As filed with the Securities and Exchange Commission on October 25, 2018

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 20-F

☐ **REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended June 30, 2018
OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

☐ **SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Date of event requiring this shell company report
For the transition period from___ to___

Commission file number: 001 — 31545

HARMONY GOLD MINING COMPANY LIMITED
(Exact name of registrant as specified in its charter)
REPUBLIC OF SOUTH AFRICA
(Jurisdiction of incorporation or organization)
RANDFONTEIN OFFICE PARK, CNR WARD AVENUE AND MAIN REEF ROAD,
RANDFONTEIN, SOUTH AFRICA, 1759
(Address of principal executive offices)
Riana Bisschoff, Group Company Secretary
Tel: +27 11 411 6020, riana.bisschoff@harmony.co.za, fax: +27 (0) 11 696 9734,
Randfontein Office Park, CNR Ward Avenue and Main Reef Road, Randfontein, South Africa, 1759
(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)
Securities registered or to be registered pursuant to Section 12(b) of the Act:
Ordinary shares, with no par value per share*
(Title of Class)
American Depositary Shares (as evidenced by American Depositary Receipts),
each representing one ordinary share
(Title of Class)
* Not for trading, but only in connection with the registration of American Depositary Shares, pursuant to the requirements of the Securities and Exchange Commission.
Securities registered or to be registered pursuant to Section 12(g) of the Act:
None
Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:
None
The number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the last full fiscal year covered by this Annual Report was 500,251,751 ordinary shares, with no par value per share

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Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES ☒ NO ☐

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. YES ☒ NO ☐

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES ☒ NO ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files)*. YES ☐ NO ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See definition of "accelerated filer and large accelerated filer" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒	Accelerated filer ☐	Non-accelerated filer ☐	Emerging growth company ☐

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

US GAAP ☐	International Financial Reporting Standards as issued by the International Accounting Standards Board ☒	Other ☐

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow:

Item 17 ☐ Item 18 ☐

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

YES ☐ NO ☒

(APPLICABLE ONLY TO ISSUERS INVOLVED IN BANKRUPTCY PROCEEDINGS DURING THE PAST FIVE YEARS)

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Sections 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court.

YES ☐ NO ☐

*This requirement does not apply to the registration.

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This document comprises the annual report on Form 20-F for the year ended June 30, 2018 (“**Harmony 2018 Form 20-F**”) of Harmony Gold Mining Company Limited (“**Harmony**” or the “**Company**”). Certain of the information in the Harmony Integrated Annual Report 2018 included in Exhibit 15.1 (“**Integrated Annual Report for the 20-F 2018**”) is incorporated by reference into the Harmony 2018 Form 20-F, as specified elsewhere in this report, in accordance with Rule 12b-23(a) of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”). With the exception of the items so specified, the Integrated Annual Report for the 20-F 2018 is not deemed to be filed as part of the Harmony 2018 Form 20-F.

Only (i) the information included in the Harmony 2018 Form 20-F, (ii) the information in the Integrated Annual Report for the 20-F 2018 that is expressly incorporated by reference in the Harmony 2018 Form 20-F and (iii) the exhibits to the Harmony 2018 Form 20-F that are required to be filed pursuant to the Form 20-F (the “**Exhibits**”), shall be deemed to be filed with the Securities and Exchange Commission (“**SEC**”) for any purpose. Any information in the Integrated Annual Report for the 20-F 2018 which is not referenced in the Harmony 2018 Form 20-F or filed as an Exhibit, shall not be deemed to be so incorporated by reference.

Financial and other material information regarding Harmony is routinely posted on and accessible at the Harmony website, *www.harmony.co.za*. References in the Harmony 2018 Form 20-F and the Exhibits to the Harmony website, unless otherwise expressly stated, are not incorporated by reference into this document.

USE OF TERMS AND CONVENTIONS IN THIS ANNUAL REPORT

Harmony Gold Mining Company Limited is a corporation organized under the laws of the Republic of South Africa. As used in this Harmony 2018 Form 20-F, unless the context otherwise requires, the terms "**Harmony**" and "**Company**" refer to Harmony Gold Mining Company Limited; the term "**South Africa**" refers to the Republic of South Africa; the terms "**we**", "**us**" and "**our**" refer to Harmony and, as applicable, its direct and indirect subsidiaries as a "**Group**".

In this annual report, references to "**R**", "**Rand**" and "**c**", "**cents**" are to the South African Rand, the lawful currency of South Africa, "**A$**" and "Australian dollars" refers to Australian dollars, "**K**" or "**Kina**" refers to Papua New Guinean Kina and references to "**$**", "**US$**" and "**US dollars**" are to United States dollars.

This annual report contains information concerning our gold reserves. While this annual report has been prepared in accordance with the regulations contained in the SEC's Industry Guide 7, it is based on assumptions which may prove to be incorrect. See Item 3: *"Key Information - Risk Factors - Estimations of Harmony's reserves are based on a number of assumptions, including mining and recovery factors, future cash costs of production, exchange rates and relevant commodity prices. As a result, metals produced may differ from current estimates."*

This annual report contains descriptions of gold mining and the gold mining industry, including descriptions of geological formations and mining processes. We have explained some of these terms in the Glossary of Mining Terms included in this annual report. This glossary may assist you in understanding these terms.

PRESENTATION OF FINANCIAL INFORMATION

We are a South African company and the majority of our operations are located in our home country. Accordingly, our books of account are maintained in South African Rand and our annual and interim financial statements are prepared in accordance with International Financial Reporting Standards ("**IFRS**") as issued by the International Accounting Standards Board ("**IASB**"). This annual report includes our consolidated financial statements prepared in accordance with IFRS, translated into US dollars. All financial information, except as otherwise noted, is stated in accordance with IFRS.

In this annual report, we also present "cash costs", "cash costs per ounce", "all-in sustaining costs" and "all-in sustaining costs per ounce", which are non-GAAP measures. An investor should not consider these items in isolation or as alternatives to production costs, cost of sales or any other measure of financial performance presented in accordance with IFRS. The calculation of cash costs, cash costs per ounce, all-in sustaining costs and all-in sustaining costs per ounce may vary significantly among gold mining companies and, by themselves, do not necessarily provide a basis for comparison with other gold mining companies. For further information, see Item 5:*"Operating and Financial Review and Prospects - Costs - Reconciliation of Non-GAAP Measures"*.

We have included the US dollar equivalent amounts of certain information and transactions in Rand, Kina and A$. Unless otherwise stated, we have translated: (i) assets and liabilities at the closing rate as reported by Reuters on the last business day of the period (R13.81 per US$1.00 as at June 30, 2018, R13.11 per US$1.00 as at June 30, 2017 and R14.72 per US$1.00 as at June 30, 2016), (ii) acquisitions, disposals and specific items such as impairments at the rate prevailing at the dates applicable to such transactions (iii) income statement items at the average rate for the year (R12.85 per US$1.00 for fiscal 2018, R13.60 per US$1.00 for fiscal 2017 and R14.50 per US$1.00 for fiscal 2016) and (iv) equity items are translated at historic rates. Capital expenditures for fiscal 2019 have been translated at an exchange rate of R13.81 per US $1.00. By including these US dollar equivalents in this annual report, we are not representing that the Rand, Kina and A$ amounts actually represent the US dollar amounts, as the case may be, or that these amounts could be converted at the rates indicated. For further information, see Item 3:*"Key Information - Selected Financial Data - Exchange Rates".*

CAUTIONARY STATEMENT ABOUT FORWARD-LOOKING STATEMENTS

This annual report contains forward-looking statements within the meaning of the safe harbor provided by Section 21E of the Exchange Act and Section 27A of the Securities Act of 1933, as amended (the "**Securities Act**"), with respect to our financial condition, results of operations, business strategies, operating efficiencies, competitive positions, growth opportunities for existing services, plans and objectives of management, markets for stock and other matters.

These forward-looking statements, including, among others, those relating to our future business prospects, revenues, and the potential benefit of acquisitions (including statements regarding growth and cost savings) wherever they may occur in this annual report and the exhibits to this annual report, are necessarily estimates reflecting the best judgment of our senior management and involve a number of risks and uncertainties that could cause actual results to differ materially from those suggested by the forward-looking statements. As a consequence, these forward-looking statements should be considered in light of various important factors, including those set forth in this annual report. Important factors that could cause actual results to differ materially from estimates or projections contained in the forward-looking statements include, without limitation:

- overall economic and business conditions in South Africa, Papua New Guinea, Australia and elsewhere;
- estimates of future earnings, and the sensitivity of earnings to gold and other metals prices;
- estimates of future gold and other metals production and sales;
- estimates of future cash costs;
- estimates of future cash flows, and the sensitivity of cash flows to the gold and other metals prices;
- estimates of provision for silicosis settlement;
- statements regarding future debt repayments;
- estimates of future capital expenditures;
- the success of our business strategy, development activities and other initiatives;
- future financial position, plans, strategies, objectives, capital expenditures, projected costs and anticipated cost savings and financing plans;
- estimates of reserves statements regarding future exploration results and the replacement of reserves;
- the ability to achieve anticipated efficiencies and other cost savings in connection with past and future acquisitions, as well as at existing operations;
- fluctuations in the market price of gold;
- the occurrence of hazards associated with underground and surface gold mining;
- the occurrence of labor disruptions;
- power cost increases as well as power stoppages, fluctuations and usage constraints;
- supply chain shortages and increases in the prices of production imports and the availability, terms and deployment of capital;
- changes in government regulation and the political environment, particularly tax, mining rights, environmental regulation and business ownership including any interpretation thereof ;
- fluctuations in exchange rates and currency devaluations and other macroeconomic monetary policies;
- the adequacy of the Group's insurance coverage; and
- socio-economic or political instability in South Africa, Papua New Guinea, Australia and other countries in which we operate.

The foregoing factors and others described under "Risk Factors" should not be construed as exhaustive.

We undertake no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after the date of this annual report or to reflect the occurrence of unanticipated events, except as required by law. All subsequent written or oral forward-looking statements attributable to Harmony or any person acting on its behalf are qualified by the cautionary statements herein.

PART I

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3. KEY INFORMATION

A. SELECTED FINANCIAL DATA

The selected consolidated financial data below should be read in conjunction with, and are qualified in their entirety by reference to, our consolidated financial statements, and the notes thereto, *set forth beginning on page F-1, and with Item 3:"Key Information-Risk Factors" and Item 5: "Operating and Financial Review and Prospects". Historical results are not necessarily indicative of results to be expected for any future period.*

Selected Historical Consolidated Financial Data

We are a South African company and the majority of our operations are located in our home country. Accordingly, our books of account are maintained in South African Rand and our annual and interim financial statements are prepared in accordance with IFRS. This annual report includes our consolidated financial statements prepared in accordance with IFRS, translated into US dollars. The selected historical consolidated income statement and balance sheet data for the last five fiscal years are, unless otherwise noted, stated in accordance with IFRS, and have been extracted from the more detailed information and financial statements prepared in accordance with IFRS. The financial data as at June 30, 2018 and 2017 and for each of the years in the three-year period ended June 30, 2018 should be read in conjunction with, and is qualified in its entirety by reference to our audited consolidated financial statements set forth beginning on page F-1. Financial data as at June 30, 2016, 2015 and 2014 and for the years ended June 30, 2015 and 2014 have been derived from our previously published consolidated financial statements, which are not included in this document.

The acquisition of Moab Khotsong was effective March 1, 2018 (see *Item 5: "Operating and Financial Review and Prospects-B Liquidity and Capital Resources-Investing"*). The results of the operations have been consolidated in the financial statements from the effective date.

	Fiscal year ended June 30,				
	2018	2017	2016	2015	2014
	($ in millions, except per share amounts, cash costs per ounce and all-in sustaining costs per ounce)				
Income Statement Data					
Revenue	1,584	1,416	1,264	1,348	1,515
(Impairment)/reversal of impairment of assets	(386)	(131)	3	(285)	(135)
Operating profit/(loss)	(335)	(81)	111	(433)	(146)
Gain on bargain purchase	—	60	—	—	—
Profit/(loss) from associates	3	(1)	—	(2)	(10)
Profit/(loss) from continuing operations before taxation	(339)	(20)	109	(436)	(145)
Taxation	18	37	(43)	62	27
Profit/(loss) from continuing operations	(321)	17	66	(374)	(118)
Profit/(loss) from discontinued operations	—	—	—	—	—
Net profit/(loss)	(321)	17	66	(374)	(118)
Basic (loss)/earnings per share from continuing operations (US cents)	(72)	4	15	(86)	(27)
Diluted earnings/(loss) per share from continuing operations (US cents)	(72)	4	15	(86)	(27)
Basic earnings/(loss) per share (US cents)	(72)	4	15	(86)	(27)
Diluted earnings/(loss) per share (US cents)	(72)	4	15	(86)	(27)
Weighted average number of shares used in the computation of basic earnings/(loss) per share	445,896,346	438,401,156	435,738,577	434,423,747	433,212,423
Weighted average number of shares used in the computation of diluted earnings/(loss) per share	465,319,405	459,220,318	446,398,380	438,091,109	434,715,373
Dividends per share (US cents)[1]	3	8	—	—	—
Dividends per share (SA cents)[1]	35	100	—	—	—
Other Financial Data					
Cash costs per ounce of gold from continuing operations ($/oz)[2]	1,018	1,000	841	1,003	988
Total cash costs per ounce of gold ($/oz)[2]	1,018	1,000	841	1,003	988
All-in sustaining costs per ounce of gold from continuing operations ($/oz)[2]	1,231	1,182	1,003	1,232	1,223
Balance Sheet Data					
Assets					
Property, plant and equipment	2,245	2,292	2,033	2,430	3,116
Total assets	2,862	2,966	2,515	2,972	3,852
Net assets	1,835	2,234	1,914	2,200	2,925
Equity and liabilities					
Share capital	4,115	4,036	4,036	4,035	4,035
Total equity	1,835	2,234	1,914	2,200	2,925
Borrowings (current and non-current)	407	163	159	280	270
Other liabilities	620	569	442	492	657
Total equity and liabilities	2,862	2,966	2,515	2,972	3,852

1 Dividends per share relates to the dividends recorded and paid during the fiscal year.

2 Cash costs per ounce and all-in sustaining costs per ounce are non-GAAP measures. Cash costs per ounce and all-in sustaining cost per ounce have been calculated on a consistent basis for all periods presented. The all-in sustaining costs per ounce for fiscal 2013 to 2015 have been restated to exclude share-based payments charge and include capitalized stripping costs for Kalgold. Changes in cash costs per ounce and all-in sustaining costs per ounce are affected by operational performance, as well as changes in the currency exchange rate between the Rand and the US dollar. Because cash cost per ounce and all-in sustaining costs per ounce are non-GAAP measures, these measures should therefore not be considered by investors in isolation or as an alternative to production costs, cost of sales, or any other measure of financial performance calculated in accordance with IFRS. The calculation of cash costs, cash costs per ounce, all-in sustaining costs and all-in sustaining costs per ounce may vary from company to company and may not be comparable to other similarly titled measures of other companies. For further information, see *Item 5:"Operating and Financial Review and Prospects-Costs-Reconciliation of Non-GAAP measures*".

Exchange Rates

Unless otherwise stated, balance sheet item amounts are translated from Rand to US dollars at the exchange rate prevailing on the last business day of the period (R13.81 per US$1.00 as at June 30, 2018, R13.11 per US$1.00 as at June 30, 2017 and R14.72 per US$1.00 as at June 30, 2016), except for acquisitions, disposals and specific items such as impairments that are converted at the exchange rate prevailing on the dates of the transactions. Income statement item amounts that are translated from Rand to US dollars at the average exchange rate for the period (R12.85 per US$1.00 for fiscal 2018, R13.60 per US$1.00 for fiscal 2017 and R14.50 per US$1.00 for fiscal 2016). During fiscal 2018, the Rand/dollar closing exchange rate ranged between R11.54 and R14.46 per US$1.00.

The following table sets forth, for the past five fiscal years, the average and period end rates for Rand expressed in Rand per US$1.00. The exchange rates are sourced from Reuters, being the closing rate at period end.

As of October 18, 2018, the exchange rate per US$1.00 was R 14.43[(1)].

Fiscal Year Ended June 30,	Average[2]	Period End[1]
2014	10.35	10.61
2015	11.45	12.16
2016	14.50	14.72
2017	13.60	13.11
2018	12.85	13.81

Month of	High	Low
May 2018	12.76	12.25
June 2018	13.81	12.55
July 2018	13.82	13.10
August 2018	14.10	14.70
September 2018	14.76	14.17
October 2018 (through October 18, 2018)	14.51	14.39

1 Based on the interbank rate as reported by Reuters.

2 The daily average of the closing rate during the relevant period as reported by Reuters.

Fluctuations in the exchange rate between Rand and the US dollar will affect the dollar equivalent of the price of ordinary shares on the Johannesburg Stock Exchange ("**JSE**"), which may affect the market price of the American Depositary Shares ("**ADSs**") evidenced by American Depositary Receipts ("**ADRs**") on the New York Stock Exchange Inc. ("**NYSE**"). These fluctuations will also affect the dollar amounts received by owners of ADSs on the conversion of any dividends on ordinary shares paid in Rand.

B. CAPITALIZATION AND INDEBTEDNESS

Not applicable.

C. REASONS FOR THE OFFER AND USE OF PROCEEDS

Not applicable.

D. RISK FACTORS

In addition to the other information included in this annual report and the exhibits, you should also carefully consider the following factors related to our ordinary shares and ADSs. There may be additional risks that we do not currently know of or that we currently deem immaterial based on information currently available to us. Although Harmony has a formal risk policy framework in place, the maintenance and development of which is undertaken on an ongoing basis so as to help management address systematic categories of risk associated with its business operations, any of these risks could have a material adverse effect on our business, financial condition or results of operations, leading to a decline in the trading price of our ordinary shares or our ADSs. The risks described below may, in retrospect, turn out to be incomplete and therefore may not be the only risks to which we are exposed. Additional risks and uncertainties not presently known to us or that we now believe are immaterial (and have therefore not been included), could also adversely affect our business, results of operations or financial condition. The order of presentation of the risk factors below does not indicate the likelihood of their occurrence or the magnitude or the significance of the individual risks.

Risks Relating to Our Business and the Gold Mining Industry

The profitability of our operations, and cash flows generated by those operations, are affected by changes in the price of gold. A fall in the gold price below our cash cost of production and capital expenditure required to sustain production for any sustained period may lead to losses and require Harmony to curtail or suspend certain operations.

Substantially all of Harmony's revenues come from the sale of gold. Historically, the market price for gold has fluctuated widely and been affected by numerous factors, over which Harmony has no control, including:

- demand for gold for industrial uses, jewelry and investment;

- international or regional political and economic events and trends;
- strength or weakness of the US dollar (the currency in which gold prices generally are quoted) and of other currencies;
- monetary policies announced or implemented by central banks, including the US Federal Reserve;
- financial market expectations on the rate of inflation;
- changes in the supply of gold from production, divestment, scrap and hedging;
- interest rates;
- speculative activities;
- gold hedging or de-hedging by gold producers;
- actual or expected purchases and sales of gold bullion held by central banks or other large gold bullion holders or dealers; and
- production and cost levels for gold in major gold-producing nations, such as South Africa, China, the United States and Australia.

In addition, current demand and supply affects the price of gold, but not necessarily in the same manner as current demand and supply affect the prices of other commodities. Historically, gold has retained its value in relative terms against basic goods in times of inflation and monetary crisis. As a result, central banks, financial institutions and individuals hold large amounts of gold as a store of value and production in any given year constitutes a very small portion of the total potential supply of gold. Since the potential supply of gold is large relative to mine production in any given year, normal variations in current production will not necessarily have a significant effect on the supply of gold or its price. Uncertainty on global economic conditions has impacted the price of gold significantly since fiscal 2013 and continued to do so in fiscal 2018, and is still relevant as is evidenced by the strategic risk profile of Harmony.

The volatility of gold prices is illustrated in the table, which shows the annual high, low and average of the afternoon London bullion market fixing price of gold in US dollars for each of the past ten years:

Annual gold price: 2008 - 2018

	Price per ounce (US$)		
Calendar year	High	Low	Average
2008	1,011	713	872
2009	1,213	810	972
2010	1,421	1,058	1,225
2011	1,895	1,319	1,572
2012	1,792	1,540	1,669
2013	1,694	1,192	1,411
2014	1,385	1,142	1,266
2015	1,296	1,049	1,160
2016	1,366	1,077	1,251
2017	1,346	1,151	1,253
2018	1,355	1,178	1,277

On October 18, 2018, the afternoon fixing price of gold on the London bullion market was US$1,223.00/oz.

While the price volatility is difficult to predict, if gold prices should fall below Harmony's cash cost of production and capital expenditure required to sustain production and remain at these levels for any sustained period, Harmony may record losses and be forced to curtail or suspend some or all of its operations, which could materially adversely affect Harmony's business, operating results and financial condition.

In addition, Harmony would also have to assess the economic impact of low gold prices on its ability to recover any losses that may be incurred during that period and on its ability to maintain adequate reserves.

Foreign exchange fluctuations could have a material adverse effect on Harmony's operational results and financial condition.

Gold is priced throughout the world in US dollars and, as a result, Harmony's revenue is realized in US dollars, but most of our operating costs are incurred in Rand and other non-US currencies, including the Australian dollar and Kina. The strengthening of the US dollar against the Rand, Australian dollar and Kina lowers operating costs in US dollar terms. From time to time, Harmony may implement currency hedges intended to reduce exposure to changes in the foreign currency exchange, which it started doing in fiscal 2016 and will continue as long as it is strategically viable. Such hedging strategies may not however be successful, and any of Harmony's unhedged exchange payments will continue to be subject to market fluctuations. Any significant and sustained appreciation of the Rand and other non-US currencies against the dollar will materially reduce Harmony's Rand revenues and overall net income, which could materially adversely affect Harmony's operating results and financial condition.

Harmony Gold's inability to maintain an effective system of internal control over financial reporting may have an adverse effect on investors' confidence in the reliability of its financial statements.

Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the company's financial statements for external purposes in accordance with IFRS as issued by the IASB. Disclosure controls and procedures are designed to ensure that information required to be disclosed by a company in reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. Harmony has invested in resources to facilitate the documentation and assessment of its system of disclosure controls and its internal control over financial reporting. However, a control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance with respect to the reliability of financial reporting and financial statement preparation. If Harmony were unable to maintain an effective system of internal control over financial reporting, investors may lose confidence in the reliability of its financial statements and this may have an adverse impact on investors' abilities to make decisions about their investment in Harmony. See Item 15: "Controls and Procedures".

Harmony is exposed to the impact of any significant decreases in the commodity prices on its production. This is mitigated by commodity derivatives and hedging arrangements, but as Harmony has limitations for the volume of forward sales, commodity derivatives or hedging arrangements it may enter into for its future production, it is exposed to the impact of decreases in the commodity prices on the remainder of its unhedged production.

As a rule, Harmony sells its gold and silver at the prevailing market price. In fiscal 2017, however, Harmony started a commodity hedging program. These contracts manage variability of cash flows for approximately 20% of the Group's total production over a two-year period for gold and 25% for silver.

Harmony's remaining unhedged future production may realize the benefit of any short-term increase in the commodity prices, but is not protected against decreases; if the gold or silver price should decrease significantly, Harmony's revenues may be materially adversely affected, which could materially adversely affect Harmony's operating results and financial condition.

Global economic conditions could adversely affect the profitability of Harmony's operations.

Harmony's operations and performance depend on global economic conditions. Despite signs of economic recovery in certain geographical markets, global economic conditions remain fragile with significant uncertainty regarding recovery prospects, level of recovery and long-term economic growth effects. A global economic downturn may have follow-on effects on our business. These could include:

- key suppliers or contractors becoming insolvent, resulting in a break-down in the supply chain;
- a reduction in the availability of credit which may make it more difficult for Harmony to obtain financing for its operations and capital expenditures or make that financing more costly;
- exposure to the liquidity and insolvency risks of Harmony's lenders and customers; or
- the availability of credit being reduced-this may make it more difficult for Harmony to obtain financing for its operations and capital expenditure or make financing more expensive.

Coupled with the volatility of commodity prices as well as the rising trend of input costs, such factors could result in initiatives relating to strategic alignment, portfolio review, restructuring and cost-cutting, temporary or permanent shutdowns and divestments. Further, sudden changes in a life-of-mine plan or the accelerated closure of a mine may result in the recognition of impairments and give rise to the recognition of liabilities that are not anticipated.

In addition to the potentially adverse impact on the profitability of Harmony's operations, any uncertainty on global economic conditions may also increase volatility or negatively impact the market value of Harmony's securities. Any of these events could materially adversely affect Harmony's business, operating results and financial condition.

A further downgrade of South Africa's credit rating may have an adverse effect on Harmony's ability to secure financing.

The slowing economy, rising debt, escalating labor disputes and the structural challenges facing the mining industry and other sectors have resulted in the downgrading of South Africa's sovereign credit ratings. At the beginning of fiscal 2018, two of the three international ratings agencies, Standard & Poor's and Fitch Ratings, rated South Africa's long-term sovereign credit rating as speculative investment grade, or junk. In November 2017, Standard & Poor's further downgraded South Africa's sovereign rating to BB with a stable outlook, due to among other things, declining consumption on a per capital basis, economic growth performance that is among the weakest of emerging market sovereigns and income inequality. In November 2017, Fitch Ratings affirmed South Africa's sovereign credit rating of BB+ with a negative outlook. In March 2018, Moody's affirmed its Baa3 sovereign credit rating for South Africa and upgraded its outlook to stable. Further downgrading of South Africa's credit ratings by any of these agencies may adversely affect the South African mining industry and Harmony's business, operating results and financial condition by making it more difficult to obtain external financing or could result in any such financing being available only at greater cost or on more restrictive terms than might otherwise be available.

Estimations of Harmony's reserves are based on a number of assumptions, including mining and recovery factors, future cash costs of production, exchange rates, and the relevant commodity prices. As a result, metals produced in future may differ from current estimates.

The mineral reserve estimates in this annual report are estimates of the mill-delivered quantity and grade of metals in Harmony's deposits and stockpiles. They represent the amount of metals that Harmony believes can be mined, processed and sold at prices sufficient to recover its estimated future cash costs of production, remaining investment and anticipated additional capital expenditures. Harmony's mineral reserves are estimated based on a number of factors, which have been stated in accordance with the South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves ("**SAMREC Code**"), the Australian Code for the Reporting of Mineral Resources and Mineral Reserves ("**JORC**") and the SEC's Industry Guide 7. Calculations of Harmony's mineral reserves are based on estimates of:

- future cash costs;
- future commodity prices; and
- future currency exchange rates.

These factors, which significantly impact mineral reserve estimates, are beyond Harmony's control. As a result, reserve estimates in this annual report should not be interpreted as assurances of the economic life of Harmony's gold and other precious metal deposits or the future profitability of operations.

Since these mineral reserves are estimates based on assumptions related to factors detailed above, should there be changes to any of these assumptions, we may in future need to revise these estimates. In particular, if Harmony's cash operating and production costs increase or the gold price decreases, recovering a portion of Harmony's mineral reserves may become uneconomical. This will lead, in turn, to a reduction in estimated reserves. Any reduction in our mineral reserves estimate could materially adversely affect Harmony's business, operating results and financial condition.

Harmony's operations have limited proved and probable reserves. Exploration for additional reserves is speculative in nature, may be unsuccessful and involves many risks.

Harmony's operations have limited proved and probable reserves, and exploration and discovery are necessary to maintain current gold production levels at these operations. Exploration for gold and other precious metals is speculative in nature, may be unsuccessful and involves risks including those related to:

- locating orebodies;
- geological nature of the orebodies;
- identifying the metallurgical properties of orebodies;
- estimating the economic feasibility of mining orebodies;
- developing appropriate metallurgical processes;
- obtaining necessary governmental permits; and
- constructing mining and processing facilities at any site chosen for mining.

Harmony's exploration efforts might not result in the discovery of mineralization, and any mineralization discovered might not result in an increase in proved and probable reserves. To access additional reserves, Harmony will need to complete development projects successfully, including extensions to existing mines and, possibly, new mines. Development projects would also be required to access any new mineralization discovered by exploration activities around the world. Harmony typically uses feasibility studies to determine whether to undertake significant development projects. These studies often require substantial expenditure. Feasibility studies include estimates of expected or anticipated economic returns, which are based on assumptions about:

- future gold and other metal prices;
- anticipated tonnage, grades and metallurgical characteristics of ore to be mined and processed;
- anticipated recovery rates of gold and other metals from the ore; and
- anticipated total costs of the project, including capital expenditure and cash costs.

All projects are subject to project study risk. There is no certainty or guarantee that a feasibility study, if undertaken, will be successfully concluded or that the project the subject of the study will satisfy Harmony's economic, technical, risk and other criteria in order to progress that project to development.

A failure in our ability to discover new reserves, enhance existing reserves or develop new operations in sufficient quantities to maintain or grow the current level of our reserves could negatively affect our results, financial condition and prospects.

The risk of unforeseen difficulties, delays or costs in implementing Harmony's business strategy and projects may lead to Harmony not delivering the anticipated benefits of our strategy and projects. In addition, actual cash costs, capital expenditure, production and economic returns may differ significantly from those anticipated by feasibility studies for new development projects.

The successful implementation of Harmony's business strategy and projects depends upon many factors, including those outside our control. For example, the successful management of costs will depend on prevailing market prices for input costs. The ability to grow our business will depend on the successful implementation of the our existing and proposed projects and continued exploration success, as well as on the availability of attractive acquisition opportunities, all of which are subject to the relevant mining and company specific risks as outlined in these risk factors.

It can take a number of years from the initial feasibility study until development of a project is completed and, during that time, the economic feasibility of production may change. In addition, there are a number of inherent uncertainties in developing and constructing an extension to an existing mine or a new mine, including:

- availability and timing of necessary environmental and governmental permits;
- timing and cost of constructing mining and processing facilities, which can be considerable;
- availability and cost of skilled labor, power, water, fuel, mining equipment and other materials;
- accessibility of transportation and other infrastructure, particularly in remote locations;
- availability and cost of smelting and refining arrangements;
- availability of funds to finance construction and development activities; and
- spot and expected future commodity prices of metals including gold, silver, copper, uranium and molybdenum.

All of these factors, and others, could result in our actual cash costs, capital expenditures, production and economic returns differing materially from those anticipated by feasibility studies.

Competition with other mining companies and individuals for specialized equipment, components and supplies necessary for exploration and development, for mining claims and leases on exploration properties and for the acquisition of mining assets also impact existing operations and potential new developments. Competitors may have greater financial resources, operational experience and technical capabilities - all which could negatively affect the anticipated costs, which in turn could have a material adverse effect on our operating results and financial condition.

Harmony currently maintains a range of focused exploration programs, concentrating mainly on a number of prospective known gold and copper mineralized areas in the Independent State of Papua New Guinea ("**PNG**") and the Kalgold open pit operation in South Africa. During fiscal 2016, the bulk of our exploration expenditure was allocated to activities in PNG. During fiscal 2017, an exploration program in South Africa was also started in addition to the projects in PNG. In order to maintain or expand our operations and reserve base, Harmony has sought, and may continue to seek to enter into joint ventures or to make acquisitions of selected precious metal producing companies or assets. For example, in 2017 Harmony agreed to acquire AngloGold Ashanti Limited's Moab Khotsong and Great Noligwa mines together with other assets and related infrastructure (the "**Moab Acquisition**"). See below under "--We may experience problems in identifying, financing and managing new acquisitions and integrating them with our existing operations. We may not have full management control over future joint venture partners.". However, there is no assurance that any future development projects will extend the life of our existing mining operations or result in any new commercial mining operations. Unforeseen difficulties, delays or costs may adversely affect the successful implementation of our business strategy and projects, and such strategy and projects may not result in the anticipated benefits, which could have a material adverse effect on our results of operations, financial condition and prospects.

Risks associated with pumping water inflows from closed mines adjacent to our operations could adversely affect Harmony's operational results.

Certain of our mining operations are adjacent to the mining operations of other companies. A mine closure can affect continued operations at an adjacent mine if appropriate preventative steps are not taken. In particular, this could include the ingress of underground water when pumping operations at the closed mine are suspended. This can result in damage to property, operational disruptions and additional pumping costs, which could adversely affect any one of our adjacent mining operations and, in turn could adversely affect our business, operating results and financial condition.

With the recent Moab Acquistion, Harmony inherited a two-thirds interest in the Margaret Water Company for all pumping and water related infrastructure at its Margaret Water Shaft. The shaft operates for the purpose of de-watering the KOSH basin groundwater in order for Moab Khotsong operations and the mine operated by Heaven-Sent (the only other mining company continuing operating) to remain dry and to prevent flooding of operational areas. Therefore it remains imperative for the shaft to continue pumping water. Flooding in the future resulting from a failure in pumping and water related infrastructure could pose an unpredicted "force majeure" type event, which could result in financial liability for us, and could have an adverse impact on our results of operations and financial condition.

Infrastructure constraints and aging infrastructure could adversely affect Harmony's operations

Mining, processing, development and exploration activities depend on adequate infrastructure. Reliable rail, ports, roads, bridges, power sources, power transmission facilities and water supply are critical to the Company's business operations and affect capital and operating costs. The infrastructure and services are often provided by third parties whose operational activities are outside the control of the Company.

Interference to the maintenance or provision of infrastructure, including by extreme weather conditions, sabotage or social unrest, could impede our ability to deliver products on time and adversely affect our business, results of operations and financial condition.

Once a shaft or a processing plant has reached the end of its intended lifespan, higher than normal maintenance and care is required. Maintaining this infrastructure requires skilled human resources, capital allocation, management and planned maintenance. Although Harmony has implemented a comprehensive maintenance strategy, incidents resulting in production delays, increased costs or industrial accidents may occur. Such incidents may have an adverse effect on Harmony's operating results and financial condition.

Fluctuations in input production prices linked to commodities may adversely affect Harmony's operational results and financial condition.

Fuel, energy and consumables, including diesel, heavy fuel oil, chemical reagents, explosives, tires, steel and mining equipment consumed in mining operations form a relatively large part of the operating costs and capital expenditure of a mining company. Harmony has no control over the costs of these consumables, many of which are linked to some degree to the price of oil and steel.

Fluctuations in oil and steel prices have a significant impact on operating cost and capital expenditure estimates and, in the absence of other economic fluctuations, could result in significant changes in the total expenditure estimates for new mining projects or render certain projects non-viable, either of which could have a material adverse effect on our business, operating results and financial condition.

Disruptions to the supply of electricity and increases in the cost of power may adversely affect the results of our operations and our financial condition.

In South Africa, each of our mining operations depends on electrical power generated by the South African state utility, Eskom Limited ("**Eskom**"), which holds a monopoly in the South African market. Electricity supply in South Africa has been constrained over the past decade and there have been multiple power disruptions. There is uncertainty as to whether Eskom will be able to meet demand for power supply in the future. In June 2016, Eskom made an assurance that it had adequate capacity to supply projected national electricity demands for the next six years. Such statements have, however, historically proven to be unreliable and accordingly there is a lack of confidence in Eskom's assurance of supply.

As a result of the planned capital expansion program of Eskom to deal with power constraints, an average annual tariff increase of 8% for the five-year multi-year price determination period has been approved by the National Energy Regulator of South Africa ("**NERSA**"). The first increase was implemented on April 1, 2013. On March, 1, 2016, NERSA granted Eskom a tariff increase of 9.4% in respect of the average tariff for standard tariff customers for the 2016/2017 financial year. On August 16, 2016, however, the Gauteng Division, Pretoria, of the High Court set aside NERSA's decision to grant Eskom the tariff increase of 9.4% for the 2016/2017 financial year on the grounds that NERSA's multi-year price determination methodology had not been properly applied. A lower increase of 2.2% was approved in February 2017, effective April 1, 2017. Although Eskom applied for a 19.9% increase for the 2018/19 fiscal year, on December 18, 2017, NERSA granted Eskom an increase of only 5.23%, stating that Eskom needed to change its operating model and reduce costs. Should Harmony experience further power tariff increases, its business, operating results and financial condition may be adversely impacted. Nersa approved the liquidation of Eskom's Regulatory Clearing Account balances of R32.69 billion will be recoverable from the standard tariff customers, local Special Pricing Agreements (SPAs) and international customers. This could increase electricity prices by an additional 4.4% per year for the next 4 years. The cost of electricity may rise by double digits in the next four years - burden on the economics and viability of some of the marginal operations in Harmony.

In addition to supply constraints, labor unrest in South Africa has before, and may in future, disrupt the supply of coal to power stations operated by Eskom and result in curtailed supply. For example, in August 2016, Eskom failed to reach a wage agreement with the National Union of Mines ("**NUM**"), which led to a two-day strike. Despite the fact that Eskom has adopted a policy of asking households to reduce usage before asking industrial users to do so in order to reduce the economic impact of such disruptions, Eskom has warned that power constraints will continue. In November 2015, a draft Carbon Tax Bill was published for public consultation. At the time of its publication, it was believed to take effect by January 2017, however this time line has since been moved to January 2019. At this time it is not possible to determine the ultimate impact of the proposed carbon tax on the company. Energy is a significant input to our mining and processing operations, with our principal energy sources being electricity and it is likely that the proposed carbon tax will affect our operations. In order both to facilitate the carbon tax legal regime and to provide for greater regulation of greenhouse gas ("**GHG**") emissions outside of the carbon tax, the Department of Environmental Affairs has initiated the implementation of a mandatory GHG reporting system, for certain identified data providers. In addition, the Department of Environmental Affairs has published the Climate Change Bill, dated June 8, 2018 for public consultation in response to the international commitments made under the 2016 Paris Agreement on Climate Change (the "**Paris Agreement**"). It aims to address climate change in the long–term by aiming for a climate resilient and low carbon economy in South Africa. Harmony remains concerned with the lack of synergy between the Carbon Tax Bill and Climate Change Bill. These or future measures could require Harmony to reduce its direct GHG emissions or energy use or to incur significant costs for GHG emissions permits or taxes or have these costs or taxes passed on by electricity utilities which supply the company's operations. Harmony also could incur significant costs associated with capital equipment, GHG monitoring and reporting and other obligations to comply with applicable requirements.

PNG has limited power generation and distribution capacity, supplied by the state utility, PNG Power. This capacity is increasing but it is subject to disruptions in electrical power supply. Currently, Harmony mines and projects still partially or entirely rely on our own diesel-generated power. The cost of this power will fluctuate with changes in the oil price. Disruptions in electrical power supply or substantial increases in the cost of oil could have a material adverse effect on our business, operating results and financial condition.

Also, see Item 5:*"Operating and Financial Review and Prospects-Electricity in South Africa."* and *"Integrated Annual Report for the 20-F 2018-Managing our Social and Environmental Impacts- Environmental management and stewardship"* on pages 68 to 87.

We may experience problems in identifying, financing and managing new acquisitions and integrating them with our existing operations. We may not have full management control over future joint venture partners.

In order to maintain or expand our operations and reserve base, Harmony has sought, and may continue to seek to enter into joint ventures or to make acquisitions of selected precious metal producing companies or assets. For example, in 2017 Harmony acquired AngloGold Ashanti Limited's Moab Khotsong and Great Noligwa mines together with other assets and related infrastructure in the Moab Acquisition.

Acquiring new gold mining operations involves a number of risks including:

- our ability to identify appropriate assets for acquisition and/or to negotiate acquisitions on favorable terms;
- obtaining the financing necessary to complete future acquisitions;
- difficulties in assimilating the operations of the acquired business;
- the changing regulatory environment as it relates to the Mining Charter (as defined below) and the general policy uncertainty in South Africa;
- difficulties in maintaining our financial and strategic focus while integrating the acquired business;
- problems in implementing uniform quality, standards, controls, procedures and policies;
- management capacity, and skills to supplement that capacity, to integrate new assets and operations;
- increasing pressures on existing management to oversee an expanding company; and
- to the extent we acquire mining operations outside South Africa, Australia or PNG, encountering difficulties relating to operating in countries in which we have not previously operated.

Any such acquisition or joint venture may change the scale of our business and operations and may expose us to new geographic, geological, political, social, operating, financial, legal, regulatory and contractual risks. Our ability to make successful acquisitions and any difficulties or time delays in achieving successful integration of any of such acquisitions could have a material adverse effect on our business, operating results and financial condition.

In addition, to the extent that Harmony participates in the development of a project through a joint venture or other multi-party commercial structure, there could be disagreements, legal or otherwise or divergent interests or goals among the parties, which could jeopardize the success of the project, particularly if Harmony does not have full management control over the joint venture. There can be no assurance that any joint venture will achieve the results intended and, as such, any joint venture could have a material adverse effect on our revenues, cash and other operating costs. See Item 5. "Operating and Financial Review and Prospects -- B. Liquidity and Capital Resources -- Investing."

Certain factors may affect our ability to support the carrying value of our property, plant and equipment, goodwill and other assets on our balance sheet, resulting in impairments.

Harmony reviews and tests the carrying value of its assets when events or changes in circumstances suggest that this amount may not be recoverable and impairments may be recorded as a result of testing performed.

Our market capitalization on any reporting date is calculated on the basis of the price of our shares and ADSs on that date. Our shares and ADSs may trade in a wide range through the fiscal year depending on the changes in the market, including trader sentiment on various factors including gold price. Therefore, there may be times where our market capitalization is greater than the value of our net assets, or "book value", and other times when our market capitalization is less than our book value. Where our market capitalization is less than our net asset or book value, this could indicate a potential impairment and we may be required to record an impairment charge in the relevant period.

At least on an annual basis for goodwill, and when there are indications that impairment of property, plant and equipment and other assets may have occurred, estimates of expected future cash flows for each group of assets are prepared in order to determine the recoverable amounts of each group of assets. These estimates are prepared at the lowest level at which identifiable cash flows are considered as being independent of the cash flows of other mining assets and liabilities. Expected future cash flows are inherently uncertain, and could materially change over time. Such cash flows are significantly affected by reserve and production estimates, together with economic factors such as spot and forward gold prices, discount rates, currency exchange rates, estimates of costs to produce reserves and future capital expenditures.

As at June 30, 2018, Harmony had substantial amounts of property, plant and equipment, goodwill and other assets on its consolidated balance sheets. Impairment charges relating to property, plant and equipment and other assets were recorded in fiscal 2018. If management is required to recognize further impairment charges, this could affect Harmony's results of operations and financial condition. See Item 5: *"Operating and Financial Review and Prospects-Critical Accounting Estimates-Impairment of Property, Plant and Equipment"* and "*-Carrying Value of Goodwill."*

Given the nature of mining and the type of gold mines we operate, we face a material risk of liability, delays and increased cash costs of production from environmental and industrial accidents and pollution compliance breaches.

The business of gold mining involves significant risks and hazards, including environmental hazards and industrial accidents. In particular, hazards associated with underground mining include:

- rock bursts;
- seismic events;

- underground fires;
- cave-ins or fall-of-ground;
- discharges of gases and toxic chemicals;
- release of radioactive hazards;
- flooding;
- mining of pillars (integrity of shaft support structures may be compromised and cause increased seismicity);
- processing plant fire and explosion;
- critical equipment failures;
- accidents and fatalities; and
- other conditions resulting from drilling, blasting and the removal and processing of material from a deep-level mine.

Hazards associated with opencast mining (also known as open-pit mining) include:

- flooding of the open-pit;
- collapse of open-pit walls or slope failures;
- processing plant fire and explosion;
- accidents associated with operating large open-pit and rock transportation equipment;
- accidents associated with preparing and igniting of large-scale open-pit blasting operations; and
- major equipment failures.

Hazards associated with construction and operation of waste rock dumps and tailings storage facilities include:

- accidents associated with operating a waste dump and rock transportation;
- production disruptions caused by natural phenomena, such as floods and droughts and weather conditions, potentially exacerbated by climate change;
- wall or slope failures; and
- contamination of ground or surface water.

We are at risk from any or all of these environmental and industrial hazards. In addition, the nature of our mining operations presents safety risks. Harmony's operations are subject to health and safety regulations, which could impose additional costs and compliance requirements. Harmony may face claims and liability for breaches, or alleged breaches, of such regulations and other applicable laws. The occurrence of any of these events could delay production, increase cash costs and result in financial liability to Harmony, which, in turn, may adversely affect our results of operations and our financial condition.

The nature of our mining operations presents safety risks.

The environmental and industrial risks identified above also present safety risks for Harmony's operations and our employees and could lead to the suspension and potential closure of operations for indeterminate periods. Safety risks, even in situations where no injuries occur, can have a material adverse effect on Harmony's results of operations and financial condition. See Item 4: "*Information on the Company-Business Overview-Regulation-Health and Safety - South Africa*" and *"Integrated Annual Report for the 20-F 2018 - Ensuring employee well-being - maintaining stability in our workforce-Safety and health"* on pages 34 to 50.

Illegal mining, or criminal mining, as well as theft of gold and copper bearing material at our operations could pose a threat to the safety of employees, result in damage to property and could expose the Company to liability.

Civil disturbances and criminal activities such as trespass, illegal mining, sabotage, theft and vandalism could lead to disruptions at certain of Harmony's operations.

The activities of illegal and artisanal miners, which include theft and shrinkage, could cause damage to Harmony's properties, including by way of pollution, underground fires, operational disruption, project delays or personal injury or death, for which Harmony could potentially be held responsible. Illegal mining could result in the depletion of mineral deposits, potentially making the future mining of such deposits uneconomic.

Rising gold and copper prices may result in an increase in gold and copper thefts. The occurrence of any of these events could have a material adverse effect on Harmony's financial condition on results of its operations.

Harmony's insurance coverage may prove inadequate to satisfy future claims against it.

Harmony has third-party liability coverage for most potential liabilities, including environmental liabilities. Harmony may be subject to liability for pollution (excluding sudden and accidental pollution) or other hazards against which we have not insured or cannot insure, including those for past mining activities. Harmony also maintains property and liability insurance consistent with industry practice, but this insurance contains exclusions and limitations on coverage. In addition, there can be no assurance that insurance will be available at economically acceptable premiums. As a result, Harmony's insurance coverage may not cover the claims against it, including for environmental or industrial accidents or pollution, which could have a material adverse effect on Harmony's financial condition.

Harmony's operations may be negatively impacted by inflation.

Harmony's operations have been materially affected by inflation. Inflation in South Africa has fluctuated in a narrow band in recent years, remaining within or just outside the inflation range of 3% - 6% set by the South African Reserve Bank. At the end of fiscal 2016, 2017 and fiscal 2018, inflation was 6.3%, 5.1% and 4.6%, respectively. However, working costs, in particular electricity costs and wages have increased at a rate higher than inflation in recent years, resulting in significant cost pressures for the mining industry. See "Operating and Financial Review and Prospects - Operating Results - Electricity in South Africa - Tariffs" [cr*oss reference to be confirmed*]. Should Harmony experience further electricity or wage increases, its business, operating results and financial condition may be adversely impacted.

The inflation rate in PNG ended fiscal 2016 at 6.4% and 2017 at 6.6%, while the annualized inflation stood at 6% at the end of fiscal 2018.

Harmony's profits and financial condition could be adversely affected when cost inflation is not offset by devaluation in operating currencies or an increase in the price of gold.

The occurrence of any of these events could adversely affect our results of operations and our financial condition.

The socio-economic framework in the regions in which Harmony operates may have an adverse effect on its operations and profits.

Harmony has operations in South Africa and PNG. As a result, changes to or instability in the economic or political environment in either of these countries or in neighboring countries could affect an investment in Harmony. These risks could include terrorism, civil unrest, nationalization, political instability, change in legislative, regulatory or fiscal frameworks, renegotiation or nullification of existing contracts, leases, permits or other agreements, restrictions on repatriation of earnings or capital and changes in laws and policy, as well as other unforeseeable risks.

In PNG, a mining legislative and tax regime review has been commissioned whereby various PNG government agencies are involved in the process. The legislation being reviewed includes the PNG Mining Act 1992, PNG Mining (Safety) Act 1977 and PNG Income Tax Act 1959, and applicable regulations. Mineral Policy and mining-specific sector policies including offshore mining policy, sustainable development policy, involuntary relocation policy and mine closure policy, and the PNG government's right to acquire an interest in a mine discovery, the percentage extent of such right and the consideration payable for it, are also being reviewed. The Chamber of Mines and Petroleum of PNG, as the representative industry body, has been collating information from industry participants regarding the review of current legislation and policy and engaging with the PNG government as part of the response to the governments mining legislation review.

Pursuant to the tax regime review, certain adverse changes to the fiscal regime were introduced with effect from January 1, 2017, with the main changes being the introduction of an Additional Profit Tax, the cessation of the double deduction allowance for exploration expenditure, and an increase in the rates of interest withholding and dividend withholding taxes. It is difficult to predict the future political, social and economic environment in these countries, or any other country in which Harmony operates, and the impact government decisions may have on its business.

Actual and potential shortages of production inputs and supply chain disruptions may affect Harmony's operations and profits.

Harmony's operational results may be affected by the availability and pricing of consumables such as fuel, chemical reagents, explosives, tires, steel and other essential production inputs. Issues with regards to availability of consumables may result from shortages, long lead times to deliver and supply chain disruptions, which could result in production delays and production shortfalls.

These shortages and delayed deliveries may also be experienced where industrial action affects Harmony's suppliers. These issues could also affect the pricing of the consumables, especially if shortages are experienced. The price of consumables may be substantially affected by changes in global supply and demand, along with natural disasters such as earthquakes, climate change, extreme weather conditions, governmental controls, industrial action and other factors. A sustained interruption to the supply of any of these consumables would require Harmony to find acceptable substitute suppliers and could require it to pay higher prices for such materials. A sustained interruption might also adversely affect Harmony's ability to pursue its development projects. Any significant increase in the prices of these consumables would increase operating costs and adversely affect profitability, which could adversely affect our results of operations and our financial condition.

Harmony's ability to service its debt will depend on its future financial performance and other factors.

Harmony's ability to service its debt depends on its financial performance, which in turn will be affected by its operating performance as well as by financial and other factors, and in particular the gold price, certain of which are beyond the control of the Company. Various financial and other factors may result in an increase in Harmony's indebtedness, which could adversely affect the Company in several respects, including:

- limiting its ability to access the capital markets;
- hindering its flexibility to plan for or react to changing market, industry or economic conditions;
- limiting the amount of cash flow available for future operations, acquisitions, dividends, or other uses, making it more vulnerable to economic or industry downturns, including interest rate increases;

- increasing the risk that it will need to sell assets, possibly on unfavorable terms, to meet payment obligations; or
- increasing the risk that it may not meet the financial covenants contained in its debt agreements or timely make all required debt payments.

The occurrence of any of these events could adversely affect our results of operations and our financial condition.

Harmony's ability to service its debt also depends on the amount of its indebtedness. In order to conclude the Moab Acquisition, Harmony increased its indebtedness. Harmony entered into a US$350 million three-year syndicated term and revolving facility in July 2017, of which US$325 million was drawn down and outstanding as of June 30, 2018. US$100 million of this amount was used to finance the Moab Acquisition. Harmony also entered into a US$200 million one-year syndicated bridge facility in October 2017, of which US$50 million was drawn down and outstanding as at the end of fiscal 2018, all of which was used to finance the Moab Acquisition. See Liquidity and Capital Resources - Outstanding Credit Facilities and Other Borrowings.

In the near-term, Harmony expects to manage its liquidity needs from cash generated by its operations, cash on hand, committed and underutilized facilities, as well as additional funding opportunities. However, if Harmony's cost of debt were to increase or if it were to encounter difficulties in obtaining financing in the future, its sources of funding may not match its financing needs, which could have a material adverse effect on its business, operating results and financial condition.

Mining companies face strong competition.

The mining industry is competitive in all of its phases. Harmony competes with other mining companies and individual for specialized equipment, components and supplies necessary for exploration and development, for mining claims and leases on exploration properties and for the acquisition of mining assets. These competitors may have greater financial resources, operational experience and technical capabilities than Harmony. Competition may increase Harmony's cost of acquiring suitable claims, properties and assets, which could have a material adverse effect on its financial condition.

We also compete with mining and other companies for key human resources.

The risk of losing senior management or being unable to hire and retain sufficient technically skilled employees or sufficient historically disadvantage South African ("**HDSA**") representation in management positions, may materially impact on Harmony's ability to achieve their objectives.

Harmony competes with mining and other companies globally to attract and retain key human resources at all levels with the appropriate technical skills and operating and managerial experience necessary to continue operating its business. The need to recruit, develop and retain skilled employees is particularly critical with **HDSA's**, women in mining in South Africa, and recruiting and training local landowners in PNG. The global shortage of key mining specialists, including geologists, mining engineers, mechanical and electrical engineers, metallurgists and skilled artisans has been exacerbated by increased mining activity across the globe. There can be no assurance that Harmony will attract and retain skilled and experienced employees. Should Harmony lose any of its key personnel, its business may be harmed and its operational results and financial condition could be adversely affected. See Item 4: "*Information on the Company-Business Overview-Regulation-Labor Relations*" and *"Integrated Annual Report for the 20-F 2018 - Ensuring employee well-being - maintaining stability in our workforce-employee engagement"* on pages 51 to 58.

Since Harmony's labor force has substantial trade union participation, Harmony faces the risk of disruption from labor disputes and non-procedural industrial action resulting in loss of production and increased labor costs impacting negatively on production and financial results.

Despite a history of constructive engagement with labor unions, there are periods when various stakeholders are unable to agree on dispute resolution processes. Disruptive activities on the part of labor, which normally differ in intensity, then become unavoidable. Due to the high level of union membership among our employees, we are at risk of production stoppages for indefinite periods due to strikes and other disputes, especially wildcat strikes. Inter-union rivalry may increase the risk of labor relations instability. In October 2015, Harmony concluded a three year wage agreement with unions representing the majority of the Company's employees. This agreement was extended to all employees irrespective of union affiliation. We are not able to predict whether we will experience significant labor disputes in future, or what the financial impact of any such disputes may be. See Item 4: "*Information on the Company-Business Overview-Regulation-Labor Relations*", *"Integrated Annual Report for the 20-F 2018-Ensuring employee well-being - maintaining stability in our workforce-employee engagement"* on pages 51 to 58. South African employment law sets out minimum terms and conditions of employment for employees. Although these may be improved by agreements between us and the trade unions, prescribed minimum terms and conditions form the benchmark for all employment contracts. See *"Integrated Annual Report for the 20-F 2018 - Operating context-Stakeholder engagement and material issues"* on pages 22 to 27.

We are required to submit a report under South African employment law detailing the progress made towards achieving employment equity in the workplace. If this report is not submitted, we could incur substantial penalties.

Developments in South African employment law may increase our cash costs of production or alter our relationship with our employees and trade unions, which may have an adverse effect on our business, operating results and financial condition.

In the event that Harmony experiences industrial relations related interruptions at any of its operations or in other industries that impact its operations, or increased employment-related costs due to union or employee activity, these may have a material adverse effect on our business, production levels, operating costs, production targets, operating results, financial condition, reputation and future prospects. In addition, mining conditions can deteriorate during extended periods without production, such as during and after strikes; lower levels of mining activity can have a longer term impact on production levels and operating costs, which may affect operating life.

HIV/AIDS, tuberculosis and other contagious diseases pose risks to us in terms of productivity and costs.

The prevalence of HIV/AIDS, and other contagious diseases in South Africa and PNG poses risks to us in terms of potentially reduced productivity, and increased medical and other costs. Compounding this are concomitant infections, such as tuberculosis, that can accompany HIV illness and cause additional health care-related costs. If there is a significant increase in the incidence of HIV/AIDS infection and related diseases among the workforce over the next several years, this may have an adverse impact on our results of operations and financial condition. See *"Integrated Annual Report for the 20-F 2018 - Ensuring employee well-being - maintaining stability in our workforce-Safety and health"* on pages 34 to 50.

The cost of occupational health care services and the potential liabilities related to occupational health diseases may increase in future and may be substantial.

Harmony's operations are subject to health and safety regulations which could impose significant cost burdens. In South Africa, the present Mine Health and Safety Act 29 of 1996 imposes various duties on mines and grants the authorities broad powers to, among others, close mines which are unsafe or hazardous to the health of persons and order corrective action on health and safety matters. Operations in PNG are subject to similar duties and powers, including under the following laws and regulations: PNG Mining Act 1992, PNG Mining (Safety) Act 1977, PNG Mining Safety Regulation 1935 (updated 2006) and PNG Environment Act 2000.

There is a risk that the cost of providing health services, complying with applicable regulations, including the Compensation for Occupational Injuries and Diseases Act 130 of 1993 ("**COIDA**") and the Occupational Diseases in Mines and Works Act 78 of 1973 ("**ODMWA**"), and implementing various programs could increase in future, depending on changes to underlying legislation, legal claims and the profile of our employees. This increased cost, should it transpire, could be substantial, but is currently indeterminate.

In addition, on May 13, 2016, the South Gauteng High Court certified a class action by current and former mineworkers against gold mining companies in South Africa, including Harmony. The action consists of two classes: the silicosis class and the tuberculosis "**TB**" class. Each class also includes dependents whose parents died after contracting silicosis and/or TB while working at the mines. While issues, such as negligence and causation, need to be proved by the claimant on a case-by-case basis, such a ruling could expose Harmony to claims related to occupational hazards and diseases (including silicosis and TB, which may be in the form of an individual claim, a class action or a similar group claim). The Supreme Court of Appeal granted the mining companies leave to appeal against all aspects of the class May 2016 judgment. The appeal hearing before the Supreme Court of Appeal was scheduled to be heard in March 2018. However, the parties agreed to postpone the matter to conclude settlement negotiations. The matter was subsequently settled on May 3, 2018. The terms of the settlement agreement are confidential. The settlement agreement must be made an order of court before it can be given effect to. Such an application to court will be brought within the near future. See *Item 8: "Financial Information-Consolidated Statements and Other Financial Information-Legal Proceedings"* and *"Integrated Annual Report for the 20-F 2018-Ensuring employee well-being - maintaining stability in our workforce-Safety and health"* on pages 34 to 50 for further information. See note 27 *"Provision for silicosis settlement*" to our consolidated financial statements set forth beginning on page F-1.

The Occupational Lung Disease Working Group ("**Working Group"**), was formed in fiscal 2014 to address issues relating to compensation and medical care for occupational lung disease in the South African gold mining industry. The Working Group, made up of ARM Limited, Anglo American SA, AngloGold Ashanti Limited, Gold Fields Limited, Harmony and Sibanye Gold Limited, has had extensive engagements with a wide range of stakeholders since its formation, including government, organized labor, other mining companies and the legal representatives of claimants who have filed legal actions against the companies.

The members of the Working Group are among respondent companies in a number of legal proceedings related to occupational lung disease, including the class action referred to above. The Working Group is however of the view that achieving a comprehensive settlement which is both fair to past, present and future employees and sustainable for the sector, is preferable to protracted litigation. The Working Group will continue with its efforts to find common ground with all stakeholders, including government, labor and the claimants' legal representatives.

As at June 30, 2018, as a result of the ongoing work of the Working Group and engagements with affected stakeholders since December 31, 2016, Harmony provided an amount of US$70 million in the statement of financial position for its share of the estimated cost in relation to the Working Group of a settlement of the class action claims and related costs. At June 30, 2018 the provision decreased by US$3 million as a result of changes in estimates, time value of money and the translation of Rand to US dollars. Harmony believes that this remains a reasonable estimate of its share of the estimated cost in relation to the Working Group of a possible settlement of the class action claims and related costs.

If Harmony or any of its subsidiaries were to face a significant number of such claims and the claims were suitably established against it, the payments of compensation to the claimants could have a material adverse effect on Harmony's results of operations and financial condition. In addition, Harmony may incur significant additional costs, including costs relating to the payment of fees, levies or other contributions in respect of compensatory or other funds established (if any), and expenditures arising out of its efforts to resolve any such claims or other potential action.

Harmony is subject to the imposition of various regulatory costs, such as mining taxes and royalties, changes to which may have a material adverse effect on Harmony's operations and profits.

In recent years, governments, communities, non-government organizations and trade unions in several jurisdictions have sought and, in some cases, have implemented greater cost imposts on the mining industry, including through the imposition of additional taxes and royalties. Such resource nationalism, whether in the form of cost imposts, interference in project management, mandatory social investment requirements, local content requirements or creeping expropriation could impact the global mining industry and Harmony's business, operating results and financial condition.

In December 2017, during its national conference, the African National Congress ("**ANC"**) resolved that as a matter of policy, the ANC should pursue the expropriation of land without compensation, provided that such expropriation is carried out without destabilizing the agricultural sector, endangering food security or undermining economic growth and job creation. In February 2018, the National Assembly assigned the Constitutional Review Committee ("**CRC"**), to review section 25 of South Africa's Constitution and other relevant clauses to make it possible for the state to expropriate land in the public interest without compensation. The CRC had a deadline of August 30, 2018 to report their findings to the National Assembly. At this stage, it is not clear what recommendations the CRC may make. In the event that the CRC recommends a Constitutional amendment in favor of expropriation, various procedural milestones would need to occur, including a bill amending section 25 of the Constitution approved by a majority of the National Assembly as well as six of the nine provinces of the National Council of Provinces ("**NCOP**") and signed by the President, among others.

While the South African government has stated that it does not intend to nationalize mining assets or mining companies, certain political parties have stated publicly and in the media that the government should embark on a program of nationalization. For instance, the ANC has adopted two recommended approaches to interacting with the mining industry. While the ANC has rejected the possibility of mine nationalization for now, the first approach contemplates, among other things, greater state intervention in the mining industry, including the revision of existing royalties, the imposition of new taxes and an increase in the South African government's holdings in mining companies. The second approach contemplates the South African government taking a more active role in the mining sector, including through the introduction of a state mining company to be involved in new projects either through partnerships or individually.

The adopted policies may impose additional restrictions, obligations, operational costs, taxes or royalty payments on gold mining companies, including Harmony, any of which could have a material adverse effect on our business, operating results and financial condition.

The former President, Jacob Zuma, appointed the Davis Tax Committee to look into and review the current mining tax regime. The committee's first interim report on mining, which was released for public comment on August 13, 2015, proposed no changes to the royalty regime but recommended the discontinuation of the upfront capital expenditure write-off regime in favor of an accelerated capital expenditure depreciation regime. In addition, the report recommended retaining the so called "gold formula" for existing gold mines only, as new gold mines would be unlikely to be established in circumstances where profits are marginal or where gold mines would conduct mining of the type intended to be encouraged by the formula. The committee also recommended the phasing out of additional capital allowances available to gold mines in order to bring the gold mining corporate income tax regime in line with the tax system applicable to all taxpayers. In December 2016, following a period of public comment, the committee issued its second and final report to the Minister of Finance, which largely reaffirmed the committee's initial recommendations. The final reports were published in November 2017. The South African National Treasury will continue to consider the committee's final recommendations. It is not clear at this stage which, if any, of the recommendations will be adopted as legislation. Such legislation could, however, have a material adverse effect on our results of operations.

Laws governing mineral rights affect our business and could impose significant costs and burdens. Mineral rights in the countries in which we operate could be altered, suspended or canceled for a variety of reasons, including breaches in its obligations in respect of such mining rights.

Our operations in South Africa and PNG are subject to legislation regulating mineral rights. Certain of the Company's properties may be subject to the rights or the asserted rights of various community stakeholders, including indigenous people. The presence of those stakeholders may therefore have an impact on Harmony's ability to develop or operate its mining interests.

In South Africa, we are governed by the South African Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) ("**MPRDA**"). See Item 4: "*Information on the Company -Business Overview-Regulation-Mineral Rights - South Africa - MPRDA"* for a description of the principal objectives set out in the MPRDA.

The MPRDA was promulgated as effective legislation on May 1, 2004 and sought to transfer ownership of mineral resources to the South African people, with the South African government acting as custodian in order to, among other things, promote equitable access to the nation's mineral resources by South Africans, expand opportunities to HSDAs who wish to participate in the South African mining industry and advance socio-economic development. We currently continue to comply with the requirements of the MPRDA. Any failure to comply with the conditions of our mining rights, whether intentional or unintentional, could have a material adverse effect on our operations and financial condition and could result in the cancellation or suspension of our mining rights.

On June 21, 2013, the Minister introduced the Mineral and Petroleum Resources Development Amendment Bill, 2013 (the **"MPRDA Bill**") into Parliament. The South African Department of Mineral Resources ("**DMR**") briefed the National Assembly's Portfolio Committee on Mineral Resources in July 2013. The MPRDA Bill was passed by both the National Assembly and the NCOP on March 27, 2014. In January 2015, the former President, Jacob Zuma, referred the MPRDA Bill back to Parliament for reconsideration and on November 1, 2016, the Portfolio Committee on Mineral Resources tabled non-substantial revisions to the MPRDA Bill in the National Assembly and a slightly revised version of the MPRDA Bill was passed by the National Assembly and referred to the NCOP. On March 3, 2017, the National Assembly passed certain minor amendments to the MPRDA Bill. The National Assembly has referred the MPRDA Bill to the NCOP where the Select Committee has received comments on the draft legislation. The chairperson of the Select Committee had targeted January or February of 2018 to pass the legislation. On February 16, 2018, the President of South Africa, Cyril Ramaphosa, announced that the MPRDA Bill was at an advanced stage in Parliament. However, in August 2018, the Minister announced that, given the issues with the MPRDA Bill, his recommendation would be to withdraw it entirely. Cabinet has subsequently supported its withdrawal but Parliament has yet to formally withdraw it.

There is a large degree of uncertainty regarding the changes that will be brought about should the MPRDA Bill not be withdrawn and if it is made law. Among other things, the MPRDA Bill provides that applicants will no longer be able to rely on the 'first come, first served' principle when submitting an application for a right, it seeks to require the consent of the Minister for the transfer of any interest in an unlisted company or any controlling interest in a listed company where such companies hold a prospecting right or mining right and to give the Minister broad discretionary powers to prescribe the levels of minerals required to be offered to domestic beneficiators for beneficiation. We cannot yet determine the full impact that the MPRDA Bill may have on our business and there can be no assurance that such changes will not have a material adverse effect on our operations and financial condition.

On September 27, 2018, the Minister published the Broad-Based Socio-Economic Empowerment Charter for the Mining and Minerals Industry, 2018 ("**Mining Charter III**"), on which date it also become effective. It replaces, in their entirety, the original Mining Charter negotiated in 2002 and gazetted in 2004 (the **"Original Charter**") and the "amended" Charter gazetted in September 2010 (the **"Amended Charter**"). Mining Charter III imposes new obligations and increased participation by Historically Disadvantaged South Africans ("**HDSAs**") in relation to a mining company's ownership, procurement of goods and services, enterprise and supplier development, human resource development and employment equity requirements.

While the HDSA ownership requirement in relation to existing mining rights has not increased (provided that Harmony met the 26 percent requirement under the Amended Charter), Harmony may be required to comply with new HDSA ownership requirements in relation to any renewals, consolidations and transfers of its existing rights and any applications for new mining rights.   The increased HDSA requirements in relation to employment equity, procurement of goods and services and enterprise and supplier development may result in additional costs being incurred by Harmony, which could have a material adverse effect on our results of operations and financial condition.

Mining Charter III has only recently been published and many of its provisions are vague and untested. Furthermore, the Minister must still publish guidelines in relation to the implementation of its provisions. See Item 4: "Information on the Company - Business Overview -Regulation - Mineral Rights - South Africa - The Mining Charter".

Should Harmony breach its obligations in complying with the MPRDA or Mining Charter III, its existing mining rights in South Africa could be suspended or canceled by the Minister in accordance with the provisions of the MPRDA. It may also influence the Company’s ability to obtain any new mining rights. Any such suspension or cancellation could have a material adverse effect on the results of operations as well as the Company’s financial condition.

In PNG, we are governed by the PNG Mining Act of 1992. Minerals in PNG are owned by the PNG government. PNG initially awards exploration licenses, but retains a right under the conditions of each exploration license, at any time prior to the commencement of mining, to acquire a participating interest of up to 30% in any mineral discovery at historical exploration cost. The PNG government administers mining tenements through the offices of the PNG Mineral Resources Authority. The types of tenements issued include: exploration license; mining lease; special mining lease; alluvial mining lease; lease for mining purpose; and mining easement. Mining companies must pay royalties to the PNG government based on production (currently 2%).

The PNG permitting process for new mining operations can be very time consuming (approximately 18 to 24 months), and (subject to the applicable legislation) there is no assurance that a mining tenement will be granted.

The PNG government has commissioned a review of the mining regime, including the PNG government's right to acquire an interest in a mine discovery, the percentage extent of such right and the consideration payable for it. The Chamber of Mines and Petroleum of PNG, as the representative industry body, has been collating information from industry participants and engaging with the PNG government as part of the industry’s response to the review proposals.

Any change to the PNG mining regime may result in the imposition of additional restrictions, obligations, operational costs, taxes or royalty payments could have a material adverse effect on Harmony's business, operating results and financial condition.

Laws governing health and safety affect our business and could impose significant costs and burdens.

In South Africa, the Mine Health and Safety Act 29 of 1996 ("**MHSA**") requires that employers take and implement various measures to ensure the safety and health of persons working at a mine. This obligation is extended to any contractor employees that may be working at a mine. These obligations include the identification and assessment of risk, implementation of codes of practice and standards setting out safe work procedures, proper and appropriate training, supervision, medical surveillance and the provision of safe equipment and personal protective equipment. Further, Harmony must ensure compliance with various licenses, permissions or consents that have been issued to it in terms of the various pieces of applicable legislation.

An employer may be subjected to significant penalties and/or administrative fines for non-compliance under the MHSA and other health and safety legislation. Depending on the particular circumstances, litigation (criminal and/or civil) may be instituted against the employer in respect of an accident or incident which has resulted in the injury, death or occupational disease contracted by an employee (or contractor employee). In addition, in some of the jurisdictions in which Harmony operates, the government enforces compulsory shutdowns of operations to enable investigations into the cause of accidents. Certain of our operations have been temporarily suspended for safety reasons in the past. Such shutdowns or suspensions, if of sufficient magnitude, could have a material adverse effect on our business, operating results or financial condition.

Any further changes to the health and safety laws which increase the burden of compliance on the employer and impose higher penalties for non-compliance may result in incurring further significant costs, which could have a material adverse effect on our business, operating results and financial condition. In addition, our reputation could be damaged by any significant governmental investigation or enforcement of health and safety laws, regulations or standards, which could also have a material adverse effect on our business, operating results and financial condition.

In PNG, the safety of employees and contractors at Harmony's mining operations is regulated by the PNG Mining (Safety) Act 1977 and the Regulations issued thereunder. In terms of section 6(1)(e)(i) of the Act, the inspector has the power to order the cessation of any part of the operations for such (unlimited) time as he or she considers may be necessary to satisfy the safety provisions of the Act. Such order for cessation can often result in lower or a total stoppage of production resulting in significant financial losses during the cessation.

We are subject to extensive environmental regulations.

As a gold mining company, Harmony is subject to extensive environmental regulation. We expect the trend of rising production costs due to compliance with South African and PNG environmental laws and regulations to continue.

In South Africa, the MPRDA, certain other environmental legislation and the administrative policies of the South African government regulate the impact of the Company's prospecting and mining operations on the environment. On the suspension, cancellation, termination or lapsing of a prospecting or mining right, Harmony will remain liable for compliance with the provisions of various relevant regulations, including any latent significant environmental impacts manifesting post-closure, notwithstanding the issuance of a closure certificate is issued by the DMR. This liability will continue until the appropriate authorities have (i) certified that the Company has complied with such provisions or (ii) authorized the transfer of liability to a competent party.

Estimates of ultimate closure and rehabilitation costs are significant and are based principally on current legal and regulatory requirements that may change materially. Environmental provisions are accrued when they become known, probable and can be reasonably estimated based on current contractor rates and in some instances based on industry good practice. In future, Harmony may incur significant costs for compliance with increasingly stringent requirements being imposed under new legislation. Harmony may also face increased environmental costs should other mines in the vicinity fail to meet their obligations on the pumping or treatment of water.

The South African government has reviewed requirements imposed on mining companies to ensure environmental restitution. For example, following the introduction of an environmental rights clause in South Africa's constitution, a number of environmental legislative reform processes have been initiated. Legislation passed as a result of these initiatives has tended to be materially more onerous than previous laws in South Africa. Examples of such legislation include the MPRDA, the National Nuclear Regulator Act 1999, the National Water Act 1998 ("**NWA**") and the National Environmental Management Act 1998 ("**NEMA**"), which include stringent 'polluter pays' provisions. The adoption of these or additional or more comprehensive and stringent requirements, particularly for the management of hazardous waste, pollution of ground and groundwater systems and duty to rehabilitate closed mines, may result in additional costs and liabilities. The "financial provision" regulations under NEMA, which were originally published in November 2015, have subsequently been updated with a new set of draft regulations published in November 2017 for public comment ("**2017 draft regulations**"). These regulations place an emphasis on post-closure water pumping and treatment and the need for upfront provision to be set aside for the management of these types of impacts. Under the 2017 draft regulations, Harmony estimates that it may be subject to an increase in the financial provision set aside for mine rehabilitation anywhere between 18% – 43%. Harmony believes that it will realize an additional liability of $1.37 million for the final closure solution to close the KOSH basin safely and sustainably. Existing mines are also required to comply with the financial provision requirement, and are required to substantively review and align their financial provision in accordance with these regulations during the relevant transitional period, the long–stop date of which currently expires on February 20, 2019, after negotiations with the regulator, the implementation date has been deferred to February, 2020.

Harmony's PNG operations are subject to the PNG Environment Act 2000, which governs the environmental permitting and regulatory aspects of mining projects. An environmental impact statement is required when projects are likely to have a significant adverse impact on the environment. This statement must be lodged with the PNG Conservation and Environment Protection Authority where, for large projects, it may be forwarded to the PNG Environment Council for review. Public consultation is an integral part of this review.

Compliance with existing or new environmental legislation, which increases the burden of compliance or the penalties for non-compliance may cause Harmony to incur further significant costs and could have a material adverse effect on our business, operating results and financial condition.

See "*Integrated Annual Report for the 20-F 2018-Managing our Social and Environmental Impacts-Environmental management and stewardship*" on pages 68 to 87 for further discussion on the applicable legislation and our policies on environmental matters.

We face public scrutiny and are under pressure to demonstrate that we pursue sustainable development that benefits the communities and countries in which they operate.

As a result of public concern about the perceived ill effects of economic globalization, businesses in general and large international companies such as Harmony, in particular, face increasing public scrutiny of their activities.

Like other mining companies, Harmony is under pressure to demonstrate that while it seeks a satisfactory return on investment for shareholders, other stakeholders including employees, communities surrounding the operations and the countries in which they operate, also benefit from their commercial activities. Such pressures tend to be particularly focused on companies whose activities are perceived to have a high impact on their social and physical environment. The potential consequences of these pressures include reputational damage, legal suits and social spending obligations.

Existing and proposed mining operations are often located at or near existing towns and villages, natural water courses and other infrastructure. Mining operations must therefore be designed to mitigate and/or manage their impact on such communities and the environment.

At our PNG operations, we are required under the PNG Mining Act of 1992 to pay landowners regulated levels of compensation for any adverse impact the mining operation may have. In addition, under a negotiated memorandum of agreement, the government of PNG distributes to landowner groups an agreed share of the royalties paid to the PNG government in respect of our mining operation.

All new mining leases are subject to agreed national content and social performance plans addressing various aspects of employment and other community support.

The cost of implementing these and other measures to support sustainable development could increase capital expenditure and operating costs and therefore impact Harmony's operational results and financial condition.

Compliance with emerging climate change regulations could result in significant costs for Harmony, and climate change may present physical risks to our operations.

GHGs are emitted directly by Harmony's operations and indirectly as a result of consuming electricity generated by external utilities. Emissions from electricity consumption are indirectly attributable to Harmony's operations. There are currently a number of international and national measures to address or limit GHG emissions, including the Kyoto Protocol, the Copenhagen Accord and the Paris Agreement in various phases of discussion or implementation.

As of October 5, 2016, enough contracting parties to the Paris Agreement ratified the agreement for it to take legal effect. South Africa ratified the Paris Agreement on April 22, 2016. PNG ratified the Paris Agreement on September 21, 2016.

In line with this aim, the country's key carbon-emitting sectors, including energy and transport, had until end 2015 to finalize 'carbon budgets' and appropriate strategies to support these targets. Adopting a carbon budget model reflects government's acceptance of the relative energy and carbon intensity of the economy and the need to create the setting required for industries to make the transition to a more carbon-constrained environment.

In November 2015, the draft Carbon Tax Bill was published for public consultation - the draft bill anticipated that the carbon tax will be implemented on January 1, 2017. At the time of its publication, it was believed the draft Carbon Tax Bill would take effect by January 2017, however this timeline has since been moved to January 2019. In addition, the Department of Environmental Affairs published the Climate Change Bill, dated June 8, 2018, for public consultation in response to the international commitments made under the Paris Agreement. It aims to address climate change in the long-term by aiming for a climate resilient and low carbon economy in South Africa. At this time it is not possible to determine the ultimate impact of the proposed carbon tax on the Company. Nevertheless, Harmony has set its internal carbon price (for the South African operations) to match that of the proposed carbon tax. Harmony is at risk due to potential pass through costs from its suppliers in the short term from increased fuel prices. As the draft bill stands, carbon tax on liquid fuels will be imposed at the source. It is estimated that the increased fuel price would be R0.13/liter. This will have an impact on Harmony's operational expenses.

The Minister of Environmental Affairs noted that government would actively consult with industry on developing carbon budgets to identify an "optimal combination" of mitigation actions to strike a balance between South Africa's socio-economic imperatives, especially creating and preserving jobs, as well as the need to manage climate change impacts and contribute to global efforts to stabilize GHG concentrations.

From a medium and long-term perspective, we are likely to see an increase in costs relating to our energy-intensive assets and assets that emit significant amounts of GHG as a result of regulatory initiatives in South Africa. These regulatory initiatives will be either voluntary or mandatory and may impact our operations directly or by affecting our suppliers or customers. These costs may include, among others, emission measurement and reduction, audit processes and human resource costs. Non-compliance with statutory initiatives may result in monetary liabilities. Insurance premiums may increase and our position relative to industry competitors may change. Assessments of the potential impact of future climate change regulation are still uncertain, given the wide scope of potential regulatory change in South Africa.

PNG's national office of climate change and environmental sustainability is studying the potential for future economic growth to be driven by renewable energy. PNG has adopted a climate change policy but implementation actions to date are very limited. The implications of the climate change policy on Harmony's operations in PNG have not yet been established but are not expected to have significant impacts.

The largest portion of GHG emissions is predominantly electricity-related, with electricity expenditure amounting to approximately 15% of Harmony's cash costs in South Africa. While cost management is clearly a strategic issue for Harmony, of even greater importance is that energy supply be constant and reliable, given the implications of loss of energy on both production and health and safety. GHG emissions regulations, which would increase the price of energy, will affect Harmony significantly, as will regulation that stipulates emission thresholds, or sets technology standards that may result in insecure energy supply. Already certain compliance costs from power suppliers are being passed on to the Group in the form of price increases. For instance, in South Africa since 2009, Harmony has paid a levy of R0.02 - R0.035 per kilowatt hour for electricity generated by fossil fuels. In the 2015 budget speech the Minister of Finance proposed an increase in the electricity levy by an additional R0.02 per kilowatt hour. There has not been any further proposal since. The implementation of the proposed increase in the electricity levy is still to be determined. These levies may increase over time and additional levies may be introduced in future in South Africa or PNG, which could result in a significant increase in our costs.

In addition, Harmony's operations could be exposed to a number of physical risks from climate change, such as changes in rainfall rates, rising sea levels, reduced water availability, higher temperatures and extreme weather events.

Events or conditions such as flooding or inadequate water supplies could disrupt our mining and transport operations, mineral processing and rehabilitation efforts, create resource or energy shortages or damage our property or equipment and increase health and safety risks on site. Such events or conditions could have other adverse effects on our workforce and on the communities around our mines, such as an increased risk of food insecurity, water scarcity and prevalence of disease, all of which could have a material adverse effect on our results of operations and financial condition.

See *"Integrated Annual Report for the 20-F 2018 -Managing our Social and Environmental Impacts- Environmental management and stewardship"* on pages 68 to 87 for disclosure regarding our GHG emissions.

Our operations in South Africa are subject to water use licenses, which could impose significant costs.

Under South African law, Harmony's local operations are subject to water use licenses that govern each operation's water use. These licenses require, among other things, that mining operations achieve and maintain certain water quality limits for all water discharges, where these apply. Our South African operations are lawful users with existing water permits in terms of the Water Act of 1954 with some having been issued new order water use licenses. Nevertheless, the South African operations have applied to the relevant regional directors for water use licenses in terms of the NWA. Submissions were made as early as 2003 and Harmony has been working closely with the regional directors in the review process. A few operations have been issued with draft licenses for review and iteration. Kusasalethu and Kalgold received their water use licenses, subject to certain onerous conditions, which we have applied to be amended and are hopeful will be amended in our favor. For the remaining licenses we anticipate that the conditions of the licenses may require Harmony to consider and implement alternate water management measures that may have a significant cost implication for our business. We intend to work collaboratively with the regional departments to reach an amicable outcome that is in the best interest of the licensee and the national water resource, as any failure on Harmony's part to achieve or maintain compliance with the requirements of these licenses for any of its operations may result in Harmony being subject to penalties, fees and expenses or business interruption due to revoked water licenses. Any of these could have a material effect on our business, operating results and financial condition.

There is a possibility of the South African National Treasury and Department of Water and Sanitation instituting an environmental levy for the management of acid mine drainage ("**AMD**") in future. AMD is a common occurrence on the gold mines of the Witwatersrand Basin. AMD is caused by the exposure of sulfide-rich ore to oxygen and water during the processes of mining, crushing, mineral recovery, and storage of the various waste streams. Any such environmental levy could have a material effect on our business, operating results and financial condition. In addition, the occurrence of AMD at any of Harmony's mines could affect its ability to comply with its water use license requirements.

See *"Integrated Annual Report for the 20-F 2018 -Managing our Social and Environmental Impacts- Environmental management and stewardship"* on pages 68 to 87.

We may have exposure to rehabilitate potential groundwater pollution, which may include salination, and radiation contamination that may exist where we have operated or continue to operate.

Due to the interconnected nature of mining operations at Doornkop and Kusasalethu, any proposed solution for potential flooding and decant risk posed by deep groundwater needs to comprise a regional solution supported by all mines located in the goldfields and the government in the event of legacy issues. As a result, the DMR and affected mining companies are involved in developing a regional mine closure strategy. In view of limited current information, no reliable estimate can be made for any possible obligations or liabilities for the Company, which could be material and have an adverse impact on Harmony's financial condition. The "financial provision" regulations under NEMA published in November 2015 and the 2017 draft regulations are also likely to affect the amount of financial provision which is set aside for rehabilitation of the mine. These regulations place an emphasis on post-closure water pumping and treatment and the need for upfront provision to be set aside for the management of these types of impacts. No provision for any potential liability has been made in the financial statements. If substantial costs are required to be incurred, this could have a material adverse effect on our results of operations and financial condition.

See *"Integrated Annual Report for the 20-F 2018 -Managing our Social and Environmental Impacts- Environmental management and stewardship"* on pages 68 to 87.

The use of contractors at certain of the Company's operations may expose Harmony to delays or suspensions in mining activities and increases in mining costs.

Harmony uses contractors at certain of its operations to mine and deliver ore to processing plants as well as for other purposes. At mines employing mining contractors, contracting costs represent a significant proportion of the total operating costs of these operations and the Company does not own all of the mining equipment.

Harmony's operations could be disrupted, resulting in additional costs and liabilities, if the mining contractors at affected mines have financial difficulties, if a dispute arises in renegotiating a contract, or if there is a delay in replacing an existing contractor and its operating equipment to meet business needs at expected cost levels. Increases in contract mining rates, in the absence of associated productivity increases, will also have an adverse impact on the Company's results of operations and financial condition.

In addition, Harmony's reduced control over those aspects of operations which are the responsibility of contractors, their failure to comply with applicable legal, human rights and regulatory requirements, or their inability to manage their workforce or provide high quality services or a high level of productivity could adversely affect Harmony's reputation, results of operations and financial condition, and may result in the Company incurring liability to third parties due to the actions of contractors, which could have a material adverse effect on Harmony's business, operating results and financial condition.

Our jointly-controlled assets may not comply with our standards.

Harmony does not have full management control over some of its assets, which are controlled and managed by joint venture participants in accordance with the provisions of their joint venture arrangements. The control environment of these assets may not align with our management and operating standards, controls and procedures. Failure to adopt equivalent standards, controls and procedures could lead to higher costs and reduced production, which could adversely affect our results of operations and reputation.

Harmony is subject to the risk of litigation, the causes and costs of which are not always known.

Harmony is subject to litigation, arbitration and other legal proceedings arising in the normal course of business and may be involved in disputes that may result in litigation. The causes of potential future litigation cannot be known and may arise from, among other things, business activities, environmental and health and safety concerns, share price volatility or failure to comply with disclosure obligations. The results of litigation cannot be predicted with certainty but could include costly damage awards or settlements, fines, and the loss of licenses, concessions, or rights, among other things.

In the event of a dispute, Harmony may be subject to the exclusive jurisdiction of foreign courts or may not be successful in subjecting foreign persons to the jurisdiction of courts in South Africa. An adverse or arbitrary decision of a foreign court could have a material adverse impact on Harmony's financial performance, cash flow and results of operations.

Harmony is subject to numerous claims, including class actions or similar group claims relating to silicosis and other occupational health diseases, and could be subject to similar claims in the future. Settlement negotiations in the silicosis class action claims have reached an advanced stage and a provision for silicosis has been made. A provision of US$70 million was recognized during fiscal 2017 for Harmony’s potential cost to settle the silicosis and tuberculosis class actions that have been instituted against it in South Africa. During fiscal 2018 the provision decreased by US$3 million as a result of changes in estimates, time value of money and the translation from Rand to US dollars. Significant judgment was applied in estimating the costs that will be incurred to settle the silicosis class action claims and related expenditure and the final costs may differ from current cost estimates. Management believes the assumptions are appropriate, however changes in the assumptions may materially affect the provision and final costs of settlement. There can be no assurance that the ultimate resolution of this matter will not result in losses in excess of the recorded provision and the ultimate settlement may have a material adverse effect on Harmony’s financial position. For further information, see Item 8: "Financial Information-Consolidated Statements and Other Financial Information-Legal Proceedings" and "Integrated Annual Report for the 20-F 2018-*Ensuring employee safety and well-being-maintaining stability in our workplace-Safety and health*" on pages 34 to 50 for further information. See note 27"Provision for silicosis settlement" to our consolidated financial statements set forth beginning on page F-1.

It is possible that additional class actions and/or individual claims relating to silicosis and/or other occupational health diseases will be filed against Harmony in the future. Harmony will defend all and any subsequent claims as filed on their merits. Should Harmony be unsuccessful in defending any such claims, or in otherwise favorably resolving perceived deficiencies in the national occupational disease compensation framework that were identified in the earlier decision by the Constitutional Court, such matters would have an adverse effect on its financial position, which could be material.

Should Harmony be unable to resolve disputes favorably or to enforce its rights, this may have a material adverse impact on our financial performance, cash flow and results of operations.

Breaches in our information technology security processes and violations of data protection laws may adversely impact the conduct of our business activities (national and international).

Harmony maintains global information technology (“**IT**”) and communication networks and applications to support our business activities. Our extensive IT infrastructure and network may experience service outages that may adversely impact the conduct of our business activities. This includes potential cyber-attacks and disruptive technologies. The information security management system (“**ISMS**”) protecting Harmony’s IT infrastructure and network may not prevent future malicious action, including denial-of-service attacks, or fraud by individuals, groups or organizations resulting in the corruption of operating systems, theft of commercially sensitive data, including commercial price outlooks, mergers and acquisitions and divestment transactions, misappropriation of funds and disruptions to our business operations, the occurrence of any of which could have a material adverse effect on our business and results of operations.

The interpretation and application of consumer and data protection laws in South Africa, the United States and elsewhere are uncertain and evolving. It is possible that these laws may be interpreted and applied in a manner that is inconsistent with Harmony’s data practices. Complying with these various laws is difficult and could cause the company to incur substantial costs or require it to change its business practices in a manner adverse to its business For example, on May 25, 2018 the General Data Protection Regulation ("**GDPR**") came into force. The GDPR is an EU-wide framework for the protection of personal data of EU based individuals. The GDPR enhances existing legal requirements through several new rules, including stronger rights for data subjects and mandatory data breach notification requirements, and increases penalties for non-compliance. Failure to comply with the GDPR may lead to a fine of up to four percent of a company’s worldwide turnover or up to Euro 20 million.

Investors in the United States may have difficulty bringing actions, and enforcing judgments, against us, our directors and our executive officers based on the civil liabilities provisions of the federal securities laws or other laws of the United States or any state thereof.

We are incorporated in South Africa. Each of our directors and executive officers (and our independent registered public accounting firm) resides outside the United States. Substantially all of the assets of these persons and substantially all our assets are located outside the United States. As a result, it may not be possible for investors to enforce a judgment against these persons or ourselves obtained in a court of the United States predicated upon the civil liability provisions of the federal securities or other laws of the United States or any state thereof. A foreign judgment is not directly enforceable in South Africa, but constitutes a cause of action which may be enforced by South African courts provided that:

- the court that pronounced the judgment had jurisdiction to entertain the case according to the principles recognized by South African law with reference to the jurisdiction of foreign courts;
- the judgment is final and conclusive;
- the judgment has not lapsed;
- the recognition and enforcement of the judgment by South African courts would not be contrary to public policy, including observance of the rules of natural justice which require that the documents initiating the United States proceeding were properly served on the defendant and that the defendant was given the right to be heard and represented by counsel in a free and fair trial before an impartial tribunal;
- the judgment does not involve the enforcement of a penal or revenue law; and
- the enforcement of the judgment is not otherwise precluded by the provisions of the Protection of Business Act 99 of 1978, as amended, of the Republic of South Africa.

Compliance with new and changing corporate governance and public disclosure requirements adds uncertainty to our compliance policies and increases our costs of compliance.

Laws, regulations and standards relating to accounting, corporate governance and public disclosure, “conflict minerals” and “responsible” gold, new SEC regulations and other listing regulations applicable to us are subject to change and can create uncertainty for companies like us. New or changed laws, regulations and standards could lack specificity or be subject to varying interpretations. Their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty on compliance matters and higher costs of compliance as a result of ongoing revisions to such governance standards.

In terms of Section 404 of the Sarbanes-Oxley Act of 2002 (the “**Sarbanes-Oxley Act**”), we are required to furnish a report by our management on our internal control over financial reporting. The report in this annual report contains, among other matters, an assessment of the effectiveness of our internal control over financial reporting as of the end of the fiscal year, including a statement as to whether or not our internal controls over financial reporting are effective. If we fail to maintain the adequacy of our internal controls, we may not be able to ensure that we can conclude on an ongoing basis that we have effective internal control over financial reporting in accordance with the Sarbanes-Oxley Act. The requirement to evaluate and report on our internal controls also applies to companies that we may acquire and therefore, this assessment may be complicated by any future acquisitions. While we continue to dedicate resources and management time to ensuring that we have effective controls over financial reporting, failure to achieve and maintain an effective internal control environment could have a material adverse effect on the market’s perception of our business and our stock price. See Item 15: *“Controls and Procedures”* for management’s assessment as of June 30, 2018. In addition to management’s assessment of internal controls over financial reporting, we are required to have our independent registered public accounting firm publicly disclose their conclusions regarding the effectiveness of Harmony’s internal controls over financial reporting.

We are committed to maintaining high standards of corporate governance and public disclosure, and our efforts to comply with evolving laws, regulations and standards in this regard have resulted in, and are likely to continue to result in, increased general and administrative expenses.

Failure to comply with laws, regulations, standards, contractual obligations whether following a breach or breaches in governance processes or fraud, bribery and corruption may lead to regulatory penalties, loss of licenses or permits, negative effects on our reported financial results, and adversely affect our reputation.

Harmony operates in multiple jurisdictions, including those with less developed political and regulatory environments, and within numerous and complex frameworks. Our governance and compliance processes may not prevent potential breaches of law, accounting principles or other governance practices.

Harmony’s Code of Conduct and Behavioral Code, among other policies, standards and guidance, and training thereon may not prevent instances of unethical or unlawful behavior, including bribery or corruption, nor do they guarantee compliance with legal and regulatory requirements, and breaches may not be detected by management.

Sanctions for failure by the Company or others acting on its behalf to comply with these laws, regulations, standards and contractual obligations could include fines, penalties, imprisonment of officers, litigation, and loss of operating licenses or permits, suspensions of operations, negative effects on Harmony’s reported financial results and may damage the Company’s reputation. Such sanctions could have a material adverse impact on the Company’s financial condition and results of operations.

Compliance with "conflict minerals" and "responsible" legislation and standards could result in significant costs.

Stringent standards relating to "conflict minerals" and "responsible" gold that include the US Dodd-Frank Act of 2010, the European proposal for self-certification for importers of gold, the Organization for Economic Cooperation and Development Due Diligence Guidelines for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, the World Gold Council Conflict Free Gold Standard and the London Bullion Market Association Responsible Gold Guidance have been introduced.

Any such legislation and standards may result in significant costs to ensure and demonstrate compliance (particularly where standards change rapidly or lack certainty due to court challenges), and may complicate the sale of gold emanating from certain areas. The complexities of the gold supply chain, especially as they relate to "scrap"or recycled gold, and the fragmented and often unregulated supply of artisanal and small-scale mined gold are such that there may be significant uncertainties at each stage in the chain as to the provenance of the gold. As a result of the uncertainties in the process, the costs of due diligence and audit, or the reputational risks of defining their product or a constituent part as containing a "conflict mineral" may be too burdensome for the company's customers. Accordingly, manufacturers may decide to switch supply sources or to substitute gold with other minerals not covered by the initiatives. This could have a material negative impact on the gold industry, including on our results of operations and financial condition.

Investors may face liquidity risk in trading our ordinary shares on the JSE Limited.

The primary listing of our ordinary shares is on the JSE Limited. Historically, the trading volumes and liquidity of shares listed on the JSE have been low relative to other major markets. The ability of a holder to sell a substantial number of our ordinary shares on the JSE in a timely manner, especially in a large block trade, may be restricted by this limited liquidity. See Item 9: *"The Offer and Listing-Listing Details-The Securities Exchange in South Africa."*

Sales of large quantities of our ordinary shares and ADSs, or the perception that these sales may occur, could adversely affect the prevailing market price of such securities.

The market price of our ordinary shares or ADSs could fall if large quantities of ordinary shares or ADSs are sold in the public market, or there is a perception in the marketplace that such sales could occur. Subject to applicable securities laws, holders of our ordinary shares or ADSs may decide to sell them at any time. The market price of our ordinary shares or ADSs could also fall as a result of any future offerings it makes of ordinary shares, ADSs or securities exchangeable or exercisable for its ordinary shares or ADSs, or the perception in the marketplace that these sales might occur. We may make such offerings of additional ADS rights, letters of allocation or similar securities from time to time in the future.

Shareholders outside South Africa may not be able to participate in future issues of securities (including ordinary shares) carried out by or on behalf of Harmony.

Securities laws of certain jurisdictions may restrict Harmony's ability to allow participation by certain shareholders in future issues of securities (including ordinary shares) carried out by or on behalf of Harmony. In particular, holders of Harmony securities who are located in the United States (including those who hold ordinary shares or ADSs) may not be able to participate in securities offerings by or on behalf of Harmony unless a registration statement under the Securities Act is effective with respect to such securities or an exemption from the registration requirements of the Securities Act is available. Securities laws of certain other jurisdictions may also restrict Harmony's ability to allow the participation of all holders in such jurisdictions in future issues of securities carried out by Harmony. Holders who have a registered address or are resident in, or who are citizens of, countries other than South Africa should consult their professional advisors as to whether they require any governmental or other consents or approvals or need to observe any other formalities to enable them to participate in any offering of Harmony securities.

US securities laws do not require Harmony to disclose as much information to investors as a US issuer is required to disclose, and investors may receive less information about the company than they might otherwise receive from a comparable US company.

Harmony is subject to the periodic reporting requirements of the SEC and the NYSE that apply to "foreign private issuers". The periodic disclosure required of foreign private issuers under applicable rules is more limited than the periodic disclosure required of US issuers. Investors may receive less timely financial reports than they otherwise might receive from a comparable US company or from certain of the Company's peers in the industry. This may have an adverse impact on investors' abilities to make decisions about their investment in Harmony.

The liquidity and price of our ADSs, and our ability to raise capital, may be negatively impacted if our ADSs are delisted from the NYSE and by the measures that we take to address non-compliance with the NYSE continued listing standards.

Our ADSs are currently listed for trading on the NYSE. There are a number of continuing requirements that must be met in order for our ADSs to remain listed on the NYSE and the failure to meet these listing standards could result in the delisting of our ADSs from the NYSE. In 2015, we failed to comply with the NYSE's continued listing standard requiring a listed security to maintain a minimum average closing price of $1.00 per ADS over a consecutive 30-trading-day period. However, the trading price of our ADSs complied again with the NYSE's continued listing standard within the specified six months' notice period and therefore no action to delist our ADSs was taken. In the event we are not able to meet the minimum average closing price requirement or other any other requirements necessary for continued listing on the NYSE in the future, our ADSs could be subject to delisting from the NYSE. See Item 9: *"The Offer and Listing-A. Offer and Listing Details"*.

If in the future our ADSs cease to be listed for trading on the NYSE for any reason, the liquidity of our ADSs may be materially reduced and result in a corresponding material reduction in the price of our ADSs. Furthermore, any such delisting could harm our ability to raise capital on terms acceptable to us, or at all, and may result in the potential loss of confidence by investors, suppliers, business partners, licensees, customers and employees. Such consequences may materially and adversely affect our business, financial condition and results of operations.

As we have a significant number of outstanding share options, our ordinary shares are subject to dilution.

We have an active employee share plan that came into effect in 2006. Our shareholders have authorized up to 60,011,669 of the issued share capital to be used for this plan, together with any other plan. As a result, shareholders' equity interests in us are subject to dilution to the extent of the potential future exercises of the options through share plan.

We may not pay dividends or make similar payments to our shareholders in the future.

Harmony's dividend policy is to pay cash dividends only if funds are available for that purpose. Whether funds are available depends on a variety of factors, including the amount of cash available, our capital expenditures and other current or future anticipated cash requirements existing at the time. Under South African law, we are only entitled to pay a dividend or similar payment to shareholders if we meet the solvency and liquidity tests set out in the Companies Act 71 of 2008 (as amended) including its Regulations (the "**Companies Act**") and our current Memorandum of Incorporation. Cash dividends or other similar payments may not be paid in the future.

On April 1, 2012, a dividends tax ("**Dividends Tax**") was introduced at a rate of 15% (increased to 20% effective from February 22, 2017) on dividends declared by South African companies to beneficial shareholders borne by the shareholder receiving the dividend. This replaced Secondary Tax on Companies. Although the substitution of Secondary Tax on Companies with Dividends Tax may reduce the tax payable on our South African operations, thereby increasing distributable earnings, the withholding tax will generally reduce the amount of dividends or other distributions received by shareholders.

In addition, Harmony's foreign shareholders face investment risk from currency exchange rate fluctuations affecting the market value of any dividends or distributions paid by the Company.

ITEM 4. INFORMATION ON THE COMPANY

A. HISTORY AND DEVELOPMENT OF THE COMPANY

The information set forth under the headings:

- "-*About this report*" on pages 4;
- "-*Corporate profile*" on pages 5;
- "-*Creating value-our business model*" on page 8;
- "-*Our strategy*" on page 11;
- "-*Operating context-Our business context*" on page 18;
- "-*Delivering profitable ounces in line with business objectives-Operating performance*" on pages 88 to 126; and
- "-*Delivering profitable ounces in line with business objectives-Projects and exploration*" on pages 127 to 130;

of the Integrated Annual Report for the 20-F 2018 is incorporated herein by reference. Also see note 19 *"Investments in Associates"* and note 20 *"Investments in Joint Operations"* of our consolidated financial statements, set forth beginning on page F-1.

In the 2018 fiscal year, we did not receive any public takeover offers by third parties or make any public takeover offers in respect of other companies' shares.

Recent Developments

Developments since June 30, 2018

Since the end of fiscal 2018, the following significant events have occurred:

- In addition to the placing of 55,055,050 new ordinary shares on June 6, 2018, raising US$83million, which we used to pay down a portion of the US$200 million syndicated bridge facility raised for the Moab Acquisition, Harmony completed a placing (the "**ARM Placing**") of 11,032,623 new ordinary shares to ARM Limited in July 2018, raising approximately US$16 million, which it used to pay down a portion of the US$200 million syndicated bridge facility. See Item 5: "Operating and Financial Review and Prospects - B. Liquidity and Capital Resources - Financing" and "- Outstanding Credit Facilities and Other Borrowings."
- On 4 October 2018, Harmony reached a mutually acceptable settlement with the Financial Sector Conduct Authority of South Africa. The dispute related to incorrect financial results reported for the March 2007 quarter. Harmony informed shareholders and the authorities of the error in August 2007. Subsequently Harmony reviewed all financial accounting procedures and systems to ensure that a similar error would not occur. Following various discussions with the authorities, an administrative penalty of R30 million (US$2.2 million) was imposed and paid by Harmony.

B. BUSINESS OVERVIEW

The information set forth under the headings:

- *"-About this report"* on pages 5;
- "-*Creating value-our business model"* on page 8;
- "-*Our strategy*" on page 11;
- -"*Operating context-Our business context*" on page 18;
- "-*Operating context-Stakeholder engagement and material issues"* on page 22;
- *"-Ensuring employee well-being - maintaining stability in our workforce-Safety and health"* on pages 34 to 50;
- *"-Ensuring employee well-being - maintaining stability in our workforce-Employee engagement*" on pages 51 to 58;

- *"-Managing our Social and Environmental Impacts- Environmental management and stewardship"* on pages 68 to 87;
- *"-Delivering profitable ounces in line with business objective-Operating performance"* on pages 88 to 126; and
- *"-Delivering profitable ounces in line with business objectives-Exploration and project"* on pages 127 to 130;

of the Integrated Annual Report for the 20-F 2018 is incorporated herein by reference.

Capital Expenditures

Capital expenditures for all operations and capitalized exploration incurred for fiscal 2018 amounted to US$356 million, compared with US$286 million in fiscal 2017 and US$164 million in fiscal 2016. During fiscal 2018, capital at PNG accounted for 50% of the total, with Tshepong operations accounting for 27%, Target 1 and Kusasalethu each accounting for 8% whilst Doornkop and Joel each accounting for 7% of the total. During fiscal 2017, capital expenditure at PNG accounted for 40% of the total, with Tshepong accounting for 10%, Phakisa and Target 1 each accounting for 8% and Kusasalethu accounting for 7% of the total.

Capital expenditures for previous years excluded capitalized deferred stripping, for fiscal 2017 this was changed and is now included in capital. Deferred stripping cost for fiscal 2016 amounted to US$3 million.

The focus of our capital expenditures in recent years has been underground development and plant improvement and upgrades. During fiscal 2018, the capital expenditure was funded from the Company's cash generated by operation. See Item 5: *"Operating and Financial Review and Prospects-Liquidity and Capital Resources".*

We have budgeted approximately US$373 million for capital expenditures in fiscal 2019. We currently expect that our planned operating capital expenditures will be financed from operations and new borrowings as needed. Details regarding the capital expenditure for each operation is included in the table below.

	Capital expenditure budgeted for fiscal 2019 (US$'million)[1]
South Africa	
Kusasalethu	23
Doornkop	26
Tshepong operations	78
Moab Khotsong	45
Masimong	8
Target 1	23
Bambanani	5
Joel	11
Unisel	3
Other - surface	9
International	
Hidden Valley[2]	112
Total operational capital expenditure	**343**
Golpu	30
Total capital expenditure	**373**

1 Converted at an exchange rate of R13.30/US$

2 Includes US$60m related to capitalized deferred stripping

Reserves

As at June 30, 2018, we have declared attributable gold equivalent proved and probable reserves of 36.9 million ounces: 16.9 million ounces gold in South Africa and 19.9 million gold and gold equivalent ounces in PNG. In instances where individual deposits may contain multiple valuable commodities with a reasonable expectation of being recovered (for example gold and copper in a single deposit) Harmony computes a gold equivalent to more easily assess the value of the deposit against gold-only mines. Harmony does this by calculating the value of each of the commodity, then dividing the product by the price of gold. For example, the gold equivalent of a gold and copper deposit would be calculated as follows: ((gold ounces x gold price per ounce) + (copper pounds x copper price per pound)) / gold price per ounce. All calculations are done using metal prices as stipulated in the discussion below. Harmony assumes a 100% metallurgical recovery in its calculations unless otherwise stated. The year-on-year negative variance in mineral reserves is due to the following reasons:

- normal depletion of 1.3 million ounces; and
- a net increase of 0.2 million ounces in reserves due to life of mine extensions and acquisition of Moab Khotsong.

We use the SAMREC Code, which sets out the internationally recognized procedures and standards for reporting of mineral resources and mineral reserves. We use the term "mineral reserves" herein, which has the same meaning as "ore reserves", as defined in the SAMREC Code. Our reporting of the PNG Mineral Reserves complies with the 2012 JORC code. This code is materially the same as the SAMREC Code. In reporting of reserves, we have complied with the SEC's Industry Guide 7.

For the reporting of Mineral Reserves the following parameters were applied:

- a gold price of US$1,275 per ounce;
- an exchange rate of R13.42 per US dollar;
- the above parameters resulting in a gold price of R550,000/kg for the South African assets;
- the Hidden Valley Operation and Wafi-Golpu project in the Wafi Golpu Joint Venture used prices of US$1275/oz gold ("**Au")**, US$17.00/oz silver ("**Ag**"), US$7.00/lb molybdenum ("**Mo**") and US$3.00/lb copper ("**Cu**") at an exchange rate of US$0.76 per A$;
- gold equivalent ounces are calculated assuming a US$1,275/oz Au, US$ 3.00/lb Cu and US$17.00/oz Ag with 100% recovery for all metals. These assumptions are based on those used in the 2016 feasibility study; and
- "gold equivalent" is computed as the value of the Company's gold, silver and copper from all mineral resources/ reserves classifications divided by the price of gold. All calculations are done using metal prices as stipulated.

In order to define the proved and probable mineral reserve at our underground operations, we apply the concept of a cut-off grade. At our underground operations in South Africa, this is done by defining the optimal cut-off grade as the lowest grade at which an orebody can be mined such that the total profits, under a specified set of mining parameters, are maximized. The cut-off grade is determined using our Optimizer computer program which requires the following as input:

- the database of measured and indicated resource blocks (per operation);
- an assumed gold price which, for this mineral reserve statement, was taken as R550,000 per kilogram (gold price of US$1,275 per ounce and an exchange rate of R13.42per US dollar);
- planned production rates;
- the mine recovery factor which is equivalent to the mine call factor ("**MCF**") multiplied by the plant recovery factor; and
- planned cash costs (cost per tonne).

Rand per tonne cash costs of the mines are historically based, but take into account distinct changes in the cost environment, such as the future production profile, restructuring, right-sizing, and cost reduction initiatives.

For the block cave reserve at Golpu (PNG), we used our consultants' proprietary tool called "Block Cave mine optimizing software computer program" to define the optimal mine plan and sequencing.

The open pit reserve at Hidden Valley (PNG) is defined by a pit design based on the optimal output from Whittle open pit optimization software.

See the table below in this section for the cut-off grades and cost per tonne for each operation.

The mineral reserves represent that portion of the measured and indicated resources above cut-off in the life-of-mine plan and have been estimated after consideration of the factors affecting extraction, including mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. A range of disciplines which includes geology, survey, planning, mining engineering, rock engineering, metallurgy, financial management, human resources management and environmental management have been involved at each mine in the life-of-mine planning process and the conversion of resources into reserves. The oreflow-related modifying factors used to convert the mineral resources to mineral reserves through the life-of-mine planning process are stated for each individual operation. For these factors, historical information is used, except if there is a valid reason to do otherwise. Owing to depth and rock engineering requirements at our underground mines, some mines design stope support pillars into their mining layouts which accounts for approximately 7% to 10% discounting. Further discounting relates to the life-of-mine extraction to provide for geological losses.

Our standard for narrow reef sampling with respect to both proved and probable reserve calculations for underground mining operations in South Africa is generally applied on a 6 meter by 6 meter grid. Average sample spacing on development ends is at 2 meter intervals in development areas. For the massive mining at the Target 1 operation, our standard for sampling with respect to both proved and probable reserves are fan drilling with "B" sized diamond drill holes (43mm core) sited at 50 meter spaced sections along twin access drives. The Kalgold opencast operations are sampled on diamond drill and reverse circulation drill spacing of no more than 25 meters on average. Surface mining at South African operations other than Kalgold involves recovering gold from areas previously involved in mining and processing, such as metallurgical plants, waste rock dumps and tailing dams (slimes and sand) for which random sampling is used.

The PNG resources are hosted in large porphyry or related mesothermal geological systems. Data is gained through diamond drilling using PQ (85.0 mm diameter) down to NQ (47.6 mm diameter) sized core. The core is cut in half, one half sampled at a maximum of 2 meter intervals and the other half stored in designated core storage facilities. Drill spacing at our Hidden Valley operations is typically on less than 20 meter centers for measured category, 20 to 40 meter centers for the indicated category and greater than 40 meters for inferred category material. Due to the nature of the Golpu porphyry mineralization, drill spacing is increased to 100 to 200 meters for indicated and greater for inferred. Assaying for gold is by fire assay and various methods are used for copper and other elements. All assays informing the resource calculation are analyzed at a National Association of Testing Authorities ("**NATA**") accredited commercial laboratory. Extensive quality assurance/quality control work is undertaken and data is stored in an electronic database.

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Our mining operations' reported total proved and probable reserves as of June 30, 2018 are set out below:

Mineral Reserves statement (Imperial) as at June 30, 2018

Operations Gold	PROVED RESERVES			PROBABLE RESERVES			TOTAL RESERVES		
	Tons (millions)	Grade (oz/ton)	Gold[1] (000 oz)	Tons (millions)	Grade (oz/ton)	Gold[1] (000 oz)	Tons (millions)	Grade (oz/ton)	Gold[1] (000 oz)
South Africa Underground									
Bambanani	1.1	0.352	386	—	—	—	1.1	0.352	386
Joel	2.8	0.136	381	2.0	0.156	304	4.8	0.144	685
Masimong	1.9	0.125	233	0.1	0.100	13	2.0	0.123	246
Unisel	0.3	0.143	43	0.0	0.166	10	0.3	0.146	53
Target 1	3.5	0.126	442	2.3	0.125	282	5.8	0.126	724
Tshepong Operations	21.7	0.173	3,762	4.2	0.142	581	25.9	0.168	4,343
Doornkop	3.3	0.146	480	4.4	0.148	648	7.7	0.147	1,128
Kusasalethu	4.0	0.212	858	0.6	0.156	101	4.6	0.204	959
Moab Khotsong	2.7	0.301	815	2.9	0.277	800	5.6	0.289	1,615
Total South Africa Underground	41.3	0.179	7,400	16.5	0.179	2,739	57.8	0.179	10,139

Mineral Reserves statement (Imperial) as at June 30, 2018

Operations Gold	PROVED RESERVES			PROBABLE RESERVES			TOTAL RESERVES		
	Tons (millions)	Grade (oz/ton)	Gold[1] (000 oz)	Tons (millions)	Grade (oz/ton)	Gold[1] (000 oz)	Tons (millions)	Grade (oz/ton)	Gold[1] (000 oz)
South Africa Surface									
Kalgold	10.3	0.028	287	13.0	0.031	397	23.3	0.029	684
Free State Surface-Phoenix	69.1	0.008	575	—	—	—	69.1	0.008	575
St Helena	119.6	0.008	933	—	—	—	119.6	0.008	933
Central Plant	—	—	—	71.2	0.008	552	71.2	0.008	552
Other	—	—	—	614.2	0.007	4,035	614.2	0.007	4,035
Total South Africa Surface	**199.0**	**0.009**	**1,795**	**698.4**	**0.007**	**4,984**	**897.4**	**0.008**	**6,779**
Total South Africa	**240.3**		**9,195**	**714.9**		**7,723**	**955.2**		**16,918**
Papua New Guinea[2]									
Hidden Valley	2.1	0.027	56	25.7	0.047	1,215	27.8	0.046	1,271
Hamata	—	0.03	1	0.6	0.062	34	0.6	0.060	35
Golpu	—	—	—	223.0	0.025	5,573	223.0	0.025	5,573
Total Papua New Guinea	**2.1**	**0.027**	**57**	**249.3**	**0.027**	**6,822**	**251.4**	**0.027**	**6,879**
Total	**242.4**		**9,252**	**964.2**		**14,545**	**1,206.6**		**23,797**

1 Metal figures are fully inclusive of all mining dilutions and gold losses, and are reported as mill delivered tons and head grades. Metallurgical recovery factors have not been applied to the reserve figures.

2 Represents Harmony's attributable interest of 50%.

Note: 1 ton = 907 kg = 2,000 lbs.

In addition to the gold reserves, we also report our gold equivalents for reserves for silver and copper from our PNG operations. Gold equivalent ounces are calculated assuming a US$1,275/oz for gold, US$3.00/lb copper and US$17,00/oz for silver with 100% recovery for all metals.

Gold Equivalents [2]

Silver	Proved reserves		Probable reserves		Total reserves	
	Tons (millions)	Gold Equivalents (oz)[1] (000)	Tons (millions)	Gold Equivalents (oz)[1] (000)	Tons (millions)	Gold Equivalents (oz)[1] (000)
Hidden Valley	2.1	17	25.7	340	27.8	357
Copper	**Proved reserves**		**Probable reserves**		**Total reserves**	
	Tons (millions)	Gold Equivalents (oz)[1] (000)	Tons (millions)	Gold Equivalents (oz)[1] (000)	Tons (millions)	Gold Equivalents (oz)[1] (000)
Golpu	—	—	223.0	12,686	223.0	12,686
Total Gold Equivalents	2.1	17	248.7	13,026	250.8	13,043
Total Harmony including gold equivalents	242.4	9,269	964.2	27,571	1,206.6	36,840

In addition to the gold reserves, we also report our attributable reserves for silver and copper from our PNG operations. Metal prices are assumed at US$17.00/oz for silver, US$3.00/lb for copper, and molybdenum at US$7.00/lb.

Papua New Guinea: Other[2]

Silver	Proved Reserves			Probable Reserves			Total Reserves		
	Tons (millions)	Grade (oz/ton)	Silver[1] (000 oz)	Tons (millions)	Grade (oz/ton)	Silver[1] (000 oz)	Tons (millions)	Grade (oz/ton)	Silver[1] (000 oz)
Hidden Valley	2.1	0.572	1,193	25.7	0.937	24,083	27.8	0.909	25,276

Copper	Tons (millions)	Grade (%)	Cu lb[1] (millions)	Tons (millions)	Grade (%)	Cu lb[1] (millions)	Tons (millions)	Grade (%)	Cu lb[1] (millions)
Golpu[2].........	—	—	—	223.0	1,097	5,393	223.0	1,097	5,393
South Africa .									

Silver	Tons (millions)	Grade (lb/t)	U308[2] (Mlb)	Tons (millions)	Grade (lb/t)	U308[2] (Mlb)	Tons (millions)	Grade (lb/t)	U308[2] (Mlb)
Moab Khotsong Undergroun d	2.7	0.697	2	2.9	0.804	2	5.6	7.52	4

1 Metal figures are fully inclusive of all mining dilutions and gold losses, and are reported as mill delivered tons and head grades. Metallurgical recovery factors have not been applied to the reserve figures.
2 Represents Harmony's attributable interest of 50%.
Note: 1 ton = 907 kg = 2,000 lbs

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Our methodology for determining our reserves is subject to change and is based upon estimates and assumptions made by management regarding a number of factors as noted above in this section. Cost per tonne and cut-off grade per operation are as follows.

Operations gold	Underground Operations		Surface and Massive Mining	
	Cut-off grade (cmg/t)	Cut-off cost (R/Tonne)	Cut-off grade (g/t)	Cut-off cost (R/Tonne)
South Africa Underground				
Bambanani	1,952	4,254	—	—
Joel	792	2,012	—	—
Masimong	883	2,016	—	—
Phakisa	792	2,572	—	—
Target 1	—	—	3.73	1,969
Tshepong	650	2,221	—	—
Unisel	974	2,173	—	—
Doornkop	735	2,129	—	—
Kusasalethu	1,100	3,087	—	—
Moab Khotsong	1,197	2,850		
South Africa Surface				
Kalgold	—	—	0.60	421
Free State Surface	—	—	0.14	43
	Cut-off grade (%Cu)	**Cut-off cost (A$/Tonne)**	**Cut-off grade (g/t)**	**Cut-off cost (A$/Tonne)**
Papua New Guinea				
Hidden Valley	—	—	0.85	33.24
Hamata	—	—	0.85	33.24
Golpu	0.3	26	—	—

Operations silver and copper	Underground Operations		Surface and Massive Mining	
	Cut-off grade (%Cu)	Cut-off cost (A$/Tonne)	Cut-off grade (g/t)	Cut-off cost (A$/Tonne)
SILVER				
Papua New Guinea				
Hidden Valley	—	—	0.85	33.24
COPPER				
Papua New Guinea				
Golpu	0.3	26	—	—

Notes on Cut-off:

1) Surface and massive mining are stated in g/t (g/t is grams of metal per tonne of ore).
2) All SA underground operations are stated in cmg/t (cmg/t is the Reef Channel width multiplied by the g/t which indicates the gold content within the Reef Channel).

Notes on Cut-off cost:
Cut-off cost refers to the cost in R/Tonne or A$/Tonne to mine and process a tonne of ore.
Notes on Copper:
Cut-off is stated in % Cu.
Notes on Golpu:
Cut-off is based on 0.2% copper; molybdenum and gold mined as by-product.

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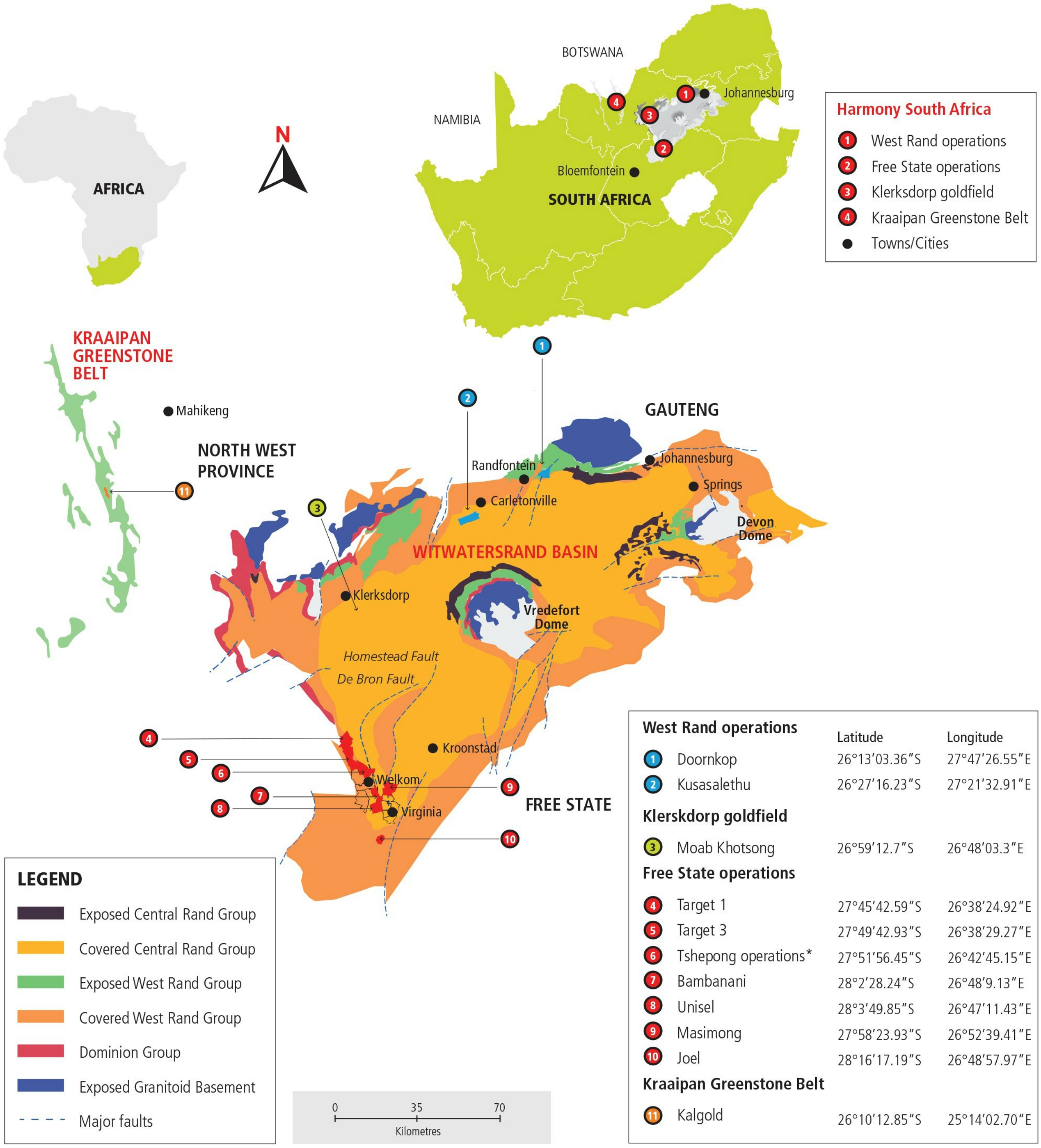
Worldwide Operations

The following is a map of our worldwide operations



	Latitude	Longitude
West Rand operations		
1 Doornkop	26°13′03.36″S	27°47′26.55″E
2 Kusasalethu	26°27′16.23″S	27°21′32.91″E
Klerksdorp goldfield		
3 Moab Khotsong	26°59′12.7″S	26°48′03.3″E
Free State operations		
4 Target 1	27°45′42.59″S	26°38′24.92″E
5 Target 3	27°49′42.93″S	26°38′29.27″E
6 Tshepong operations*	27°51′56.45″S	26°42′45.15″E
7 Bambanani	28°2′28.24″S	26°48′9.13″E
8 Unisel	28°3′49.85″S	26°47′11.43″E
9 Masimong	27°58′23.93″S	26°52′39.41″E
10 Joel	28°16′17.19″S	26°48′57.97″E
Kraaipan Greenstone Belt		
11 Kalgold	26°10′12.85″S	25°14′02.70″E

Projection: UTM Zone 36, Southern Hemisphere (WGS 84)

** Tshepong operations is the combined Thsepong and Phakisa mining operation*

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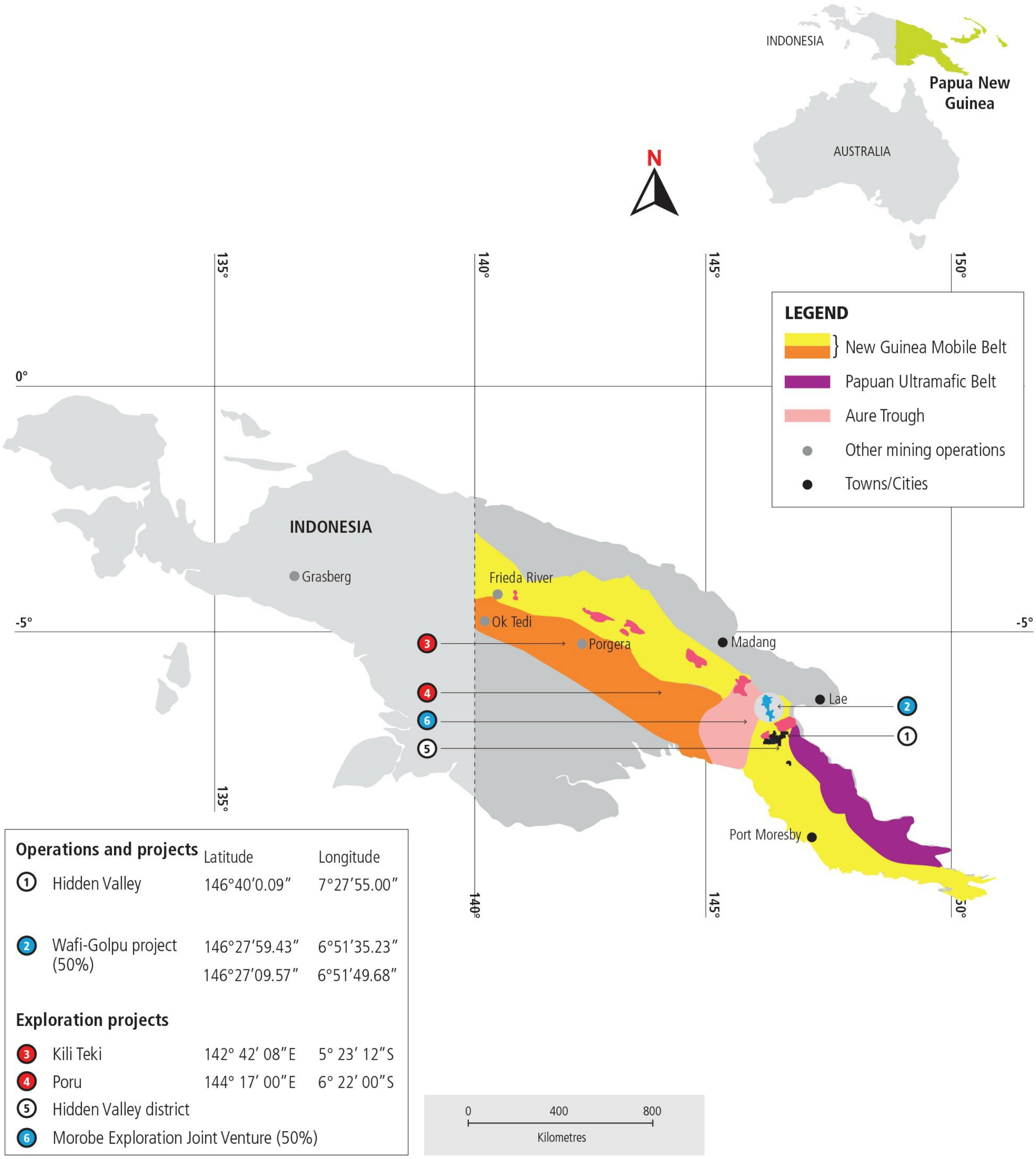

Harmony equity interest 100% unless otherwise indicated

Projection: UTM Zone 54, Southern Hemisphere (WGS 84)

Geology

The major portion of our South African gold production is derived from mines located in the Witwatersrand Basin in South Africa. The Witwatersrand Basin is an elongated structure that extends approximately 300 kilometers in a northeast-southwest direction and approximately 100 kilometers in a northwest-southeast direction. It is an Archean sedimentary basin containing a six kilometer thick stratigraphic sequence consisting mainly of quartzites and shales with minor volcanic units. The majority of production is derived from auriferous placer reefs situated at different stratigraphic positions and at varying depths below the surface in three of the seven defined goldfields of the Witwatersrand Basin.

Our Papua New Guinean gold production is derived exclusively from our Hidden Valley Operation in the Morobe Province of PNG. The Hidden Valley deposit comprises low sulphidation carbonate-base metal-gold epithermal deposits within the Morobe Goldfield. In the mine area, a batholith of Morobe Granodiorite (locally a coarse grained monzogranite) is flanked by fine metasediments of the Owen Stanley Metamorphics. Both are cut by dykes of Pliocene porphyry ranging from hornblende-biotite to feldspar-quartz porphyries. A number of commonly argillic altered and gold anomalous breccias are known, including both hydrothermal and over printing structural breccias. The Hidden Valley deposit is hosted in the Moribe Granodiorite, dominated by a series of post-Miocene faults, both north and north-west trending, control the gold mineralization.

Our Wafi-Golpu project (also in the Morobe Province of PNG) encompasses the Wafi and Golpu deposits. The Wafi deposit comprises sedimentary/volcaniclastic rocks of the Owen Stanley Formation that surround the Wafi Diatreme and host the gold mineralization. Gold mineralization occurs associated with an extensive zone of high-sulphidation epithermal alteration overprinting porphyry mineralization and epithermal style vein-hosted and replacement gold mineralization with associated wall-rock alteration. The Golpu deposit is located about one kilometer northeast of the Wafi deposit, and is a porphyry (diorite) copper-gold deposit. The host lithology is a diorite that exhibits a typical zoned porphyry copper alteration halo together with mineralization in the surrounding metasediment. The mineralized body can be described as a porphyry copper-gold “pipe”. The Wafi gold mineralization and alteration partially overprints the upper levels of the Golpu porphyry copper-gold mineralization.

Our Kili Teke deposit is an advanced exploration play located in the Hela Province of PNG. The Kili Teke deposit comprises porphyry style copper-gold mineralization hosted in a multiphase calc-alkaline dioritic to monzonitic intrusive complex. Host rocks comprise interbedded siliciclastics and limestone of the Papuan Fold Belt. Uranium-lead zircon age dating highlight Pliocene age dates in the range of 3.5 ± 0.04 Ma (million year) to 3.59 ± 0.07 Ma for emplacement of the mineralized porphyry phases. Late-mineral porphyry phases have been identified in the drilling and impact grade continuity within the deposit, where they intrude and stope out the earlier more mineralized phases. Overall the geometry of the deposit reflects a relatively steeply plunging, pipe like body, with mineralization decreasing away from the central high grade stockwork zones of copper gold mineralization. Intense marbleization and copper-gold skarn mineralization is developed around the peripheral contact with the host sequence, and variably developed skarn mineralization also occurs along internal structural and contact zones within the complex.

During fiscal 2018 a feasibility study was completed for Target 3. The study will be used in conjunction with our other projects for future decision making on capital allocation and prioritization in Harmony.

Mining and Exploration - Papua New Guinea

Harmony has acquired 100% ownership of the Hidden Valley mining lease. With effect from July 1, 2017, all rights and interests to the mine and its operations have been amalgamated in Harmony’s wholly-owned subsidiary, Morobe Consolidated Goldfields Limited and the previously existing Hidden Valley Joint Venture with Newcrest PNG 1 Limited (subsequently Harmony PNG 20 Limited) has terminated. The company has obligations under compensation agreements with landowners and the Training and Localisation Policy appended to a Memorandum of Agreement ("**MOA**") with the PNG government, Provincial and local government and the landowner association.

With regard to the Wafi-Golpu Project, Harmony’s wholly-owned subsidiary, Wafi Mining Limited holds a 50% share in various exploration licenses, together with its participant in the Wafi-Golpu Joint Venture, Newcrest PNG 2 Limited, which holds the other 50% share. Both companies have entered into compensation agreements with landowners on its exploration licenses. On August 25, 2016, the joint venture participants submitted an application for a Special Mining Lease under section 35 of the PNG Mining Act 1992, and various other associated mining tenements. The application (SML 10) was registered on that date.

On March 20, 2018, the joint venture participants submitted a feasibility study update and revised proposals for development to the PNG Mineral Resources Authority under the PNG Mining Act 1992. The feasibility study update provides greater clarity around the infrastructure which will be associated with development of the Wafi-Golpu Project, including the recommended use of deep sea tailings placement as the preferred tailings management solution and the construction of a modular designed power plant. The participants continue to engage with the PNG government to take forward the SML 10 permitting and approvals process in accordance with PNG law and on June 25, 2018 submitted an Environment Impact Study to the Conservation and Protection Authority under the PNG Environment Act 2000.

With regard to our Kili Teke Project, all exploration licenses are 100% owned by Harmony’s wholly-owned subsidiary, Harmony Gold (PNG) Exploration Limited. The company has entered into compensation agreements with landowners on its exploration licenses.

There has been a significant rationalization of Harmony’s exploration tenement holding in PNG since fiscal 2014. As at June 30, 2018, Harmony’s exploration tenement holding in PNG totaled 1,760 square kilometers (all titles excluding mining easements and ancillary mining purpose leases). The tenements form four main project areas: the Kili Teke in the Hela Province (Harmony 100% owned), the Poru project in the Southern Highlands Province (Harmony 100% owned), the Hidden Valley District in the Morobe Province (Harmony 100% owned) and Morobe Exploration Joint Venture tenement (Harmony 50% owned) over the area surrounding the Wafi-Golpu Deposit.

Harmony, through its wholly-owned subsidiary Harmony Gold (PNG) Exploration Limited, manages the exploration on all of these project areas. Prior to commencement of exploration work programs, the company enters into compensation agreements with landowners on its exploration licenses, in accordance with the PNG Mining Act 1992.

Regulation

Mineral Rights -- South Africa

MPRDA

The MPRDA is the primary legislation used to regulate the mining industry since it came into effect on May 1, 2004. The DMR is the national department tasked with implementing the MPRDA and regulating the mining industry. The MPRDA extinguished private ownership of minerals. The South African government’s role as custodian of South Africa’s mineral and petroleum resources was entrenched in system where the right to prospect and mine is granted by government through the Minister.

The principal objectives of the MPRDA are:

- to recognize the internationally accepted right of the South African government to exercise full and permanent sovereignty over all the mineral and petroleum resources within South Africa;
- to give effect to the principle of South Africa's custodianship of its mineral and petroleum resources;
- to promote equitable access to South Africa's mineral and petroleum resources to all the people of South Africa;
- to substantially and meaningfully expand opportunities for HDSA, including women, to enter the mineral and petroleum industry and to benefit from the to promote economic growth and mineral and petroleum resources development in South Africa;
- to promote employment and advance the social and economic welfare of all South Africans;
- to provide security of tenure in respect of prospecting, exploration, mining and production operations;
- to give effect to Section 24 of the South African Constitution by ensuring that South Africa's mineral and petroleum resources are developed in an orderly and ecologically sustainable manner while promoting justifiable social and economic development; and
- to ensure that holders of mining and production rights contribute towards socio-economic development of the areas in which they are operating.

Owing to the change brought about by the MPRDA, provision for a transition from the old regime (in which the role of the South African government was regulatory in nature and in which the right to mine vested in the holder of the common law mineral rights) to the new regime (which provides for the South African government, acting through the Minister, to grant mining rights) has been made in the Transitional Provisions contained in Schedule II of the MPRDA (the "**Transitional Provisions**"). The Transitional Provisions provide for, among other things, the holders of then-existing "old order" mining rights to apply for the conversion of those old order rights into "new order" mining rights in accordance with the MPRDA within five years of May 1, 2004, or before the old order right expired, whichever was earlier.

Old order mining rights were converted into new order mining rights in accordance with the MPRDA provided that the holder of the old order right fulfilled the requirements specified in the MPRDA, its Regulations and the Mining Charter or the Revised Mining Charter, as the case may have been at the relevant juncture. Upon conversion, or failure to convert within the specified time periods, the old order rights cease to exist. In the event that the old order right was converted, the new order mining right could have been converted for a period up to 30 years which period may be renewed for further periods, each of which may not exceed 30 years at a time. A mining right for which an application for renewal has been lodged shall, despite its stated expiry date, remain in force until such time as such application has been granted or refused.

In accordance with the MPRDA, the holder of a mining right must comply with the terms of the right, the provisions of the MPRDA, the environmental authorization (issued under NEMA), the mining work program and the social and labor plan (the "**SLP**") approved as part of the right. The SLP relates to the obligations placed on the mining right holder to, among other things, train employees of the mine in accordance with prescribed training methodologies, achieve employment equity and human resource development in the mining company, improve housing and living conditions of employees and set up local economic development projects. Compliance with the provisions of the MPRDA, environmental authorization, mining work program and SLP is monitored by submission of monthly, bi-annual and annual returns and reports by the holder of the right to the DMR in accordance with the provisions of the MPRDA and the right.

We have been working on our program of licensing since 2004, which involved the compilation of a mineral assets register and the identification of all of our economic, mineral and mining rights. We actively carry out mining and exploration activities in all of our material mineral rights areas. Accordingly, the change in regime to that contained in the MPRDA has not had a significant impact on our mining and exploration activities as we applied for and were granted conversion of all of our old-order mining rights into new order mining rights in terms of the MPRDA. Our strategy has been to secure all strategic mining rights on a region-by-region basis, which we have achieved as we have secured all "old mining rights" and validated existing mining authorizations. We now have to continue complying with the required monthly, annual and bi-annual reporting obligation to the DMR.

On June 21, 2013, the Minister introduced the MPRDA Bill into Parliament. The DMR briefed the National Assembly's Portfolio Committee on Mineral Resources in July 2013. The MPRDA Bill was passed by both the National Assembly and the NCOP on March 27, 2014. In January 2015, the former President referred the MPRDA Bill back to Parliament for reconsideration and on November 1, 2016, the Portfolio Committee on Mineral Resources tabled non-substantial revisions to the MPRDA Bill in the National Assembly and a slightly revised version of the MPRDA Bill was passed by the National Assembly and referred to the NCOP. On March 3, 2017, the National Assembly passed certain minor amendments to the MPRDA Bill. The National Assembly has referred the MPRDA Bill to the NCOP where the Select Committee has received comments on the draft legislation. The chairperson of the Select Committee had targeted January or February of 2018 to pass the legislation. On February 16, 2018, the President of South Africa announced that the MPRDA Bill was at an advanced stage in Parliament. There has been no update since.

There is a degree of uncertainty regarding the changes that will be brought about should the MPRDA Bill be made law and the MPRDA Bill raises some concerns as it relates to Harmony's business:

- *Concentration of rights*

  The MPRDA Bill seeks to introduce a system whereby the Minister invites applications for prospecting rights, exploration rights, mining rights, technical co-operation permit, production rights and mining permits in respect of any area of land. Applicants for rights will no longer be able to rely on the first come, first served principle when submitting an application.

- *Ownership of tailings created before May 1, 2004*

  The MPRDA provides that historic tailings are not regulated in terms of the MPRDA; however, the MPRDA Bill purports to amend the MPRDA so as to render historic tailings subject to regulation under the MPRDA, resulting in the South African government gaining custodianship of historic tailings.

- *Mineral beneficiation*

  A key change is that the MPRDA Bill now makes it mandatory for the Minister to “initiate or promote the beneficiation of minerals and petroleum resources in the Republic of South Africa”. The MPRDA Bill affords the Minister broad discretion over beneficiation, without providing any criteria under which such discretion should be exercised.

- *Issue of a closure certificate*

  The MPRDA Bill envisages that a rights holder will remain liable for any latent or residual environmental and associated damage caused by prospecting and mining operations, even after (and notwithstanding) the issue of a closure certificate by the Minister. This means that a rights holder will no longer be indemnified from liability after the issue of a closure certificate.

Harmony is, through the Minerals Council of South Africa, working closely with government to ensure that the MPRDA Bill is drafted to support continued investment in mining in South Africa.

The Mining Charter

The South African government has identified the South African mining industry as a sector in which significant participation by Historically Disadvantaged South Africans ("**HDSAs**") is required. One of the objects of the Mineral and Petroleum Resources Development Act, 2002 ("**MPRDA**") is to substantially and meaningfully encourage HDSAs to enter the mineral and petroleum industries and to benefit from the exploitation of the nation’s mineral and petroleum resources. In terms of section 100 of the MPRDA, the South African Minister of Mineral Resources ("**Minister**") is required to develop a broad-based socio-economic charter in order to set the framework for targets and time periods for giving effect to these objectives.

On 27 September 2018, the Minister published the Broad-Based Socio-Economic Empowerment Charter for the Mining and Minerals Industry, 2018 ("M**ining Charter III**"), on which date it also became effective. It replaces, in their entirety, the original Mining Charter negotiated in 2002 and gazetted in 2004 ("**the Original Charter**") and the "amended" Charter gazetted in September 2010 ("**the Amended Charter**").

The Original Charter set the initial framework, targets and timelines and it was subsequently amended by the Amended Charter which included targets and timelines for HDSA participation in procurement and enterprise development, beneficiation, employment equity, human resources development, mine community development, housing and living conditions, sustainable development and growth of the mining industry and reporting (monitoring and evaluation). It required mining companies to achieve the following, amongst others, by no later than 31 December 2014:

- a minimum effective HDSA ownership of 26 per cent;
- procure a minimum of 40 per cent of capital goods, 70 per cent of services and 50 per cent of consumer goods from HDSA suppliers (i.e. suppliers in which a minimum of 25 per cent + 1 vote of their share capital must be owned by HDSAs) by 2014 (exclusive of non-discretionary procurement expenditure);
- ensure that multinational suppliers of capital goods contribute a minimum of 0.5 per cent of their annual income generated from South African mining companies into a social development fund from 2010 towards the socio-economic development of South African communities;
- achieve a minimum of 40 per cent HDSA demographic representation at executive management (board) level, senior management (executive committee) level, core and critical skills, middle management level and junior management level;
- invest up to 5 per cent of annual payroll in essential skills development activities; and
- implement measures to improve the standards of housing and living conditions for mineworkers by converting or upgrading mineworkers’ hostels into family units, attaining an occupancy rate of one person per room and facilitating home ownership options for all mineworkers in consultation with organized labour.

In addition, mining companies were required to monitor and evaluate their compliance with the Amended Charter and submit annual compliance reports to the Department of Mineral Resources ("**DMR**"). The Scorecard attached to the Amended Charter made provision for a phased-in approach for compliance with the above targets over the five year period ending on 31 December 2014. For measurement purposes, the Scorecard allocated various weightings to the different elements of the Amended Charter. Failure to comply with the provisions of the Amended Charter would, according to its provisions, ostensibly amounted to a breach of the MPRDA and could have resulted in the cancellation or suspension of a mining company’s mining rights.

Harmony believes that it had complied with the requirements of the Amended Charter by the December 31, 2014 deadline. *See “*Integrated Annual Report for the 20-F 2018-*Operating context-Mining Charter scorecard”* on pages 32-33.

In March 2015, the DMR prepared an interim report of consolidated results of the self-assessment by reporting companies of compliance with the Amended Charter, reporting relatively broad compliance with the non-ownership requirements of the Amended Charter. However, the DMR did not report the results of compliance with the HDSA ownership guidelines of the Amended Charter and noted that there was no consensus on certain principles applicable to the interpretation of the ownership element.

On 31 March 2015, the Minerals Council South Africa (previously the Chamber of Mines) ("**MCSA**") and the DMR jointly agreed to approach the North Gauteng High Court to seek a declaratory order that would provide a ruling on the relevant legislation and the status of the Original Charter and the Amended Mining Charter, including clarity on the status of previous empowerment transactions concluded by mining companies and a determination on whether the ownership element of the Original Charter and the Amended Charter should be a continuous compliance requirement for the duration of the mining right as argued by the DMR, or a once-off requirement as argued by the MSCA, on the “once empowered always empowered” principle.

On 4 April 2018, the North Gauteng High Court delivered its judgment in this matter ("**the Judgment**"). The effect of the Judgment is that mining companies are *not* required to re-empower themselves after their HDSA shareholders have sold out and that the DMR *cannot* rely on the provisions of the MPRDA to enforce compliance with the Amended Charter, unless the provisions which the DMR seeks to enforce were made a *term or condition of the mining right*. The Court also held that the Minister's promulgation of the Amended Charter did not occur in terms of or in compliance with the duty imposed in terms of section 100(2) of the MPRDA and, as such, the terms of the Amended Charter can have legal consequences or significance *only* insofar as they are, in some way or another, reflected in the terms of conditions subject to which the Minister grants a mining right. It also brings the validity and enforceability of any subsequent Mining Charter into question unless it is legislatively authorized. The Judgment is currently subject to an appeal by the DMR.

On 15 June 2018, the Minister published a new draft Mining Charter and invited interested and affected parties to submit comments on its provisions by 30 August 2018. Following a period of stakeholder engagement the final version of Mining Charter III was published on 27 September 2018, on which date it became effective. Some of the material changes introduced by Mining Charter III include:

- in relation to existing mining rights, the continuing consequences of historical black economic empowerment transactions will be recognised and existing right holders will not be required to increase their HDSA shareholding for the duration of their mining right in circumstances where they either achieved and maintained 26 per cent HDSA ownership or where they achieved the 26 per cent HDSA ownership but their HDSA shareholder has since exited;
- in relation to the renewal and transfer of existing mining rights, historical BEE credentials will not be recognised and mining companies will be required to comply with the ownership requirements in relation to new mining rights (see below);
- in relation to new mining rights (granted after 27 September 2018) mining companies must have a minimum of 30 per cent BEE shareholding distributed as follows: a minimum of 5 per cent non-transferable *carried* interest to qualifying employees; a minimum of 5 per cent non-transferable *carried* interest to host communities, or a minimum 5 per cent equity equivalent benefit; and a minimum of 20 per cent to a BEE entrepreneur, 5 per cent of which must preferably be for women;
- 'carried interest' is defined as "*shares issued to qualifying employees and host communities at no cost to them and free of any encumbrances. The cost for the carried interest shall be recovered by a right holder from the development of the asset*";
- applications for mining rights lodged and accepted prior to 27 September 2018, will be processed in terms of the Amended Charter (ie. with a 26% HDSA ownership requirement) but with a further obligation to increase their HDSA shareholding to 30 per cent within five years of the granting of the right;
- BEE shareholding may be concluded at holding company level, mining right level, on units of production, shares or assets and where is concluded at any level other than mining right level, the flow-through principle will apply;
- the permitted beneficiation off-set of up to 11 per cent against the HDSA ownership requirement contained in the Original Charter and Amended Charter has been reduced to 5 per cent unless it was 'claimed' prior to 27 September 2018;
- a minimum of 70 per cent of total mining goods procurement spend (including non-discretionary expenditure) must be on South African manufactured goods, allocated amongst HDSA owned and controlled companies, women and youth owned and controlled companies and BEE compliant companies;
- A minimum of 80 per cent of the total spend on services (including non-discretionary expenditure) must be sourced from *South African* companies, allocated amongst HDSA owned and controlled companies, women and youth owned and controlled companies and BEE compliant companies;
- Mining companies must achieve a minimum representation of HDSAs in the following management positions: 50 percent on the Board of directors (20 percent of which must be women), 50 percent in executive (20 percent of which must be women), 60 percent in senior management (25 percent of which must be women); 60 percent in middle level (25 percent of which must be women); 70 percent in junior level (30 percent of which must be women) and 60 percent in core and critical skills. In addition; HDSAs with disabilities must constitute 1.5 percent of all employees.
- the Minister may, by notice in the Government Gazette, review Mining Charter III;

- the ownership and mine community development elements are ring-fenced and require 100% compliance at all times;
- a mining right holder that has not complied with the ownership element and falls between levels 6 and 8 of the Mining Charter scorecard shall be in breach of the MPRDA and its mining right may be suspended or cancelled in accordance with the provisions of the MPRDA; and
- Mining Charter III is effective from 27 September 2018 but there are transitional arrangements in relation to compliance with the procurement and the employment equity element targets.

Mining Charter III makes reference to "Mining Charter Implementation Guidelines". These guidelines have yet to be published. It is understood from recent public announcements made by the Minister that he intends to publish them before the end of the year. The guidelines may provide clarity on some of the provisions of Mining Charter III which are vague and open to interpretation.

The MCSA released a media statement on 3 October 2018 in which it welcomed the publication of Mining Charter III, broadly supporting its intentions and content, but expressed concern over some key issues including the limited applicability of continuing consequences of past transactions on disposal of BEE shareholding, the treatment of renewals of mining rights as new rights, the practicality of the inclusive procurement provisions relating to local content targets for mining goods and services. The MCSA indicated that it would engage the Minister on these unresolved issues as the guidelines for implementation are developed.

The Royalty Act

The Mineral and Petroleum Royalty Act 28 of 2008 and the Mineral and Petroleum Royalty Administration Act 29 of 2008 were assented to on November 21, 2008 with the commencement date set as May 1, 2009. However, the date on which royalties became payable was deferred to March 1, 2010. Royalties are payable by the holders of mining rights to the government according to formula based on a defined earnings before interest and tax. This rate is then applied to a defined gross sales leviable amount to calculate the royalty amount due, with a minimum of 0.5% and a maximum of 5% for gold. For 2018, the average royalty rate for our South African operations was 0.7% of the gross sales leviable amount.

The BBBEE Act and the BBBEE Amendment Act

The BBBEE Act, which came into effect on April 21, 2004, established a national policy on broad-based black economic empowerment with the objective to (i) remedy historical racial imbalances in the South Africa economy and (ii) achieve economic transformation, by increasing the number of black people who participate in the mainstream South African economy. The BBBEE Act provides for various measures to promote BEE participation, including empowering the Minister of Trade and Industry to issue the BBBEE Codes, with which organs of state and public entities and parties interacting with them or obtaining rights and licenses from them would be required to comply. The BBBEE Codes were first published in 2007, and were revised in 2013 (although the revisions only came into effect in 2015). The BBBEE Codes sought to provide a standard framework, in the form of a "generic scorecard", for the measurement of BBBEE across all sectors and industries operating within the South African economy and sought to regularize such sectors and industries by providing clear and comprehensive criteria for the measurement of BBBEE.

On October 24, 2014, the BBBEE Amendment Act, No. 46 of 2013 (the “**BBBEE Amendment Act**”) came into effect. The BBBEE Amendment Act inserted a new provision in the BBBEE Act, whereby the BBBEE Act would trump the provisions of any other law in South Africa which conflicts with the provisions of the BBBEE Act, provided such conflicting law was in force immediately prior to the effective date of the BBBEE Amendment Act. The BBBEE Amendment Act also stipulates that this provision would only be effective one year after the BBBEE Amendment Act is brought into effect, on October 24, 2015. On October 27, 2015, the Minister for Trade and Industry published a government gazette notice declaring an exemption in favor of the DMR from applying the requirements contained in section 10(1) of the BBBEE Act for a period of 12 months. There has been some debate as to whether or to what extent the mining industry was subject to the BBBEE Act and the policies and codes provided for thereunder. The BBBEE Codes apply in the absence of sector specific codes which have been agreed to by interested and affected parties active within a specific sector. By way of background, various sectors within the South African economy may negotiate and agree Codes of Good Practice which would govern transformation in that specific sector. In addition, certain codes fall outside of the regulatory framework established by the BBBEE Act and Codes promulgated by the Minister of Trade and Industry thereunder. One such sector is the mining industry, where the Mining Charter governs the implementation of BBBEE, among other things, within the mining industry. For purposes of the BBBEE Act, the Mining Charter is not a Sector Code. It is not clear at this stage how the Mining Charter and Code relate to each other. The government may designate the Mining Charter as a Sector Code, in which case it will be under the auspices of the BBBEE Act. On the other hand, the Mining Charter may remain a stand-alone document under the auspices of the MPRDA and may be subject to the trumping provision, discussed above, to the extent that there is a conflict between the two. This uncertainty may be resolved through either government clarification or judicial attention. The exemption by the Minister for Trade and Industry can be read as confirmation that the Department of Trade and Industry regards the BBBEE Codes as “applicable” to the Mining Industry after the exemption is lifted on October 27, 2016. On February 17, 2016, the Minister of Trade and Industry published a gazette notice which repealed and confirmed the validity of a number of Sector Codes. The omission of the Mining Charter from the notice can be interpreted as confirmation that the Mining Charter is not contemplated as a Sector Code. This supports the interpretation BBBEE Act did not intend to trump the Mining Charter. While it remains to be seen how this will be interpreted, it appears that the BBBEE Act and the BEE Codes will not overrule the Mining Charter in the future and, in any event, our view is that the DMR is likely to continue implementing the Mining Charter and it is unlikely that the DMR will begin applying the BBBEE Act and BBBEE Codes in administering the MPRDA, since in order to do so will potentially require an amendment of the MPRDA.

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Mineral Rights - Papua New Guinea

Mining in PNG is governed by the PNG Mining Act 1992. The Act stipulates that all mineral rights in PNG belong to the PNG government, and, subject to the Act, all land is available for exploration and mining. The PNG government issues and administers mining tenements under the Mining Act 1992, through the offices of the PNG Mineral Resources Authority, within the PNG Department of Mineral Policy and Geohazards Management.

Mining tenements include:

- exploration licenses, issued for a term not exceeding two years, renewable for further two year terms subject to compliance with expenditure and other conditions. Each license contains a condition conferring on the PNG government the right to make a single purchase up to 30% equitable interest in any mineral discovery under the license at a price pro rata to the accumulated exploration expenditure;
- mining leases, issued for a term not exceeding 20 years, renewable on application subject to compliance with issue conditions;
- special mining leases, issued for a term not exceeding 40 years, renewable on application subject to compliance with issue conditions;
- mining easements; and
- leases for mining purposes.

These tenements generally confer exclusive rights on the holder to exercise their rights thereunder. The key difference in PNG is that citizens have the right to carry out non-mechanized mining of alluvial minerals on land owned by them, provided that an alluvial mining lease is obtained and provided there is not already a mining lease or special mining lease over the subject land

Almost all land in PNG is owned by a person or group of persons under customary ownership, and is not generally overlaid by landowner title. The customary owners of the land have in some instances been formally identified through the work of the Land Titles Commission. However, there is often considerable difficulty in identifying landowners of a particular area of land because land ownership may arise from both contract and inheritance, and because of the absence of a formal written registration system.

Along with standard corporate and other taxes and levies, mining companies must pay royalties to the State based on production. Prior to commencing exploration, compensation for loss or damage must be agreed with the landowners. Prior to commencing mining, written agreements must be entered into with landowners dealing with compensation and, in company with the PNG government as a party, a memorandum of agreement dealing with such other matters as the sharing of royalties and other mining benefits between landowner groups and Provincial and local government entities.

Mineral policy in PNG is administered by the Department of Mineral Policy and Geohazards Management. The legislative and fiscal regime in PNG has been under review since 2012, including the PNG Mining Act 1992, PNG Mining Safety Act 1997, and various sector policies including offshore mining policy, sustainable development policy, involuntary relocation policy and mine closure policy. In its capacity as the representative industry body, the Chamber of Mines and Petroleum of PNG has collated information from industry participants and has lodged formal industry responses to the government’s proposals. Harmony is represented on the chamber’s sub-committee and is actively participating in its discussions.

Health and Safety - South Africa

For many years, the safety of persons working in South African mines and quarries was controlled by the Mines and Works Act of 1956 and then by the Minerals Act of 1991 which was replaced by the MHSA**.** The objectives of the MHSA are:

- to protect the health and safety of persons at mines;
- to require employers and employees to identify hazards and eliminate, control and minimize the risks relating to health and safety at mines;
- to give effect to the public international law obligations of South Africa that concern health and safety at mines;
- to provide for employee participation in matters of health and safety through health and safety representatives and the health and safety committees at mines;
- to provide effective monitoring of health and safety measures at mines;
- to provide for enforcement of health and safety conditions at mines;
- to provide for investigations and inquiries to improve health and safety at mines;
- to promote a culture of health and safety in the mining industry;
- to promote training in health and safety in the mining industry; and
- to promote co-operation and consultation on health and safety matters between the South African, employers, employees and their representatives.

One of the most important objectives of the MHSA is to protect the health and safety of all persons at mines and not merely the health and safety of employees. An employer is obliged, in terms of the MHSA and the regulations binding in terms thereof, to protect, as far as reasonably practicable, the health and safety of non-employees (such as visitors to a mine and the public who live in close proximity to the mine) and employees (which includes employees of independent contractors) performing work at a mine. The word "*employer*" in section 102 of the MHSA is defined as the owner of the mine. In turn, an "*owner*" of a mine is defined to include: (i) the holder of the prospecting permit or mining authorization issued under the MPRDA; (ii) if a prospecting permit or mining authorization does not exist, the person for whom the activities in connection with the winning of a mineral are undertaken, but excluding an independent contractor; or (iii) the last person who worked the mine or that person's successor in title.

The aforesaid subsection was amended by section 30(f) of the Mine Health and Safety Amendment Act, No. 74 of 2008 by substituting the term "*Mineral and Petroleum Resources Development Act*" for the term "*Minerals Act*." Under the new system, mining authorizations do not exist. However, taking into account section 12 of the Interpretation Act, No. 33 of 1957, the word "*authorisation*" must be substituted by the words "*mining right or mining permit*." Accordingly, the holder of the "*mining right or mining permit*" is regarded the employer for the purposes of the MHSA and the regulations binding thereunder. The employer therefore remains responsible to ensure that applicable provisions of the MHSA and the regulations binding in terms thereof are complied with to ensure the health and safety of persons, as far as reasonably practicable and to prevent damage to property.

The MHSA prescribes general and specific duties for employers and others, determines penalties and a system of administrative fines, and provides for employee participation by requiring the appointment of health and safety representatives and the establishment of health and safety committees. It also entrenches the right of employees to refuse to work in dangerous conditions.

See "Integrated Annual Report for the 20-F 2018-Ensuring employee well-being - maintaining stability in our workforce-Safety and health" on pages 34 to 50.

The Mine Health and Safety Inspectorate ("**MHSI**") within the DMR is responsible for the enforcement of the MHSA and the regulations binding in terms thereof and it also plays an important role in the promotion of health and safety at mines. The MHSI comprises of a Chief Inspector of Mines, Principal Inspectors of Mines for each region and various Inspectors of Mines for each region. Should employers or employees fail to comply with their obligations under the MHSA the MHSI may take a number of enforcement measures which include the following:

- the issuing of statutory instructions (for example notices in terms of section 54 or section 55 of the MHSA) if an Inspector of Mines has reason to believe that any occurrence, practice or condition at a mine endangers the health and safety of any person at a mine, alternatively if an Inspector of Mines has reason to believe that a provision of the MHSA has not been complied with. A notice in terms of section 54 of the MHSA may halt all mining operations undertaken at a mine or part thereof. If a mine receives notices in terms of section 54 of the MHSA regularly, the production stoppages and the additional costs incurred as a result thereof, will not only affect the production results of a mine but also the reputation and business of a mine. If, however, a notice in terms of section 54 of the MHSA has been issued unlawfully, the mine may appeal the said notice to the Chief Inspector of Mines. It must be noted that the aforesaid appeal does not suspend the operation of the notice issued in terms of section 54 of the MHSA. To suspend the operation of the notice in the above instance, a mine may lodge an urgent application to the Labour Court (being the court with jurisdiction) requesting the suspension of the operation of the notice issued in terms of section 54 of the MHSA pending the outcome of the appeal to the Chief Inspector of Mines;
- the Chief Inspector of Mines may suspend or cancel certificates of competency issued in terms of the MHSA if the holder of that certificate is guilty of gross negligence or misconduct or has not complied with the MHSA or the regulations binding thereunder;
- a Principal Inspector of Mines may recommend prosecution to the National Director of Public Prosecutions if satisfied that there is sufficient admissible evidence that an offence has been committed. Any person convicted of an offense in terms of the MHSA may be sentenced to a fine or imprisonment as may be prescribed; and
- a Principal Inspector of Mines may, after considering the recommendation of an Inspector of Mines and the written representations of the employer, impose an administrative fine for the failure to comply with, amongst others, the provisions of the MHSA and the regulations binding thereunder. In terms of Schedule 8 to the MHSA, the maximum administrative fine which may be imposed on an employer is one million ZAR per transgression. The MHSA does not make provision for any internal appeal against an administrative fine which has been issued unlawfully. However, if a mine receives an administrative fine which has been issued unlawfully, the mine may lodge an application in the Labour Court (being the court with jurisdiction) to review the decision of the Chief Inspector of Mines to impose an administrative fine.

Over and above the aforesaid, investigation and/or inquiry proceedings in terms of the MHSA are instituted by the MHSI following the occurrence of any accident or incident at a mine, which results in the death of any person.

In South Africa the COIDA and ODMWA established two statutory systems for the payment of compensation for occupationally related injuries and certain occupationally related diseases. COIDA applies to the compensation of all occupational injuries (including payment of compensation in the event of the death of the injured employee), whether or not it occurs in or outside the mining industry. ODMWA applies to diseases which are defined as "*compensatable diseases*", being primarily occupationally related lung diseases like silicosis. COIDA indemnifies the employer against claims by the employee or his/her dependents for damages incurred as a result of occupational injuries and diseases. However, the Constitutional Court held in *Mankayi v AngloGold Ashanti Limited* 2011 (3) SA 237 (CC) that although COIDA applies to occupational diseases in general, COIDA does not apply in instances where the disease in question is a compensatable disease in terms of ODMWA and which was contracted as a result of the performance of "*risk work*" at a "*controlled mine*". The Court further held that if an employee contracts a compensatable disease as defined in ODMWA, the employee would still be entitled to claim common law damages from the employer.

Health and Safety - Papua New Guinea

PNG has a significant mining industry, and a developing system of occupational health and safety. The PNG Mining (Safety) Act 1977 is the principal legislation, which addresses a range of issues such as working hours, minimum safety and reporting requirements. Other legislation and regulations also apply.

The PNG Mining (Safety) Act 1977 and the Regulations issued thereunder are currently under review as part of the overall review of mining legislation in PNG.

See "Integrated Annual Report for the 20-F 2018-Ensuring employee well-being - maintaining stability in our workforce-Safety and health" on pages 34 to 50.

Laws and Regulations pertaining to Environmental Protection - South Africa

The following is an overview of the South African environmental laws and regulations which are relevant to our operations in South Africa.

Four major pieces of legislation presently account for the majority of environmental management of mining operations in South Africa and are discussed in turn below. They are:

- NEMA;
- The NWA;
- The National Environmental Management: Air Quality Act, 39 of 2004 ; and
- The National Environmental Management: Waste Act, 59 of 2008 ("**Waste Act**").

South African environmental legislation commonly requires businesses whose operations may have an impact on the environment to obtain permits, authorizations and other approvals for those operations. The rationale behind this is to ensure that companies with activities that are reasonably expected to have environmental impacts, can initially assess the extent of the environmental impacts from such activities, as well as to put reasonable and practicable mitigation measures in place to manage these impacts.

NEMA

NEMA is the overarching legislation giving effect to the environmental right protected in section 24 of the Constitution of the Republic of South Africa, 1996, and which provides the underlying framework and principles underpinning the coordinated and integrated management of environmental activities. In terms of NEMA, an environmental authorization is required in order to commence a listed activity. These activities are currently listed in GNR 983-985 of December 8, 2014 ("**NEMA Listed Activities**"), as amended in GNR 324-327 of April 4, 2017. The commencement of a listed activity without an environmental authorization may be rectified via a section 24G application for authorization, however, such application will be subject to payment of an administrative penalty and may attract other liability. The "financial provision" regulations under NEMA, which were originally published in November 2015, have subsequently been updated with the 2017 draft regulations. These regulations place an emphasis on post-closure water pumping and treatment and the need for upfront provision to be set aside for the management of these types of impacts.

Depending on the anticipated severity of the impact of undertaking a listed activity, the application process will require either a basic assessment report ("**BAR**") or a scoping and environmental impact assessment report ("**S&EIR**") to be prepared as part of the application for an environmental authorization. An activity requiring a mining right is considered to have a more severe environmental impact and requires an S&EIR prior to commencement. This listed activity was previously listed in the listing notices published prior to 2014; however, it was never brought into effect. As a result there was legal debate about the applicability of NEMA Listed Activities to mining and related activities and whether activities which were incidental to mining triggered other related activities under NEMA. Previously the approval of an Environmental Management Programme ("**EMPR**") served a relatively similar function under the MPRDA. Clarity has since been brought about by virtue of a number of amendments to NEMA and the MPRDA, as well as the listed activities under NEMA and it is clear that as of December 8, 2014, an environmental authorization is required for the commencement of any activity which requires a mining right or the commencement of any activity which requires a prospecting right. The issue of an environmental authorization is a condition prior to the grant of a prospecting or mining right. The DMR is the responsible authority for the issuing of an environmental authorization; however, the Department of Environmental Affairs remains the appeal authority in respect of any appeals to the issue of an environmental authorization. Applicants are also required to follow stringent requirements in the public participation process to enable consultation with all interested and affected parties.

As part of its application for an environmental authorization the applicant must demonstrate that it has complied with the prescribed financial provisioning requirements in terms of section 24P of NEMA. This means that the holder must set aside funds in the form of cash, financial guarantees and/or investment policies, to serve as security for the discharge of the statutory obligation to undertake concurrent rehabilitation, rehabilitation upon closure and the costs of managing latent and residual post closure impacts. Moreover every holder of a mining right must assess his or her environmental liability on an annual basis and must increase his or her financial provision to the satisfaction of the Minister for Mineral Resources. The holder must also submit an audit report to the Minister on the adequacy of the financial provision from an independent auditor. The Regulations Pertaining to the Financial Provision for Prospecting, Exploration, Mining or Production Operations ("**financial provisions regulations, 2015**") were published in the government gazette in November 2015 and now fall under NEMA. The financial provisions regulations, 2015 stipulate procedures for how financial provision is to be made, audited and reviewed and existing mines are also required to comply with the these financial provision requirements, which entails such mines undertaking a substantive review and alignment of the quantum of their existing financial provision in accordance with these regulations. These regulations have brought about a number of changes and clarifications to the previous legal regime with the consequent probable and substantial increase in the required quantum of financial provision set aside by existing operations, as well as the corollary increase in the costs associated with adjusting the financial vehicles historically used by mining companies to put up these provisions. This is due to the qualification that latent or residual environmental impacts which may become known in the future now include the pumping and treatment of polluted or extraneous water. The mining industry has raised serious concerns about the intent of, and ability of the DMR to implement the new regulations. The financial provisions regulations, 2015 have subsequently been updated with a new set of draft regulations published in November 2017 for public comment, with a revised compliance deadline of February 20, 2019. The 2017 draft regulations place an emphasis on post-closure water pumping and treatment and the need for upfront provision to be set aside for the management of these types of impacts.

This has resulted in further public participation and will likely result in amendments to the financial provision regulation being published in the near future.

Lastly, NEMA imposes a statutory obligation on every person who has caused or is likely to cause significant contamination to take reasonable measures in relation thereto. This duty applies retrospectively to contamination caused prior to 1998. A failure to comply with this duty, as well as the requirement for an environmental authorization can result in significant fines of up to ZAR10 million and/or 10 years imprisonment being imposed. Directives or compliance notices can also be issued under NEMA for the temporary or permanent shut down of facilities at a mining operation or the entire mining operation. Directors and certain employees can also be held criminally liable for environmental offences in their personal capacity under NEMA if they fail to take reasonable measures to protect the environment.

Waste management

In relation to mining waste specifically, the Waste Act has been amended so as to apply to residue stockpiles and deposits and to prescribe certain management measures in respect thereof. A waste management license is now required for the establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a prospecting right or mining permit. This requirement only applies to facilities established or reclaimed after July 24, 2015. It does not apply retrospectively to negate the lawfulness of existing stockpiles and deposits as the relevant transitional provisions (albeit drafted ambiguously) appear to suggest that if they were authorized in an EMPR in terms of the MPRDA prior to July 24, 2015, they will be considered lawful or authorized for the purposes of the Waste Act. Other waste management facilities constructed and/or operated by our operations may also be subject to licensing requirements, including hazardous waste disposal sites and central salvage yards.

In addition to licensing, mines must also comply with the management measures prescribed for residue stockpiles and deposits in the Regulations for Residue Stockpiles and Residue Deposits from a Prospecting, Mining, Exploration or Production Operation in GNR 632 of July 24, 2015. These regulations do not retrospectively apply to the management of existing stockpiles and deposits, so long as they are in an approved EMPR. These regulations have notable cost implications for new residue stockpiles and deposits established after this date as they impose certain liner/barrier requirements for them.

The Waste Act also regulates contaminated land, whether or not the contamination occurred before the commencement of the Waste Act or at a different time from the actual activity that caused the contamination. Consequently, historic, as well as present or future arising, contaminated land which is identified as an investigation area by the environmental authorities or which is notified as being contaminated by the land owner must be assessed and reported on. The direction of taking monitoring and management measures, or of undertaking site remediation, may follow depending on the level of risk associated with the contamination.

Water use and pollution

South Africa's water resources are regulated by the NWA. The NWA has provisions governing the prevention and remediation of pollution, and provides for a liability regime similar to that of NEMA, as well as licensing requirements. Most mining operations require a water use license in order to conduct their operations, particularly for activities relating to water abstraction, storage, effluent discharge, diversions, and facilities which have the potential to pollute groundwater resources. Water use licenses are difficult to obtain and usually involve a lengthy and delayed application process. Mines are also required to comply with the regulations which were specifically published for the use of water for mining and related activities in GN 704 of June 4, 1999. These regulations provide for limitations on the location of mining infrastructure and requirements for separation of dirty and clean water systems and the design of certain water management infrastructure.

Environment - Papua New Guinea

In PNG, there are various laws and regulations relating to protection of the environment which are similar in scope to those of South Africa. The PNG Environment Act 2000 governs the environmental permitting and regulatory aspects of mining projects. An environmental impact statement is required when projects are likely to have a significant adverse impact on the environment. This statement must be lodged with the Conservation and Environment Protection Authority (previously the Department of Environmental Conservation) where, for large projects, it may be forwarded to the Environment Council for review. Public consultation is an integral part of this review.

Other environmental legislation includes the PNG Maritime Zones Act 2015 and the PNG Forestry Act 1991 and Regulations

Labor Relations

South Africa

Employee relations in South Africa are guided by the Labour Relations Act 66 of 1995 as well as by company and mine-based recognition agreements. In South Africa, Harmony recognizes four labor unions (save for the Moab Khotsong operation where National Union of Metalworkers of South Africa (NUMSA) is also recognized). As at financial year-end, these unions and their corresponding representation were as follows, namely the National Union of Mineworkers (at 58%); the Association of Mineworkers and Construction Union (at 24%); the United Association of South Africa (at 6%) National Union of Metalworkers (4%) and Solidarity (at 2%). About 94% of our South African workforce is unionized, with the balance not belonging to a union. See *"Integrated Annual Report for the 20-F 2018-Ensuring employee well-being - maintaining stability in our workforce-employee engagement"* on pages 51 to 58.

Australia

Employee relations in Australia are regulated by a combination of federal and state statutes that stipulate minimum standards and provide for collective bargaining and action. All employment contracts are based on the Fair Work Act of 2009 and the National Employment Standards. Our Australian workforce is not unionized.

Papua New Guinea

Employee relations in PNG are regulated by the PNG Employment Act of 1978 and the PNG Employment of Non-Citizens Act 1978. Individual contracts are entered into, and the workforce is not unionized.

In PNG, wages are guided by independent market research that compares mining, oil and gas companies in the region. Industrial relations at Hidden Valley have been established through regular dialogue between management and employees via the Employee Relations Committee. Employees at PNG are not unionized, however, Hidden Valley Mine employment is guided by the Training and Localisation Policy appended to the Memorandum of Agreement ("**MOA**") between the company, the PNG government, provincial and local governments and the Landowner Association. The MOA governance process requires that, when qualifications and experience are equivalent, employment preference is given to local and landowner candidates before individuals from other provinces or countries. Compliance with this agreement is a critical issue in maintaining Hidden Valley Mine's license to operate.

C. ORGANIZATIONAL STRUCTURE

The information set forth under the heading:

- *"-Corporate profile"* on page 5

of the Integrated Annual Report for the 20-F 2018 is incorporated herein by reference. Also see note 2.1 "*Consolidation*" of our consolidated financial statements, set forth beginning on page F-1.

D. PROPERTY, PLANT AND EQUIPMENT`

The information set forth under the headings:

- *"-Managing our Social and Environmental Impacts- Environmental management and stewardship"* on pages 68 to 87;
- *"-Delivering profitable ounces in line with business objectives-Operating performance"* on pages 88 to 126;

of the Integrated Annual Report for the 20-F 2018 is incorporated herein by reference. Also see note 15 "*Property, Plant and Equipment*" and note 32 "*Cash Generated by Operations*" of our consolidated financial statements, set forth beginning on page F-1.

Also see Item 4: "*Information on the Company-Business Overview--Reserves", "-Geology" and "-Capital Expenditures"* and Item 5: "*Operating and Financial Review and Prospects-Tabular Disclosure of Contractual Obligations"*.

ITEM 4A. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

You should read the following discussion and analysis together with our consolidated financial statements, including the related notes, set forth beginning on page F-1.

A. OPERATING RESULT

Overview

Harmony is currently the second largest producer of gold in South Africa and is furthermore an important producer in PNG. Our gold sales for fiscal 2018 were 1.15 million ounces of gold excluding capitalised ounces. As at June 30, 2018, our mining operations and projects reported total proved and probable reserves of approximately 36.9 million gold equivalent ounces and in fiscal 2018 we processed approximately 24.7 million tons of ore.

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker ("**CODM**"). The CODM has been identified as the CEO's office consisting of the chief executive officer, financial director, director corporate affairs, chief operating officer: new business, chief executive officer: South-east Asia and chief operating officer: South Africa.

For segment purposes, management distinguishes between "Underground" and "Surface", with each shaft or group of shafts or open-pit mine managed by a team (headed by a single general manager) being considered to be an operating segment.

Our reportable segments are as follows:

- Bambanani, Doornkop, Joel, Kusasalethu, Masimong, Moab Khotsong, Target 1, Tshepong Operations, Unisel and Hidden Valley; and
- all other shafts and surface operations, including those that treat historic sand dumps, rock dumps and tailings dams, are grouped together under *"Other - Underground*" and *"Other - Surface*".

From July 1, 2017, the Tshepong and Phakisa shafts were integrated into the Tshepong Operations in order to take advantage of the close proximity of the two shafts, which allows for existing infrastructure to be optimized. Due to this change, they now form one segment and the results of fiscal 2016 and 2017 have been re-presented. As of July 1, 2017 the CODM has reviewed the single segment information.

Recent Accounting Pronouncements

Recently adopted accounting policies, as well as recent accounting pronouncements with the potential for impact on the consolidated financial statements, are described in note 2 "*Accounting Policies*" to our consolidated financial statements set forth beginning on page F-1.

Critical Accounting Policies and Estimates

The preparation of our financial statements in accordance with IFRS requires management to make estimates and assumptions that affect the reported results of our operations. Actual results may differ from those estimates. We have identified the most critical accounting policies upon which our financial results depend. Some of our accounting policies require the application of significant judgment and estimates by management in selecting the appropriate assumptions for calculating financial estimates. By their nature, these judgments are subject to an inherent degree of uncertainty and are based on our historical experience, terms of existing contracts, management's view on trends in the gold mining industry and information from outside sources.

Our significant accounting policies and critical accounting estimates and judgments are described in more detail in note 2 "*Accounting Policies*" and note 3 "*Critical Accounting Estimates and Judgments*", respectively, to our consolidated financial statements set forth beginning on page F-1. This discussion and analysis should be read in conjunction with such consolidated financial statements and the relevant notes. Management has identified the following as critical accounting policies because estimates used in applying these policies are subject to material risks and uncertainties. Management believes the following critical accounting policies, together with the other significant accounting policies discussed in the notes to our consolidated financial statements, affect its more significant judgments and estimates used in the preparation of our consolidated financial statements and could potentially impact our financial results and future financial performance.

Gold Mineral Reserves

Gold mineral reserves are estimates of the amount of ounces that can be economically and legally extracted from the Group's properties. In order to calculate the gold mineral reserves, estimates and assumptions are required about a range of geological, technical and economic factors, including quantities, grades, production techniques, recovery rates, production costs, commodity prices and exchange rates.

Estimating the quantities and/or grade of the reserves requires the size, shape and depth of the orebodies to be determined by analyzing geological data such as the logging and assaying of drill samples. This process may require complex and difficult geological judgments and calculations to interpret the data. These reserves are determined in accordance with the SAMREC Code, JORC and SEC Industry Guide 7.

Because the economic assumptions used to estimate the gold mineral reserves change from year to year, and because additional geological data is generated during the course of operations, estimates of the mineral reserves may change from year to year. Changes in the proved and probable reserves may affect the Group's financial results and financial position in a number of ways, for example depreciation and amortization charged in the income statement may change as they are calculated on the units-of-production method.

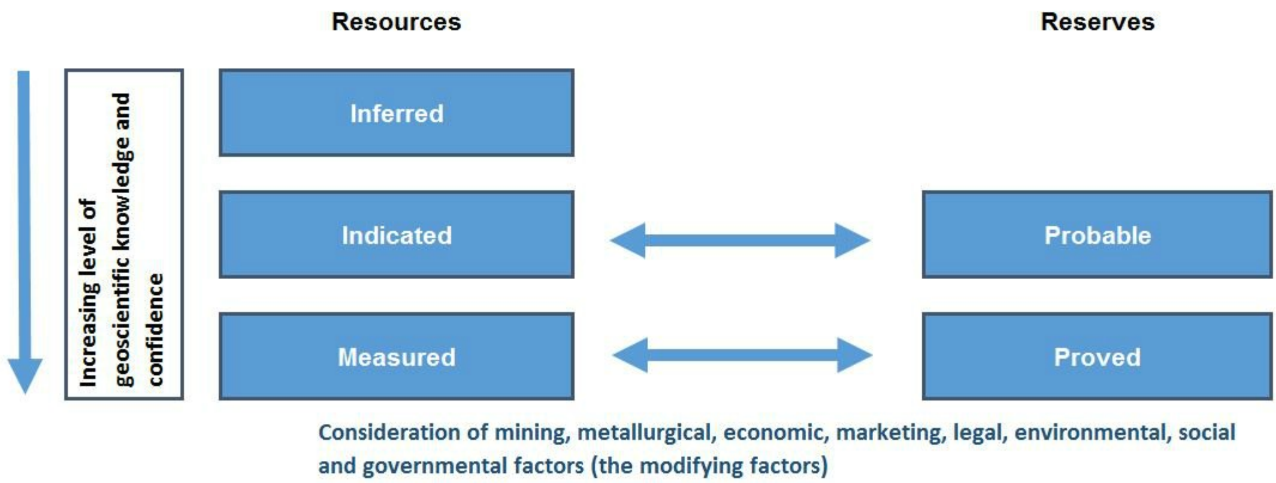
The estimate of the total expected future lives of our mines could be materially different from the actual amount of gold mined in the future. See Item 3:*"Key Information - Risk Factors - Estimations of Harmony's reserves are based on a number of assumptions, including mining and recovery factors, future cash costs of production, exchange rates, and the relevant commodity prices. As a result, metals produced in future may differ from current estimates".*

Depreciation of Mining Assets

Depreciation of mining assets is computed principally by the units-of-production method over the life-of-mine, based on estimated quantities of economically recoverable proved and probable reserves, which can be recovered in future from known mineral deposits.

The preparation of consolidated financial statements in compliance with IFRS requires management to assess the useful life of each of its operations separately based on the characteristics of each deposit and select the reserve/resource base that best reflects the useful life of the operation. In most instances, management considers the use of proved and probable reserves for the calculation of depreciation and amortization expense to be the best estimate of the life of the respective mining operation. Therefore, for most of the Company's operations, we use proved and probable reserves only, excluding all inferred resources as well as any indicated and measured resources that have not yet been deemed economically recoverable.

In some instances, proved and probable reserves alone may not provide a realistic indication of the useful life of mine and related assets. In these instances, management may be confident that certain inferred resources will eventually be classified as measured and indicated resources, and if economically recoverable, they will be included in proved and probable reserves. Management is approaching economic decisions affecting the mine on this basis, but has not yet done the necessary development and geological drill work to improve the confidence to the required levels to designate them formally as reserves. In these cases, management, in addition to proved and probable reserves, may also include certain, but not all, of the inferred resources associated with these properties as the best estimate of the pattern in which the asset's future economic benefits are expected to be consumed by the entity.



Management only includes the proved and probable reserves and the inferred resources that have been included in the life-of-mine plan. To be included in the life-of-mine plan, resources need to be above the cut-off grade set by management, which means that the resource can be economically mined and is therefore commercially viable. This consistent systematic method for inclusion in the life-of-mine plan takes management's view of the gold price, exchange rates as well as cost inflation into account. The board of directors and management approach economic decisions affecting these operations based on the life-of-mine plans that include such resources. In declaring the resource, management would have had to obtain a specified level of confidence of the existence of the resource through drilling as required by the SAMREC Code or JORC. For further discussion on mineral reserves, see *"- Gold Mineral Reserves"* above.

In fiscal 2018 and 2017, the Company added the inferred resources that were included in the life-of-mine plans at Doornkop (2016: Doornkop and Masimong) to the proved and probable reserves in order to calculate the depreciation expense. The depreciation calculation for all other operations was done using only the proved and probable reserves.

In fiscal 2016, exploration at Doornkop proved successful with the inclusion of new mining areas in the updated life-of-mine plan for fiscal 2017. During fiscal 2017 a seismic study was completed with the results finalized during the first half of fiscal 2018 and changes to the model reflected in the current life-of-mine production profile. This, together with the underground exploration that started during fiscal 2017, increased Doornkop's geological and orebody confidence and the updated geological model has been used in the latest life-of-mine plan.

At Doornkop, there has been a steady conversion of the inferred resources included in the life-of-mine plan into measured and indicated resources that are then classified as reserves if economically viable. In addition, there have been no instances during the periods presented where subsequent drilling or underground development indicated instances of inappropriate inclusion of inferred resources in the life-of-mine plan. As such, management is confident that the inclusion of the inferred resources included in the life-of-mine plan in calculating the depreciation charge is a better reflection of the pattern of consumption of the future economic benefits of these assets than would be achieved by excluding them.

Management's confidence in the economical recovery of these inferred resources is based on historical experience and available geological information. The surface drilling spread (surface boreholes) and underground advance drilling at Doornkop South Reef has indicated that the portion of the inferred resources included in the life-of-mine plan exist and can be economically mined with a high level of confidence in the orebodies. The surface boreholes have been used to determine the existence of the orebodies as well as the location of major geological structures and the mineralogy of the orebodies. However, since further drilling and underground development necessary to classify the inferred resources as measured and/ or indicated resources and then as reserves, if economically recoverable, has not been done yet, they remain in the inferred resource category. Geological drilling can only be done as and when the underground infrastructure is advanced.

Additional confidence in existence and commercial viability is obtained from the fact that the orebodies surrounding the operation have already been mined over many years in the past. We mine continuations of the same reefs that these mined-out operations exploited. At Doornkop South Reef, the geological setting of the orebody is such that there is an even distribution of the mineralized content, and reliance can be placed on the comparable results of the surrounding mines. As these results are already known, simulations and extrapolations of the expected formations can be done with a reasonable degree of accuracy. Although this information will not allow the classification of inferred resources to measured and indicated resources and then as a reserve if economically viable, it does provide management with valuable information and increases the level of confidence in existence and grade expectation.

Future capital expenditure necessary to access these inferred resources, such as costs to complete a decline or a level, has also been included in the cash flow projections for the life-of-mine plan and have been taken into account when determining the pattern of depreciation charge for these operations.

Due to the fact that the economic assumptions used to estimate the proved and probable reserves and resources change from year to year, and because additional geological data is generated during the course of operations, estimates of the resources and proved and probable reserves may change from year to year. Changes in the proved and probable reserves and the inferred resource base used in the life-of-mine plan may affect the calculation of depreciation and amortization. The change is recognized prospectively.

The relevant statistics for the two operations have been included below.

		Applicable to the Fiscal Year Ended June 30,		
Doornkop		**2018**	**2017**	**2016**
A	Years (life-of-mine plan)	16	17	15
B	Reserves (Tons million)	7.7	4.7	5.6
B	Resources (Tons million)	57.9	20.6	36.2
D	Total inferred resources (Tons million)	16.9	13.5	24.9
E	Inferred resources included in life-of-mine plan (Tons million)	6.2	7.8	4.2
F	Future development costs			
	• Rand million	494.1	358.1	173.3
	• US$ million	38.5	26.3	11.9
G	Depreciation expense for the fiscal year			
	• As reported (US$ million)	14.4	16.6	12.7
	• Excluding inferred resources (US$ million)	26.2	28.2	16.9

		Applicable to the Fiscal Year Ended June 30,		
Masimong		**2018**	**2017**	**2016**
A	Years (life-of-mine plan)	n/a	n/a	3
B	Reserves (Tons million)	n/a	n/a	2.1
B	Resources (Tons million)	n/a	n/a	15.1
D	Total inferred resources (Tons million)	n/a	n/a	5.7
E	Inferred resources included in life-of-mine plan (Tons million)	n/a	n/a	0.1
F	Future development costs			
	• Rand million	n/a	n/a	1.5
	• US$ million	n/a	n/a	0.1
G	Depreciation expense for the fiscal year			
	• As reported (US$ million)	n/a	n/a	17.7
	• Excluding inferred resources (US$ million)	n/a	n/a	18.6

Impairment of Property, Plant and Equipment

We review and evaluate our mining assets for impairment when events or changes in circumstances indicate the related carrying amounts may not be recoverable. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash generating units). Each operating shaft, along with allocated common assets such as plants and administrative offices, is considered to be a cash generating unit as each shaft is largely independent of the cash flows of other shafts and assets. With the integration of Phakisa and Tshepong into the Tshepong Operations the two shafts were treated as a single cash generating unit at June 30, 2018.

Future cash flows are estimated based on estimated quantities of recoverable minerals, expected commodity prices (considering current and historical prices, price trends and related factors), production levels and cash costs of production, capital and reclamation costs, all based on detailed life-of-mine plans. The significant assumptions in determining the future cash flows for each individual operating mine at June 30, 2018, apart from production cost and capitalized expenditure assumptions unique to each operation, included a gold price, silver price and exchange rate assumptions, are as follows:

Fiscal year ended June 30, 2018

	Long term
US$ gold price per ounce	1,250.00
US$ silver price per ounce	17.00
Rand/US$ exchange rate	13.30
US$/Kina exchange rate	3.17

The term "recoverable minerals" refers to the estimated amount of gold that will be obtained from proved and probable reserves and related exploration stage mineral interests, except for other mine-related exploration potential and greenfields exploration potential discussed separately below, after taking into account losses during ore processing and treatment. Estimates of recoverable minerals from such exploration stage mineral interests are risk adjusted based on management's relative confidence in such materials. With the exception of other mine-related exploration potential and greenfields exploration potential, estimates of future undiscounted cash flows are included on an area of interest basis, which generally represents an individual operating mine, even if the mines are included in a larger mine complex. In the case of mineral interests associated with other mine-related exploration potential and greenfields exploration potential, cash flows and fair values are individually evaluated based primarily on recent exploration results and recent transactions involving sales of similar properties.

As discussed above under *"- Gold Mineral Reserves"*, various factors could impact our ability to achieve our forecasted production schedules from proved and probable reserves. Additionally, gold prices, capital expenditure requirements and reclamation costs could differ from the assumptions used in the cash flow models used to assess impairment. The ability to achieve the estimated quantities of recoverable minerals from exploration stage mineral interests involves further risks in addition to those factors applicable to mineral interests where proved and probable reserves have been identified, due to the lower level of confidence that the identified mineralized material can ultimately be mined economically. Assets classified as other mine-related exploration potential and greenfields exploration potential have the highest level of risk that the carrying value of the asset can be ultimately realized, due to the still lower level of geological confidence and economic modeling.

During fiscal 2018, we recorded an impairment of property, plant and equipment of US$361 million. During fiscal 2017 we recorded an impairment of US$112 million while a net reversal of US$3 million was recorded in fiscal 2016. Material changes to any of these factors or assumptions discussed above could result in future impairment charges, particularly around future commodity price assumptions. A 10% decrease in commodity price assumptions at June 30, 2018 would have resulted in impairments as follows:

	($ in millions)
Tshepong Operations	375
Kusasalethu	197
Hidden Valley	54
Target 1	122
Doornkop	149
Masimong	28
Moab Khotsong*	118
Joel	64
Target 3	10
Other surface operations	39
Target North	132
Unisel	38
Bambanani*	16

*The goodwill balance attributed to this cash generating unit would be reduced to $nil. See *"- Carrying Value of Goodwill*" below.

This analysis assumes that all other variables remain constant.

Carrying Value of Goodwill

We evaluate, on at least an annual basis, the carrying amount of goodwill to determine whether current events and circumstances indicate that such carrying amount may no longer be recoverable. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash generating units). Each operating shaft, along with allocated common assets such as plants and administrative offices, is considered to be a cash generating unit as each shaft is largely independent of the cash flows of other shafts and assets. To accomplish this, we compare the recoverable amounts of our cash generating units to their carrying amounts. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. If the carrying value of a cash generating unit were to exceed its recoverable amount at the time of the evaluation, an impairment loss is recognized by first reducing goodwill, and then the other assets in the cash generating unit on a pro rata basis. Assumptions underlying fair value estimates are subject to risks and uncertainties. If these assumptions change in the future, we may need to record impairment charges on goodwill not previously recorded.

As at June 30, 2018 our goodwill related to the Moab Khotsong and Bambanani cash generating units. Goodwill of US $23 million was recognized on acquisition of the Moab Khotsong operations. Refer to note 14 *"Acquisitions and Business Combinations"* of our consolidated financial statements for further details. An impairment of US$27 million on goodwill, US$24 million relating to the Tshepong Operations and US$3 million relating to Joel, was recorded in fiscal 2018. Impairment on goodwill of US$19 million was recorded during fiscal 2017 relating to the Tshepong Operations while no impairment on goodwill was recorded during fiscal 2016.

Derivatives and Hedging Activities

Derivatives are initially recognized at fair value on the date a derivative contract is entered into and are subsequently remeasured to their fair value at the end of each reporting period. The accounting for subsequent changes in fair value depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged.

The difference between the fair value of the derivative at initial recognition and expected forward transaction price is deferred and recognized as a day one gain or loss. The day one gain or loss is amortized over the derivative contract period and recognized in profit or loss in gains/losses on derivatives.

The full fair value of a derivative is classified as a non-current asset or liability when the remaining maturity is more than 12 months; it is classified as a current asset or liability when the remaining maturity is less than 12 months.

Cash flow hedge

The group designates certain derivatives as hedges of a particular risk associated with the cash flows of highly probable forecast transactions (cash flow hedges). The group documents at the inception of the hedging transaction the relationship between hedging instruments and hedged items, as well as its risk management objective and strategy for undertaking various hedge transactions. The group also documents its assessment, both at hedge inception and on an ongoing basis, of whether the derivatives that are used in hedging transactions have been and will continue to be highly effective in offsetting changes in cash flows of hedged items.

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognized in other comprehensive income and accumulated in reserves in equity. The gain or loss relating to the ineffective portion is recognized immediately in profit or loss within gains/losses on derivatives.

Amounts accumulated in equity are reclassified to profit or loss in the periods when the forecast sale that is hedged takes place and affects profit or loss. The gain or loss relating to the effective portion of the rand gold forward sales contracts is recognized in profit or loss within revenue.

When a hedging instrument expires or is sold or terminated, or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in equity at that time remains in equity and is recognized when the forecast transaction that was hedged is ultimately recognized in profit or loss. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was reported in equity is immediately reclassified to profit or loss.

Derivatives not designated for hedge accounting purposes

Certain derivative instruments do not qualify for hedge accounting. Changes in the fair value as well as gains and losses on expiry, disposal or termination of any derivative instrument that does not qualify for hedge accounting are recognized immediately in profit or loss and are included in gains/losses on derivatives.

Share Issues

Harmony conducted a placing (the "**Placing**") of 55,055,050 new ordinary shares with existing and new institutional investors at a price of R19.12 per share, raising gross proceeds of R1,053 million (US$83 million), which represented approximately 15 percent of the Company's existing issued ordinary share capital prior to the Placing. The placement was conducted through an accelerated bookbuild. Costs directly attributable to the issue of the shares amounted to R49 million (US$4 million). The net proceeds of the placement were to be used to pay down part of the outstanding bridge loan raised for the Moab Acquisition.

Provision for Environmental Rehabilitation

Our mining and exploration activities are subject to various laws and regulations governing the protection of the environment. Estimated long term environmental obligations, comprising pollution control, rehabilitation and mine closure, are based on the Group's environmental management plans. Annual changes in the provision consist of finance costs relating to the change in the present value of the provision and inflationary increases in the provision estimate, as well as changes in estimates. The present value of environmental disturbances created is capitalized to mining assets against an increase in the rehabilitation provision. The rehabilitation asset is depreciated as discussed above. Rehabilitation projects undertaken, included in the estimates are charged to the provision as incurred. The cost of ongoing current programs to prevent and control pollution is charged against income as incurred. See Item 3:*"Key Information - Risk Factors - We are subject to extensive environmental regulations".*

Provision for Silicosis Settlement

The Group's portion of the potential cost of settling the silicosis and tuberculosis class actions that have been instituted against it in South Africa has been provided for. The expected contributions (cash flows) to the vehicle that will manage the settlement process have been discounted over the expected period of time during which contributions will be made. Annual changes in the provision consists of the time value of money (recognized as finance cost) and changes in estimates (recognized as other operating expenses).

See Item 3:*"Key Information - Risk Factors - The cost of occupational healthcare services and the potential liabilities related to occupational health diseases may increase in future and may be substantial".*

Deferred Taxes

The taxable income from gold mining at our South African operations was subject to a formula to determine the taxation expense. The tax rate calculated using the formula was capped to a maximum mining statutory rate of 34% for fiscal 2018, fiscal 2017 and fiscal 2016. Taxable income is determined after the deduction of qualifying mining capital expenditure to the extent that it does not result in an assessed loss. Excess capital expenditure is carried forward as unredeemed capital expenditure and is eligible for deduction in future periods, taking the assessed loss criteria into account. Further to this, mines are ring-fenced and are treated separately for tax purposes, with deductions only being available to be claimed against the mining income of the relevant ring-fenced mine.

In terms of IAS 12 - *Income Taxes*, deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, and at our South African operations, such average tax rates are directly impacted by the profitability of the relevant ring-fenced mine. The deferred tax rate is therefore based on the current estimate of future profitability of an operation when temporary differences will reverse, based on tax rates and tax laws that have been enacted at balance sheet date.

The future profitability of each ring-fenced mine, in turn, is determined by reference to the life-of-mine plan for that operation. The life-of-mine plan is based on parameters such as the Group's long term view of the US$ gold price and the Rand/US$ exchange rate, as well as the reserves declared for the operation. As some of these parameters are based on market indicators, they differ from one year to the next. In addition, the reserves may also increase or decrease based on updated or new geological information.

We do not recognize a deferred tax asset when it is more likely than not that the asset will not be utilized. Assessing recoverability of deferred tax assets requires management to make significant estimates related to expectation of future taxable income. Estimates of future taxable income are based on forecasted cash flows from operations, reversals of deferred tax liabilities and the application of existing tax laws in each jurisdiction. To the extent that future taxable income differs significantly from estimates, our ability to realize the net deferred tax assets recorded at the balance sheet date could be impacted. Additionally, future changes in tax laws in the jurisdictions in which we operate could limit our ability to obtain the future tax benefits represented by deferred tax assets recorded at the balance date.

Revenue

Most of our revenues are derived from the sale of gold. As a result, our operating results are directly related to the price of gold. Historically, the price of gold has fluctuated widely. The gold price is affected by numerous factors over which we do not have control. See Item 3:*"Key Information - Risk Factors - The profitability of our operations, and cash flows generated by those operations, are affected by changes in the price of gold. A fall in the gold price below our cash cost of production and capital expenditure required to sustain production for any sustained period may lead to losses and require Harmony to curtail or suspend certain operations".* As a general rule, we sell our gold produced at market prices to obtain the maximum benefit from increases in the prevailing gold price.

During fiscal 2018 and 2017, Harmony entered into derivative contracts to manage the variability in cash flows from the Group's production, in order to create cash certainty and protect the Group against lower commodity prices. At year end the limits set by the Board were for 20% of the production from gold and 25% from silver over a period of 24 months. Subsequent to year end the permitted level of cover for silver has been increased to 50%. Management continues to top-up these programs as and when opportunities arise to lock in attractive margins for the business, but are not required to maintain hedging at these levels.

A portion of the production of the South African operations is linked to Rand gold forward sale contracts. The majority of the Rand gold forward contracts have been designated as cash flow hedging instruments and hedge accounting is applied on these contracts. US$ gold forward sale contracts were also entered into for the production of the Hidden Valley operation, but these contracts were not designated as hedging instruments and the gains/losses are accounted for in profit or loss.

Significant changes in the price of gold over a sustained period of time may lead us to increase or decrease our production in the near term.

Harmony's Realized Gold Price

In fiscal 2018, the average gold price in US dollars received by us was US$1,380 per ounce. This average gold price includes the realized gains on the hedging instruments, where hedge accounting was applied. The market price for gold (and, accordingly, the price received by us) is affected by numerous factors over which we have no control. See Item 3:*"Key Information - Risk Factors - The profitability of our operations, and cash flows generated by those operations, are affected by changes in the price of gold. A fall in the gold price below our cash cost of production and capital expenditure required to sustain production for any sustained period may lead to losses and require Harmony to curtail or suspend certain operations*".

The following table sets out the average, the high and the low London Bullion Market price of gold and our average US dollar sales price during the past three fiscal years:

	Fiscal Year Ended June 30,		
	2018	2017	2016
		($/oz)	
Average	1,297	1,257	1,169
High	1,355	1,366	1,325
Low	1,211	1,125	1,049
Harmony's average sales price[1]	1,380	1,304	1,169

1 Our average sales price differs from the average gold price due to the timing of our sales of gold within each year. In addition, fiscal 2018 and 2017 include the effect of hedge accounting i.e. realized gains from the cash flow hedges which have been included in revenue.

Costs

Our cash costs typically make up between 70% and 80% of our total costs (excluding impairments and disposal/loss on scrapping of assets). The remainder of our total costs consists primarily of exploration costs, employment termination costs, corporate and sundry expenditure, and depreciation and amortization. Our cash costs consist primarily of production costs. Production costs are incurred on labor, equipment, consumables and utilities. Labor costs are the largest component and typically comprise between 60% and 65% of our production costs.

Our all-in sustaining costs increased from US$1,182 per ounce in fiscal 2017 to US$1,231 in fiscal 2018. The primary reason for the increase is increased labor and energy costs, as well as inflationary pressures on supply contracts. In US dollar terms, the strengthening of the Rand against the US dollar in fiscal 2018 also contributed to the increase. This strengthening of the Rand resulted in the Rand amounts being translated at a lower rate of R12.85 compared to R13.60 in fiscal 2017.

Our cash costs have increased from US$1,000 per ounce in fiscal 2017 to US$1,018 in fiscal 2018, mainly due to the impact of increased labor and energy costs and inflationary pressures on supply contracts as well as the strengthening of the Rand against the US dollar.

Our US dollar translated costs are very sensitive to the exchange rate of the Rand and other non-US currencies to the US dollar. See Item 5:*"Operating and Financial Review and Prospects-Exchange Rates"*. Appreciation of the Rand and other non-US currencies against the US dollar increases working costs at our operations when those costs are translated into US dollars. See Item 3:*"Key Information - Risk Factors - Foreign exchange fluctuations could have a material adverse effect on Harmony's operational results and financial condition"*.

The average exchange rate of the Rand appreciated approximately 5% against the US dollar in fiscal 2018 compared to fiscal 2017. In the case of our International operations, the Australian dollar appreciated by 2% against the US dollar in fiscal 2018, while the Kina depreciated by 2% against the US dollar in fiscal 2018.

Management conducts a thorough review of costs at all operations to ensure that costs are properly managed and within budget. However, it should be noted that there are risks beyond our control such as safety stoppages, which would result in production being negatively affected while certain costs would still be incurred. This is discussed in more detail in Item 3: *"Key Information - Risk Factors - Given the nature of mining and the type of gold mines we operate, we face a material risk of liability, delays and increased cash costs of production from environmental and industrial accidents and pollution compliance breaches"* and *"- The nature of our mining operations presents safety risks"*.

Reconciliation of Non-GAAP Measures

All-in sustaining costs ("**AISC**"), all-in sustaining costs per ounce, total cash costs and total cash costs per ounce are non-GAAP measures.

The World Gold Council ("**WGC**") published industry guidance in June 2013 on the calculation of "all-in sustaining costs" and "all in cost" non-GAAP measures, developed to create a better understanding of the overall costs associated with producing gold. Although Harmony is not a member of the WGC, we started disclosing all-in sustaining costs in the 2014 fiscal year (only for continuing operations). The all-in sustaining cost measure is an extension of the existing cash cost measure (refer below) and incorporates costs related to sustaining production.

All-in sustaining costs include mine production costs, transport and refinery costs, applicable general and administrative costs, costs associated with movements in production inventories, ore stockpiles, as well as ongoing environmental rehabilitation costs, transfers for stripping activities and costs associated with royalties. Employee termination costs are included, however employee termination costs associated with major restructuring and shaft closures are excluded. The following costs are also included: local economic development ("**LED**") expenditure for continuing operations, corporate costs, sustaining exploration costs and sustaining capital expenditure including ongoing capital development ("**OCD**") expenditure and rehabilitation accretion and amortization for continuing operations. Gold ounces sold are used as the denominator in the all-in sustaining costs per ounce calculation.

Our cash costs consist primarily of production costs and are expensed as incurred. The cash costs are incurred to access ore to produce current mined reserves. Cash costs do not include capital development costs, which are incurred to allow access to the orebody for future mining operations and are capitalized and amortized when the relevant reserves are mined.

Total cash costs include mine production costs, transport and refinery costs, applicable general and administrative costs, ore stockpiles, as well as ongoing environmental rehabilitation costs as well as transfers for stripping activities and costs associated with royalties. Employee termination cost is included, however employee termination costs associated with major restructuring and shaft closures are excluded. The costs associated with movements in production inventories are excluded from total cash costs. Gold ounces produced are used as the denominator in the total cash costs per ounce calculation.

Changes in all-in sustaining costs per ounce and cash costs per ounce are affected by operational performance, as well as changes in the currency exchange rate between the Rand and the US dollar and, in the case of the Papua New Guinean operations, the Kina. All-in sustaining costs, all-in sustaining costs per ounce, total cash costs and total cash costs per ounce are non-GAAP measures. All-in sustaining costs, all-in sustaining costs per ounce, total cash costs and total cash costs per ounce should not be considered by investors in isolation or as an alternative to production costs, cost of sales, or any other measure of financial performance calculated in accordance with IFRS. In addition, the calculation of all-in sustaining costs, all-in sustaining costs per ounce, total cash costs and total cash costs per ounce may vary from company to company and may not be comparable to other similarly titled measures of other companies. However, we believe that all-in sustaining costs per ounce and cash costs per ounce are useful indicators to investors and management of a mining company's performance as they provide (1) an indication of the cash generating capacities of our mining operations, (2) the trends in all-in sustaining costs and cash costs as the Company's operations mature, (3) a measure of a company's performance, by comparison of cash costs per ounce to the spot price of gold and (4) an internal benchmark of performance to allow for comparison against other companies.

While recognizing the importance of reducing all-in sustaining costs and cash costs, our chief focus is on controlling and, where possible, reducing total costs, including overhead costs. We aim to control total unit costs per ounce produced by maintaining our low total cost structure at our existing operations. We have been able to reduce total costs by implementing a management structure and philosophy that is focused on reducing management and administrative costs.

The following is a reconciliation of total all-in sustaining costs, as a non-GAAP measure, to the nearest comparable GAAP measure, cost of sales:

	Fiscal year ended June 30,		
	2018	**2017**	**2016**
	(in $ millions, except for ounce amounts)		
Total cost of sales - under IFRS	1,800	1,448	1,088
Depreciation and amortization expense	(192)	(179)	(144)
Rehabilitation (costs)/credit	(5)	(2)	3
Care and maintenance costs of restructured shafts	(10)	(8)	(8)
Employment termination and restructuring costs	(16)	(5)	(1)
Share-based payments	(19)	(29)	(23)
(Impairment)/reversal of impairment of assets	(386)	(131)	3
Other	9	4	1
LED costs	5	5	3
Corporate, administration and other expenditure costs	45	32	23
Exploration (sustaining)	—	—	—
Capital expenditure (OCD)	121	99	96
Capital expenditure (Exploration, abnormal expenditure and shaft capital)	60	50	45
Total all-in sustaining costs	1,412	1,284	1,086
Per ounce calculation:			
Ounces sold[1]	1,146,850	1,086,231	1,081,615
Total all-in sustaining costs per ounce	1,231	1,182	1,003

¹ Excludes 64,976 ounces in fiscal 2018 and 11,713 ounces in fiscal 2017 from Hidden Valley that have been credited against the capitalized costs as part of the pre-stripping of stages 5 and 6.

The following is a reconciliation of total cash costs, as a non-GAAP measure, to the nearest comparable GAAP measure, cost of sales under IFRS:

	Fiscal year ended June 30,		
	2018	2017	2016
	(in $ millions, except for ounce amounts)		
Total cost of sales - under IFRS	1,800	1,448	1,088
Depreciation and amortization expense	(200)	(185)	(149)
Rehabilitation (costs)/credit	(5)	(2)	3
Care and maintenance costs of restructured shafts	(10)	(8)	(8)
Employment termination and restructuring costs	(16)	(5)	(1)
Share-based payments	(19)	(29)	(23)
(Impairment)/reversal of impairment of assets	(386)	(131)	3
Other	3	1	1
Gold and uranium inventory movement	17	(14)	(4)
Total cash costs	1,184	1,075	910
Per ounce calculation:			
Ounces produced[1]	1,161,435	1,076,139	1,082,035
Total cash costs per ounce	1,018	1,000	841

¹ Excludes 66,499 ounces in fiscal 2018 and 11,713 ounces in fiscal 2017 from Hidden Valley that have been credited against the capitalized costs as part of the pre-stripping of stages 5 and 6

Within this report, our discussion and analysis is focused on the all-in sustaining costs and total cash costs measure.

Exchange Rates

Our revenues are very sensitive to the exchange rate of the Rand and other non-US currencies to the US dollar.

Currently, the majority of our earnings are generated in South Africa and, as a result, most of our costs are incurred in Rand. Since gold is generally sold in US dollars, most of our revenues are received in US dollars. The average gold price received by us during fiscal 2018 before including the effect of the cash flow hedges increased by US$45 per ounce to US $1,300 per ounce from US$1,255 per ounce during fiscal 2017. Appreciation of the Rand against the US dollar increases our US dollar working costs at our South African operations when those costs are translated into US dollars, which serves to reduce operating margins and net income from our South African operations. Depreciation of the Rand against the US dollar reduces these costs when they are translated into US dollars, which serves to increase operating margins and net income from our South African operations. Accordingly, strengthening of the Rand generally results in poorer earnings for us if there is not a similar increase in the gold price.

The exchange rates obtained when converting US dollars to Rand are determined by foreign exchange markets, over which we have no control. The conversion rate for balance sheet items as at June 30, 2018 is R13.81 per US$1.00, except for specific items within equity that are converted at the exchange rate prevailing on the date the transaction was entered into. This compares with a conversion rate of R13.11 per US$1.00 as at June 30, 2017, reflecting a depreciation of 5% of the Rand against the US dollar. Income statement items were converted at the average exchange rate for fiscal 2018 of R12.85 per US$1.00, reflecting an appreciation of 6% of the Rand against the US dollar when compared with fiscal 2017.

Harmony has entered into foreign exchange hedging contracts in the form of zero cost collars, which establish a minimum (floor) and maximum (cap) Rand/US dollar exchange rate at which to convert US dollars to Rand. At June 30, 2018, the nominal amount of the hedging contracts is US$252 million and is spread over a 12-month period with a weighted average cap price of US$1=R14.54 and weighted average floor price of US$1=R13.69. Additionally at June 30, 2018 Harmony had open forward exchange forward contracts which had a nominal amount of US$273 million spread over a 24-month period at an average exchange rate of US$1 = R13.95.

The majority of our working costs are incurred in Rand and, as a result of this, appreciation of the Rand against the US dollar increased our working costs when translated into US dollars. Compounding this increase are increases in our labor costs as well as inflationary pressures on our consumables and energy costs, which would decrease operating margins and net income reflected in our consolidated income statement. Depreciation of the Rand against the US dollar would cause a decrease in our costs in US dollar terms. Similarly, at our International operations, appreciation of the Australia dollar or Kina against the US dollar would cause an increase in our costs in US dollar terms. See Item 3: *"Key Information - Risk Factors - Foreign exchange fluctuations could have a material adverse effect on Harmony's operational results and financial condition"*.

The Bank of Papua New Guinea has weakened the Kina against the US dollar by approximately 40 basis points per month in fiscal 2017 and during fiscal 2018, the Kina has weakened by 2%. Since the introduction of the trading band in June 2014 the Kina has weakened by 25% against the US dollar as at June 30, 2018. Should the trading band continue and depending on the level the exchange rate is set at, it could have a negative impact on the results of the Hidden Valley operation, as well as the cost of development at Golpu and other PNG exploration sites.

Inflation

Our operations have been materially affected by inflation. Inflation in South Africa was 4.38% at the end of fiscal 2018, 5.1% at the end of fiscal 2017 and 6.3% at the end of fiscal 2016. Working costs, especially wages, have increased considerably over the past several years resulting in significant cost pressures for the mining industry. In addition, the effect on inflation of the increase in electricity tariffs of 5.2% in fiscal 2018, 2.2% in fiscal 2017 and 9.4% in fiscal 2016, together with an increase that is yet to be determined by the energy regulator in fiscal 2019, will have a negative effect on the profitability of our operations.

The inflation rate in PNG ended fiscal 2016 at 6.4% and 2017 at 6.6%, while the annualized inflation stood at 4.7% at the end of fiscal 2018.

Our profits and financial condition could be adversely affected if the cost inflation is not offset by a concurrent devaluation of the Rand and other non-US currencies and/or an increase in the price of gold. See Item 3: *"Key Information - Risk Factors-Harmony's operations may be negatively impacted by inflation"*.

South African Socio-Economic Environment

We are a South African company and the majority of our operations are in South Africa. As a result, we are subject to various economic, fiscal, monetary and political policies and factors that affect South African companies generally. See Item 3: *"Key Information - Risk Factors - The socio-economic framework in the regions in which Harmony operates may have an adverse effect on its operations and profits"*.

South African companies are subject to exchange control limitations. While exchange controls have been relaxed in recent years, South African companies remain subject to restrictions on their ability to deploy capital outside of the Southern African Common Monetary Area. See Item 10: *"Additional Information - D. Exchange Controls*".

SLPs have been developed for each of our South African operations. These SLPs are prepared in line with legislation governing the participation of HDSAs in mining assets.

We have been granted all of our mining licenses under the MPRDA. We have therefore already started to incur expenses relating to HDSA participation. We believe the biggest challenge will lie in maintaining these licenses, as we will have a responsibility in respect of human resource development, procurement and local economic development. We are unable, however, to provide a specific amount of what the estimated cost of compliance will be but we will continue to monitor these costs on an ongoing basis.

Electricity in South Africa

South African state utility, Eskom, generates approximately 90% of the electricity used in South Africa and approximately 40% of the electricity used in Africa. Eskom generates, transmits and distributes electricity to industrial, mining, commercial, agricultural and residential customers and redistributors.

During fiscal 2018 and 2017, the electricity supply in South Africa has seen less pressure than the previous years, with reduced power interruptions (also referred to as load shedding) occurring. South Africa's electricity supply has improved and since September 2015 only isolated instances of load shedding has occurred.

The supply and demand for electricity is still very tight especially during the evening peak periods between 6:00 p.m. and 8:00 p.m. Harmony participates voluntarily in the Eskom Demand response program to reduce their demand during the said periods. Harmony has renewed its contract agreement with an Energy Service Company ("**ESCO**") to ensure that the various load clipping and load shifting projects savings are sustained. They will also assist with the implementation of new energy saving initiatives at the South African operations to reduce the electricity demand during morning and evening peaks. Harmony also benefits financially from this as the Eskom tariffs are more expensive during that period. The risk of having power outages will be mainly limited to the evening peak periods in the current situation.

Government remains committed to ensure energy security for the country, through the roll-out of the independent power producer program as an integral part of the energy mix. Government remains committed to ensuring the provision of reliable and sustainable electricity supply, as part of mitigating the risk of carbon emissions.

Renewable energy

Energy is the critical component of the country's future policy mix. The argument around electricity really comes down to the questions: Future supply of electricity will be influenced by the extent to which renewables, primarily wind, are efficient, sustainable and ensure security of electricity supply at a competitive economic prices.

Forecasts predict that renewable energy technologies, predominantly solar- and wind-based systems, will further grow in the coming decades, overcoming coal-based electricity around 2030 (IEA, 2015). South Africa is no exception and renewable energy has entered the country's electricity landscape as a significant trend.

Discussions around other technologies, such as gas-to-power and nuclear energy, are also adding to this dynamic. Significant vested interests are still at play alongside substantial state support to maintain the domination of the coal industry over the electricity supply industry in South Africa.

See *"Integrated Annual Report for the 20-F 2018 - Operating context-Social and ethics committee chairman's report"* on pages 28 to 31 *and "Integrated Annual Report for the 20-F 2018 - Managing our Social and Environmental Impacts-Environmental management and stewardship"* on pages 68 to 87.

Tariffs

Like all mining companies, Harmony is a major user of electricity, mostly supplied by Eskom. Energy is a significant and growing portion of our operating costs, given rising electricity tariffs. Electricity tariffs have more than doubled in the last 8 years. On December 18, 2017, NERSA granted Eskom an increase of 5.23%. Eskom is currently in the process of preparing a three-year revenue application, covering 2019/20 to 2021/22 which is expected to be submitted to NERSA in the second half of the 2018 calendar year.

Energy efficiency

Harmony has worked closely with Eskom to manage electricity use and peak demand, underlining our commitment to reduce energy consumption. This includes demand-side management ("**DSM**") strategies to reduce electricity consumption in peak periods; timing our pumping to coincide with cheaper off-peak periods, making more efficient use of Eskom tariffs that reward load-shifting, and improving the efficiency of pumping operations.

We have implemented various energy efficiency projects in recent years, resulting in an average load reduction of 35.8MW and energy savings of 314GWh. Due to capital constraints the projects we have committed to for 2016 were moved to 2017 including a number of other projects identified. With little capital expenditure Harmony has with the assistance of an ESCO achieved a R81 million (US$6 million) cost saving on new projects and a R56 million (US$4 million) maintained cost saving from completed projects. The average weekday load reduction will be 9.4MW and the anticipated energy savings will the 6 981MWh per month.

We have implemented various energy efficiency projects in recent years. See *"Integrated Annual Report for the 20-F 2018 - Managing our Social and Environmental Impacts- Environmental management and stewardship - "* on pages 68 to 87.

Results of Operations

Years Ended June 30, 2018 and 2017

Revenues

Revenue increased by 12%, from US$1,416 million in fiscal 2017 to US$1,584 million in fiscal 2018. This increase can mainly be attributed to a 6% increase in gold sales, from 1,086,231 ounces in fiscal 2017 to 1,146,850 ounces in fiscal 2018. The increase in ounces is largely as a result of the acquisition of the Moab Khotsong operations as well as improvements at Doornkop, Target 1 and Tshepong Operations. In addition to the increase in gold sales the average spot gold price received for fiscal 2018 increased by 4% to US$1,300 per ounce, from US$1,255 per ounce in fiscal 2017, further supplemented by the positive impact of the Rand gold hedges of US$93 million.

The Moab Khotsong operations were acquired in March 2018 and sold 105,872 ounces in the four months to June 2018. See Item 4: *"Information on the Company - History and Development of the Company - Recent Developments - Developments since June 30, 2018 - Acquisition".*

At Doornkop, ounces sold increased by 26% from 87,193 in fiscal 2017 to 109,441 in fiscal 2018. The recovery grade increased by 18% to 0.144 ounce per ton in fiscal 2018. The tons milled increased by 9%.

At Target 1, ounces sold increased by 7% from 84,942 in fiscal 2017 to 90,922 in fiscal 2018. The recovery grade increased by 17% to 0.123 ounce per ton.

At Tshepong Operations, ounces sold increased by 6% from 283,439 in fiscal 2017 to 300,223 in fiscal 2018. The recovery grade increased by 5% to 0.160 ounce per ton.

At Joel, ounces sold decreased by 27% from 73,303 in fiscal 2017 to 53,242 in fiscal 2018. The recovery grade and tons milled decreased by 18% and 12% to 0.105 ounce per ton and 501,000 tons respectively in fiscal 2018. The decrease in production is as a result of a lack in flexibility in terms of available mining areas whilst the Joel decline project is in development. The Joel decline project is nearing completion and development in the footwall areas has commenced. Development is expected to continue for 12 to 18 months where after grades are expected to increase to reserve grade.

At Unisel, ounces sold decreased by 20% from 51,120 in fiscal 2017 to 40,896 in fiscal 2018. The recovery grade and tons milled decreased by 16% and 5% to 0.099 ounce per ton and 415,000 tons respectively in fiscal 2018. During fiscal 2018 the Leader Reef was stopped to accelerate mining of the higher grade Basal Reef pillar areas.

Cost of sales

Cost of sales includes production costs, depreciation and amortization, (reversal of impairment)/impairment of assets and share-based payments.

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a) Production costs (cash costs/all-in sustaining costs)

The following table sets out our total ounces produced and weighted average cash costs per ounce and total ounces sold and weighted average all-in sustaining costs per ounce for fiscal 2018 and fiscal 2017:

	Year Ended June 30, 2018				Year Ended June 30, 2017				Percentage (increase)/decrease	
	Cash costs		All-in sustaining costs		Cash costs		All-in sustaining costs		Cash costs per ounce	All-in sustaining costs per ounce
	(oz produced)	($/oz)	(oz sold)	($/oz)	(oz produced)	($/oz)	(oz sold)	($/oz)		
South Africa										
Kusasalethu	142,395	1,143	138,281	1,342	141,270	1,051	144,614	1,238	(9)	(8)
Doornkop	110,245	1,001	109,440	1,230	85,939	1,047	87,193	1,288	4	5
Tshepong Operations	302,026	987	300,223	1,245	283,827	953	283,439	1,161	(4)	(7)
Moab Khotsong...	105,969	761	101,757	1,017	n/a	n/a	n/a	n/a	(100)	(100)
Masimong	84,332	1,071	83,882	1,242	81,599	1,005	81,631	1,146	(7)	(8)
Target 1..............	91,758	1,131	90,922	1,409	85,809	1,162	84,942	1,491	3	6
Bambanani	90,698	776	90,151	873	88,415	727	88,253	817	(7)	(7)
Joel	52,566	1,347	53,242	1,602	72,211	945	73,303	1,092	(43)	(47)
Unisel..................	41,152	1,463	40,896	1,642	51,280	1,203	51,120	1,354	(22)	(21)
Other - surface....	114,778	1,039	114,199	1,139	102,175	993	103,171	1,090	(5)	(5)
International										
Hidden Valley[(1)] ...	25,516[(2)]	669	23,857[(3)]	1,094	83,614[(2)]	1,068	88,565[(3)]	1,241	37	12
Total	1,161,435		1,146,850		1,076,139		1,086,231			
Weighted average		1,018		1,231		1,000		1,182	(2)	(4)

1 Cash costs and all-in sustaining costs would have been US$824 per ounce and US$1,261 per ounce (2017: US$1,252 per ounce and US$1,1417 per ounce) respectively had silver byproduct credits of US$4 million (2017: US$15 million) or US$155 per ounce produced, US$168 per ounce sold (2017: US$184 per ounce produced, US$176 per ounce sold) not been taken into account.

2 Excludes 66,499 ounces in fiscal 2018 and 11,713 ounces in fiscal 2017, that have been credited against the capitalized cost as part of the pre-stripping of stages 5 and 6.

3 Excludes 64,976 ounces in fiscal 2018 and 11,713 ounces in fiscal 2017, that have been credited against the capitalized cost as part of the pre-stripping of stages 5 and 6.

For further information about the use of Non-GAAP measures, refer to Item 5:*"Operating and Financial Review and Prospects-Costs-Reconciliation of Non-GAAP Measures"*.

Our total average all-in sustaining costs per ounce increased from US$1,182 per ounce in fiscal 2017 to US$1,231 per ounce in fiscal 2018, mainly due to the strengthening of the Rand against the US dollar in fiscal 2018.

Our average cash costs increased by 2%, or US$18 per ounce, from US$1,000 per ounce in fiscal 2017 to US$1,018 per ounce in fiscal 2018. Cash costs per ounce vary with the working costs per ton (which are, in turn, affected by the number of tons processed) and grade of ore processed. Cash costs expressed in US dollars per ounce also vary with fluctuations in the Rand-US dollar exchange rate, because most of our working costs are incurred in Rand. Operating costs in Rand terms increased by 4%, mainly due to the inclusion of the Moab Khotsong operations during fiscal 2018.The South African Rand appreciated by 6% on average against the US dollar when compared to fiscal 2017. The increase in operating cost was partially offset by a 13% increase in ounces produced which netted a 2% increase in cash cost per ounce for fiscal 2018.

At Joel, cash cost per ounce increased by 43% from US$945 per ounce in fiscal 2017 to US$1,347 per ounce in fiscal 2018. The all-in sustaining cost per ounce increased by 47% from US$1,092 per ounce in fiscal 2017 to US$1,602 per ounce in fiscal 2018. The increase was mainly due to a 27% decrease in gold produced and ounces sold as a result of a 18% decrease in the recovered grade to 0.105 ounce per ton combined with a 12% decrease in tons milled.

At Unisel, cash cost per ounce increased by 22% from US$1,203 per ounce to US$1,463 per ounce in fiscal 2018. The all-in sustaining cost increased by 21% from US$1,354 per ounce to US$1,642 per ounce in fiscal 2018. The increase was mainly due to a 20% decrease in gold produced and ounces sold as a result of a 16% decrease in the recovered grade to 0.099 ounce per ton combined with a 5% decrease in tons milled following the cessation of mining in the Leader Reef areas.

At Kusasalethu, cash cost per ounce increased by 9% from US$1,051 per ounce to US$1,143 per ounce in fiscal 2018. The all-in sustaining cost increased by 8% from US$1,238 per ounce to US$1,342 per ounce in fiscal 2018. The increase was mainly due to a 4% increase in cash operating cost as a result of the increase in labor costs.

b) Depreciation and amortization

Depreciation and amortization increased from US$185 million in fiscal 2017 to US$200 million, or 8%, in fiscal 2018 due primarily to the reduction in the reserve tons included in various life-of-mine plans. Also contributing to the increase is the appreciation of the Rand against the US$ dollar in fiscal 2018. In Rand terms, there was an increase in depreciation and amortization expense of 2%.

c) Impairment/(reversal of impairment) of assets

An impairment charge of US$386 million was recorded in fiscal 2018 compared to US$131 million in fiscal 2017. The lower increase in the forecasted gold price relative to the forecasted cost inflation used in the life-of-mine plans impacted negatively on margins.

Assets of US$47 million and goodwill of US$24 million was impaired on Tshepong Operations which has a recoverable amount of US$538 million. Assets of US$8 million and goodwill of US$3 million was impaired on Joel which has a recoverable amount of US$63 million. The updated life-of-mine plans for Tshepong Operations and Joel presented a marginal decrease in recovered grade.

Target 1 recorded an impairment of US$51 million and has a recoverable amount of US$88 million. Exploration drilling during the year resulted in lower grade estimates for certain blocks that had previously been included in the life-of-mine plan but have now subsequently been excluded from the life-of-mine plan.

Unisel recorded an impairment of US$35 million and has a recoverable amount of US$3 million. Masimong recorded an impairment of US$24 million and has a recoverable amount of US$4 million. The impairment at Unisel was driven by a reduced remaining life-of-mine and a focus on the higher grade Basal Reef, whilst the impairment at Masimong was as a result of the depletion of the higher grade B Reef and subsequent reduced life-of-mine plan.

Kusasalethu recorded an impairment of US$42 million and has a recoverable amount of US$155 million. The old mine at the operation was excluded in the FY19 life-of-mine plan.

Doornkop recorded an impairment of US$23 million and has a recoverable amount of US$198 million. Target North recorded an impairment of US$106 million and has a recoverable amount of US$267 million. The impairments of Doornkop and Target North are primarily as a result of a decrease in resource values. During the year, the resource multiples were reassessed in order to be reflective of current market conditions using multiples derived from past transactions with an adjustment for the gold price. The transactions were used to derive US$/oz multiples for resources. The resource per ounce values have decreased substantially as a result of the decrease in the levels of merger and acquisition activity influencing the marketability of resource companies in South Africa, and more specifically gold mining companies.

Other mining assets recorded an impairment of US$23 million and have a recoverable amount of US$26 million. The updated life-of-mine plans for the CGU's in Freegold and Harmony resulted in the impairment of other mining assets.

Gains on derivatives

Gains on derivatives amounted to US$8 million in fiscal 2018, compared to US$75 million in fiscal 2017. Gains on derivatives include the fair value movements of derivatives which have not been designated as hedging instruments for hedge accounting purposes, the amortization of day one gains and losses for derivatives and the hedging ineffectiveness. The day one adjustment arises from the difference between the contract price and market price on the day of the transaction.

Harmony maintains a foreign exchange hedging program in the form of zero cost collars, which establish a floor and cap US$/Rand exchange rate at which to convert US dollars to Rands, and foreign exchange forward contracts. As hedge accounting is not applied, the resulting gains and losses have been recorded in gains on derivatives in the income statement. These gains amounted to US$9 million in fiscal 2018 compared to US$80 million in fiscal 2017 The fair value of the forex hedging contracts was US$10 million negative as at June 30, 2018.

Harmony maintains a hedging program for Hidden Valley by entering into commodity hedging contracts. The contracts comprise US$ gold forward sale derivative contracts as well as silver zero cost collars which establish a minimum (floor) and maximum (cap) silver sales price. Hedge accounting is not applied and the resulting gains and losses are recorded in gains on derivatives in the income statement. The gain amounted to US$3 million in fiscal 2018 compared to US$2 million in fiscal 2017.

Harmony has entered into rand gold forward sale derivative contracts to hedge the risk of lower rand/gold prices. Cash flow hedge accounting is applied to the majority of these contracts, resulting in the effective portion of the unrealized gains and losses being recorded in other comprehensive income (other reserves). During fiscal 2018, the contracts that matured realized a gain of US$93 million which has been included in revenue. There was no ineffective portion in the current year During fiscal 2017 total gains on these contracts amounted to US$54 million. The effective portion of US$53 million was included in revenue while the ineffective portion of US$1 million was included in gains on derivatives. The unamortized portion of the day one gain or loss amounted to US$1 million in fiscal 2018 and US$3 million in fiscal 2017. The gains and losses from non-hedge accounted rand gold forward sale contracts are included in gains on derivatives.

Other operating expenses

(a) *Loss on scrapping of property, plant and equipment*

A negligible loss on scrapping was recorded during fiscal 2018 compared to a loss of US$10 million during fiscal 2017. The 2017 loss relates to the abandonment of individual surface assets for which no future economic benefits are expected from their use or disposal.

(b) *Foreign exchange translation*

A foreign exchange translation loss of US$53 million was recorded during fiscal 2018 compared to gain of US$14 million in fiscal 2017. The change in fiscal 2018 relates to the translation of the US$ revolving credit facilities into Rand, which decreased from a gain of US$16 million in fiscal 2017 to a loss of US$48 million in fiscal 2018. The Rand weakened against the US dollar by 5% from a closing rate of R13.11 in fiscal 2017 to R13.81 in fiscal 2018.

(c) *Silicosis settlement provision*

A provision of US$70 million was recognized during fiscal 2017 for Harmony's potential cost to settle the silicosis and tuberculosis class actions that have been instituted against it in South Africa. During fiscal 2018 the provision decreased by US$3 million as a result of changes in estimates.

Acquisition-related costs

Expenses of US$8 million were incurred during fiscal 2018 related to direct costs of the Moab Khotsong operations acquisition. These expenses comprise mainly legal and consulting fees.

Income and mining taxes

In fiscal 2017 and 2018, the tax rates for companies were 34% for mining income and 28% for non-mining income for South African companies and 30% for Australian companies and PNG mining companies.

	Fiscal year ended June 30,	
Income and mining tax	**2018**	**2017**
Effective income and mining tax rate	5%	185%

The effective tax rate for fiscal 2018 was lower than the mining statutory tax rate of 34% for us and our subsidiaries as a whole, mainly due to the impairment processed during the year. The impairment recognized is an outcome of forecast cost inflation, a subdued forecast gold price and the resultant impact on margins at the group's South African operations. Further contributing to the lower effective tax rate is a deferred tax credit following the decrease in the average deferred tax rates at the South African operations due to lower estimated profitability following the completion of the updated life-of-mine plans. The most significant items causing the group's income tax provision to differ from the mining statutory tax rate are:

- Harmony company tax losses and deductible temporary differences for which future taxable profits are uncertain and not considered probable. This primarily relates to the impairment of assets and foreign exchange losses on the US$ loan.
- Hidden Valley operation's and the PNG exploration operations' respective tax losses and deductible temporary differences arising in the year for which future taxable profits are not considered probable.
- No tax consequences relating to the impairment of assets for various operations.
- Rate differences related to the additional capital allowances that may be deducted from mining taxable income in South Africa, which mainly relates to Avgold Limited (which includes the Target 1 operation).

Deferred tax rates for the South African operations are calculated based on estimates of the future profitability of each ring-fenced mine when temporary differences will reverse. The future profitability of each ring-fenced mine, in turn, is determined by reference to the life-of-mine plan for that operation, which is based on parameters such as the Group's long term view of the US$ gold price and the Rand/US$ exchange rate, as well as the reserves declared for the operation. As some of these parameters are based on market indicators, they differ from one year to the next. In addition, the reserves may also increase or decrease based on updated or new geological information. Changes in the future profitability of each ring-fenced mine impact the deferred tax rates used to recognize temporary differences at these operations. See *"-Critical Accounting Policies and Estimates - Deferred taxes*" above. The decrease in deferred tax on temporary differences due to changes in estimated effective tax rates results primarily from a decrease in the effective deferred tax rate at Freegold (includes the Bambanani, Joel and Tshepong operations), Randfontein (consists of Doornkop and Kusasalethu) and Harmony (includes the Masimong, Unisel and Free State Surface operations).The deferred tax rate at Freegold decreased from 12.5% in fiscal 2017 to 8.7% in fiscal 2018, Randfontein decreased from 3.8% to 1.8% in fiscal 2018 and Harmony decreased from 19.4% in fiscal 2017 to 10.5% in fiscal 2018. These decreases are mainly due to lower estimated profitability.

South Africa. Generally, South Africa imposes tax on worldwide income (including capital gains) of all our South African incorporated tax resident entities at a rate of 28% on non-mining income. The South African entities pay taxes separately on mining income and non-mining income. The amount of our South African mining income tax is calculated on the basis of a gold mining formula that takes into account our total revenue and profits from, and capital expenditure for, mining operations in South Africa. 5% of total mining revenue is exempt from taxation in South Africa as a result of the application of the gold mining formula. The amount of revenue subject to taxation is calculated by deducting qualifying capital expenditures from taxable mining income. The amount by which taxable mining income exceeds 5% of mining revenue constitutes taxable mining income. We and our subsidiaries account for taxes separately that is determined in respect of each entity. Hence South Africa does not make use of any group basis of taxation.

South Africa has a Controlled Foreign Company regime which effectively attributes certain types of passive income derived by offshore subsidiaries and imputes that income in taxable income as if it had been derived in South Africa under South African tax rules.

Australia. Generally, Australia also imposes tax on the worldwide income (including capital gains) of all of our Australian incorporated and tax resident entities. The current income tax rate for companies is 30%.

Harmony Gold (Australia) Proprietary Limited and its wholly-owned Australian subsidiary companies are recognized and taxed as a single entity, called a Consolidated Group. Under the Tax Consolidation rules all of the Australian subsidiary companies are treated as divisions of the Head Company, Harmony Gold Australia. As a result, inter-company transactions between group members are generally ignored for tax purposes. This allows the group to transfer assets between group members without any tax consequences, and deems all tax losses to have been incurred by the Head Company of the group.

PNG. PNG mining projects are taxed on a project basis. Therefore, each project is taxed as a separate entity, even though it may be one of a number of projects carried on by the same company. Capital development and exploration expenditure incurred in PNG is capitalized for tax purposes and can be deducted at 25% per annum on a diminishing value basis against project income, with the deduction being limited to the lesser of 25% of the diminished value or the income of the project for the year.

PNG mining companies are taxed at a rate of tax of 30%. Mining operations in PNG are subject to a 2% royalty and 0.25% Production Levy which are payable to the PNG Government.

Years Ended June 30, 2017 and 2016

Revenues

Revenue increased by 12%, from US$1,264 million in fiscal 2016 to US$1,416 million in fiscal 2017. This increase can be attributed to a 7% increase in the average spot gold price received of US$1,255 per ounce for fiscal 2017, compared to US$1,169 per ounce for fiscal 2016, together with the impact of the Rand gold hedges of US$53 million. Our gold sales increased 0.4%, from 1,081,615 ounces in 2016 to 1,086,231 ounces in 2017. The increase in ounces can be attributed mainly to the acquisition of Newcrest's 50% of the Hidden Valley operation, improvements at Kusasalethu year on year as well as grade improvements at Masimong, Kalgold and Phoenix.

At Hidden Valley, ounces sold increased by 18% from 75,233 in fiscal 2016 to 88,565 in fiscal 2017. The acquisition was completed in October 2016 and 100% of the production was accounted for. With the mining of stage 4 completed in fiscal 2016 the operation processed the run-of-mine stockpiles during fiscal 2017. These factors led to an increase in tons milled of 41% to 2,678,000 tons and a decrease in the recovery grade of 8% to 0.035 ounce per ton in fiscal 2017.

At Phoenix, ounces sold increased by 18% from 25,335 in fiscal 2016 to 29,964 in fiscal 2017. The tons milled increased by 4% to 7,420,000 tons in fiscal 2017 as a result of additional tons from the Phoenix slimes dams being treated at Central Plant.

At Kusasalethu, ounces sold increased by 18% from 122,880 in fiscal 2016 to 144,614 in fiscal 2017. The recovery grade increased by 25% to 0.211 ounce per ton in fiscal 2017 following the decision to shorten the life of mine and focus on higher grade areas.

At Kalgold, ounces sold increased by 12% from 34,916 in fiscal 2016 to 38,999 in fiscal 2017. The recovery grade and tons milled increased by 5% and 2% to 0.023 ounce per ton and 1,660,000 tons respectively in fiscal 2017 due to improved availability of the mills and additional mobile crushers that assisted with mill throughput during fiscal 2017.

At Target 1, ounces sold decreased by 23% from 109,923 in fiscal 2016 to 84,942 in fiscal 2017. The recovery grade decreased by 22% to 0.104 ounce per ton in fiscal 2017. Production was hampered by unfavorable mining conditions in the higher grade areas.

Cost of sales

Cost of sales includes production costs, depreciation and amortization, (reversal of impairment)/impairment of assets and employment termination and restructuring costs.

a) Production costs (cash costs/all-in sustaining costs)

The following table sets out our total ounces produced and weighted average cash costs per ounce and total ounces sold and weighted average all-in sustaining costs per ounce for fiscal 2017 and fiscal 2018:

	Year Ended June 30, 2017				**Year Ended June 30, 2016**				**Percentage (increase)/ decrease**	
	Cash costs		**All-in sustaining costs***		**Cash costs**		**All-in sustaining costs***		**Cash costs per ounce**	**All-in sustaining costs per ounce**
	(oz produced)	**($/oz)**	**(oz sold)**	**($/oz)**	**(oz produced)**	**($/oz)**	**(oz sold)**	**($/oz)**		
South Africa										
Kusasalethu	141,270	1,051	144,614	1,238	124,198	1,026	122,880	1,254	(2)	1
Doornkop	85,939	1,047	87,193	1,288	87,772	831	87,193	1,016	(26)	(27)
Tshepong Operations	283,827	952	283,439	1,161	289,968	767	289,999	939	(24)	(24)
Masimong	81,599	1,005	81,631	1,146	78,190	916	78,191	1,059	(10)	(8)
Target 1	85,809	1,162	84,942	1,491	108,895	787	109,923	1,012	(48)	(47)
Bambanani	88,415	727	88,253	817	96,870	576	96,934	654	(26)	(25)
Joel	72,211	945	73,303	1,092	73,239	796	72,179	911	(19)	(20)
Unisel	51,280	1,203	51,120	1,354	54,785	949	54,817	1,064	(27)	(27)
Other - surface	102,175	993	103,171	1,090	95,553	935	94,266	996 [2]	(6)	(9)
International										
Hidden Valley[1]	83,614[2]	1,068	88,565[2]	1,241	72,565	1,028	75,233	1,282	(4)	3
Total operations	1,076,139		1,086,231		1,082,035		1,081,615			
Weighted average		1,000		1,182		841		1,003	(19)	(18)

1 Cash costs and all-in sustaining costs would have been US$1,252 per ounce and US$1,417 per ounce (2016: US$1,320 per ounce and US$1,564 per ounce) respectively had silver byproduct credits of US$15 million (2016: US$21 million) or US$184 per ounce produced, US$176 per ounce sold (2016: US$292 per ounce produced, US$282 per ounce sold) not been taken into account.

2 Excludes 11,713 ounces that have been credited against the capitalized cost as part of the pre-stripping of stages 5 and 6.

For further information about the use of Non-GAAP measures, refer to Item 5:*"Operating and Financial Review and Prospects-Costs-Reconciliation of Non-GAAP Measures"*.

Our total average all-in sustaining costs per ounce increased from US$1,003 per ounce in fiscal 2016 to US$1,182 per ounce in fiscal 2017, mainly due to an increase in labor costs (annual increases and bonuses) and consumables as well as capital expenditure. Also contributing to the increase in US dollar terms is the strengthening of the Rand against the US dollar in fiscal 2017.

a) Production costs (cash costs/all-in sustaining costs) continued

Our average cash costs increased by 19%, or US$159 per ounce, from US$841 per ounce in fiscal 2016 to US$1,000 per ounce in fiscal 2017. Cash costs per ounce vary with the working costs per ton (which are, in turn, affected by the number of tons processed) and grade of ore processed. Cash costs expressed in US dollars per ounce also vary with fluctuations in the Rand-US dollar exchange rate, because most of our working costs are incurred in Rand. Operating costs in Rand terms increased by 11%. The South African Rand appreciated by 6% on average against the US dollar when compared to fiscal 2016. Operating costs in Rand terms were affected mainly by an increase in costs on Tshepong Operations, Doornkop, Target 1 and Kusasalethu where costs increased in Rand terms by 14%, 16%, 9% and 9%, respectively, year on year. Annual increases in labor costs as well as inflationary pressures on our consumables contributed towards higher operating costs in fiscal 2017. The inclusion of the acquired 50% of Hidden Valley resulted in a 12% increase year on year.

At Doornkop, the cash cost per ounce increased by 26% from US$831 per ounce in fiscal 2016 to US$1,047 per ounce in fiscal 2017. The all-in sustaining cost per ounce increased by 27% from US$1,016 per ounce in fiscal 2016 to US$1,288 per ounce in fiscal 2017. The increase was mainly due to the increase in cash operating costs due to the annual increase in labor costs and inflationary increases in consumables.

At Tshepong Operations, the cash cost per ounce increased by 24% from US$767 per ounce in fiscal 2016 to US$952 per ounce in fiscal 2017. The all-in sustaining cost per ounce increased by 24% from US$939 per ounce in fiscal 2016 to US $1,161 per ounce in fiscal 2017. The increase was mainly due to the increase in production costs as due to the annual increase in labor costs and inflationary increases in consumables. Also contributing is the 2% decrease in gold produced as a result of the decrease in the tons milled (decrease of 4% to 1,869,000 tons) in fiscal 2017.

At Target 1, the cash cost per ounce increased by 48% from US$787 per ounce in fiscal 2016 to US$1,162 per ounce in fiscal 2017. The all-in sustaining cost per ounce increased by 47% from US$1,012 per ounce in fiscal 2016 to US$1,491 per ounce in fiscal 2017. The increase was mainly due to the unfavorable ground conditions that affect production, which resulted in a 22% decrease in grade to 0.104oz/t. Gold produced decreased by 21% to 85,809.

b) Depreciation and amortization

Depreciation and amortization increased from US$149 million in fiscal 2016 to US$185 million, or 24%, in fiscal 2017 due primarily to a 4% increase in the reserve tons mined used in the calculation as well as the carrying value of areas mined, and therefore depreciated, being higher year on year. Also contributing to the increase is the appreciation of the Rand against the US$ dollar in fiscal 2017. In Rand terms, there was an increase in depreciation and amortization expense of 16%.

c) (Impairment)/reversal of impairment of assets

An impairment charge of US$131 million was recorded in fiscal 2017 compared to a net reversal of impairment of US$3 million in fiscal 2016. The slight decrease in the gold price used in the life-of-mine plans, together with cost inflation, impacted negatively on margins. This, as well as increases in the discount rates used, contributed to the lower recoverable amounts.

At Target 1, a charge of US$60 million was recorded after information gained from underground drilling during the year indicated that some areas of the bottom reef of the Dreyerskuil are highly channelized, which negatively impacted on the overall grade of the operation. These areas were subsequently excluded from the life-of-mine plan. This, together with general pressure on margins, reduced the profitability of the operation over its life, contributing to the impairment charge.

At Kusasalethu, a charge of US$52 million was recorded mainly due to the reduction in the additional attributable resource value as a result of a decrease in the ounces. Harmony investigated the viability of a decline to extend the life of the operation. The business case showed that the option was not feasible and therefore the resource ounces were reduced.

At the Tshepong Operations, an impairment of US$19 million was recorded, which was allocated against the goodwill of the cash generating unit. The integration of Tshepong and Phakisa on July 1, 2017 resulted in the two cash generating units being combined for impairment testing at June 30, 2017. The planned improvements to the environmental conditions at the operation resulted in additional capital expenditure and reduced the recoverable amount.

The net reversal of US$3 million in fiscal 2016 consists of a reversal of US$50 million at Doornkop, offset by charges to Hidden Valley and Masimong of US$32 million and US$15 million, respectively.

Gains on derivatives

Gains on derivatives amounted to US$75 million in fiscal 2017, compared to US$30 million in fiscal 2016. These gains relate primarily to the gains on the foreign exchange hedging contracts (forex hedging contracts) in the form of zero cost collars. These establish a minimum (floor) and maximum (cap) Rand/US dollar exchange rate at which to convert US dollars to Rand. The nominal value of open forex hedging contracts at June 30, 2017 was US$422 million. The hedging contracts are spread over a 12-month period. The fair value of the forex hedging contracts was US$34 million positive as at June 30, 2017. Hedge accounting is not applied to these forex hedging contracts and all gains have been recorded in the income statement.

Other operating expenses

a) Loss on scrapping of property, plant and equipment

A loss on scrapping of US$11 million (2016: US$4 million) was recorded in fiscal 2017. This relates to the abandonment of individual surface assets for which no future economic benefits are expected from their use or disposal. The 2016 loss relates to the abandonment of unprofitable areas in certain of the South African operations' life-of-mine plans.

b) Foreign exchange translation loss

Foreign exchange translation gain/loss increased from a loss of US$43 million in fiscal 2016 to a gain of US$14 million in fiscal 2017. The change in fiscal 2017 relates to the translation of the US$ revolving credit facilities into Rand, which increased from a loss of US$46 million in fiscal 2016 to a gain of US$16 million in fiscal 2017. The Rand strengthened against the US dollar by 11% from a closing rate of R14.72 in fiscal 2016 to R13.11 in fiscal 2017.

c) Silicosis settlement provision

A provision of US$70 million was recognized during fiscal 2017 for Harmony's potential cost to settle the silicosis and tuberculosis class actions that have been instituted against it in South Africa. During fiscal 2016, these class actions were disclosed as a contingent liability as a reliable estimate of the amount could not be made. With progress by the industry working group on occupational lung diseases and the status of the negotiations with the various stakeholders, management can reasonably estimate the Group's share of any potential settlement.

Gain on bargain purchase

A gain on bargain purchase arose from Harmony's acquisition of full ownership of the Hidden Valley operation. Refer to note 10, "*Gain on bargain purchase*" of our consolidated financial statements for further details.

Income and mining taxes

In fiscal 2016 and 2017, the tax rates for companies were 34% for mining income and 28% for non-mining income for South African companies and 30% for Australian companies and PNG mining companies.

	Fiscal year ended June 30,	
Income and mining tax	**2017**	**2016**
Effective income and mining tax rate	185%	40%

The effective tax rate for fiscal 2017 was higher than the mining statutory tax rate of 34% for us and our subsidiaries as a whole due to the deferred tax credit following the decrease in the average deferred tax rates at the South African operations due to lower estimated profitability following the completion of the updated life-of-mine plans. Offsetting this is the increase in current tax in fiscal 2017 compared to fiscal 2016 as a result of the utilization of assessed losses and unredeemed capital by most of the South African operations in the prior year as well as the gains on derivatives (including the unrealized portion of the foreign exchange contracts). The most significant items causing the group's income tax provision to differ from the mining statutory tax rate are:

- No tax consequences relating to the gain on bargain purchase recorded on the acquisition of Hidden Valley and deferred tax assets not recognized which relates primarily to the Hidden Valley operation.
- No tax consequences relating to the impairment recorded for the goodwill on the Tshepong Operations.
- Rate differences related to the additional capital allowances that may be deducted from mining taxable income in South Africa, which mainly relates to Avgold Limited (which includes the Target 1 operation).

Deferred tax rates for the South African operations are calculated based on estimates of the future profitability of each ring-fenced mine when temporary differences will reverse. The future profitability of each ring-fenced mine, in turn, is determined by reference to the life-of-mine plan for that operation, which is based on parameters such as the Group's long term view of the US$ gold price and the Rand/US$ exchange rate, as well as the reserves declared for the operation. As some of these parameters are based on market indicators, they differ from one year to the next. In addition, the reserves may also increase or decrease based on updated or new geological information. Changes in the future profitability of each ring-fenced mine impact the deferred tax rates used to recognize temporary differences at these operations. See *"- Critical Accounting Policies and Estimates - Deferred taxes"* above. The deferred tax rate at Freegold decreased from 20.0% in fiscal 2016 to 12.5% in fiscal 2017, Randfontein decreased from 10.1% to 3.8% in fiscal 2017 and Harmony decreased from 21.1% in fiscal 2016 to 19.4%, these decreases mainly due to lower estimated profitability.

South Africa. Generally, South Africa imposes tax on worldwide income (including capital gains) of all our South African incorporated tax resident entities at a rate of 28% on non-mining income. We pay taxes separately on mining income and non-mining income. The amount of our South African mining income tax is calculated on the basis of a gold mining formula that takes into account our total revenue and profits from, and capital expenditure for, mining operations in South Africa. 5% of total mining revenue is exempt from taxation in South Africa as a result of the application of the gold mining formula. The amount of revenue subject to taxation is calculated by deducting qualifying capital expenditures from taxable mining income. The amount by which taxable mining income exceeds 5% of mining revenue constitutes taxable mining income. We and our subsidiaries account for taxes separately that is determined in respect of each entity. Hence South Africa does not make use of any group basis of taxation.

South Africa has a Controlled Foreign Company regime which effectively attributes certain types of passive income derived by offshore subsidiaries and imputes that income in taxable income as if it had been derived in South Africa under South African tax rules.

Australia. Generally, Australia also imposes tax on the worldwide income (including capital gains) of all of our Australian incorporated and tax resident entities. The current income tax rate for companies is 30%.

Harmony Gold (Australia) Proprietary Limited and its wholly-owned Australian subsidiary companies are recognized and taxed as a single entity, called a Consolidated Group. Under the Tax Consolidation rules all of the Australian subsidiary companies are treated as divisions of the Head Company, Harmony Gold Australia. As a result, inter-company transactions between group members are generally ignored for tax purposes. This allows the group to transfer assets between group members without any tax consequences, and deems all tax losses to have been incurred by the Head Company of the group.

PNG. PNG mining projects are taxed on a project basis. Therefore, each project is taxed as a separate entity, even though it may be one of a number of projects carried on by the same company. Capital development and exploration expenditure incurred in PNG is capitalized for tax purposes and can be deducted at 25% per annum on a diminishing value basis against project income, with the deduction being limited to the lesser of 25% of the diminished value or the income of the project for the year.

PNG mining companies are taxed at a rate of tax of 30%. Mining operations in PNG are subject to a 2% royalty and 0.25% Production Levy which are payable to the PNG Government.

Other Financial Information

Export Sales

All of our gold produced in South Africa during fiscal 2016 to 2018 was refined by Rand Refinery Proprietary Limited ("**Rand Refinery**"). Rand Refinery is owned by a consortium of the major gold producers in South Africa and Harmony holds a 10.38% interest at June 30, 2018. All of our gold produced in PNG in those periods was sold to The Perth Mint Australia, a Perth-based refinery.

Recent Developments

See Item 4: *"Information on the Company - History and Development of the Company - Recent Developments - Developments since June 30, 2018*".

B. LIQUIDITY AND CAPITAL RESOURCES

We centrally manage our funding and treasury policies. There are no legal or economic restrictions on the ability of our subsidiaries to transfer funds to us. We have generally funded our operations and our short-term and long-term liquidity requirements from: (i) cash generated from operations; (ii) credit facilities and other borrowings; and (iii) sales of equity securities.

	Fiscal year ended June 30,		
	2018	2017	2016
	($ in millions)		
Operating cash flows	303	280	312
Investing cash flows	(658)	(249)	(180)
Financing cash flows	320	(29)	(114)
Foreign exchange differences	(9)	8	(21)
Total cash flows	(44)	10	(3)

Operations

Net cash provided by operations is primarily affected by the quantities of gold sold, the gold price, the Rand-US dollar exchange rate, cash costs per ounce and, in the case of the International operations, the Australian dollar and PNG Kina versus US dollar exchange rate. A significant adverse change in one or more of these parameters could materially reduce cash provided by operations as a source of liquidity.

Net cash generated by operations increased from US$280 million in fiscal 2017 to US$303 million in fiscal 2018. This is mainly due to the inclusion of the Moab Khotsong operations in fiscal 2018 offset by a temporary cut in production at Hidden Valley.

Net cash generated by operations decreased from US$312 million in fiscal 2016 to US$280 million in fiscal 2017. This is mainly due to the income tax paid during fiscal 2017 as a result of the increase in current tax primarily due to gains on derivatives.

Investing

Net cash utilized by investing activities was US$658 million in fiscal 2018, an increase from US$249 million in fiscal 2017. The increase relates largely to the acquisition of the Moab Khotsong operations. This was further supplemented by additions to property, plant and equipment of US$355 million in fiscal 2018, compared with US$286 million in fiscal 2017.

On October 19, 2017, Harmony announced that it would acquire Anglogold Ashanti Limited's Moab Khotsong and Great Noligwa mines together with other assets and related infrastructure for a cash consideration of the Rand equivalent of US $300 million. The Moab Acquisition was approved by Harmony's shareholders on February 1, 2018 and became effective as of March 1, 2018.

The assets and liabilities were acquired by Harmony Moab Khotsong Operations Proprietary Limited, a wholly-owned subsidiary of Harmony. The assets acquired and liabilities assumed constitute a business as defined by IFRS 3 *Business Combinations* and the purchase price allocation process has been finalized. Refer to note 14 "*Acquisitions and Business Combinations*" of our consolidated financial statements for further details.

The acquisition of the Moab Khotsong operations resulted in the recognition of goodwill to the amount of US$23 million. The goodwill is attributable mainly to the skills and technical talent of the Moab Khotsong operations' work force and the synergies expected to be achieved from integrating the Moab Khotsong operations into the group's existing mining activities.

Net cash utilized by investing activities was US$249 million in fiscal 2017, an increase from US$180 million in fiscal 2016. The increase relates to the additions to property, plant and equipment of US$286 million in fiscal 2017, compared with US$168 million in fiscal 2016. Offsetting this was the US$33 million cash received on the acquisition of full ownership of Hidden Valley.

Financing

Financing activities generated US$320 million in fiscal 2018, compared with US$29 million utilized in fiscal 2017. The increase in cash generated from financing activities was primarily a result of our need to finance the Moab Acquisition. Dividends of US$12 million were paid during fiscal 2018. The net of borrowings drawn (US$565 million) and borrowings repaid (US$312 million) during fiscal 2018 was US$253 million.

Cash utilized in financing activities amounted to US$29 million in fiscal 2017, a decrease from US$114 million in fiscal 2016. Dividends of US$33 million was paid during fiscal 2017. The net of borrowings drawn (US$54 million) and borrowings repaid (US$50 million) during fiscal 2017 was US$4 million.

US$100 million of the consideration for the Moab Acquisition was funded from Harmony's US$350 million three-year syndicated term loan and revolving credit facilities. The remaining US$200 million was initially funded through Harmony's US $200 million one-year syndicated bridge facility as described below. Harmony repaid US$50 million of the bridge facility in April 2018 from operating cash flows. A further US$100 million of the bridge facility was repaid in June 2018 from the proceeds of the Placing and operating cash flows. US$50 million under the bridge facility was still outstanding on June 30, 2018, which Harmony repaid from the proceeds the ARM Placing subsequent to the end of fiscal 2018, in July 2018. See "- *Outstanding Credit Facilities and Other Borrowings*" below.

Outstanding Credit Facilities and Other Borrowings

On July 28, 2017, we entered into a syndicated term loan and revolving credit facilities agreement in the amount of up to US$350 million, with Nedbank Limited, Absa Bank Limited, JP Morgan Chase Bank NA, Caterpillar Financial Services Corporation, HSBC Bank plc, State Bank of India, The Bank of China and Citibank, NA, with Nedbank Limited and Absa Bank Limited acting as arrangers, and Nedbank Limited acting as facility agent. The syndicated term loan and revolving credit facilities mature on August 15, 2020. Harmony drew down US$175 million on the term facility in August 2017 and a further US $40 million and US$110 million on the revolving facility in November 2017 and February 2018, respectively. As at June 30, 2018 the remaining US$25 million on the revolving facility was available.

The key terms of the syndicated term loan and revolving credit facilities are:

Term facility:	$175 million
Margin on term facility:	3.15% over 3 month LIBOR
Revolving facility:	$175 million
Margin on revolving facility:	3.00% over 3 month LIBOR
Maturity	Three years from close
Security	Certain shares and claims

On February 20, 2017 we entered into a Rand revolving credit facility in the amount of up to R1 billion (US$85.2 million) with Nedbank Limited. Interest accrues at JIBAR plus a margin of 3.15% per annum, with quarterly commitment fee of 0.95%. The Rand revolving credit facility matures in February 2020. R500 million (US$41 million) was drawn down in April 2018 and remains outstanding. As at June 30, 2018, the remaining R500 million (US$36 million) on this facility was available.

On October 18, 2017, we entered into a syndicated bridge facility agreement in the amount of up to US$200 million with UBS Limited, Nedbank Limited, Absa Bank Limited and JP Morgan Securities Plc, with Nedbank Limited acting as facility agent. The syndicated bridge facility has a term of one year. Harmony drew down US$200 million on this facility in February 2018. Harmony repaid US$50 million of the bridge facility in April 2018 from operating cash flows. A further US$100 million of the bridge facility was repaid in June 2018 from the proceeds of the Placing and operating cash flows. At June 30, 2018, US$50 million on this loan was still outstanding. Harmony repaid the final US$50 million from the proceeds the ARM Placing as well as internal cash resources subsequent to the end of fiscal 2018, in July 2018.

The key terms of the US$200 million one-year syndicated bridge facility are:

Facility:	$200 million
Margin on term facility:	2.5% - 3.5% over 3 month LIBOR
Maturity	Twelve months
Security	Certain shares and claims

See Item 4: "*Information on the Company - History and Development of the Company - Recent Developments - Developments since June 30, 2018*".

We need to comply with certain debt covenants for the syndicated term loan and revolving credit facilities, the Rand revolving credit facility and the syndicated bridge facility.

The debt covenant tests are as follows:

The group's interest cover ratio shall not be less than five (EBITDA[1]/Total interest paid).

Tangible Net Worth[2] to total net debt ratio shall not be less than six times or eight times when dividends are paid.

Leverage[3] shall not be more than 2.5 times.

1 *EBITDA as defined in the agreement excludes unusual items such as impairment and restructuring cost.*

2 *Tangible Net Worth is defined as total equity less intangible assets.*

3 *Leverage is defined as total net debt to EBITDA.*

At the time of entering into the syndicated bridge facility, the Tangible Net Worth to total net debt ratio covenant was renegotiated and relaxed from 6 times to 4 times for the full term of the bridge loan.

We complied with the relevant covenants during fiscal 2018.

Recently Retired Credit Facilities and Other Borrowings

On December 20, 2013, we entered into a loan facility with Nedbank, comprising a revolving credit facility of R1,300 million (US$126 million). Interest at JIBAR plus 350 basis points, was paid at the elected interest interval. The revolving credit facility was repayable after three years. The facility was extended to and matured in February 2017.

On December 22, 2014, we entered into a loan facility agreement which was jointly arranged by Nedbank Limited (Nedbank) and Barclays Bank Plc, comprising a revolving credit facility of up to US$250 million. Interest accrued on a day-to-day basis over the term of the loan at a variable interest rate. The facility was repaid on maturity during February 2018.

Capital Expenditures

Total budgeted capital expenditures for fiscal 2019 are US$373 million. See *Item 4:* "*Information On The Company - Business Overview - Capital Expenditures" for* details regarding the budgeted capital expenditures for each operation. We currently expect that our planned operating capital expenditures will be financed from operations, including use of our current facilities, as described in "*-Outstanding Credit Facilities and Other Borrowings" above*, and new borrowings as needed.

The following table sets forth our authorized capital expenditure as of June 30, 2018:

	$'million
Authorized and contracted for[1]	20
Authorized but not yet contracted for	124
Total	**144**

1 Including our share of the PNG joint operation's capital expenditure of US$4 million.

Working Capital and Anticipated Financing Needs

The board believes that our working capital resources, by way of cash generated from operations, borrowings and existing cash on hand, are sufficient to meet our present working capital needs. The South African operations are generally expected to fund their capital internally. The Wafi-Golpu project in PNG is, however, expected to require additional capital expenditure over the next three to six years to complete construction, some of which will be funded from cash generated by operations and the balance by debt. We may also consider other options or structures to finance Wafi-Golpu. For more information on our planned capital expenditures, see "*-Capital Expenditure*" above. Also see *Item 3: "Risk Factors - Harmony's operations have limited proved and probable reserves. Exploration for additional reserves is speculative in nature, may be unsuccessful and involves many risks"*. Our board believes that we will have access to adequate financing on reasonable terms given our cash-based operations and modest leverage. Our ability to generate cash from operations could, however, be materially adversely affected by increases in cash costs, decreases in production, decreases in the price of gold and appreciation of the Rand and other non-US dollar currencies against the US dollar. In addition, South African companies are subject to significant exchange control limitations, which may impair our ability to fund overseas operations or guarantee credit facilities entered into by overseas subsidiaries. See *Item 10: "Additional Information - D. Exchange Controls".*

The information set forth under the headings:

- *"-Delivering profitable ounces in line with business objectives-Operating performance*" on page 88 to 126 of the Integrated Annual Report for the 20-F 2018 is incorporated herein by reference.

C: RESEARCH AND DEVELOPMENT, PATENTS AND LICENSES, ETC.

Not applicable.

D. TREND INFORMATION

The information set forth under the headings:

- *"-Delivering profitable ounces in line with business objective-Operating performance*" on pages 88 to 126 of the Integrated Annual Report for the 20-F 2018 is incorporated herein by reference.

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E. OFF-BALANCE SHEET ARRANGEMENTS

Contractual obligations in respect of mineral tenement leases in PNG amount to US$4 million at June 30, 2018.

F. TABULAR DISCLOSURE OF CONTRACTUAL OBLIGATIONS

Our contractual obligations and commercial commitments consist primarily of credit facilities, post-retirement healthcare and environmental obligations.

Contractual Obligations on the Balance Sheet

The following table summarizes our contractual obligations as of June 30, 2018:

		Payments Due by Period			
	Total	**Less Than 12 Months July 1, 2018 to June 30, 2019**	**12-36 Months July 1, 2019 to June 30, 2021**	**36-60 Months July 1, 2021 To June 30, 2023**	**After 60 Months Subsequent June 30, 2023**
	($'million)	**($'million)**	**($'million)**	**($'million)**	**($'million)**
Bank facilities[1]	455	51	404	—	—
Post-retirement health care[2]	13	—	—	—	13
Environmental obligations[3]	240	—	—	—	240
Total contractual obligations	**708**	**51**	**404**	**—**	**253**

1 See Item 5: *"Operating and Financial Review and Prospects - Liquidity and Capital Resources - Outstanding Credit Facilities and Other Borrowings"*. The amounts include the interest payable over the terms of the facilities.

2 This liability relates to post-retirement medical benefits of Freegold employees at the time of acquisition as well as for former employees who retired prior to December 31, 1996 and is based on actuarial valuations conducted during fiscal 2018.

3 We make provision for environmental rehabilitation costs and related liabilities based on management's interpretations of current environmental and regulatory requirements. See Item 5: *"Operating and Financial Review and Prospects - Operating Result - Critical Accounting Policies - Provision for environmental rehabilitation"*.

Commercial Commitments

The following table provides details regarding our commercial commitments as of June 30, 2018:

		Amount of Commitments Expiring by Period			
	Total	**Less Than 12 Months July 1, 2018 to June 30, 2019**	**12-36 Months July 1, 2019 to June 30, 2021**	**36-60 Months July 1, 2021 To June 30, 2023**	**After 60 Months Subsequent June 30, 2023**
	($'million)	**($'million)**	**($'million)**	**($'million)**	**($'million)**
Guarantees[1]	45	—	—	—	45
Capital commitments[2]	20	20	—	—	—
Total commitments expiring by period	**65**	**20**	**—**	**—**	**45**

1 US$35 million of these guarantees relate to our environmental and rehabilitation obligation.

2 Capital commitments consist only of amounts committed to external suppliers, although a total of US$144 million has been approved by the board for capital expenditures.

G. SAFE HARBOR

The information set forth under the heading *"Cautionary statement about forward-looking statements"* on page iii is incorporated herein by reference.

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. DIRECTORS AND SENIOR MANAGEMENT

The information set forth under the heading:

- *"Board of directors" and "Executive management"* on pages 149 to 155 of the Integrated Annual Report for the 20-F 2018 is incorporated herein by reference.

B. COMPENSATION

The information set forth under the heading:

- *"-Leadership and governance-Remuneration report"* on pages 156 to 180 of the Integrated Annual Report for the 20-F 2018 is incorporated herein by reference.

C. BOARD PRACTICES

The information set forth under the headings:

- *"-Leadership and governance-Corporate governance"* on pages 131 to 149;
- *"-Leadership and governance-Remuneration report"* on pages 156 to 180; and
- *"-Leadership and governance-Audit and risk committee chairman's report"* on pages 181 to 186

of the Integrated Annual Report for the 20-F 2018 is incorporated herein by reference.

D. EMPLOYEES

The information set forth under the heading:

- *"-Ensuring employee safety and well-being-maintaining stability in our workplace"* on pages 51 to 58 of the Integrated Annual Report for the 20-F 2018 is incorporated herein by reference.

E. SHARE OWNERSHIP

The information set forth under the headings:

- *"-Leadership and governance-Remuneration report"* on pages 156 to 180; of the Integrated Annual Report for the 20-F 2018 is incorporated herein by reference.

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

A. MAJOR SHAREHOLDERS

We are an independent gold producer, with no single shareholder exercising control. As of October 18, 2018, our issued share capital consisted of 511,751,667 ordinary shares. To our knowledge, (a) we are not directly or indirectly owned or controlled: (i) by another corporation; or (ii) by any foreign government, and (b) there are no arrangements (including any announced or expected takeover bid), the operation of which may at a subsequent date result in a change in our control.

The voting rights of our major shareholders do not differ from the voting rights of other holders of the same class of shares.

Significant changes in the percentage ownership held by major shareholders in the past three years are described below under "-*Related Party Transactions*".

A list of the holders that hold 5% or more of our securities as of September 30, 2018 is set forth below:

Holder	Number of shares	Percentage
Deutsche Bank Trust Company Americas [1]	251,102,955	50.2%
ARM Ltd.[2]	74,665,545	14.59%
Private Investors (North America) [3]	67,889,585	13.27%
Van Eck Global [4]	66,966,055	13.09%
Private Investors (Europe) [5]	41,211,183	8.05%

1 Deutsche Bank Trust Company Americas has acted as the depositary ("Depositary") with respect to the ADSs evidenced by ADRs as of October 10, 2011. Holding disclosed represents outstanding ADRs on September 30, 2018.

2 Patrice Motsepe, our Chairman, has an indirect holding in ARM Limited.

3 Van Eck's holding of is held in in the form of ADRs and is included in (1) above.

4 Private Investors (North America)'s holding includes held in ADR form and is included in (1) above.

5 Private Investors (Europe's holding) includes 21,396,676 held in ADR form and is included in (1) above.

B. RELATED PARTY TRANSACTIONS

See note 32 "*Related Parties*", note 18 (c) "*Trade and other receivables*", note 19 *"Investments in Associates"* and note 20 *"Investment in Joint Operations"* of our consolidated financial statements, set forth beginning on page F-1.

C. INTERESTS OF EXPERTS AND COUNSEL

Not applicable.

ITEM 8. FINANCIAL INFORMATION

A. CONSOLIDATED STATEMENTS AND OTHER FINANCIAL INFORMATION

Please refer to Item 18: *“Financial Statements and Item 3: “Key Information-Selected Financial Data”*.

Legal Proceedings

None of our properties is the subject of pending material legal proceedings. We have been involved in a number of claims and legal and arbitration proceedings incidental to the normal conduct of our business, such as the ones described below.

Silicosis (and other occupational diseases)

AngloGold Ashanti court case

On March 3, 2011, judgment was handed down in the Constitutional Court, in the case of Mr Thembekile Mankayi v AngloGold Ashanti Limited regarding employees' common-law claims against their employers in respect of compensatable diseases referred to in ODMWA. The judgment allows claimants, such as Mr Mankayi, to institute action against their current and former employers for damages suffered as a result of them contracting occupational diseases which result, amongst others, from their exposure to harmful quantities of dust while they were employed at a controlled mine as referred to in ODMWA. In this regard, should anyone bring similar claims against Harmony in future, those claimants would need to prove that silicosis, as an example, was contracted as a result of exposure to respirable silica dust while in the employ of Harmony and that it was contracted due to negligence on Harmony's part to provide a safe and healthy working environment. The link between the cause (negligence by Harmony in exposing a claimant to harmful quantities of dust while in its employ) and the effect (the silicosis) will be an essential part of any case. A possibility exists that a court may conclude in future that negligence is no longer a requirement to be proven by the claimant and that the employer is strictly liable for such harm.

Consolidated class action

On August 23, 2012, Harmony and certain of its subsidiaries (Harmony defendants) were served with court papers in terms of which three former employees made application to the South Gauteng High Court to certify a class action for purposes of instituting action against the Harmony defendants. In essence, the applicants want the court to declare them as suitable members to represent a class of current and former mineworkers who have contracted occupational lung diseases for purposes of instituting a class action for certain relief, and to obtain directions from the court as to what procedure to follow in pursuing the relief required against the Harmony defendants. Similar applications were also brought against various other gold mining companies for similar relief during August 2012.

On January 8, 2013, the Harmony defendants, alongside other gold mining companies operating in South Africa (collectively the respondents), were served with another application to certify another class action. In this application, two classes of persons were sought to be established representing, firstly, a class of current and former mine workers who have silicosis (whether or not accompanied by any other disease) and who work or have worked on gold mines owned and/or controlled by the respondents, and secondly, a class of dependents of mine workers who have died as a result of silicosis (whether or not accompanied by any other disease) and who worked on gold mines owned and/or controlled by the respondents. The Harmony defendants opposed both applications.

Following receipt of the aforesaid application in 2013, the Harmony defendants were advised that there was a potential overlap between the application of August 23, 2012 and the application of January 8, 2013. On October 17, 2013, the five certification applications were consolidated by order of court.

The consolidated application was heard in October 2015. On May 13, 2016, the Gauteng Local Division of High Court, Johannesburg, ordered the certification of a class action consisting of current and former underground mineworkers who have contracted silicosis and dependents of underground mineworkers who have died of silicosis (silicosis class), and current and former underground mineworkers who have contracted TB, and the dependents of deceased underground mineworkers who died of TB (a tuberculosis class), which classes are to proceed as a single class action against the mining companies cited in the consolidated application. The High Court also ordered that any claimant who has a claim for general damages, and who dies before the finalization of his case, will have such general damages transmitted to the estate of the deceased claimant. The High Court did not make an order on the merits of the claimants' cases or any potential claims to be instituted by the mineworkers or their dependents.

On June 24, 2016, the High Court granted leave to appeal to the Supreme Court of Appeal against the order of transmissibility of general damages. The Harmony defendants submitted their notice of appeal in respect of the transmissibility of the general damages order to the Supreme Court of Appeal on July 25, 2016.

The mining companies, including the Harmony defendants, also requested leave to appeal from the Supreme Court of Appeal against the balance of the judgment and orders of the High Court certifying the class action in respect of the silicosis class and tuberculosis class. Leave to appeal to the Supreme Court of Appeal was granted on September 13, 2016. The Harmony defendants submitted their notice of appeal in respect of the remainder of the order certifying a class action in respect of the silicosis class and the tuberculosis class to the Supreme Court of Appeal on September 27, 2016.

The matter was set down to be argued in the Supreme Court of Appeal on March 19, 2018 to March 23, 2018. However, the parties agreed to postpone the matter to conclude settlement negotiations. The matter was subsequently settled on May 3, 2018. The terms of the settlement agreement are confidential. The settlement agreement must be made an order of court before it can be given effect to. Such an application to court will be brought within the near future.

Individual claims

On May 3, 2013, an individual action was instituted against Harmony by a former employee. The plaintiff subsequently joined one of Harmony's subsidiaries to the action. The plaintiff is claiming R25 million (approximately US$1.9 million) in damages, plus interest, from Harmony, its subsidiary, and another gold mining group of companies. The plaintiff alleges to have contracted silicosis with progressive massive fibrosis during the course of his employment. The action was subsequently withdrawn against Harmony and its subsidiaries.

During the period September 2011 to June 20, 2018, 12 individual actions were instituted against Harmony by former employees, or dependents of former employees, in which damages are claimed ranging from R500,000 (US$38,000) to R5 million (US$380,000) arising from the alleged contraction of silicosis, alleged exposure to blasting fumes and smoke, or the loss of support following medical incapacitation, or death, of former employees as a result of the alleged contraction of silicosis. All of these actions are being defended. Nine of these actions have been suspended pending the outcome of the appeals presently before the Supreme Court of Appeal in respect of the consolidated application for the certification of a class action.

The Working Group

The Working Group was formed in fiscal 2014 to address issues relating to compensation and medical care for occupational lung disease in the South African gold mining industry. The Working Group, made up of ARM Limited, Anglo American SA, AngloGold Ashanti Limited, Gold Fields Limited, Harmony and Sibanye Gold Limited, has had extensive engagements with a wide range of stakeholders since its formation, including government, organized labor, other mining companies and the legal representatives of claimants who have filed legal actions against the companies.

The members of the Working Group are among respondent companies in a number of legal proceedings related to occupational lung disease, including the class action referred to above. The Working Group is however of the view that achieving a comprehensive settlement which is both fair to past, present and future employees and sustainable for the sector, is preferable to protracted litigation. The Working Group will continue with its efforts to find common ground with all stakeholders, including government, labor and the claimants' legal representatives.

Provision for silicosis settlement

A provision of US$70 million was recognized during fiscal 2017 for Harmony's potential cost to settle the silicosis and tuberculosis class actions that have been instituted against it in South Africa. At June 30, 2018 the provision decreased by US $3 million as a result of changes in estimates, time value of money and the translation from Rand to US dollars.

The ultimate outcome of these matters remains uncertain, with a possible failure to reach a settlement or to obtain the requisite court approval of the settlement. The provision recorded in the financial statements is consequently subject to adjustment or reversal in the future, depending on the progress of the working group discussions and stakeholder consultations, and the ongoing legal proceedings.

See to Note 27 "*Provision for silicosis settlement*" of our consolidated financial statements set forth beginning on page F-1.

Watut River damage claims

Legal proceedings commenced in December 2010 against the Hidden Valley mine in PNG over alleged damage to the Watut River (which runs adjacent to the Hidden Valley mine), alleged to have been caused by waste rock and overburden run-off from the mine. The damages sought by the plaintiffs were not specified. The defendants intend to defend the claims. No active steps have been taken by the plaintiffs in this proceeding for more than five years. It is not practicable to make any reasonable assessment of the prospects of the plaintiffs succeeding should they proceed with these claims, nor the potential liability of the defendants if the plaintiffs were to succeed. As a result, no provision has been recognized in the financial statements for this matter.

B. SIGNIFICANT CHANGES

See Item 4: "*Information on the Company-History and Development of the Company-Recent Developments-Developments since June 30, 2018*."

ITEM 9 THE OFFER AND LISTING

A. OFFER AND LISTING DETAILS

As of October 18, 2018, there were 1,527 record holders of our 251,956,977 ADRs in the United States.

The high and low sales prices in Rand for our ordinary shares on the JSE for the periods indicated were as follows:

	Harmony Ordinary Share (Rand per Ordinary Share)	
	High	**Low**
Fiscal year ended June 30, 2014		
Full Year	42.47	24.48
Fiscal year ended June 30, 2015		
First Quarter	35.21	24.70
Second Quarter	24.15	17.00
Third Quarter	35.50	20.47
Fourth Quarter	24.34	15.59
Full Year	35.50	15.59
Fiscal year ended June 30, 2016		
First Quarter	15.85	8.63
Second Quarter	16.25	8.13
Third Quarter	62.30	15.60
Fourth Quarter	59.25	44.99
Full Year	62.30	8.13
Fiscal year ended June 30, 2017		
First Quarter	66.65	45.72
Second Quarter	47.05	26.10
Third Quarter	38.80	27.66
Fourth Quarter	37.87	20.68
Full Year	66.65	20.68
Fiscal year ended June 30, 2018		
First Quarter	27.90	21.08
Second Quarter	26.35	21.34
Third Quarter	28.13	19.24
Fourth Quarter	28.80	19.80
Full Year	28.80	19.24
July 2018	22.98	20.63
August 2018	23.93	21.17
September 2018	27.50	23.35
As of October 18, 2018	30.27	28.95

On October 18, 2018, the share price of our ordinary shares on the JSE was R 30.00.

Our ADSs, evidenced by ADRs, are listed on the NYSE The high and low sales prices in US dollars for our ADRs for the periods indicated, as reported on the NYSE were as follows:

	NYSE Harmony ADRs ($ per ADR)	
	High	Low
Fiscal year ended June 30, 2014		
Full Year	4.33	2.36
Fiscal year ended June 30, 2015		
First Quarter	3.29	2.16
Second Quarter	2.23	1.53
Third Quarter	3.18	1.67
Fourth Quarter	2.53	1.31
Full Year	3.29	1.31
Fiscal year ended June 30, 2016		
First Quarter	1.34	0.60
Second Quarter	1.03	0.53
Third Quarter	3.99	0.93
Fourth Quarter	4.17	2.92
Full Year	4.17	0.53
Fiscal year ended June 30, 2017		
First Quarter	4.81	3.35
Second Quarter	3.49	1.89
Third Quarter	2.98	2.08
Fourth Quarter	2.78	1.59
Full Year	4.81	1.59
Fiscal year ended June 30, 2018		
First Quarter	2.17	1.59
Second Quarter	1.92	1.62
Third Quarter	2.5	1.67
Fourth Quarter	2.5	1.52
Full Year	2.5	1.52
July 2018	1.72	1.61
August 2018	1.74	1.44
September 2018	1.92	1.66
As of October 18, 2018	2.13	2.06

On October 18, 2018, the closing share price of our ADRs on the NYSE was US$ 2.11.

B. PLAN OF DISTRIBUTION

Not applicable.

C. MARKETS

The Securities Exchange in South Africa

The JSE is the one of the largest emerging market exchange and by far the leading exchange in Africa, playing a leadership role in the continent, supporting South Africa's role as the African financial hub. It is also recognized as a leading exchange in the global resources sector.

As South Africa's only full service securities exchange, the JSE connects buyers and sellers in five different markets: equities, which includes a primary and secondary board, equity derivatives, agricultural derivatives and interest rate instruments. The JSE is one of the top 20 exchanges in the world in terms of market capitalization. The market capitalization of the JSE equities market was R14,083 billion (US$1,028 billion) at June 30, 2018. The mining market capitalization was R1,755 billion (US$128 billion) at June 30, 2018, 12% of the overall JSE market capitalization.

Strate Settlement

Under Strate, South Africa's Central Securities Depository ("**CSD**"), there are essentially two types of clients: controlled and non-controlled. A controlled client is one who elects to keep his shares and cash with his broker and these shares are held in custody at the broker's chosen Custodian Bank, the CSD Participant ("**CSDP**"). A non-controlled client is one who appoints his own CSDP to act as custodian on his behalf. Equity settlements take place on a contractual T+3 (where T= trade date) settlement cycle. Securities and funds become due for settlement three business days after the trade. Contractual settlement is a market convention embodied in the rules of the JSE which states that a client has a contractual obligation to cause a JSE trade to settle on settlement day. The JSE, in its capacity as Settlement Authority, ensures that all on-market trades entered into by two JSE member firms settle three days after the trade date.

D. SELLING SHAREHOLDERS

Not applicable.

E. DILUTION

Not applicable.

F. EXPENSES OF THE ISSUE

Not applicable.

ITEM 10. ADDITIONAL INFORMATION

A. SHARE CAPITAL

As of June 30, 2018, our issued share capital consisted of 500,251,751 ordinary shares with no par value. As of October 18, 2018 our issued share capital consisted of 511,751,667 ordinary shares with a no par value each, of the same class. Our authorized capital is 1,200,000,000 ordinary shares with no par value.

B. MEMORANDUM OF INCORPORATION

Information on our Memorandum of Incorporation can be found in Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2014 which was filed with the SEC on October 23, 2014, is available on the SEC's website and is incorporated herein by reference.

C. MATERIAL CONTRACTS

Sale Agreement

On October 18, 2017, Harmony entered into a share and asset sale and purchase agreement with AngloGold Ashanti Limited and Coreland Property Investment Company Proprietary Limited (now known as Harmony Moab Khotsong Operations Proprietary Limited) to acquire the Moab Khotsong and Great Noligwa mines, together with certain long life projects and tailings dams for consideration of US$300 million in cash, which was paid in full without any post-closing adjustment. The Moab Acquisition was completed with effect from March 1, 2018.

Syndicated Term and Revolving Credit Facility

On July 28, 2017, Harmony, as borrower, entered into a syndicated term and revolving credit facilities agreement in the amount of up to US$350 million, with Nedbank Limited, Absa Bank Limited, JP Morgan Chase Bank NA, Caterpillar Financial Services Corporation, HSBC Bank plc, State Bank of India, The Bank of China and Citibank, NA, with Nedbank Limited and Absa Bank Limited acting as arrangers, and Nedbank Limited acting as facility agent. The syndicated term and revolving credit facilities mature on August 15, 2020.

Under the terms of the syndicated term and revolving credit facilities, Harmony agreed to apply all amounts borrowed by it to repay outstanding liabilities under the US$250 million revolving credit facility entered into in December 2014 and to fund the Group's exploration activities, feasibility costs, capital costs, operational costs, other corporate expenses and costs relating to other strategic objectives outside of South Africa.

The term facility bears interest at 3.15% over three month LIBOR; the revolving facility bears interest at 3.00% over three month LIBOR.

The syndicated term and revolving credit facilities are secured by a cession and pledge over all the shares and claims in certain operating subsidiaries in the Group.

Borrowings under the term and revolving credit facilities are guaranteed by certain operating companies of the Group.

The outstanding balance under the term facility at June 30, 2018 was US$175 million. The outstanding balance under the revolving facility at June 30, 2018 was US$150 million.

Syndicated Bridge Facility

On October 18, 2017, Harmony, as borrower, entered into a syndicated bridge facility agreement in the amount of up to US$200,000,000 with UBS Limited, Nedbank Limited, Absa Bank Limited and JP Morgan Securities Plc, with Nedbank Limited acting as facility agent. The syndicated bridge facility has a term of one year.

Under the terms of the syndicated bridge facility, Harmony has agreed to apply all amounts borrowed by it directly or indirectly to fund the Moab Acquisition, including all fees, costs and expenses, stamp, registration and other Taxes incurred by Harmony in connection with the Acquisition.

The syndicated bridge facility bears interest at LIBOR plus a margin calculated as follows:

- 2.5% per annum from October 18, 2017 to, but excluding, the date that is six months after October 18, 2017 (the "First Margin Step-up Date");
- 3.0% per annum from the First Margin Step-up Date to, but excluding, the date falling three months after the First Margin Step-up Date (the "Second Margin Step-up Date"); and

- 3.5% per annum from the Second Margin Step-up Date until the date that is twelve months after October 18, 2017.

The syndicated bridge facility is secured by (i) a cession in security given by Harmony over shares in, and loan claims against, Coreland Property Investment Company Proprietary Limited (now known as Harmony Moab Khotsong Operations Proprietary Limited) and (ii) a cession in security given by Harmony over shares in an loan claims against Harmony BEE SPV Proprietary Limited.

Borrowings under the syndicated bridge facility are guaranteed by Coreland Property Investment Company Proprietary Limited (now known as Harmony Moab Khotsong Operations Proprietary Limited).

The outstanding balance under the syndicated bridge facility at June 30, 2018 was US$50 million. All amounts outstanding were repaid subsequent to the end of fiscal 2018, in July 2018.

Third Amended and Restated Rand Revolving Credit Facility Agreement

On February 20, 2017 Harmony, as borrower, entered into a Rand revolving credit facility in the amount of up to R1 billion with Nedbank Limited. The Rand revolving credit facility amended and restated the R1.3 billion agreement revolving credit facility agreement entered into on or about December 20, 2013, as amended and restated on or about February 5, 2015 and on or about June 30, 2016, and as further amended on or about December 23, 2016. Interest accrues at JIBOR plus a margin of 3.15% per annum, with a quarterly commitment fee of 0.95%. The Rand revolving credit facility matures in February 2020.

Under the terms of the Rand revolving credit facility, Harmony agreed to apply all amounts borrowed by it to repay outstanding liabilities under the R2.25 billion facility entered into in December 2009 and for ongoing general corporate costs, working costs and working capital requirements of the Group.

The Rand revolving credit facility is secured by a cession and pledge over all the shares and claims in certain operating subsidiaries in the Group.

Borrowings under the Rand term and revolving credit facility are guaranteed by certain operating companies of the Group.

R500 million was outstanding under the Rand term and revolving credit facility at June 30, 2018.

D. EXCHANGE CONTROLS

Introduction

The following is a general outline of South African exchange controls. Investors should consult a professional adviser pertaining to the exchange control implications of their particular investments.

The Republic of South Africa's exchange control regulations provide for restrictions on the exportation capital from a Common Monetary Area member, consisting of South Africa, the Republic of Namibia and the Kingdoms of Lesotho and Swaziland. Transactions between South African residents (including corporations) and foreigners are subject to these exchange controls, which are administered by the Financial Surveillance Department of the South African Reserve Bank ("**SARB**").

Since 1995 a number of exchange control regulations have been relaxed with regard to both residents and non-residents. Following the initial reforms, ongoing relaxations have been introduced with the aim of achieving a macroprudential risk based approach to the management of foreign exchange. The reforms are being made to, among other things, enable international firms to make investments through South Africa to the rest of Africa and to further enhance opportunities for offshore portfolio diversification for resident investors. In addition, the relaxations have also significantly raised the size of the discretionary allowances available to residents for overseas transactions.

A considerable degree of flexibility is built into the system of exchange controls, and the SARB possesses substantial discretionary powers in approving or rejecting the applications that fall outside the authority granted to authorized dealers.

These comments relate to exchange controls in force at June 30, 2018. These controls are subject to change at any time, however, the government has previously announced most changes during the annual budget statement in February. It is not possible to predict whether existing exchange controls will be changed or relaxed by the South African government in the future.

Government Regulatory Considerations

Shares

A foreign investor may invest freely in shares in a South African company, whether listed on the JSE or not, through normal banking channels against settlement in foreign currency or Rand from a non-resident rand account. A foreign investor may also sell his or her share investment in a South African company and transfer the proceeds out of South Africa without restriction. However, when the Company is not listed on the JSE, the SARB must be satisfied that the sale price of any shares reflects fair market value.

Under present South African exchange control regulations, our ordinary shares and ADSs are freely transferable outside the Common Monetary Area between non-residents of the Common Monetary Area. No prior SARB approval is required for the transfer of proceeds to South Africa, in respect of shares listed on the JSE, provided these funds enter the country through the normal banking channels. In addition, the proceeds from the sale of ordinary shares on the JSE on behalf of those holders of ordinary shares who are not residents of the Common Monetary Area are freely remittable to those holders. Share certificates and warrant certificates held by non-residents will be endorsed with the words “non-resident.”

Loans

Generally, the granting of loans to us or our subsidiaries, and our ability to borrow from non-South African sources and the repatriation of dividends, interest and royalties by us will be regulated by the Exchange Control Department of the SARB. If a foreign investor wishes to lend capital to a South African company, the prior approval of the SARB must be sought mainly in respect of the interest rate and terms of repayment applicable to such loan.

Interest on foreign loans is subject to a withholding tax of 15% and freely remittable abroad, provided the loans received prior approval from the SARB. However, this rate may be reduced depending on the applicability of a double taxation treaty.

Investments

We are required to seek approval from the SARB to use funds held in South Africa to make investments outside of South Africa.

Dividends

Dividends declared by a listed company are subject to a withholding tax of 20% and freely transferable out of South Africa from both trading and non-trading profits earned in South Africa through a major bank as agent for the SARB to non-resident shareholders. However, this rate may be reduced depending on the applicability of a double taxation treaty.

Where 75% or more of a South African company’s capital, voting power, power of control or earnings is directly or indirectly controlled by non-residents, such a company is designated an “affected person” by the SARB, and certain restrictions are placed on its ability to obtain local financial assistance. We are not, and have never been, designated an “affected person” by the SARB.

If an affected entity made use of local borrowing facilities, the affected entity must apply for SARB approval prior to remitting dividends offshore. As a general rule, an affected entity that has accumulated historical losses may not declare dividends out of current profits unless and until such time that the affected entity’s local borrowings do not exceed the local borrowing limit.

E. TAXATION

Certain South African Tax Considerations

The summary set out in this section is based on current law and our interpretation thereof. Amendments to the law may change the tax treatment of acquiring, holding or disposing of our ordinary shares or ADSs, as applicable, which changes may possibly occur on a retrospective basis. The following summary is not a comprehensive description of all of the tax considerations that may be relevant to a decision to purchase, own or dispose of our ordinary shares or ADSs, and does not cover the tax consequences that depend upon your particular tax circumstances. This summary is not intended to be tax advice. In particular, the following summary addresses tax consequences for holders of ordinary shares or ADSs who are not residents of South Africa for tax purposes from a South African perspective. It specifically excludes the tax consequences for persons who are not residents of South Africa for tax purposes whose holding of shares or ADSs is effectively connected with a permanent establishment in South Africa through which the holder carries on business activities, or who is not the beneficial recipient of the dividends, or where the source of the transaction or dividends is deemed to be in South Africa. In addition, it does not cover the tax consequences for a holder that is not entitled to the benefits of the double taxation agreement concluded between the Republic of South Africa and the United States of America signed on February 17, 1997 (“**US Treaty**”). It also assumes that the holders hold the ordinary shares or ADSs on capital account (that is, for investment purposes) as opposed to on revenue account (that is for speculative purposes or as trading stock). Recently the Supreme Court of Appeal in South Africa indicated that gains will be on revenue account if they are derived as part of a business in carrying out a scheme of profit making. We recommend that you consult your own tax adviser concerning the consequences of holding our ordinary shares or ADSs, as applicable, in your particular situation.

Dividends

With effect from April 1, 2012, South Africa introduced a Dividends Tax, which is a withholding tax on dividends borne by the shareholder receiving the dividend. The rate at which Dividends Tax is levied is 20% effective from 22 February 2017 (previously 15%). Dividends Tax is imposed on, amongst others, non-resident shareholders, and it is withheld by the company declaring and paying the dividend to its shareholders or the regulatory intermediary, as the case may be, as a withholding agent.

Article 10 of the US Treaty provides that a dividend paid by a company that is a resident of South Africa for tax purposes to a resident of the US for tax purposes may be taxed in the US. Article 10 of the US Treaty further provides that such a dividend may also be taxed in South Africa. However, the tax charged in South Africa may not exceed 5% of the gross amount of the dividends if the beneficial owner is a company that holds directly at least 10% of the voting stock of the South African company paying the dividends. In all other cases, the US Treaty provides for a withholding tax of 15% of the gross amount of the dividends.

With effect from January 1, 2012 it is deemed that an amount will be derived by a person from a source within South Africa if the amount constitutes a dividend received by or accrued to that person.

Capital Gains Tax

Capital Gains Tax ("**CGT**") was introduced in South Africa with effect from October 1, 2001. In the case of an individual, 40% in respect of years of assessment commencing 1 March 2016 (previously 33.3%) of the capital gain is included in the individual's taxable income (effectively 18% (previously 16.4%) should the individual pay tax at the marginal rate of 45% from 1 March 2017(previously 41%)). In the case of a corporate entity or trust, 80% in respect of years of assessment commencing 1 March 2016 (previously 66.6%) of such gain is included in its taxable income (effectively a rate of 22.4% (previously 18.6%) for a corporate entity and 36% (previously 32.8%) for a trust). CGT is only applicable to non-residents if the proceeds from the sale are attributable to a permanent establishment of the non-resident shareholder. The US Treaty (which will prevail in the event of a conflict) provides that the US holder of ordinary shares or ADSs will not be subject to CGT if the assets have been held as capital assets, unless they are linked to a permanent establishment of such non-resident shareholder in South Africa. To the extent that shares or ADSs are held on revenue account, a similar principle applies with reference to the payment of income tax. Accordingly, income tax is only payable to the extent that the gain is attributable to the carrying on of a business in South Africa through a permanent establishment situated in South Africa. The current corporate rate is equal to 28%. Any gains realized on the disposal of equity shares are automatically deemed to be of a capital nature if the equity shares have been held for a continuous period of at least three years. Such provision applies automatically and is not elective. However, this deeming provision does not include an ADS.

Generally the domestic laws of South Africa provide that an amount received or accrued in respect of the disposal of an asset that constitutes immovable property held by that person or any interest or right of whatever nature of that person to or in intellectual property where that property is situated in South Africa is deemed to have been sourced in South Africa and be subject to South African tax. It includes the disposal of any equity shares held by a person in a company if:

- 80% or more of the market value of the equity shares, ownership or right to ownership or vested interest, as the case may be, at the time of disposal thereof is attributable directly or indirectly to immovable property held otherwise than as trading stock; and
- the person directly or indirectly holds at least 20% of the equity shares in the company or ownership or right to ownership of the other entity.

The provisions of the US Treaty override the deemed source rules to the extent applicable. Article 13 of the US Treaty provides that South Africa is entitled to tax a gain that is attributable to the alienation of real property situated in South Africa, which concept includes the equivalent of a US real property interest, even if held through means of shares.

Securities Transfer Tax

Security Transfer Tax ("**STT**") is payable in respect of the transfer of any security issued by a South African company. STT is levied at a rate of 0.25% of the taxable amount of the security concerned (generally the market value). A security is defined to include a depository receipt in a company, in addition to shares in a company. STT is not payable on the issue of any security.

Although ADSs in respect of our shares are not listed on the JSE, reference is specifically made to the transfer of depository receipts in a South African company. As a consequence, STT will therefore be payable on the transfer of ADSs. In addition, the process of depositing shares listed on the JSE in return for ADSs, or withdrawing such shares from the deposit facility, may attract STT as and when the shares are transferred to or from the depository institution.

STT is payable by the broker or participant if a transaction is effected through a stockbroker or an exchange participant, but it may be recovered from the person acquiring the beneficial ownership of the rights concerned. In other instances, STT is payable by the person acquiring beneficial ownership.

STT is also payable on the subsequent redemption or cancellation of shares or ADSs.

Interest

South Africa has imposed a withholding tax on interest paid by any person to or for the benefit of any foreign person to the extent that the interest is regarded as having been received or accrued from a source within South Africa at the rate of 15% with effect from March 1, 2015. In terms of the US Treaty this rate is reduced to zero. However, the rate may change to 5% or 10% once the US Treaty is renegotiated.

Withholding tax on Service Fees

The proposed withholding tax on service fees at the rate of 15% was withdrawn in the 2016 Budget. The withholding tax on service fees has apparently introduced unforeseen issues, including uncertainty on the application of domestic tax law and taxing rights under tax treaties. The withholding tax on service fees is rather now dealt by way of the fact that these types of arrangements must be reported. Transactions between residents and non-residents must thus be reported if they relate to consultancy, construction, engineering, installation, logistical, managerial, supervisory, technical or training services, in circumstances where the expenditure exceeds or is anticipated to exceed R10 million in aggregate and does not otherwise qualify as remuneration.

Capitalization Shares

Capitalization shares issued to holders of shares in lieu of cash dividends are currently not subject to Dividends Tax. However, these shares have a base cost of zero for income tax purposes.

Voting Rights

There are no limitations imposed by South African law or by our charter on the right of non-resident or foreign owners to hold or vote our ordinary shares.

Certain Material United States Federal Income Tax Considerations

The following is a discussion of certain material US federal income tax consequences of acquiring, holding and disposing of the ordinary shares (for purposes of this summary, references to the ordinary shares include the ADSs, unless the context otherwise requires).

You will be a "**US holder**" if you are a beneficial owner of ordinary shares and you are:

- an individual who is a citizen or resident of the United States;
- a corporation (or other entity taxable as a corporation for US federal income tax purposes) organized under the laws of the United States, any state thereof, or the District of Columbia;
- an estate whose income is subject to US federal income tax regardless of its source; or
- a trust if: (i) a US court can exercise primary supervision over the trust's administration and one or more US persons are authorized to control all substantial decisions of the trust or (ii) it has a valid election in effect under applicable US Treasury regulations to be treated as a US person.

This summary only applies to US holders that hold ordinary shares or ADSs as capital assets. This summary is based on the US Internal Revenue Code of 1986, as amended, (the "**Code**"), its legislative history, existing and proposed US Treasury regulations, published Internal Revenue Service rulings, and court decisions that are now in effect, any and all of which are subject to differing interpretations and which could be materially and adversely changed. Any such change could apply retroactively and could affect the continued validity of this summary. This summary does not consider the potential effects, both adverse and beneficial, of any proposed legislation which, if enacted, could be applied, possibly on a retroactive basis, at any time.

This summary does not purport to be a comprehensive description of all of the tax considerations that may be relevant to a decision to purchase the ordinary shares. In particular, this summary deals only with US holders that will hold the ordinary shares as capital assets within the meaning of Section 1221 of the Code. It does not address considerations that may be relevant to you if you are an investor that is subject to special tax rules, such as a bank, real estate investment trust, regulated investment company, insurance company, dealer in securities or currencies, trader in securities or commodities that elects mark-to-market treatment, person that will hold the ordinary shares as a hedge against currency risk or as a position in a "straddle" or conversion transaction, tax-exempt organization, person whose "functional currency" is not the US dollar, person liable for alternative minimum tax, or a person who owns directly, indirectly or by attribution, at least 10% of our stock. This summary also does not address any aspect of US federal non-income tax laws, such as gift or estate tax laws, or state, local, or non-US tax laws, or, except as discussed below, any tax reporting obligations of a holder of our ordinary shares.

If a partnership (including for this purpose any entity treated as a partnership for US federal income tax purposes) is a beneficial owner of the ordinary shares, the US federal income tax treatment of a partner in the partnership generally will depend on the status of the partner and the activities of the partnership. A holder of the ordinary shares that is a partnership and partners in such a partnership should consult their own tax advisors about the US federal income tax consequences of acquiring, holding, and disposing of the ordinary shares.

We believe that we will not be a passive foreign investment company ("**PFIC**"), for US federal income tax purposes for the current taxable year. However, we cannot assure you that we will not be considered a PFIC in the current or future years. The determination whether or not we are a PFIC is a factual determination that is based on the types of income we earn and the value of our assets and cannot be made until the close of the applicable tax year. If Harmony were to be treated as a PFIC, US holders of ordinary shares or ADSs would be required (i) to pay a special US addition to tax on certain distributions and gains on sale and (ii) to pay tax on any gain from the sale of ordinary shares or ADSs at ordinary income (rather than capital gains) rates in addition to paying the special addition to tax on this gain. Additionally, dividends paid by Harmony would not be eligible for the reduced rate of tax described below under "Taxation of Dividends". The remainder of this discussion assumes that Harmony is not a PFIC for US federal income tax purposes. You should consult your own tax advisers regarding the potential application of the PFIC regime.

Each prospective purchaser should consult his or her tax advisor with respect to the US federal, state, local and non-US tax consequences of acquiring, owning, or disposing of shares or ADSs.

US holders of ADSs

For US federal income tax purposes, a US holder of ADSs generally will be treated as the owner of the corresponding number of underlying ordinary shares held by the Depositary for the ADSs, and references to ordinary shares in the following discussion refer also to ADSs representing the ordinary shares.

Deposits and withdrawals of ordinary shares by US holders in exchange for ADSs will not result in the realization of gain or loss for US federal income tax purposes. Your tax basis in withdrawn ordinary shares will be the same as your tax basis in the ADSs surrendered, and your holding period for the ordinary shares will include the holding period of the ADSs.

Taxation of Dividends

Distributions paid out of Harmony's current or accumulated earnings and profits (as determined for US federal income tax purposes), before reduction for any South African withholding tax paid by Harmony with respect thereto, will generally be taxable to you as dividend income, and will not be eligible for the dividends received deduction allowed to corporations. Distributions that exceed Harmony's current and accumulated earnings and profits will be treated as a non-taxable return of capital to the extent of your basis in the ordinary shares and thereafter as capital gain. However, we do not maintain calculations of our earnings and profits in accordance with US federal income tax accounting principles. You should therefore assume that any distribution by us with respect to the shares will be reported as ordinary dividend income. You should consult your own tax advisers with respect to the appropriate US federal income tax treatment of any distribution received from us.

Dividends paid by Harmony generally will be taxable to non-corporate US holders at the reduced rate normally applicable to long-term capital gains, provided that either (i) Harmony qualifies for the benefits of the US Treaty, or (ii) with respect to dividends paid on the ADSs, the ADSs are considered to be "readily tradable" on the NYSE. You will be eligible for this reduced rate only if you are an individual, and have held the ordinary shares or ADSs for more than 60 days during the 121 day period beginning 60 days before the ex-dividend date.

For US federal income tax purposes, the amount of any dividend paid in Rand will be included in income in a US dollar amount calculated by reference to the exchange rate in effect on the date the dividends are received by you or the depositary (in the case of ADSs), regardless of whether they are converted into US dollars at that time. If you or the Depositary, as the case may be, convert dividends received in Rand into US dollars on the day they are received, you generally will not be required to recognize foreign currency gain or loss in respect of this dividend income.

Effect of South African Withholding Taxes

As discussed above in "-Taxation-Certain South African Tax Considerations-Dividends", under current law, South Africa imposes a withholding tax of 20% on dividends paid by Harmony. A US holder will generally be entitled, subject to certain limitations, to a foreign tax credit against its US federal income tax liability, or a deduction in computing its US federal taxable income, for South African income taxes withheld by Harmony.

US holders that receive payments subject to this withholding tax will be treated, for US federal income tax purposes, as having received the amount of South African taxes withheld by Harmony, and as then having paid over the withheld taxes to the South African taxing authorities. As a result of this rule, the amount of dividend income included in gross income for US federal income tax purposes by a US holder with respect to a payment of dividends may be greater than the amount of cash actually received (or receivable) by the US holder from Harmony with respect to the payment.

For purposes of the foreign tax credit limitation, foreign source income is classified in one of two "baskets", and the credit for foreign taxes on income in any basket is limited to US federal income tax allocable to that income. Dividends paid by Harmony generally will constitute foreign source income in the "passive income" basket.

The rules governing foreign tax credits are complex. You should consult your tax adviser concerning the foreign tax credit implications of the payment of South African withholding taxes.

Taxation of a Sale or other Disposition

Upon a sale or other disposition of ordinary shares or ADSs, other than an exchange of ADSs for ordinary shares and vice versa, you will generally recognize US source capital gain or loss for US federal income tax purposes equal to the difference between the amount realized and your adjusted tax basis in the ordinary shares or ADSs. Your tax basis in an ordinary share or ADS will generally be its US dollar cost. This capital gain or loss will be long-term capital gain or loss if your holding period in the ordinary shares or ADSs exceeds one year. However, regardless of your actual holding period, any loss may be treated as long-term capital loss to the extent you receive a dividend that qualifies for the reduced rate described above under "-Taxation of Dividends" and also exceeds 10% of your basis in the ordinary shares. The deductibility of capital losses is subject to significant limitations.

Foreign currency received on the sale or other disposition of an ordinary share will have a tax basis equal to its US dollar value on the settlement date. Foreign currency that is purchased will generally have a tax basis equal to the US dollar value of the foreign currency on the date of purchase. Any gain or loss recognized on a sale or other disposition of a foreign currency (including its use to purchase ordinary shares or upon exchange for US dollars) will be US source ordinary income or loss.

To the extent you incur STT in connection with a transfer or withdrawal of ordinary shares as described under "-Certain South African Tax Considerations-Securities Transfer Tax" above, such securities transfer tax will not be a creditable tax for US foreign tax credit purposes.

Information with Respect to Foreign Financial Assets

US holders of "specified foreign financial assets" with an aggregate value in excess of US$50,000, or US$75,000 at any time during the taxable year, are generally required to file an information report with respect to such assets with their tax returns. "Specified foreign financial assets" may include financial accounts maintained by foreign financial institutions, as well as the following, but only if they are not held in accounts maintained by financial institutions: (i) stocks and securities issued by non-United States persons, (ii) financial instruments and contracts held for investment that have non-United States issuers or counterparties and (iii) interests in foreign entities. US holders are urged to consult their tax advisors regarding the application of this reporting requirement to their ownership of the ordinary shares.

US Information Reporting and Backup Withholding Rules

Payments of dividends and other proceeds with respect to ordinary shares or ADSs by US persons will be reported to you and to the Internal Revenue Service as may be required under applicable regulations. Backup withholding may apply to these payments if you fail to provide an accurate taxpayer identification number or certification of exempt status or fail to comply with applicable certification requirements. Some holders are not subject to backup withholding. You should consult your tax adviser as to your qualification for an exemption from backup withholding and the procedure for obtaining an exemption.

F. DIVIDENDS AND PAYING AGENTS

Not applicable.

G. STATEMENTS BY EXPERTS

Not applicable.

H. DOCUMENTS ON DISPLAY

Our current Memorandum of Incorporation may be examined at our principal place of business at: Randfontein Office Park, Corner of Main Reef Road and Ward Avenue, Randfontein, 1759, South Africa.

We also file annual and furnish interim reports and other information with the SEC. You may read and copy any reports or other information on file at the SEC's public reference room at the following location:

Public Reference Room

100 F Street, NW

Room 1580

Washington D.C. 20549

Please call the SEC at 1-800-SEC-0330 for further information on the public reference rooms. The SEC filings are also available to the public from commercial document retrieval services. We file electronically with the SEC, and the documents it files are available on the website maintained by the SEC at www.sec.gov.

This Harmony 2018 Form 20-F reports information primarily regarding Harmony's business, operations and financial information relating to the fiscal year ended June 30, 2018. For more recent updates regarding Harmony, you may inspect any reports, statements or other information that Harmony files with the SEC.

No material on the Harmony website forms any part of this Harmony 2018 Form 20-F.

I. SUBSIDIARY INFORMATION

Not applicable.

ITEM 11 QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The information set forth under the heading *"Cautionary statement about forward-looking statements"* on the inside front cover is incorporated herein by reference.

General

We are exposed to market risks, including credit risk, foreign currency risk, commodity price risk and interest rate risk associated with underlying assets, liabilities and anticipated transactions. Following periodic evaluation of these exposures, we may enter into derivative financial instruments to manage these exposures. We have policies in areas such as counterparty exposure and hedging practices, which have been approved by our audit committee. We do not hold or issue derivative financial instruments for trading or speculative purposes.

We did not apply hedge accounting to incidental hedges held in the past.

In accordance with IAS 39 - *Financial Instruments: Recognition and Measurement*, we account for our derivative financial instruments as hedging transactions if the following criteria are met:

- in the case of a hedge of an anticipated future transaction, there is a high probability that the transaction will occur, and
- in the case of a cash flow hedge, the hedging instrument is expected to be highly effective.

During fiscal 2018 and 2017, we designated the majority of the Rand gold forward sales contracts as cash flow hedging instruments and applied hedge accounting to these transactions. See *'Commodity Price Sensitivity*' below.

Foreign Currency Sensitivity

In the ordinary course of business, we enter into transactions denominated in foreign currencies (primarily US dollars, Australian dollars and PNG Kina). In addition, we incur investments and liabilities in US dollars, Australian dollars and PNG Kina from time to time. As a result, we are subject to transaction and translation exposure from fluctuations in foreign currency exchange rates.

Harmony enters into foreign exchange hedging contracts to manage these risks. This can take the form of zero cost collars, which establish a minimum (floor) and maximum (cap) Rand/US dollar exchange rate at which to convert the US dollars we receive on our gold sales to Rand or outright forward contract that fixes the forward exchange rate. At June 30, 2018, the nominal amount of the zero cost collars is US$252 million spread over a 12-month period with a weighted average cap price of US$1=R14.54 and weighted average floor price of US$1=R13.69. Additionally at June 30, 2018 Harmony had open foreign exchange forward contracts which had a nominal amount of US$273 million spread over a 24-month period at an average exchange rate of US$1 = R13.95.

Commodity Price Sensitivity

General

Our revenues and costs are very sensitive to the exchange rate of the Rand and other non-US currencies to the US dollar because our gold is sold in US dollars, but most of our operating costs are incurred in Rand and other non-US currencies. During fiscal 2018 and 2017, Harmony entered into forward sales to establish the sales price in advance of its future gold production, which includes the foreign exchange rate. See "- *Foreign Currency Sensitivity"* above. Appreciation of the Rand and other non-US currencies against the US dollar increases working costs at our operations when those costs are translated into US dollars, which reduces operating margins and net income from our operations. Depreciation of the Rand and other non-US currencies against the US dollar reduces these costs when they are translated into US dollars, which increases operating margins and net income from our operations. See Item 3:*"Key Information - Exchange Rates"* and *"Key Information - Risk Factors - Foreign exchange fluctuations could have a material adverse effect on Harmony's operational results and financial condition"*.

The market price of gold has a significant effect on our results of operations, our ability to pay dividends and undertake capital expenditures, and the market price of our ordinary shares.

Gold prices have historically fluctuated widely and are affected by numerous industry factors over which we do not have any control. See Item 3: *"Key Information - Risk Factors - The profitability of our operations, and cash flows generated by those operations, are affected by changes in the price of gold. A fall in the gold price below our cash cost of production and capital expenditure required to sustain production for any sustained period may lead to losses and require Harmony to curtail or suspend certain operations"*. The aggregate effect of these factors, all of which are beyond our control, is impossible for us to predict.

Harmony's Hedging Policy

As a general rule, we sell our gold production at market prices. However, commencing in fiscal 2017, Harmony entered into derivative contracts to manage the variability in cash flows from the Group's production, in order to create cash certainty and protect the Group against lower commodity prices. The limits set by the Board are for 20% of the Group's total production from gold and 25% from silver over a 24-month period. Management continues to top up these programs as and when opportunities arise to lock in attractive margins for the business, but are not required to maintain hedging at these levels. Subsequent to the fiscal year end the limit set on silver production was increased from 25% to 50% over a 24-month period. In addition, Harmony's hedging policy permitted up to 15% of US$/ZAR exposure to be hedged. Subsequent to year end this limit has been increased to 25% over 24 months.

Harmony has designated the majority of the Rand gold forward sale contracts as cash flow hedging instruments and applied hedge accounting to these transactions as we believe they are effective hedges. The effective unrealized portion of the gains and losses before maturity are recorded in other comprehensive income. The realized gains and losses of the matured contracts are recorded in revenue. The US$ gold forward sale contracts and the silver zero cost collars have not been designated as hedging instruments and the gains and losses from these transactions are recorded in profit or loss.

Commodity Sales Agreements

At June 30, 2018, the open Rand gold forward sale contracts amounted to 300,000 ounces spread over 24 months at an average of R639,000/kg. The open US$ gold forward contracts amounted to 96,000 ounces spread over 18 months at an average of US$1,318/oz. The open US$ silver zero cost collars amounted to 750,000 ounces spread over 15 months with a weighted average floor of US$17.19/oz and a weighted average cap of US$18.19/oz.

At June 30, 2017, the open Rand gold forward sale contracts amounted to 324,000 ounces spread over 24 months at an average of R693,437/kg. The open US$ gold forward contracts amounted to 64,000 ounces spread over 18 months at an average of US$1,276/oz. The open US$ silver zero cost collars amounted to 970,000 ounces spread over 18 months with a weighted average floor of US$17.10/oz and a weighted average cap of US$18.10/oz.

We did not have any forward commodity sales agreements in place during fiscal 2016.

Interest Rate Sensitivity

Our interest rate risk arises mainly from long-term borrowings. We have variable interest rate borrowings. Variable rate borrowings expose us to cash flow interest rate risk. Interest rate risk arising from long-term borrowings is offset by cash, restricted cash and restricted investments held at variable rates.

Sensitivity analysis-borrowings

A change of 100 basis points in interest rates on borrowings at June 30, 2018, 2017 and 2016 would have increased/(decreased) profit or loss before tax by the amounts shown below. This analysis assumes that all other variables remain constant.

	Fiscal year ended June 30,		
	2018	**2017**	**2016**
		($ in millions)	
Increase in 100 basis points	(4)	(2)	(2)
Decrease in 100 basis points	4	2	2

Sensitivity analysis - financial assets

A change of 100 basis points in interest rates on financial assets at June 30, 2018, 2017 and 2016 would have increased/(decreased) profit or loss before tax by the amounts shown below. This analysis assumes that all other variables remain constant.

	Fiscal year ended June 30,		
	2018	**2017**	**2016**
		($ in millions)	
Increase in 100 basis points	4	2	2
Decrease in 100 basis points	(4)	(2)	(2)

For further information on sensitivities, see note 4 "*Financial Risk Management*" to our consolidated financial statements set forth beginning on page F-1.

ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

A. DESCRIPTION OF DEBT SECURITIES

Not applicable.

B. DESCRIPTION OF WARRANTS AND RIGHTS

Not applicable.

C. DESCRIPTION OF OTHER SECURITIES

Not applicable.

D. AMERICAN DEPOSITARY SHARES

On October 7, 2011, Harmony appointed Deutsche Bank Trust Company Americas in place of The Bank of New York Mellon as its Depositary for the ADSs evidenced by ADRs. A copy of our form of amended and restated deposit agreement (the "**Deposit Agreement**") among the Depositary, owners and beneficial owners of ADRs and Harmony was filed with the SEC as an exhibit to our Form F-6 filed on September 30, 2009.

The Depositary collects fees for delivery and surrender of ADSs directly from investors depositing shares or surrendering ADSs for the purpose of withdrawal or from intermediaries acting for them. The Depositary collects fees for making distributions to investors by deducting those fees from the amounts distributed or by selling a portion of the distributable property to pay the fees.

The principal terms regarding fees and charges that an ADS holder might have to pay, as well as any fee and other payments made by the Depositary to us as part of the Deposit Agreement, are summarized below.

Fees and Expenses

Persons depositing shares or ADR holders must pay:	For:
\$5.00 (or less) per 100 ADSs (or portion of 100 ADSs)	• The execution and delivery of ADRs • The surrender of ADRs
\$.02 (or less) per ADS	• Any cash distribution to you
A fee equivalent to the fee that would be payable if securities distributed to you had been shares and the shares had been deposited for issuance of ADSs	• Distribution of securities distributed to holders of deposited securities which are distributed by the depositary to ADR holders
Registration or transfer fees	• Transfer and registration of equity shares on our share register to or from the name of the depositary or its agent when you deposit or withdraw shares
Expenses of the depositary	• Cable, telex and facsimile transmissions (when expressly provided in the Deposit Agreement) • Converting foreign currency
Taxes and other governmental charges the depositary or the custodian have to pay on any ADR or share underlying an ADR, for example, stock transfer taxes, stamp duty or withholding taxes	• As necessary
Any charges incurred by the depositary or its agents for servicing the deposited securities	• As necessary

In addition, ADR holders must pay any tax or other governmental charge payable by the Depositary or its custodian on any ADS or ADR, deposited security or distribution. If an ADR holder owes any tax or other governmental charge, the depositary may:

- refuse to effect any transfer of such ADRs or any withdrawal of ADSs;
- withhold any dividends or other distributions; or
- sell part or all of the ADSs evidenced by such ADR,

and may apply dividends or other distributions or the proceeds of any sale in payment of the outstanding tax or other governmental charge. The ADR holder remains liable for any shortfall.

Fees and payments made by the Depositary

The Depositary has agreed to reimburse Harmony for expenses Harmony incurs that are related to the maintenance expenses of our ADR facility. The Depositary has agreed to pay the standard out-of-pocket maintenance costs for the ADRs, which consist of the expenses of printing and distributing dividend checks, electronic filing of US federal tax information, mailing required tax forms, stationery, postage, facsimile, and telephone calls. The amount of reimbursement available to Harmony is not necessarily tied to the amount of fees the Depositary collects from investors.

During the fiscal year ended June 30, 2018, Harmony received net direct and indirect payments of approximately \$0.625 million from the Depositary.

PART II

ITEM 13 DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

Not applicable.

ITEM 14 MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS

Not applicable.

ITEM 15 CONTROLS AND PROCEDURES

A. DISCLOSURE CONTROLS AND PROCEDURES

As of June 30, 2018, our management, with the participation of our Chief Executive Officer ("**CEO**") and Chief Financial Officer ("**CFO**"), carried out an evaluation, pursuant to Rule 13a-15 promulgated under the Exchange Act of the effectiveness of our "disclosure controls and procedures". Based on the foregoing, our management, including the CEO and CFO, concluded that our disclosure controls and procedures were effective as of June 30, 2018.

B. MANAGEMENT'S ANNUAL REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Our management is responsible for establishing and maintaining effective internal control over financial reporting and for the assessment of the effectiveness of internal control over financial reporting. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Harmony's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements. Management has excluded Moab Khotsong operations from our assessment of internal control over financial reporting as of June 30, 2018, because it was acquired by the Company in a purchase business combination during the year ended June 30, 2018. Moab Khotsong is a wholly-owned subsidiary whose total assets and total revenues excluded from management's assessment of internal control over financial reporting represent approximately 9% of consolidated total assets and approximately 8% of consolidated revenues, respectively, of the related consolidated financial statement amounts as of and for the year ended June 30, 2018.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management conducted an evaluation of the effectiveness of its internal control over financial reporting based on the framework in "*Internal Control -Integrated Framework* (2013 Framework) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("**COSO**"). Management has assessed the effectiveness of internal control over financial reporting, as of June 30, 2018, and has concluded that such internal control over financial reporting was effective based upon those criteria.

PricewaterhouseCoopers Inc., an independent registered public accounting firm, which has audited the consolidated financial statements included in this Annual Report, has issued an attestation report on the effectiveness of Harmony's internal control over financial reporting as of June 30, 2018.

C. ATTESTATION REPORT OF THE REGISTERED PUBLIC ACCOUNTING FIRM

See report of PricewaterhouseCoopers Inc., an independent registered public accounting firm, which is included on page F-2 of exhibit 99.1. The consolidated financial statements, together with the report of PricewaterhouseCoopers Inc., are incorporated by reference to exhibit 99.1 and shall be deemed filed as part of the Harmony 2018 Form 20-F.

D. CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

There has been no change in Harmony's internal control over financial reporting that occurred during fiscal 2018 that has materially affected or is reasonably likely to materially affect, Harmony's internal control over financial reporting.

ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT

Ms. Fikile De Buck, independent non-executive chairman of the audit and risk committee, is regarded as being the Company's "audit committee financial expert" as defined by the rules of the SEC.

In addition, the audit committee members through their collective experience meet a majority of the definitions of the SEC for an "audit committee financial expert" in both the private and public sectors. The members have served as directors and officers of numerous public companies and have over the years developed a strong knowledge and understanding of IFRS, overseeing the preparation, audit and evaluation of financial statements. We believe that the combined knowledge, skills and experience of the Audit Committee, and their authority to engage outside experts as they deem appropriate to provide them with advice on matters related to their responsibilities, enable them, as a group and under the guidance of Ms. De Buck, to act effectively in the fulfillment of their tasks and responsibilities required under the Sarbanes-Oxley Act.

ITEM 16B. CODE OF ETHICS

The information set forth under the heading:

- "*-Leadership and governance-Corporate governance*" on pages 130 to 148 of the Integrated Annual Report for the 20-F 2018 is incorporated herein by reference.

ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

A. AUDIT FEES

The following sets forth the aggregate fees billed for each of the two past fiscal years for professional fees to our principal accountants for the audit of the annual financial statements or for services normally provided by the accountant in connection with statutory and regulatory filings or engagements for those fiscal years.

Fiscal year ended June 30, 2017	US$	1.690 million
Fiscal year ended June 30, 2018	US$	2.129 million

B. AUDIT-RELATED FEES

The following sets forth additional aggregate fees to those reported under "Audit Fees" in each of the last two fiscal years that were provided by the principal accountant that are reasonably related to the performance of the audit or review of the financial statements:

Fiscal year ended June 30, 2017	US$	0.001 million
Fiscal year ended June 30, 2018	US$	0.310 million

Fees related to interim reviews.

C. TAX FEES

The following sets forth the aggregate fees billed in each of the last two fiscal years for professional services rendered by the principal accountant for tax compliance, tax advice and tax planning:

Fiscal year ended June 30, 2017	US$	0.041 million
Fiscal year ended June 30, 2018	US$	0.041 million

Services comprised advice on disclosure for completion of certain tax returns.

D. ALL OTHER FEES

The following sets forth the aggregate fees billed in each of the last two fiscal years for products and services provided by the principal accountant not described above, and relate primarily to sustainability assurance services:

Fiscal year ended June 30, 2017	US$	0.036 million
Fiscal year ended June 30, 2018	US$	US$nil

E. AUDIT COMMITTEE PRE-APPROVAL POLICIES AND PROCEDURES

Our audit committee pre-approves our engagement of PricewaterhouseCoopers Inc. to render audit or non-audit services in terms of its non-audit services policy. All of the services described above were approved in terms of the Company's delegation of authority framework and the audit committee's policy on non-audit services.

ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES

Not applicable.

ITEM 16E. PURCHASE OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS

None.

ITEM 16F. CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT

Not applicable.

ITEM 16G. CORPORATE GOVERNANCE

Significant ways in which Harmony's corporate governance practices differ from practices followed by US domestic companies under the listing standards of the NYSE.

Foreign private issuers, such as Harmony, must briefly highlight any significant ways in which their corporate governance practices differ from those followed by US domestic companies subject to the listing standards of the NYSE. Set out below is a brief summary of the significant differences.

US domestic companies are required to have a nominating/corporate governance committee and all members of this committee must be non-executive directors. The JSE Listing Requirements also require the appointment of such a committee, and stipulate that all members of this committee must be nonexecutive directors, the majority of whom must be independent. Harmony has a Nomination Committee comprised of five non-executive board members. The lead independent non-executive director serves as chairman of the Nomination Committee. For US domestic companies, the chairperson of this committee is required to be the chairperson of the board of directors. The current chairman of our board of directors, Patrice Motsepe, is chairman of one of Harmony’s largest shareholders, African Rainbow Minerals Limited, and is thus not independent. He is, however, in terms of South African governance practices, a member of the Nomination Committee. The lead independent non-executive director was re-appointed in August 2017.

US domestic companies are required to have a compensation committee composed entirely of independent directors. Harmony has appointed a Remuneration Committee, comprising five board members, all of whom are non-executive and four of whom are independent.

The non-executive directors of US domestic companies must meet at regularly scheduled executive sessions without management. Although the JSE Listing Requirements do not require such meetings, the board meets without executives after each board meeting. The board also has unrestricted access to all company information, records, documents and property. Directors may, if necessary, take independent professional advice at the Company’s expense and non-executive directors have access to management and may meet separately with management, without the attendance of executive directors.

ITEM 16H. MINE SAFETY DISCLOSURE

Not applicable.

GLOSSARY OF MINING TERMS

The following explanations are not intended as technical definitions, but rather are intended to assist the general reader in understanding certain terms as used in this annual report.

Alluvial: the product of sedimentary processes in rivers, resulting in the deposition of alluvium (soil deposited by a river).

All-in sustaining costs: all-in sustaining costs include mine production costs, transport and refinery costs, applicable general and administrative costs, costs associated with movements in production inventories, ore stockpiles, as well as ongoing environmental rehabilitation costs as well as transfers for stripping activities and costs associated with royalties. Employee termination costs are included, however employee termination costs associated with major restructuring and shaft closures are excluded. The following costs are also included: LED expenditure for continuing operations, share-based payments for continuing operations, corporate costs, sustaining exploration costs and sustaining capital expenditure including OCD expenditure and rehabilitation accretion and amortization for continuing operations. Depreciation costs are excluded. All-in sustaining costs per ounce are attributable all-in sustaining costs divided by attributable ounces of gold sold.

Auriferous: a substance that contains gold (Au).

Beneficiation: the process of adding value to gold products by transforming gold bullion into fabricated gold products.

By-products: Any products emanating from the core process of producing gold, including silver and uranium in South Africa and copper, silver and molybdenum in Papua New Guinea.

Carbon in leach (CIL): Gold is leached from a slurry of gold ore with cyanide in agitated tanks and adsorbed on to carbon granules in the same circuit. Granules are separated from the slurry and treated to remove the gold.

Carbon In Pulp (CIP): Gold is leached conventionally from a slurry of gold ore with cyanide in agitated tanks. The leached slurry passes into the CIP circuit where carbon granules are mixed with the slurry and gold is absorbed onto the carbon. Granules are separated from the slurry and treated to remove gold.

Carbon In Solution (CIS): a process similar to CIP except that the gold, which has been leached by the cyanide into solution, is separated by the process of filtration (solid/liquid separation). The solution is then pumped through six stages where the solution comes into contact with the activated carbon granules.

Cash costs: total cash costs include site costs for all mining, processing and administration, reduced by contributions from by-products and include royalties and production taxes. Depreciation, rehabilitation, corporate administration, retrenchment, capital and exploration costs are excluded. Total cash costs per ounce are attributable total cash costs divided by attributable ounces of gold produced.

Conglomerate: a coarse-grained classic sedimentary rock, composed of rounded to sub-angular fragments larger than 2mm in diameter (granules, pebbles, cobbles, boulders) set in a fine-grained matrix of sand or silt, and commonly cemented by calcium carbonate, iron oxide, silica or hardened clay.

Cut-off grade: minimum grade at which a unit of ore will be mined to achieve the desired economic outcome.

Decline: an inclined underground access way.

Depletion: the decrease in quantity of ore in a deposit or property resulting from extraction or production.

Development: process of accessing an orebody through shafts or tunneling in underground mining.

Electro-winning: the process of removing gold from solution by the action of electric currents.

Elution: removal of the gold from the activated carbon before the zinc precipitation stage.

Exploration: activities associated with ascertaining the existence, location, extent or quality of mineralized material, including economic and technical evaluations of mineralized material.

Fabricated gold: gold on which work has been performed to turn it into a product, such as jewelry, which differs from a pure investment product, such as a gold bullion bar.

Footwall: the underlying side of a fault, orebody or stope.

Forward sale: the sale of a commodity for delivery at a specified future date and price.

Gold reserves: the gold contained within proved and probable reserves on the basis of recoverable material (reported as mill delivered tons and head grade).

Gold produced: refined gold derived from the mining process, measure in ounces or kilograms in saleable form.

Grade: quantity of gold contained in a unit weight of gold-bearing material, generally expressed in ounces per short ton of ore.

Greenfield: a potential mining site of unknown quality.

Head grade: the grade of the ore as delivered to the metallurgical plant.

Indicated mineral resource: Part of a mineral resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information using appropriate techniques from outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but close enough for continuity to be assumed.

Inferred mineral resource: Part of a mineral resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from outcrops, trenches, pits, workings and drill holes that may be limited or of uncertain quality and reliability.

Leaching: dissolution of gold from crushed or milled material, including reclaimed slime, prior to absorption on to activated carbon.

Level: the workings or tunnels of an underground mine that are on the same horizontal plane.

Measured mineral resource: part of a mineral resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information using appropriate techniques from outcrops, trenches, pits, workings and drill holes. The locations are spaced closely enough to confirm geological and grade continuity.

Measures: conversion factors from metric units to US units are provided below.

Metric unit		**US equivalent**
1 tonne	= 1 t	= 1.10231 short tons
1 gram	= 1 g	= 0.03215 ounces
1 gram per tonne	= 1 g/t	= 0.02917 ounces per short ton
1 kilogram per tonne	= 1 kg/t	= 29.16642 ounces per short ton
1 kilometer	= 1 km	= 0.621371 miles
1 meter	= 1 m	= 3.28084 feet
1 centimeter	= 1 cm	= 0.3937 inches
1 millimeter	= 1 mm	= 0.03937 inches
1 hectare	= 1 ha	= 2.47105 acres

Metallurgical plant: a processing plant used to treat ore and extract the contained gold.

Mill delivered tons: a quantity, expressed in tons, of ore delivered to the metallurgical plant.

Milling/mill: the comminution of the ore, although the term has come to cover the broad range of machinery inside the treatment plant where the gold is separated from the ore.

Mineralization: the presence of a target mineral in a mass of host rock.

Mineralized material: a mineralized body that has been delineated by appropriately spaced drilling and/or underground sampling to support a sufficient tonnage and average grade of metals to warrant further exploration. Such a deposit does not qualify as a reserve until a comprehensive evaluation based upon unit cost, grade, recoveries, and other material factors conclude legal and economic feasibility.

Mineral reserves: that part of mineralized material which at the time of the reserve determination could be economically and legally extracted or produced. Mineral reserves are reported as general indicators of the life-of-mineralized materials. Changes in reserves generally reflect:

- development of additional reserves;
- depletion of existing reserves through production;
- actual mining experience; and

- price forecasts.

Grades of ore actually processed may be different from stated reserve grades because of geologic variation in different areas mined, mining dilution, losses in processing and other factors. Recovery rates vary with the metallurgical characteristics and grade of ore processed. Neither reserves nor projections of future operations should be interpreted as assurances of the economic life-of-mineralized material nor of the profitability of future operations.

Open-pit/Opencast/Open cut: mining in which the ore is extracted from a pit. The geometry of the pit may vary with the characteristics of the orebody.

Ore: a mixture of mineralized material from which at least one of the contained minerals can be mined and processed at an economic profit.

Ore grade: the average amount of gold contained in a ton of gold bearing ore expressed in ounces per ton.

Orebody: a well-defined mass of mineralized material of sufficient mineral content to make extraction economically viable.

Ounce: one Troy ounce, which equals 31.1035 grams.

Overburden: the soil and rock that must be removed in order to expose an ore deposit.

Overburden tons: tons that need to be removed to access an ore deposit.

Placer: a sedimentary deposit containing economic quantities of valuable minerals mainly formed in alluvial environments.

Precipitate: the solid product of chemical reaction by fluids such as the zinc precipitation referred to below.

Probable reserves: reserves for which quantity and grade and/or quality are computed from information similar to that used for proved reserves, but the sites for inspection, sampling, and measurement are farther apart or are otherwise less adequately spaced. The degree of assurance, although lower than that for proved reserves, is high enough to assume continuity between points of observation.

Prospect: an area of land with insufficient data available on the mineralization to determine if it is economically recoverable, but warranting further investigation.

Prospecting license: an area for which permission to explore has been granted.

Proved reserves: (i) quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes; grade and/or quality are computed from the results of detailed sampling; and (11) the sites for inspection, sampling and measurement are spaced so closely and the geologic character is so well defined that size, shape, depth and mineral content of reserves are well-established.

Pyrite: a brassy-colored mineral of iron sulphide (compound of iron and sulfur).

Quartz: a mineral compound of silicon and oxygen.

Recovery grade: the actual grade of ore realized after the mining and treatment process.

Reef: a gold-bearing sedimentary horizon, normally a conglomerate band, which may contain economic levels of gold.

Refining: the final stage of metal production in which final impurities are removed from the molten metal by introducing air and fluxes. The impurities are removed as gases or slag.

Rehabilitation: the process of restoring mined land to a condition approximating its original state.

Sampling: taking small pieces of rock at intervals along exposed mineralization for assay (to determine the mineral content).

Shaft: a shaft provides principal access to the underground workings for transporting personnel, equipment, supplies, ore and waste. A shaft is also used for ventilation and as an auxiliary exit. It is equipped with a surface hoist system that lowers and raises conveyances for men, materials and ore in the shaft. A shaft generally has more than one conveyancing compartment.

Slimes: the finer fraction of tailings discharged from a processing plant after the valuable minerals have been recovered.

Slurry: a fluid comprising fine solids suspended in a solution (generally water containing additives).

Smelting: thermal processing whereby molten metal is liberated from beneficiated mineral or concentrate with impurities separating as lighter slag.

Spot price: the current price of a metal for immediate delivery.

Stockpile: a store of unprocessed ore.

Stope: the underground excavation within the orebody where the main gold production takes place.

Stripping: the process of removing overburden to expose ore.

Sulphide: a mineral characterized by the linkages of sulfur with a metal or semi-metal, such as pyrite, FeS.

Syncline: a basin-shaped fold.

Tailings: finely ground rock from which valuable minerals have been extracted by milling.

Tailings dam (slimes dam): Dam facilities designed to store discarded tailings.

Ton: one ton is equal to 2,000 pounds (also known as a “short” ton).

Tonnage: quantities where the ton or tonne is an appropriate unit of measure. Typically used to measure reserves of gold-bearing material in situ or quantities of ore and waste material mined, transported or milled.

Tonne: one tonne is equal to 1,000 kilograms (also known as a “metric” ton).

Trend: the arrangement of a group of ore deposits or a geological feature or zone of similar grade occurring in a linear pattern.

Unconformity: the structural relationship between two groups of rock that are not in normal succession.

Waste: ore rock mined with an insufficient gold content to justify processing.

Waste rock: the non-mineralized rock and/or rock that generally cannot be mined economically that is hoisted to the surface for disposal on the surface normally close to the shaft on an allocated dump.

Yield: the actual grade of ore realized after the mining and treatment process.

Zinc precipitation: a chemical reaction using zinc dust that converts gold solution to a solid form for smelting into unrefined gold bars.

PART III

ITEM 17 FINANCIAL STATEMENTS

Not applicable.

ITEM 18 FINANCIAL STATEMENTS

The following consolidated financial statements, together with the report of PricewaterhouseCoopers Inc., are incorporated by reference to exhibit 99.1 and shall be deemed filed as part of the Harmony 2018 Form 20-F:

- Index to Financial Statements;
- Report of Independent Registered Public Accounting Firm; and
- Consolidated Financial Statements.

ITEM 19. EXHIBITS

1.1 Memorandum of Incorporation of Harmony (previously known as Memorandum and Articles of Association) (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2014, filed on October 23, 2014) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex11.htm

2.1 Notice to shareholders dated October 25, 2018 in respect of the annual general meeting to be held on December 7, 2018.

2.2 Amended and Restated Deposit Agreement among Harmony, Deutsche Bank Trust Company Limited, as Depositary, and owners and holders of American Depositary Receipts, dated as of October 7, 2011 (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2011, filed on October 24, 2011) http://www.sec.gov/Archives/edgar/data/1023514/000119312511278584/d242812dex22.htm

2.3 Form of ADR (included in Exhibit 2.2) (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2011, filed on October 24, 2011) http://www.sec.gov/Archives/edgar/data/1023514/000119312511278584/d242812dex22.htm

4.1 Deed of Extinguishment of Royalty (Wafi-Golpu Project) dated February 16, 2009 (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2009, filed on October 26, 2009) http://www.sec.gov/Archives/edgar/data/1023514/000095012309053204/u07679exv4w25.htm

4.2 Subscription, Sale and Shareholders' Agreement dated March 20, 2013 between Harmony Gold Mining Company Limited, Business Venture Investments No. 1692 Proprietary Limited, Histopath Proprietary Limited, Business Venture Investments No. 1677 Proprietary Limited, Business Venture Investments No. 1687 Proprietary Limited, Business Venture Investments No. 1688 Proprietary Limited and the Trustees for the time being of the Harmony Gold Community Trust (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex423.htm

4.3 First Addendum to the Subscription, Sale and Shareholders' Agreement dated May 28, 2013 between Harmony Gold Mining Company Limited, Business Venture Investments No. 1692 Proprietary Limited, Histopath Proprietary Limited, Business Venture Investments No. 1677 Proprietary Limited, Business Venture Investments No. 1687 Proprietary Limited, Business Venture Investments No. 1688 Proprietary Limited and the Trustees for the time being of the Harmony Gold Community Trust (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex424.htm

4.4 Second Addendum to the Subscription, Sale and Shareholders' Agreement dated July 10, 2013 between Harmony Gold Mining Company Limited, Business Venture Investments No. 1692 Proprietary Limited, Histopath Proprietary Limited, Business Venture Investments No. 1677 Proprietary Limited, Business Venture Investments No. 1687 Proprietary Limited, Business Venture Investments No. 1688 Proprietary Limited and the Trustees for the time being of the Harmony Gold Community Trust (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex425.htm

4.5 Contractor Agreement dated March 20, 2013 between Harmony Gold Mining Company Limited, Business Venture Investments No. 1692 Proprietary Limited and ARMGold/Harmony Freegold Joint Venture Company (Proprietary) Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex427.htm

4.6 Services Agreement dated March 20, 2013 between Harmony Gold Mining Company Limited and Business Venture Investments No. 1692 Proprietary Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex428.htm

4.7 Sale of Property Agreement dated March 20, 2013 between ARMGold/Harmony Freegold Joint Venture Company (Proprietary) Limited and Business Venture Investments No. 1692 Proprietary Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex429.htm

4.8 Agreement of Lease dated March 20, 2013 between ARMGold/Harmony Freegold Joint Venture Company (Proprietary) Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex430.htm

4.9 Borrower Pledge and Cession Agreement dated March 20, 2013 between Business Venture Investments No. 1677 Proprietary Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex431.htm

4.1 Borrower Pledge and Cession Agreement dated March 20, 2013 between Business Venture Investments No. 1687 Proprietary Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex432.htm

4.11 Borrower Pledge and Cession Agreement dated March 20, 2013 between Business Venture Investments No. 1688 Proprietary Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex433.htm

4.12 Borrower Pledge and Cession Agreement dated March 20, 2013 between Histopath Proprietary Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex434.htm

4.13 Cashflow Waterfall Agreement dated March 20, 2013 between Harmony Gold Mining Company Limited, Business Venture Investments No. 1692 Proprietary Limited, Histopath Proprietary Limited, Business Venture Investments No. 1677 Proprietary Limited, Business Venture Investments No. 1687 Proprietary Limited and Business Venture Investments No. 1688 Proprietary Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex435.htm

4.14 Addendum to the Cashflow Waterfall Agreement dated May 28, 2013 between Harmony Gold Mining Company Limited, Business Venture Investments No. 1692 Proprietary Limited, Histopath Proprietary Limited, Business Venture Investments No. 1677 Proprietary Limited, Business Venture Investments No. 1687 Proprietary Limited and Business Venture Investments No. 1688 Proprietary Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex436.htm

4.14 Term Loan Facility Agreement dated March 20, 2013 between Business Venture Investments No. 1677 Proprietary Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex437.htm

4.15 Addendum to the Term Loan Facility Agreement dated May 23, 2013 between Business Venture Investments No. 1677 Proprietary Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex438.htm

4.16 Waiver letter dated June 24, 2013 in respect of the Term Loan Facility Agreement dated March 20, 2013 between Business Venture Investments No. 1677 Proprietary Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex439.htm

4.16 Extension letter dated May 10, 2013 in respect of the Term Loan Facility Agreement dated March 20, 2013 between Business Venture Investments No. 1677 Proprietary Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex440.htm

4.17 Term Loan Facility Agreement dated March 20, 2013 between Business Venture Investments No. 1687 Proprietary Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex441.htm

4.18 Addendum to the Term Loan Facility Agreement dated May 24, 2013 between Business Venture Investments No. 1687 Proprietary Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex442.htm

4.18 Waiver letter dated June 24, 2013 in respect of the Term Loan Facility Agreement dated March 20, 2013 between Business Venture Investments No. 1687 Proprietary Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex443.htm

4.19 Extension letter dated May 10, 2013 in respect of the Term Loan Facility Agreement dated March 20, 2013 between Business Venture Investments No. 1687 Proprietary Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex444.htm

4.20 Term Loan Facility Agreement dated March 20, 2013 between Business Venture Investments No. 1688 Proprietary Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex445.htm

4.21 Addendum to the Term Loan Facility Agreement dated May 24, 2013 between Business Venture Investments No. 1688 Proprietary Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex446.htm

4.22 Waiver letter dated June 24, 2013 in respect of the Term Loan Facility Agreement dated March 20, 2013 between Business Venture Investments No. 1688 Proprietary Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex447.htm

4.23 Extension letter dated May 10, 2013 in respect of the Term Loan Facility Agreement dated March 20, 2013 between Business Venture Investments No. 1688 Proprietary Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex448.htm

4.24 Term Loan Facility Agreement dated March 20, 2013 between Histopath Proprietary Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex449.htm

4.25 Addendum to the Term Loan Facility Agreement dated May 24, 2013 between Histopath Proprietary Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex450.htm

4.26 Waiver letter dated June 24, 2013 in respect of the Term Loan Facility Agreement dated March 20, 2013 between Histopath Proprietary Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex451.htm

4.27 Extension letter dated May 10, 2013 in respect of the Term Loan Facility Agreement dated March 20, 2013 between Histopath Proprietary Limited and Harmony Gold Mining Company Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2013, filed on October 25, 2013) http://www.sec.gov/Archives/edgar/data/1023514/000119312513411617/d612311dex452.htm

4.28 First Addendum to the Exchange and Sale of Mining Right Portions Agreement dated April 16, 2014 between Armgold/Harmony Freegold Joint Venture Company Proprietary Limited and Sibanye Gold Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2014, filed on October 23, 2014) http://www.sec.gov/Archives/edgar/data/1023514/000119312514379647/d804845dex453.htm

4.29 Reinstatement and Second Addendum to the Exchange and Sale of Mining Right Portions Agreement dated May 6, 2014 between Armgold/Harmony Freegold Joint Venture Company Proprietary Limited and Sibanye Gold Limited (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2014, filed on October 23, 2014) http://www.sec.gov/Archives/edgar/data/1023514/000119312514379647/d804845dex454.htm

4.31 Loan Agreement between Harmony Gold Mining Company Limited and the Trustees for the time being of the ARM Broad-Based Economic Empowerment Trust, dated March 1, 2016 (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2016, filed on October 26, 2016) http://www.sec.gov/Archives/edgar/data/1023514/000120561316000327/ex4_63.htm

4.32 Intercreditor agreement between African Rainbow Minerals Limited and Harmony Gold Mining Company Limited, dated March 1, 2016 (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2016, filed on October 26, 2016) http://www.sec.gov/Archives/edgar/data/1023514/000120561316000327/ex4_64.htm

4.33 Second Amendment and Restatement Agreement amongst Nedbank Limited (acting through its Corporate and Investment Banking division) (as Original Lender, Arranger and Facility Agent), the Trustees for the time being of the ARM Broad-Based Economic Empowerment Trust (as Borrower), African Rainbow Minerals Limited (as Guarantor) and Harmony Gold Mining Company Limited (as Guarantor), dated March 1, 2016 (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2016, filed on October 26, 2016) http://www.sec.gov/Archives/edgar/data/1023514/000120561316000327/ex4_67.htm

4.34 Subordination Agreement between Nedbank Limited (acting through its Corporate and Investment Banking division), the Trustees for the time being of the ARM Broad-Based Economic Empowerment Trust, African Rainbow Minerals Limited and Harmony Gold Mining Company Limited, dated March 1, 2016 (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2016, filed on October 26, 2016) http://www.sec.gov/Archives/edgar/data/1023514/000120561316000327/ex4_68.htm

4.35 Share Purchase Agreement between Harmony Gold (PNG Services) Proprietary Limited and Harmony Gold Mining Company Limited and Newcrest International Proprietary Limited and Newcrest Mining Limited, dated September 18, 2016 (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2016, filed on October 26, 2016) http://www.sec.gov/Archives/edgar/data/1023514/000120561316000327/ex4_69.htm

4.36 The amendment and restatement agreement dated 30 June 2016 entered into amongst the Finance Parties (as defined in the Amended and Restated USD Facility Agreement) and the Obligors (listed in Schedule 1 thereto), pursuant to which the revolving credit facility agreement of up to USD250,000,000 dated 22 December 2014 between, amongst others, Harmony Gold Mining Company Limited as Borrower, the Original Guarantors listed in Part I of Schedule 1 thereto, Absa Bank Limited (acting through its Corporate and Investment Banking division) (as Coordinator and Original Lender) and Nedbank Limited (acting through its Corporate and Investment Banking division) (as Facility Agent, Coordinator and Original Lender), Nedbank Limited (acting through its London Branch), HSBC Bank plc (acting through its Johannesburg Branch), JPMorgan Chase Bank, N.A., London Branch as original lenders and to which Caterpillar Financial Services Corporation has acceded, as amended and/or amended and restated from time to time, has been, or will be, further amended and restated (incorporated by reference to Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2017, filed on October 26, 2017) http://www.sec.gov/Archives/edgar/data/1023514/000162828017010249/exhibit436amendedandrestat.htm

4.37 The third amendment and restatement agreement dated 24 January 2017 entered into amongst the Finance Parties (as defined in the Third Amended and Restated ZAR RCF Agreement) and the Obligors (listed in Schedule 1 thereto), pursuant to which the ZAR1,300,000,000 revolving credit facility agreement dated 20 December 2013 between, amongst others, Harmony Gold Mining Company Limited as Borrower, the Original Guarantors listed in Part I of Schedule 1 thereto and Nedbank Limited (acting through its Corporate and Investment Banking division) (as Original Lender and Facility Agent), as amended and/or amended and restated from time to time, has been, or will be, further amended and restated(incorporated by reference to /Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2017, filed on October 26, 2017 (incorporated by reference to /Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2017, filed on October 26, 2017) http://www.sec.gov/Archives/edgar/data/1023514/000162828017010249/exhibit437thirdamendedandr.htm

4.38 Harmony Gold Mining Company Limited 2006 Share Plan as amended and approved 25 November 2016 (incorporated by reference to /Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2017, filed on October 26, 2017) http://www.sec.gov/Archives/edgar/data/1023514/000162828017010249/exhibit438harmonygold2006s.htm

4.39 Wafi-Golpu Joint Venture Agreement, dated May 22, 2008 between Wafi Mining Limited, Newcrest PNG 2 Limited and Wafi-Golpu Services Limited (incorporated by reference to /Harmony's Annual Report on Form 20-F for the fiscal year ended June 30, 2017, filed on October 26, 2017) http://www.sec.gov/Archives/edgar/data/1023514/000162828017010249/exhibit439wafi-golpujointv.htm

4.40 Sale Agreement dated October 18, 2017 among Harmony Gold Mining Company Limited, AngloGold Ashanti Limited and Harmony Moab Khotsong Operations Proprietary Limited (previously known as Coreland Property Investment Company Proprietary Limited)

4.41 Addendum to Sale Agreement dated November 16, 2017 among Harmony Gold Mining Company Limited, AngloGold Ashanti Limited and Harmony Moab Khotsong Operations Proprietary Limited

4.42 Second Addendum to Sale Agreement dated February 28, 2018 among Harmony Gold Mining Company Limited, AngloGold Ashanti Limited and Harmony Moab Khotsong Operations Proprietary Limited

4.43 Extention Agreement dated January 12, 2018 among Harmony Gold Mining Company Limited, AngloGold Ashanti Limited and Harmony Moab Khotsong Operations Proprietary Limited

4.44 Second Extention Agreement dated February 7, 2018 among Harmony Gold Mining Company Limited, AngloGold Ashanti Limited and Harmony Moab Khotsong Operations Proprietary Limited

4.45 Term and Revolving Credit Facilities Agreement of up to US$350,000,000 dated July 28, 2017 among Harmony Gold Mining Company Limited, Nedbank Limited, Absa Bank Limited, JP Morgan Chase Bank, Caterpillar Financial Services Corporation, HSBC Bank plc, The State Bank of India, Citibank, NA, and the Bank of China

4.46 Bridge Facility Agreement of up to US$200,000,000 dated October 18, 2017 among Harmony Gold Mining Company Limited, UBS Limited, Nedbank Limited, JP Morgan Securities Plc and Absa Bank Limited

4.47 Third Amended and Restated Revolving Credit Facility Agreement of up to R1 billion dated February 20, 2017 among Harmony Gold Mining Company Limited and Nedbank Limited

4.48 ESOP trust deed

4.49 Condition Precedent Waiver Agreement dated February 19, 2018 among AngloGold Ashanti Limited, Harmony Gold Mining Company Limited and Harmony Moab Khotsong Operations Proprietary Limited

8.1 Significant subsidiaries of Harmony Gold Mining Company Limited

†12.1 Certification of the principal executive officer required by Rule 13a-14(a) or Rule 15(d)-14(a), pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

†12.2 Certification of the principal financial officer required by Rule 13a-14(a) or Rule 15(d)-14(a), pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

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†13.1	Certification of the principal executive officer, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
†13.2	Certification of the principal financial officer, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
††15.1	Integrated Annual Report for the 20-F 2018 dated October 25, 2018 (adjusted version)
99.1	Consolidated Financial Statements 2018 dated October 25, 2018

† This certification will not be deemed “filed” for purposes of Section 18 of the Exchange Act or otherwise subject to the liability of that section. Such certification will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended (the “Securities Act”), or the Securities Exchange Act of 1934, as amended (the “Exchange Act”), except to the extent that the Registrant specifically incorporates it by reference.

†† Certain of the information included in Exhibit 15.1 is incorporated by reference into the Harmony 2018 Form 20-F, as specified elsewhere in this report, in accordance with Rule 12b-23(a) of the Exchange Act. With the exception of the items so specified, the Integrated Annual Report for the 20-F 2018 is not deemed to be filed as part of Harmony 2018 Form 20-F.

SIGNATURES

Pursuant to the requirements of Section 12 of the Exchange Act, we hereby certify that we meet all of the requirements for filing on Form 20-F and that we have duly caused this annual report to be signed on our behalf by the undersigned, thereunto duly authorized.

HARMONY GOLD MINING COMPANY LIMITED

By: /s/ Peter Steenkamp

Peter Steenkamp

Chief Executive Officer

Date: October 25, 2018

Exhibit 15.1: Integrated Annual Report for the 20-F 2018 dated October 25, 2018

INTEGRATED ANNUAL REPORT FOR THE 20-F 2018

CONTENTS

ABOUT THIS REPORT

Our Integrated Annual Report 2018 covers Harmony's performance for the 2018 financial year (FY18), from 1 July 2017 to 30 June 2018. Certain comparative historical information is presented where relevant and to provide insight into our future plans.

In summary, our Integrated Annual Report for the 20-F 2018 encompasses the following elements:

Review and reflect	External factors and material issues	Future plans and outlook	Primary audience
Performance in terms of our strategic objectives and business model, and what we have achieved	Impact of external environment in which we operate and how we manage these variables	What we plan to do in the future and how we intend to achieve this	All stakeholders, but primarily shareholders

This report covers all of Harmony's operations in South Africa as well as its operating and exploration activities (joint venture and own) in Papua New Guinea. It details the material environmental, socio-economic and governance aspects of our operations, and of Harmony as a whole.

This integrated report has been compiled in line with the International Integrated Reporting Council's Framework, the Global Reporting Initiative G4 guidelines and the King Report on Governance for South Africa 2016 (King IV report).

Everything we do in conducting our business, from risk assessment and decision making to reporting, is informed by our values and our understanding of how various elements of the business fit together. We have applied this integrated approach to our reporting – sharing insights into both our financial and non-financial performance. Certain key non-financial performance indicators presented in this report were assured by SNG Grant Thornton.

The mineral reserve information presented was compiled in accordance with the South African Code for Reporting of Exploration Results, Mineral Reserves and Mineral Resources; the Australasian Code for Reporting of Mineral Resources and Mineral Reserves; the Industry Guide 7 of the United States' Securities and Exchange Commission; and the JSE Listings Requirements. This information was gathered, reviewed and confirmed by the relevant competent persons.

REFERENCE

Throughout this report, "$" or "dollar" refers to US dollar, unless otherwise stated.

"R" refers to rand, the currency of South Africa.

"K" refers to kina, the currency of Papua New Guinea.

"Moz" refers to million ounces and "Mt" refers to million tonnes.

All production volumes are in metric tonnes (t), unless specifically stated as imperial tons.

CORPORATE PROFILE

WHO WE ARE

Harmony, a gold mining and exploration company, conducts its activities in South Africa, one of the world's best-known gold mining regions, and in Papua New Guinea, one of the world's premier new gold-copper regions. With 68 years of experience, Harmony is South Africa's second largest gold producer.

Headquartered in Randfontein, South Africa, Harmony is listed on the Johannesburg Stock Exchange and on the New York Stock Exchange, on which its shares are quoted as American Depositary Receipts. At 30 June 2018, our market capitalisation was R10.6 billion (US$769 million) (FY17: R9.5 billion; US$728 million).

WHAT WE DO

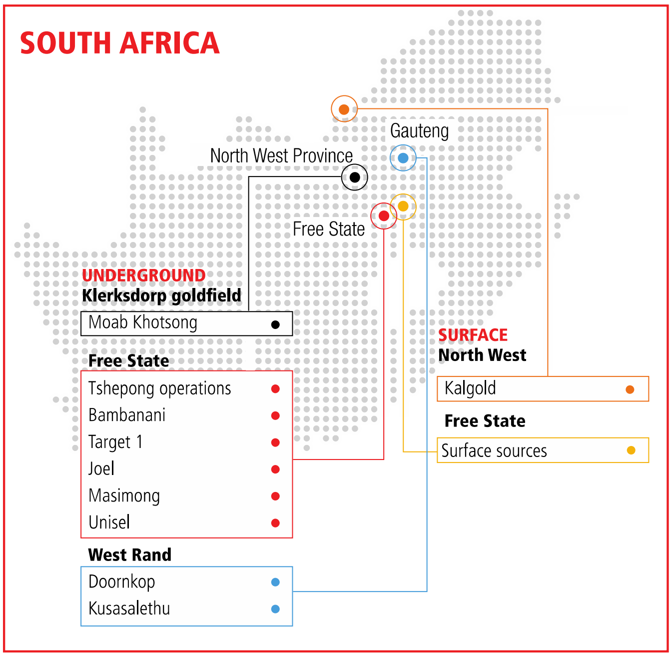
Exploration and acquisition	Mining and processing	Sales and financial management	Land rehabilitation and mine closure
Exploring for and evaluating economically viable ore bodies and/or value-accretive acquisitions	Establishing, developing and operating mines and related processing infrastructure. Ore mined is milled and processed by our gold plants to produce gold dóre bars	Generating revenue through the sale of gold produced and optimising efficiencies to maximise financial returns	Restoring mining impacted land for alternative economic use post-mining and having in place approved mine closure plans

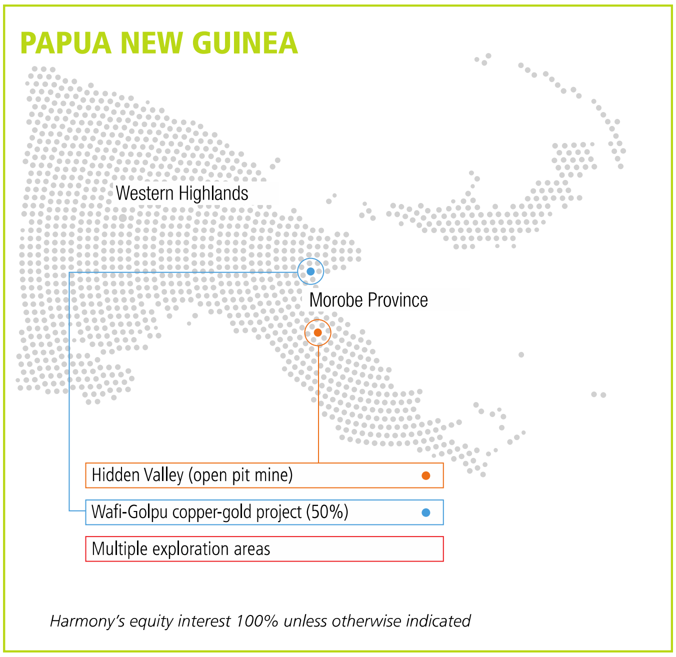
WHERE WE OPERATE

In South Africa, our nine underground operations are located within the world-renowned Witwatersrand Basin – one in the Klerksdorp goldfield, two in the West Rand and six in the Free State, in the southern portion of the Basin.

In addition, we have an open-pit mine on the Kraaipan Greenstone Belt as well as several surface treatment operations.

In Papua New Guinea, Hidden Valley is an open-pit gold and silver mine. Our significant gold-copper portfolio includes a 50% stake in the Wafi-Golpu project in the Morobe Province, through a 50:50 joint venture with Newcrest Mining Limited (Newcrest).





OPERATING STATISTICS

Gold production increased to	Costs contained	Underground recovered grade improved by
1.23Moz (FY17: 1.09Moz) • 13% increase year on year • Exceeded guidance	All-in sustaining cost of R508 970/kg and US$1 231/oz (FY17: R516 687/kg and US$1 182/oz)	8% to 5.48g/t (FY17: 5.07g/t) • Sixth consecutive year of higher grade at South African underground operations

EXTERNAL OPERATING CONTEXT

Factors affecting our ability to generate value:

Globally:	South Africa:	Papua New Guinea:
• Gold market fundamentals • Global economic outlook and geo-political climate • Rand-dollar exchange rate	• Regulatory uncertainty • Industrial relations climate • Stakeholder expectations	• Regulatory uncertainty • Industrial relations climate • Stakeholder expectations

See *Our business context* for further detail on the external environment in which we operate.

OUR VALUES

At Harmony, we understand the significant impact our company has on the lives of employees, on the communities that surround our mines, on the environment, and on the economic well-being of the countries in which we operate.

The value we create is measured by the impact we have on the lives of stakeholders, now and in the future. To this end, our values inform our decisions and guide all that we do:

SAFETY
No matter the circumstances, safety is our main priority

ACCOUNTABLE
We are all accountable for delivering on our commitments

ACHIEVEMENT
Achievement is core to our success

CONNECTED
We are all connected as one team

HONESTY
We uphold honesty in all our business dealings and communicate openly with stakeholders

GUIDED BY OUR VALUES, GOVERNANCE FRAMEWORK AND CODE OF ETHICS

Harmony is committed to the principles of good corporate governance and ethical conduct. Our governance framework and code of conduct, together with our values, guide all that we do. They underpin our decision-making and inform our interactions with each other and with external stakeholders – shareholders, investors, host communities, especially those from which our employees are drawn, all levels of government, suppliers and the media.

The board, which has a broad range of skills, knowledge and experience, ensures the highest levels of governance are applied. The governance is supported by the legal and compliance function which assesses our risks and material issues, and ensures that the necessary policies, procedures and controls are in place to mitigate them. The audit and risk function monitors the effectiveness of these policies, procedures and controls.

OUR VALUE PROPOSITION

Our business is to unlock and create value by safely, cost effectively and profitably extracting gold from the orebodies we own.

Employees - Providing employment and the opportunity to earn a living, to develop skills and learn in a safe working environment

Communities - Sharing value created to stimulate growth and development in host communities by investing in socio-economic projects and promoting preferential local procurement

Investors - Delivering consistently higher and sustained financial returns (capital appreciation and dividends)

Government - Contributing to the countries in which we operate by paying taxes and royalties

CREATING VALUE – OUR BUSINESS MODEL

As a gold mining and exploration company, the conduct of our business activities to produce gold and its by-products has an impact on stakeholders, including employees, communities and governments, and on the natural resources used in the process, such as land, water, energy, among others. In addition, financial capital is required to enable us to conduct our activities, which in turn generate cash flow.

EXPLORATION AND ACQUISITIONS

Establishing a continuing pipeline of reserves is essential to Harmony's long-term sustainability.

Our business activities:

Exploration (greenfield and brownfield)

- **Papua New Guinea:** Greenfield exploration is conducted on the gold-copper porphyry deposits.
- **South Africa:** brownfields exploration on and near our mining operations involves mainly orebody definition drilling to increase confidence in our geological modelling. Geological models are updated annually to confirm life-of-mine planning. In all, 62 961m were drilled for reserve development in FY18
- Total exploration expenditure totalled R423 million in FY18
- Involves establishing relationships with relevant stakeholders in new areas of operation, including government, communities and landowners, and managing their expectations

Organic growth prospects

- Wafi-Golpu project – updated feasibility study released in March 2018; approval of special mining licence progressing well
- Tailings retreatment projects in South Africa
- Exploration and drilling at Kalgold
- Great Noligwa and Zaaiplaats studies

Acquisitions

- Our acquisition strategy is based on acquiring assets that have potential to produce around 100 000oz of gold annually at a unit cost of ~US$950/oz with a 10-year life of mine
- Moab Khotsong, acquired effective 1 March 2018 at a cost of US$300 million, has begun to make a significant contribution

For more detail on the impact and outcomes of these activities in the past financial year, see *Chief executive officer's review, Exploration and projects*

MINING AND PROCESSING

Gold-bearing ore is mined at our nine underground, two open pit mining operations and various surface sources in South Africa and Papua New Guinea. To conduct our operations, capital is spent. People are employed and training and development provided to ensure the right skills are available. Infrastructure and equipment must be maintained.

Our operating activities:

- Milled and processed 22.4Mt of ore to produce 1.23Moz of gold
- Employed 40 686 people
- Spent R5.8bn on goods and services
- Consumed 2 548 721MWH of electricity and used 15 473 478m^3 of water in primary activities

For more detail on the impact and outcomes of these activities in the past financial year, see *Chief executive officer's review, Safety and health, Employee engagement, Operating performance, Socio-economic development, Environmental management and stewardship.*

SALES AND FINANCIAL MANAGEMENT

The end-products of our mining and processing activities are sold to generate revenue which is used in turn to create value for stakeholders and to fund organic growth.

Our financial activities:

- Generated revenue of R20.4 billion, 6% more than the previous year
- Cash of R3.9 billion generated by operating activities, including R1.8 billion generated by the hedging programme
- Following Moab Khotsong acquisition, the Hidden Valley re-investment plan and capital expenditure at our South Africa operations, cash used by investing activities amounted to R8.1 billion
- Market capitalisation improved in both rand and US dollar terms year on year

Environmental stewardship and mine closure

Our environmental stewardship responsibilities include managing the impact of our business activities on the environment. These include land rehabilitation and management, conservation, biodiversity, waste management, pollution, the efficient use of natural resources as well as closure planning, which are all incorporated in the approved environmental management plans in place for each of our operations.

Our environmental activities:

- Spent R199 million on environmental activities
- Generated 3Mt in CO_2 emissions
- Funding/guarantees amounting to R3.7 billion in place to cover rehabilitation and closure

For more detail on the impact and outcomes of our activities on the environment in the past financial year, see *Environmental management and stewardship.*

SHARING VALUE

By sustaining our business and creating value, as measured by the revenue generated, we are able to share the value created among key stakeholders.

OUR STRATEGY

OUR STRATEGY

To produce safe, profitable ounces and increase our margins

STRATEGIC PILLARS

OPERATIONAL EXCELLENCE	**CASH CERTAINTY**	**EFFECTIVE CAPITAL ALLOCATION**
Prioritising safety, strict cost control and management of grades mined, disciplined mining and improved productivity	**Achieving operational plans, supported by the current hedging strategy, contributes to cash flow certainty**	**Evaluating and prioritising organic growth opportunities and value-accretive acquisitions to ensure positive stakeholder returns and increase margins**
What we did in FY18 • Production up 13% to 1.228Moz • At South African operations, underground grade recovered increased by 8% – sixth consecutive annual increase • Lower unit costs as measured by all-in sustaining costs • Improved lost-time injury frequency rate by 13% to 6.26 per million hours worked	**What we did in FY18** • Achieved or exceeded production guidance for third consecutive year • Hedging strategy continued to boost cash flow margins	**What we did in FY18** • Hidden Valley re-investment plan delivered on time and on budget • Acquisition of Moab Khotsong has enhanced our portfolio
Focus in FY19 • Improve safety performance • Realise synergies at Moab Khotsong • Deliver on Hidden Valley plan	**Focus in FY19** • Exceed operational plans so generating free cash flow • Repay debt • Continue hedging programme	**Focus in FY19** • Secure Wafi-Golpu permitting and funding • Evaluate organic growth opportunities

CHAIRMAN'S LETTER

"Harmony's safety risk management strategy, its values and visible leadership underpins its determination to achieve zero harm."

Dr Patrice Motsepe Chairman

Dear shareholders and stakeholders

During the financial year under review Harmony continued its increase in production volumes for the third consecutive year.

Gold production increased by 13% and the underground recovered grade increased by 8% in the past year, resulting in our all-in sustaining unit costs reducing to R509 000/kg. The newly acquired Moab Khotsong operations included in our portfolio from 1 March 2018 contributed significantly to our improved performance in FY18.

We acquired the Moab Khotsong operations and completed our reinvestment in Hidden Valley, as part of the strategy to increase our production profile and improve margins and cash flow. These operations will increase our annual production by 450 000 ounces, reduce unit costs and improve our cash flows.

We are thankful for the support from our shareholders who participated in the equity capital raise of R1.26 billion (US$100 million) to partially fund the Moab Khotsong acquisition.

Harmony released an updated feasibility study in March 2018 for the Wafi-Golpu copper-gold project in Papua New Guinea which confirmed a large orebody with high grades, low operating costs and significant free cash flows. We are looking forward to its contribution to our production and cash flows when it becomes operational.

Further details of the company's operational and financial performance are provided in the Chief executive officer's review and the Financial director's report.

SAFETY AND HEALTH

Harmony's principal focus is on the safety and health of all our employees. We remain committed to achieving a target of zero harm.

Regrettably, 13 of our employees tragically lost their lives at our mines during the year. I send my heartfelt condolences to their families, friends and colleagues.

Harmony's safety risk management strategy, its values and visible leadership underpins its determination to achieve zero harm. A co-operative approach involving all stakeholders ensures that the appropriate infrastructure and systems are in place, including relevant planning, communication and training. We encourage employees to halt work when a workplace is considered unsafe. For further information in this regard, see the *Safety and health* section of the report.

Our company is an active participant in industry-wide health and safety initiatives. This year we reached an agreement with lawyers representing claimants in the silicosis class action. The settlement which is still subject to High Court ratification, represents a fair and just outcome for all stakeholders.

OUR EMPLOYEES

The acquisition of Moab Khotsong increased our total number of employees to approximately 38 500 in South Africa and 2 200 in Papua New Guinea. Our employees reside mainly in the communities neighbouring our mining operations and we paid R9.5 billion (US$740 million) in salaries during the year.

Harmony invested R418 million (US$32.5 million) in employee training. Employees were trained in critical skills, mentorship, hazard identification, risk assessment, ore reserve management and various other courses. We also awarded 101 bursaries to students studying at South African universities.

HARMONY'S COMMITMENT TO ITS HOST COMMUNITIES

Our commitment to involve and benefit the communities neighbouring our mines and to contribute to their development and growth is important for the long-term success of the company.

Harmony has given particular attention to the needs of the people living near our mines in the Free State in recent years. Harmony introduced an innovative community skills and development training programme in Welkom and the broader Matjhabeng area. It is aimed at empowering women and a whole new generation of young people. The programme's objective is to train participants in the skills that will help them to find jobs, not only in the mining sector but also in the broader economy. By the end of June 2018, 60 community members had participated in this initiative.

Enterprise development is a key focus area of our sustainable development strategy. Successful supplier days were held in the communities surrounding Doornkop, Joel, Kalgold and Kusasalethu. The purpose of these supplier days is to conduct structured and proactive engagement sessions within each municipal district, exposing local small, micro and medium enterprises 15 (SMMEs) to procurement and development opportunities within Harmony.

We paid R429 million (US$33 million) in taxes and royalties in South Africa and Papua New Guinea. In addition, we spent R5.1 billion (US$400 million) on local procurement and R74 million (US$6 million) on socio-economic initiatives in our host communities in both countries.

THE SOUTH AFRICAN MINING INDUSTRY

The gold mining industry remains a key contributor to the South African economy. In the 2017 calendar year, the gold mining industry contributed R54.5 billion to the South African gross domestic product (GDP) and exported R82.7 billion worth of products as part of the country's R1.1 trillion exports. The gold mining industry employs approximately 112 000 people and in 2017 paid R29.5 billion in employee wages, salaries and benefits. Those employed by the gold mining industry in turn support an estimated 1.1 million dependants[1].

In addition to creating employment and contributing to GDP and the fiscus, the South African mining industry invested approximately R2 billion in community development initiatives and created opportunities for SMMEs (small, medium and micro enterprises) through preferential procurement, supplier development and enterprise development [1].

Between 2007 and 2016, gross fixed investment by the South African mining industry slowed mainly due to a downturn in the commodity cycle, rapidly rising mining costs, uncertainty relating to the regulatory dispensation and the discussions on the mining charter between the government and the mining industry [1].

It is important that the South African mining industry continues to be globally competitive and attractive to domestic and international investment.

The new mining dispensation including the mining charter must ensure that the South African mining industry maintains and enhances investor confidence.

The mining industry should continue to create broad public awareness of its developmental and upliftment role which benefits workers, neighbouring communities and other stakeholders.

MY GRATITUDE

I would like to thank all our employees, our host communities and all other stakeholders for their support and cooperation during the past financial year. I would also like to thank our chief executive officer, Peter Steenkamp and his management team for their leadership, hard work and contribution to the success and growth of Harmony.

We are pleased to welcome back Max Sisulu as an independent non-executive director. Max previously served on the Harmony board.

Our board of directors remains committed to robust corporate governance and ethical conduct. I am grateful and value the guidance and advice provided by our high calibre, skilled and experienced directors.

I am confident that Harmony will build on the momentum achieved during this past year and will continue to create value for its shareholders and all our stakeholders.

Dr Patrice Motsepe

Chairman

25 October 2018

[1] Statistics provided by the Minerals Council South Africa.

CHIEF EXECUTIVE OFFICER'S REVIEW

"At Harmony, we are committed to delivering on our market guidance. Production guidance was achieved for the third consecutive year in FY18."

Peter Steenkamp Chief executive officer

From the time I joined Harmony in January 2016, our team has been committed to delivering on our market guidance. Production guidance was achieved for the third consecutive year in FY18.

The performance of our South African operations has been consistent. Availability of stoping panels and fewer unplanned engineering stoppages due to focused asset management and maintenance have improved the predictability of our production performance. Our disciplined grade management approach has also been important in delivering on guidance and mitigating cost inflation.

In FY16, we reported our aspiration to grow the company to 1.5Moz by June 2019. We are on track to realise this annual production target with the combined contributions of Hidden Valley and Moab Khotsong as well as consistent production from our other mines. This will be achieved through efficient capital allocation and managing our operations by focusing on what we can control – safety, production and costs.

SAFETY AND HEALTH

As the safety and health of our employees is of paramount importance, we are also committed to doing more to ensure a safe working place for all. Sadly, we had 13 fatalities in FY18 in eight separate events. Our colleagues who lost their lives were Saraseng Elias Moloko, Mohlomi Mokhele, Motshewa Matuba, Relebohile Mokemane, Mohlabane Moganedi, Moss Setlhafuno, Fusi Khalikana, Moelwa Emily Lethebe, Nyanisile Jacwana, Molatudi Mafereka, Ephraim Leholoo, Thembile Tsutsu and Kabelo Lebetsa.

We extend our personal, heartfelt condolences to their families, colleagues and friends. For additional information, see *Safety and health*.

Key aspects of our safety approach include:

- Stopping significant unwanted events by focusing on critical control management
- Actively leading and promoting a proactive culture
- Transforming our culture through continuous employee engagement, safety awareness and training as well as positive behaviour reinforcement
- Improving system monitoring and analysis to improve risk management

On 17 August 2018, the Minerals Council South Africa (formally the Chamber of Mines South Africa) launched the National Day of Safety and Health in Mining 2018 campaign as part of its recommitment to the shared goal of zero harm and ensuring that all employees are able to go to work knowing that they will return home unharmed every day. We hosted safety and health days at each of our operations in October 2018 to reaffirm our commitment to the safety and wellbeing of employees.

OPERATIONAL REVIEW

South Africa

Harmony's operations achieved gold production of 1.228Moz, exceeding our annual production guidance of 1.18Moz. The South African operations recorded a 14% increase in gold production and increased underground recovered grade by 8% to 5.48g/t.

Moab Khotsong produced 105 969 ounces (contributing 10% of the increase in SA gold production) for the four months the operation has been included in Harmony's asset portfolio. Furthermore, the operation contributed R460 million to our operational free cash flow and lowered the overall all-in-sustaining unit costs for the group.

Optimising the performance of Moab Khotsong will be a key focus area in FY19 as further cost reduction and efficiencies have been identified. Studies are currently underway to evaluate potential options to safely and optimally mine the Great Noligwa shaft pillar and other isolated pillars. The high-grade Zaaiplaats project is an attractive growth opportunity. Progression of this project is subject to the feasibility study due to be completed by the end of June 2019.

An outstanding feature of the past year is that, with the exceptions of Unisel and Joel, all of our South African underground operations increased their gold production year-on-year. Overall underground grades have increased for the sixth consecutive year in line with our strategy to focus on the extraction of profitable ounces. Full details of our mining operations are provided in *Operating performance* section of the report.

Papua New Guinea

The Hidden Valley investment in the stage 5 and 6 cutback, and related plant and processing upgrades, was delivered on schedule and below budget (US$175 million spent compared to investment planned of US$180 million). Commercial levels of production were achieved in the June 2018 production month.

Stripping of the cutbacks will continue for the next three years to deliver an average life of mine all-in sustaining cost of below US$950/oz.

The updated feasibility study of the Wafi-Golpu project released on 19 March 2018 proposed a larger mine and increased production profile, resulting in a 33% increase in net present value to US$2.6 billion (applying a real discount rate of 8.5%)[1]. Engagement by the Wafi-Golpu Joint Venture with the Papua New Guinea government on the application for a special mining lease for the Wafi-Golpu project is progressing well.

OUR PEOPLE

The employee relations environment was stable this past financial year. In South Africa, wage negotiations for the three years beginning 1 July 2018 were successfully concluded with unions representing 69% of employees.

For more employee-related initiatives, see *Employee engagement* in this report.

MINING CHARTER

The latest version of the Mining Charter (referred to as Mining Charter III) was gazetted by the Minister of Mineral Resources in September 2018.

Harmony, through the Minerals Council South Africa, is engaging with the Department of Mineral Resources on certain issues of concern and we are optimistic that we may reach an amicable solution.

CONCLUSION

In our review of the past year, it is evident that Harmony's people remain committed to working as a team in the interests of the company with sustainability in mind. I extend my thanks to everyone and look forward to further positive collaboration in future. My thanks also go to our chairman Dr Patrice Motsepe and to all Board members for their continuing support and counsel.

Peter Steenkamp

Chief executive officer

25 October 2018

[1] Harmony has a 50% equity stake in the Wafi-Golpu project, which is held in a 50:50 joint venture with Newcrest Mining Limited. These figures are quoted on a 100% basis.

OUR BUSINESS CONTEXT

As a business, we operate in a complex and ever-changing external environment that involves social, political, economic and environmental changes in the short, medium and long terms.

Understanding our operating environment

To help position Harmony for success, it is vital to identify those external factors that impact our internal operations and to understand how they affect our ability to deliver on our strategic objectives. Identifying and understanding these external factors requires regular, transparent and consistent stakeholder engagement. This section should be read in conjunction with *Material issues and stakeholder engagement*

Stakeholder engagement

External stakeholders – including communities, labour unions, non-government organisations and media – influence the public debate on mining's contribution to society

Commodity price and exchange rate volatility

Long project lead times and a lack of flexibility to rescale operations in response to price fluctuations can impact sustainable cash generation over the long term

Economic outlook

- Our long-term view of the gold price remains positive. The global economy has been characterised by uneven growth, increased geopolitical tensions and a stronger US dollar. This has been aggravated by the potential trade war threatened by the United States and, post year-end, the emerging market crisis sparked by Argentina and Turkey. The latter is having an adverse impact on related currencies, including the rand. Our hedging strategy is helping to lock in cash margins over the short term

See *Financial director's report*

EXTERNAL ENVIRONMENT

EXTERNAL ENVIRONMENT

Balancing shareholder and stakeholder expectations

- Engagement is informed by stakeholders, our operating environment, material issues, risks and opportunities
- Regular, open, honest and transparent communication is underpinned by our values

Ensuring business sustainability

Entails:

- Disciplined cost control
- Increased productivity
- Prioritising organic growth opportunities

INTERNAL ENVIRONMENT

Maintaining social licence to operate – our environmental, social and impact on host communities

- Our aim is to influence, develop and support the socio-economic sustainability of communities
- Ensure efficient use of resources (water and energy)
- Limit, and where possible eliminate, our environmental footprint through conservation and rehabilitation programmes

INTERNAL ENVIRONMENT

Ensuring employee safety and well-being

- Providing training and development
- Preventing and treating HIV/Aids and tuberculosis (TB)
- Competing to recruit and retain skilled employees
- Addressing employment equity and equality

Occupational lung disease (silicosis) settlement

- A sustainable, inclusive and comprehensive solution was agreed in May 2018 (to be ratified by court)
- A legacy fund is to be established – Harmony has estimated its share of settlement and has recognised a provision of R925 million (FY17: R917 million)
- Harmony's RECONNECT initiative has made contact with 8 795 former employees to whom the Department of Health has paid R168 million in claims to date

See *Safety and health*

Potential liability for occupational lung disease compensation in South Africa

Harmony, through the gold mining industry occupational lung disease working group, has been working towards a settlement since November 2014

Volatile labour relations environment in South Africa

Labour relations in South Africa are complicated by inter-union rivalry

Wage negotiations

- In South Africa, Harmony negotiates changes to wages and other conditions of employment through a recognised collective bargaining structure, under the auspices of the Minerals Council
- Three-year wage agreement reached in October 2018

EXTERNAL ENVIRONMENT

EXTERNAL ENVIRONMENT

Sharing resources

- While sufficient, reliable supplies of water and electricity are essential to the safe, efficient conduct of our mining operations, access to water and electricity remain important social, environmental and economic issues, particularly in a resource-constrained country such as South Africa
- Various measures have been implemented to improve water use efficiency and to reduce consumption by recycling
- Successful energy consumption strategies have reduced our carbon footprint

See *Environmental performance* and *Socio-economic performance*

Social licence to operate

Responsible environmental stewardship is an important aspect of acquiring and maintaining our social licence to operate

Regulatory certainty and adapting to legislative changes and amendments

This is key to the future success and sustainability of the mining industry

Regulatory certainty

- In South Africa, Mining Charter III was gazetted in September 2018 and Harmony, through the Minerals Council, is engaging with the Minister of Mineral Resources on certain areas of concern
- In Papua New Guinea, we are active in industry working groups and the local Chamber of Mines on proposed amendments to the Mining Act

MANAGING OUR RISKS AND OPPORTUNITIES

MANAGING OUR RISKS AND OPPORTUNITIES

The effective governance and management of our risks and opportunities are fundamental to and underpin our ability to deliver on our strategic objectives, and on our ability to create sustainable value.

Effective enterprise risk management involves identifying and understanding the risks and opportunities facing our business. By understanding those variables in our internal and external operating environments that create uncertainty and risk, we are better able to alleviate the effects of such risks and to position Harmony to take advantage of any opportunities, future challenges and growth prospects.

OUR RISK MANAGEMENT PROCESS

At Harmony, our approach to risk relies on the ongoing monitoring of risk and related mitigation procedures and, when appropriate, their revision. These activities are embedded in our day-to-day activities and processes at an operational level, in our governance structures and at policy level. Our risk management process aims to be practical and effective, rather than focusing solely on compliance.

While our risk management process is guided by specific regulatory and legislative requirements, internally, it is championed by our chief executive officer. Management is responsible for implementation and compliance, and the audit and risk committee is responsible for oversight of the risk management process and for its adequacy and effectiveness.

Risk management has, as its starting point, our business strategy and related strategic objectives. Understanding those factors that have the potential to limit our ability to deliver on our strategy is vital, as is identifying those opportunities that will enable us to achieve our goals. We also benchmark the risks and opportunities identified against those of our peers to ensure that the risks identified include not only those specific to Harmony but also those facing the gold mining industry as a whole.

In preparing their formal reports to the board, the executive and audit and risk committees meet quarterly to interrogate the risk register and review any changes in relative importance or in mitigation plans. The audit and risk committee's report is supplemented by feedback from the various board sub-committees and reviews of specific risks falling within the ambit of their responsibilities.

Quarterly risk examination is based on experiences at the operations, feedback from key stakeholders, external factors and management meetings. In addition, various teams within the company address risk on a regular basis as part of their day-to-day roles. This creates an ongoing conversation about risk at different levels, allowing any changes to be captured on a continuing basis.

In addition, formal weekly operational and safety risk reviews are undertaken by management teams to identify and prioritise specific, high-risk issues at an operating level. These reviews are reported to the respective regional general managers with additional oversight by the operations' committees.

Roles of the board and audit and risk committee

Risk is a standard agenda item at audit and risk committee meetings with the committee's role in our risk management process being multi-dimensional. Its primary role is that of oversight of risk governance and ensuring that strategic risks are appropriately addressed and managed. Operational and safety specific risks are monitored by the technical committee of the board. Our risk management process reflects our integrated approach to business and the audit and risk committee – supported by various board sub-committees – examines all risks affecting our strategy.

To do this, the committee spends considerable time reviewing and evaluating the processes in place to identify, monitor and manage risk. These include our risk management policy, methodology and planning, formal risk assessment, internal controls and assurance processes, our risk appetite and tolerance and our responses to the risks identified. Once the audit and risk committee is satisfied with these, responsibility for their implementation devolves to executive management and their teams. In turn, their task is to ensure that these risk processes are constantly applied in day-to-day activities.

Based on these reviews, the audit and risk committee submits its findings to the board. The top strategic, operational and safety-specific risks and mitigating factors are reported to the board on a quarterly basis.

Our risk appetite statement

Harmony is in the business of gold mining, we are involved in the entire gold mining value chain – from exploring for prospects, conducting feasibility studies and building, buying and operating mines to closing and rehabilitating mines at the end of their productive lives. The nature of our operations and the environment within which we operate expose the business to internal and external risks and opportunities that can impact our ability to generate sustainable value for our shareholders and stakeholders. These risks and opportunities are carefully evaluated and managed.

We have expertise in operating in emerging economies and have the ability and experience to manage the socio-political circumstances in these countries. We have developed the skills to deal with the challenges of multi-stakeholder labour relations, the latter is especially so at our deep-level gold mines in South Africa, which are labour intensive and unionised.

We have an appetite for change and continuous improvement, we continuously strive to improve the safety and health of our employees, and are constantly looking for innovative and cost effective ways to optimise performance at our operations. Our strategy to produce safe, profitable ounces and increase margins has led us to acquire and invest in mines that can be operated more efficiently and that can enhance our ability to achieve our strategic objectives. As exploration is one of the most effective ways to grow and develop an ore body and to create value, we continue to explore in the vicinity of our operations and in new regions in Papua New Guinea.

We have experienced, values-driven teams committed to delivery on our strategic objectives.

Determining our most significant risks and opportunities

We formulate group-level risk appetite and tolerance levels, and continue to monitor our risks to identify and manage those that are most material to the company. While our group-level risk appetite and tolerance levels are subject to formal annual reviews, these are continually monitored for relevance in terms of changing macro-environment factors. Our tolerance levels are further defined at lower tolerance limits per risk.

STAKEHOLDER ENGAGEMENT AND OUR MATERIAL ISSUES

The process to determine our material issues derives from stakeholder engagement and our risk management process.

While our relationships with our stakeholders underpin all that we do, stakeholder engagement is also integral to our risk management process. This engagement – between management and the board, and between the company and various stakeholders – ensures that we address risks appropriately.

OUR APPROACH TO STAKEHOLDER ENGAGEMENT

Our stakeholder engagement complies with relevant legislation and standards, including ISO 14001, OHSAS 18001 and ISO 9000. In particular, we take account of King IV and its recommendations regarding the importance of inclusive stakeholder engagement and stakeholders' legitimate concerns. Using our stakeholder engagement policy and strategy, we identify various stakeholders, internal and external, across our business process.

Given our many stakeholders, priority is given to those who are most likely to have the greatest impact on Harmony in terms of achieving our strategic objectives and our business performance.

The primary aim of our stakeholder engagement is to share and gather information to inform our business decisions. This two-way communication is guided by our values and our strategic intent:

- To improve the lives of host communities through appropriate programmes or projects
- To find solutions to the various challenges facing our society and host communities, including unemployment and lack of economic activity, by collaborating with stakeholders and forming meaningful partnerships
- To find a balance between the expectations of shareholders and those of other stakeholders

Our engagement with stakeholders is inclusive, so that it is:

- Meaningful and addresses what is material to stakeholders
- Complete so that we understand the views, needs, perceptions and expectations linked to issues that stakeholders view as material
- Responsive so that we respond to material issues timeously, coherently and appropriately

WHY STAKEHOLDER ENGAGEMENT IS IMPORTANT

Stakeholder engagement is integral to our business and shapes our actions in determining strategy, addressing problems, and allocating human resources and capital. Effective stakeholder engagement helps us better manage risks, opportunities and enhances the company's reputation, which is essential to the long-term sustainability of Harmony. Furthermore, effective, meaningful stakeholder engagement contributes to our store of knowledge as a company and provides information, which leads to improved decision-making processes. The board's social and ethics committee oversees stakeholder relations while the board itself monitors relations with stakeholders.

To be a profitable, responsible and sustainable business, mutually beneficial and sustainable relationships with various stakeholders are vital to the success of our business strategy, especially in relation to our material issues. Given that our material issues are informed by stakeholder engagement, it is important to understand and meet our stakeholders' needs and expectations where possible. We engage with numerous stakeholders – individuals and organisations – on an ongoing basis.

Continuous two-way engagement with our stakeholders

EMPLOYEES AND UNIONS

Maintaining stable, peaceful labour relations is essential. The benefits of a stable, engaged workforce are many, including enhanced productivity, increased likelihood of meeting our strategic objectives, reduced safety risk, and improved health and well-being.

Related material issues: 1, 2, 3, 4 and 5

GOVERNMENT AND REGULATORS

Positive relations with governments and regulators helps to better manage the uncertainty around regulatory uncertainty and political risk. Such engagement includes reporting on compliance, in line with regulations, and on developments and/or changes at our operations and projects. We collaborate with local and district municipalities on the planning and implementation of mine community development projects.

Related material issues: 1, 4 and 5

BUSINESS PARTNERS AND SUPPLIERS

Constructive relations and partnerships with our business associates and suppliers assists with cost control and management, helping us to deliver on our strategic objectives and supporting our long-term viability. In South Africa, such engagement is also vital in helping us meet procurement targets in relation to our mining rights.

Related material issues: 2, 4 and 5

SHAREHOLDERS, INVESTORS, PROVIDERS OF CAPITAL

Regular communication with the broader investment community is aimed at managing expectations relating to our financial and operating performance and to delivery on our guidance and strategic objectives. This community is the most geographically diverse of all our stakeholders.

Related material issues: 1, 2, 3, 4 and 5

HOST COMMUNITIES

Direct community engagement is key to managing our socio-economic and environmental impacts as well as community expectations, and to ensuring public safety. Our aim is to establish partnerships with host communities, based on shared value. Subjects of community engagement include, among others, employment and procurement opportunities, enterprise development, mine community development and illegal mining.

Related material issues: 4 and 5

INDUSTRY BODIES

Liaison with relevant industry bodies in South Africa and Papua New Guinea helps to promote partnerships to address material issues that are common to the industry as a whole, such as regulatory concerns relating to the Mining Charter, the impending carbon tax, industry-wide labour relations and wage negotiations, illegal mining and the silicosis settlement.

Related material issues: 1, 3 and 4

MEDIA AND GENERAL PUBLIC

Engagement with the media and general public supplements and reinforces that with other stakeholders. It helps in managing stakeholder expectations and our reputation, in forming public opinion and in promoting an understanding of our activities.

Related material issues: 1, 2, 3, 4 and 5

MATERIAL ISSUES

In the course of engaging with stakeholders, we identify those issues that are most closely related to our values and strategy. From this process, we have derived the following five material issues, which encompass our key risks and address our values – safety, accountability, achievement, connectedness and honesty.

ADDRESSING OUR MATERIAL ISSUES

1 KEEPING OUR PEOPLE SAFE AND HEALTHY

People are central to our business. While we have made significant progress in recent years, ensuring employee safety and health remain priorities.

We continue our proactive people-centric risk-based approach to safety, focusing on training and communication to entrench safe behaviour in the workplace. We understand the need to make additional safety advances by applying new technology and/or advancing protective equipment.

Our employees may face occupational health risks in working underground. We address all operational health risks and offer treatment for a variety of other health concerns. We believe that prevention is better than cure and offer proactive, integrated and holistic health programmes. Our aim is to ensure our employees return home safely and in good health. For more, see the *Safety and health* section of this report.

Our response

- Ensuring that high-risk health and safety exposures are managed
- Leading by example
- Creating an enabling environment for continuous safety improvement
- Promoting engagement aimed at enhancing safety in the workplace and employee health
- Encouraging employees to withdraw from their workplace when they consider working conditions to be unsafe
- Implementing proactive safety awareness campaigns aimed at improving safety performance
- Proactive healthcare programmes implemented, including health hubs

See *Safety and health*

2 ACHIEVING OUR BUSINESS OBJECTIVES

While success in achieving our business objectives drives what we do, we are not focused solely on short-term success. As explained in *Our strategy*, our aim is to ensure Harmony is viable for years to come. As a result, we also consider our future objectives, the use of technology and innovation, diversifying our asset portfolio, and ensuring we have projects in place to sustain and grow our production, while still applying effective financial capital allocation criteria and processes.

Our response

- Communicating progress made in achieving our objectives and on impacts of changes in the gold price and the rand/US dollar exchange rate
- Implementing initiatives to contain costs
- Implementing an appropriate hedging strategy to lock in cash margin certainty
- Engaging with suppliers to ensure cost increases are contained and reasonable
- Liaising with the Papua New Guinea government around Wafi-Golpu, and application for the special mining lease and related approvals and permits
- Acquisition of Moab Khotsong, a high-grade, low unit cost operation

This is discussed throughout this report, and, in particular, in the *Chief executive officer's review* and *Operating performance*

3 MAINTAINING STABILITY IN OUR WORKFORCE

A stable workforce contributes to our aim of meeting our business objectives, as it results in lower employee turnover and stabilises production. We focus on having positive and open relationships with our employees and labour unions. By fostering conversation, we understand and are able to address grievances before industrial action. The benefits of a stable industrial relations climate are extensive. We want to create workplaces where employees feel safe, respected and valued. The benefits of meeting our business objectives are shared with employees through production bonuses, and reward and recognition programmes. For more on these, see *Remuneration Report.*

Our response

- Proactive, regular engagement based on openness, honesty and integrity
- Constructive engagement to facilitate understanding of issues and concerns of both sides
- Commitment to resolving the issues and addressing concerns
- Maintaining and upholding the principles of fairness and equity
- Promoting personalised development and training to empower individuals to contribute to Harmony and society

See *Employees engagement and Socio-economic development*

4 MAINTAINING OUR LICENCE TO OPERATE

To be successful, we must earn and retain our right to mine. This requires a clear understanding of local legislation and regulations, as well as having solid relations with government, communities, industry bodies and local business partners. We seek more than compliance: we will continue to transform our workforce, ensure good corporate governance, and be a responsible corporate citizen. For more on this, see *Mining Charter compliance scorecard.*

Our response

- Proactive engagement on the state of our business
- Proactively engaging to promote alignment of expectations and to understand communities' needs to enable us to make a positive, sustainable contribution
- Communication on compliance targets achieved and challenges encountered, particularly those relating to housing
- Engaging on proposed amendments to the Mining Charter and the Mineral and Petroleum Resources Development Act
- Engaging with suppliers to ensure that their processes are aligned with our human rights and environmental standards, code of conduct and empowerment requirements
- Complying with all relevant laws and regulations including those relating to the environment

See *Employees engagement* and *Socio-economic development.*

5 MANAGING OUR IMPACTS

The natural resources available to our business are finite and we respect this. We are environmentally responsible through careful monitoring of our consumption, emissions and impact. Our commitment to improving health and safety speaks to our need to protect human resources, while our training and development programmes highlight how we encourage each employee to learn and grow their skills. Responsible resource management is also crucial to our socio-environmental rehabilitation planning. While our mines are operational, we want to do all we can to improve the living conditions of employees and communities, and to bolster both socio-economic and ecological developments so that, when our mines close, we will leave behind us viable communities able to support their economies and which are not plagued by environmental or health issues. This entails planning now, ahead of mine closure, and is something we are constructively working towards. For more on our skills training and rehabilitation initiatives see section *Employees engagement* and *Socio-economic development.*

Our response

- Developing and implementing initiatives to empower local communities to ensure sustainable economic activity once mining has ceased
- Inclusive engagement relating to land rehabilitation in the Free State and the creation of sustainable of economic activities independent of mining
- Optimising our use of materials and natural resources and minimising waste and emissions

See *Safety and health, Employee engagement, Socio-economic development* and *Environmental management and stewardship* in this report

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SOCIAL AND ETHICS COMMITTEE: CHAIRMAN'S REPORT

"Our commitment to sustainable development and all that it encompasses is a moral responsibility that is underpinned by our values and integrated into our business as we strive to create shared value."

Dr Simo Lushaba

Chairman: social and ethics committee

Dear Stakeholder

In the past five years, Harmony has focused on embedding the principles of sustainable development into our business strategy and our decision-making with the understanding that, while corporate citizenship is a moral responsibility and a condition of our mining licences, this duty rests on the inextricable link between profitability and sustainability.

As such, we have concentrated on strengthening our culture and values, and Harmony's leadership approach, with standardised processes and definitions, such as ISO systems and environment and safety standards.

Guided by our vision of sustainable development, we strive to enable and empower our stakeholders. In so doing, we have recorded several, notable successes in the past year. For our employees, this includes our proactive healthcare programme, our improved safety strategy and the share ownership plan. To meet the needs of communities, we have established local socio-economic projects in South Africa and Papua New Guinea. Environmentally, we have reduced our carbon emissions, initiated pioneering rehabilitation processes and linked our Papua New Guinea operations to hydropower.

To add impetus, we have applied the principles of King IV with greater emphasis on ethical governance and conduct, and responsible corporate citizenship. As a result, the role of the social and ethics committee has become even more significant – more so with the creation of investment stewardship programmes by some of the world's largest fund managers. These stewardship programmes, which monitor and support the sustainable long-term growth of the companies in which they are invested, aim to facilitate an understanding of company management and the role of environmental, social and governance (ESG) considerations in their business strategies and overall performance.

As a company in which such fund managers invest, it is important that Harmony is and is seen to be financially sustainable in the longer term. To ensure this longevity, it is vital that we deliver not only in terms of financial performance but also in making a positive, long-term contribution to society. Although, as a mining company, our main business is the exploitation of a finite reserve, we are committed to sustainability in the long term. We must deliver on our social, environmental and economic responsibilities in the interests of leaving a lasting, positive legacy for host communities, employees and other stakeholders.

Harmony's social and ethics committee is responsible for overseeing governance and our performance in relation to our sustainable development activities. These activities include, among others, stakeholder engagement; employee relations, including empowerment, transformation, safety and health; environmental management and stewardship; socio-economic development and upliftment; and public health and safety.

The social and ethics committee is confident that, over the past financial year, it complied fully with the legal, regulatory and other responsibilities assigned to it by the board. For further details on the committee, its members and activities in the past financial year, refer to *Corporate governance*.

CONTEXT AND APPROACH

Harmony's approach to sustainable development and our sustainable development framework is aligned with our values, which are central to all that we do. They guide our decision-making and our approach to sustainable socio-economic investment. We aim to create value over the economic lives of our mines and beyond by leaving a lasting, positive legacy. Our approach is allied to our commitment to the Sustainable Development Goals, introduced under the auspices of the United Nations (UN) in September 2015. These goals, endorsed by the Global Reporting Initiative and the UN Global Compact, among others, are aimed at ending poverty, protecting the planet and ensuring prosperity for all.

Our sustainable development framework also recognises the principles articulated by the International Council on Mining and Metals, which promotes the 10 governing principles expressed in our various sustainable development policies and position statements.

Additionally, in the South African context, our sustainable development initiatives and the formulation of local economic development projects are aligned with and take into account the National Development Plan. It is important that the broader socio-economic concerns of our stakeholders are considered in delivery of sustainable development initiatives. To this end, we support government initiatives to create sustainable, diversified post-mining economies in our host communities and thus alleviate poverty by creating jobs as a national imperative. We therefore focus on the development of critical infrastructure, human settlements, development of viable alternative economic activity, education and community skills training, and the promotion of local procurement and enterprise development. Our sustainable development policy affirms our commitment to being a responsible, relevant and resilient partner in the areas in which we operate.

Our overriding aim is to uphold fair and just labour practices and conditions of service; frequent, in-depth engagement with employees and communities; and focused and sustainable supplier development and environmental stewardship. In addition, we strive to promote a culture that values corporate citizenship, human rights, and ethical and accountable leadership. Together with effective risk management, this underpins sustained growth in our business and ultimately greater shareholder value.

In the coming five years, we plan to build on the systems and processes we have embedded and move towards building a positive legacy in the communities in which we operate.

Stakeholder engagement

Stakeholder engagement and its effective management have become increasingly important as public expectations of the corporate sector, in particular mining companies, grow. Meaningful stakeholder engagement should be frequent, inclusive, productive and based on trust. Integrity is the foundation of effective and meaningful stakeholder engagement. Establishing relationships based on trust, honesty and transparency takes time and effort, and should be reflected in our internal relationships and business activities.

However, with growing community discontent with government service delivery and increasing levels of poverty, communities are turning to corporates with heightened needs and expectations. It's a delicate situation with challenges being brought to bear on these relationships. These expectations must be tempered while maintaining trust, and oftentimes, this results in dissension and disruptive behaviour. Through all of this, we respond with respect for the human rights of our employees, communities, suppliers and business partners. We are then better equipped to maintain our social licence to operate and ensure the sustainability of our business. For more information, see *Stakeholder engagement and material issues*.

Building a healthy, safe and engaged workforce

A healthy workforce and workplace translate directly into improved productivity and, at Harmony, we strive to create an enabling environment to promote employee health and wellbeing. Proactive healthcare remains the key tenet of our programme and in FY18 we advanced this by promoting awareness of the importance of health, prevention and treatment, and continuous health risk profiling. Our focus remains the management of tuberculosis, HIV/Aids, as well as on occupational health concerns relating to dust (silicosis in particular), heat, noise and radiation.

Much work has been done in a collaborative gold mining industry effort in South Africa to address the silicosis legacy and to establish a sustainable, all-inclusive and comprehensive solution for the compensation of occupational lung diseases covered by the Occupational Diseases in Mines and Works Act. A settlement of the silicosis class action has been reached (subject to court ratification) and, through the Ku-Riha and RECONNECT projects, the Department of Health has compensated 8 795 people to the value of R168 million.

In terms of operational and employee safety, our performance and regulatory compliance are monitored by the technical committee. I refer you to *Safety and health* in this report.

Trust, consultation and collaboration are the cornerstones of our relationship with employees, both directly and through organised labour. We have experienced stable labour relations in South Africa and Papua New Guinea in recent years. In South Africa, the 2018 wage negotiations in the gold mining sector were completed post year end. For further information on employee relations and the wage negotiations, see *Employee engagement*.

Community empowerment and transformation

Our moral obligation to host communities extends beyond providing direct employment opportunities and financial benefits. We drive socio-economic sustainability through local economic development programmes, and by supporting and developing local procurement and business opportunities, including infrastructure, education and skills development, job creation and entrepreneurship. Much of this is done in terms of our social and labour plans and corporate social investment programmes. In FY18 we invested R20m in local economic development. For details on work in communities in the past year, see *Socio-economic development*.

In addition, we monitor and manage our activities to limit community exposure to any potential health hazards. Our aim is to ensure the well-being of host communities.

Environmental and material management and stewardship

Responsible management of our environmental impact and our consumption of finite natural resources remain high on our list of priorities. Given the prevailing water scarcity in South Africa, reducing the rate of water consumption is vital. We also continue to drive energy conservation and efficiency, which resulted in a 3% reduction in electricity consumption and a 2% decrease in carbon emissions, thanks to innovative solutions.

Harmony has featured in the A list of the Carbon Disclosure Project's Water programme for three consecutive years and in the A list of the Climate Change programme for five years since 2013.

THE YEAR AHEAD

In September 2018, Mining Charter III was gazetted by the Minister of Mineral Resources, the Honourable Gwede Mantashe.

Harmony remains committed to the sustainable transformation of the mining industry but is also of the view that this can only be achieved through open negotiations, based on trust, between the industry and the regulators. We look forward to continued participation in discussions with the Minister and the Department of Mineral Resources.

THANKS

This is my first report as chairman of the social and ethics committee. In an effort to ensure that the board and its committees remain refreshed, I was appointed chairman of the committee during the course of this year. Modise Motloba remains a committee member, and I want to thank him and my fellow committee members for their support and contribution to ensuring Harmony's progress towards a sustainable future, and to ensuring that we comply with the best safety, health, environmental, social and governance standards. In this, the committee has the full support of our board.

Dr Simo Lushaba

Chairman: social and ethics committee

25 October 2018

MINING CHARTER SCORECARD

We report on our performance in relation to the Mining Charter throughout this integrated report. The table below sets out our performance in relation to the specific requirements of the Mining Charter, as gazetted in 2010, and our progress in terms of the Mining Charter targets set in 2014.

A declaratory order issued by a majority judgement of the High Court of South Africa in April 2018 recognised the continuing consequences of previous black economic empowerment transactions.

The latest version of the Mining Charter (referred to as Mining Charter III) was gazetted by the Minister of Mineral Resources in September 2018.

Harmony, through the Minerals Council South Africa, is engaging with the Department of Mineral Resources on certain issues of concern and we are optimistic that we may reach an amicable solution.

For further information and progress related to the revised Mining Charter, see the Minerals Council's website, www.mineralscouncil.org.za.

PROGRESS AGAINST MINING CHARTER TARGETS

Although the latest version of the Mining Charter is yet to be finalised, our work in South African has continued towards fulfilling our commitments, in line with the underlying spirit of the 2014 Mining Charter and our overall commitment to transformation.

The Mining Charter serves as a guide to the industry, focusing the transformation journey on several key elements. A template designed by the Department of Mineral Resources enables mining companies to provide the information necessary to assess their success in achieving key Mining Charter targets.

The table below summarises our performance against the targets for each pillar of the Mining Charter's for the calendar year ended 31 December 2017.

Mining Charter scorecard for calendar year 2017 (January – December)

	Compliance target	Target	Weighting	Progress	Score
1. Reporting					
Has the company reported its level of compliance with the Mining Charter for the calendar year?	Report annually	Yes	Yes / No	Yes	Yes
2. Ownership					
Minimum target for effective ownership by historically disadvantaged South Africans	Meaningful economic participation Full shareholder rights	26%	Yes / No	More than 26%	Yes
3. Housing and living conditions					
Conversion and upgrading of hostels to attain an occupancy rate of one person per room	Occupancy rate of one person per room	100%	Yes / No	100%	Yes
Conversion and upgrading of hostels into family units	Family units established (as part of mine community development)	Yes	Yes / No	No	No

4. Procurement and enterprise development					
Procurement spend with black economic empowerment entities	Capital goods	40%	5%	76%	5%
	Services	70%	5%	76%	5%
	Consumable goods	50%	2%	82%	2%
Multinational suppliers contribution to a social fund	Multinational supplier contributions	0.5%	3%	0%	0%
5. Employment equity					
Diversification of workplace to reflect the country's demographics and attain competitiveness	Top management (board and executive management)	40%	3%	57%	3%
	Senior management	40%	4%	51%	4%
	Middle management	40%	3%	52%	3%
	Junior management	40%	1%	64%	1%
	Core skills	40%	5%	68%	5%

Mining Charter scorecard for calendar year 2017 (January – December) continued

	Compliance target	Target	Weighting	Progress	Score
6. Human resource development					
Development of the requisite skills, including support for South African-based research and development initiatives intended to develop solutions in exploration, mining, processing, technology efficiency (energy and water use in mining), beneficiation as well as environmental conservation	Expenditure on human resource development as percentage of payroll	5%	25%	6%	25%
7. Mine community development					
Conduct ethnographic community consultative and collaborative processes to delineate community needs analysis	Up to date project implementation	100%	15%	65%	10%
8. Sustainable development and growth					
Improvement of the industry's environmental management	Implementation of approved environmental management plans	100%	12%	100%	12%
Improvement of the industry's mine health and safety performance	Implementation of tripartite action plans on safety and health	100%	12%	100%	12%
Use of South African-based research facilities for the analysis of samples across the mining value chain	Percentage of samples analysed in South African laboratories	100%	5%	100%	5%
			100%		92%

SAFETY AND HEALTH

As the safety and the health of our employees is paramount, we recognise that more needs to be done to ensure a safe workplace for all employees.

REFLECTING ON FY18

- Sadly, 13 colleagues lost their lives in FY18. Previously, Harmony had demonstrated an improved and consistent downward trend in the number of fall-of-ground incidents
- Roll-out and training of our safety risk management programme continued and will be completed in FY19
- Group lost-time injury frequency rate improved by 13% to 6.26 from 7.21 per million hours worked
- Hidden Valley project was delivered safely, with no fatalities or lost-time injuries
- Doornkop mine achieved its first ever three million fatality-free shifts during the year

OUR APPROACH TO SAFETY AND HEALTH

At Harmony, we care for the safety and health of our employees. Employee wellbeing and ensuring a safe workplace are priorities. Through active leadership, a proactive culture and effective critical control management, we will prevent significant unwanted events and fatal incidents – and *Live Longer*.

Implementation of a comprehensive integrated safety risk management system and the accompanying safety campaign – ***Live Longer*** – began in FY17. This system was developed following an exercise to benchmark best practice in the industry, and an external audit by DuPont of our safety performance and practice. *Live Longer* is a risk-based approach to safeguarding lives. This approach is not limited to safety. It also encompasses health, the environment, communities and social risks, legal and regulatory risks, among others.

Our occupational safety and health policy and related management framework are aligned with the Mine Health and Safety Act in South Africa and relevant legislation in Papua New Guinea, including the Mining (Safety) Act and associated regulations. We also adhere to and apply the standards and aims prescribed by the International Council on Mining and Metals. Our approach to safety encompasses critical control management, preparedness, prevention and the monitoring, review and analysis of relevant safety and health data indicators.

Representatives of management, unions and government participate in structures aimed at emphasising the importance of safety and achieving our goal of zero harm.

At our South African operations, operational safety and health committees ensure that all employees are involved in managing and ensuring the safety of all.

Currently, we have 45 full-time safety and health stewards at our South African operations (FY17: 33). Safety and health feature as agenda items at all union and management engagements.

At board level, the technical committee is responsible for approving and monitoring compliance with our safety and health policy, and with legislation. Safety, a key performance indicator for management, is monitored to determine remuneration in terms of safety performance.

In Papua New Guinea, safety managers report regularly to the South-east Asia executive committee by way of notifications, formal monthly reports and meetings. This committee in turn reports to Harmony's technical committee and the board.

SAFETY

Harmony's approach to safety risk management, together with visible felt leadership and our values, underpin our determination to achieve zero harm. A co-operative approach, involving all stakeholders, ensures that the necessary infrastructure and systems are in place – including relevant planning, communication and training. We encourage employees to stop working when a workplace is considered unsafe and/or to prevent unsafe actions. Safe behaviour is constantly reinforced.

The overall aims of our safety risk management are to:

- proactively manage safety risks
- establish in-house capabilities to ensure that safety risk management is a way of life
- promote a culture of continuous learning
- prevent accidents, especially significant unwanted events, before they happen by implementing the controls necessary to effectively manage potential hazards

Key aspects of our safety approach:

Prevent fatalities	Active leadership and proactive culture	Embedding our safety culture	Implementing systems to improve risk management
Risk management has to be a way of life Focus on critical control management (as per International Council on Mining and Metals guidelines) Routine tasks: • SLAM (Stop, Look, Assess, Manage) • Safety declaration • Permit to work and pre-start up checks Non-routine tasks: issues-based risk assessment, trigger action response plan	Promoting a proactive culture to prevent incidents Creating an enabling environment for our teams to deliver safely and productively Asset management focused on: • Infrastructure and equipment integrity • Moving towards engineered controls	Employee engagement, safety awareness and training Engaged workforce committed to compliance Leadership development Positive behaviour reinforcement	Systems implemented to improve monitoring and analysis of critical controls and safety compliance “Learning from incidents” to drive continuous improvement Review control effectiveness through an enhanced second level audit process

Our safety approach is underpinned by living our values – genuinely caring for safety, health and the environment

At our underground operations in South Africa, eight fatal risks – falls of ground, underground rail-bound equipment, electricity, working at heights, winches, mud rushes and inundation, fire and explosives – have been identified. For each, risk standards with critical controls have been compiled and rolled out together with the necessary training.

Phase 1 of the rollout of our safety risk management approach at all operations will be completed by the end of calendar 2018. Phase 2 of the system’s rollout is being conducted and group-wide implementation is scheduled to be completed during FY19.

Phase 3 will involve embedding the monitoring of controls and responses to control failures, together with a process to continually improve control efficacy.

Harmony is involved and contributes to external safety initiatives and leading practices in the mining industry for implementation through the Mining Industry Occupational Safety and Health’s (MOSH) Community of Practice Adoption (COPA) process. Champions are nominated for each aspect of occupational safety and health. They attend industry meetings and ensure that relevant information is disseminated to the operations.

PERFORMANCE FY18

Relevant Global Reporting Initiative indicators: G4-LA5, G4-LA6 and G4-LA8

Regrettably, there were 13 fatalities during the year (FY17: 5) at our South African operations. There were no fatalities for the second consecutive year at Hidden Valley in Papua New Guinea.

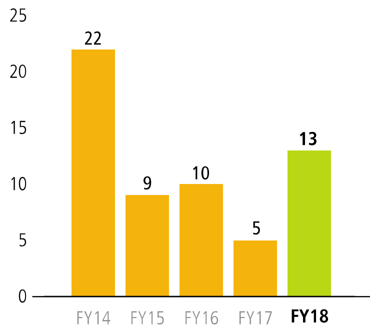
Harmony continues to provide counselling and financial assistance to the families of deceased employees. An education fund established in FY14 supports the needs of school-going dependants of all employees and contractors who lose their lives in the workplace.

Following the tragic Kusasalethu accident, an in-depth investigation was conducted by Harmony and the Department of Mineral Resources. Existing procedures and processes were reviewed and the following actions, among others, were undertaken:

- Rock engineering audits that included macro and micro audits with actions and outcomes closed out by line management
- Refresher training of managers and line management on seismically active mines
- Investment in further research and tests to ensure adequacy of support systems

The increase in fall-of-ground related incidents across the mining industry has led to an investigation into new leading safety practices related to ledging and drilling and blasting by an industry safety task team.

Group: Number of fatalities



South Africa

The lost-time injury frequency rate for the South African operations improved by 12% to 6.67 per million hours worked (FY17: 7.61) and the reportable injury frequency rate by 7% to 4.18 per million hours worked (FY17: 4.49). A total of 23 780 shifts were lost due to occupational injury (FY17: 24 026). The fall-of-ground injury frequency rate improved to 1.41 (FY17: 1.55). There were three gravity-related fall-of-ground fatalities (FY17: 1) and seven seismicity-related fall-of-ground fatalities (FY17: 0). The rail-bound equipment injury frequency rate regressed to 0.59 (FY17: 0.43). No rail-bound equipment-related fatalities were recorded during the year.

In response to the prior year's assurance qualification of the lost-time injury frequency rate, which related to certain inconsistencies in the reporting of hours worked, Harmony implemented standardised and automated computer-based systems in FY18 to improve the safety data management process and reporting of hours worked in determining key safety statistics.

In memoriam

Date	Operation	Name	Occupation	Cause
25 July 2017	Target	Saraseng Elias Moloko	Engineering team leader	Pressure vessel related
25 August 2017	Kusasalethu	Mohlomi Mokhele	Stope team member	Seismicity-related fall of ground
		Motshewa Matuba	Stope team member	
		Relebohile Mokemane	Stope team member	
		Mohlabane Moganedi	Rock drill operator	
		Moss Setlhafuno	Rock drill operator	
8 November 2017	Masimong	Fusi Khalikana	Rock drill operator	Gravity-related fall of ground
5 December 2017	Tshepong	Moelwa Emily Lethebe	Miner's assistant	Gravity-related fall of ground
17 January 2018	Tshepong	Nyanisile Jacwana	Miner's assistant	Tools, machinery and equipment
27 March 2018	Joel	Molatudi Mafereka	General logistic worker	Seismicity-related fall of ground
		Ephraim Leholoo	Crew supervisor	
17 May 2018	Moab Khotsong	Thembile Tsutsu	Locomotive operator	Working at height
8 June 2018	Bambanani	Kabelo Lebetsa	Rock drill operator	Gravity-related fall of ground

The number of Section 54/55 instructions issued during FY18 decreased to 242 (FY17: 276) with production of 530kg (18 550oz) (FY17: 291kg; 10 185oz) being lost as a result of safety-related stoppages.

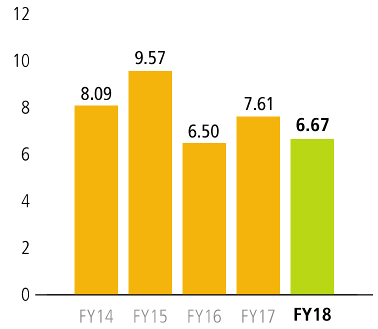
The fatal injury frequency rate for the South African operations regressed from 0.07 for FY17 to 0.17 per million hours worked for FY18.

FY18 safety achievements

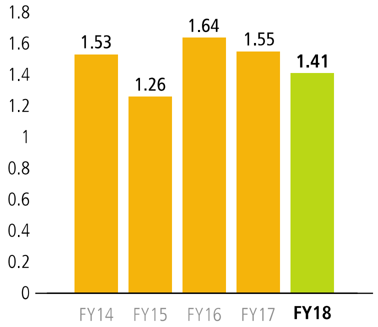
Fatality-free performance		Significant safety performance	
More than 3 million shifts	South Africa operations (rail bound equipment): 14 million shifts Target (rail-bound equipment): 8 million shifts Tshepong (rail-bound equipment): 4 million shifts Unisel (fall-of-ground): 4 million shifts Doornkop (rail-bound equipment): 4 million shifts Moab Khotsong (fall-of-ground): 4 million shifts	**More than three years**	Joel Plant: seven years' lost-time and reportable injury free Education, Training and Development Services: eight years' lost-time and reportable injury free Saaiplaas Plant: 11 years' reportable injury free
3 million shifts	South Africa operations (including fall-of-ground) Doornkop (including fall-of-ground) Joel (fall-of-ground) Unisel (rail-bound equipment) Kusasalethu (rail-bound equipment)	**Three years**	Doornkop: fatality free Harmony One PLANT: reportable injury free Free State Laboratory: reportable injury free
2 million shifts	Tshepong Operations (including fall-of-ground) Phakisa (fall-of-ground) Masimong (rail-bound equipment)	**Two years**	Doornkop Plant: lost time and reportable injury free
1 million shifts	Phakisa (including rail-bound equipment) South Africa underground operations South Africa surface operations Masimong (fall-of-ground) Target (fall-of-ground)	**One year**	Kalgold: lost-time injury free
		White flag year (injury free)	Harmony One Plant Central Plant Saaiplaas Plant Free State Commercial Services & Transport Nufcor Plant Free State Surface Operations Central Plant
		Rail-bound equipment injury-free year	Target
MineSAFE awards			
Safety improvement (year on year total injury and accident frequency rate improvement)			
Underground operations	Unisel: 3rd place Target: 2nd place	Process plants	Saaiplaas: 1st place
Best in class (lowest progressive total injury frequency rate)			
Underground operations	Asset Management Forum: 3rd place Bambanani: 2nd place	Process plants	Saaiplaas: 1st place

The fatal injury frequency rate for the South African operations regressed from 0.07 for FY17 to 0.17 per million hours worked for FY18.

South Africa: Lost-time injury frequency rate (per million hours worked)



South Africa: Fall-of-ground injury frequency rate (per million hours worked)



Managing seismicity

Seismicity at our mines is monitored and managed continuously. Some of our underground mines experience higher levels of seismic activity, and have in place support systems and procedures focused on energy absorption.

A number of methods are used to prevent and control seismicity and its consequences:

- Routine seismic monitoring systems are in operation at all our mines in South Africa. These systems monitor all mining-related seismicity. The data generated is used to quantify exposure to seismicity, to warn of potential instabilities and to aid mine planning and design
- Short-term seismic hazard assessments of each mining panel are conducted daily. Depending on the seismic hazard rating of a workplace, mining crews are withdrawn
- Monthly planning process limits the mining rates in high-risk areas and manages the design of mine stope faces
- Long-term planning addresses placement of development excavations in the footwall and in vicinity of other excavations
- Long-term mining sequence is addressed in yearly life-of-mine planning and technical sessions
- On mines where the hazard of face strain bursts is present, pre-conditioning of the stope face is applied
- Rapid yielding hydraulic props are used on certain seismically active mines to cater for the high velocity of closure expected during rockbursts

- On certain seismically-active mines, backfill is used as both a regional and local support. This assists in reducing volumetric convergence and high stresses on the face as well as in maintaining the integrity of fractured rock in the stope face and gully regions
- Support units are specially selected to cater for rockfall conditions and dynamic loading in seismically-active areas
- Secondary support is installed in selected areas to manage changes in stress and expected shakedown during seismicity
- Flooding of mines also influences seismicity. Water levels in neighbouring mines and in the zone of influence are, therefore, monitored and managed where possible
- As the majority of seismic events occur during blasting activities, centralised blast systems are used at most seismically active mines to minimise the seismic hazard to which the workforce is exposed

In the interest of a safer working environment in deep-level hard-rock mines, Harmony contributes to fundamental research programmes conducted by the University of Pretoria and the Institute of Mine Seismology into specific rock engineering and seismological issues.

Papua New Guinea

Hidden Valley recorded no fatalities or lost-time injuries for the year. The lost-time injury frequency rate improved from 0.52 to 0. In all, no shifts were lost due to occupational injury at Hidden Valley (FY17: 0). Encouraged by this performance in FY18, we will continue to focus on risk management and critical controls, visible felt leadership and promoting a proactive safety culture.

Work continues to integrate, update and improve Harmony’s Hidden Valley and Exploration’s safety management system.

The revised or updated system will align with the risk management safety approach rolled out at the South African operations, Australian standard 4801 and the ISO 45001 (once ratified).

Safety measures in place include implementation of critical controls and verification of all high-risk (potentially fatal) activities. Work menus and related training programmes, incorporating relevant critical controls, were developed for high-risk activities, rolled out and monitored.

Review of compliance with the implementation of critical controls continues to be embedded across the Hidden Valley operation. It is important in monitoring the implementation and effectiveness of controls, and identifying leading indicators.

Particular safety challenges encountered in Papua New Guinea are landslides and/or slope failures due to the mountainous terrain, high rainfall, quickly changing weather conditions and earthquakes. Natural landslides are relatively common and, together with potential man-made landslides (slope failures associated with open-pit mining), pose a significant safety risk.

Real-time slope stability radar monitoring systems, critical in monitoring and managing potential failures and failure incidents, operate at both open pits.

Specific geotechnical risk assessments are undertaken for all work sites in Papua New Guinea. The associated mitigation plans are updated at least annually.

As vehicle-related incidents are also a significant risk, we have implemented the following risk mitigation measures:

- Installation of on-board cameras to monitor driver behaviour for corrective training
- Vehicle-specific emergency braking procedure training for drivers
- Manned check points for trucks to verify permits and licences prior to entry into mine lease areas and prior to certain hazardous declines
- Reducing fatigue-related incidents and further investigations into technology to prevent accidents

HEALTH

At Harmony, we believe that every employee deserves a fulfilled life and that is why we care about their wellbeing. It is important that our employees are fit for life, fit for work and fit to retire. The healthcare approach at Harmony is proactive, risk-based and close to the operations. Healthcare or employee wellbeing can be categorised into two distinct areas: employee health and wellness, which is occupational healthcare in the workplace, and non-occupational healthcare, which is lifestyle related.

Health is a key component of achieving operational excellence. Harmony's health strategy is aligned with achieving its strategic objectives, mainly by reducing health-related safety risks, improving productivity by reducing absenteeism and offering a sustainable, cost-effective health service solution.

Prevention and managing of tuberculosis (TB), HIV/Aids and chronic diseases at all our operations, and malaria specifically in Papua New Guinea, are important focus areas.

In South Africa, Harmony's healthcare programme provides primary, secondary and tertiary healthcare as well as occupational health services to all employees, through company-managed healthcare facilities, medical aid membership, and through external healthcare providers. We continue to provide accessible, comprehensive healthcare services at our health hubs, located close to the workplace.

Harmony's proactive healthcare aims to manage illness by identifying disease early and so helping to prevent permanent disability. Medical surveillance, active case finding, and the early detection and treatment of disease are thus integral aspects of our management healthcare system. This strategy will be expanded to include monitoring and promoting employees' resistance to illness.

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The four pillars of health services are:

- Health promotion and awareness
- Disease prevention and risk management
- Clinical intervention (treatment programmes)
- Continuous health risk profiling

PERFORMANCE IN FY18*

South Africa

Key health focus areas in FY18 were the optimisation of labour availability, integration and aligning of Harmony's healthcare strategy at Moab Khotsong (ongoing), and greater attention and awareness of psycho-social or mental health wellness.

* All figures presented exclude Moab Khotsong unless otherwise stated.

Employee wellness and healthcare

Healthcare delivery

At our South African operations, membership of a medical scheme is compulsory for all category 9+ employees. For category 4-8 employees, membership is voluntary. In all, 6 879 employees participated in medical schemes in FY18 (FY17: 6 870).

Harmony subsidised the related costs on behalf of employees by R14 million (US$1.1 million) a month (FY17: R13 million or US$1.0 million).

In all, 20 632 category 4-8 employees have elected not to join a medical scheme. Instead they receive comprehensive health services from mine medical health facilities and associated preferred providers at no cost to the employee. The cost of providing these services was R24 million (US$1.9 million) a month in FY18 (FY17: R24 million; US$2.0 million), which includes health hub management costs, specialists and hospitalisation.

The dedicated health hubs at our operations undertake active case-finding and screening as well as active disease management of chronic conditions for employees who are not members of a medical scheme. Medical surveillance is conducted at our health hubs for all employees, including contractors. In all, 46 513 medical examinations were conducted during the past financial year (FY17: 44 733).

Managing health-related absenteeism

Our *At work* health management programme continues to yield good results by contributing to more healthy people being at work. The aim of this programme is the early identification and care of employees who may become chronically ill, and to manage, review and monitor their medical conditions. Health-related absenteeism remained stable at 7.4% in FY18. In the past year, 8 463 (FY17: 8 109) individual medical cases were reviewed by a team of healthcare professionals.

Preventative healthcare – promoting awareness and education

Harmony's health initiatives focus on the most common diseases and, as part of the induction programme, the e-learning module addresses these diseases. In addition, podcasts and television screens are used to educate employees on various health issues. Other initiatives include the distribution of pamphlets, health-worker training, screening at all medical centres, disease management interventions and quality assurance. Furthermore, an exclusive health desk has been set up to improve and strengthen communication on health-related matters.

Monthly health awareness campaigns, guided by the annual health calendar, focus on particular health-related topics such as HIV/Aids, TB, sexually transmitted infections, and occupational and lifestyle diseases. Ongoing monitoring and education are conducted at the medical health hubs, which oversee major health campaigns at operational level.

In preparation for the winter season in South Africa, the influenza (flu) vaccine is offered to employees as a precautionary measure. In all, 8 883 employees (FY17: 9 260) received influenza vaccinations in the past financial year.

Managing diseases

Tuberculosis

TB is one of the most pressing public health concerns in South Africa and the gold mining industry. The TB incidence rate at our South African operations remains high compared with World Health Organization and national benchmarks.

Harmony's TB control programme, which is aligned with the relevant guidelines and prescriptions of the World Health Organization, and with the National Strategic Plan to combat TB, focuses on comprehensive screening, testing and contact tracing, hospitalisation of infectious cases and a directly observed therapy short course. As an affiliate of the Minerals Council South Africa, and through the national Masoyise iTB campaign, Harmony is committed to ensuring that every employee is screened and tested for TB annually.

For FY18, 29 955 employees (including contractors), or 97% of the workforce, were screened for TB, exceeding the 90% target set by the Minister of Health. A total of 540 cases of TB were certified (FY17: 440).

The TB incidence rate per 100 000 employees has continued to decline since the introduction of our proactive healthcare strategy in FY10, improving by 22% year on year.

HIV/Aids

The HIV/Aids hyperepidemic in South Africa still continues to have a significant impact on employees and their dependants, despite significant progress made in raising awareness and prevention, and the national roll-out of antiretroviral therapy. The illness can result in higher levels of opportunistic co-infections, which lead to increased absenteeism and reduced performance levels, loss of skills, increased economic burden, and sometimes death. Motivating employees to confirm or disclose their HIV status, despite perceived stigma and confidentiality issues, remains one of the greatest challenges. Initiatives such as positive behaviour programmes are pivotal in this regard.

At our South African operations, 8 108 employees (FY17: 7 816) have been identified as being HIV-positive and are on the HIV/Aids programme, with 6 938 (FY17: 6 340) receiving antiretroviral therapy. HIV/Aids is managed through our clinics and the services of health professionals with the support of appropriate specialists. Harmony's HIV/Aids strategy is based on promoting health through education and awareness programmes, preventative strategies to reduce the number of new cases, evidence-based medical interventions and ongoing monitoring of compliance.

The Department of Health, in conjunction with the Joint United Nations Programme on HIV/Aids (UNAids), has adopted the 90-90-90 targets, which are globally aligned. Harmony has in turn aligned its HIV/Aids programme with these targets, which are:

- By 2020, 90% of all people living with HIV will know their HIV status. Harmony is currently at 82% (FY17: 78%) (including contractors)
- By 2020, 90% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy. Harmony is currently at 80% (FY17: 78%) (medically uninsured, excludes contractors)

- By 2020, 90% of all people receiving antiretroviral therapy will have viral suppression. Harmony is currently at 71% (medically uninsured)

Voluntary counselling and testing for HIV/Aids

Pre-test counselling and voluntary testing are offered to all employees through ongoing interventions at all Harmony healthcare hubs. In all, 32 194 (FY17: 29 991) employees received voluntary counselling and testing during the year and, of these, 26 082 (FY17: 23 162) confirmed their status.

Chronic diseases

Non-communicable chronic diseases including hypertension, heart disease and diabetes continue to pose a significant challenge for our employees.

Specific initiatives have been implemented to manage chronic diseases, with a particular focus on HIV/Aids, TB, diabetes and hypertension. In FY18, 59% (FY17: 55%) of employees at the South African operations had a chronic condition. Of the 16 247 employees diagnosed with chronic conditions, 34% have hypertension, 6% diabetes and 50% HIV/Aids.

Managing occupational health

Harmony is focused on creating an enabling environment for teams to succeed. Managing underground health hazards, including temperature, dust and noise control, is critical.

Managing underground temperatures – limiting heat stress

Extensive refrigeration and ventilation measures are in place at all operations where temperatures exceed normal working ranges. Heat-tolerance testing, acclimatisation programmes, and the provision of adequate hydration, support and protect employees exposed to excessive heat in the workplace.

In FY18, 20 797 heat-tolerance tests were conducted with 47 heat-related illness cases reported (FY17: 15 354 tests and 53 cases). Most cases can be attributed to dehydration. Environmental working conditions are monitored continuously.

Noise management – eliminating noise-induced hearing loss

All Harmony employees who are exposed to high noise levels are given personalised hearing protection devices, which reduce noise levels by 25 decibels.

During the year, 99% of occupationally exposed employees, including contractor employees (84%), were given personalised hearing protection devices (FY17: 99% and 76%). A progressive total of 26 913 personalised devices had been issued by the end of FY18 (FY17: 24 759).

Sound attenuators were also fitted to all equipment, resulting in no noise level exceeding 110dB(A)-weighted decibels from any machine, in compliance with our noise milestone.

Industry milestones for noise-induced hearing loss:

- By January 2018, no employee's standard threshold shift will exceed 25dB from the baseline when averaged at 2 000Hz, 3 000Hz and 4 000Hz in one or both ears
- By December 2024, the total operational or process noise emitted by any equipment must not exceed a milestone sound pressure level of 107dB(A)

Annual audiometric testing is conducted at our occupational health hubs during medical examinations. The number of early noise-induced hearing loss cases (5-10% shift) decreased from 518 cases in FY17 to 446 in FY18.

An awareness drive was initiated at all operations to ensure employees are aware of the benefits of wearing personalised hearing protection. A monitoring programme was also implemented to measure actual compliance in the workplace. Compliance monitoring is undertaken during routine occupational hygiene inspections and ad hoc audits are also conducted.

As part of the initiative to prevent noise-induced hearing loss, 25 607 (FY17: 24 939) employees participated in the 'hearing coach promotion' initiative during the year. Evaluations were conducted and guidance provided where necessary regarding the use of customised hearing-protection devices.

Dust control – elimination of related occupational health diseases

Dust discharge occurs during activities where the rock is broken at source: stoping, development and trackless mining. Engineering controls to allay dust have been implemented or are being rolled out at our underground operations to minimise employees' exposure to silica dust, including leading practices as advocated by the Mining Industry Occupational Safety and Health (MOSH) such as employing fogger systems at strategic underground areas and implementing foot- and side-wall treatments to allay dust in identified intake airways.

Multi-stage dust filtration systems have also been installed and all winches have been covered. In addition, real time dust monitors are installed at all our underground operations. These monitors provide immediate dust readings, which will allow immediate action to be taken on unacceptable readings.

Training and awareness programmes address dust control in stopes and all development ends are equipped with water blasts to settle dust directly after a blast.

Managing silicosis

Silicosis is caused by long-term exposure to high levels of quartz silica dust and can increase susceptibility to TB. Harmony's integrated HIV/Aids, TB and silicosis policy and programme is intended to responsibly manage the debilitating disease and proactively prevent deterioration, and so minimise the risk.

During FY18, 211 cases of silicosis were submitted to the Medical Bureau for Occupational Diseases and 179 cases were certified (FY17: 220 cases reported; 108 cases certified).

Project Ku-Riha and RECONNECT

Project Ku-Riha (Tsonga for compensation), launched by government in May 2015, is being rolled out by the Department of Health to improve the compensation system for those mineworkers who have occupational lung disease, and ensure that valid claims are paid more speedily and efficiently.

Harmony and seven other South African mining companies continue to participate in this initiative.

Aligned with the Department of Health's Project Ku-Riha, Harmony's in-house RECONNECT initiative was launched in collaboration with Teba to trace former employees and assist in addressing the backlog in claims for occupational lung disease at the Compensation Commission for Occupational Diseases.

The RECONNECT initiative began in Lesotho in May 2017, and has covered the following areas to date: Lesotho's Butha-Buthe, Qachas Nek and Maseru; Manzini in eSwati (Swaziland); Xai-Xai in Mozambique; and Pongola, Mqanduli, Vryheid, Stilfontein, Welkom and Carletonville in South Africa.

The current status of this initiative is as follows:

- Number of Harmony related claims paid and closed from Oct 2015 to Jun 2018: 8,795
- Number of Harmony related claims in process: 14,021
- Number of door-to-door household visits: more than 19 000
- Total value of Harmony related claims paid to date: R168 million (US$12.4 million) by the Department of Health

As a member of the Minerals Council South Africa and the Gold Working Group, Harmony participates in processes to address legacy issues relating to occupational lung disease. In May 2016, the High Court certified two classes for the related class action, namely TB and silicosis.

On 3 May 2018, six mining companies – African Rainbow Minerals, Anglo American South Africa, AngloGold Ashanti, Gold Fields, Harmony and Sibanye-Stillwater – and attorneys Richard Spoor Inc, Abrahams Kiewitz Inc and the Legal Resources Centre announced that they had reached a settlement in the silicosis and TB class action litigation. The settlement is still to be approved by the South Gauteng High Court.

Industry milestone: eliminating silicosis

By December 2024, 95% of all exposure measurement results will be below the milestone level for respirable crystalline silica of 0.05mg/m^3.

Using present diagnostic techniques, no new cases of silicosis will occur among previously unexposed individuals (previously unexposed individuals are those unexposed to mining dust prior to December 2008, equivalent to a new person starting work in the industry in 2009). Workshops have been conducted by the occupational hygienists from all operations to establish a strategy to achieve this milestone.

A decision was taken to set annual incremental targets to meet the milestone ahead of time, and not to wait until the deadline.

This will ensure a special focus on areas where compliance is lacking. The fact that Harmony is currently 82% compliant with the new milestone can be attributed to all the engineering controls in place.

Radiation protection

Radiation levels and radiation exposure are monitored at all our operations in South Africa. The dose limits are 50 millisievert a year and 100 millisievert over five years. All our South African operations comply with these limits. Operational controls ensure that elevated monitoring results are investigated and corrected when necessary. Radiological clearances are conducted at decommissioned sites to ensure the future declassification of these areas.

Community health initiatives

Harmony recognises that it can play an important role in the healthcare of surrounding communities. Activities in FY18 included:

- TB dialogue at Tshepisong, near our Doornkop mine, where leaders were mobilised at all levels is in line with the goals and objectives for the National Strategic Plans to promote shared accountability for sustainable response to TB and HIV/AIDS.

A TB-focused health campaign was conducted at Bronville and Ext 20 in conjunction with the Department of Health in the Lejweleputswa district, (close to Bambanani) and a total of 109 community members were screened for TB of which four were referred for further TB management.

Papua New Guinea

In Papua New Guinea, primary healthcare and occupational health surveillance are provided to employees and contractors by medical centres at Hidden Valley and Wafi-Golpu. Medical registers in an online information system are used to track and review each patient's progress from the first visit through to final treatment.

Upper respiratory tract infections remain one of Harmony's main medical concerns in Papua New Guinea.

Despite experiencing between 3-4m of rain a year, which naturally suppresses dust, testing for respirable silica is conducted with initial focus on higher-risk areas at Hidden Valley. Baseline data indicates that the risk of personnel contracting silicosis is negligible.

A total of 15 198 health examinations took place at Harmony medical centres in Papua New Guinea during FY18 (FY17: 13 133), of which 3 508 (FY17: 3 535) were random drug and alcohol tests.

Upper respiratory tract infections

The Hidden Valley mine is located approximately three kilometres above sea level and most employees reside in the lower, warmer areas. The regular change in altitude between home and work contributes to various respiratory ailments. Other factors contributing to these infections include low levels of personal hygiene in home villages and airborne pollen during peak flowering times which affects air quality. The high rainfall all year round maintains high levels of humidity (around 80-90%), which creates favourable conditions for fungus, bacteria and viruses to thrive.

A total of 2 581 employees were treated for respiratory ailments in FY18 (FY17: 2 427). The number of cases presented annually has remained stable. An employee educational programme on respiratory ailments and gastro-intestinal hygiene has been successfully implemented.

Tuberculosis and HIV/Aids

Hidden Valley has installed a digital X-ray machine and medical laboratory to accurately diagnose tropical diseases, tuberculosis and HIV/Aids. In FY18, 22 new cases of tuberculosis were reported during the year at Papua New Guinea operations (FY17: 5).

In all, 472 personnel underwent voluntary counselling and testing for HIV/Aids during the year at Hidden Valley compared to 150 during FY17.

Malaria

Malaria is endemic to many parts of Papua New Guinea, which includes work sites such as Wafi-Golpu and Lae but excludes Hidden Valley.

Importantly, many employees and contractors working at Hidden Valley reside in areas where malaria is endemic, and this is where our community health projects play a vital role in combatting the disease. Over the past two years, there has been a 50% increase in the presentation of patients with malaria-like symptoms.

Typhoid fever

A small typhoid fever outbreak occurred at Hidden Valley during FY18 with a total of 51 employees and contractors diagnosed from 30 April to 10 June 2018. All employees diagnosed were isolated, treated with a course of antibiotics and removed from site to prevent further spread. The high-risk employee/contractor group (food-handlers, plumbing crews and cleaners) were vaccinated as part of the prevention process.

Additional rules were also enforced to assist in the control of the infection, such as mandatory hand washing at the mess entrance, anti-bacterial gel at all crib areas, information sessions and talk topics and additional medical isolation rooms. No additional cases have been reported since June.

Community health initiatives

The community health outreach programme was developed to improve the health and wellbeing of local communities. It is led by the Medical Department and a Health Extension Officer. During FY18, the following activities were conducted:

- **Community health awareness:** Obstetrics training was conducted at the Bulolo Health Centre. This was led by the Health Extension Officer and used the new Mama Birthie Manikin (training mannequin), donated by Laerdal
- **Health patrol:** A health patrol was conducted in the Wau and Winima Village area
- **Community medical assistance:** Two cases were treated – an obstetrics case and a trauma case resulting from a bush knife attack
- **Polio vaccination assistance:** The Department of Health was assisted with 688 vaccinations administered since the programme began in June
- **Local health centre visits:** Follow-up visits were conducted with the Bulolo and Wau health centres to maintain relationships and communication. This led to the official handover of mattresses to the Bulolo and Wau health centres during a visit by chief executive officer, Peter Steenkamp

EMPLOYEE ENGAGEMENT

Our employees contribute to the growth and development of our company and we, in turn, contribute to the growth and development of our people.

REFLECTING ON FY18

- **Moab Khotsong employees welcomed to Harmony**, our values shared and embedded
- **Employee training and development** continued to be an important focus area
- **Stable employee relations environment**
- **Positive and constructive union stakeholder relationships** and roll out of employee relations policy framework
- **In Papua New Guinea, workforce localisation and gender diversification processes continued** to progress well

OUR EMPLOYEES ARE INTEGRAL TO THE SUCCESS OF OUR BUSINESS

Our employees contribute to the growth and development of our company and we, in turn, contribute to the growth and development of our people. Our aim is to provide the means for our employees to achieve good quality of life for themselves and their families, and to provide the opportunity for each individual to develop to his or her full potential.

OUR EMPLOYEE RELATIONS APPROACH

Our human resources initiatives focus on four underlying goals:

- Entrenching a single organisational culture
- Attracting and retaining employees with high potential
- Developing employees to meet operational skills requirements and improve productivity
- Maintaining effective employee performance and leadership development management systems.

Our employment policies, procedures and practices take into account and comply with relevant labour legislation in South Africa and Papua New Guinea. Recruitment initiatives focus on local communities in both countries. Reviews of all human resource procedures and policies, including remuneration and incentive schemes, are ongoing.

Relevant Global Reporting Initiative indicators: G4-LA1, LA9, LA12 labour and employment

PERFORMANCE FY18

Employee complement

Region	Permanent employees		Contractors		% employees drawn from local communities	
	FY18	FY17	FY18	FY17	FY18	FY17
South Africa[1]	**32 520**	26 478	**5 951**	4 512	**75**	76
Papua New Guinea[2]	**1 397**	1 300	**818**	911	**96**	95
Harmony	**33 917**	**27 778**	**6 769**	**5 423**		

[1] Increase year on year is due to the acquisition of Moab Khotsong and the integration of the related employee complement

[2] Excludes employees of the Wafi-Golpu Joint Venture

Employment and gender equity

Relevant Global Reporting Initiative indicators: G4-EC6 and G4-HR3

We are committed to building and maintaining a representative workforce.

South Africa: In FY18, 60% (FY17: 61%) of Harmony's management were historically disadvantaged South Africans, exceeding the Mining Charter 2014 target of 40% for company-level compliance. There is no difference in salary scales for men and women at Harmony.

In the course of the financial year, a gender diversity strategy was approved by the board which aims to improve women representation in management. The strategy sets specific annual targets for the proportional representation of women in management. See table below.

Five-year plan: women equity targets at managerial or supervisory levels

	FY18	2018	2019	2020	2021	2022
Number of women employees	**807**	860	900	980	1 070	1 160
%	**17**	18	19	21	23	25

Harmony reports quarterly on its employment equity plan and progress made to the social and ethics committee. Reports are submitted to the departments of Labour and Mineral Resources annually.

Employment equity performance by category – as at June 2018[1]

Occupational category	Historically disadvantaged South Africans[2] (target = 40%)	Women employed by category[3] (%)
Board	67%	17%
Top (executive) management	50%	20%
Senior management	53%	26%
Middle management	50%	22%
Junior management	62%	17%
Core and critical skills	67%	13%

[1] *Includes employees from the Moab Khotsong operations*

[2] *Historically disadvantaged South Africans exclude white males and foreign nationals*

[3] *All nationalities*

Papua New Guinea: Emphasis is on attracting and retaining locally recruited employees, particularly landowners and local citizens. Operations are governed by a three-year training plan lodged with the local Department of Labour in terms of which we ensure that local employees receive ongoing training and succession is managed. In all, 96% (FY17: 95%) of employees at Hidden Valley were local. In all, 12% of employees in Papua New Guinea are women.

Employee engagement

In applying our "connectedness" value, we ensure employees feel part of the Harmony family. For employees to be committed, productive and passionate about their jobs, they should feel valued, which in turn increases morale, productivity and participation because they feel empowered to communicate openly. Regular employee engagement involves two-way communication with employees. Furthermore, suggestions made by employees are taken seriously and acted upon.

Our ongoing and interactive internal communications process is a management and employee information sharing and engagement platform. This includes regular meetings with heads of departments, work groups and general manager engagement platforms (mass meetings and quarterly productivity meetings), as well as in-depth quarterly internal campaigns to drive important messages across the group, such as safety, ethics and wellness, among others. We also make use of printed material (posters, internal newsletters, memos and flyers) and digital media (email, mine television, intranet, website and text messaging).

The chief executive officer communicates regularly with employees at meetings, during internal roadshows and by email.

Following the acquisition of Moab Khotsong, Harmony's values were launched to employees and local communities.

Employee relations

Following a long period of negotiations and consultations with organised labour, the Employee Relations Policy Framework was rolled out in March 2018. The policy seeks to standardise and realign labour relations processes, procedures and structures but, more importantly, to establish thresholds for organisational rights.

South African gold wage negotiations

Relevant Global Reporting Initiative indicators: G4-EC5

Harmony negotiates changes to wages and other conditions of employment through a recognised collective bargaining structure at a centralised industry forum under the auspices of the Minerals Council South Africa. The October 2015 three-year wage agreement concluded in June 2018. The next round of wage negotiations in the gold sector started in July 2018 and the wage agreement was concluded with the majority of unions on 3 October 2018.

Labour disputes and strikes

Relevant Global Reporting Initiative indicators: MM4, G4-LA16 and G4-HR11

Labour disputes and strikes are considered a material issue as, in addition to the resulting loss of production, disputes affect morale and reputation, and present a risk to non-striking employees, communities and company assets. The employee relations environment has been stable over the past financial year with no unprotected strike action.

We endeavour to maintain peace and stability in our workforce at all times. We want our employees to feel and be safe at work.

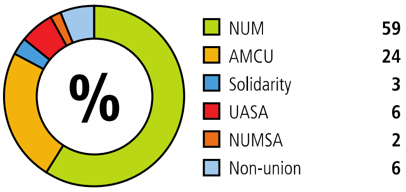
Our multi-union environment promotes co-existence, inclusion and collaboration. In addition to quarterly regional meetings with unions, we also encourage proactive and robust engagement to address particular issues. As communication is ongoing at all levels, we are in daily contact with full-time stewards while our general managers and human resources leaders interact regularly at branch level and with shaft committees.

South Africa: To mitigate the risk of labour disputes, we engage frequently with organised labour at mine and company level in addition to direct engagement with employees. We are proactive in addressing employees' queries through established structures and processes.

Various initiatives address the scourge of employee indebtedness with the added benefit of improving employee morale and engagement. These include, among others, financial literacy and personal financial education. In all, 20 851 employees or 78% of the workforce (FY17: 19 621 or 74%) have attended the financial literacy and debt counselling programme since its launch in September 2013. A particular focus area is the discontinuation of non-statutory payroll deductions and notifying employees about emolument attachment orders against their pay. The legal validity of these attachment orders is verified before they are actioned. Dealing with rescision of administration orders: a total of 112 administration orders were rescinded in the course of FY18.

Papua New Guinea: We engage continuously with all stakeholders, including employees, contractors, and national, provincial and local government, as well as landowners and regulators.

Union representation at the South African operations (%)
as at 30 June 2018



Freedom of association

Relevant Global Reporting Initiative indicators: G4-HR4

At Harmony, employees and contractors have the right to freedom of association. We participate in collective bargaining processes and adhere to the resulting collective agreements in each country. We strive for honest, two-way discussions through collective bargaining.

South Africa: Harmony recognises five labour unions. Union representation in FY18 was as follows: NUM at 59% (FY17: 62%), AMCU at 24% (FY17: 22%), the UASA at 6% (FY17: 7%), Solidarity at 3% (FY17: 2%) and NUMSA at 2% (FY17: 0%). Some 6% (FY17: 7%) of employees did not belong to a union.

Papua New Guinea: There are no active unions. Industrial relations at Hidden Valley are currently overseen by an employee representative committee.

Training and development

Relevant Global Reporting Initiative indicators: G4-LA9

All employee training and development programmes are aligned with the company’s strategic and operational needs and the recognition that Harmony can play a significant role in the development of its employees.

South Africa: Workforce training and skills development is a key focus area. In FY18, 92% (FY17: 92%) of our workforce attended training and skills development amounting to R418 million or US$32.5 million (FY17: R409 million or US$30.1 million). This included South African-based research and development initiatives in exploration, mining, processing, technology efficiency, beneficiation and environmental conservation.

Training in critical skills, such as mentoring, hazard identification and risk assessment, ore reserve management and others initiatives is provided through study assistance and various in-house programmes. In FY18, 106 people (FY17:75) benefited from this initiative. In FY18, 5.0% of the payroll was spent on human resource development (FY17: 5.0%).

Harmony supports various training and skills development programmes as summarised below:

Leadership development	Harmony's leadership development competency framework was initiated in FY18. This framework is part of the initiative to improve organisational efficiency and innovation, and includes training and development programmes aimed at improving leadership effectiveness across all levels from supervisory up to executive level. In FY18, 116 employees embarked on this leadership journey of which 63% have completed the programme.
Adult education and training ***Relevant Global Reporting Initiative indicators: G4-LA10***	Adult education and training centres at our South African operations run full-time and part-time classes to ensure that employees are functionally literate and numerate to enable personal growth and promote transformation. In FY18, 493 (FY17: 537) employees and five (FY17: eight) community members attended adult education and training at a cost of R36 million or US$2.8 million (FY17: R38 million or US$1.9 million). The overall average pass rate decreased to 57% in FY18 (FY17: 66%). The e-learning programmes, which allow part-time participants to study at their own pace, are proving beneficial to employees as the centres achieved a 67% pass rate for the two exams written within this reporting period.
Bursary programme	On completion of their studies, student bursars can apply for Harmony's graduate development programme. A total of 101 bursaries (FY17: 76) were awarded to students studying at tertiary institutions. Of the bursaries awarded in 2018, 91 (90%) of the students were from local communities and the balance from provinces in which we operate. The pass rate in the 2017 academic year was 90%.
Bridging school	Harmony's bridging school supports mathematics and science at grade 12 level to assist school leavers improve their final results and gain admission to tertiary institutions. On successful completion of grade 12, some are awarded bursaries while others apply for learnerships within the company. Since the school's inception in 1996, we have registered 450 students in all. Of these, 33 (7%) were awarded bursaries and 350 attended our learnership programme. The balance were appointed to various permanent positions within Harmony.
Learnerships	Harmony runs various formal learnership programmes in mining, engineering and ore reserve management. In FY18, 306 learners (FY17: 152) were enrolled and at different stages of completion in the various learnership programmes. Of the total number enrolled (71 in engineering, 54 in mining operations level 2 and 20 in rock breaker level 3/blasting ticket completed their programmes in FY18 (FY17:123 completed their learnerships). Most of the learners will be appointed to positions available within the company.
Internship and experiential programmes	In support of our social and labour plans, we hosted 43 students (18 internships and 25 experiential trainees) during FY18 (FY17: 49 students – 18 interns and 31 experiential trainees).
Social plan programme	We continue to provide alternative skills training to employees, current and retrenched, through our social plan programme, which was facilitated

	by the framework agreement between Harmony and NUM in 2003. The training enables people to remain economically active beyond mining, cushioning the economic impact of unavoidable retrenchments or the loss of employment when mines reach the ends of their lives.
Portable skills development	In FY18, 1 532 employees (FY17: 1 545) received portable skills training. Around 57% (FY17: 63%) were proxies (dependants of mine employees). The number of people receiving this training has almost quadrupled in recent years. Over the past nine years, Harmony has provided portable skills training to 7 631 employees (and/or their proxies) in basic electrical work, end-user computing, basic welding, basic motor mechanics, clothing manufacture, furniture making, plumbing, bricklaying, animal husbandry and mixed farming systems.

Papua New Guinea: In FY18, workforce training events conducted at Hidden Valley included:

- Production training
- Safety compliance training
- National Training Accreditation Council compliance
- Professional development
- Computer software courses
- Supervisor development programme

Our communities – training and development

Investing in our communities is a key aspect of our socio-economic approach. Considerable time and effort is dedicated to identifying community members who could benefit from bursaries, work experience, internships and the bridging school. Priority is given to local students. We are encouraged that we were able to provide permanent positions to 71% (five of seven) of the students who successfully completed their internship.

Our community skills development initiative, which began in FY17, is aimed at upskilling members of the community surrounding our operations, and is used to create a pool of trained community members that can be called on to fill appropriate vacancies at our operations.

The formal opening ceremony of the new community training initiative in Welkom was held on the 14 February 2018. The event was well attended by Harmony management, organised labour, the Matjhabeng municipality's executive mayor and his team, and community representatives. The first intake comprised 60 youth from local communities who have all been transferred to various Free State operations for the competence portion of initial training.

Housing and living conditions in South Africa

Of those employees residing in our hostels, all are accommodated in single rooms.

Of the 958 family units to be built over three years, 953 units have been built to date – 99%

of the total planned. This includes 448 family units built at the completed Merriespruit housing project.

To further facilitate home ownership, the company participates and supports the pension-backed home loan scheme negotiated for the industry by the Minerals Council South Africa. 1 231 (FY17: 1 772) of employees made use of this facility. The reduction in the number is a result of those employees who have paid off their home loans.

Progress is being made with the construction of the 10 Doornkop family units and a further five family units have been planned. Construction is scheduled to be completed by February 2019. A key aspect of this project is to provide mine housing for the future. The design of the housing units incorporates new energy efficient and building systems.

While all existing mine housing is offered to employees at affordable rates, the sale of those in Wedela, near Kusasalethu, is progressing slowly, owing to the inaccessibility of funding. Alternative funding models are being put in place and to date 29 houses have been sold, 162 are in the process of being sold.

HUMAN RIGHTS

Relevant Global Reporting Initiative indicators: G4-LA14, G4-HR3, G4-HR10 and G4-HR12

Respect for human rights is entrenched in and underpins our values. Human rights are specifically catered for in our human resource policies, charters and contracts of engagement. The human resources function and community engagement managers closely monitor our human rights performance at operational level.

Harmony upholds the United Nations' global principles on human rights and labour. Following a survey of the company's policies, procedures, and labour practices in FY17, certain policy changes have been undertaken, including internal communication campaigns on Harmony's disciplinary procedure and code of conduct. Employee communication and education on conditions of employment will be a key focus area in FY19.

With regard to unethical behaviour, Harmony has outsourced a 24-hour anonymous crime reporting line for employees, or any member of the public, to use to report any suspicion of unethical behaviour, including crime, corruption and bribery, to management.

SOCIO-ECONOMIC DEVELOPMENT

Upliftment of our communities has a significant impact on socio-economic development in South Africa and Papua New Guinea.

HIGHLIGHTS FY18

- Second generation social and labour plans completed – R476 million invested
- Third generation social and labour plans for next five years submitted to regional offices of the Department of Mineral Resources – **these plans prioritise impactful projects to uplift communities, focusing on education infrastructure and enterprise development**
- Hosting of local community supplier days – **working with communities to promote local preferential procurement with R1.8 billion invested in host communities**
- **Community coffee projects in Papua New Guinea**

SOCIO-ECONOMIC DEVELOPMENT IS IMPORTANT

Harmony recognises its responsibility to be a good corporate citizen and is committed to sustainable socio-economic development.

Investing in the future of communities beyond the life of our mines is an integral part of our businesses and core to preserving our social licence to operate. Creating shared value has been and remains an integral part of Harmony's corporate culture, underpinning our branding and reputation as a responsible corporate citizen and valued partner within our communities.

In FY18 Harmony aligned its socio-economic strategy with the aims of the United Nations Sustainable Development Goals.

Socio-economic development at Harmony can be broadly categorised as follows:

- **Protecting our licence to operate**
  - In South Africa, delivering on mine community development
  - In Papua New Guinea, social commitments in terms of relevant landowner and government agreements
  - Building linkages with business through enterprise and supplier development
- **Social upliftment**
  - job creation and poverty alleviation
  - critical infrastructure development and human settlement
  - alternative industries
  - education and skills development
  - local procurement

- **Engaging with communities**

  Harmony engages with various community stakeholders on a regular basis to discuss and agree on key projects for host communities. Harmony has established multi-party stakeholder community forums, which accommodate various government departments and non-governmental organisations (NGOs) in the district. Refer to *Stakeholder engagement and our material issues* for further detail.

- **Environmental management** Stewardship of the environment is a key tenet of sustainability. Stakeholder engagement and compliance with environmental laws and regulations are integral in the management of our sustainability. Harmony prioritises environmental management programmes and initiatives that create local employment opportunities, which support skills development. Refer to *Environmental management and stewardship* for further details.

PERFORMANCE FY18

Protecting our licence to operate

At Harmony, mine community development can be broadly defined as an outcome of local initiatives by stakeholders identifying and using local resources, ideas and skills to stimulate socio-economic growth and development. The outcome of this exercise is the creation of employment opportunities, alleviation of poverty and addressing inequality while attracting external investment.

It is an important tool in creating sustainable local economies.

South Africa

Harmony's South African operations are governed by approved mining rights, which are each bound by an agreed and approved social and labour plan. Our social and labour plans include local economic development initiatives executed in terms of the Mining Charter, the Mineral and Petroleum Resources Development Act, and the codes of good practice for the minerals and mining industry.

At a cost of R476 million the five-year social and labour plans for 2013 to 2017 concluded in December 2017. Of this, R313 million was spent on mine community development projects, which included

Socio-economic spend by municipality (R million)*

Municipality	Five-year spend (calendar 2013 to 2017)	Spend in FY18
Ratlou	13	**2**
Matjhabeng	96	**13**
Masilonyana	11	**1**
Merafong	9	**2**
City of Johannesburg	34	**3**

** Rounded to the nearest million*

R303 million from government for two legacy projects: the conversions of the Masimong 4 and Merriespruit 3 hostels into residential units.

The new five-year social labour plans, submitted to the relevant regional Department of Mineral Resources offices for approval, are being implemented. The plans for the Free State operations have been approved with approval for the remaining plans due by the end of October 2018.

Extensive communication and engagement was conducted with various community representatives and local authorities in support of the various commitments. Harmony also engaged with the Department of Agriculture and Rural Development as well as the Department of Economic Development, Tourism, Environmental Affairs and Small Business.

Ongoing projects include:

- Virginia Sports Academy (fully supported by Harmony and employing 25 people) funding 50 boys at an annual cost of approximately R7 million (US$0.5 million)
- Virginia Jewellery School (fully supported by Harmony and employing 13 people) funding 13 students in their third year of study and two jewellery stores at an annual cost of approximately R4 million (US$0.3 million)

In terms of our third generation social and labour plans, Harmony is also set to collaborate with peers on an infrastructure development project, identified by the Matjhabeng local municipality, in the Free State during the coming financial year.

During the period under review, we adopted a proven vegetable tunnel project model, which was approved by executive mayors, members of mayoral councils and councillors of the municipalities after a visit to the site near Krugersdorp. It will be implemented in the following areas in FY19:

- Doornkop (Soweto)
- Moab Khotsong (Orkney)
- Kusasalethu (Carletonville)

Papua New Guinea

In Papua New Guinea, regulatory control vests in a memorandum of agreement between Harmony, various national, regional and local governments, and the Hidden Valley landowner association with similar social commitments to those in South Africa. Mine community development projects and programmes focus on health, education, agriculture and infrastructure.

Harmony's infrastructure programme at the Hidden Valley mine focuses on building, repairing and upgrading roads, bridges, educational facilities, health facilities and water supply in the landowner and local community villages.

Education programmes in FY18 included:

- Stationery for students and teachers at elementary and primary schools
- Harmony's Tutudesk initiative

- Education centre and school support
- Assisting the provincial government in engaging new teachers
- Adult literacy programmes

Agricultural programmes

During FY18, community training was conducted in six local villages, with a total of 129 people trained in coffee husbandry and quality control. Six model solar dryers for coffee processing were built. Terms of reference were developed for coffee and fresh produce farmers. An external contractor was invited to bid for this exercise.

The focus during FY18 was on the continuing the coffee husbandry initiatives. This involved development of farmer training plans, consultation with government officials, commercial enterprises and preparation for a pilot project which will begin in FY19.

Health programmes

A community health outreach programme is in effect to improve the health and wellbeing of local communities. During FY18, the following activities occurred:

- Obstetrics training at the Bulolo Health Centre
- Assisted the Department of Health in the administration of polio vaccinations
- Routine health centre visits and health patrols
- Community medical assistance

The Wau Health Centre was assisted in a maternal and child health patrol at the Kaindi clinic. Actions included immunization of 947 children and antenatal examinations for mothers.

Hidden Valley has commissioned an overseas organisation, with a presence in Papua New Guinea,that specialises in establishing sustainable health facilities in challenging jurisdictions. The organisation will work with Harmony and other stakeholders to develop a five-year plan for an improved health facility in Wau.

Community infrastructure programmes

Water supply projects, which began in FY17, were completed in FY18. These projects benefit all remaining villages funded by the Benefit Sharing Agreement Trust.

Harmony is also contributing towards maintenance of critical sections of the Lae-Bulolo highway, the grading of an alternative road access to Wau, as well as Wau Hospital's unpaid electricity accounts and the Lae-Bulolo-Wau leg of the Rugby League World Cup tour.

Corporate social investment

Our corporate social responsibility policy recognises the need for socio-economic investment in South Africa and Papua New Guinea, starting with our host communities. Harmony's corporate social investment programme focuses on:

- education
- socio-economic advancement projects
- arts, culture, sports and recreation

In selecting projects and compiling our corporate social investment strategy, we conduct research, consult with communities to understand their need and requirements, and engage with various municipal structures.

In FY18, Harmony spent:

- R15 million or US$1.2 million (FY17: R11 million; US$0.8 million) on corporate social responsibility projects in South Africa
- R2 million or US$ 0.1 million (FY17: R3 million; US$0.2 million) on corporate social responsibility projects related to Hidden Valley

Preferential procurement

At Harmony, we recognise that a resilient supply chain, supported by local business participation, is necessary in terms of shared value. By making procurement opportunities available to our local businesses, we support the development of local economies, as well as the creation of local employment and poverty alleviation, while Harmony benefits from competitive and reliable local supply.

Preferential procurement is a key focus area in support of economic growth within the district municipalities, provinces and associated communities in which Harmony operates. Preferential stakeholders can leverage Harmony's procurement opportunities in the establishment of sustainable enterprises.

South Africa

Our preferential procurement strategy promotes expenditure with companies recognised as black economic empowerment entities by the Mining Charter.

In FY18, procurement expenditure with black economic empowerment entities was R5.1 billion or US$398 million (FY17: R4.4 billion or US$323 million), which is equivalent to 80% (FY17: 78%) of total discretionary spend. In addition, Harmony returned R1.8 billion (US$140 million) to our host communities while we procured R27 million from 100% black-owned companies.

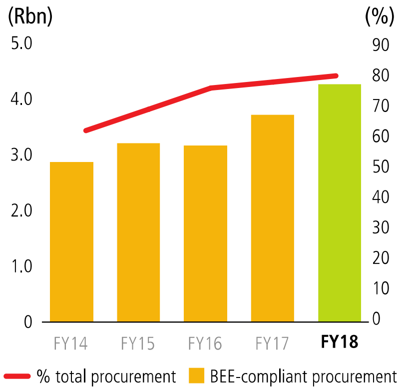
Case study: Tutudesk initiative in Papua New Guinea

Hidden Valley launched its Tutudesk initiative at Kaisenik Primary School in Wau and Hompiri Elementary School in Morobe Province on 22 August 2017.

A total of 1 000 portable Tutudesks were distributed to 28 elementary schools in the Wau and Bulolo districts and to the Biangai and Watut tribes who are landowners at Hidden Valley.

The desks, made in South Africa, are named after Nobel Peace Prize laureate and retired Archbishop Desmond Tutu. The Tutudesk campaign aims to deliver at least 20 million desks to school-going children in developing countries.

Made from robust, child-friendly polymers, Tutudesks provide children with their own long-life workstations throughout their school years.



South Africa: Our performance in relation to the Mining Charter's black economic procurement targets as a percentage of total spend:

Category	Mining Charter target	FY18*	FY17*	FY16*
Capital goods	40	**75**	78	81
Services	70	**79**	80	79
Consumables	50	**82**	78	76

** Calculation is based on Harmony's financial year.*

Papua New Guinea

As agreed with government authorities (local, regional and national), landowners and communities, we contract local companies wherever possible. Supply expenditure by Harmony in FY18 amounted to R2.98 billion or US$233 million (FY17: R2.7 billion or US$198 million) of which R1.6 billion or US$126 million (FY17: R1.0 billion or US$75 million) was spent in Papua New Guinea. Of this amount, R1.1 billion or US$85 million (FY17: R725 million or US$53 million) was spent in Morobe Province on goods and services. Harmony awarded contracts to local landowner companies for catering, fuel haulage, general freight, plant hire, security, labour hire, cleaning, and rehabilitation and bus services.

Enterprise and supplier development

South Africa

Harmony has established the Harmony Leano and Phakamani funding initiative, which focuses on the development of small, medium and micro enterprises (SMMEs) within our mining communities. Harmony provides financial and non-financial support to these enterprises. The fund and related support initiatives are managed by Phakamani and Tysys. Since inception, Harmony's visibility in host communities has increased significantly and the Leano initiative has approved 96 loans with a total value of R17 million and has supported 35 SMME enterprises. In all, 35 women and 39 youth entrepreneurs are being assisted.

Case study: Golden Goose

Welkom-based Golden Goose Catering and Cake Decorating, run by Rethabile Gladys Maimane, was established in 2003 for the manufacture of motoho (a sorghum beverage), among other products and services. Harmony has assisted Golden Goose by funding a reverse osmosis plant, equipment and premises at a cost of R2 million (US$0.2 million).

Case study: Structural engagements with businesses in host communities

Supplier days and small, medium and micro enterprises (SMME) Indabas are engagement sessions for SMMEs in our host communities aimed at exposing them to opportunities within Harmony and providing a platform for SMMEs to share experiences in dealing with Harmony. Harmony further engages with these SMMEs individually to determine their suitability and readiness. Once confirmed ready and compliant, they are presented with more details on identified opportunities and guidance. Those SMMEs that are not procurement-ready are referred to Harmony's enterprise and supplier development department for assistance and coaching.

SMME Indaba

SMME Indabas are held annually. They are aimed at creating a mutual dialogue with SMMEs on challenges faced on a day-to-day basis and possible interventions required to make it possible for such businesses to access opportunities at Harmony, without compromising our policies and procedures. On 26 March 2018, Harmony held its first SMME Indaba for SMMEs in Soweto and neighbouring townships. This ground-breaking event, held at the Council Chambers of the City of Johannesburg Municipality, was attended by 199 SMMEs, making it a great success. The session was hosted by councillors from the City of Johannesburg and was opened by the General Manager: Doornkop, Mr. Seromo Mofokeng.

One of the outcomes of the SMME Indaba held in Soweto was a proposal for training for 25 SMMEs which had been identified by Harmony. Milani Nande Recruitment and Trading, a 100% black woman-owned company in Soweto, was appointed to conduct the training. Among the success stories were Elicidor Trading, which was awarded a tender valued at approximately R14 million for the construction of the perimeter wall around the Doornkop plant and Barolong Trading Enterprise which was selected to provide maintenance services at Doornkop. Barolong presented solutions to the challenges facing emerging enterprises, including marketing.

Supplier days

Supplier days are structured engagement sessions aimed solely at registered businesses located in Harmony's host communities with the aim of exposing them to procurement and development opportunities and engagement processes. As an enabler, Harmony shares our procurement calendar with these registered businesses, including information on upcoming procurement opportunities and on contracts that will terminate within 12 months. These sessions are aimed at assisting registered SMMEs based in our host communities in preparing their bids. During FY18, Harmony hosted four supplier days, the first at Doornkop, covering Soweto and its neighbouring townships, the second at Joel, covering Masilonyana, a local municipality located on the south side of Welkom, the third at Kalgold in North West Province, and lastly, at Kusasalethu covering the Merafong Local Municipality. The following is a summary of the four events:

Supplier days	Doornkop (Soweto – Regions D and C)	Joel (Masilonyana)	Kalgold (Ratlou)	Kusasalethu (Merafong)
No of SMMEs participating	46	20	33	63
One-on-one engagements	17	9	9	15
FY18 spend with 100% black-owned SMMEs	R63 million	R36 million	R6 million	R32 million

In FY18, boosted by our hosting of the supplier days, Harmony spent about R137 million with 100% black-owned companies at these four operations. Harmony aims to attract and sustain participation by more businesses based in our host communities.

Papua New Guinea

In line with Hidden Valley's current memorandum of agreement, Harmony continues to offer business development opportunities to landowners. Similar opportunities are expected to be available with the proposed development of the Wafi-Golpu project.

Sustainable human settlement initiatives

Harmony makes land available to provincial and local governments for the development of integrated human settlements. On the West Rand, land valued at R7 million in Mohlakeng Extensions 13 and 14 was donated to the province of Gauteng.

An updated housing programme, based on government's breaking new ground housing strategy, aims to promote an integrated society by developing sustainable human settlements and quality housing within a subsidised system for various income groups.

In support of the housing project, an industrial development initiative with local stakeholders is underway. Harmony will lease land adjacent to the housing project for the establishment of a motor industry-related industrial hub and thus provide income-generating opportunities for the area.

In addition, existing mine houses are sold to employees at nominal prices. To assist with affordability, a pension-backed loan scheme is being facilitated by the company. To date, more than 3 550 houses have been sold through this scheme, which is open to all employees.

In the Free State, Harmony is funding three spatial development frameworks in conjunction with the respective municipalities, including the Masimong-Thabong, Virginia core area and Merriespruit spatial development frameworks. The frameworks aim to include mining infrastructure and mine housing in the municipal areas. These initiatives will create home-ownership options for employees and job creation for the communities.

Harmony also makes 'social leases' available to businesses and other organisations, including redundant mine buildings that are rented at nominal rates to SMMEs and charitable organisations. The buildings are also donated to schools and orphanages.

Public safety

The social and ethics committee oversees public safety on behalf of the board. No major incidents occurred during the year. Primary risk areas include road/transportation incidents, radiation exposure and dust pollution associated with our operations.

Tailings dam dust management

Dust from Harmony's tailings dams could pose a nuisance to local communities during the dry winter season, exacerbated by excessive winds, droughts and the generally dry environment.

Tailings dam dust is actively monitored and managed by Harmony. Procedures include spraying and vegetation. In the Free State, 10 000 trees have been planted on the Freddies 9 and Merriespruit tailings facilities. Planting of another 20 000 trees on each facility is planned for FY19.

ENVIRONMENTAL MANAGEMENT AND STEWARDSHIP

We acknowledge that mining by its very nature impacts on the environment, yet we remain committed to eliminating, mitigating and remediating where possible our impacts as we aspire to leave a net positive legacy wherever we operate. Excellence in environmental performance is essential to our business success.

HIGHLIGHTS FY18

- **Continued significant investment in environmental management of R199 million (US$15.5 million)**
- 5ML recycling plant installed at Doornkop generating potable water resulting in a **67% saving in its water usage**
- **"A" listings for performance and reporting on climate change and water** from Carbon Disclosure Project (CDP)
- At Hidden Valley, terms of environmental **permits renegotiated with regulator for single permit and improved regulatory framework**
- The Wafi-Golpu Joint Venture **submitted environmental impact statement for Wafi-Golpu project** to Conservation and Environment Protection Agency
- **Deep sea tailings placement chosen as preferred tailings management method** for Wafi-Golpu project

ENVIRONMENTAL MANAGEMENT IS IMPORTANT

We are aware that our activities and processes could have a negative impact on the natural environment in which we operate. We therefore accept responsibility for preventing, mitigating, managing and minimising these impacts.

OUR APPROACH

We aim to manage our environmental impacts, related risks and liabilities, and to comply with environmental legislation as responsible stewards, upholding a culture that shares knowledge and experience within and outside our group.

Our social and ethics committee oversees Harmony's environmental strategy and performance while the executive responsible for the sustainable development and environmental leadership teams motivates environmental improvement strategically at group level. General managers are accountable for environmental management at each operation in terms of annual environmental management plans that identify opportunities for improvement.

Our environmental strategy is supported by our board-approved environmental policy. Operations are guided by technical and performance standards, which are incorporated into environmental management systems and implemented in line with ISO 14001. Our commitment to responsible environmental stewardship and sustainable mining and closure is outlined in this policy. Environmental management programmes include detailed closure plans for each operation within five years of planned closure to expedite beneficial post-mining land use and sustainable community livelihoods.

In South Africa, by year-end, seven of our mining operations and five of our processing plants had been certified in terms of ISO 14001.

All the South Africa operations are either ISO 14001 certified and/or operate in compliance with this standard. Continual improvements are noted year on year. The Joel, Target, Harmony One, Central, Doornkop, Kusasalethu and Great Noligwa plants were recertified in accordance with the International Cyanide Management Code in FY18, illustrating the responsible environmental practices being applied in relation to cyanide management.

In Papua New Guinea, Hidden Valley's environmental management plan is aligned with the ISO 14001 standard and all new employees receive environmental awareness training, which is reinforced by leadership training courses and monthly initiatives. During FY18, Hidden Valley negotiated an amended single environmental permit with the regulator, making the implementation of the permit and the application of the controls simpler and more effective.

Environmental legislation

South Africa

Our activities are regulated by, among others, the Mineral and Petroleum Resources Development Act, 2002 (Act No 28 of 2002), the National Environmental Management Act, 1998 (Act No 107 of 1998), the National Water Act, 1998 (Act No 36 of 1998) and the National Nuclear Regulator Act, 1999 (Act No 47 of 1999). Environmental management programmes for each operation are approved by the Department of Mineral Resources.

During the period under review, Harmony continued to engage together with the Minerals Council South Africa (previously the Chamber of Mines), the Department of Environmental Affairs regarding the Financial Provision Regulations under the National Environmental Management Act. Draft regulations were published in November 2017.

The Department of Environmental Affairs has recognised the challenges of the current 2015 Regulations and that certain of the conditions are impractical, and has agreed to extend the period for implementation until February 2020, during which the challenges identified will be resolved.

In November 2015, a draft Carbon Tax Bill was published for public consultation. At the time of its publication, it was believed it would take effect by January 2017. However this timeline has since been moved to January 2019.

It is understood that Harmony may be cost neutral until 2020. Energy is a significant input into our mining and processing operations with our principal energy sources being electricity. It is likely that the proposed carbon tax will increased the cost of electricity at our operations beyond 2020.

In order to facilitate the carbon tax legal regime and to provide for greater regulation of greenhouse gas emissions outside of the carbon tax, the Department of Environmental Affairs has initiated the implementation of a mandatory greenhouse gas reporting system, for certain identified data providers. In addition, the Department of Environmental Affairs has published the Climate Change Bill for public consultation in response to the international commitments made under the 2016 Paris Agreement on Climate Change. It aims to address climate change in the long-term by aiming for a climate resilient and low carbon economy in South Africa. Harmony's contribution to the conversation with the regulator aims to ensure that there are no overlaps in the various legislation.

Papua New Guinea

Water extraction and waste discharge for mining projects are regulated by applicable environmental legislation issued by the Conservation and Environment Protection Authority.

PERFORMANCE FY18*

Relevant Global Reporting Initiative indicators: G4-EN22

- We spent a total of R199 million (US$15.5 million) (FY17: R74 million; US$5.5 million) on our environmental portfolio in FY18 as follows:

South Africa

- R71 million (US$5.6 million) (FY17: R54 million; US$3.9 million) on environmental control implementation
- R86 million (US$6.7 million) (FY17: R80 million; US$5.9 million) on various rehabilitation projects

Papua New Guinea

- R24 million (US$1.9 million) (FY17: R21 million; US$1.5 million) on environmental control implementation
- R18 million (US$1.4 million) on an environmental impact study related to Wafi-Golpu (Harmony's share of 50%)

Harmony's environmental stewardship and management activities are aligned, directly and indirectly, with the following Sustainable Development Goals:

** All figures presented exclude Moab Khotsong unless otherwise stated.*

ENVIRONMENTAL INCIDENTS

Relevant Global Reporting Initiative indicators: G4-EN24, G4-EN29 and G4-EN34

We monitor, report and remediate environmental incidents, including direct or indirect discharges of water beyond our mining area in terms of environmental management plans. Environmental incidents are classified on a scale from 1 to 3 and we report incidents at level 3 (from serious medium-term environmental effects to significant impacts on sensitive species, habitats or ecosystems).

Relevant Global Reporting Initiative indicators: G4-EN8 and G4-SO8

In FY18, we reported three level 3 incidents in South Africa. No significant environmental incidents were recorded in Papua New Guinea.

Location	Date	Description	Steps taken in mitigation
Central Plant	Q2 FY18	Process water spillage from broken pipeline. Event was localised and contained with no environmental impact	Spillage was localised and contained, hence no further remedial actions were necessary
Kusasalethu	Q3 FY18	Overflow of process water dam flowing into local tributary due to flash floods and depleting holding capacity of water dam	Water samples were taken from the local tributary. No significant impacts were recorded.
Kusasalethu	Q3 FY18	Spillage of sewage onto surrounding land. The affected area was small and localised with immediate remedial measures implemented	The sewage pump was repaired including minor changes to the system were made to avoid repeat of incident

REHABILITATION, LAND MANAGEMENT AND ENVIRONMENTAL CONSERVATION

Relevant Global Reporting Initiative indicator: MM1

We acknowledge that we must rehabilitate the land impacted by our mining and mining-related activities in order to ensure sustainable post-mining land use. Rehabilitation ahead of closure is therefore included in planning throughout the life of mine. The necessary rehabilitation funding mechanisms are in place and, where feasible, infrastructure is refurbished for alternative use. As only a small proportion (14%) of the land covered by our mining rights has been disturbed by mining, opportunities for progressive and concurrent rehabilitation are limited at this stage. Our focus over the past two years has been to rehabilitate decommissioned shafts which have been linked to ingress by illegal miners. Over the past year, we completed a further seven shafts and are planning to complete the remaining five decommissioned shafts by the end of FY19. In addition, Harmony is in the process of demolishing and rehabilitating two decommissioned gold plants, which will be completed by the end of December 2018.

Rehabilitation of tailings dams is a key priority for Harmony with rehabilitation taking place on the following sites:

- Welkom
- Virginia
- Kalgold

Reclamation of waste rock dumps is progressing well with the following dumps being reclaimed:

- Kalgold
- Kusasalethu
- Target 2
- Tshepong
- Nyala
- ARM 7
- Saaiplaas 3

Land rehabilitation liabilities

		FY18	FY17	FY16	FY15	FY14
South Africa	(Rm)	[1] **2 919**	2 180	2 170	2 210	2 209
Papua New Guinea	(Rm)	**1 336**	1 391	826	675	795
Total	**(Rm)**	**4 255**	**3 571**	**2 933**	**2 796**	**2 708**
	(US$m)	**308**	**166**	**150**	**230**	**255**

[1] *Includes Moab Khotsong liability of R640 million*

South Africa

Our programme to rehabilitate decommissioned operations has continued since FY10 to reduce environmental liability and eliminate potential safety and health risks. During the course of the past year, we demolished a further seven shafts. To date, 45 shafts have been demolished and rehabilitated in the Free State.

In FY18, the total rehabilitation liability for our South African operations was R2.9 billion (US$210 million) (FY17: R2.2 billion; US$166 million), which is fully funded. The predominant reason for the increase in the rehabilitation liability is the acquisition of the Moab Khotsong operations, which include two operating shafts, two metallurgical plants (uranium and gold), a tailings storage facility, mine services and mine accommodation.

Harmony has acquired the liability of AngloGold Ashanti as it relates to the Klerksdorp, Orkney, Stilfontein and Hartbeesfontein (KOSH) Basin. In this acquisition, Harmony has made provision for post closure management of the KOSH Basin. The shaft operates for the purpose of dewatering the KOSH groundwater basin to ensure that Moab Khotsong and Kopanang (Village Main Reef) continue to have access to underground working.

The Moab Khotsong transaction included acquisition of the Nuclear Fuels Corporation of South Africa (NUFCOR), which processes the ammonium diurinate stream from the South Uranium Plant, a zero effluent facility. The uranium oxide produced by the plant is sold on international markets.

Papua New Guinea

A detailed biophysical rehabilitation and mine closure plan for the Hidden Valley operation was completed. For accounting purposes, an updated financial provision for unplanned closure as at 30 June 2018 has been made and an estimate for closure at completion of stage 6 has also been prepared.

BIODIVERSITY, LAND MANAGEMENT AND CONSERVATION

Relevant Global Reporting Initiative indicators: G4-EN12, G4-EN14, G4-EN31, MM1 and MM2

South Africa

All long-life South African sites have biodiversity management plans, which are implemented either through their respective mine closure plans, environmental management plans or specific biodiversity action plans. To ensure compliance to such, numerous environmental projects are being implemented throughout our operations in line with the sustainable development goals of the United Nations.

Biodiversity

Aliens programme: An alien invasive plant eradication project has been implemented to minimise the continued growth and infestation of alien species, to ultimately mitigate and eradicate such plants. Areas of infestation are first mapped and then divided into smaller management units to enable prioritisation and appropriate planning. To date, Harmony has cleared more than 1 300ha.

In addition, Harmony has had preliminary engagement with the Department of Environmental Affairs regarding their Green Business Programme. Its aim is to eradicate alien invasives for the benefit of improving South Africa’s biodiversity, water security, climate change, sustainable livelihoods and to seek to develop small to medium enterprises.

Conservation programme: During the course of this year, Harmony will undertake further studies in order to complete the proposed Lesser Flamingo Conservation Project north of Welkom. The project design and strategy for the construction of a Lesser Flamingo bird island will be done in collaboration with the local municipality and non-profit organisations.

Land management initiatives:

Kalgold aggregate production community project: Kalgold has created a broad-based black economic empowerment consortium to crush waste rock material for aggregate production. Working in partnership with the local community, the consortium crushes, screens and stockpiles crushed material for collection by third parties. Reclamation of the Kalgold rock dump began in FY18. To date, 6 660 tons have been crushed and an additional jaw crusher, purchased by the consortium, will be delivered within a few months to increase the volume processed.

The local community will have a 10% free carry in this project and employees 5%. This project addresses the aspect of land management. By reclaiming the rock dump, we will liberate the land from its current state and instead create an opportunity for alternative land uses that contribute to conservation.

Biodiversity

Final-end land use

Harmony is targeting four applications as part of its socio-economic development strategy and these have been integrated into our social and labour plan commitments:

- Agriculture and agri-processing projects at Doornkop, Moab Khotsong and Kusasalethu
- Alternative energy projects including bio-energy and solar projects
- Conservation initiatives
- Industry applications

By way of example:

Doornkop agricultural project: A vegetable project is in the process of being constructed and is using the excess potable water from the Doornkop water treatment plant. Refer to *Socio-economic development*.

Papua New Guinea

Hidden Valley is not in a biodiversity-protected area but five species on the International Union for Conservation of Nature Red Data List are found in the vicinity of the mine. There is no evidence that the mine has affected these critical habitats. The five species include tree kangaroos, nectar bats, harpy eagles and long-beaked echidna, which are all not endemic to the Hidden Valley area.

For the Wafi-Golpu project, block cave mining has been selected as the optimal underground mining method. This selection will reduce the surface footprint of the project in comparison to open pit mining and large-scale sub-level cave underground mining and significantly reduce the amount of waste rock generated by the project.

A further key measure to manage the impacts of the Wafi-Golpu project has been the selection of deep sea tailings placement as the preferred tailings management method.
This decision is based on extensive baseline oceanographic studies conducted over the past 18 months as well as trade-off studies assessing deep sea tailings placement compared to terrestrial tailings disposal alternatives.

Community consultation and engagement with various stakeholders groups is significant in informing our position on stakeholder engagement. The Wafi Golpu Joint Venture executives and community affairs team ensure frequent dialogue on the deep sea tailings placement studies with the coastal communities, national and provincial politicians, Wafi Golpu employees and executives of the landowner associations. Several sessions were held in Port Moresby, Lae and Wafi.

Harmony and Newcrest, partners in the joint venture, have engaged the Sustainable Minerals Institute (part of the University of Queensland) to review all terrestrial tailings management options completed to date to confirm sufficiency and rigour in terms of the approach and process followed.

During FY18, an updated feasibility study for the project was completed and application made for a special mining lease and associated regulatory approvals.

Key measures proposed to manage the impacts of the Wafi-Golpu project on the terrestrial ecology include limited vegetation clearing, the preservation of vulnerable flora species as well as measures to control weeds and pests. Extensive baseline studies have been completed to inform the project's environmental impact statement.

ENERGY MANAGEMENT – OPTIMISING OUR ENERGY USE, REDUCING OUR CARBON EMISSIONS

Relevant Global Reporting Initiative indicators: G4-EN3, G4-EN5 and G4-EN6

Harmony endeavours tirelessly to reduce energy consumption and greenhouse gas emissions, adapt to climate change and diversify our energy mix by:

- promoting energy efficiency at our deep-level mines in South Africa
- optimising and rebalancing our asset portfolio
- promoting an alternative energy mix
- aligning our rehabilitation programme with the green energy agenda

Total energy use in FY18 was 2 548 721MWh (FY17: 2 629 321MWh), a decrease of 3%. This is attributed to numerous energy saving initiatives and to the downscaling of our Unisel operation.

The corresponding energy intensity level was 0.11MWh/tonne treated
(FY17: 0.13MWh/tonne). However, our energy consumption has declined by 11% in the past five years and our intensity usage by 20%, which is in line with the annual reduction targeted. These declines have in turn reduced our greenhouse gas emissions.

South Africa

Generally, Harmony consumes energy indirectly in the form of electricity purchased from the national power utility, Eskom, which uses coal-fired power stations. We therefore have little scope for large-scale purchases of energy from renewable sources. Eskom's electricity tariffs have risen steadily since 2008 and, given the relatively significant contribution to operating costs, increases exceeding 8% have an impact on the sustainability of our operations. We are therefore intent on reducing electricity consumption.

Our energy efficiency initiatives focus on efficient mine cooling, compressed air, water management and ventilation, as well as an improved energy mix with emphasis on sustainable renewable energy, particularly solar power and bio-energy in the short term. We have improved our capacity to generate solar power and this has helped decrease our power consumption and energy use intensity.

Papua New Guinea

Our operations are designed to be energy-efficient. As Papua New Guinea's grid power is generated predominantly by renewable, hydro-power, this results in much lower emission intensities at Hidden Valley, which has used 60% of grid power, on average since 2011.

The proportion of grid power used in FY18 was 66% (FY17: 58%). In FY18, 30 900MWh of diesel-generated electricity was consumed (FY17: 38 800MWh). Although Hidden Valley has experienced interruptions to its supply of hydro-power, negotiations with the current supplier have resulted in an understanding that Harmony will receive preferential supply for Hidden Valley.

To ensure a stable, base-load power supply, the Wafi-Golpu project is planning to use self-generated power using intermediate fuel oil as a fuel. Alternative options continue to be assessed.

Energy consumption and consumption intensity

Energy consumption (MWh)	**FY18**	**FY17**	**FY16**	**FY15**	**FY14**
South Africa	**2 458 423**	2 537 944	2 542 463	2 608 157	2 756 029
Papua New Guinea	**90 298**	[1] 90 380	54 976	59 218	60 414
Harmony total	**[2] 2 548 721**	**[1] 2 629 321**	**2 597 439**	**2 667 375**	**2 816 443**
Consumption intensity (MWh/tonne treated)					
Harmony	**0.11**	0.14	0.13	0.15	0.15

[1] Increases recorded in FY17 in Papua New Guinea electricity consumption and for Harmony as a whole, a result of acquisition in full of Hidden Valley, which is now included at 100% versus 50% in preceding years
[2] Includes Papua New Guinea diesel consumption used to produce electricity (30 931MWh)

Noteworthy action: Managing our electricity consumption

SOUTH AFRICA

Energy supplied by Eskom was 0.38% lower in FY18 than the previous year, with demand peaking at 35 613MW.

Supply status

Eskom generates approximately 95% of the electricity used in South Africa and approximately 45% of the electricity used in Africa. The utility generates, transmits and distributes electricity to industrial, mining, commercial, agricultural and residential customers and redistributors. Since December 2017, there has been increased use of emergency energy reserves to meet operating requirements during evening peak periods.

During FY18, there was less pressure on electricity supply in South Africa than in previous years, with fewer interruptions to the power supply (or load shedding). Consequently, supply improved with the only incidents of load shedding occurring between 14 to 16 June 2018. However, supply of and demand for electricity remain very tight, especially during the peak evening period between 18h00 and 20h00.

Harmony participates voluntarily in the Eskom demand response programme to reduce electricity usage at these times. We have renewed our contract agreement with an energy service company to ensure that various load-clipping and load-shifting projects are sustained. We have also assisted by implementing new energy saving initiatives at our operations to reduce electricity demand during morning and evening peaks. Harmony benefits financially from this as well, as Eskom tariffs are more expensive during these periods. Currently, the risk of power outages is limited mainly to the evening.

The Integrated Resource Plan, an aspect of the national Integrated Energy Plan, was promulgated initially in 2011. It was, the government said at the time, to be a "living plan" with regular updates. However, there have been no official updates until now, although an early draft was presented by a former energy minister. The new draft plan allows for additional electricity generating capacity of 25 000MW, with no new nuclear, pumped storage or concentrated solar power. Instead, gas and wind power are to contribute more than half of this additional capacity. In terms of the new plan, coal-fired power generation will decline from current levels of more than 80% of all power generated to less than 50% by 2030.

Renewable energy

Forecasts are that renewable energy technologies, predominantly gas and wind-based, will grow further in coming decades, exceeding coal-based electricity by around 2030. Renewable energy will increasingly become a significant element in the country's electricity landscape.

Tariffs

Like all mining companies, Harmony is a major user of electricity, mostly supplied by South Africa's power utility, Eskom. Given rising electricity tariffs, energy makes up a significant and growing portion of our operating costs. The existing time-of-use tariffs, which are extremely expensive during winter months, were implemented to change the behaviour of end-users. Over time, this has escalated to an unacceptable winter to summer tariff ratio. While electricity tariffs per unit have increased by 5.3% on average for Harmony operations, owing to our efficient energy management plan, the effective increase in the overall electricity cost for our South Africa operations was just 0.47%.

Energy efficiency

Harmony has worked closely with Eskom to manage its electricity use. Eskom has offered incentives to customers to increase their consumption/demand outside of peak demand periods, when additional capacity is available. Energy consumption by our South Africa operations declined by 38 516MWh for FY18, compared to FY17, a result of various energy efficiency projects implemented during the course of the year.

Total measured cost savings resulting from these energy savings initiatives amounted to R85 million for FY18. New savings from these projects, based on a year-on-year comparison with FY17, amounted to approximately R42 million.

Direct and indirect energy consumption (MWh)

	FY18	% of total energy used	FY17	% of total energy used	FY16	% of total energy used	FY15	% of total energy used	FY14	% of total energy used
South Africa										
Direct [1]	**–**		–		–	–	–	–	–	–
Indirect [2]	**2 458 423**	**100**	2 537 944	100	2 542 463	100	2 608 157	100	2 756 029	100
Total	**2 458 423**		**2 537 944**		**2 542 463**		**2 608 157**		**2 756 029**	
Papua New Guinea										
Direct [1]	**30 931**	**34**	38 839	41.9	14 010	25.5	10 355	17	18 354	30
Indirect [3]	**59 367**	**66**	52 542	58.1	40 966	74.5	48 863	83	42 060	70
Total	**90 298**	**100**	**90 380**	**100**	**54 976**	**100**	**59 218**	**100**	**60 414**	**100**
Harmony										
Direct	**30 931**	**0.001**	38 839	0.1	14 010	0.5	10 355	0.4	18 354	1
Indirect	**2 517 790**	**99.9**	2 590 482	99.9	2 583 429	99.5	2 657 020	99.6	2 798 089	99
Total	**2 548 721**	**100**	**2 629 321**	**100**	**2 597 439**	**100**	**2 667 375**	**100**	**2 816 443**	**100**

[1] *Diesel*
[2] *Non-renewable: coal-fired power stations (Eskom)*
[3] *Renewable energy: hydropower-generated electricity*

Addressing climate change by optimising our energy use

Relevant Global Reporting Initiative indicators: G4-EC2

Harmony monitors the opportunities and risks presented by climate change, included in our mine closure plans, and communicates these to the Board throughout the year. Our climate strategy is then reviewed every year with a view to substituting and/or augmenting conventional electricity use (fossil fuel and grid energy) with renewable energy.

In line with our strategy (for the next five years) to adapt, conserve and move towards an alternative energy supply mix, we are reducing our grid-electricity consumption and greenhouse gas emissions with year-on-year and multi-year targets. To this end, we have implemented a suite of energy efficiency initiatives and closed carbon-intensive (high-energy) shafts. We plan to increase the use of green energy derived from hydropower, solar power and biomass.

To mitigate the risk of climate change, we have:

- rebalanced our asset portfolio: over the years we have closed several carbon-intensive operations as they have reached the end of their geological life
- decommissioned and sealed old mining shafts
- received environmental authorisations for three solar projects with final procurement processes currently being concluded.

Renewable energy

At present, Harmony is considering several renewable and alternate energy projects in South Africa:

- bio-energy project
- three 10MW photovoltaic power plants in the Free State – on Harmony-owned land

Our initiatives to reduce electricity consumption in Harmony improved the reduction energy consumption across the group by 21% since 2010.

Harmony collaborates with an energy saving company (ESCO) to enhance efficiencies at our South African operations, to assist with increasing operational efficiency, so reducing energy costs and ultimately ensuring that targeted energy savings are achieved.

The ESCO will help to ensure that savings are maximised and existing savings are maintained.

Year-on-year, the cost savings in actual electricity consumed were R36 million. Total measured cost savings resulting from implemented energy savings initiatives amounted to R85 million and R58 million valued added for maintaining the existing energy savings initiatives in FY18. Some of the savings were neutralised due to an increase in energy consumption for operational requirements.

Demand-side management is encouraged by Eskom with rewards for making more efficient use of tariffs. Initiatives to this end include scheduling of pumping, air compression, cooling, hoisting and ventilation at off-peak periods.

Projects funded by Harmony are sustainable in the long term, and include the use of energy efficient underground fans, managing the compressed air at refuge chambers and workplaces, installation of standalone compressors, accurate measurement of compressed air and online electricity consumption monitoring.

Projects that continued throughout FY18 included:

Solar procurement programme: The Department of Environmental Affairs has approved the construction of three 10MW solar energy plants at the Eland, Nyala and the Tshepong shafts. Harmony has set up a steering committee comprising various specialists. A power purchase agreement was completed and an information memorandum document developed. Discussions were held with financiers and project developers. The bid was allocated to one of the tenderers. A final decision on a generation licence is required to proceed with the installation.

Energy management: All plant mills and shaft winders operate at off-peak periods to reduce electricity costs and decrease load during national high-demand periods.

Compressed air management: Installation of control valves on compressed air lines at a number of operations to reduce the flow of compressed air during periods of lower demand resulted in a reduction in electricity consumption by the compressors. We are also proactively managing compressed air leaks to avoid wastage. Compressed air piping was investigated and, where pipe sizes were inadequate, upgraded to supply sufficient volume of compressed air to workplaces while maintaining energy levels.

Refrigeration: At all of the production shafts where refrigeration has been installed, control measures have been implemented, based on the "cooling on demand" principle, considering ambient conditions and seasonal changes. Plant efficiencies are monitored to ensure maximum cooling reaches the workplaces at acceptable energy consumption levels.

Hoisting: At all the shafts, winder operations are monitored and ore extraction is managed to ensure that the winders could be stopped during the peak tariff periods. As a result, significant cost savings have been achieved, especially during high demand season when tariffs are high.

Ventilation: In the underground mines, ventilation is measured and analysed so that it can be switched off on surface and underground while maintaining required or improved ventilation at the workplaces. This has been completed at Target mine. Energy saving is realised by improving operational efficiencies.

Pumping: Control valves have been installed on water lines at a number of operations to reduce the flow of mine water during periods of lower demand.

As a result, electricity consumption by the pumps has been reduced. We are also proactively managing water leaks to avoid wastage. The pump efficiencies are monitored and the most efficient pumps are run during peak tariff periods if they cannot be stopped. Excellent savings were achieved and pumping costs were reduced.

Other initiatives

A dedicated effort to maintain the performance of demand-side management projects previously implemented was undertaken in FY18. These projects generated significant electricity cost savings.

A project to increase awareness of the importance of energy efficiency and opportunities for improvement has been implemented. The project entails increasing awareness through automated distribution of daily, weekly and monthly reports on various operational aspects such as the energy consumption of a site, efficiency of a system and performance of energy saving projects, among others. Regular monthly meetings are held with the main energy consumers and action lists are drawn up to assist with the awareness campaign and energy savings.

Noteworthy action

Papua New Guinea: reducing use of fossil fuels

Hydropower usage at Hidden Valley was lower in the past year due to poor supply reliability from the hydropower provider. However, since year end this has improved and plans are well advanced to enable the mine to access another third party supplier of hydropower.

The Wafi-Golpu project is being designed to exceed Papua New Guinean statutory requirements and to align with Australian and other international environmental standards. In terms of the feasibility study, all infrastructure is being designed to minimise power consumption. As part of the updated feasibility study, options for the self-generation of power are also being investigated.

Climate change and greenhouse gas emissions

Relevant Global Reporting Initiative indicators: G4-EC4, G4-EN15, G4-EN16, G4-EN17, G4-EN18 and G4-EN19

Harmony's Scope 1 and Scope 2 emissions in FY18 totalled 2 573 740t CO_2e (FY17: 2 623 607t CO_2e) with a corresponding intensity of 0.12t CO_2e/tonne milled (FY17: 0.135t CO_2e/tonne milled). Indirect emissions in South Africa, largely due to electricity purchased from Eskom, accounted for 95% of emissions. Direct emissions marginally increased (2.9%) as a result of Hidden Valley in Papua New Guinea coming into full production. In FY18, we decreased our Scope 1 and Scope 2 emissions by 2% (FY17: 0.5%).

In FY18, our total carbon emissions decreased by 2% (FY17: 5.62%) with a corresponding decrease in intensity, which averaged 0.14t CO_2e/tonne treated for the year (FY17: 0.179t co_2e/tonne treated). At group level, absolute and intensity-based greenhouse gas emission reduction targets have been set for the five years from FY18.

Group carbon emissions

	FY18	FY17	FY16	FY15	FY14
Scope 1 emissions breakdown by source (CO_2e tonnes)					
Diesel	**128 505**	108 306	53 278	64 244	71 728
Explosives	**2 135**	1 953	1 838	1 748	2 079
Petrol	**844**	784	777	909	950
Total	**131 483**	**111 043**	**55 893**	**66 902**	**74 758**
Scope 1 emissions breakdown by source (%)					
Diesel	**97.7**	97.5	95.3	96	96
Explosives	**1.6**	1.8	3.3	3	3
Petrol	**0.7**	0.7	1.4	1	1
Total	**100**	**100**	**100**	**100**	**100**
Total scope 1, 2 and 3 emissions (CO_2e tonnes)					
Scope 1	**131 483**	111 043	55 893	66 902	74 758
Scope 2	**2 442 256**	2 512 565	2 580 600	2 686 401	2 745 005
Scope 3	**439 551**	445 033	615 456	686 233	661 515
Total	**3 013 290**	**3 068 633**	**3 251 949**	**3 439 536**	**3 481 278**
Total scope 1, 2 and 3 emissions (%)					
Scope 1	**4**	4	2	2	2
Scope 2	**81**	82	79	78	80
Scope 3	**15**	14	19	20	18
Total	**100**	**100**	**100**	**100**	**100**

Carbon emissions intensity					
	FY18	FY17	FY16	FY15	FY14
Scope 1 emissions intensity by source (CO_2e tonnes/tonne treated)					
Diesel	**0.0057**	0.0055	0.0029	0.0036	0.0038
Explosives	**0.0001**	0.0001	0.0001	0.0001	0.0001
Petrol	**0.00004**	0.0004	0.0001	0.0001	0.0001
Total scope 1, 2 and 3 emissions intensity (CO_2e tonnes/tonne treated)					
Scope 1	**0.0061**	0.0057	0.0031	0.0040	0.0040
Scope 2	**0.1090**	0.1295	0.1428	0.1490	0.1458
Scope 3	**0.0196**	0.0229	0.0340	0.0380	0.0332
Total	**0.1345**	**0.1581**	**0.1799**	**0.1910**	**0.1830**

OPTIMISING WATER USE, LIMITING OUR IMPACTS

Relevant Global Reporting Initiative indicators: G4-EN8, G4-EN9 and G4-EN10

Our water strategy supports conservation and demand management, including optimisation of supply in regions such as Welkom, particularly to secure supply during a protracted drought, and for the sustainable development of the business and our host communities.

An important indicator for water use to Harmony is water used for primary activities. The total amount of water used for primary activities in FY18 was 15 473 478m^3 with a resulting intensity of 0.69m^3/tonne treated.

Across the group, Harmony has implemented a campaign to re-use process water and thus reduce our dependency on groundwater by 4.5%, while increasing the amount of water recycled.

Water use – measured						
		FY18	FY17	FY16	FY15	FY14
Water used for primary activities	000m^3	[1] **15 473**	18 125	15 083	15 752	16 502
Potable water from external sources	000m^3	**12 646**	12 486	13 854	13 132	13 915
Non-potable water from external sources	000m^3	**2 827**	[2] 5 638	1 229	2 620	2 587
Surface water used	000m^3	**2 034**	4 863	716	776	1 037
Groundwater used	000m^3	**793**	775	513	1 844	1 550
Water recycled in process	000m^3	**40 435**	41 112	38 821	38 338	24 531

[1] The values (unaudited) relating to 'water used for primary activities' for the past five years have been restated. This follows implementation of operational controls that affected application of the definition at Kusasalethu, resulting in an increase in the use of water for primary activities.

[2] Increase in non-potable water consumption due to impact of drought on the Free State operations

Water used for primary activities – measured

		FY18	FY17	FY16	FY15	FY14
Intensity consumption	000m^3/tonne treated	**0.69**	0.93	0.80	0.87	0.88
Water used for primary activities	000m^3	**15 473**	18 125	15 083	15 752	16 502

This has enabled us to continue to maintain a favourable water use intensity. Conservation of potable water is a priority, particularly in light of the recent impact of drought in South Africa and foreseeable drought patterns in future. Enhanced water awareness campaigns and water management initiatives, including recycling, among others listed below, were effective throughout FY18.

Noteworthy action

CDP reporting: Climate change and water reporting

CDP, the non-profit global environmental disclosure platform, has again acknowledged Harmony as a global leader in corporate sustainability. Harmony is included in the CDP's 2017 A List for climate and water. This is the second consecutive year in which we have been awarded an A for climate and water. Harmony was one of only 25 companies to score an A for climate and water in 2017. This achievement acknowledges our performance in mitigating and managing environmental risks, cutting carbon emissions and enhancing water stewardship. According to the CDP, the 2017 A List, which comprises 156 global companies, has been produced at the request of more than 800 investors with assets of over US$100 trillion.

South Africa

In line with legislative requirements, integrated water-use licence applications were submitted to the authorities for each operation. Where water use licences have been received, Harmony has applied for amendments to take into account omissions, additional water uses and to clarify certain aspects. Where possible, Harmony continues to apply best practice in water management. Most of our operations are zero discharge mines.

Our strategy to reduce dependency on potable water, and to maximise our use of fissure and process water, began in 2013.

Water conservation strategy

Water balances have been used to model the likely effects of a protracted drought on our operations and continue to be used for this purpose with another likely drought period predicted for FY19. Part of the success in reducing our water-use intensity is attributed to less wastage but also reduced potable water use given recycling. Harmony installed two water treatment plants in Gauteng to treat fissure water to potable standards. This has had the added advantage of liberating potable water supply for other users, especially necessary during times of El Nino.

Harmony has thus begun implementing a third water treatment plant. The Free State operations are most likely to be affected by drought. In addition our strategy has focused on developing models from data received through our water balances to project future retreatment projects.

It is imperative that we continue to improve the efficiency of our water use in order to operate effectively under regulations that aim to reduce demand and consider the needs of community's access to potable water from the same source.

- **Water conservation in the Free State:** In line with our strategy, Harmony has begun building its third water treatment plant, to be based in the Free State. This will ensure security of water, reduce water consumption and assist with water conservation. The plant will treat 2.8ML of water a day and will save Harmony a further R3.2 million in water bills annually. The treatment projects will bring about a total saving of R5.6 million annually and reduce our potable water consumption.
- **Kalgold:** This operation is in a water scarce area, Kalgold's D-Zone pit deposition ensures water is available for production and the surrounding borehole network augments water needs when necessary. Modified plant and tailings storage facilities have maximised the recovery of water for reuse, process water dams have been reinforced to increase storage capacity and minimise overflows, and efficient flow meters and valves have been installed.

Water discharge

At Doornkop, we are licensed to discharge but the treatment plant has mitigated the need for this. Only in the event of excess water will Harmony discharge treated potable water into the Klipspruit.

The Kusasalethu operation has a water use licence permitting the discharge of water. We remain committed to optimising our water balance to achieve zero discharge.

Papua New Guinea

At Hidden Valley, compliance monitoring of water quality during the year showed that all dissolved metals and physicochemical parameters complied with regulatory criteria at the Nauti compliance point. The steep topography, high rainfall and low levels of evaporation pose significant water management challenges. The two main water management techniques are:

- controlled run-off of rainfall to prevent erosion and sediment entering the river system
- recycling of site water to limit the volumes of treated wastewater discharged into the environment

Most of the raw water required by Hidden Valley is drawn from Pihema Creek, and used in the process plant and related ore-processing activities. Although process water recycling is prioritised, the tropical environment creates a positive water balance thus, together with the requirement to minimise water storage in the tailings storage facility, there is a high rate of water discharge to the environment.

Hidden Valley treats all water to prescribed standards before it is discharged into the environment and the mine monitors any environmental impact on the receiving Watut River system. Quality assurance/control programmes have been implemented to monitor construction and operation of the waste dumps and tailings storage facility, including assessment of sediment and run-off control measures.

Discharge of mine-related sediment into the Watut River has been reduced with continued focus on erosion control and sediment management. Lime dosing of treated water prior to discharge continues when required to control acidity and dissolved metal levels. At the sewage treatment plant, continuous operator training and use of real-time monitoring equipment has afforded a trend of improved compliance with permitted discharge criteria.

Acid mine drainage

Major sources of acid mine drainage include drainage from underground mine shafts and run-off and discharge from open pits and mine waste dumps, tailings and ore stockpiles. Tailings and ore stockpiles make up nearly 88% of all waste produced at our South African operations.

Our water management strategy involves intercepting water before it is polluted underground. When there is a risk that rising water levels underground could hinder access to our ore reserves or those of other operations or harm the environment, water is pumped to surface. It is then consumed as plant intake.

Welkom is a water stressed environment and our environmental modelling confirms that there is no risk of a surface decant of acid mine drainage, currently or beyond end of life. There is therefore no material risk to surface and groundwater sources in Welkom.

Geohydrological studies confirm the same outcome for Kalgold while the geohydrology at Doornkop and Kusasalethu is far more complex, given the interconnected nature of mining operations in the vicinity. These operations participate in regional geohydrological and closure studies.

In Papua New Guinea, acid mine drainage can occur as a result of waste rock dumps and ore stockpiles that contain potentially acid-forming material. Environmental impacts are mitigated by the construction of engineered waste rock dumps and the controlled placement of potentially acid-forming waste rock. When required, lime is added to the process water discharge to maintain natural levels of alkalinity at the compliance point. Water sampling and studies continue to improve our understanding of acid mine drainage impacts and enable us to formulate plans for longer-term reduction, mitigation and ultimately closure success.

OPTIMISING OUR USE OF MATERIALS

The primary materials consumed in conducting our mining activities and processes include the rock (ore and waste) we mine together with liquefied petroleum gas, grease, cyanide, fuels and lubricating and hydraulic oils.

Cyanide

Harmony used 23 339t of cyanide during FY18 (FY17: 21 000t). The increase in cyanide consumption was largely due to the greater volume of mined ore treated in FY18 – 22.4Mt compared to 19.4Mt in FY17.

Harmony is a signatory to the International Cyanide Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold (Cyanide Code). All of our major gold mining operations and most of our metallurgical plants have been certified compliant with the Cyanide Code.

Hidden Valley: Cyanide Code re-certification procedures have begun with an audit planned for the first quarter of FY19.

Materials used

	FY18	FY17	FY16	FY15	FY14
Rock mined: ore and waste (000t)	**43 578**	33 150	27 606	29 948	39 133
Ore mined (000t)	**22 441**	19 402	19 739	13 041	14 798
Waste rock recycled (000t)	**3 690**	4 668	3 964	6 647	7 058
Slimes recycled (000t)	**9 772**	6 559	6 131	5 987	5 933
Liquefied petroleum gas (t)	**1**	0.47	0.54	1.14	1.21
Grease (t)	**426**	121	384	54	87
Cyanide (000t)	**23.3**	21.0	18.0	14.3	14.7
Petrol and diesel (000L)	[1] **48 461**	40 811	20 298	24 464	27 148
Lubricating and hydraulic oil (000L)	**2 744**	2 768	2 291	2 772	3 011

[1] 100% reporting of Hidden Valley from FY17. Production ramp up in FY18. Given the reduced availability of hydro-power, Papua New Guinea has had to rely on generators

MANAGING OUR EFFLUENTS AND WASTE

Relevant Global Reporting Initiative indicators: G4-EN22, G4-EN23, G4-EN24 and MM3

Effective waste management is a priority and can reduce our environmental impacts and mitigate our environmental liabilities. An understanding of the actual cost of waste management enables us to plan effectively for new projects and mine closure. Practically, we maximise recycling and waste reduction during the life of a mine, and design to minimise waste and reclaim mineral waste (such as waste rock from dumps as aggregate) to curtail our total mining environmental footprint.

Internally, guidelines on mineral, non-mineral and hazardous waste materials are included in the environmental management systems implemented at all operations. We understand that waste management begins with initial generation and encompasses handling, storage and transport as well as recycling, treatment and/ or disposal.

Mineral waste

In FY18, 50.7Mt of mineral waste was generated from gold production (FY17: 38.4Mt), comprising 29.4Mt (FY17: 18.6Mt) of waste rock and 21.4Mt of tailings (FY17: 19.8Mt).

The year-on-year increase in mineral waste was due to waste stripping of the cutbacks at Hidden Valley.

Tailings comprise crushed rock and process water emitted from the gold elution process in the form of a slurry once the gold has been extracted. The composition, size and consistency of tailings vary by operation with opencast operations producing greater volumes in general than underground operations. Tailings and waste rock are usually inert but rock close to the ore body may be associated with metals or salts if these are characteristic of the ore body.

As tailings contain impurities or pollutants, they are placed on tailings dams engineered to contain the slime in line with our water management programme.

The fines are also collected and deposited on the tailings. Water is collected from toe drains and penstocks, and channelled to return water dams where it is available for reuse by the plant.

In the process, cyanide is destroyed – it self-destructs on the tailings when exposed to light – but salts and heavy metals can enter groundwater and create a pollution plume. We monitor our groundwater as public safety assessments have found that these plumes (contaminant plumes) could be contained in the tailings storage or water management facilities.

Effective mineral waste management reduces the aesthetic and land use challenges of mining, particularly during closure, as well as the potential for water and air pollution while maximising the recovery of ore, minerals and metals. Improved mineral waste management can result in significant savings and a reduction in energy consumption. Residual economic value can be generated from projects such as our Tswelopele reclamation initiative (Phoenix operation).

To protect employees, communities and the environment, we handle all chemically reactive or radioactive waste appropriately by:

- minimising the quantity of material stored to limit the extent of the footprint of land disturbed
- ensuring storage sites are physically and chemically safe and well-engineered
- undertaking progressive rehabilitation – returning affected land to productive use after mining

Hidden Valley's advanced waste management systems have generated positive feedback from stakeholders, particularly the tailings storage facility, the first large facility of this type to be operated successfully in Papua New Guinea.

Of note, at Hidden Valley, we have:

- completed extensive design for the biophysical aspects of mine closure
- agreed with the Conservation and Environment Protection Authority on a revised environmental permit

At the Wafi-Golpu project, deep sea tailings placement has been selected as the preferred tailings management option. This decision is based on extensive baseline oceanographic studies conducted over the past 18 months as well as trade-off studies assessing deep sea tailings placement compared to terrestrial tailings disposal alternatives.

Waste rock is oftentimes regarded as a source to the aggregate industry. To this end, Harmony through its rehabilitation efforts and downstream beneficiation efforts, is re-purposing waste rock into aggregate at:

- Kalgold
- Welkom
- Doornkop

Many of these initiatives are developed to support local participation.

Non-mineral waste

In FY18, 16 939t of waste (plastic, steel, wood and paper) was recycled (FY17: 22 458t). Significantly less non-mineral waste is generated than mineral waste (less than 0.2%).

Plastics, steel, paper and timber generated by processing operations are produced in lesser volume than mineral waste. This non-mineral waste is managed by recycling or reuse, off-site treatment, disposal or on-site landfills. We ensure responsible storage, treatment and disposal of non-mineral waste.

Group environmental standards for non-mineral waste management are integrated into existing ISO 14001 systems.

OPERATING PERFORMANCE

Ensuring operational excellence will enable us to deliver our strategy to produce safe, profitable ounces and increase margins.

HIGHLIGHTS FY18

- Achieved production guidance for third consecutive year and beating all-in sustaining unit cost guidance
- Successful acquisition and integration of Moab Khotsong
- Excellent project delivery at Hidden Valley

OPERATIONAL EXCELLENCE IS AN IMPERATIVE

Our successful operational performance is based primarily on the philosophy of operational excellence.

Operational excellence is aimed at creating an environment that enables safe, consistent, predictable and profitable production. In addition to safety, it encompasses infrastructure and asset maintenance, grade and cost management, and capital allocation. This will contribute to improved safety, fewer unplanned work stoppages, improved mining flexibility and optimised costs, among others, and ultimately to the successful delivery on our strategic objectives.

In all of this safety is paramount. Safe operating performance is essential to sustaining our business in the long run. This entails delivering safely on our operational plans, reducing unit costs, improving productivity and thereby maximising the generation of free cash flow.

Our approach takes into account the long-term sustainability of the company as a whole. We aim to mine those areas which will return a positive cash flow. As we are price takers, we control what we can – safety, costs and production.

Relevant Global Reporting Initiative indicators: G4-EC1, G4-13, G4-19, MM3, G4-20 and G4-21

OPERATIONAL EXCELLENCE

Disciplined mining is integral to ensuring the safety of our employees, improving productivity and efficiencies and achieving our targets. Ensuring operational excellence helps to create an enabling environment. Safety is considered at all times, teams are motivated, and the workplace environment promotes and enhances productivity.

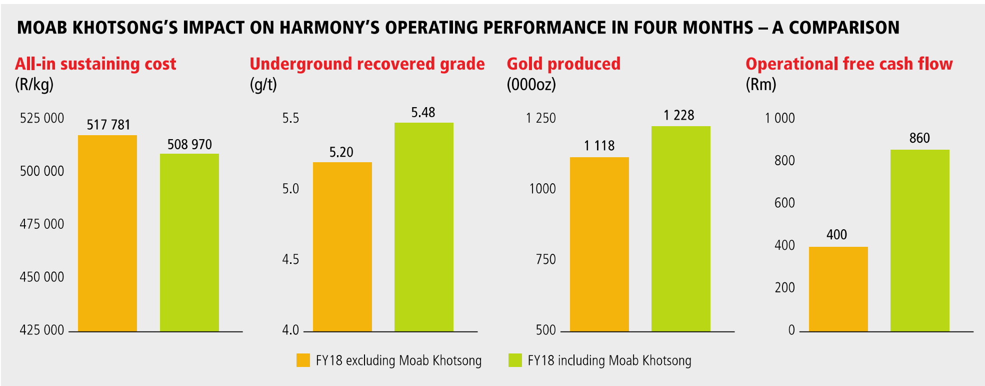
CREATE AN ENABLING ENVIRONMENT – BUILD SUCCESSFUL, PERFORMANCE DRIVEN AND MOTIVATED TEAMS

Safety and health	Infrastructure	Grade and mining flexibility	Capital allocation	Cost
• Live longer journey • Risk management and focus on critical controls	• Asset management and planned maintenance to limit impact of unplanned stoppages	• No mining below cut-off • Increased availability of stoping panels • Remove bottlenecks and manage constraints	• Focused capital allocation that prioritises growth and sustaining capital expenditure	• Focused cost management and project delivery • Improve productivity

= SAFE, CONSISTENT, PREDICTABLE AND PROFITABLE PRODUCTION

Our South African operations have been performing consistently. Increased flexibility, availability of stoping panels and fewer unplanned engineering stoppages due to focused asset management and maintenance have improved the predictability of our production performance. Our disciplined grade management approach has also been important in delivering on guidance and managing cost inflation.

Managing operational risks: Operational risk management is integral to our business and entails managing risks effectively while working safely and being proactive. Risk management is essential to ensure that all supporting systems are functioning efficiently. Safety hazards and operational business risks are identified and dealt with continuously at each of our operations.



IMPROVING THE QUALITY OF OUR PORTFOLIO

Our growth aspiration to produce 1.5Moz and improve the quality of our asset portfolio was set out at the end of financial year 2016 (FY16). Since then, Harmony has re-invested in Hidden Valley and, in FY18, acquired Moab Khotsong.

These operations will boost cash flow generation by increasing annual production by approximately 450 000 to 500 000 ounces at an average life of mine all-in sustaining unit cost of below US$950/oz.

The Hidden Valley investment in the stage 5 and 6 cutbacks was delivered safely, below budget and on schedule.

Given the quality of the Moab Khotsong operation, its inclusion into our asset portfolio from 1 March 2018 had an immediate impact on Harmony's FY18 results.

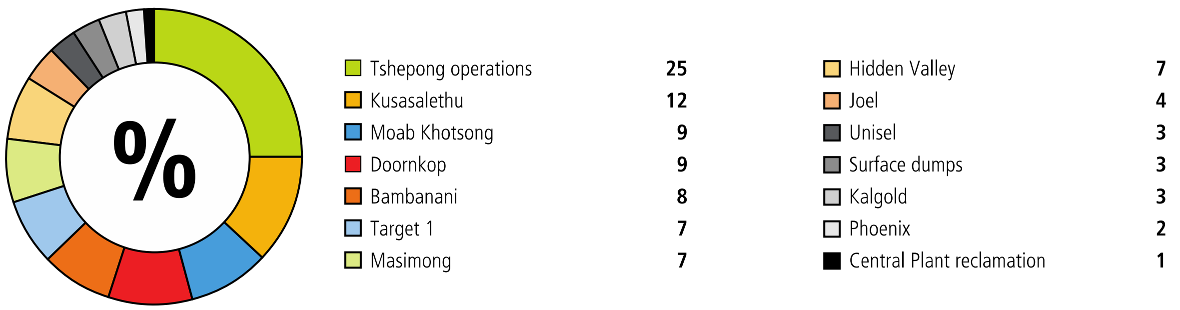
OPERATING PERFORMANCE IN FY18

Safety is a priority. We recognise that more needs to be done to ensure a safe working place for all our employees. Sadly, 13 of our colleagues lost their lives in mine-related accidents in FY18. The implementation of our safety programme is focused on stopping significant unwanted events. All stakeholders are committed to and actively enforce a safe working environment. For more information on our safety performance, see *Safety and health.*

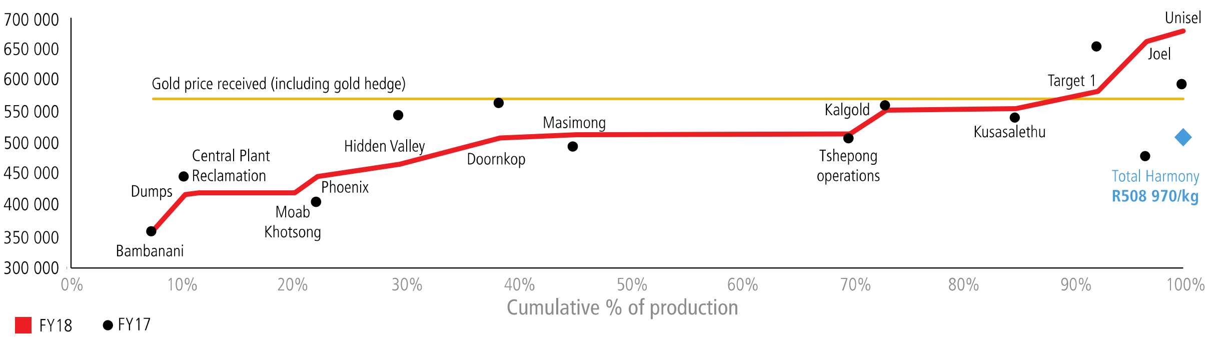
Operational excellence in FY18 was key in achieving our annual production guidance for a third consecutive year and increasing underground grade for a sixth consecutive year.
In FY18, Harmony increased production by 13%, produced 1.228Moz of gold
(FY17: 1.088Moz) and achieved an 8% increase in underground grade mined of 5.48g/t (FY17: 5.07g/t).

In FY18, harmony achieved an all-in sustaining unit cost of R508 970/kg (US$1 231/oz), beating annual guidance of r520 000/kg and the all-in sustaining unit cost of r516 687/kg (us$1 182/oz) in FY17.

Contrbution to group production by operation



All-in sustaining costs FY18 compared to FY17 (R/kg)



Performance highlights

- **Doornkop:** gold produced increased by 28%, due to an 18% increase in recovered grade to 4.93g/t and a 9% increase in tonnes milled. Doornkop's excellent safety performance enhanced the performance of the operation in FY18

- **Central Plant Reclamation:** the inaugural annual performance from the operation was successful. The operation produced 502kg (16 139oz) of gold, processed
3.8 million tonnes at an all-in sustaining cost of R420 016/kg (US$1 017/oz)
- Stable production performance and improved recovery grades at the Tshepong operations, Bambanani and Masimong

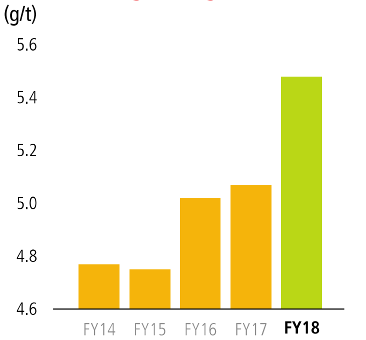
Performance from other South African operations

- **Kusasalethu:** a tragic seismic event impacted results in FY18. Encouraging development grades indicate that recovery grades are expected to improve in FY19
- **Kalgold:** waste stripping due to the pit merger continued in FY18. A drilling and exploration programme is underway

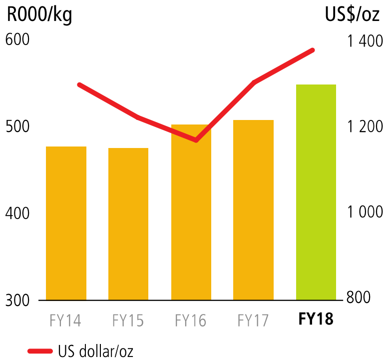
Addressing underperformance

- **Unisel:** a mature operation reaching the end of its life of mine was restructured during the March 2018 quarter. Mining of the Leader Reef was stopped to accelerate mining of the higher grade Basal Reef pillar areas. An improved performance is expected from Unisel during FY19
- **Target 1:** improved on its FY17 performance, where production had been hampered by unfavourable mining conditions in the higher grade areas. Exploration drilling during the year resulted in lower grade estimates for certain blocks that had previously been included in the life-of-mine plan but have now subsequently been excluded. The operation requires capital investment to improve productivity. The capital required will be assessed against capital allocation priorities and criteria to determine a suitable way forward for Target 1
- **Joel:** was hampered by the unavailability of planned mining areas due to geological intrusions. The Joel decline project is nearing completion and development in the footwall areas has commenced. Development is expected to continue for 12 to 18 months, following which grades are expected to increase to reserve grade

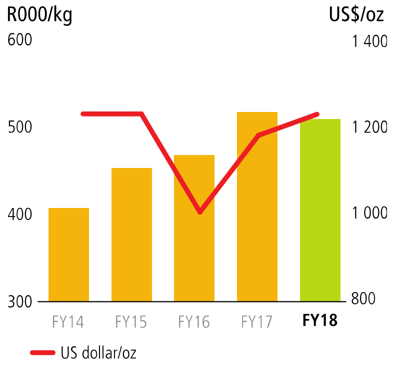
Annual underground grade recovered



Average annual gold price received



Annual all-in sustaining costs



OUTLOOK FOR FY19

Our target for FY19 is to produce approximately 1.45Moz at an all-in sustaining cost of R515 000/kg.

Key focus areas in FY19 will be to:

- improve safety focus and performance at all operations
- meet all operational targets and generate free cash flow
- realise synergies at Moab Khotsong operations
- deliver on the Hidden Valley operational plan
- increase focus on cost management and unit cost reductions

FY19 production and capital guidance

Operation	Production	Capital expenditure[1,2]		Life of mine
	(oz)	(Rm)	(US$m)	(years)
Tshepong operations	287 000	1 032	78	17
Moab Khotsong	248 000	595	45	7
Bambanani	82 000	70	5	5
Target 1	86 500	311	23	7
Doornkop	106 500	349	26	16
Joel	50 000	147	11	9
Kusasalethu	155 500	311	23	5
Masimong	72 500	106	8	3
Unisel	32 000	35	3	2
Underground operations – total[3]	**1 120 000**	**2 956**	**222**	
South African surface operations (tailings and waste rock dumps)	84 500	39	4	14+
Kalgold	39 000	69	5	15
Hidden Valley[4]	201 500	1 491	112	5
Total	**~1.45Moz**	**4 555**	**343**	

[1] *Excludes Golpu* [3] *At a grade of ~5.85g/t*

[2] *At an exchange rate of R13.30/US$* [4] *Includes deferred stripping*

SOUTH AFRICA

Tshepong operations

		FY18*	FY17*	FY16*
Number of employees				
– Permanent		**8 347**	8 110	7 779
– Contractors		**673**	588	600
Total		**9 020**	8 698	8 379
Operational				
Volumes milled	(000t) (metric)	**1 716**	1 695	1 774
	(000t) (imperial)	**1 893**	1 869	1 956
Gold produced	(kg)	**9 394**	8 828	9 019
	(oz)	**302 026**	283 827	289 968
Gold sold	(kg)	**9 338**	8 816	9 020
	(oz)	**300 223**	283 439	289 999
Grade	(g/t)	**5.47**	5.21	5.08
	(oz/t)	**0.160**	0.152	0.148
Productivity	(g/TEC)	**93.93**	92.28	97.29
Development results				
Total metres		**23 089**	19 462	23 099
Reef metres		**3 159**	3 028	3 530
Capital metres		**588**	599	0
Financial				
Revenue	(Rm)	**5 389**	5 062	4 942
Revenue	(US$m)	**419**	372	341
Average gold price received	(R/kg)	**577 058**	574 165	547 906
	(US$/oz)	**1 397**	1 314	1 175
Cash operating cost	(Rm)	**3 829**	3 677	3 223
	(US$m)	**298**	270	222
Production profit	(Rm)	**1 590**	1 391	1 723
	(US$m)	**123**	102	119
Capital expenditure	(Rm)	**1 008**	717	630
	(US$m)	**78**	52	43
Cash operating cost	(R/kg)	**407 575**	416 493	357 345
	(US$/oz)	**987**	953	757
All-in sustaining cost	(R/kg)	**514 537**	507 368	437 550
	(US$/oz)	**1 245**	1 161	939
Safety				
Number of fatalities		**2**	1	2
Lost-time injury frequency rate per million hours worked		**7.80**	7.09	6.51
Environment				

Electricity consumption	(GWh)	**454**	466	453
Water consumption – primary activities	(ML)	**2 701**	2 719	2 385
Greenhouse gas emissions	(000t CO_2e)	**441**	463	460
Intensity data per tonne treated				
– energy		**0.26**	0.27	0.26
– water		**1.57**	1.60	1.34
– greenhouse gas emissions		**0.26**	0.27	0.26
Number of reportable environmental incidents		0	0	0
Community				
Local economic development	(Rm)	**9**	12	13
Training and development	(Rm)	**92**	74	72

** From FY18, Tshepong and Phakisa have been integrated and reported on as a single entity, Tshepong operations.*

Other salient features	
Status of operation	Steady state operation: development continues
Life of mine	17 years
Nameplate hoisting capacity (per month)	283 000 tonnes (312 000 tons)
Compliance and certification	New order mining right – December 2007 ISO 14001 ISO 9001

Mineral reserves as at 30 June 2018

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**
	19.7	5.93	117	3.7	4.84	18	23.5	5.76	135
Reserves (imperial)	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**
	21.7	0.173	3 762	4.1	0.141	581	25.9	0.168	4 343

The Tshepong operations are located in the Free State Province, near Welkom, about 250km from Johannesburg. The Tshepong operations includes the Tshepong and Phakisa mining sections. The close proximity of these sections allowed for this integration, which has resulted in the use of excess hoisting capacity at Tshepong and the debottlenecking of Phakisa's restrained infrastructure. The integration and reporting of the Tshepong operations as a single entity began in FY18. Mining is conducted at depths ranging from 1 600m to 2 600m. Tshepong uses conventional undercut mining and Phakisa primarily uses conventional open mining of the Basal Reef. The B Reef is exploited as a high-grade secondary reef. Ore mined is processed at the Harmony One plant.

Sadly, two fatalities occurred in FY18.

In FY18, the Tshepong operations was the group's second highest contributor to cash flow. Improved production was boosted by increased volumes and higher grades achieved in the first half of the year due to disciplined mining, especially from Phakisa North and the Tshepong decline.

Gold production increased by 6% to 9 394kg (302 026oz) in FY18, primarily due to a 5% increase in underground recovered grade to 5.47g/t (0.160oz/t). Ore milled increased by 1% to 1 716 000 tonnes (1 893 000 tons). The average rand gold price received remained flat at R577 058kg (FY17:R574 165/kg) (In dollar terms the gold price received increased by 6% mainly due to the strengthening of the Rand/US$ exchange rate in FY18). Revenue increased year on year to R5 389 million (13% increase to US$419 million).

Cash operating costs were well contained and increased by only 4% to R3 829 million (increased by 10% to US$298 million).

Capital expenditure increased by 41% to R1 008 million (increased by 50% to US$78 million). Capital increased due to higher ongoing development at Phakisa and expenditure related to the Tshepong Sub-71 (nearing completion) and Sub-75 decline projects and ventilation upgrades for purposes of supporting the integration. The optimisation project to support the integration began in FY18.

Construction of the pump station and refrigeration plant on 66 level will continue in FY19. The Alimak (a mechanical platform used for vertical development) access development was completed in the fourth quarter of the year and the Alimak hole development is scheduled for completion in FY19.

Key deliverables in FY19 will be improving safety performance, reducing costs in all disciplines, adhering to maintenance schedules, quality mining and focusing on the development section in order to sustainably create face length.

Moab Khotsong

		FY18*
Number of employees		
– Permanent		**5 804**
– Contractors		**1 014**
Total		**6 818**
Operational		
Volumes milled	(000t) (metric)	**327**
	(000t) (imperial)	**360**
Gold produced	(kg)	**3 296**
	(oz)	**105 969**
Gold sold		**3 165**
		101 757
Grade	(g/t)	**10.08**
	(oz/t)	**0.294**
Productivity	(g/TEC)	**135.17**
Development results		
Total metres		**9 527**
Reef metres		**1 328**
Capital metres		**380**
Financial		
Revenue	(Rm)	**1 672**
Revenue	(US$m)	**130**
Average gold price received	(R/kg)	**528 387**
	(US$/oz)	**1 279**
Cash operating cost	(Rm)	**1 037**
	(US$m)	**81**
Production profit	(Rm)	**720**
	(US$m)	**56**
Capital expenditure	(Rm)	**173**
	(US$m)	**13**
Cash operating cost	(R/kg)	**314 526**
	(US$/oz)	**761**
All-in sustaining cost	(R/kg)	**420 286**
	(US$/oz)	**1 017**
Safety		
Number of fatalities		**1**
Lost-time injury frequency rate per million hours worked		**11.18**
Environment		
Electricity consumption	(GWh)	**114**
Water consumption – primary activities	(ML)	**1 702**

Greenhouse gas emissions	(000t CO_2e)	**110**
Intensity data per tonne treated		
– energy		**0.35**
– water		**5.20**
– greenhouse gas emissions		**0.35**
Number of reportable environmental incidents		
Community		
Local economic development	(Rm)	**7**
Training and development	(Rm)	**13**

* *Incorporated into Harmony's portfolio from 1 March 2018. The figures reported are for the four months from March 2018 to June 2018*

Other salient features	
Status of operation	Steady state operation: development continues
Life of mine	7 years
Nameplate hoisting capacity (per month)	160 000 tonnes (176 000 tons)
Compliance and certification	New order mining right

Mineral reserves as at 30 June 2018

	Proved reserves			**Probable reserves**			**Total mineral reserves**		
Reserves (metric)	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**
	2.5	10.32	25	2.6	9.50	25	5.1	9.90	50
Reserves (imperial)	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**
	2.7	0.301	815	2.9	0.277	800	5.6	0.289	1 615

Harmony acquired Moab Khotsong from AngloGold Ashanti Limited in March 2018. Moab Khotsong, which includes the mining and surface infrastructure of the adjacent Great Noligwa mine, is located near the towns of Orkney and Klerksdorp, about 180km south-west of Johannesburg. The mining lease area lies just south of the Vaal River, which forms a natural boundary between South Africa's North West and Free State provinces.

Mining is based on a scattered mining method together with an integrated backfill support system that incorporates bracket pillars. The Vaal Reef is the primary reef exploited. The economic reef horizons are mined between 1 791m and 3 052m below surface. Ore mined is processed at the Great Noligwa gold plant. The plant uses the reverse gold leach method, with gold and uranium being recovered through gold cyanide and acid uranium leaching.

The acquisition of Moab Khotsong meets Harmony's strategic objective of increasing the quality of its asset portfolio and increasing margins. Moab Khotsong is a high-grade, cash-generative operation that has already had a positive impact on Harmony's FY18 performance since its incorporation on 1 March 2018.

Moab Khotsong processed 327 000 tonnes (360 000 tons), producing 3 296kg (105 969oz) at a recovered grade of 10.08g/t (0.294oz/t) which resulted in a production profit of R720 million (US$56 million) in the four months from March 2018 to June 2018.

The integration of Moab Khotsong included the transfer of Harmony's existing accounting and payroll systems. This had been successfully completed by the end of FY18.

Management is focused on optimising costs and efficiencies to further enhance the performance of Moab Khotsong.

Studies to optimise the performance by potentially mining the Great Noligwa shaft pillar and remnant pillars are underway as well as is a study on the Zaaiplaats project. The outcomes of these studies will determine if these potential projects will be progressed.

FY19 production and grade guidance is 248 000oz and 9.49g/t respectively.

Bambanani

		FY18	FY17	FY16
Number of employees				
– Permanent		**1 568**	1 464	1 491
– Contractors		**163**	205	321
Total		**1 137**	1 669	1 812
Operational				
Volumes milled	(000t) (metric)	**233**	231	232
	(000t) (imperial)	**257**	254	256
Gold produced	(kg)	**2 821**	2 750	3 013
	(oz)	**90 698**	88 415	96 870
Gold sold	(kg)	**2 804**	2 745	3 015
	(oz)	**90 151**	88 253	96 934
Grade	(g/t)	**12.11**	11.90	12.99
	(oz/t)	**0.353**	0.348	0.378
Productivity	(g/TEC)	**150.60**	148.42	156.54
Development results				
Total metres		**1 495**	1 591	1 743
Reef metres		**0**	130	105
Capital metres		**0**	0	0
Financial				
Revenue	(Rm)	**1 616**	1 576	1 617
Revenue	(US$m)	**126**	116	112
Average gold price received	(R/kg)	**576 398**	574 227	536 410
	(US$/oz)	**1 395**	1 314	1 151
Cash operating cost	(Rm)	**905**	874	808
	(US$m)	**70**	64	56
Production profit	(Rm)	**720**	705	806
	(US$m)	**56**	52	56
Capital expenditure	(Rm)	**64**	77	106
	(US$m)	**5**	6	7
Cash operating cost	(R/kg)	**320 724**	317 833	268 305
	(US$/oz)	**776**	727	576
All-in sustaining cost	(R/kg)	**360 462**	357 025	304 634
	(US$/oz)	**873**	817	654
Safety				
Number of fatalities		**1**	1	0
Lost-time injury frequency rate per million hours worked		**2.43**	5.23	3.59
Environment				
Electricity consumption	(GWh)	**145**	143	140

Water consumption – primary activities	(ML)	**1 527**	1 200	1 434
Greenhouse gas emissions	(000t CO_2e)	**141**	141	142
Intensity data per tonne treated				
– energy		**0.62**	0.64	0.60
– water		**6.60**	5.19	6.18
– greenhouse gas emissions		**0.62**	0.64	0.60
Number of reportable environmental incidents		**0**	0	0
Community				
Local economic development	(Rm)	**11**	14	9
Training and development	(Rm)	**25**	20	25

	Other salient features
Status of operation	Mature operation with focus on mining of the shaft pillar for the next few years after which it will be at the end of its operating life
Life of mine	5 years
Nameplate hoisting capacity (per month)	32 000 tonnes (35 000 tons)
Compliance and certification	New order mining right – December 2007 ISO 14001 – not certified but operates according to standards requirements ISO 9001 OHSAS 18001

Mineral reserves as at 30 June 2018

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**
	1.0	12.08	12	–	–	–	1.0	12.08	12
Reserves (imperial)	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**
	1.1	0.352	386	–	–	–	1.1	0.352	386

Bambanani, located in the Free State Province, near Welkom and about 260km from Johannesburg, has two surface shafts (the East and West shafts). Mining is conducted to a depth of 2 365m. Activities at the mine focus on the Basal Reef and are limited to shaft pillar extraction. The ore mined is sent to Harmony One Plant for processing. Given the high risk of seismicity at Bambanani, efforts are focused on managing support systems and the rehabilitation of areas with challenging ground conditions.

Regrettably, one fatality occurred at Bambanani in FY18. Focus on safety and fatal risk management remains critical for this operation.

Bambanani is Harmony's most profitable mine. Gold production increased by 3% to 2 821kg (90 698oz) in FY18. This was primarily due to the increase in recovered grade by 2% to 12.11g/t (0.353oz/t). Volumes milled remained flat year on year at 233 000 tonnes (257 000 tons) in FY18.

Revenue was up by 3% to R1 616 million (9% increase to US$126 million) mainly due to higher production in FY18.

Cash operating costs increased by 4% to R905 million (or 9% to US$70 million), mainly due to the increase in annual wages and electricity tariffs.

Capital expenditure decreased by 17% to R64 million (a decrease of 17% to US$5 million). The decrease was due to reduced capital spending as the Bambanani shaft pillar major capital project was completed at the end of FY17.

The operation is performing well. Safety and disciplined mining are key to its success.

Target 1

		FY18	FY17	FY16
Number of employees				
– Permanent		**1 663**	1 689	1 653
– Contractors		**284**	222	272
Total		**1 947**	1 911	1 925
Operational				
Volumes milled	(000t) (metric)	**680**	745	739
	(000t) (imperial)	**749**	822	814
Gold produced	(kg)	**2 854**	2 669	3 387
	(oz)	**91 758**	85 809	108 895
Gold sold	(kg)	**2 828**	2 642	3 419
	(oz)	**90 922**	84 942	109 923
Grade	(g/t)	**4.20**	3.58	4.58
	(oz/t)	**0.123**	0.104	0.134
Productivity	(g/TEC)	**146.90**	126.66	155.77
Development results				
Total metres		**3 883**	3 656	3 459
Reef metres		**431**	104	182
Capital metres		**620**	0	0
Financial				
Revenue	(Rm)	**1 630**	1 506	1 833
Revenue	(US$m)	**127**	111	126
Average gold price received	(R/kg)	**576 316**	570 091	536 196
	(US$/oz)	**1 395**	1 304	1 150
Cash operating cost	(Rm)	**1 334**	1 356	1 242
	(US$m)	**104**	100	86
Production profit	(Rm)	**312**	161	583
	(US$m)	**24**	12	40
Capital expenditure	(Rm)	**309**	324	322
	(US$m)	**24**	24	22
Cash operating cost	(R/kg)	**467 271**	508 082	366 814
	(US$/oz)	**1 131**	1 162	787
All-in sustaining cost	(R/kg)	**582 200**	651 833	471 876
	(US$/oz)	**1 409**	1 491	1 012
Safety				

Number of fatalities		**1**	0	2
Lost-time injury frequency rate per million hours worked		**10.18**	11.80	4.91
Environment				
Electricity consumption	(GWh)	**187**	186	247
Water consumption – primary activities	(ML)	**553**	678	808
Greenhouse gas emissions	(000t CO_2e)	**189**	184	251
Intensity data per tonne treated				
– energy		**0.23**	0.25	0.33
– water		**0.81**	0.91	1.09
– greenhouse gas emissions		**0.27**	0.25	0.33
Number of reportable environmental incidents		**0**	0	0
Community				
Local economic development	(Rm)	**4**	5	4
Training and development	(Rm)	**41**	36	34
Other salient features				
Status of operation	Recapitalisation of operation currently being evaluated.			
Life of mine	7 years			
Nameplate hoisting capacity (per month)	97 000 tonnes (107 000 tons)			
Compliance and certification	New order mining right – December 2007 ISO 14001 ISO 9001 OHSAS 18001			

Mineral reserves as at 30 June 2018

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**
	3.2	4.32	14	2.0	4.29	9	5.2	4.31	23
Reserves (imperial)	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**
	3.5	0.126	442	2.3	0.125	282	5.8	0.126	724

Target 1 is located in the Free State Province, some 270km southwest of Johannesburg. Mining operations comprise one primary underground shaft, to a depth of approximately 2 945m. While most of the ore extracted comes from mechanised mining (massive mining techniques), conventional stoping is still employed primarily to destress areas ahead of mechanised mining. Ore mined is processed at the Target plant. The gold mineralisation currently exploited at Target 1 is contained within a succession of Elsburg and Dreyerskuil quartz pebble conglomerate reefs.

Target 1's operational performance is focused on trackless development to ensure timeous availability of massive stopes and to prevent excessive dilution from waste and backfill in the pillar areas, which could impact negatively on the delivered grade. Future success will depend on the availability of trackless mining equipment and performance regarding volumes and grade.

Sadly, Target 1 reported one fatality in FY18.

The production performance in FY18 improved after production in FY17 was severely affected by unstable ground conditions which hampered further mining in the higher grade areas. Narrow reef mining of lower grade areas had been implemented to access the ore.

Gold production increased by 7% to 2 854kg (91 758oz) in FY18 as a result of the 17% increase in the recovered grade to 4.20g/t (0.123oz/t) (FY17: 3.58g/t (0.104oz/t)). Ore milled decreased by 9% to 680 000 tonnes (749 000 tons) due to the availability of higher grade areas in FY18.

Revenue increased by 8% to R1 630 million (14% increase to US$127 million) as a result of the increase in the production delivered in FY18.

Cash operating costs were lower year on year by 2% to R1 334 million (4% increase to US$104 million). Reduced volumes milled offset the increase in annual labour costs and electricity tariffs.

Capital expenditure decreased by 5% to R309 million (FY17: R324 million) (unchanged at US$24 million). Recapitalisation of the mine is required to improve productivity and efficiencies (the crushing system is to be moved nearer to the working areas). Management is evaluating this capital project against other capital priorities and will decide on the way forward for Target 1 during FY19.

Doornkop

		FY18	FY17	FY16
Number of employees				
– Permanent		**3 073**	2 847	2 471
– Contractors		**669**	645	443
Total		**3 742**	3 492	2 914
Operational				
Volumes milled	(000t) (metric)	**696**	641	630
	(000t) (imperial)	**767**	706	695
Gold produced	(kg)	**3 429**	2 673	2 730
	(oz)	**110 245**	85 939	87 772
Gold sold	(kg)	**3 404**	2 712	2 712
	(oz)	**109 440**	87 193	87 193
Grade	(g/t)	**4.93**	4.17	4.33
	(oz/t)	**0.144**	0.122	0.126
Productivity	(g/TEC)	**94.97**	77.08	83.49
Development results				
Total metres		**9 595**	9 961	7 766
Reef metres		**1 478**	1 337	1 688
Capital metres		**806**	1 316	0
Financial				
Revenue	(Rm)	**1 958**	1 553	1 480
Revenue	(US$m)	**152**	114	102
Average gold price received	(R/kg)	**575 077**	572 494	545 770
	(US$/oz)	**1 392**	1 310	1 171
Cash operating cost	(Rm)	**1 418**	1 224	1 058
	(US$m)	**110**	90	73
Production profit	(Rm)	**547**	312	433
	(US$m)	**43**	23	30

Capital expenditure	(Rm)	**274**	243	208
	(US$m)	**21**	18	14
Cash operating cost	(R/kg)	**413 586**	457 752	387 585
	(US$/oz)	**1 001**	1 047	831
All-in sustaining cost	(R/kg)	**508 065**	562 907	473 562
	(US$/oz)	**1 230**	1 288	1 016
Safety				
Number of fatalities		**0**	0	0
Lost-time injury frequency rate per million hours worked		**6.78**	7.50	12.27
Environment				
Electricity consumption	(GWh)	**193**	188	203
Water consumption – primary activities	(ML)	**344** [1]	947	1 135
Greenhouse gas emissions	(000t CO_2e)	**199**	186	206
Intensity data per tonne treated				
– energy		**0.28**	0.30	0.32
– water		**0.49**	1.48	1.80
– greenhouse gas emissions		**0.27**	0.30	0.32
Number of reportable environmental incidents		**0**	0	0
Community				
Local economic development	(Rm)	**6**	8	4
Training and development	(Rm)	**47**	42	30

** Included in the total for FY16 is an amount of R1 million that was capitalised as part of the hostel upgrades (FY17: R0 million, FY18: R0 million)*
[1] Year on year decrease due to the installation of 5ML recycling plant

Other salient features	
Status of operation	Mining takes place on the South Reef at this single-shaft operation.
Life of mine	16 years
Nameplate hoisting capacity (per month)	103 000 tonnes (113 000 tons)
Compliance and certification	New order mining right – October 2008 ISO 14001 ISO 9001 OHSAS 18001

Mineral reserves as at 30 June 2018

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**
	3.0	5.01	15	4.0	5.07	20	7.0	5.05	35
Reserves (imperial)	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**
	3.3	0.146	480	4.4	0.148	648	7.7	0.147	1 129

Doornkop, a single-shaft operation, is located in the Gauteng province of South Africa, approximately 30km west of Johannesburg, on the northern rim of the Witwatersrand Basin. Mining is conducted to a depth of 1 978m. The operation focuses on narrow-reef conventional mining of the South Reef. Ore from the operation is processed at the Doornkop plant.

Doornkop delivered an excellent safety performance in FY18 and achieved 3 million fatality free shifts on 24 February 2018. There were no fatalities in FY18. The lost-time injury frequency rate improved by 9% to 6.78 per million hours worked in FY18 from 7.50 in FY17.

Gold production increased by 28% to 3 429kg (110 245oz) in FY18. A 9% increase in ore milled to 696 000 tonnes (767 000 tons) and an 18% increase in the recovered gold grade to 4.93g/t (0.144oz/t) resulted in the increased production. The improved performance was aided by the availability of mining areas, disciplined mining and improved efficiencies from the Doornkop Plant.

Revenue increased by 26% to R1 958 million (33% increase to US$152 million) due to the excellent production performance in FY18.

Cash operating costs increased by 16% to R1 418 million (increased by 22% to US$110 million) mainly as a results of increased production.

Capital expenditure increased by 13% to R274 million (increased by 17% to US$21 million) owing to an increase in shaft capital development on the 207 and 212 levels. Planned capital expenditure for FY19 includes the construction of a second outlet following the planned closure of Sibanye-Stillwater's Cooke 1 operation and continuing construction and development of 207/212 levels.

The planned seismic survey was completed during FY17. The related 3D modelling completed for Doonkop results in a geological model that significantly improves the structure of the orebody. Focus on achieving planned development targets to enable the life of mine production build up and an increase in production areas to enhance mining flexibility will be key in FY19.

Joel

		FY18	FY17	FY16
Number of employees				
– Permanent		**1 914**	1 962	1 796
– Contractors		**184**	171	97
Total		**2 098**	2 133	1 893
Operational				
Volumes milled	(000t) (metric)	**454**	514	542
	(000t) (imperial)	**501**	567	597
Gold produced	(kg)	**1 635**	2 246	2 278
	(oz)	**52 566**	72 211	73 239
Gold sold	(kg)	**1 656**	2 280	2 245
	(oz)	**53 242**	73 303	72 179
Grade	(g/t)	**3.60**	4.37	4.20
	(oz/t)	**0.105**	0.127	0.123
Productivity	(g/TEC)	**82.23**	113.57	117.33
Development results				
Total metres		**3 331**	3 477	3 541
Reef metres		**431**	1 596	2 315
Capital metres		**620**	532	485
Financial				
Revenue	(Rm)	**954**	1 309	1 220
Revenue	(US$m)	**74**	96	84
Average gold price received	(R/kg)	**576 023**	573 986	543 442
	(US$/oz)	**1 394**	1 313	1 166
Cash operating cost	(Rm)	**910**	928	845
	(US$m)	**71**	68	58
Production profit	(Rm)	**34**	373	389
	(US$m)	**3**	27	27
Capital expenditure	(Rm)	**250**	243	215
	(US$m)	**19**	18	15
Cash operating cost	(R/kg)	**556 468**	413 088	371 080
	(US$/oz)	**1 347**	945	796
All-in sustaining cost	(R/kg)	**661 921**	477 484	424 617
	(US$/oz)	**1 602**	1 092	911
Safety				
Number of fatalities		**2**	1	1
Lost-time injury frequency rate per million hours worked		**2.87**	2.54	3.49
Environment				
Electricity consumption	(GWh)	**81**	85	108

Water consumption – primary activities	(ML)	**788**	922	816
Greenhouse gas emissions	(000t CO_2e)	**79**	84	109
Intensity data per tonne treated				
– energy		**0.18**	0.17	0.19
– water		**1.74**	1.79	1.50
– greenhouse gas emissions		**0.18**	0.16	0.19
Number of reportable environmental incidents		**0**	0	0
Community				
Local economic development	(Rm)	**5**	7	3
Training and development	(Rm)	**23**	20	15
Other salient features				
Status of operation	Twin-shaft operation – technically challenging			
Life of mine	9 years			
Nameplate hoisting capacity (per month)	75 000 tonnes (83 000 tons)			
Compliance and certification	New order mining right – December 2007 ISO 14001 – not certified but operates according to the standard's requirements ISO 9001 OHSAS 18001			

Mineral reserves as at 30 June 2018

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**
	2.5	4.74	12	1.8	5.33	9	4.3	4.99	21
Reserves (imperial)	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**
	2.8	0.138	381	2.0	0.156	305	4.7	0.145	686

Joel is located in the Free State Province, about 292km from Johannesburg, on the southern edge of the Witwatersrand Basin. The mine comprises two shafts: North and South. The primary economic reef horizon is a narrow tabular Beatrix Reef deposit, which is accessed via conventional grid development. Mining is conducted to a depth of 1 452m. Ore mined is processed at the Joel plant.

Regrettably, there were two fall-of-ground fatalities in FY18.

Progress was made in the 137 decline capital project and is scheduled to be completed by January 2019. The decline project was initiated to extend the life of Joel by approximately eight years and is included in the current life-of-mine plan.

Joel's performance in FY18 was impacted significantly by the unavailability of mining areas due to geological intrusions (Klippan intrusion).This resulted in the mining of lower grade areas while development of 137 level and the required ore passes is underway. Development will continue in FY19, following which grades are expected to improve in FY20.

Gold production decreased by 27% to 1 635kg (52 566oz) in FY18. Recovered gold grades decreased by 18% to 3.60g/t (0.105oz/t), and further impacted by the 12% decrease in ore milled to 454 000 tonnes (501 000 tons). The decrease in production resulted in a 27% decrease in revenue to R954 million (23% decrease to US$74 million).

Cash operating costs decreased by 2% to R910 million (increased by 4% to US$71 million) largely as a result of the decrease in tonnages mined, offsetting increases in wages and electricity tariffs.

Capital expenditure increased by 3% to R250 million (increased by 6% to US$19 million), mainly as the 137 decline project nears completion.

Kusasalethu

		FY18	FY17	FY16
Number of employees				
– Permanent		**3 980**	4 050	3 944
– Contractors		**692**	538	539
Total		**4 672**	4 588	4 483
Operational				
Volumes milled	(000t) (metric)	**670**	607	668
	(000t) (imperial)	**738**	670	736
Gold produced	(kg)	**4 429**	4 394	3 863
	(oz)	**142 395**	141 270	124 198
Gold sold	(kg)	**4 301**	4 498	3 822
	(oz)	**138 281**	144 614	122 880
Grade	(g/t)	**6.61**	7.24	5.78
	(oz/t)	**0.193**	0.211	0.169
Productivity	(g/TEC)	**91.54**	89.05	77.80
Development results				
Total metres		**4 016**	5 101	7 183
Reef metres		**776**	1 185	1 517
Capital metres		**0**	0	0
Financial				
Revenue	(Rm)	**2 483**	2 575	2 078
Revenue	(US$m)	**193**	189	143
Average gold price received	(R/kg)	**577 313**	572 376	543 633
	(US$/oz)	**1 397**	1 309	1 166
Cash operating cost	(Rm)	**2 091**	2 019	1 848
	(US$m)	**163**	148	127
Production profit	(Rm)	**457**	494	262
	(US$m)	**35**	36	18
Capital expenditure	(Rm)	**289**	289	360
	(US$m)	**22**	21	25
Cash operating cost	(R/kg)	**472 177**	459 422	478 277
	(US$/oz)	**1 143**	1 051	1 026
All-in sustaining cost	(R/kg)	**554 302**	541 247	584 498
	(US$/oz)	**1 342**	1 238	1 254
Safety				
Number of fatalities		**5**	0	2
Lost-time injury frequency rate per million hours worked		**6.25**	10.29	7.06
Environment				
Electricity consumption	(GWh)	595	616	611

Water consumption – primary activities	(ML)	2 609	613	1 671
Greenhouse gas emissions	(000t CO_2e)	577	610	620
Intensity data per tonne treated				
– energy		0.9	1.01	0.91
– water		3.89	1.00	2.50
– greenhouse gas emissions		0.3	0.10	0.91
Number of reportable environmental incidents		2	3	1
Community				
Local economic development*	(Rm)	**6**	5	5
Training and development	(Rm)	**33**	45	26

Other salient features	
Status of operation	Positioned for profitability
Life of mine	5 years
Nameplate hoisting capacity (per month)	172 000 tonnes (190 000 tons)
Compliance and certification	New order mining right – December 2007 ISO 14001 ISO 9001 Cyanide Code

Mineral reserves as at 30 June 2018

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**
	3.7	7.26	27	0.6	5.34	3	4.3	7.00	30
Reserves (imperial)	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**
	4.0	0.212	857	0.7	0.156	101	4.7	0.204	959

Kusasalethu is located about 90km from Johannesburg, near the provincial border of Gauteng and North West Province, in the West Witwatersrand Basin where it mines the Ventersdorp Contact Reef as its main ore body. The mine comprises twin vertical and twin sub-vertical shaft systems, and uses conventional mining methods in a sequential grid layout. Mining is conducted to a depth of 3 388m, making it Harmony's deepest mine. Ore mined is treated at the Kusasalethu plant.

A seismic event triggered a fall-of-ground accident which led to five fatalities in August 2017. Management are still deeply saddened by this event. Safety standards and controls have been reviewed and new procedures and controls enforced to prevent such an event from recurring.

The recovered gold grade decreased by 9% to 6.61g/t (0.193oz/t) due to the unavailability of higher grade areas. The decrease in grade was offset by a 10% increase in the volume of ore milled to 670 000 tonnes (738 000 tons), resulting in the flat gold production performance year on year, increasing by 1% to 4 429kg (142 395oz).

The operation was impacted by illegal industrial action during November 2017. Management instituted disciplinary measures against the instigators and the AMCU branch leadership was dismissed. Employee and union relations after the illegal industrial action have been stable and calm has been restored.

Revenue decreased by 4% to R2 483 million in FY18 (increased by 2% to US$193 million) as a result of the 4% decrease in gold sold to 4 301kg (138 281oz).

Cash operating costs increased by 4% to R2 091 million (10% to US$163 million) mainly due to wage increases and higher electricity tariffs.

Capital expenditure of R289 million recorded in FY18 and FY17 (5% increase to US$22 million due to the strengthening of the rand against the dollar by 6% to R12.85/US$ in FY18).

Safety, disciplined mining and improved grades are key to Kusasalethu's successful performance in the future.

Masimong

		FY18	FY17	FY16
Number of employees				
– Permanent		**2 432**	2 437	2 478
– Contractors		**108**	107	112
Total		**2 540**	2 544	2 590
Operational				
Volumes milled	(000t) (metric)	**647**	640	650
	(000t) (imperial)	**714**	706	716
Gold produced	(kg)	**2 623**	2 538	2 432
	(oz)	**84 332**	81 599	78 190
Gold sold	(kg)	**2 609**	2 539	2 432
	(oz)	**83 882**	81 631	78 191
Grade	(g/t)	**4.05**	3.97	3.74
	(oz/t)	**0.118**	0.116	0.109
Productivity	(g/TEC)	**92.82**	89.73	83.85
Development results				
Total metres		**5 287**	4 754	4 755
Reef metres		**2 067**	1 054	1 549
Financial				
Revenue	(Rm)	**1 505**	1 452	1 318
Revenue	(US$m)	**117**	107	91
Average gold price received	(R/kg)	**576 729**	571 870	541 806
	(US$/oz)	**1 396**	1 308	1 162
Cash operating cost	(Rm)	**1 161**	1 115	1 038
	(US$m)	**90**	82	72
Production profit	(Rm)	**351**	339	280
	(US$m)	**27**	25	19
Capital expenditure	(Rm)	**129**	119	110
	(US$m)	**10**	9	8
Cash operating cost	(R/kg)	**442 586**	439 457	426 904
	(US$/oz)	**1 071**	1 005	916
All-in sustaining cost	(R/kg)	**513 197**	500 938	493 527
	(US$/oz)	**1 242**	1 146	1 059
Safety				
Number of fatalities		**1**	1	2
Lost-time injury frequency rate per million hours worked		**8.61**	10.54	10.05
Environment				
Electricity consumption	(GWh)	**173**	170	172
Water consumption – primary activities	(ML)	**824**	825	715

Greenhouse gas emissions	(000t CO_2e)	**167**	169	175
Intensity data per tonne treated				
– energy		**0.27**	0.27	0.26
– water		**1.27**	1.29	1.10
– greenhouse gas emissions		**0.27**	0.27	0.26
Number of reportable environmental incidents		**0**	0	0
Community				
Local economic development	(Rm)	**6**	7	6
Training and development	(Rm)	**27**	23	22
Other salient features				
Status of operation	Mature, single shaft operation nearing the end of its life of mine			
Life of mine	3 years			
Nameplate hoisting capacity (per month)	112 000 tonnes (124 000 tons)			
Compliance and certification	New order mining right – December 2007 ISO 14001 ISO 9001 OHSAS 18001			

Mineral reserves as at 30 June 2018

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**
	1.7	4.28	7	0.1	3.42	0	1.8	4.23	8
Reserves (imperial)	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**
	1.9	0.125	234	0.1	0.100	13	2.0	0.123	246

Masimong is located in the Free State Province, near Welkom, about 260km from Johannesburg. The Masimong complex comprises an operating shaft (5 shaft) and 4 shaft, which, although closed for mining, is used for ventilation, pumping and as a second escape outlet. Masimong exploits the Basal Reef and the secondary B Reef. Mining is conducted to a depth of 2 050m. Ore mined is processed at the Harmony One plant.

Sadly, there was one fatality at Masimong in FY18.

Masimong once again delivered a good performance in FY18. The operation continues to focus on accessing higher grade B Reef areas. The recovered grade increased by 2% to 4.05g/t (0.118oz/t). Ore milled increased by 1% to 647 000 tonnes (714 000 tons). Gold produced increased by 3% to 2 623kg (84 332oz).

The increase in gold production contributed to a 4% increase in revenue to R1 505 million (9% increase to US$117 million, due to increased production and the strengthening of the average rand/US dollar exchange rate by 6% from R13.60 in FY17 to R12.85 in FY18).

Cash operating costs increased by 4% to R1 161 million (10% increase to US$90 million) mainly due to higher volumes produced and wage increases. Capital expenditure increased by 8% to R129 million (increased by 14% to US$10 million). Capital was spent mainly on ongoing development.

Exploration for higher grade B Reef areas will continue in FY19.

Unisel

		FY18	FY17	FY16
Number of employees				
– Permanent		**1 016**	1 839	1 817
– Contractors		**80**	152	128
Total		**1 096**	1 991	1 945
Operational				
Volumes milled	(000t) (metric)	**376**	394	424
	(000t) (imperial)	**415**	436	467
Gold produced	(kg)	**1 280**	1 595	1 704
	(oz)	**41 152**	51 280	54 785
Gold sold	(kg)	**1 272**	1 590	1 705
	(oz)	**40 896**	51 120	54 817
Grade	(g/t)	**3.40**	4.05	4.02
	(oz/t)	**0.099**	0.118	0.117
Productivity	(g/TEC)	**70.04**	73.56	77.43
Development results				
Total metres		**2 921**	3 647	3 145
Reef metres		**1 325**	1 575	1 917
Capital metres		**1 028**	0	0
Financial				
Revenue	(Rm)	**733**	915	925
Revenue	(US$m)	**57**	67	64
Average gold price received	(R/kg)	**576 222**	575 650	542 487
	(US$/oz)	**1 395**	1 317	1 164
Cash operating cost	(Rm)	**774**	839	754
	(US$m)	**60**	62	52
Production profit/(loss)	(Rm)	**(38)**	77	171
	(US$m)	**(3)**	6	12
Capital expenditure	(Rm)	**85**	78	62
	(US$m)	**7**	6	4
Cash operating cost	(R/kg)	**604 311**	525 732	442 359
	(US$/oz)	**1 463**	1 203	949
All-in sustaining cost	(R/kg)	**678 436**	591 913	496 099
	(US$/oz)	**1 642**	1 354	1 064
Safety				
Number of fatalities		**0**	0	0
Lost-time injury frequency rate per million hours worked		**10.86**	13.57	9.61
Environment				
Electricity consumption	(GWh)	**99**	112	112

Water consumption – primary activities	(ML)	**488**	441	563
Greenhouse gas emissions	(000t CO_2e)	**96**	112	113
Intensity data per tonne treated				
– energy		**0.26**	0.28	0.26
– water		**1.30**	1.12	1.33
– greenhouse gas emissions		**0.26**	0.28	0.26
Number of reportable environmental incidents		**0**	0	0
Community				
Local economic development*	(Rm)	**5**	5	4
Training and development	(Rm)	**19**	24	23

Other salient features	
Status of operation	Mature operation reaching the end of its life of mine. Mining focused on higher grade areas of shaft pillar
Life of mine	2 years
Nameplate hoisting capacity (per month)	63 000 tonnes (69 000 tons)
Compliance and certification	New order mining right – December 2007 ISO 9001

Mineral reserves as at 30 June 2018

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**
	0.3	4.89	1	0.1	5.69	0	0.3	5.02	2
Reserves (imperial)	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**
	0.3	0.143	43	0.1	0.166	10	0.4	0.146	53

Unisel is located in the Free State Province, near Virginia, about 270km from Johannesburg. Mining is conducted to a depth of 2 153m below surface. Conventional scattered mining and pillar reclamation take place to primarily access the Basal reef. Ore mined is processed at Harmony One plant.

Unisel is nearing the end of its operating life and is Harmony's oldest operating mine. Mining of the Leader Reef was terminated in the second half of FY18. Unisel's ageing infrastructure presents significant challenges to the mine's operational flexibility and to the maintenance of production. Mining focuses on targeted areas of the shaft pillar and is expected to continue for an estimated two years. Employees and unions receive regular updates on the mine's performance and future plans. Post closure, Harmony will arrange to transfer the Unisel workforce to other operations where positions are available. Portable skills training will be a key focus going forward.

In FY18, Unisel recorded its third consecutive year without a fatality.

Gold production declined by 20% to 1 280kg (41 152oz) in FY18 due to the 16% decrease in underground recovered grade to 3.40g/t (0.099oz/t) and 5% decrease in ore milled to 376 000 tonnes (415 000 tons). The decrease in gold production resulted in a 20% decrease in revenue to R733 million (15% decrease to US$57 million).

Cash operating costs decreased by 8% to R774 million (decreased by 3% to US$60 million), mainly due to lower volumes milled following the decision to stop mining of the Leader Reef.

Capital expenditure increased by 9% to R85 million (increased by 17% to US$7 million) mainly due to capital spent on preparing sections of the pillar to be mined over Unisel's remaining life of mine.

SOUTH AFRICA – SURFACE OPERATIONS

Kalgold

		FY18	FY17	FY16
Number of employees				
– Permanent		**237**	241	235
– Contractors		**334**	395	377
Total		**571**	636	612
Operational				
Volumes milled	(000t) (metric)	**1 550**	1 506	1 479
	(000t) (imperial)	**1 709**	1 660	1 630
Gold produced	(kg)	**1 250**	1 205	1 103
	(oz)	**40 189**	38 742	35 463
Gold sold	(kg)	**1 231**	1 213	1 086
	(oz)	**39 577**	38 999	34 916
Grade	(g/t)	**0.81**	0.80	0.75
	(oz/t)	**0.024**	0.023	0.022
Productivity	(g/TEC)	**147.96**	123.82	116.79
Financial				
Revenue	(Rm)	**710**	695	595
Revenue	(US$m)	**55**	51	41
Average gold price received	(R/kg)	**576 630**	573 010	548 072
	(US$/oz)	**1 396**	1 311	1 176
Cash operating cost	(Rm)	**565**	557	548
	(US$m)	**44**	41	38
Production profit	(Rm)	**157**	131	55
	(US$m)	**12**	10	4
Capital expenditure	(Rm)	**108**	96	39
	(US$m)	**8**	7	3
Cash operating cost	(R/kg)	**452 365**	462 037	496 991
	(US$/oz)	**1 095**	1 057	1 066
All-in sustaining cost	(R/kg)	**552 032**	558 731	549 590
	(US$/oz)	**1 336**	1 278	1 179
Safety				
Number of fatalities		**0**	0	0
Lost-time injury frequency rate per million hours worked		**0**	2.19	0
Environment				
Electricity consumption	(GWh)	**53**	54	49
Water consumption – primary activities	(ML)	**324**	392	375
Greenhouse gas emissions	(000t CO_2e)	**51**	53	50
Intensity data per tonne treated				

– energy		**0.03**	0.04	0.03
– water		**0.21**	0.26	0.25
– greenhouse gas emissions		**0.03**	0.36	0.03
Number of reportable environmental incidents		**0**	0	0
Community				
Local economic development	(Rm)	**3**	2	2
Training and development	(Rm)	**6**	7	5
Other salient features				
Status of operation	Open-pit mining operation			
Life of mine	15 years			
Compliance and certification	New order mining right – August 2008 ISO 14001 ISO 9001			

Mineral reserves as at 30 June 2018

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**
	9.4	0.95	9	11.8	1.05	12	21.1	1.01	21
Reserves (imperial)	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**
	10.3	0.028	286	13.0	0.031	397	23.3	0.029	683

Kalgold is an open-pit mine situated on the Kraaipan Greenstone Belt, 55km southwest of Mahikeng in North West Province. Mining takes place from the A-Zone pit. Mining is ramping up at the pillar between the A-Zone and Watertank pit. Ore mined is processed at a carbon-in-leach plant located at Kalgold.

Kalgold maintained its fatality-free record in FY18.

Gold production improved by 4% to 1 250kg (40 189oz), which was mainly due to an increase in ore milled by 3% to 1 550 000 tonnes (1 709 000 tons) and 1% increase in the recovered grade to 0.806g/t (0.024oz/t). Revenue increased by 2% to R710 million (an 8% increase to US$55 million) as a result of increased production.

Cash operating costs increased by 1% to R565 million (7% increase to US$44 million).

Capital expenditure increased by 13% to R108 million (increased by 14% to US$8 million), mainly due to the R98 million (US$7.6 million) capitalisation of stripping activities resulting from the A-Zone pit and Watertank pit merger.

Phoenix (tailings retreatment)

		FY18	FY17	FY16
Number of employees				
– Permanent		**87**	82	82
– Contractors		**252**	261	296
Total		**349**	343	378
Operational				
Volumes milled	(000t) (metric)	**5 962**	6 729	6 465
	(000t) (imperial)	**6 575**	7 420	7 129
Gold produced	(kg)	**737**	918	804
	(oz)	**23 695**	29 515	25 849
Gold sold	(kg)	**739**	932	788
	(oz)	**23 759**	29 964	25 335
Grade	(g/t)	**0.124**	0.136	0.124
	(oz/t)	**0.004**	0.004	0.004
Productivity	(g/TEC)	**183.88**	187.96	177.72
Financial				
Revenue	(Rm)	**397**	512	429
Revenue	(US$m)	**31**	38	30
Average gold price received	(R/kg)	**537 547**	549 777	544 390
	(US$/oz)	**1 301**	1 258	1 168
Cash operating cost	(Rm)	**326**	364	320
	(US$m)	**25**	27	22
Production profit	(Rm)	**71**	140	117
	(US$m)	**5**	10	8
Capital expenditure	(Rm)	**3**	5	5
	(US$m)	**–**	–	–
Cash operating cost	(R/kg)	**442 526**	396 486	398 122
	(US$/oz)	**1 071**	907	854
All-in sustaining cost	(R/kg)	**446 268**	404 685	403 907
	(US$/oz)	**1 080**	926	866
Safety				
Number of fatalities		**0**	0	0
Lost-time injury frequency rate per million hours worked		**0**	0	2.06
Environment				
Electricity consumption	(GWh)	**41**	42	40

Water consumption – primary activities	(ML)	**260**	249	267
Greenhouse gas emissions	(000t CO_2e)	**40**	42	41
Intensity data per tonne treated				
– energy		**0.007**	0.006	0.006
– water		**0.04**	0.04	0.04
– greenhouse gas emissions		**0.007**	0.006	0.006
Number of reportable environmental incidents		**0**	0	0
Other salient features				
Status of operation	Retreatment of tailings			
Life of mine	12 years			

Mineral reserves as at 30 June 2018

	Proved reserves			**Probable reserves**			**Total mineral reserves**		
Reserves (metric)	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**
	62.7	0.29	18	–	–	–	62.7	0.29	18
Reserves (imperial)	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**
	69.1	0.008	575	–	–	–	69.1	0.008	575

Phoenix, a tailings retreatment operation situated in Virginia in the Free State Province, makes use of the Saaiplaas plant to retreat tailings. During FY13, Harmony finalised an empowerment agreement and transferred 30% of its shareholding in the Phoenix operations to black economic empowerment owners.

Phoenix's operational performance in FY18 was impacted by lower volumes processed and lower recoveries. Recovery grades are expected to improve in FY19.

Year-on-year, gold production decreased by 20% to 737kg (23 695oz), mainly as a result of a 9% decrease in the recovered grade to 0.124g/t (0.004oz/t), and an 11% reduction in volumes processed to 5 962 000 tonnes (6 575 000 tons).

The 2% decrease in the average rand gold price received and decrease in gold production, resulted in a 22% decrease in revenue to R397 million (decrease of 18% to US$31 million). Cash operating costs decreased by 10% to R326 million (decreased by 7% to US$25 million) due to the lower volumes processed in FY18.

Operational success depends on maintaining plant efficiency and reducing pump and pipe failures (adequate spillage control). Grade variability and the theft of pipelines and electrical cables are the main risks being managed at Phoenix. Security has been increased in an effort to halt the endemic theft of piping and cables that can affect the integrity of operations.

Central Plant Reclamation (tailings retreatment)

		FY18	FY17
Number of employees			
– Permanent		**100**	114
– Contractors		**182**	68
Total		**282**	182
Operational			
Volumes milled	(000t) (metric)	**3 810**	–
	(000t) (imperial)	**4 201**	–
Gold produced	(kg)	**502**	–
	(oz)	**16 139**	–
Gold sold		**508**	
		16 333	
Grade	(g/t)	**0.132**	–
	(oz/t)	**0.004**	–
Productivity	(g/TEC)	**261.72**	
Financial			–
Revenue	(Rm)	**293**	–
Revenue	(US$m)	**23**	–
Average gold price received	(R/kg)	**576 829**	
	(US$/oz)	**1 396**	–
Cash operating cost	(Rm)	**191**	–
	(US$m)	**15**	–
Production profit	(Rm)	**98**	–
	(US$m)	**8**	–
Capital expenditure	(Rm)	**22**	156
	(US$m)	**2**	11
Cash operating cost	(R/kg)	**381 131**	–
	(US$/oz)	**923**	–
All-in sustaining cost	(R/kg)	**420 016**	–
	(US$/oz)	**1 017**	–
Safety			–
Number of fatalities		**0**	1
Lost-time injury frequency rate per million hours worked		**0**	12.51
Environment			
Electricity consumption	(GWh)	24	*
Water consumption – primary activities	(ML)	180	*
Greenhouse gas emissions	(000t CO_2e)	0.04	*
Intensity data per tonne treated			
– energy		0.006	*
– water		0.05	*

– greenhouse gas emissions		0.006	*
Number of reportable environmental incidents		1	*
Other salient features			
Status of operation	Retreatment of tailings		
Life of mine	18 years		

* Reported as part of the waste rock dumps prior to conversion of Central Plant into a tailings retreatment operation, which commenced operation in FY18.

Mineral reserves as at 30 June 2018

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**
	–	–	–	64.6	0.27	17	64.6	0.27	17
Reserves (imperial)	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**
	–	–	–	71.2	0.008	552	71.2	0.008	552

Central Plant Reclamation, a tailings retreatment operation situated near Welkom in the Free State, began production in July 2018. Central Plant, which previously processed waste rock dumps, was converted into a tailings retreatment operation during FY17.

Central Plant's inaugural annual performance was very successful. The operation processed 3.8 million tonnes and produced 502kg (16 139oz), at an all-in sustaining cost of R420 016/kg (US$1 017/oz).

The capital expenditure for FY17 of R156 million (US$11.5 million) was related to the Central Plant tailings conversion project which was completed on time and below budget.

Focus at the Central Plant is on improving plant efficiencies for optimal gold recovery. Increased security measures have been implemented to combat vandalism and theft, the main risks encountered.

Waste rock dumps

		FY18	FY17	FY16
Operational				
Volumes milled	(000t) (metric)	**2 821**	2 810	3 041
	(000t) (imperial)	**3 110**	3 099	3 353
Gold produced	(kg)	**1 081**	1 055	1 065
	(oz)	**34 755**	33 918	34 241
Grade	(g/t)	**0.383**	0.375	0.350
	(oz/t)	**0.011**	0.011	0.010
Financial				
Revenue	(Rm)	**610**	609	577
Revenue	(US$m)	**47**	45	40
Average gold price received	(R/kg)	**567 737**	572 172	544 996
	(US$/oz)	**1 374**	1 309	1 169
Cash operating cost	(Rm)	**450**	459	427
	(US$m)	**35**	34	29
Production profit	(Rm)	**164**	142	158
	(US$m)	**13**	10	11
Capital expenditure	(Rm)	**3**	7	18
	(US$m)	**–**	1	1
Cash operating cost	(R/kg)	**415 993**	434 715	401 033
	(US$/oz)	**1 007**	995	860
All-in sustaining cost	(R/kg)	**417 462**	445 451	422 205
	(US$/oz)	**1 010**	1 019	906
Safety				
Number of fatalities		**0**	0	0
Lost-time injury frequency rate per million hours worked		**0**	0	0
Environment				
Electricity consumption	(GWh)	*	52	66
Water consumption – primary activities	(ML)	*	234	394
Greenhouse gas emissions	(000t CO_2e)	*	51	67
Intensity data per tonne treated				
– energy		*	0.02	0.02
– water		*	0.08	0.12
– greenhouse gas emissions		*	0.02	0.02
Number of reportable environmental incidents		0	0	0
Other salient features				
Status of operation	Processing of waste rock dumps is dependent on the availability of spare plant capacity and plant requirements for grinding material			
Life of mine	± 1 year			

* Environmental consumption and emission and related intensity data for the respective plant at which the waste rock dumps are being processed is

accounted for as part of the primary operation's environmental results.

Mineral reserves as at 30 June 2018

	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**	**Tonnes (Mt)**	**Grade (g/t)**	**Gold (000kg)**
	–	–	–	3.9	0.51	2	3.9	0.51	2
Reserves (imperial)	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**	**Tons (Mt)**	**Grade (oz/t)**	**Gold (000oz)**
	–	–	–	4.3	0.015	64	4.3	0.015	64

Production from the processing of surface rock dumps situated in the Free State province of South Africa depends entirely on the availability of spare mill capacity at the Harmony One and Target Plants, which in turn depends on the availability of underground ore delivered for milling. Waste and waste rock dump deliveries to Kusasalethu Plant (situated near the border of Gauteng and North West Province) supplement mining volumes in order to secure sufficient backfill to use as support in stoping areas. Waste rock dumps situated near Orkney and acquired as part of the Moab Khotsong operations are treated at the Noligwa and Mispah Plants. Milling of waste rock dumps at the Doornkop Plant, situated in the Gauteng province commenced in FY18.

The tailings retreatment conversion of the Central Plant in FY17 reduced capacity to process waste rock volumes. Waste rock dumps were not processed at the Central Plant in FY18 following the completion of the conversion of this plant to treat tailings.

Volumes milled, recovered grades and gold produced remained steady year on year. Production was boosted by the inclusion of Moab surface operations from 1 March 2018 and commencement of surface waste rock dump processing at the Doornkop Plant. Processing of ore and waste material received from Sibanye-Stillwater's Cooke operations, at Harmony's Doornkop plant was terminated in FY18.

PAPUA NEW GUINEA

Hidden Valley

		FY18	**FY17***	**FY16***
Number of employees				
– Permanent		**1 295**	1 192	
– Contractors		**790**	881	
Total		**2 085**	2 073	[1] 1 618
Operational				
Volumes milled	(000t) (metric)	**2 499**	2 889	1 729
	(000t) (imperial)	**2 757**	3 186	1 906
Gold produced [2]	(kg)	**2 862**	2 965	2 257
	(oz)	**92 015**	95 327	72 565
Gold sold [2]	(kg)	**2 763**	3 119	2 340
	(oz)	**88 833**	100 278	75 233
Grade	(g/t)	**1.36**	1.07	1.31
	(oz/t)	**0.039**	0.035	0.038

Financial				
Revenue	(Rm)	**409**	1 500	1 320
Revenue	(US$m)	**31**	110	91
Average gold price received	(R/kg)	**550 956**	544 442	564 272
	(US$/oz)	**1 283**	1 246	1 210
Cash operating cost	(Rm)	**228**	1 214	1 082
	(US$m)	**17**	89	75
Production profit	(Rm)	**175**	186	108
	(US$m)	**14**	14	7
Capital expenditure [2]	(Rm)	**1 563**	1 335	121
	(US$m)	**122**	98	8
Cash operating cost	(R/kg)	**287 028**	466 847	479 196
	(US$/oz)	**669**	1 068	1 028
All-in sustaining cost	(R/kg)	**466 256**	543 186	597 398
	(US$/oz)	**1 094**	1 241	1 282
Safety				
Number of fatalities		**0**	0	1
Lost-time injury frequency rate per million hours worked		**0**	0.52	1.39
Environment				
Electricity consumption	(GWh)	**59**	53	54
Water consumption – primary activities	(ML)	**1 359**	1 309	715
Greenhouse gas emissions	(000t CO_2e)	**57**	53	55
Intensity data per tonne treated				
– energy		**0.02**	0.02	0.03
– water		**0.54**	0.45	0.41
– greenhouse gas emissions		**0.02**	0.07	0.03
Number of reportable environmental incidents		**0**	0	0

** The FY16 key statistics in the table above represent Harmony's 50% interest in the Hidden Valley mine and are not comparable to the FY17 or FY18 results. Following Harmony's acquisition of the remaining 50% of Hidden Valley in October 2016, Hidden Valley has been accounted for at 100% from the end of October 2016.*

[1] Employees of the Hidden Valley joint venture

[2] FY18 gold produced includes 2 068kg (66 499oz) and gold sold 2 021kg (64 976oz) capitalised as part of pre-stripping of stages 5 and 6 (FY17:364kg, 11 713oz), (FY16:nil). Revenue of R1 045 million (US$85 million) and the associated costs were capitalised during FY18 (FY17: R195 million, US$14 million).

Other salient features	
Status of operation	Open-pit mining operation producing gold and silver. The pre-stripping of stage 5 commenced in October 2016. Commercial levels of production achieved in the June 2018 production month.
Life of mine	5 years

Compliance and certification	Mining lease approved by Papua New Guinea authorities

Mineral reserves as at 30 June 2018 (including Hamata)

Gold	Proved reserves			Probable reserves			Total mineral reserves		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	1.9	0.92	2	23.8	1.63	39	25.7	1.58	41
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	2.1	0.027	57	26.3	0.048	1 250	28.4	0.046	1 306

The Hidden Valley mine is an open pit gold and silver mine, situated in the Morobe Province in Papua New Guinea, some 210km northwest of Port Moresby. Harmony increased its interest in Hidden Valley to 100% by acquiring the remaining 50% in October 2016 (FY17).

The major gold and silver deposits of the Morobe goldfield and Hidden Valley are hosted in the Wau Graben. Ore mined is treated at the Hidden Valley processing plant.

The acquisition of full ownership of Hidden Valley followed the decision to invest primarily in the further development of the Hidden Valley- Kaveroi stage 5 and 6 cutbacks. Excellent project delivery was demonstrated at Hidden Valley during the investment phase in the stage 5 and 6 cut backs, achieving an excellent safety performance, expenditure below budget and achieving commercial levels of production within schedule.

The safety performance at Hidden Valley over the investment phase was commendable – zero fatalities and lost-time injuries were achieved in FY18. There were no fatalities in FY17. A culture of zero harm, safety coaching and the use of critical control management are driving the safety performance at Hidden Valley.

The total investment capital amounted to net US$175 million (planned investment of net US$180 million, of which US$68 million was spent in FY17). Commercial levels of production were achieved in the June 2018 month.

A planned major four-month plant and processing shutdown commenced in August 2017. Depleted ore stockpiles and a lack of mined ore to feed the plant necessitated the shutdown, during which extensive upgrades and maintenance were undertaken. This project was completed approximately 15 days ahead of schedule during November 2017.

The operational performance for FY18 and FY17 are not comparable due to the abovementioned plant shutdown.

Total capital expenditure increased by 17% in FY18 to R1 563 million (increased by 24% to US$122 million).

Stripping of the cutbacks will continue over the next three years. Hidden Valley is expected to produce approximately 180 000oz to 200 000oz of gold and 3Moz of silver annually at an average all-in sustaining cost of US$950/oz over its remaining life of mine.

EXPLORATION AND PROJECTS

Exploration is vital to ensuring the long-term economic sustainability of Harmony as a mining company.

HIGHLIGHTS AND MILESTONES FY18

Papua New Guinea

- Advancement of the Wafi-Golpu project – updated feasibility study released in March 2018
- Brownfield focus around Hidden Valley

South Africa

- Kalgold brownfield exploration programme – prefeasibility study underway to optimise Kalgold operation
- Tailings retreatment expansion underway

WHY EXPLORATION IS IMPORTANT

Exploration and the discovery of significant and viable orebodies for development are essential to the sustainability of Harmony. By ensuring a future production pipeline of reserves. Harmony will be able to operate sustainably and profitably in the long term.

OUR APPROACH

Our exploration strategy is aimed largely at pursuing brownfields exploration targets close to existing infrastructure. This will drive short to medium term organic ore reserve replacement and growth to support our current strategy of increasing quality ounces and to mitigate the risk of a depleting ore reserve base.

Key work streams underpinning the FY18 exploration programme include brownfield exploration at:

- Hidden Valley in Papua New Guinea and Kalgold in South Africa to optimise existing open-pit operations and extend their mine lives
- Our underground operations in South Africa

Wafi-Golpu, a greenfield exploration project, remains an excellent long-term opportunity for Harmony.

PERFORMANCE FY18

Papua New Guinea

The case for exploration investment in Papua New Guinea remains strong. Harmony closely monitors the environment for new opportunities to enhance our project portfolio, in line with core operating capabilities. The country is hugely prospective and under-explored. Harmony has an established track record of discovery and adding value through cost-effective exploration.

Key work streams underpinning the FY18 exploration programme included:

- The Wafi-Golpu copper-gold deposit feasibility study update, and progressing of the special mining lease application
- Near-mine exploration and projects in support of extending mine life at Hidden Valley

- Maintenance of a greenfield exploration portfolio to enhance Harmony's world-class copper-gold footprint
- In FY18, we spent R407.4 million (US$37.0 million) (FY17: R431 million; US$32 million) on exploration

Wafi-Golpu update

The feasibility study for Wafi-Golpu was updated to incorporate the recommendations of previous studies and additional orebody data obtained. The proposed project involves development of the high-grade Golpu orebody and optimised capital expenditure profile, rate of production and cash flow.

The updated feasibility study confirmed a staged approach to project development and that block caving was the preferred mining method.

Supporting documents for the special mining lease application were submitted in March 2018 and the environmental impact statement in June 2018. Granting of the special mining licence is expected by June 2019 to be followed by board approval and the securing of a funding solution.

Key statistics for the Wafi-Golpu project (100% basis) include:

- Estimated life of mine of more than 28 years
- Steady state production estimated at 161 000t of copper, 266 000oz of gold (more than 1.4Moz of gold equivalents ounces annually)
- Above average recovery grades:
  - Gold – 0.90g/t,
  - Copper – 1.27%
- Estimated costs of US$0.26/lb are in the lowest decile for copper production
  - expressed in terms of gold, an all-in sustaining cost of minus US$2 128/oz is estimated

Hidden Valley brownfield exploration

Following the acquisition of 100% of the contiguous tenement package surrounding the Hidden Valley mining lease in FY17, our exploration strategy shifted its focus to near-mine brownfield targets covering an area of 502km^2 of tenure, centered on one of Papua New Guinea's premier goldfields and including the historic mining centre at Wau.

Prefeasibility studies have begun on the down dip extensions of the Hidden Valley ore body to extend the mine life. Target generation to identify potential high-grade satellite epithermal gold deposits progressed and a systematic grid-based geochemical coverage over the Hidden Valley mining lease was completed. Initial drill intercepts together with widespread alteration and gold geochemical footprint highlighted the excellent prospectivity at the historic mining centre at Wau.

Greenfield exploration and tenement rationalisation

Regional greenfield exploration expenditure was scaled back in favour of near-mine brownfield exploration. Harmony's (100%) tenement holding reduced to 963.75km^2 (FY17: 1 265km^2). The joint venture (Harmony 50%) tenement holding was reduced to 325.3km^2 (FY17: 495km^2).

Exploration licence 1629 was held under option to purchase by Pacific Niugini Minerals who are also responsible for maintaining the joint venture tenement in good standing. Harmony continues to manage exploration on the portfolio tenement package on behalf of the exploration portfolio joint venture participants (ultimate parent companies: Newcrest 50%; Harmony 50%).

South Africa

In FY18, Harmony spent R50 million on exploration in South Africa with expenditure of R88 million planned for FY19.

Underground exploration

A total of 62 961m (FY17: 62 860m) was drilled across Harmony's underground operations in South Africa. Underground exploration drilling provides information to determine the elevation and grade of the targeted reef horizon as well as on geological features in the immediate surrounding lithology. It assists in structural geological interpretation and evaluation of specific areas as well as in the compilation of regional structural geological and evaluation models. Mine geologists and planners use drilling information to determine a mine's development strategy and eventually its economic viability.

Brownfield exploration – Kalgold

The Kalgold operation is located approximately 276km west of Johannesburg, in North West Province, South Africa. Harmony holds 448 square kilometres of highly prospective tenure over the Kraaipan Greenstone Belt which includes the Kalahari Goldridge Mining Right (Kalgold), its associated open-pit gold mines and several adjacent prospecting rights.
The titles provide an ideal mix of near-mine and new mine opportunities that can leverage existing infrastructure and be fast-tracked into production with aggressive exploration.

The brownfield drill campaign undertaken at Kalgold has proven a highlight of Harmony's FY18 exploration programme. In all, 20,872m were drilled. Intercepts returned over the course of the programme outlined an expanded, robust mineralised system with over 2.1 kilometres of strike, extending to in excess of 300m below surface.

The deposit remains open to the south and at depth. Infill and scoping drilling continues. Several high-grade satellite targets have also been identified for follow-up work in FY19.

The expanded base presents an exceptional organic growth opportunity for Harmony and mining studies have begun to test a range of concepts to achieve a step change in the production profile of the operation through higher mining and throughput rates.

Tailings retreatment expansion

- Several tailings retreatment growth projects are currently underway to optimise available surface sources in the Free State. These include:
- **Central Plant tailings retreatment facility:** a feasibility study has begun into the planned expansion and the potential to increase monthly capacity from 300 000 tonnes to 500 000 tonnes
- **Retreatment of newly-acquired Mispah tailings:** A prefeasibility study is being conducted to investigate the economic viability of retreating the tailings material stored in the Mispah dams, which were acquired in the Moab Khotsong transaction
- **Saints tailings retreatment project:** Expansion underway

Other areas of exploration

- **B-Reef:** High-grade B Reef areas have been identified at Tshepong which will become part of the life of mine plan. B Reef exploration began at Phakisa during FY18.
- **Doornkop:** The seismic survey and 3D modelling completed for Doornkop results in geological model that significantly improves the confidence in the structure of the ore body.
- **Target North:** Three exploration boreholes are planned for FY19.

CORPORATE GOVERNANCE

"The board subscribes to the principles of good corporate governance"

Introduction

Harmony's board of directors (the board) subscribes to the principles of good corporate governance. The board supports the definition of corporate governance as being the exercise of ethical and effective leadership towards the achievement of the following governance outcomes:

- Ethical culture and responsible corporate citizenship
- Good performance and value creation
- Effective control
- Legitimacy

These objectives form the foundation and framework for the corporate governance report of the board as set out below.

The King IV Report on Corporate Governance for South Africa, 2016 which was launched on 1 November 2016 (King IV) has elevated the call on boards and other governing bodies to apply their own minds to the appropriate practices in each organisation to illustrate the application of the governance principles as contained in the Code on Corporate Governance that is included in King IV. Discussed below are the practices within Harmony that the board believes confirm Harmony's application of the King IV principles. Considering that the core messages of good corporate governance have remained mainly unchanged throughout the various King reports to date, together with the Harmony board's long-standing commitment to good corporate governance, the board is comfortable that sufficient practices are and have been in place to promote Harmony's reputation as an ethical, reputable and legitimate organisation and a responsible corporate citizen.

In an attempt to focus on high-level, material practices and detail, additional information supporting specific matters is cross-referenced and linked in the report where appropriate.

Ethical culture and responsible corporate citizenship

Ethical leadership

The board fully appreciates that it has to lead by example. Each member of the board is therefore expected to at all times exhibit the characteristics of integrity, competence, responsibility, accountability, fairness and transparency in his or her conduct. Collectively, the board's conduct, activities and decision-making are characterised by these attributes, which also form part of the regular assessment of the board and individual directors' performance.

The board charter elaborates on the standard of conduct expected from board members. In addition, the board policy on the declaration of interests not only limits the potential for a conflict of interest but also ensures that, in cases where conflict cannot be avoided, it is properly disclosed and proactively managed within the boundaries of the law and principles of good governance.

Organisational ethics

The board sets the group's approach to ethics. Oversight and monitoring of organisational ethics is the mandated responsibility of the social and ethics committee which fulfils this role on behalf of the board. Details of the arrangements for governing and managing ethics, key focus areas during the reporting period, measures taken to monitor organisational ethics and planned areas of future focus are contained in the *Social and ethics committee: chairman's report*.

Responsible corporate citizenship

The mining industry introduces a unique responsibility and opportunity to the group to be a responsible corporate citizen. Although the board sets the tone and direction for the manner in which corporate citizenship should be approached and managed, ongoing oversight and monitoring of the group's performance against set targets again forms part of the mandate of the social and ethics committee. Extensive detail and information on the consequences of the group's activities and outputs that affect its status as a responsible corporate citizen with relevant measures and targets are given elsewhere in the integrated annual report relating to the following areas:

- Workplace – *Safety and health; Employee engagement, Socio-economic development; Remuneration report;*
- Economy – *Employee engagement and Socio-economic development*
- Society – *Employee engagement and Socio-economic development*, which includes reports on corporate social investment and human rights
- Environment – *Environmental management and stewardship*

Good performance and value creation

Strategy

The board is responsible for approving the group's short-, medium- and long-term strategy as formulated and developed by management. In doing so, the board focuses on numerous critical aspects of the strategy including, among others, the legitimate and reasonable needs, interests and expectations of material stakeholders as well as the impact of the group's activities and output on the various forms of capital employed as part of the business process. The risks and opportunities connected to the triple context (economy, society and the environment) within which the group operates are integral to the board's strategic reviews of the business.

Policies and operational plans that support the approved strategy are submitted regularly by management for review and formal board approval. The board attends an annual "bosberaad" specifically dedicated to confirm and review the company's strategy. Strategy also forms part of the ongoing conversation in the boardroom and is a key agenda item at every board meeting. Ongoing oversight of the implementation of strategy and operational plans takes place against agreed performance measures and targets.

As the company's reputation as a responsible corporate citizen is an invaluable attribute and asset, the consequences of activities and our outputs, in terms of the various capitals employed, are continuously assessed by the board through its subsidiary committees. This will ensure that we are able to respond responsibly and limit any negative consequences of our activities, to the extent reasonably possible.

In addition, the board continuously monitors the reliance of the group on these capital inputs – employees, financial capital, the environment, our reserves, communities and society at large, our mining infrastructure and our intellectual and technological know-how – as well as the solvency and liquidity and going concern status of Harmony.

Reporting

In protecting and enhancing the legitimacy and reputation of the group, the board ensures that comprehensive reporting is done on different platforms. In addition to the integrated annual report, a separate report to shareholders as well as a financial report and a Mineral resources and mineral reserves report are published. The group's sustainable development performance, as measured against the Global Reporting Initiative Scorecard, also forms part of the group's publications. It is the board's intention to not only meet minimum legal requirements but also the legitimate and reasonable information needs of material stakeholders. The board is comfortable with management's bases for determining materiality for the purposes of deciding what information should be included in our external reports. The audit and risk committee, with the assistance of the social and ethics committee, has also been tasked with reviewing all external reports to verify the integrity of the information contained therein.

Political donations

Relevant Global Reporting Initiative indicators: G4-SO6

Harmony supports the democratic processes in South Africa and Papua New Guinea, and contributes to their political parties. A policy relating to political donations has been adopted by the company. Harmony made no political party donations in the year under review.

Effective control: board structures and processes

Role of the board

The board exercises its leadership role by:

- steering the group and setting its strategic direction
- approving policy and planning that gives effect to the direction provided
- overseeing and monitoring implementation and execution by management
- ensuring accountability for the group's performance by means of, among others, reporting and disclosures
- The role and function of the board, including guidelines relating to the board's composition and procedures, are documented in detail in the board charter, which is reviewed regularly to ensure that it remains relevant and applicable. A protocol is in place to be followed in the event of any of the board members or committees needing to obtain independent, external professional advice at the cost of the company on matters within the scope of their duties. Non-executive directors are also aware of the protocol to be followed for requisitioning documentation from, and setting up meetings with, management. Notwithstanding, board members have direct and unfettered access to the chief audit executive, the company secretary and members of executive management.

Based on its annual work plan, the board is satisfied that it fulfilled its responsibilities during the period under review in accordance with its charter.

Information on the number of board meetings held by the board and attendance can be found in this report.

Board composition, chairman and independence

The Harmony board has 15 highly experienced and reputable members, three of whom are executive directors. The board increased its wealth of experience by appointing Mr Max Vuyisile Sisulu as an independent non-executive director effective 31 January 2018.

In an effort to ensure that the board and its committees remain refreshed, the board appointed Mr Mavuso Msimang as the new lead independent director, effective 10 May 2018. Additionally, the board changed the composition of its committees as follows:

- Ms Fikile De Buck was appointed as the new chairman of the audit and risk committee, replacing Mr John Wetton who remains a member of this committee.
- Mr Modise Motloba was appointed as the new chairman of the investment committee, replacing Dr Simo Lushaba who remains a member of this committee.
- Mr Mavuso Msimang was appointed as the new chairman of the nomination committee, replacing Ms Fikile De Buck who remains a member of this committee.
- Dr Simo Lushaba was appointed as the new chairman of the social and ethics committee, replacing Mr Modise Motloba who remains a member of this committee.
- Mr Max Sisulu was appointed as a new member of the social and ethics committee.

The chairman of the board, Mr Patrice Motsepe, is a non-executive director but is not classified as independent. The board is satisfied that the new lead independent director, Mr Mavuso Msimang, meets the requirements for an independent director under the Companies Act, Act 71 of 2008 (the Companies Act) and King IV, and any other criteria evidencing objectivity and independence established by the board. The duties of the chairman as well as the lead independent director have been captured in the board charter and are based on the recommendations of King IV. The roles of the chief executive officer and chairman are separate.

In addition to the chairman and lead independent director, the board also has a deputy chairman, Mr Modise Motloba. These appointments are all reviewed annually and form part of the board's succession plan for the position of chairman.

Guidance provided by King IV, as far as the board chairman's membership of board committees is concerned, has been applied and the board chairman is only a member of the nomination committee.

The nomination committee is chaired by the lead independent director.

Profiles of all board members can be found in the *Board of directors* in this report.

The majority of the non-executive directors are classified as independent and the independence of these board members has been reviewed by the nomination committee. The board appreciates that independence is first and foremost a state of mind and all board members, notwithstanding their categorisation, are expected to act independently and with unfettered discretion at all times.

This expectation is also confirmed in the board charter.

A number of the independent non-executive directors have served in this capacity for periods longer than nine years. They are:

Ms Fikile De Buck – 12 years

Mr Joaquim Chissano – 13 years

Mr Modise Motloba – 14 years

Dr Simo Lushaba – 16 years

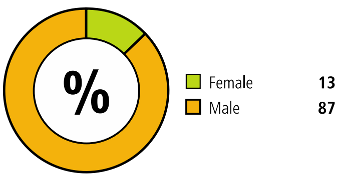
The nomination committee specifically assessed the independence of these individuals on behalf of the board and has concluded that the members exercise objective judgement at all times. In addition, there are no interests, positions, associations or relationships which, when judged from the perspective of a reasonable and informed third party, are likely to influence the members unduly or cause bias in their decision-making. The wealth of experience of these members, in addition to their being known as reputable individuals of integrity and great character, makes their ongoing input and contribution an invaluable asset to the board and the group.

Diversity is a key focus area for the board. Two board members are female and 10 members are black. A policy on gender and race diversity at board level has been formally adopted. Although no voluntary targets have been set, the appointment of two additional black female directors is under review. Considering all aspects relating to the composition of the board, the board is satisfied that its composition reflects the appropriate mix of knowledge, skills, experience and independence. In addition, the composition of the board and its leadership structure ensures that there is a balance of power in the boardroom and that no one individual has unfettered authority of decision-making.

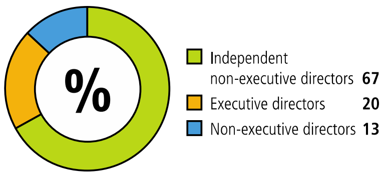
As required by the provisions of the Harmony Memorandum of Incorporation, a third of the non-executive directors are expected to retire by rotation at each annual general meeting of the company. The names and profiles of these members have been included in the notice of the 2018 annual general meeting in the Report to shareholders 2018. The board is comfortable in recommending their re-appointment to shareholders.

Board characteristics:

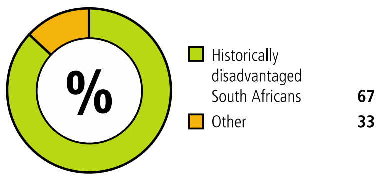
By gender



By director



By historically disadvantaged South Africans



Nomination, election and appointment

The nomination committee is also tasked with identifying potential candidates for appointment to the board while the actual appointment is a matter for the board as a whole. The collective knowledge, skills and experience required by the board as well as diversity performance are all aspects considered by the board before appropriate candidates are identified for nomination. The nomination committee conducts the necessary independence checks and investigations, as recommended by King IV, in respect of potential candidates.

Formal letters of appointment are provided to all new board members. In addition, new board members participate in an extensive induction programme to enable them to make the maximum contribution within the shortest possible time. Ongoing mentorship is provided to members with no or limited governance experience and they are encouraged to undergo appropriate training. Provision has also been made in the board's annual work plan for regular briefings on legal and corporate governance developments, as well as risks and changes in the external environment of the group.

Conflicts of interest

Each member of the board is required, among others, to submit a general declaration of financial, economic and other relevant interests and to update these general declarations as and when necessary as a result of significant changes. In addition, the declaration of interests in any matter on the agenda of a meeting of the board or a board committee is a standard item at the start of every meeting. In the event of a potential conflict being declared, the board proactively manages such conflict within the boundaries of the law.

Board committees

The board has delegated particular roles and responsibilities to standing committees based on relevant legal requirements as well as on what is appropriate for the group and to achieve the objectives of delegation. The board recognises that duties and responsibilities can be delegated but that accountability cannot be abdicated. The board therefore remains ultimately accountable.

The following committees have been established:

- Audit and risk committee
- Remuneration committee
- Nomination committee
- Social and ethics committee
- Technical committee
- Investment committee

Disclosures in respect of each committee can be found from in this report.

Formal terms of reference have been adopted for each board committee and are reviewed annually (and when necessary) to ensure that the content remains appropriate and relevant. The terms of reference address, as a minimum, the recommended items in King IV.

In considering the membership of board committees, the board, with the assistance of the nomination committee, is mindful of the need for effective collaboration through cross-membership between committees, where required. The timing of committee meetings is co-ordinated so as to facilitate and enhance the effective functioning of and contribution made by each of the committees. The duties and responsibilities of each committee have been documented so as to clearly define the specific role and positioning of each committee in relation to topics that may be within the mandate of more than one committee. Committee membership has also been addressed to ensure a balanced distribution of power across committees so that no person has the ability to dominate decision-making and no undue reliance is placed on any one person.

The board is comfortable that each committee as a whole has the necessary knowledge, skills, experience and capacity to execute its duties effectively and with reasonable care and diligence. Each committee has, as a minimum, three members. Members of the executive and senior management are invited to attend committee meetings as deemed appropriate and necessary for the effective functioning of the committee.

Any board member who is not a member of a specific committee is entitled to attend meetings of a board committee as an observer but is not entitled to participate without the consent of the committee chairman. Such members have no vote in meetings and will not be entitled to fees for attendance, unless specifically agreed by the board and provided for in the board fee structure as approved by shareholders.

The board considers the recommendations as provided by board committees in matters requiring board approval but remains responsible for applying its collective mind to the information, opinions, recommendations, reports and statements presented by the committees.

Board performance evaluations

The board fully supports the notion that an appropriate evaluation of the board and its various structures is a value adding exercise that facilitates the continued improvement of the board's performance and effectiveness. For this reason a formal self-evaluation process was again undertaken during the past year and included an assessment of the performance of the board, its chairman and individual members as well as the board committees, chief executive officer and company secretary.

Overall, the self-evaluation reconfirmed that the board and board committees were considered to be:

- highly effective
- appropriately positioned to discharge their governance responsibilities and that the board is well supported by its committees
- working as a cohesive unit and that the highest ethical standards are applied in deliberations and decision-making, thus enabling the board to provide effective leadership based on an ethical foundation

Considering the outcome of the evaluation process, the board is satisfied that the process is improving its performance and effectiveness.

The following matters were highlighted as further areas for improvement:

- The board has initiated a search process for the appointment of two additional black women to the board. The need for women with the necessary skills to serve on the audit and risk committee and the investment committee has also been identified
- Younger board members will be included in search criteria when new board members are identified
- The board has initiated a search process for the appointment of an additional board member with the necessary technical skills to serve on the technical committee
- Board papers are to be circulated at least seven days prior to board meetings
- Board meeting dates to be confirmed well in advance of the new calendar year
- Cyber security has been included as a topic for board training and information sessions

Appointment and delegation to management

The board is responsible for appointing the chief executive officer on the recommendation of the nomination committee. Harmony's chief executive officer is responsible for leading implementation and execution of the board-approved strategy, policy and operational planning, and serves as a link between the board and management.

He is accountable and reports to the board. The chief executive officer is not a member of the remuneration, audit or nomination committees.

He does however attend meetings of these committees as and when required for him to contribute insights and information.

The board monitors the chief executive officer's performance. Succession planning for this position forms part of the executive succession plan that is monitored on behalf of the board by the nomination committee. An emergency succession plan is also in place.

A formal delegation of authority framework is in place and is reviewed regularly by the board to ensure its appropriateness and relevance to the business. The delegation of authority addresses the authority to appoint executives who may serve as ex officio executive members of the board and to make other executive appointments.

The board has identified key management functions and ensures that these functions are headed by individuals with the necessary competence and authority, and are adequately resourced. Executive succession planning includes plans for executive management succession and other key positions in order to provide continuity of leadership. These plans are reviewed periodically by the nomination committee on behalf of the board.

Company secretary

The board has direct access to the company secretary who provides professional and independent guidance to the board as a whole and to members individually on corporate governance and legal duties. The company secretary also supports the board in co-ordinating the effective and efficient functioning of the board and its committees.

The company secretary is a full time employee of Harmony and also oversees the legal function in the group. She is a qualified attorney, conveyancer and notary and has been a company secretary for the past 14 years (11 years in a listed environment). Her summary resumé is included in this report. In order to facilitate and enhance the independence and effectiveness of the company secretary, the board ensures that the office of the company secretary is empowered and that the position carries the necessary authority. The remuneration committee considers and approves the remuneration of the company secretary on behalf of the board.

The company secretary has unfettered access to the board and, at all times, retains an arms-length relationship with the board in order to enhance the independence of the position. The company secretary is not a member of the board but, being accountable to the board, reports to the board via the chairman on all statutory duties and functions performed in connection with the board.

The board annually assesses the performance and independence of the company secretary and also confirms that the company secretary has the necessary competence, gravitas and objectivity to provide independent guidance and support at the highest level of decision-making in the group. The company secretary's performance and independence were assessed at the end of the year under review, and the board is satisfied with her competence, experience and qualifications.

The board is therefore comfortable that the arrangements in place for accessing professional corporate governance services are effective.

Effective control – governance functional areas

Risk governance

The board appreciates that risk is integral to the way it makes decisions and executes its duties. Risk governance in the boardroom encompasses both risks and opportunities as well as a consideration of the potential positive and negative effects of any risks on the achievement of the group's objectives.

The group's risk appetite and tolerance levels, which support its strategic objectives, are considered annually. The board is supported in this area by the audit and risk committee.

Responsibility for implementing and executing effective risk management is delegated by the board to management. The board acknowledges the need to integrate and embed risk management in the business activities and culture of the group. The audit and risk committee is tasked with ensuring independent assurance on the effectiveness of risk management in the group, and when deemed necessary and appropriate.

Internal audit conducted a gap analysis on corporate governance in the company. The outcome revealed that the company was materially compliant. A full enterprise risk management assessment will be conducted during the course of the coming year.

The results of the ongoing oversight of risk management as well as detail on the nature and extent of the risks and opportunities that the group is willing to take are disclosed in *Managing our risks and opportunities*. An overview of the arrangements for governing and managing risk, key areas of focus during the reporting period, actions taken to monitor the effectiveness of risk management and planned areas of future focus are also included.

Technology and information governance

The board accepts responsibility for governing technology and information in a way that supports the group in setting and achieving its strategic objectives. The board is supported in this area by the audit and risk committee.

An information technology (IT) steering committee, chaired by the financial director and with its membership covering the head of information technology and members of the group executive committee, has a well-defined charter and is responsible for the oversight of information and technology direction, investment and alignment with business strategy
and priorities.

Management adopted the Control Objectives for Information and Related Technologies (COBIT), a framework published by Information Systems Audit and Control Association (ISACA) for IT management and IT governance. COBIT provides a set of recommended best practices for governance and control processes of information systems and technology with the goal of aligning IT with business. COBIT is positioned at a high level and has been aligned and harmonised with other, more detailed IT standards and good practices.
Internal audit provides assurance to management and the audit and risk committee on the effectiveness of the governance of information and technology.

Compliance governance

Relevant Global Reporting Initiative indicators: G4-SO7, G4-SO8

The foundation of our corporate governance is compliance with the Companies Act, the requirements of the JSE, where we have our primary listing, and of the New York Stock Exchange as well as with the King IV Report and related principles and codes of good corporate governance. Harmony also complies voluntarily with the principles of the United Nations Global Compact, International Council on Mining and Metals, the Global Reporting Initiative and the International Cyanide Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold (Cyanide Code).

Being an ethical and responsible corporate citizen requires zero tolerance of any incidences of legislative non-compliance. In addition, compliance with adopted, non-binding rules, codes and standards is essential in supporting the achievement of strategic business objectives.

Corporate governance policy

Acknowledging the significance of compliance, the board, through the audit and risk committee, adopted a formal corporate governance and compliance policy which sets out the principles of good corporate governance for all employees at all operational levels as well as the board.

Code of conduct

Developed to respond to the challenge of ethical conduct in the business environment, our code of conduct commits Harmony, our employees and our contractors to the highest moral standards, free from conflicts of interest. The board reviews the code of conduct at least every second year, while its application within Harmony is continually monitored by management. The code of conduct was reviewed and updated during FY18.
Our ethics programme is also subject to independent assurance as part of the internal audit coverage plan.

The code of conduct addresses critical issues including anti-corruption, gifts and entertainment and declarations of interests. It encourages employees and other stakeholders to report any suspected irregularities. This can be done anonymously through a 24-hour crime line (which is managed by an independent consulting firm), as well as other channels. All incidents reported are investigated and monitored by the white-collar crime committee, which comprises managers representing various disciplines in the company and reports to the management ethics committee.

The identity of any employee or stakeholder who reports non-compliance with the code of conduct is protected. Our anonymous ethics hotline numbers, which are widely advertised throughout the organisation, are:

- South Africa: +27 (0) 800 204 256
- Papua New Guinea: +61 448 188 463
- Australia: +61 1800 940 949

Whistleblowing policy

Our whistleblowing policy encourages shareholders, employees, service providers, contractors and members of the public to report practices at any of our workplaces that are in conflict with any law, regulation, legal obligation, ethical codes or governance policies. It also provides a mechanism for our stakeholders to report these practices internally, in confidence, independent of line management, and anonymously if they so wish.

Ethics officer and ethics management committee

An ethics officer has been appointed to ensure that the ethics management plan and programme is executed sufficiently and is duly communicated throughout the organisation. Our management ethics committee monitors our ethical culture and integrity with the assistance of the ethics officer. With the assistance of our ethics officer, the following were introduced and developed further during the year:

- An electronic gift register to monitor the receipt of gifts by our employees
- Streamlining the process of employees making personal declarations of interests in terms of the code of conduct
- Introducing a vendor ethics screening process to ensure that we do business with vendors that supports Harmony's values
- Implementing a fraud risk register to identify risk areas and any shortcomings in procedures and processes during formal investigations into misconduct
- Formalising the investigation methodology to ensure effective and transparent investigation processes

The management ethics committee also assesses declarations of interest in terms of the code of conduct and provides feedback to the executive committee, which then reports to the board's social and ethics committee. As a result, ethics are discussed and examined at every level of management within the company.

Protection of Personal Information Act

Harmony has made significant progress in the implementation of the requirements of the Protection of Personal Information Act (PoPI). Harmony's PoPI awareness campaign has proven to be very successful.

In accordance with PoPI, the information and compliance officer manages the company's information, ensures compliance with PoPI, manages the company's records and archives and ensures compliance with the company's regulatory environment in general. The information and compliance officer compiles information and reports on the status of legislative compliance at the audit and risk committee meetings.

Promotion of Access to Information Act

Harmony complies with the Promotion of Access to Information Act, which protects the constitutional right to information that is required to exercise or protect a right. The purpose of this legislation is to foster a culture of transparency and accountability in public and private bodies, and to promote a society in which all South Africans are enabled to enjoy their rights. The company received two requests for access to information in terms of this legislation during FY18.

Broad-Based Black Economic Empowerment Act

The annual compliance report in line with section 13G(2) of this Act is close to finalisation and will be available on the company's website.

Dealing in Harmony shares

During price-sensitive periods, our employees and directors are prohibited from dealing in Harmony shares. Written notice of these restricted periods is communicated to employees and directors by the company secretary. In terms of regulatory and governance standards, directors and employees are required to disclose any dealings in Harmony shares in accordance with the JSE Listings Requirements. The clearance procedure for directors and the company secretary to deal in Harmony shares is regulated by the company's policy on trading in shares and insider trading. The policy was reviewed during FY18.

Significant fines

Harmony paid no significant fines in any of its areas of operation and had no actions brought against it for anti-competitive behaviour or for anti-trust or monopoly practices during FY18.

Foreign private issuers

New York Stock Exchange foreign private issuers, such as Harmony, must briefly highlight any significant ways in which their corporate governance practices differ from those followed by United States domestic companies subject to the listing standards of the New York Stock Exchange. A brief summary of these differences can be found in our 2018 Form 20-F filed with the United States Securities and Exchange Commission.

Remuneration governance

Attracting and retaining the required skills depends to a large extent on the remuneration levels and practices in any business. It is therefore vital to ensure that the group remunerates fairly, responsibly and transparently so as to promote the achievement of strategic objectives and positive outcomes in the short, medium and long term. The board is supported in this area by the remuneration committee.

Extensive detail on group remuneration is provided in the *Remuneration report*. In addition, provision has been made in the notice of the 2018 annual general meeting for a non-binding advisory vote of shareholders on both the remuneration policy as well as on the remuneration implementation report.

Assurance and internal audit

The audit and risk committee oversees the arrangements for assurance services and functions on behalf of the board to ensure that those arrangements are effective in achieving the objectives of an enabling control environment and supporting the integrity of information, for internal decision-making and external reporting purposes.

A combined assurance model is applied that effectively covers the group's significant risks and material matters through a combination of internal functions and external service providers.

Notwithstanding the output of the combined assurance model, board members are expected to apply an enquiring mind, form their own opinion on the integrity of the information and reports, and the degree to which an effective control environment has been achieved.

Internal audit plays an important part in the overall assurance approach and effectiveness of the assurance model. The audit and risk committee oversees the internal audit function on behalf of the board. More information on the internal audit function is contained in the *Audit and risk committee: chairman's report*.

Legitimacy

Stakeholder relationships

In the interests of Harmony's reputation and its legitimacy, the board sets the direction for the group's approach to stakeholder relationships. An inclusive stakeholder-engagement model has been adopted that considers the legitimate needs, interests and expectations of all material stakeholders.

Information on the material stakeholders and the manner in which relationships with stakeholders are managed is provided in *Stakeholder engagement and our material issues* which also addresses, among others, the arrangements for governing and managing stakeholder relationships, key areas of focus during the reporting period, actions taken to monitor the effectiveness of stakeholder management and future focus areas.

Shareholders are encouraged to attend the Harmony annual general meeting, details of which are contained in the notice of the 2018 annual general meeting in the Report to shareholders 2018.

Board committees

During FY18, the board rotated the composition of its committees, effective 10 May 2018, to enhance committee effectiveness and corporate governance. The majority of the members of all board committees remained independent non-executive directors. All board committees were chaired by an independent non-executive director, except for the technical committee chaired by André Wilkens (a non- independent, non-executive director).

The board is confident that André's leadership as chairman of the technical committee is in the best interests of the company, based on his extensive knowledge of the specific areas of responsibilities of that committee.

A brief description of each board committee, its functions and what each committee achieved during FY18, follows.

Audit and risk committee			
Members			
Fikile De Buck*^ (chairman)	Dr Simo Lushaba*		
John Wetton*	Karabo Nondumo*		
Modise Motloba*			
** Independent non-executive^*	*Appointed as chairman of the committee on 10 May 2018*		

Description of committee's overall expertise and experience

A total combination of the following skills and experiences on the part of the individual members of this committee enables them to execute their duties as members of the audit and risk committee:

- Experience in accounting, investment banking, treasury services and fund management
- Roles on various other boards and industry bodies
- Governance experience
- Knowledge of business development in and around Africa
- Given their previous roles as chief financial officers, business managers and an external auditor, members have a good understanding of company finances, risk processes and controls

Primary functions

- Monitors the operation of an adequate system of internal control and control processes
- Monitors the preparation of accurate financial reporting and statements in compliance with all applicable legal and corporate governance requirements and accounting standards
- Monitors risk management, ensures that significant risks identified are appropriately addressed and supports the board in the overall governance of risk

Key activities and actions in FY18

For the actions of the audit and risk committee in FY18 refer to the Audit and risk committee chairman's report.

- Reviewed the company's quarterly and annual financial results
- Evaluated and considered Harmony's risks, as well as measures taken to mitigate those risks. In addition, the committee also considered and refined the company's risk appetite and tolerance levels
- Monitored the internal control environment in Harmony and found it to be effective
- Discussed the appropriateness of accounting principles, critical accounting policies, management judgments, estimates and impairments, all of which were found to be appropriate
- Considered the appointment of the external auditor, PricewaterhouseCoopers Inc, as the registered independent auditor for the ensuing year.
- Satisfied itself that the external audit firm, PricewaterhouseCoopers Inc, was suitable and independent from the company
- Evaluated the independence and effectiveness of the internal audit function
- Evaluated and coordinated the internal audit, external audit and sustainability assurance processes
- Received and considered reports from the external and internal auditors
- Reviewed and approved internal and external audit plans, terms of engagement and fees, as well as the nature and extent of non-audit services rendered by the external auditors
- Considered the appropriateness and expertise of the financial director, Frank Abbott, as well as that of the

finance function –both were found to be adequate and appropriate

- Considered whether information technology risks are adequately addressed and whether appropriate controls are in place to address these risks. The committee oversees and monitors the governance of information technology on behalf of the board, a task it views as a critical aspect of risk management
- Considered and confirmed the company as a going concern
- Considered and approved the company's corporate governance and compliance policy
- Reviewed and recommended the committee's terms of reference to the board for approval.

Remuneration committee

Members			
Vishnu Pillay* (chairman)	John Wetton*		
Fikile De Buck*	André Wilkens		
Dr Simo Lushaba*			

** Independent non-executive*

Description of committee's overall expertise and experience

A total combination of the following skills and experiences on the part of the individual members of this committee enables them to execute their duties as members of the remuneration committee:

- Experience in accounting, remuneration and financial management roles, as well as mining experience, allowing members to ensure our remuneration is aligned with industry standards, best practice and legislation
- Knowledge of the duties and responsibilities of the board and executive positions, allowing realistic key performance indicators to be related to remuneration

Primary functions

Ensures directors and executive management are fairly rewarded for their contribution to Harmony's performance

- Assists the board in monitoring, reviewing and approving Harmony's compensation policies and practices, and in the administration of its share incentive schemes
- Operates as an independent overseer of the group remuneration policy and makes recommendations to the board for final approval

Key activities and actions in FY18

- Reviewed the benefits and remuneration principles as applied to Harmony executive management
- Received and discussed a summary of the total suite of Harmony executive management incentive schemes in order to obtain a holistic view
- Reviewed and recommended the committee's terms of reference to the board for approval, following which the committee's work plan was accordingly updated
- Considered and recommended the remuneration policy and implementation report to the board for inclusion in the notice of annual general meeting for consideration by the shareholders as non-binding advisory resolutions. (see *Remuneration report*)
- Reviewed executive directors' and executive management's remuneration benchmarks and recommended their annual salary increases to the board for approval (see *Remuneration report*)
- Reviewed the annual salary increases of the company secretary and chief audit executive
- Considered and recommended the company's total incentive plan to the board for approval as well as the deferred share plan inclusion in the notice to the annual general meeting for approval by the shareholders (Report to shareholders)

Nomination committee

Members			
Mavuso Msimang*^ (chairman)	Modise Motloba*		
Joaquim Chissano*	Fikile De Buck*		
Dr Patrice Motsepe			

** Independent non-executive*
^ Appointed as chairman of the committee on 10 May 2018, independent non-executive director

Description of committee's overall expertise and experience

The following insights allow the committee to find and nominate individuals who will add value to our Harmony board in the areas that we require:

- Experience in the mining, financial, accounting and legal sectors
- Extensive experience in management and leadership roles
- Understanding of Harmony, its needs and the requirements of being a board member

Primary functions

- Ensures that procedures governing board appointments are formal and transparent
- Makes recommendations to the board on all new board appointments
- Reviews succession planning for directors and other members of the executive team and oversees the board's self-assessment process

Key activities and actions in FY18

- Reviewed succession planning for directors and other members of the executive team and oversaw the board's self-assessment process
- Reviewed and recommended for re-election directors who retire by rotation in terms of the company's memorandum of incorporation
- Reviewed and made recommendations on the composition, structure and size of the board and board committees, in line with the board's policy on gender and race diversity
- Considered the positions of the chairman and the deputy chairman of the board and the lead independent director and made recommendations to the board
- Reviewed and recommended the independence of non-executive directors (especially independent non-executives serving on the board for longer than nine years)
- Reviewed and recommended immediate and long-term succession plans for the board, the chairman of the board, the chief executive officer, executive management and the company secretary
- Considered the programme in place for the professional development and regular briefings on legal and corporate governance developments, risks and changes in the external environment of the organisation

Social and ethics committee	
Members	
Dr Simo Lushaba*^ (chairman)	Mavuso Msimang*
Joaquim Chissano*	John Wetton*
Fikile De Buck*	Modise Motloba*
Max Sisulu**	

** Independent non-executive ^ Appointed as chairman of the committee on 10 May 2018*
*** Appointed as member of the committee on 10 May 2018, independent non-executive director*

Description of committee's overall expertise and experience

A total combination of the following skills and experiences on the part of the individual members of this committee enables them to execute their duties as members of the social and ethics committee:

- Proven experience in the fields of sustainable and business development in Africa, community affairs, government relations, the drafting and implementing of charters, international relations and global leadership
- The collective experience of committee members brings with it the skills and relationships necessary to ensure Harmony can contribute to meaningful change through its social development and transformation work. In addition, this experience adds weight to the committee's ability to enforce the code of conduct within Harmony

Primary functions

- Oversees policy and strategies pertaining to occupational health and employee well-being, environmental management, corporate social responsibility, human resources, public safety and ethics management
- Monitors implementation of policies and strategies by executives and their management teams for each discipline referred to above
- Assesses Harmony's compliance against relevant regulations
- Reviews material issues in each of the above disciplines to evaluate their relevance in the reporting period, and to identify additional material issues that warrant reporting, including sustainability-related key performance indicators and levels of assurance

Key activities and actions in FY18

- Reviewed and recommended the social and ethics committee report to be included in the integrated annual report
- Reviewed and considered the social, economic, human capital and environmental issues affecting the company's business
- Reviewed and considered the effect that the company's operations had on the economic, social and environmental well-being of communities, as well as significant risks within the ambit of the committee's responsibilities
- Approved material elements of sustainability reporting and the key performance indicators which were externally assured
- Considered and monitored the company's employment relationships
- Attended an environmental site visit at Moab Khostong
- Reviewed and recommended changes to the committee's terms of reference to the board for approval. The committee's work plan was updated accordingly
- Considered and approved the third generation five-year social and labour plans
- Considered and approved the company's whistle blowing policy
- Reviewed and recommended the committee's terms of reference to the board for approval.

See *Social and ethics committee: chairman's report*

Investment committee

Members			
Modise Motloba*^ (chairman)	John Wetton*		
Ken Dicks*	André Wilkens		
Karabo Nondumo*	Dr Simo Lushaba*		
Vishnu Pillay*			

** Independent non-executive* *^ Appointed as chairman of the committee on 10 May 2018*

Description of committee's overall expertise and experience

The combination of the following skills equips the investment committee with knowledge of what reasonable returns on investments are and a thorough understanding of the investment process, as well as insight into what investors want:

- Occupy various roles on other boards
- Experience in entrepreneurship and business development
- Extensive knowledge of the mining, legal and financial industries

Primary functions

- Considers projects, acquisitions and disposals in line with Harmony's strategy and ensures that due diligence procedures are followed
- Conducts other investment-related functions designated by the board

Key activities and actions in FY18

- Considered investments, proposals, projects and proposed acquisitions in line with the board's approved delegation of authority and the committee's terms of reference
- Reviewed and recommended the acquisition of Moab Khotsong to the board for approval
- Attended a site visit for a detailed update on the Wafi-Golpu project feasibility study
- Reviewed and recommended the budget and business plans for FY19
- Reviewed and recommended the committee's terms of reference to the board for approval, following which the committee's work plan was accordingly updated
- Attended a site visit at Moab Khotsong

Technical committee

Members			
André Wilkens (chairman)	Vishnu Pillay*		
Ken Dicks*	Karabo Nondumo*		

** Independent non-executive*

Description of committee’s overall expertise and experience
• Decades of experience in the mining industry, particularly in gold, mining technology and mining engineering • Strong research skills This experience allows members to fully grasp the technical and operational challenges facing Harmony and lend their knowledge to the tasks required of them
Primary functions
• Provides a platform to discuss strategy, performance against targets, operational results, projects and safety • Informs the board of key developments, progress against objectives and the challenges facing operations • Reviews strategic plans before recommending such to the board for approval • Provides technical guidance and support to management
Key activities and actions in FY18
• Monitored exploration in South Africa and Papua New Guinea • Monitored all South African and Papua New Guinean operations • Reviewed and recommended to the board the company’s annual budget and business plans for FY19 • Monitored safety across all operations • Attended a site visit for a detailed update on the Wafi-Golpu project feasibility study • Reviewed and recommended the committee’s terms of reference to the board for approval. • Attended a site visit at Moab Khotsong

Board and board committee meeting attendance – FY18

	Board	Audit and risk	Nomination	Remuneration	Technical	Investment	Social and ethics
Number of meetings held during the year	**4**	**6**	**4**	**4**	****8**	****8**	*****7**
Dr Patrice Motsepe (chairman)	4	–	4	–	–	–	–
Modise Motloba^ (deputy chairman)	4	6	2	–	–	^2	7
Joaquim Chissano	2	–	1	–	–	–	3
Fikile De Buck	4	5	4	4	–	–	6
Ken Dicks	4	–	–	–	8	8	–
Simo Lushaba	3	4	–	3	–	7	^0
Mavuso Msimang	4	–	2	–	–	–	3
Karabo Nondumo	4	5	–	–	8	8	–
Vishnu Pillay	3	–	–	4	6	6	–
John Wetton	4	6	–	4	–	8	7
André Wilkens	4	–	–	4	8	8	–
Max Sisulu*	1	–	–	–	–	–	^0
Peter Steenkamp	4	–	–	–	–	–	–
Frank Abbott	4	–	–	–	–	–	–
Mashego Mashego	4	–	–	–	–	–	–

– *Not applicable*
* *Appointed to board on 31 January 2018*
** *Includes three site visits*
*** *Includes two site visits*
^ *Appointed to committee to 10 May 2018*

BOARD OF DIRECTORS

Chairman

Dr Patrice Motsepe (56)
BA, LLB, Doctorate of Commerce (Honorius Causa), Doctor of Management and Commerce (Honorius Causa)

- Appointed a director and non-independent non-executive chairman on 23 September 2003
- Member of the nomination committee

Independent non-executive deputy chairman

Modise Motloba (52)
BSc, Diploma in Strategic Management

- Appointed to the board on 30 July 2004
- Chairman of the investment committee and member of the nomination committee, audit and risk committee and the social and ethics committee

Lead independent non-executive director

Mavuso Msimang (76)
MBA (Project Management), BSc

- Appointed to the board on 26 March 2011
- Chairman of the nomination committee and member of the social and ethics committee.

EXECUTIVE DIRECTORS

Chief executive officer

Peter Steenkamp (58)
BEng (Mining), Mine Manager's Certificate Metal Mines, Mine Manager's Certificate Fiery Mines, CPIR, MDP, BLDP

- Appointed to the board on 1 January 2016, on appointment as chief executive officer

Financial director

Frank Abbott (63)
BCom, CA(SA), MBL

- First appointed to the board as non-executive director on 1 October 1994 and was financial director from 1997 until 2004
- Re-appointed financial director in February 2012

Executive director: stakeholder relations and corporate affairs

Mashego Mashego (54)
BA (Education), BA (Hons)
(Human Resources Management), Joint Management Development Programme,
Global Executive Development Programme

- Joined Harmony in 2005 and appointed an executive director on 24 February 2010

INDEPENDENT NON-EXECUTIVE DIRECTORS

Fikile De Buck (58)
BA (Economics), FCCA

- Appointed to the board on 30 March 2006
- Chairman of the audit and risk committee and member of the social and ethics committee, the remuneration committee and the nomination committee

Joaquim Chissano (79)
PhD

- Appointed to the board on 20 April 2005
- Member of the nomination committee and the social and ethics committee

Ken Dicks (79)
Mine Manager's Certificates (Metalliferous Mines and Fiery Coal Mines), Management diplomas

- Appointed to the board on 13 February 2008
- Member of the technical committee and the investment committee

Dr Simo Lushaba (52)
BSc (Hons), MBA, DBA, CD (SA)

- Appointed to the board on 18 October 2002
- Chairman of the social and ethics committee, member of the audit and risk committee and the remuneration committee and the investment committee

Karabo Nondumo (40)
BAcc, HDip (Acc), CA(SA)

- Appointed to the board on 3 May 2013
- Member of the audit and risk committee, the technical committee and the investment committee

Vishnu Pillay (61)
BSc (Hon), MSc

- Appointed to the board on 8 May 2013
- Chairman of the remuneration committee and member of the technical committee and the investment committee

John Wetton (69)
CA(SA), FCA

- Appointed to the board on 1 July 2011
- Member of the audit and risk committee, social and ethics committee, remuneration committee and investment committee

Max Sisulu (73)
MA (Political science), MA (Political economy)

- Appointed to the board on 31 January 2018
- Member of the social and ethics committee

NON-EXECUTIVE DIRECTOR

André Wilkens (69)
Mine Manager's Certificate of Competency, MDPA, RMIIA, Mini MBA Oil and Gas

- Appointed to the board on 7 August 2007
- Chairman of the technical committee and member of the investment committee and the remuneration committee

EXECUTIVE MANAGEMENT

GROUP CHIEF EXECUTIVE OFFICER'S OFFICE

Chief executive officer

Peter Steenkamp (58)

BEng (Mining), Mine Manager's Certificate Metal Mines, Mine Manager's Certificate Fiery Mines, CPIR, MDP, BLDP

Financial director

Frank Abbott (63)

BCom, CA(SA), MBL

Executive director: stakeholder relations and corporate affairs

Mashego Mashego (54)

BA (Education), BA (Hons)

(Human Resources Management), Joint Management Development Programme, Global Executive Development Programme

Chief operating officer: new business development, corporate strategy and projects

Phillip Tobias (48)

BSc (Mining Engineering), International Executive Development Programme, Advanced Management Programme, Pr Eng and Mine Manager's Certificate of Competence

Chief operating officer: South Africa

Beyers Nel (41)

BEng (Mining Engineering), MBA, Pr. Eng, Mine Manager's Certificate of Competency

Chief executive officer: South-East Asia

Johannes van Heerden (46)

BCompt (Hons), CA(SA)

EXECUTIVES REPORTING TO THE CHIEF EXECUTIVE OFFICER/FINANCIAL DIRECTOR

Special projects

Abré van Vuuren (58)

BCom, Development Programme in Labour Relations, Management Development Programme, Advanced Labour Law Programme, Board Leadership Programme

Investor relations

Marian van der Walt (45)

Studying towards an Executive MBA at Oxford University's Said Business School (to be completed May 2019); IR Certificate (UK IR Society); BCom (Law), LLB, Higher Diploma in Tax, Diplomas in Corporate Governance and Insolvency Law, Certificates in Business Leadership

Chief financial officer

Boipelo Lekubo (35)

BCom (Hons), CA(SA)

Sustainable development

Melanie Naidoo-Vermaak (44)

BSc (Hons) (Industrial Microbiology), MSc (Sustainable Development), MBA

Chief financial officer: Treasury

Herman Perry (46)

BCom (Hons), CA(SA)

Company secretary and legal

Riana Bisschoff (41)

LLB, LLM

CHIEF AUDIT EXECUTIVE

Besky Maluleka Ngunjiri (42)

BCOMPT (HONS), CTA, CIA, CCSA

EXECUTIVES REPORTING TO THE CHIEF OPERATING OFFICER: SOUTH AFRICA

Ore reserve management

Jaco Boshoff (49)

BSc (Hons), MSc, MBA, Pr Sci Nat, MSAIMM, MGSSA

Human resources

Anton Buthelezi (54)

National diploma (Human Resources Management), BTech (Labour Relations Management), Advanced Dip. in Labour Law, Cert. in Business Leadership

Safety and technology

Tom van den Berg (50)

MBL, BTech Mining Engineering

Health

Dr Tumi Legobye (46)

MBcHB, Diploma in Occupational Health, Project Management

Technical services and engineering

Robert Hart (44)

BEng (Mech), MBA

Chief financial officer (South Africa operations)

Danie Muller (58)

BCom

REGIONAL GENERAL MANAGERS

Moab Khotsong and Tshepong Operations

Moses Motlhageng (42)

B-Tech (Mining), Mine Manager's Certificate of Competency, Professional Engineering Technician (Pr. Techni Eng)

Doornkop, Kusasalethu and Kalgold

Floyd Masemola (38)

B.Eng (Mining), Mine Manager's Certificate of Competency, Mine Overseer's Certificate of Competency, Post-Graduate Diploma in Management Practice

Bambanani, Unisel, Joel, Masimong and Target

Francois Janse van Rensburg (43)

B. Eng (Mining), MBA, Pr. Cert. Eng., Mine Manager's Certificate, Mine Overseer's Certificate, Leadership Development Programme

EXECUTIVES REPORTING TO THE CHIEF EXECUTIVE OFFICER: SOUTH-EAST ASIA

Operations

Charles de Villiers (48)

B. Eng (Mining), M. Eng (Mineral Economics)

Chief financial officer

Aubrey Testa (42)

Accounting (Cum Laude), B Compt

Projects and Wafi-Golpu joint venture

Bryan Bailie (55)

National Higher Diploma – Mechanical Engineering, Higher Diploma Project Management, PMI Professional Project Manager, South Africa Government Certificate of Competency – Mines and Works, Executive and Management Development Diplomas

New business and resource development

Greg Job (54)

BSc (Geology), MSc (Mineral Economics), Member AusIMM

Exploration

Mike Humphries (51)

BSc(Hons)

Engineering and asset management

Stan Bierschenk (52)

Elect Eng HC, MBA, GCC (Electrical engineering)

Corporate affairs

Richard Wills (63)

BA, LLB, B Compt, LLM

REMUNERATION REPORT

"To ensure peak performance and that our business objectives are responsibly met, it is imperative that employees and directors of the company are fairly rewarded."

Dear shareholder

I am pleased to submit the Remuneration Report as part of Harmony's Integrated Annual Report 2018. To ensure peak performance and that our business objectives are responsibly met, it is imperative that employees and directors of the company are fairly and responsibly rewarded. The remuneration committee plays an important role in ensuring fair, equitable and responsible remuneration practices.

As evidenced by the Remuneration Policy (Part 1) and Implementation Report (Part 2), significant progress has been made in addressing company performance and the topical issues of a living wage, diversity and pay equality internally. Our aim is to ensure that a process is in place to keep these issues in the forefront and to address any inconsistencies that deviate from the norms of good governance.

Gold mining in South Africa

The South African gold industry is maturing and shrinking with annual gold production declining from 198 tonnes to 138 tonnes during the period 2009 to 2017[1]. Against the multiple challenges of increasing mining depth, rising costs and a volatile rand/gold price, South African gold mines are under pressure to deliver a reasonable margin after all-in sustaining costs are considered. As a result, around 75% of gold mines operating in South Africa today are unprofitable[2]. Despite these challenges Harmony remains committed to a "living wage" approach for its employees.

[1] *http://www.goldwagenegotiations.co.za/facts-figures*
[2] http://www.thisisgold.co.za/component/jdownloads/send/2-fact-sheets/19-the-state-of-the-gold-industry

For a detailed account of the overall remuneration packages of Harmony's lower level employees (category 4 – 8), please refer to this Remuneration report.

Financial and operational performance

Against this background, and in keeping with its mandate from the board, the executive team has, despite all odds, achieved a significant outcome for FY18. The team has delivered an improvement of 13% on its total lost time injury frequency rate (LTIFR), increased its gold production by 13%, increased its underground recovered grade from 5.07g/t to 5.48g/t and improved the all-in sustaining cost for the year from R516 687/kg to R508 970/kg.

Further to our improved operating performance, and with the board's support, Harmony concluded the US$300 million acquisition of the Moab Khotsong mine and related assets from AngloGold Ashanti Limited. This acquisition helped raise full year gold output, assisted in lowering group costs and boosted grades mined. It has significantly enhanced our operating flexibility and contributed positively to cash generation for the group.

Harmony's social responsibility

In 2017, I made reference to "living wages" for our entry level workers. The reduction of inequality remained a top priority with a focus placed on "living wages" for entry-level workers. Managing the wage gap included finding innovative ways in which the company may be able to assist workers in addressing their most pressing basic financial concerns. This calls for innovative thinking at all levels and by all role players.

In this remuneration report we expand on the concept of a "living wage" and how it is being addressed by Harmony in an effort to improve the lives of our employees through the provision of improved living conditions, better access to physical and social services, health care and education and training. See this Remuneration report.

2018 wage negotiations

The 2018 round of wage negotiations in the gold sector began on 11 July 2018, between the Minerals Council (representing four gold mining companies) and the four trade unions: Association of Mine Workers and Construction Union (AMCU), National Union of Mineworkers (NUM), United Association of South Africa (UASA) and Solidarity. We reached a three-year wage agreement on 3 October 2018, effective from 1 July 2018, with the NUM, UASA and Solidarity. The increase in the standard rate of pay for the first year is R700 for category 4-8 employees and 6.3% for miners, artisans and officials. The living out allowance will increase annually by R100 from 1 September 2018. We are grateful to the unions, employees, the Minerals Council and the Commission for Conciliation Mediation and Arbitration for the constructive manner and spirit in which the negotiations were concluded. Refer to *www.goldwagenegotiations.co.za* for more details.

Gender and race equality

Harmony's remuneration policy is to remunerate based on an individual's ability, skills and knowledge. Men and women, irrespective of their race, are paid equally for equivalent roles. There is no differentiation in remuneration based on gender, race or any other arbitrary reason. The gender distribution for all employment categories is more fully discussed in *Part 2* of this Remuneration report. The overall number of females represented in the organisation's workforce is low. Harmony is systematically addressing this discrepancy by employing a greater number of women at the underground operations. For more, refer to *Employee engagement*.

Fair and responsible pay

Remunerating executives fairly and holding them accountable for the success of the business is in the interests of all stakeholders, including employees, the community at large and business partners and suppliers. The "living wage" approach for junior workers aims to underpin the concept of fair and responsible pay.

While average levels of executive pay remain high relative to lower level employees, and are viewed as excessive by labour and the general public, increases in guaranteed executive pay have generally remained subdued and are below those granted to lower level employees as part of the company's continuing efforts to reduce the pay-gap.

In FY18, an average increase of 6% to guaranteed remuneration packages for non-unionised employees and 7.5% for unionised employees had been approved and agreed.

In order for the committee to more efficiently track the income dispersion between high and low income earners, a comprehensive exercise has been undertaken to determine the company's Gini co-efficient. Based on the analysis, it was concluded that Harmony has a more favourable level of income dispersion (0.33) when compared to the South African national all industries (0.43) as well as the South African mining industry (0.42). Both the national and mining industry Gini co-efficients were calculated on an on-target benchmarked total reward basis, whereas Harmony's Gini co-efficient was calculated on an actual total reward basis.

Changes to Harmony's short- and long-term incentive plans

As noted last year, the key focus area for the committee during FY18 was to continue and finalise the review of our short- and long-term incentive plans currently in place for management and executive employees. In consultation with our shareholders and employees, a number of challenges have been identified with the current plans. Our remuneration consultants provided the committee with an overview of current best practice trends in the market and we, as a result, have come a long way in designing a simplified, market-related total incentive plan comprising a long-term deferred share plan and a short-term annual cash payment (the Total Incentive Plan). This revised plan will be implemented from 1 July 2019, subject to shareholder approval of the new proposed deferred share plan at the upcoming annual general meeting. For more information, refer to the Notice of Meeting in the Report to shareholders 2018 and *Part 1* of this *Remuneration report*.

King IV principles

The remuneration committee continues to review local and global remuneration trends and our remuneration strategy.

At the 2017 annual general meeting, the non-binding, advisory vote on the remuneration policy was supported by more than 98% of the votes exercised on the resolution. Considering that 83% of the total issued shares of the company were voted on the resolution, the remuneration committee is satisfied with shareholders' support for this very important aspect of the business. However, this does not mean that we should be complacent and the remuneration committee is committed to continuous improvement in remuneration practices in the best interests of the company and its stakeholders. The committee is satisfied that the remuneration policy has achieved its stated objectives for the year.

For more on the committee and its activities during the year under review, see *Corporate governance* in this report.

No member of the committee has a personal interest in the outcome of decisions made during the period under review, and four of its five members are independent non-executive directors. The chairman of the board is not a member of the committee.

We value our shareholder comments and, as always, we invite our shareholders to engage with the company, through the office of the company secretary (companysecretariat@harmony.co.za).

I remain grateful to the board, remuneration committee members and executive directors for their support and commitment during 2018.

Vishnu Pillay

Chairman, remuneration committee

25 October 2018

PART ONE: FY19 REMUNERATION POLICY

Harmony's reward strategy underpins our business strategy of safely producing profitable ounces and increasing our margins.

In order to achieve this, we rely on experienced, skilled teams who live our values and maintain stakeholder relationships, in growing profits, and in maintaining a sustainable company.

Our remuneration policy has been designed with our business strategy in mind – to attract and retain these experienced, skilled teams, and to motivate them to deliver and achieve our key business goals. To ensure that this happens, we need to be certain that all elements of our remuneration and wider reward offerings are aligned and market competitive.

In determining remuneration, the remuneration committee takes into account shareholders' interests as well as the financial health and future of the company.

GENDER AND RACE EQUALITY

Harmony's remuneration policy is to remunerate based on an individual's ability, skills and knowledge. Men and women, irrespective of their race, are equally paid for equivalent roles. There is no differentiation in remuneration based on gender, race or any other arbitrary ground.

FAIR AND RESPONSIBLE PAY

Harmony is committed to the concept of a "living wage" which is based on the philosophy of fair and responsible pay. It embodies our efforts to improve the lives of our employees by enabling them to improve their living conditions and to have better access to physical and social services, health care and education and training. For more information, refer to *Employee engagement* and *Socio-economic performance*.

REMUNERATION MIX AT HARMONY

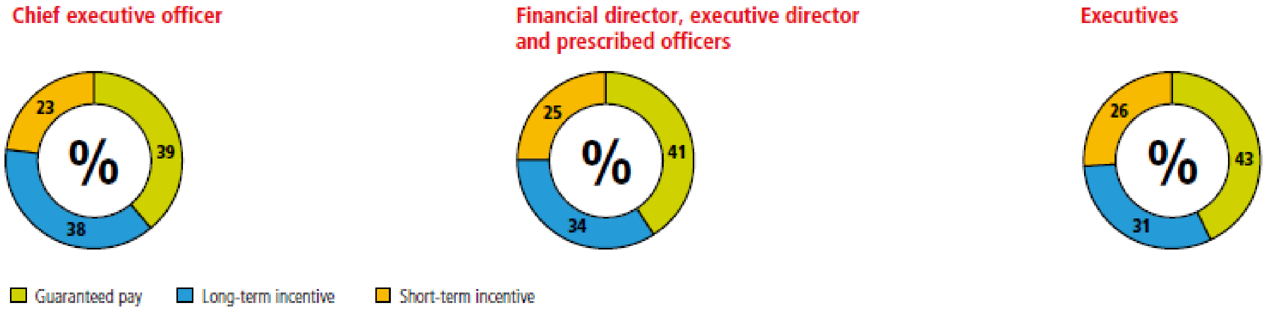
Harmony chooses to adopt an integrated approach to rewarding its employees.

Management employees

The table below illustrates the desired outcome of the total remuneration package for management, based on achieving targeted performance. The guaranteed pay, short-term incentives and long-term incentives are expressed as a percentage of total remuneration.

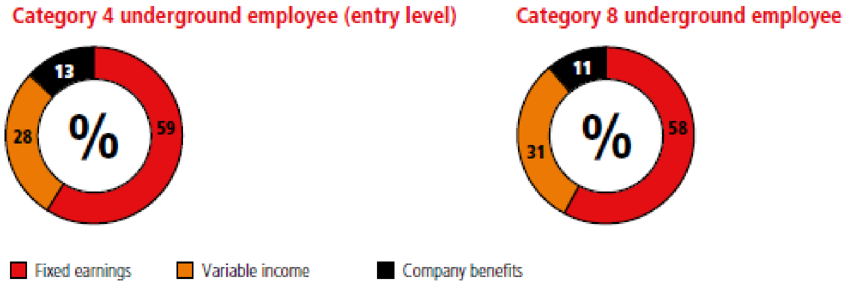
The compositions of total remuneration outcomes for FY18 illustrated below:

On target pay mix:



Category 4-8 employees

Average monthly wages and benefits



Each component includes the following:

Fixed earnings: Basic pay, service increment, 13th cheque, living out allowance

Variable income: Average overtime, shift allowance, average bonus, meal allowance, Unemployment Insurance Fund/skills development levy, insurance benefit

Company benefits: Employer provident/pension fund and medical aid

Key elements of Harmony's remuneration structure (management employees)

Reward elements	Remuneration strategy
Guaranteed pay	In reviewing and approving levels of guaranteed pay, the committee ensures that the guaranteed pay portion of remuneration is aligned with similar roles in the market sector in which we operate and the contribution made by employees. To compete effectively for skills in a challenging employment market, we identify the target market against which to benchmark guaranteed pay. This target market includes those organisations or companies that employ similar skills sets to those which we require. Comparisons are made predominantly with the mining and resources sectors to ensure that Harmony remains competitive. Harmony aims for guaranteed pay levels relative to the median of the target market. Guaranteed pay is inclusive of contributions by the company to a retirement fund and a medical aid scheme.

<table>
<tr><td>Short-term incentive</td><td>
The short-term incentive scheme provides for bonus payments that are:

based on team performance against annual targets that are reviewed annually, modified by a personal performance rating for executive management
paid twice a year for all management employees in corporate, central services, medical services and central operations (including executive directors and prescribed officers)
paid quarterly for designated shaft management team members and regional operations management teams
paid monthly for mining and engineering crews

The targets on which bonus payments are based are derived from the company's business plan which is developed in terms of the company's strategic objectives for the year.

For executive management, the measures and weightings are as follows:
<table>
<tr><th>Performance drivers</th><th>Weighting</th></tr>
<tr><td>Gold produced</td><td>40%</td></tr>
<tr><td>Total cost (working cost + capital expenditure excluding royalties)</td><td>30%</td></tr>
<tr><td>Underground grade</td><td>30%</td></tr>
</table>
</td></tr>
<tr><td></td><td>
Payment parameters
To achieve a minimum qualification for a bonus, Harmony must achieve at least 95% of the business plan.
On-target performance will result in a total bonus of 60% of guaranteed pay.
<table>
<tr><th>% of business plan achieved</th><th>% of 6-month guaranteed pay</th><th>Parameter</th></tr>
<tr><td><95</td><td>0</td><td></td></tr>
<tr><td>95</td><td>40</td><td>Threshold</td></tr>
<tr><td>100</td><td>60</td><td>Target</td></tr>
<tr><td>105</td><td>100</td><td>Maximum</td></tr>
<tr><td>>105</td><td>100</td><td></td></tr>
</table>
</td></tr>
<tr><td></td><td></td></tr>
</table>

Short-term incentive (continued)	**Safety as a modifier** Safety performance is applied as an adjustment in the calculation of our short-term incentive bonuses. The company's lost time injury frequency rate for the total South African business plan is used to measure Harmony's safety performance. If the planned safety target is achieved, 10% will be added to the overall percentage bonus paid. If the company does not achieve its safety target, up to 10% will be deducted from the overall percentage bonus paid as per the gradation scale illustrated below:

Achievement against business plan	% added or deducted from overall bonus percentage*
100	10%
95	5%
90	0%
85	-5%
80	-10%

**Linear interpolation between these points*

Personal performance modifier:

The personal performance percentage will be calculated according to an executive manager's personal performance measured against objectives set out in that executive's performance management contract as follows:

Guaranteed pay x group performance against plan x personal performance percentage (0% – 150%)

Long-term (share-based) incentive	The Harmony share plan (the plan) consists of share appreciation rights (SARs), performance shares and restricted shares. Employees eligible for participation in the plan include executive directors, executive management and management. Non-executive directors do not participate in the plan. There is no repricing or surrender or re-grant of any offers. Share awards are not granted in a closed period and no backdating of awards is allowed. Rewards are settled in shares, although participants may receive, via our share scheme administrators, cash from the sale of these shares, less tax payable. The main elements of the share plan and performance conditions are summarised below. **Share appreciation rights** Eligible employees received annual allocations based on a percentage of their guaranteed pay, which vest in equal thirds on the third, fourth and fifth anniversaries of such allocations and lapse in the sixth year. The value or reward that accrues is based on the positive appreciation of the share price over time (compared to the issue price) and continued employment. The company has acknowledged shareholders' sentiment with regard to the issuing of share appreciation rights. Share appreciation rights were last allocated in November 2014 (FY15). Existing share appreciation rights will continue until they expire in terms of the provisions agreed to on each allocation.

Reward elements	Remuneration strategy
Long-term (share-based) incentive (continued)	**Performance shares**

Eligible employees receive annual conditional awards of a maximum number of performance shares based on a percentage of guaranteed pay and remuneration category. The conditional award vests after three years, if and to the extent that performance conditions have been satisfied and is subject to the minimum shareholding requirement described below. The conditional awards that do not vest at the end of the three-year period will be forfeited.

Awards made since November 2015 will be measured on the total shareholder return of the company over a three-year period and will be capped at the maximum vesting percentage of 100%. The total shareholder return vesting criteria will comprise two components:

- 50% is based on absolute performance which takes into account the value of the company's share price growth and the value of dividends paid over the measurement period
- 50% is based on the relative performance of the company compared to that of the JSE Gold Index over the measurement period

Absolute performance (share price growth):

Performance	Achievement	Vesting*
Full (stretch)	100%	100%
Target	80%	80%
Threshold	45%	0%

**Linear interpolation will apply between levels*

Relative performance (company performance compared to JSE Gold Index):

Performance	Achievement	Vesting*
Full (stretch)	40%	150%
Target	0%	40%
Threshold	-5%	0%

**Linear interpolation will apply between levels*

Details of the awards made during FY18 can be found in *Part Two* of this Remuneration Report.

Restricted shares

The share plan allows for restricted shares and matching performance shares to be granted to eligible employees at the discretion of the board, based on past performance. The board determines the quantum and balance between restricted shares and matching performance shares.

Restricted shares vest three years from the grant date. If the grant is not exercised, partially or fully at the time, these shares remain restricted for a further three years and are supplemented by a matching grant of restricted shares. The restricted shares and the matching restricted shares are then settled after the end of a further three-year period.

We acknowledge the sentiments of shareholders with regard to restricted shares and our last grant of restricted shares was made in 2012 and will finally vest in November 2018.

Reward elements	Remuneration strategy
Long-term (share-based) incentive (continued)	**Minimum shareholding requirement** We have encouraged executive management to retain performance shares when they vest and a minimum shareholding requirement was introduced to achieve this during November 2016. In terms of the approved minimum shareholding requirement, compulsory lock-up of shares would have become applicable in FY20. The minimum shareholder requirement has been revised as part of the new total share incentive plan to be proposed to shareholders at the 2018 annual general meeting. **Share plan limit** The approved aggregate number of shares that may be acquired by participants in the long-term incentive plan, together with any other share plan or scheme are 60 011 669 shares as approved by the members of the company at an annual general meeting held on 1 December 2010. To date, Harmony has issued 15 690 083 of these approved shares. The aggregate number of shares that may be acquired by any one participant in terms of the long-term incentive plan together with any other share plan or scheme approved by the members shall not exceed 2 100 000 shares. To date, none of the participants has acquired an aggregate of more than 2 100 000 shares.
Tlhakanelo Employee Share Trust	The Tlhakanelo Employee Share Trust had a life of five years. The first allocation date was on 31 August 2012 and the first vesting date on 15 March 2013. The fifth and final vesting date was 15 March 2017. With the consent of the board of Harmony, the Trustees of the Trust had resolved to terminate the Trust in accordance with the provisions of the Trust Deed. The Trust was finally wound up in August 2017. At the special general meeting held on 1 February 2018, the shareholders approved the issue of 6.7 million authorised but unissued ordinary shares to the new Harmony Employee Share Option Trust.

BOARD REMUNERATION (NON-EXECUTIVE DIRECTORS)

In considering the proposed fees for non-executive directors, the committee not only looked at general increases in the market place for comparison and alignment purposes but also took account of the fiduciary risks carried by non-executive directors as well as their work load, time commitment, expertise and preparation time expected of each non-executive director.

Harmony's philosophy regarding the remuneration of non-executive directors is to ensure that they are fairly rewarded for their contribution to the company's overall performance.

Non-executive directors' fees are reviewed annually to ensure that they remain competitive. In line with the recommendations of King IV, our non-executive directors are paid a retainer for board meetings and an attendance fee for every board meeting attended. Non-executive directors also receive a retainer for serving on a committee. In addition, a per day ad hoc fee is paid for special meetings or attending to company business.

Non-executive directors do not receive share options or other incentive awards correlated with the share price or group performance as these may impair their ability to provide impartial oversight and advice.

The proposed fees for FY19 are set out in the notice of annual general meeting in the Report to shareholders 2018.

CONTRACTS, SEVERANCE AND TERMINATION

Executive directors and executive managers have employment contracts with Harmony which include notice periods of up to 90 days. There are no balloon payments on termination, automatic entitlement to bonuses or automatic entitlement to share-based payments other than in terms of the company's approved share incentive plans.

NON-BINDING ADVISORY VOTE

Shareholders are requested to cast non-binding advisory votes required by King IV on Part One and Part Two of this remuneration report. For more information refer to the notice of the annual general meeting in the Report to shareholders 2018.

In the event that either the remuneration policy or the implementation report, or both are voted against by 25% or more of the voting rights exercised at the 2018 annual general meeting, the committee will in good faith and with the best reasonable effort engage with its shareholders to ascertain the reasons for the dissenting votes and appropriately address legitimate and reasonable objections and concerns raised which may include amending the remuneration policy, or clarifying or adjusting the company's remuneration governance and/or processes.

STAKEHOLDER FEEDBACK

We maintain open communication channels with our stakeholders, listen to feedback and take action where this is deemed to be in the best interests of the company.

PROPOSED HARMONY TOTAL INCENTIVE PLAN, 2019

Introduction

With the assistance of remuneration specialists and in consultation with our employees and shareholders, the remuneration committee considered key changes to the long- and short-term incentive plans against market practice.

The following challenges with the current long- and short-term incentive plans were identified:

- Inconsistent vesting due to the volatility of the share price;
- The appropriateness of performance conditions in a dynamic single commodity industry

We have found that institutional investors want the following attributes to be considered within incentive schemes:

- Longer vesting periods (between three and five years) for long-term incentives;
- Simpler variable pay plan
- Plan that encourages share ownership by senior executives
- Clear linkage between pay and performance
- Incentive metrics that better encourage improved sustainability, the generation of free cash flow and capital efficiency

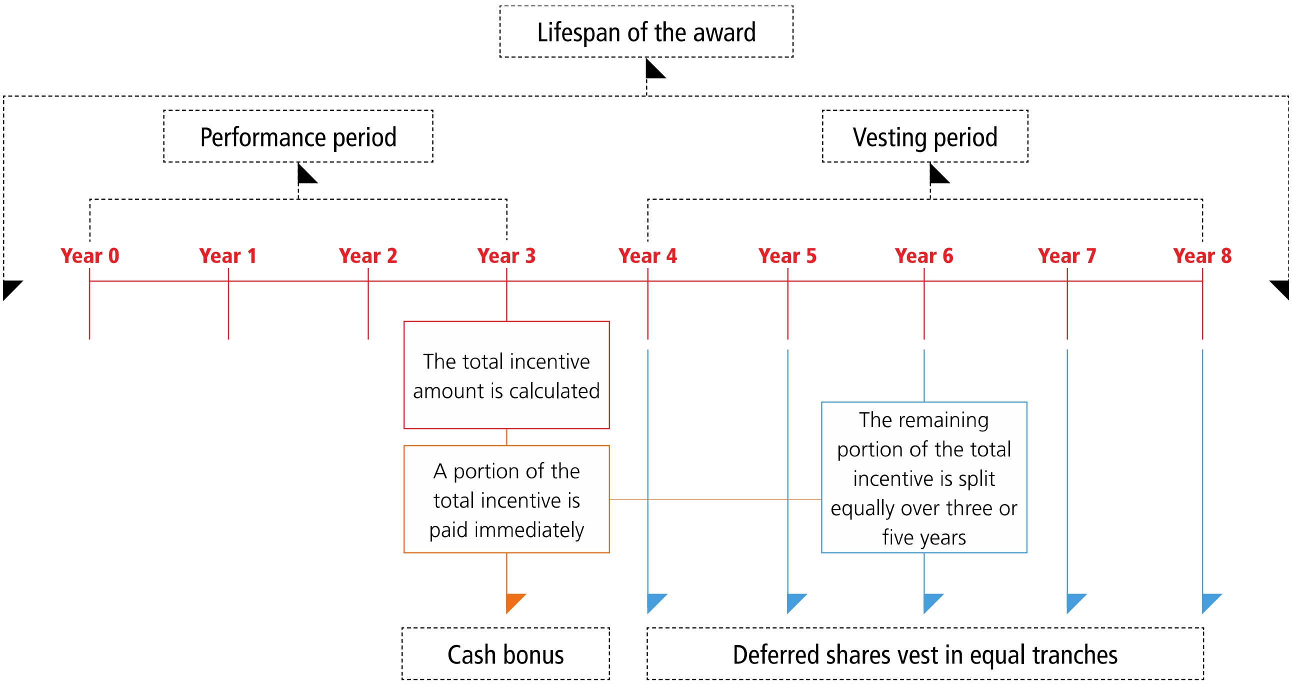
- Incentive measures that mitigate the impact of gold price volatility and other measures that fall beyond the sphere of management's influence

The committee and the board have, as a result, resolved that the short- and long-term incentive plans be replaced with a simplified, market-related total incentive plan (the total incentive plan) to be implemented from 1 July 2019, subject to the approval of the Deferred Share Plan (the DSP) by shareholders at the annual general meeting to be held on 7 December 2018. Refer to the Notice of meeting in the Report to Shareholders 2018.

Key features of the total incentive plan:

- A single, combined short- and long-term incentive plan, which represents the group's variable pay offering
- It is simple, transparent and driven entirely by performance against critical, short-, medium- and long-term performance measures
- It comprises:
    - an annual cash payment (paid immediately at the award date)
    - deferred shares (for eligible employees graded as E-band and above), governed by the rules of the DSP
- Performance measures under the total incentive plan are assessed either over one year or a three-year trailing period
- The scheme will be cost neutral compared to the previous scheme
- Awards of deferred shares vest over three or five year periods (depending on the employment level of the participant), which incentivises decision making that promotes long-term sustainability
- The issue and allotment of new shares are limited. A maximum of 5% of issued shares can be used in settlement of awards under the DSP
- The minimum shareholding requirement will continue to apply to prescribed officers (senior executives), aligning their interests more closely with those of shareholders
- Participation in the share incentive has been reduced, resulting in less dilution
- A reduction in the weighting of performance measures linked to the gold price (a factor outside of management's control)
- It introduces a relevant balance of measures on the scorecard (shareholder value, financial and operational indicators, growth and sustainability)
- It incorporates relevant regulatory requirements (e.g. forfeiture King IV)
- It allows for greater accountability for performance over a longer period;
- It endears management to a company that has a clear growth strategy

Key design features of the total incentive plan



Balanced scorecard

The balanced scorecard result will be determined based on a number of key short- and long-term company performance measures (to be measured over the performance period), which will be reviewed and defined annually with appropriate weightings.

Each metric in the balanced scorecard is weighted relative to performance. Each metric has a threshold, target and stretch parameter:

- threshold (minimum requirement to earn at 40%)
- target (minimum requirement to earn at 60%)
- stretch (minimum requirement to earn at 100%)

Distinct weightings will be applied to the group, the South Africa operations and the South-East Asia operations, on a basis that best reflects their underlying focus areas.

The balanced scorecard weighting components for the three distinct groups are presented in the table below.

Weighting of components in the balanced scorecard

	Scorecard component	Group	South Africa operations	South-East Asia operations
Shareholder value	Total shareholder return (absolute)	8.34%	6.67%	6.67%
	Total shareholder return (relative to the JSE Gold Index)	8.33%	6.67%	6.67%
	New: Total shareholder return (relative to the FTSE Gold Mines Index)	8.33%	6.66%	6.66%
Financial and operational	Production	20%	35%	35%
	Total production cost (South Africa	15%	20%	20%

	operations) and (new) all-in sustaining cost (South-East Asia operations)			
	New: Free cash flow	10%	–	–
Growth	New: Development	–	10%	10%
	New: Additions to mineral reserves	10%	–	–
	New: Project execution (for future measurement)	–	–	–
Sustainability	Safety performance: Lost time injury frequency rate (LTIFR)	15%	15%	15%
	New: Environment, social and governance (ESG)	5%	–	–
Total		**100%**	**100%**	**100%**

The balanced scorecard will be applied to eligible employees as follows:

- **Group:** Prescribed officers, executives in the office of the chief executive officer and all off-shaft services operational managers
  (South Africa)
- **South Africa operations:** Operational executive managers and all on-shaft operational managers
- **South-East Asia operations:** Operational executive managers and all operational managers

The shareholder roadshows and employee engagements held to discuss the proposed new total incentive plan and balanced scorecard were constructive with positive feedback and dialogue.

Some questions posed by shareholders during the consultations have been addressed as follows:

Shareholder feedback	Harmony's response
Shareholders expressed a preference for longer vesting periods for long-term incentives	In the new plan, the vesting period for deferred shares have been increased to five years for prescribed officers (including executive directors).

Shareholders expressed a concern that the previous plan was allotted 60 011 669 shares and that another 5% (approximately 25 million shares) of the issued shares of the company will be added to that number	The plan limit of 60 011 669 shares is only applicable to the 2006 Harmony Share Plan and the Tlhakanelo Employee Share Option Plan (the Old Plans). To date 15 690 083 of these shares have been issued. No further awards will be made under the Old Plans (as the Old Plans are in the process of being “wound down”). It is anticipated that a large number of the unissued shares under the Old Plans will be used to settle the historic 2015, 2016 and 2017 awards that vest. We are therefore requesting approval for the directors to allot and issue up to 25 000 000 ordinary shares in order to enable the company to fulfill its obligations under the new deferred share plan. No shares authorized under the Old Plans will be issued under the new deferred share plan.
Shareholders expressed support for malus and clawback policies	Clawback and forfeiture of award (“malus”) provisions have been included in the new deferred share plan
Shareholders asked that the company consider including Return on Capital Employed (ROCE)	Harmony measures total share price performance and cash flow. Project execution will be measured when we embark on a major project (ie. Wafi-Golpu). The success of a project can only be measured over an extended period of time.

The rules of the DSP are included in the Notice of meeting in the Report to Shareholders 2018.

PART TWO: IMPLEMENTATION REPORT ON THE POLICY APPLICABLE IN FY18

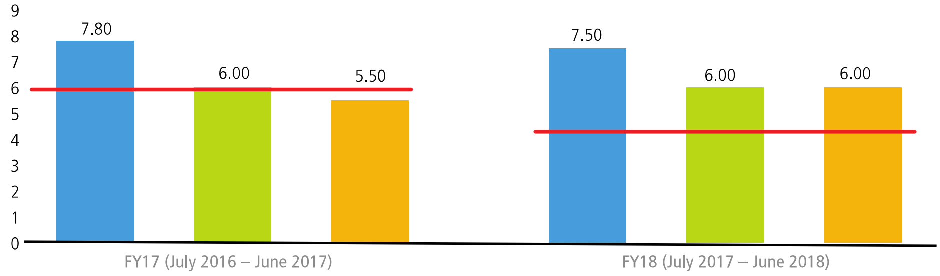
INCREASES TO GUARANTEED PACKAGE DURING THE YEAR UNDER REVIEW

An assessment of executive remuneration, and short- and long-term incentives was undertaken during FY18.

Taking into consideration the prevailing market conditions, affordability and shareholders’ expectations, an average increase of 6% to guaranteed remuneration packages of executives and management was made during FY18. Illustrated below are the average percentage increases awarded during FY17 and FY18 to executives, management and unionised staff:

Unionised staff, management and executive average salary increase

(%)



	FY17	FY18
Unionised staff (July every year)	7.80	7.50
Management (January every year)	6.00	6.00
Executives (August every year)	5.50	6.00
Consumer price index	6.05	4.53

SHORT-TERM INCENTIVE PAYMENTS DURING THE YEAR UNDER REVIEW

During the year under review, achievement levels against the targets for the executive short-term incentive scheme were as follows:

First period FY18 (July to December 2017)

Company performance measures	Weighting	% of plan achieved	Weighted %
Total kilograms	40	104	36.8
Total cost (capped at 105%)	30	106	30
Grade	30	100	18
Weighted average	–		84.8
Lost time injury frequency rate adjustment*		107	–
Percentage of six-months' guaranteed pay**			84.8

** Lost time injury frequency rate improved but the component was forfeited because of the fatal accidents*
*** Personal percentage performance modifier:*
The personal performance modifier determined for all executive management was a 100%.

Second period FY18 (January to June 2018)

Company performance measures	Weighting	% of plan achieved	Weighted %
Total kilograms	40	101	27.2
Total cost	30	101	20.4
Grade	30	104	27.6
Weighted average	–		75.2
Lost time injury frequency rate adjustment		101	+10
Percentage of six-months' guaranteed pay**			85.2

*** Personal percentage performance modifier:*
The personal performance modifier determined for all executive management was a 100%.

LONG-TERM INCENTIVES AWARDED DURING THE YEAR UNDER REVIEW

Share appreciation rights:

No further allocations of share appreciation rights have been made since 2014.

Performance shares:

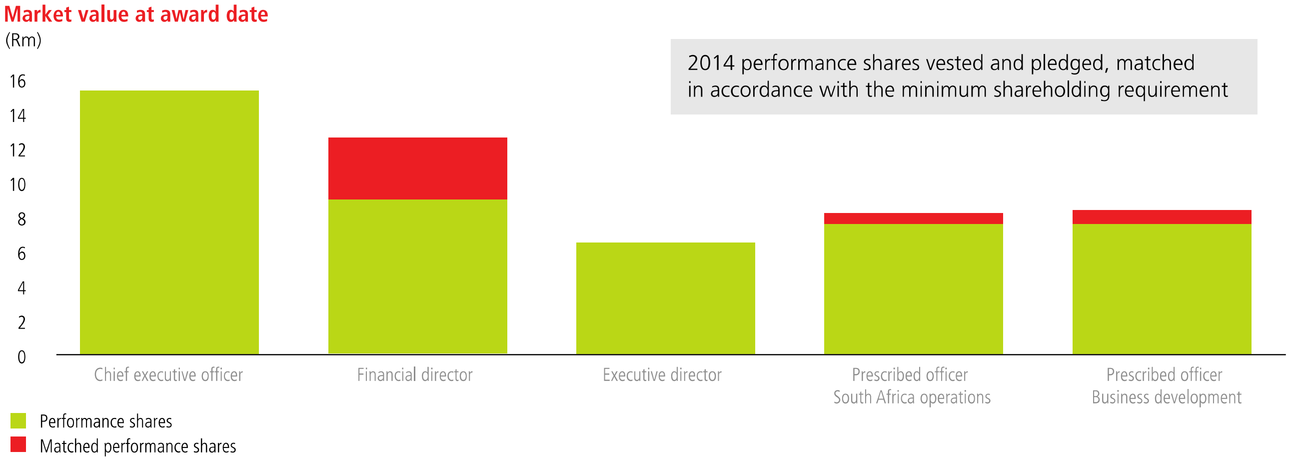
Performance shares were awarded to eligible participants in November 2017. The performance measure applicable to the performance awards is based on Harmony's total shareholder return over a three-year period. The vesting criteria comprise two components, namely, absolute and relative performance with vesting capped at 100%.

Matched performance shares:

Performance shares that vested and were voluntarily pledged in accordance with the minimum shareholding requirement were matched with additional performance shares.

The number of grants awarded for each executive director and prescribed officer is as set out in the table at the end of this section.

The values at date of grant for awards made during FY18 are illustrated below, assuming a 100% vesting:



VESTING OF LONG-TERM INCENTIVES DURING THE YEAR UNDER REVIEW

During the year, the following awards in terms of the long-term incentive plan vested in November 2017:

- **Share appreciation rights allocated in November 2014**

  The 2014 allocation vested in November 2017 and can be exercised in equal thirds on the subsequent anniversaries of the vesting. The value or reward that accrues is based on the positive appreciation of the share price over time and continued employment.

- **Performance shares awarded in November 2014**

  The vesting percentage of performance shares was based on the total shareholder return of the company compared to that of the gold index over the full three-year period

This resulted in a total vesting of 68% of performance shares awarded in November 2014.

TOTAL REMUNERATION OUTCOMES

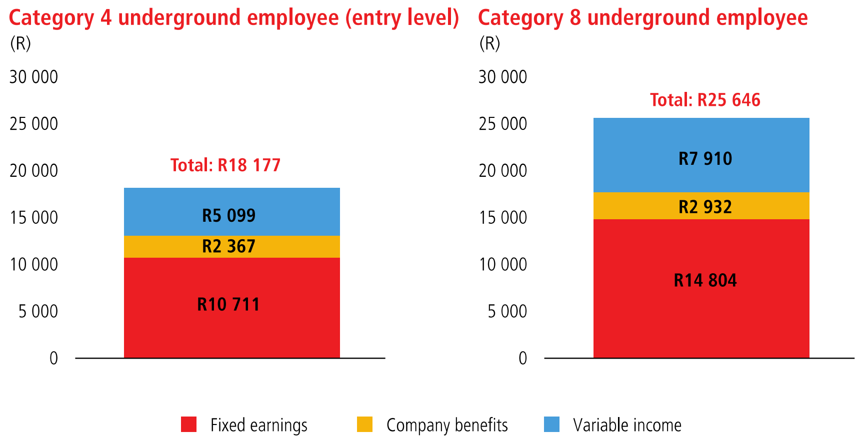
The composition of total remuneration outcomes for FY18 are illustrated below.

Management employees

** Value of shares pledged toward minimum shareholding*

Category 4-8 employees

The average wages and benefits of underground employees for FY18 are illustrated below:



Each component includes the following:

Fixed earnings: Basic pay, service increment, 13th cheque, living out allowance

Company benefits: Employer provident/pension fund and medical aid

Variable income: Average overtime, shift allowance, average bonus, meal allowance, Unemployment Insurance Fund/skills development levy, insurance benefit

GENDER EQUALITY

The tables below illustrate the gender distribution for employees for all employment categories during FY18.

South Africa

Occupational category	Total workforce	Male Number	Male (%)	Female Number	Female (%)
Board	15	13	87	2	13
Top (executive management)	7	5	71	2	29
Senior management	114	84	74	30	26
Middle management	568	442	78	126	22
Skilled technical workers	4 961	4 129	83	832	17
Semi-skilled workers	10 047	9 152	91	895	9
Unskilled workers	16 820	13 479	80	3 341	20
Total	**32 532**	**27 304**	**84**	**5 228**	**16**

Papua New Guinea (including Australia)

Occupational category	Total workforce	Male Number	Male (%)	Female Number	Female (%)
Top (executive management)	7	7	100	0	0
Senior management	27	23	85	4	15
Middle and junior management	373	325	87	48	13
Skilled technical workers	631	561	89	70	11
Core and critical skills	383	321	84	62	16
Total	**1 421**	**1 237**	**87**	**184**	**13**

It is evident that the overall representation of females in the organisation is low.

FAIR AND RESPONSIBLE PAY

In FY18, an average increase of 6% in guaranteed remuneration packages for non-unionised employees and 7.5% for unionised employees was approved. Unionised employees have consistently received above inflation increases for the past six years.

NON-EXECUTIVE DIRECTORS' FEES

During May 2018, the remuneration committee considered an industry benchmark on non-executive directors' fees. On recommendation of the remuneration committee, the board proposed an increase in fees of 6% for all non-executive directors, to be considered for approval by the shareholders at the forthcoming annual general meeting.

Directors' emoluments (R000)

	FY17					FY17
Name	**[1]Directors' fees**	**Salaries and benefits**	**Retirement savings and contributions**	**[2]Bonuses paid**	**Total**	**Total**
Non-executive directors						
Dr Patrice Motsepe	**1 288**	**–**	**–**	**–**	**1 288**	1 150
Joachim Chissano	**489**	**–**	**–**	**–**	**489**	610
Fikile De Buck	**1 255**	**–**	**–**	**–**	**1 255**	1 080
Ken Dicks	**653**	**–**	**–**	**–**	**653**	682
Dr Simo Lushaba	**817**	**–**	**–**	**–**	**817**	828
Cathie Markus [3]	**–**	**–**	**–**	**–**	**–**	438
Modise Motloba	**1 399**	**–**	**–**	**–**	**1 399**	1 142
Mavuso Msimang	**660**	**–**	**–**	**–**	**660**	582
Karabo Nondumo	**762**	**–**	**–**	**–**	**762**	796
Vishnu Pillay	**803**	**–**	**–**	**–**	**803**	622
Max Sisulu [4]	**125**				**125**	–
John Wetton	**1 053**	**–**	**–**	**–**	**1 053**	1 040
André Wilkens	**870**	**–**	**–**	**–**	**870**	721
Executive directors						
Frank Abbott	**–**	**5 404**	**571**	**3 976**	**9 951**	7 534
Mashego Mashego	**–**	**3 951**	**533**	**2 879**	**7 363**	5 597
Peter Steenkamp	**–**	**7 656**	**1 291**	**5 969**	**14 916**	11 232
Prescribed officers						
Beyers Nel	**–**	**4 741**	**697**	**2 854**	**8 292**	6 577
Phillip Tobias	**–**	**4 495**	**574**	**3 357**	**8 426**	6 238
Johannes van Heerden [5]	**–**	**6 104**	**249**	**3 539**	**9 892**	7 650
Total	**10 174**	**32 351**	**3 915**	**22 574**	**69 014**	**54 519**

[1] *Directors' remuneration excludes value added tax*
[2] *Reflects amounts actually paid during the year*
[3] *Resigned as non-executive director on 9 February 2017*
[4] *Appointed as non-executive director on 31 January 2018*
[5] *Salary is paid in Australian dollars and is influenced by movements in the exchange rate*

EXECUTIVE DIRECTORS AND MANAGEMENT SHARE INCENTIVES

As at 30 June 2018

	Executive directors						Prescribed officers						Other			
	Peter Steenkamp		Frank Abbott		Mashego Mashego		Johannes van Heerden		Beyers Nel		Phillip Tobias		Other management		Total	
Movements on share incentives	Number of awards	Average price (SA rand)	Number of awards	Average price (SA rand)	Number of awards	Average price (SA rand)	Number of awards	Average price (SA rand)	Number of awards	Average price (SA rand)	Number of awards	Average price (SA rand)	Number of awards	Average price (SA rand)	Number of awards	Average price (SA rand)
Performance shares																
Opening balance at 1 July 2017	932 423	n/a	1 275 104	n/a	757 564	n/a	757 564	n/a	486 916	n/a	505 248	n/a	33 133 754	n/a	37 848 573	n/a
Awards granted	596 427	n/a	348 815	n/a	251 722	n/a	293 554	n/a	293 554	n/a	293 554	n/a	12 050 182	n/a	14 127 808	n/a
Matched awards granted[1]	–	n/a	141 075	n/a	–	n/a	–	n/a	24 933	n/a	31 166	n/a	81 455	n/a	278 629	n/a
Awards exercised/pledged	–	n/a	(141 075)	n/a	(101 807)	n/a	(101 807)	n/a	(24 933)	n/a	(31 166)	n/a	(3 472 679)	n/a	(3 873 467)	n/a
– Average sales price	–	n/a	–	24.56	–	24.72	–	24.56	–	24.56	–	24.56	–	35.20	–	32.85
– Gain realised on awards exercised and settled (SA rand)		–		–		2 516 669		2 500 390		612 357		765 440		135 473 327		141 868 183
Awards forfeited and lapsed	–	n/a	(66 387)	n/a	(47 908)	n/a	(47 908)	n/a	(48 397)	n/a	(60 496)	n/a	(5 683 163)	n/a	(5 954 259)	n/a
Closing balance at 30 June 2018	**1 528 850**	**n/a**	**1 557 532**	**n/a**	**859 571**	**n/a**	**901 403**	**n/a**	**732 073**	**n/a**	**738 306**	**n/a**	**36 109 549**	**n/a**	**42 427 284**	**n/a**
Restricted shares																
Opening balance at 1 July 2017	–	n/a	100 544	n/a	62 776	n/a	62 776	n/a	40 084	n/a	–	n/a	435 232	n/a	701 412	n/a
Awards granted	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a
Awards exercised	–	n/a	(16 000)	n/a	(16 000)	n/a	(16 000)	n/a	(8 000)	n/a	–	n/a	(64 000)	n/a	(120 000)	n/a
– Average sales price	–	n/a	–	24.63	–	24.63	–	24.63	–	24.63	–	n/a	–	24.63	–	24.63

– Gain realised on awards exercised and settled (SA rand)		–		394 071		394 071		394 071		197 035		–		1 576 282		2 955 530
Awards forfeited and lapsed	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	(30 416)	n/a	(30 416)	n/a
Closing balance at 30 June 2018	**–**	**n/a**	**84 544**	**n/a**	**46 776**	**n/a**	**46 776**	**n/a**	**32 084**	**n/a**	**–**	**n/a**	**340 816**	**n/a**	**550 996**	**n/a**
Share appreciation rights																
Opening balance at 1 July 2017	–	n/a	139 362	33.97	101 180	34.39	101 180	34.39	76 580	34.01	46 850	18.41	12 011 545	32.60	12 476 697	32.60
Rights accepted	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a
Rights exercised	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	(794 351)	n/a	(794 351)	n/a
– Average sales price	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	24.37	–	24.37
– Gain realised on awards exercised and settled (SA rand)		–		–		–		–		–		–		19 362 208		19 362 208
Rights forfeited and lapsed	–	n/a	(6 585)	104.79	(5 361)	104.79	(5 361)	104.79	(4 620)	104.79	–	n/a	(1 812 559)	78.46	(1 834 486)	52.86
Closing balance at 30 June 2018	**–**	**n/a**	**132 777**	**56.61**	**95 819**	**56.31**	**95 819**	**56.31**	**71 960**	**56.31**	**46 850**	**18.41**	**9 404 635**	**50.11**	**9 847 860**	**50.20**
Gain realised on awards exercised (SA rand)		–		394 071		2 910 740		2 894 461		809 392		795 440		156 411 817		164 185 921

	Executive directors						Prescribed officers						Other			
	Peter Steenkamp		Frank Abbott		Mashego Mashego		Johannes van Heerden		Beyers Nel		Phillip Tobias		Other management		Total	
Outstanding awards (listed by allocation date)	Number of awards	Average price (SA rand)	Number of awards	Average price (SA rand)	Number of awards	Average price (SA rand)	Number of awards	Average price (SA rand)	Number of awards	Average price (SA rand)	Number of awards	Average price (SA rand)	Number of awards	Average price (SA rand)	Number of awards	Average price (SA rand)
Performance shares	**1 528 850**		**1 557 532**		**859 571**		**901 403**		**732 073**		**738 306**		**36 109 549**		**42 427 284**	
16 November 2015	–	n/a	736 809	n/a	455 758	n/a	455 758	n/a	236 220	n/a	236 220	n/a	17 829 438	n/a	19 950 203	n/a
17 February 2016	512 000	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	–	n/a	512 000	n/a
29 November 2016	420 423	n/a	330 833	n/a	152 091	n/a	152 091	n/a	177 366	n/a	177 366	n/a	6 950 408	n/a	8 360 578	n/a
15 November 2017	596 427	n/a	489 890	n/a	251 722	n/a	293 554	n/a	318 487	n/a	324 720	n/a	11 329 703	n/a	13 604 503	n/a
Restricted shares	**–**		**84 544**		**46 776**		**46 776**		**32 084**		**–**		**340 816**		**550 996**	
16 November 2012	–	n/a	21 136	n/a	11 694	n/a	11 694	n/a	8 021	n/a	–	n/a	85 204	n/a	137 749	n/a
16 November 2015 (2012 award – matching shares)	–	n/a	63 408	n/a	35 082	n/a	35 082	n/a	24 063	n/a	–	n/a	255 612	n/a	413 247	n/a
Share appreciation rights	**–**		**132 777**		**95 819**		**95 819**		**71 960**		**46 850**		**9 404 635**		**9 847 860**	
16 November 2012	–	n/a	16 204	68.84	11 694	68.84	11 694	68.84	8 021	68.84	–	n/a	1 079 897	68.84	1 127 510	68.84
15 November 2013	–	n/a	52 951	33.18	38 212	33.18	38 212	33.18	26 459	33.18	–	n/a	3 735 292	33.18	3 891 126	33.18
17 November 2014	–	n/a	63 622	18.41	45 913	18.41	45 913	18.41	37 480	18.41	46 850	18.41	4 589 446	18.41	4 829 224	18.41
Closing balance at 30 June 2018	**1 528 850**		**1 774 853**		**1 002 166**		**1 043 998**		**836 117**		**785 156**		**45 855 000**		**52 826 140**	

[1] *Performance shares granted in terms of vested awards pledged pursuant to the minimum shareholding requirement*

AUDIT AND RISK COMMITTEE: CHAIRMAN'S REPORT

"The committee's diverse perspectives, independence, knowledge and experience increases the value of Harmony's governance structures"

Fikile De Buck: Chairman audit and risk committee

Harmony's audit and risk committee (the committee) is pleased to present its report for the financial year ended 30 June 2018 (FY 18). This report addresses various material issues beyond compliance with the statutory requirements relating to an audit committee.

Introduction

The committee is an independent statutory committee appointed by Harmony's shareholders. In compliance with section 94 of the Companies Act of 2008 (the Act) and the principles of good governance, shareholders annually appoint certain independent directors as members of the audit committee to fulfil the statutory duties as prescribed by the Act.

In addition, Harmony's board of directors (the board) delegates specific oversight functions to the committee.

This report considers these statutory and delegated duties as well as the committee's responsibilities in terms of the JSE Listings Requirements. It also addresses some of the matters that the King IV Code on Corporate Governance, 2016 (King IV) advises should be considered by an audit committee.

Terms of reference

The committee has formal terms of reference, which are reviewed and updated annually as necessary (or more frequently if required) by both the committee and the board. The committee is satisfied that it has conducted its affairs in accordance with its terms of reference and has discharged its responsibilities.

Composition and function

During the course of the year, the nomination committee considered the composition and roles of the board committees. This process ensures independence and that these committees remain refreshed. As a result of this process, it was agreed that John Wetton be replaced by Ms Fikile De Buck as chairman of the committee. Mr Wetton remains a committee member and also serves as the deputy chairman of the committee.
The committee thanks Mr Wetton for his invaluable commitment and service throughout his tenure as chairman of the committee.

The committee's diverse perspectives, independence, knowledge and experience increase the value of Harmony's governance structures. For details of the qualifications, expertise and experience of the members of the audit and risk committee, refer to *Board of directors*.

Recommendations for the appointment of members to the committee for the new financial year can be found in the notice of annual general meeting in the Report to shareholders 2018 that accompanies the annual financial statements.

The group chief executive, the financial director, the executive: risk management and services improvement, the executive: ore reserves, the group IT manager, the external auditors, the chief audit executive and other assurance providers attend meetings either by standing invitation or as and when required.

As at the date of this report, the committee comprised the following independent members:

Name	Status	Date appointed
Fikile De Buck (chairman)	Independent non-executive director	30 March 2006 (Chairman with effect from 10 May 2018)
John Wetton	Independent non-executive director	1 July 2011
Dr Simo Lushaba	Independent non-executive director	18 October 2002
Modise Motloba	Independent non-executive director	30 July 2004
Karabo Nondumo	Independent non-executive director	3 May 2013

Roles and responsibilities

The committee is satisfied that it complied with its legal, regulatory and other responsibilities during the past financial year. The committee's primary objective is to assist the board with its responsibilities of ensuring the integrity of financial statements, the management of risk and cyber security, as well as the safeguarding of assets. Additionally, the committee is mandated to provide oversight of financial control and reporting on internal controls, shareholder reporting and corporate governance, particularly relating to legislative and regulatory compliance.

The committee's roles and responsibilities include statutory and regulatory duties as per the Act, the JSE Listings Requirements and those items recommended in the interest of good governance according to King IV. In addition, the board has assigned other ad hoc duties to the committee, embodied in its terms of reference.

The board conducts annual reviews of the committee's duties and terms of reference as well as annual assessments of its performance, in a manner determined by the board.

No major concerns were raised by any member of the committee in FY18.

For more on the committee and its activities during the year under review, see *Corporate governance*.

The integrated annual report

The committee is responsible for overseeing the group's integrated annual report and the reporting process. This integrated annual report, which has been reviewed by the committee, focuses not only on the group's financial performance, but also its economic, social and environmental performance. This report sets out how the group has engaged with stakeholders, addressed its material issues and governed its business. The committee is satisfied with the quality and integrity of the information contained in the integrated annual report 2018 and recommended it to the board for approval.

Annual report filed on Form 20-F with the United States Securities and Exchange Commission

The committee has reviewed the annual report filed on Form 20-F for the year ended 30 June 2018 and recommended the report to the board for approval.

Annual financial statements and accounting practices

The committee reviewed the audited annual financial statements and summarised consolidated financial statements for the year ended 30 June 2018. The statements comply with International Financial Reporting Standards and no significant matters were identified by the committee in that regard. The committee submits that they present a balanced view of the group's performance for the period under review.

The committee considered the JSE's most recent report back on proactive monitoring of financial statements, and where necessary those of previous periods, and has taken appropriate action where necessary to respond to the findings as highlighted in the JSE report when preparing the annual financial statements.

The committee recommended the annual financial statements and summarised consolidated financial statements to the board for approval.

External auditor appointment and independence

The committee is satisfied that the external auditor, PricewaterhouseCoopers (PwC), is independent of the group, as set out in section 94(8) of the Act. This opinion is based on consideration of previous appointments of the auditor and the extent of other work the auditor has undertaken for the group. In a written statement addressed to the committee, PwC confirmed that their independence complies with criteria relating to independence or conflicts of interest as prescribed by the Independent Regulatory Board for Auditors, the Public Company Accounting Oversight Board, the American Institute of Certified Public Accountants and the Securities and Exchange Commission. Requisite assurance was sought and provided by the auditor that internal governance processes within the audit firm support and demonstrate its independence.

The committee ensured that the appointment of the auditor complies with the requirements of the Act and other applicable legislation relating to the appointment of auditors. The committee, in consultation with management, agreed to the engagement letter and terms, and to the audit plan as well as scope of work performed and budgeted audit fees for the 2018/19 year.

A formal procedure has been adopted to govern the process whereby the external auditor may be considered for non-audit services and the extent of these services is closely monitored by the committee.

Fees paid to the external auditor for the year were R35.8 million, of which R35.1 million was for audit related services, R0.2 million for non-audit services and R0.5 million for tax services.

Tenure of the audit firm

PwC has been the group's external auditor for 68 years. At the annual general meeting held on 23 November 2017, PwC was reappointed as the independent external auditor and undertook to hold office until the conclusion of the 2018 annual general meeting.

The committee considered the suitability of PwC and designated audit partner as required by paragraph 3.84(g) (iii) of the JSE Listings Requirements and found same to be adequate based on PwC's submission of the relevant information as required by paragraph 22.15 (h) of the JSE Listings Requirements.

The individual registered auditor responsible for the audit for the financial year ended 30 June 2018 was Mr HP Odendaal. As PwC is required to rotate the audit partner responsible for the group audit every five years, the current lead audit partner will be required to change from FY21 onwards.

As part of Harmony's commitment to transformation, PwC continued to partner with Ngubane & Co., a black audit firm, as part of the PwC engagement team. To facilitate the transfer of skills in the audit of mining companies and SEC registrants, Ngubane & Co. assisted PwC on the audit of Harmony's South African operations. PwC had overall responsibility for the audit and signed off the financial statements. Ngubane & Co. is a level 1 broad-based black economic empowerment company.

The committee has recommended to the board that PwC be re-appointed as the group's independent external auditor, to hold office until the conclusion of the 2019 annual general meeting.

The directors will propose the re-appointment of PwC at the annual general meeting to be held on 7 December 2018. Details can be found in the notice of the annual general meeting in the Report to shareholders 2018 that accompanies the annual financial statements.

Mandatory audit firm rotation is effective from financial years commencing on or after 1 April 2023 and is applicable to listed companies, as well as all public interest entities, to promote superior audit quality and audit independence. Harmony is supports the process, and further details will be provided to shareholders at the 2019 annual general meeting.

Internal controls

The committee considers significant control deficiencies raised by management and by the internal and external auditors, and reports its findings to the board. Where weaknesses are identified, the committee ensures that management takes appropriate action.

Based on a review of the design, implementation and effectiveness of the group's system of internal financial controls conducted by the internal audit function during the year under review, and on reports made by the independent external auditors on the results of their audit and management reports, the committee is satisfied that the company's system of internal financial controls is effective and forms a basis for the preparation of reliable financial statements. No findings have come to the attention of the committee to indicate that any material breakdown in internal controls occurred during the past financial year.

Internal audit

In accordance with the requirements of King IV, the committee confirms that, having considered the effectiveness of the chief audit executive, Ms Besky Ngunjiri, it is satisfied that she has the appropriate expertise and experience to meet the responsibilities of this position. The committee is also satisfied that the internal audit function is adequately resourced with technically competent individuals and operates both effectively and efficiently.

The committee is responsible for:

- ensuring that the group's internal audit function is independent and has the necessary resources, standing and authority within the group to enable it to perform its duties
- oversees co-operation between the internal and external auditors, and serves as a link between the board of directors and these functions

The chief audit executive is responsible for regularly reporting the findings of the internal audit work against the agreed internal audit plan to the committee. She has direct access to the committee, primarily through its chairman.

During the year, the committee met with the external auditors and with the chief audit executive without management being present.

The committee is satisfied that the group internal audit follows an approved risk-based internal audit plan and regularly reviews the group's risk profile with necessary changes to the internal audit plan being proposed as and when deemed appropriate. Internal audit provides an overall statement as to the effectiveness of the group's governance, risk management and control processes.

Combined assurance

The committee is satisfied that the group has optimised the assurance coverage obtained from management, and internal and external assurance providers, in accordance with an appropriate approved combined assurance model. The committee is also satisfied that the combined assurance model and related systems and procedures are effective in achieving the following objectives:

- Enabling an effective internal control environment
- Supporting the integrity of information used for internal decision-making by management, the board and its committees
- Supporting the integrity of external reports
- Minimising assurance fatigue

Going concern

The audit committee has reviewed a documented assessment, including key assumptions prepared by management, of the going-concern status of the group. The board's statement on the going-concern status of the group, as supported by the audit committee, appears in the directors' responsibility for financial reporting section of the integrated annual report.

Governance of risk

The audit committee fulfils a dual function, being both an audit committee and a risk committee. Internal audit conducts regular and full assessments of the risk management function and framework. The committee is satisfied with the effectiveness of its oversight of the governance of risk in the group. A detailed report on risk, as recommended in King IV, is contained in this integrated annual report. See *Managing our risks and opportunities*.

Information and technology governance

The board recognises that technology is now more than just an enabler, but that technology is both a source for future opportunities and platforms on which our organisation conducts its business.

The audit and risk committee has delegated responsibility to management for implementing the policy on enterprise-wide information and technology management, and for embedding it into the day-to-day, medium- and long-term decision-making activities and culture of the organisation.

During the period under review, *inter alia*, management reviewed and expanded governance of the information technology (IT) project management office, implemented an information security management system, integrated its IT systems at Moab Khotsong and ensured the alignment of adequately skilled resources to support operational and project initiatives as per the approved strategy.

Events subsequent to June 2018

- On 12 July 2018, shareholders approved a special resolution to issue 11 032 623 new ordinary shares to African Rainbow Minerals Limited at the placing price of R19.12 (ARM Placing). The proceeds of R211 million (US$16 million) raised from the ARM Placing were used to repay part of the outstanding bridge loan raised for the acquisition of Moab Khotsong
- On 18 July 2018, the remaining outstanding balance of US$50 million (R670 million) was repaid on the US$200 million bridge loan
- On 4 October 2018, Harmony reached a mutually acceptable settlement with the Financial Sector Conduct Authority of South Africa. The dispute related to incorrect financial results reported for the March 2007 quarter. Harmony informed shareholders and the authorities of the error in August 2007. Subsequently Harmony reviewed all financial accounting procedures and systems to ensure that a similar error would not occur. Following various discussions with the authorities, an administrative penalty of R30 million was imposed and paid by Harmony

Fikile De Buck

Audit and risk committee: Chairman

25 October 2018

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Harmony Gold Mining Company Limited

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Harmony Gold Mining Company Limited and its subsidiaries as of June 30, 2018 and 2017, and the related consolidated income statements, statements of comprehensive income, statements of changes in shareholders' equity and cash flow statements for each of the three years in the period ended June 30, 2018, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of June 30, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO").

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of June 30, 2018 and 2017, and the results of their operations and their cash flows for each of the three years in the period ended June 30, 2018 in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of June 30, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

As described in Management's Annual Report on Internal Control over Financial Reporting, management has excluded Moab Khotsong from its assessment of internal control over financial reporting as of June 30, 2018 because it was acquired by the Company in a purchase business combination during 2018. We have also excluded Moab Khotsong from our audit of internal control over financial reporting. Moab Khotsong is a wholly-owned subsidiary whose total assets and total revenues excluded from management's assessment and our audit of internal control over financial reporting represent approximately 9% of consolidated total assets and approximately 8% of consolidated revenues, respectively, of the related consolidated financial statement amounts as of and for the year ended June 30, 2018.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers Inc.
Johannesburg, Republic of South Africa
25 October 2018

We have served as the Company's auditor since 1950.

GROUP INCOME STATEMENTS

for the years ended 30 June 2018

Figures in million	Notes	US dollar 2018	2017	2016
Revenue	5	**1 584**	1 416	1 264
Cost of sales	6	**(1 800)**	(1 448)	(1 088)
Production costs		**(1 167)**	(1 089)	(914)
Amortisation and depreciation		**(200)**	(185)	(149)
(Impairment)/reversal of impairment of assets		**(386)**	(131)	3
Other items		**(47)**	(43)	(28)
Gross profit/(loss)		**(216)**	(32)	176
Corporate, administration and other expenditure		**(63)**	(38)	(28)
Exploration expenditure		**(11)**	(18)	(13)
Gains on derivatives	7	**8**	75	30
Other operating expenses	8	**(53)**	(68)	(54)
Operating profit/(loss)	9	**(335)**	(81)	111
Gain on bargain purchase	14	**—**	60	—
Loss on liquidation of subsidiaries		**—**	(1)	—
Share of profit/(loss) from associate	21	**3**	(1)	—
Acquisition-related costs	14	**(8)**	—	—
Investment income	10	**27**	20	17
Finance costs	11	**(26)**	(17)	(19)
Profit/(loss) before taxation		**(339)**	(20)	109
Taxation	12	**18**	37	(43)
Net profit/(loss) for the year		**(321)**	17	66
Attributable to:				
Owners of the parent		**(321)**	17	66
Earnings/(loss) per ordinary share (cents)				
Total earnings/(loss)	13	**(72)**	4	15
Diluted earnings/(loss) per ordinary share (cents)				
Total diluted earnings/(loss)	13	**(72)**	4	15

The accompanying notes are an integral part of these consolidated financial statements.

GROUP STATEMENTS OF COMPREHENSIVE INCOME

for the years ended 30 June 2018

		US dollar		
Figures in million	Notes	**2018**	2017	2016
Net profit/(loss) for the year		**(321)**	17	66
Other comprehensive income/(loss) for the year, net of income tax		**(175)**	309	(375)
Items that may be reclassified subsequently to profit or loss	25	**(174)**	309	(375)
Foreign exchange translation gain/(loss)		**(117)**	225	(375)
Remeasurement of Rand gold hedging contracts		**(57)**	84	—
Items that will not be reclassified to profit or loss:	25	**(1)**	—	—
Remeasurement of retirement benefit obligation		**(1)**	—	—
Total comprehensive income/(loss) for the year		**(496)**	326	(309)
Attributable to:				
Owners of the parent		**(496)**	326	(309)

The accompanying notes are an integral part of these consolidated financial statements.

GROUP BALANCE SHEETS

Figures in million	Notes	At 30 June 2018	At 30 June 2017
		US dollar	
ASSETS			
Non-current assets			
Property, plant and equipment	15	**2 245**	2 292
Intangible assets	16	**37**	46
Restricted cash	17	**6**	5
Restricted investments	18	**237**	203
Investments in associates	21	**6**	4
Inventories	23	**3**	3
Trade and other receivables	19	**18**	14
Derivative financial instruments	20	**6**	24
Other non-current assets		**1**	—
Total non-current assets		**2 559**	2 591
Current assets			
Inventories	23	**127**	86
Restricted cash	17	**3**	1
Trade and other receivables	19	**83**	76
Derivative financial instruments	20	**39**	117
Cash and cash equivalents		**51**	95
Total current assets		**303**	375
Total assets		**2 862**	2 966
EQUITY AND LIABILITIES			
Share capital and reserves			
Share capital and premium	24	**4 115**	4 036
Other reserves	25	**(1 402)**	(1 255)
Accumulated loss		**(878)**	(547)
Total equity		**1 835**	2 234
Non-current liabilities			
Deferred tax liabilities	12	**83**	130
Provision for environmental rehabilitation	26	**240**	201
Provision for silicosis settlement	27	**67**	70
Retirement benefit obligation	28	**13**	14
Borrowings	29	**357**	23
Other non-current liabilities	30	**3**	1
Derivative financial instruments	20	**1**	—
Total non-current liabilities		**764**	439
Current liabilities			
Borrowings	29	**50**	140
Trade and other payables	31	**198**	153
Derivative financial instruments	20	**15**	—
Total current liabilities		**263**	293
Total equity and liabilities		**2 862**	2 966

The accompanying notes are an integral part of these consolidated financial statements.

GROUP STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

for the years ended 30 June 2018

Figures in million (US dollar)	Number of ordinary shares issued	Share capital and share premium	Accumu-lated loss	Other reserves	Total
Notes	24	24		25	
Balance - 30 June 2015	436 187 133	4 035	(597)	(1 238)	2 200
Issue of shares					
– Exercise of employee share options	1 077 346	—	—	—	—
– Shares issued to the Tlhakanelo Employee Share Trust	35 000	—	—	—	—
Share-based payments	—	—	—	22	22
Reversal of provision for odd lot repurchases	—	1	—	—	1
Net profit for the year	—	—	66	—	66
Other comprehensive loss for the year	—	—	—	(375)	(375)
Balance - 30 June 2016	437 299 479	4 036	(531)	(1 591)	1 914
Issue of shares					
– Exercise of employee share options	2 657 720	—	—	—	—
Share-based payments	—	—	—	27	27
Net profit for the year	—	—	17	—	17
Other comprehensive income for the year	—	—	—	309	309
Dividends paid	—	—	(33)	—	(33)
Balance - 30 June 2017	439 957 199	4 036	(547)	(1 255)	2 234
Issue of shares					
– Shares issued and fully paid	**55 055 050**	**79**	**—**	**—**	**79**
– Exercise of employee share options	**5 239 502**	**—**	**—**	**—**	**—**
Share-based payments	**—**	**—**	**—**	**29**	**29**
Net loss for the year	**—**	**—**	**(321)**	**—**	**(321)**
Other comprehensive loss for the year	**—**	**—**	**—**	**(175)**	**(175)**
Reclassification from other reserves	**—**	**—**	**1**	**(1)**	**—**
Dividends paid	**—**	**—**	**(11)**	**—**	**(11)**
Balance - 30 June 2018	**500 251 751**	**4 115**	**(878)**	**(1 402)**	**1 835**

The accompanying notes are an integral part of these consolidated financial statements.

GROUP CASH FLOW STATEMENTS

for the years ended 30 June 2018

		US dollar		
Figures in million	Notes	**2018**	2017	2016
CASH FLOW FROM OPERATING ACTIVITIES				
Cash generated by operations	32	**334**	320	322
Interest received		**6**	6	5
Interest paid		**(14)**	(6)	(11)
Income and mining taxes refunded/(paid)		**(23)**	(40)	(4)
Cash generated by operating activities		**303**	280	312
CASH FLOW FROM INVESTING ACTIVITIES				
(Increase)/decrease in restricted cash		**(2)**	—	(1)
Decrease in amounts invested in restricted investments		**—**	1	3
Cash on acquisition of Hidden Valley	14	**—**	33	—
Acquisition of Moab Khotsong	14	**(300)**	—	—
Loan to ARM BBEE Trust		**—**	—	(14)
Additions to intangible assets		**(1)**	—	—
Proceeds from disposal of property, plant and equipment		**—**	3	—
Additions to property, plant and equipment		**(355)**	(286)	(168)
Cash utilised by investing activities		**(658)**	(249)	(180)
CASH FLOW FROM FINANCING ACTIVITIES				
Borrowings raised	29	**565**	54	24
Borrowings repaid	29	**(312)**	(50)	(138)
Proceeds from the issue of shares[1]	24	**79**	—	—
Dividends paid		**(12)**	(33)	—
Cash generated from/(utilised by) financing activities		**320**	(29)	(114)
Foreign currency translation adjustments		**(9)**	8	(21)
Net increase/(decrease) in cash and cash equivalents		**(44)**	10	(3)
Cash and cash equivalents - beginning of year		**95**	85	88
Cash and cash equivalents - end of year		**51**	95	85

[1] Net of share issue cost of US$3.7 million

The accompanying notes are an integral part of these consolidated financial statements.

NOTES TO THE GROUP FINANCIAL STATEMENTS

for the years ended 30 June 2018

1 GENERAL INFORMATION

Harmony Gold Mining Company Limited (the company) and its subsidiaries (collectively Harmony or the group) are engaged in gold mining and related activities, including exploration, extraction and processing. Gold bullion, the group's principal product, is currently produced at its operations in South Africa and Papua New Guinea (PNG).

The company is a public company, incorporated and domiciled in South Africa. The address of its registered office is Randfontein Office Park, Corner Main Reef Road and Ward Avenue, Randfontein, 1759.

The consolidated financial statements were authorised for issue by the board of directors on 25 October 2018.

2 ACCOUNTING POLICIES

BASIS OF PREPARATION

The principal accounting policies applied in the preparation of the consolidated financial statements have been consistently applied in all years presented.

Share capital and share premium, which were presented separately in the statements of changes in equity in 2017, have been combined into a single share capital and premium column for 2018.

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board (IASB) and IFRIC Interpretations (collectively IFRS).

The consolidated financial statements have been prepared on a going concern basis.

The consolidated financial statements have been prepared to the nearest million and rounding may cause differences.

RECENT ACCOUNTING DEVELOPMENTS

New standards, amendments to standards and interpretations to existing standards adopted by the group

The standards and amendments to standards that became effective during the 2018 year did not have an impact on the consolidated financial statements with the exception of the following:

Pronouncement	Title	Effective date
IAS 7 (Amendments)	*Statement of Cash Flows* - Disclosure initiative	1 January 2017

New standards, amendments to standards and interpretations to existing standards that are not yet effective and have not been early adopted.

At the date of authorisation of these financial statements, the standards, amendments to standards and interpretations listed below were in issue but not yet effective. These new standards and interpretations have not been early adopted by the group and the group plans on adopting these standards, amendments to standards and interpretations on the dates when they become effective. The effective dates below are for the financial periods beginning on or after the given date.

The following standards, amendments to standards and interpretations to existing standards may possibly have an impact on the group:

Pronouncement	Title	Effective date
IFRS 9	*Financial Instruments* This standard on classification and measurement of financial assets and financial liabilities will replace IAS 39, *Financial Instruments: Recognition and Measurement*. IFRS 9 has two measurement categories: amortised cost and fair value. The group does not expect the new guidance to have a significant impact on the classification and measurement of its financial assets for the following reasons: – The equity instruments that are currently classified as available-for-sale financial assets appear to satisfy the conditions for classification as at fair value through other comprehensive income and hence there will be no change to the accounting for these assets. – A fair value through other comprehensive income (FVOCI) election is available for the equity instruments which are currently classified as available-for-sale. – Equity investments currently measured at fair value through profit or loss (FVPL) will likely continue to be measured on the same basis under IFRS 9. – Debt instruments currently classified as held-to-maturity and measured at amortised cost appear to meet the conditions for classification at amortised cost under IFRS 9.	1 January 2018

2 ACCOUNTING POLICIES continued

RECENT ACCOUNTING DEVELOPMENTS continued

The following standards, amendments to standards and interpretations to existing standards may possibly have an impact on the group:

Pronouncement	Title	Effective date
IFRS 9	*Financial Instruments* continued There will be no impact on the group's accounting for financial liabilities, as the new requirements only affect the accounting for financial liabilities that are designated at fair value through profit or loss and the group does not have any such liabilities. The derecognition rules for all financial instruments have been transferred from IAS 39. Hedge accounting The new hedge accounting rules will align the accounting for hedging instruments more closely with the group's risk management practices. As a general rule, more hedge relationships might be eligible for hedge accounting, as the standard introduces a more principles-based approach. However, at this stage the group does not expect to identify any new hedge relationships. The group's existing hedge relationships appear to qualify as continuing hedges upon the adoption of IFRS 9. As a consequence, the group does not expect a significant impact on the accounting for its hedging relationships. Expected credit losses The impairment model requires the recognition of impairment provisions based on expected credit losses (ECL) rather than only incurred credit losses as is the case under IAS 39. The impact of the new impairment requirements is not expected to be material for the following reasons: – The group does not generally carry significant assets that are subject to the new impairment requirements; and – The group expects to make use of practical expedients when measuring expected credit losses on trade receivables. Disclosures Extensive disclosures are required, including reconciliations from opening to closing amounts of the ECL provision, assumptions and inputs and a reconciliation on transition of the original classification categories under IAS 39 to the new classification categories in IFRS 9. These are expected to change the nature and extent of the group's disclosures about its financial instruments particularly in the year of the adoption of the new standard. Transition The group expects to apply the standard prospectively without restating any comparative figures. The difference between the carrying amount of financial instruments before the adoption of IFRS 9 and the new carrying amount calculated in accordance with the standard at the beginning of the annual reporting period that includes the date of initial application will be recognised directly in the opening balance of equity in the annual reporting period that includes the date of initial application.	1 January 2018

2 ACCOUNTING POLICIES continued

RECENT ACCOUNTING DEVELOPMENTS continued

The following standards, amendments to standards and interpretations to existing standards may possibly have an impact on the group:

Pronouncement	Title	Effective date
IFRS 15	*Revenue from Contracts with Customers* Revenue is currently recognised when the goods are delivered and a certificate of sale is issued by the customer, which is taken to be the point in time at which the customer accepts the goods and the related risks and rewards of ownership transfer. Revenue is recognised at this point provided that the revenue and costs can be measured reliably, the recovery of the consideration is probable and there is no continuing management involvement with the goods. Under IFRS 15, revenue will be recognised when a customer obtains control of the goods. The group expects that the certificate of sale will continue to drive revenue recognition as this is the point when control of the goods effectively transfers to the customer. However, we expect that the adoption of IFRS 15 will result in the recognition of by-product revenue in “revenue from product sales”. Revenue from product sales includes gold income and by-product revenue. This change in classification results in a consequential increase in costs of sales, and therefore will not have an impact on previously reported gross profit or loss. The group expects to apply the standard retrospectively to each prior reporting period presented in accordance with IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors.*	1 January 2018
IFRS 16	*Leases* The new standard requires lessees to recognise a lease liability reflecting future lease payments and a ‘right-of-use asset’ for virtually all lease contracts (with limited exceptions), whereas previously, lessees were required to make a distinction between a finance lease (on balance sheet) and an operating lease (off balance sheet). The guidance on the definition of a lease (as well as the guidance on the combination and separation of contracts) has been updated, affecting lessors, although the accounting remains almost unchanged. The new accounting model for lessees is expected to impact negotiations between lessors and lessees. The group is still assessing the impact of the new standard. In general, it is expected that assets and liabilities will increase as right of use assets and lease liabilities will be recognised for most of the group’s leases. This is expected to lead to an increase in depreciation and interest expense and a change in the classification of cash flows.	1 January 2019

MEASUREMENT BASIS

The financial statements have been prepared under the historical cost convention, as modified by the revaluation of available-for-sale financial assets, financial assets and financial liabilities at fair value through profit or loss and cash-settled share-based payments.

GROUP ACCOUNTING POLICIES

Accounting policies are included in the relevant notes to the consolidated financial statements and have been highlighted between red lines in the notes to the consolidated financial statements. The accounting policies that follow are applied throughout the financial statements:

2 ACCOUNTING POLICIES continued

GROUP ACCOUNTING POLICIES continued

2.1 Consolidation

The group recognises that control is the single basis for consolidation for all types of entities in accordance with IFRS 10 - *Consolidated Financial Statements.*

The consolidated financial information includes the financial statements of the company, its subsidiaries, interest in associates and joint arrangements and structured entities. Where the group has no control over an entity, that entity is not consolidated.

Control
The group, regardless of the nature of its involvement with an entity, shall determine whether it is a parent by assessing whether it controls the investee.

The group controls an entity when it is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

(i) Subsidiaries
Subsidiaries are entities over which the group has control. Subsidiaries are fully consolidated from the date on which control is transferred to the group up until when that control ceases.

Intercompany transactions, balances and unrealised gains on transactions between group companies are eliminated. Unrealised losses are also eliminated. Accounting policies of subsidiaries have been changed to ensure consistency with the policies adopted by the group.

The group uses the acquisition method of accounting to account for business combinations. The consideration transferred for the acquisition of an acquiree is the fair value of the assets transferred, liabilities incurred and the equity interests issued by the group. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Acquisition-related costs are expensed as incurred. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. On an acquisition-by-acquisition basis, the group recognises any non-controlling interests in the acquiree either at fair value or at the non-controlling interest's proportionate share of the acquiree's net assets.

The excess of the sum of the consideration transferred, the amount of any non-controlling interest in the acquiree and the acquisition-date fair value of any previously held equity interest in the acquiree over the fair value of the group's share of the identifiable net assets acquired is recorded as goodwill. If this is less than the fair value of the net assets of the subsidiary acquired, in the case of a bargain purchase, the difference is recognised directly in the income statement below operating profit or loss.

(ii) Associates
Associates are entities in which the group has significant influence, but not control, over operational and financial policies. This may be when there is a shareholding of between 20% and 50% of the voting rights or when significant influence can be otherwise demonstrated, for example where the group has the right of representation on the board of directors, or other governing body, of the entity.

Investments in associates are accounted for by using the equity method of accounting, and are initially recognised at cost. The group's investment in associates includes goodwill identified on acquisition. Cumulative post-acquisition movements are adjusted against the carrying amount of the investment. The group's share of the associates' post-acquisition profits or losses is recognised in the income statement, and its share of post acquisition movement in reserves is recognised in other reserves.

When the group's share of losses in an associate equals or exceeds its interest in the associate, the group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the associate.

The carrying value of an associate is reviewed on a regular basis and, if impairment in the carrying value has occurred, it is written off in the period in which such impairment is identified.

Accounting policies of associates have been reviewed to ensure consistency with the policies adopted by the group.

(iii) Joint arrangements
Joint arrangements are arrangements of which two or more parties have joint control and are contractually bound. The joint arrangement can either be a joint operation or a joint venture. A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement and have the right to the assets, and obligations for the liabilities, relating to the arrangement. These parties are called joint operators. A joint venture is a joint arrangement where the parties that have joint control of the arrangement have rights to the net assets of the arrangement. Those parties are called joint venturers. For interest in joint operations, the group includes its share of the joint operations' individual income and expenses, assets and liabilities and cash flows on a line-by-line basis with similar items in the group's financial statements.

Where an additional interest in a joint operation is acquired, the principles of IFRS 3 are applied to account for the transaction.

The group recognises the portion of gains or losses on the sale of assets by the group to the joint operation that is attributable to the other joint operators. The group does not recognise its share of profits or losses from the joint operation that results from the purchase of assets by the group from the joint operation until it resells the assets to an independent party. However, if a loss on the transaction provides evidence of a reduction in the net realisable value of current assets or an impairment loss, the loss is recognised immediately.

The group recognises its interest in a joint venture as an investment and accounts for it using the equity accounting method.

2 ACCOUNTING POLICIES continued

GROUP ACCOUNTING POLICIES continued

2.1 Consolidation continued

(iv) Structured entities
A structured entity is an entity that has been designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, such as when any voting rights relate to administrative tasks only and the relevant activities are directed by means of contractual arrangements.

The accounting treatment for a structured entity will fall into one of the aforementioned categories (i to iii) depending on whether the group has control over that structured entity.

2.2 Foreign currency translation

(i) Functional and presentation currency
Items included in the financial statements of each of the group's entities are measured using the currency of the primary economic environment in which the entity operates (the functional currency).

For translation of the rand financial statement items to US dollar, the average of R12.85 (2017: R13.60) (2016: R14.50) per US$1 was used for income statement items (unless this average was not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case these items were translated at the rate on the date of the transactions) and the closing rate of R13.81 (2017: R13.11) per US$1 for asset and liability items. Equity items were translated at historic rates.

The translation effect from rand to US dollar is included in other comprehensive income in the US$ financial statements.

References to "A$" refers to Australian currency, "R" to South African currency, "$" or "US$" to United States currency and "K" or "kina" to Papua New Guinean currency.

(ii) Transactions and balances
Foreign exchange gains and losses resulting from the settlement of foreign currency transactions and from the translation to year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the income statement. Gains and losses recognised in the income statement are included in the determination of other operating expenses.

(iii) Group companies
The results and financial position of all group entities (none of which has the currency of a hyperinflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- Assets and liabilities for each balance sheet presented are translated at the closing rate at the date of that balance sheet while equity items are translated at historic rates;
- Income and expenses for each income statement are translated at average exchange rates (the rate on the date of the transaction is used if the average is not a reasonable rate for the translation of the transaction);
- All resulting exchange differences are recognised as a separate component of other comprehensive income.

On consolidation, exchange differences arising from the translation of the net investment in foreign operations, and of borrowings and other currency instruments designated as hedges of such investments, are taken to other comprehensive income. When a foreign operation is sold or control is otherwise lost, exchange differences that were recorded in other comprehensive income are recognised in profit or loss in the period of the disposal or change in control. Goodwill and fair value adjustments arising on the acquisition of a foreign operation are treated as assets and liabilities of the foreign entity and translated at the closing rate.

2.3 Derivatives and hedging activities

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently remeasured to their fair value at the end of each reporting period. The accounting for subsequent changes in fair value depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged.

The difference between the fair value of the derivative at initial recognition and expected forward transaction price is deferred and recognised as a day one gain or loss. The day one gain or loss is amortised over the derivative contract period and recognised in profit or loss in gains/losses on derivatives.

The full fair value of a derivative is classified as a non-current asset or liability when the remaining maturity is more than 12 months; it is classified as a current asset or liability when the remaining maturity is less than 12 months.

(i) Cash flow hedge

The group designates certain derivatives as hedges of a particular risk associated with the cash flows of highly probable forecast transactions (cash flow hedges). The group documents at the inception of the hedging transaction the relationship between hedging instruments and hedged items, as well as its risk management objective and strategy for undertaking various hedge transactions. The group also documents its assessment, both at hedge inception and on an ongoing basis, of whether the derivatives that are used in hedging transactions have been and will continue to be highly effective in offsetting changes in cash flows of hedged items.

2 ACCOUNTING POLICIES continued

GROUP ACCOUNTING POLICIES continued

2.3 Derivatives and hedging activities continued

(i) Cash flow hedge continued

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognised in other comprehensive income and accumulated in reserves in equity. The gain or loss relating to the ineffective portion is recognised immediately in profit or loss within gains/losses on derivatives.

Amounts accumulated in equity are reclassified to profit or loss in the periods when the forecast sale that is hedged takes place and affects profit or loss. The gain or loss relating to the effective portion of the rand gold forward sales contracts is recognised in profit or loss within revenue.

When a hedging instrument expires or is sold or terminated, or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in equity at that time remains in equity and is recognised when the forecast transaction that was hedged is ultimately recognised in profit or loss. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was reported in equity is immediately reclassified to profit or loss.

(ii) Derivatives not designated for hedge accounting purposes
Certain derivative instruments do not qualify for hedge accounting. Changes in the fair value as well as gains and losses on expiry, disposal or termination of any derivative instrument that does not qualify for hedge accounting are recognised immediately in profit or loss and are included in gains/losses on derivatives.

2.4 Exploration expenditure

The group has elected to expense all exploration and evaluation expenditures until it is concluded that the project is technically feasible and commercially viable, and that future economic benefits are therefore probable. The information used to make that determination depends on the level of exploration as well as the degree of confidence in the ore body as set out below.

Exploration and evaluation expenditure on greenfield sites, being those where the group does not have any mineral deposits which are already being mined or developed, is expensed as incurred until the technical and commercial viability of the project has been demonstrated usually through the completion of a final feasibility study. However, in certain instances, the technical and commercial viability of the deposit may be demonstrated at an earlier stage, for example where an extended feasibility study is conducted and the underlying feasibility study in respect of specific components of the mineral deposit has advanced to such a stage that significant commercially viable reserves has been established, and the other criteria for the recognition of an asset have been met.

Exploration and evaluation expenditure on brownfield sites, being those adjacent to mineral deposits which are already being mined or developed, is expensed as incurred until the group is able to demonstrate that future economic benefits are probable through the completion of a feasibility study, after which the expenditure is capitalised as mine development cost. A ‘feasibility study’ consists of a comprehensive study of the viability of a mineral project that has advanced to a stage where the mining method has been established, and which, if an effective method of mineral processing has been determined, includes a financial analysis based on reasonable assumptions of technical, engineering, operating economic factors and the evaluation of other relevant factors. The feasibility study, when combined with existing knowledge of the mineral property that is adjacent to mineral deposits that are already being mined or developed, allows the group to conclude that the project is technically feasible and commercially viable.

Exploration and evaluation expenditure relating to extensions of mineral deposits which are already being mined or developed, including expenditure on the definition of mineralisation of such mineral deposits, is capitalised as a mine development cost following the completion of an economic evaluation equivalent to a feasibility study. This economic evaluation is distinguished from a feasibility study in that some of the information that would normally be determined in a feasibility study is instead obtained from the existing mine or development. This information, when combined with existing knowledge of the mineral property already being mined or developed, allows the directors to conclude that the project is technically feasible and commercially viable.

2.5 Impairment of non-financial assets

Assets that have an indefinite useful life are not subject to amortisation or depreciation and are tested annually for impairment or when there is an indication of impairment.

Assets that are subject to amortisation are reviewed annually on 30 June for impairment or whenever events or changes in circumstances indicate that the carrying amount may not be recoverable.

An impairment loss is recognised in the income statement for the amount by which the asset’s carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset’s fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash generating units). Each operating shaft, along with allocated common assets such as plants and administrative offices, is considered to be a cash generating unit as each shaft is largely independent from the cash flows of other shafts and assets belonging to the group

2 ACCOUNTING POLICIES continued

GROUP ACCOUNTING POLICIES continued

2.5 Impairment of non-financial assets continued

Fair value less cost to sell is generally determined by using discounted estimated after-tax future cash flows. Future cash flows are estimated based on quantities of recoverable minerals, expected gold prices (considering current and historical prices, price trends and related factors), production levels and cash costs of production, all based on life-of-mine (LoM) plans. Future cash flows are discounted to their present value using a post-tax discount rate that reflects current market assessments of the time value of money and risk specific to the asset. Refer to note 15 for detail.

The term “recoverable minerals” refers to the estimated amount of gold that will be obtained from reserves and resources and all related exploration stage mineral interests (except for other mine-related exploration potential and greenfields exploration potential discussed separately below) after taking into account losses during ore processing and treatment. Estimates of recoverable minerals from such related exploration stage mineral interests will be risk adjusted based on management's relative confidence in such materials.

In estimating future cash flows, assets are grouped at the lowest level for which there are identifiable cash flows that are largely independent of cash flows from other asset groups. With the exception of other mine-related exploration potential and greenfields exploration potential, estimates of future undiscounted cash flows are included on an area of interest basis, which generally represents an individual operating mine, even if the mines are included in a larger mine complex.

In the case of mineral interests associated with other mine-related exploration potential and greenfields exploration potential, cash flows and fair values are individually evaluated based primarily on recent exploration results and recent transactions involving sales of similar properties, if any. Assumptions underlying future cash flow estimates are subject to significant risks and uncertainties.

Impairment losses on goodwill are recognised immediately in the income statement and are not reversed. The impairment testing is performed annually on 30 June or when events or changes in circumstances indicate that it may be impaired.

Non-financial assets other than goodwill that suffered an impairment are reviewed annually for possible reversal of the impairment at 30 June. Reversal of impairments is also considered when there is objective evidence to indicate that the asset is no longer impaired. Where an impairment subsequently reverses, the carrying amount of the asset or CGU is increased to the revised estimate of its recoverable amount, but not higher than the carrying value that would have been determined had no impairment been recognised in prior years.

2.6 Operating profit

The group defines operating profit as the profit earned from the normal core mining operations. In reporting operating profit in the income statement, transactions for capital transactions involving subsidiaries, joint arrangements and associates are excluded from operating profit as these are not considered to be part of the mining operations of the Harmony group. Any gains or losses on capital transactions are presented below the operating profit line.

3 CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

The preparation of the financial statements in conformity with IFRS requires the group's management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Refer to the specific notes below for further information on the key accounting estimates and assumptions applied.

- Valuation of derivative financial instruments – note 4;
- Estimate of taxation – note 12;
- Valuation of acquired assets and assumed liabilities for Moab Khotsong and Hidden Valley– note 14;
- Gold mineral reserves and resources – note 15;
- Production start date – note 15;
- Stripping activities – note 15;
- Impairment of assets – note 15;
- Depreciation of property plant and equipment – note 15;
- Impairment of goodwill – note 16;
- Valuation of loans receivable – note 19;
- Valuation of interest in associate – note 21;
- Provision for stock obsolescence - note 23;
- Estimate of exposure and liabilities with regard to rehabilitation costs – note 26;
- Estimate of provision for silicosis settlement – note 27;
- Estimate of employee benefit liabilities – note 28;
- Fair value of share-based payments – note 34;
- Assessment of contingencies – note 36.

4 FINANCIAL RISK MANAGEMENT

The group's operating activities expose it to a variety of financial risks: market risk (including commodity price risk, currency risk, cash flow interest rate risk and other price risk), credit risk and liquidity risk. The group may use derivative financial instruments to hedge certain risk exposures.

The group's financial assets and liabilities are set out below:

Figures in million (US dollars)	Loans and receivables	Available-for-sale financial assets	Held-to-maturity investments	Hedging instruments	Fair value through profit or loss	Financial liabilities at amortised cost
At 30 June 2018						
Financial assets						
Restricted cash	**9**	**—**	**—**	**—**	**—**	**—**
Restricted investments	**2**	**—**	**169**	**—**	**66**	**—**
Investment in financial assets	**—**	**1**	**—**	**—**	**—**	**—**
Other non-current receivables	**18**	**—**	**—**	**—**	**—**	**—**
Derivative financial instruments	**—**	**—**	**—**	**34**	**11**	**—**
Trade and other receivables	**45**	**—**	**—**	**—**	**—**	**—**
Cash and cash equivalents	**51**	**—**	**—**	**—**	**—**	**—**
Financial liabilities						
Derivative financial instruments	**—**	**—**	**—**	**—**	**16**	**—**
Borrowings	**—**	**—**	**—**	**—**	**—**	**407**
Trade and other payables	**—**	**—**	**—**	**—**	**—**	**56**
At 30 June 2017						
Financial assets						
Restricted cash	6	—	—	—	—	—
Restricted investments	2	—	137	—	64	—
Other non-current receivables	14	—	—	—	—	—
Derivative financial instruments	—	—	—	105	36	—
Trade and other receivables	39	—	—	—	—	—
Cash and cash equivalents	95	—	—	—	—	—
Financial liabilities						
Borrowings	—	—	—	—	—	163
Other non-current liabilities	—	—	—	—	—	1
Trade and other payables	—	—	—	—	—	47

Risk management is carried out by a central treasury department (Group treasury) under policies approved by the board of directors. Group treasury identifies, evaluates and hedges certain selected financial risks in close cooperation with the group's operating units. The audit and risk committee and the board provides written principles for overall risk management, as well as written policies covering specific areas, such as commodity price risk, foreign exchange risk, interest rate risk, credit risk, use of derivative financial instruments and non-derivative financial instruments, and the investment of excess liquidity.

4 FINANCIAL RISK MANAGEMENT continued

MARKET RISK

(i) Foreign exchange risk

The group operates internationally and is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to the US dollar (US$). Foreign exchange risk arises when future commercial transactions, recognised assets and liabilities are denominated in a currency that is not the entity's functional currency. Harmony's revenues are sensitive to the R/US$ exchange rate as all revenues are generated by gold sales denominated in US$. Harmony may enter into hedging transactions to reduce this risk. The limit set by the board is 15% of the group's foreign exchange risk exposure over two years. Subsequent to year-end the board approved for the limit to be set at 25% of the group's foreign exchange risk exposure over two years. Refer to note 20 for details of the contracts. The audit and risk committee review the details of the programme quarterly.

The group is exposed to foreign exchange risk arising from borrowings and cash denominated in a currency other than the functional currency of that entity.

The group has reviewed its foreign currency exposure on financial assets and financial liabilities and has identified the following sensitivities for a 10% change in the exchange rate that would affect profit or loss. Management considers a range between 10% and 20% to be a reasonable change given the volatility in the market.

	US dollar	
Figures in million	**2018**	2017
Sensitivity analysis - borrowings		
Rand against US$		
Balance at 30 June	**370**	140
Strengthen by 10%	**37**	14
Weaken by 10%	**(37)**	(14)
Closing rate	**13.81**	13.11
Sensitivity analysis - financial instruments		
Rand against US$		
Balance at 30 June	**(10)**	34
Strengthen by 10%	**48**	40
Weaken by 10%	**(45)**	(34)
Closing rate	**13.81**	13.11
US$ against Kina		
Balance at 30 June	**2**	7
Strengthen by 10%	**—**	1
Weaken by 10%	**—**	(1)
Closing rate	**0.30**	0.32

(ii) Commodity price sensitivity

The profitability of the group's operations, and the cash flows generated by those operations, are affected by changes in the market price of gold, and in the case of Hidden Valley, silver as well. During July 2016, Harmony started entering into derivative contracts to manage the variability in cash flows from the group's production, in order to create cash certainty and protect the group against lower commodity prices. The limits currently set by the Board are for 20% of the production from gold and 25% from silver over a 24-month period. Subsequent to year end the permitted level of cover for the silver has been increased to 50%. Management continues to top up these programmes as and when opportunities arise to lock in attractive margins for the business, but are not required to maintain hedging at these levels. The audit and risk committee review the details of the programme quarterly.

The exposure to the variability in the price of gold is managed by entering into gold forward sales contracts for a portion of the group's production. A portion of the production of the South African operations is hedged by Rand gold forward contracts. These contracts have been designated as cash flow hedging instruments and hedge accounting has been applied. US$ gold forward contracts entered into are for the production from Hidden Valley which were not designated as hedging instruments for hedge accounting and the gains and losses are accounted for in the income statement.

4 FINANCIAL RISK MANAGEMENT continued

MARKET RISK continued

(ii) Commodity price sensitivity continued

The exposure to the variability in the price of silver for Hidden Valley is managed by entering into US$/silver zero cost collars. These contracts have not been designated as hedging instruments for hedge accounting and the gains and losses are accounted for in the income statement.

Refer to note 7 and 20 and the fair value determination for financial assets and liabilities section below for further detail on these contracts.

The group has reviewed its exposure to commodity linked instruments and has identified the following sensitivities for a 10% change in the commodity price specified per contract that would affect other comprehensive income and profit or loss. Management considers a range between 10% and 20% to be a reasonable change given the recent volatility in the market.

	US dollar	
Figures in million	**2018**	2017
Sensitivity analysis		
Rand gold derivatives		
Other comprehensive income		
Increase by 10%	**(38)**	(41)
Decrease by 10%	**37**	40
US$ gold derivatives		
Profit or loss		
Increase by 10%	**(12)**	(8)
Decrease by 10%	**12**	8
US$ silver derivatives		
Profit or loss		
Increase by 10%	**(1)**	(1)
Decrease by 10%	**1**	1

(iii) Other price risk

The group is exposed to the risk of fluctuations in the fair value of the available-for-sale financial assets and fair value through profit or loss financial assets as a result of changes in market prices (other than changes in interest rates and foreign currencies). Harmony generally does not use any derivative instruments to manage this risk.

Sensitivity analysis

Certain of the restricted investments are linked to the Top 40 Index on the JSE. A 10% increase in the Top 40 index at the reporting date, with all other variables held constant, would have increased profit or loss by US$3.3 million (2017: US$2.4 million); an equal change in the opposite direction would have decreased profit or loss by US$2.5 million (2017: US$1.6 million).

(iv) Interest rate risk

The group's interest rate risk arises mainly from long-term borrowings. The group has variable interest rate borrowings. Variable rate borrowings expose the group to cash flow interest rate risk. The group has not entered into interest rate swap agreements as this is a risk that management is prepared to take. The audit and risk committee reviews the exposures quarterly.

Interest rate risk arising from long-term borrowings is offset by cash, restricted cash and restricted investments held at variable rates.

A change of 100 basis points in interest rates at the reporting date would have increased/(decreased) profit or loss before tax by the amounts shown below. This analysis assumes that all other variables remain constant. The analysis is performed on the same basis for 2017.

4 FINANCIAL RISK MANAGEMENT continued

MARKET RISK continued

(iv) Interest rate risk continued

	US dollar	
Figures in million	**2018**	2017
Sensitivity analysis - borrowings (finance costs)		
Increase by 100 basis points	**(4)**	(2)
Decrease by 100 basis points	**4**	2
Sensitivity analysis - financial assets (interest received)		
Increase by 100 basis points	**2**	2
Decrease by 100 basis points	**(2)**	(2)

CREDIT RISK

Credit risk is the risk that a counterparty may default or not meet its obligations in a timely manner. Financial instruments, which subject the group to concentrations of credit risk, consist predominantly of restricted cash, restricted investments, derivative financial assets, trade and other receivables (excluding non-financial instruments) and cash and cash equivalents.

Assessment of credit risk

In April 2017, two of the three international rating agencies, Standard and Poor's and Fitch, downgraded South Africa's long-term sovereign credit rating. Moody's has kept the sovereign credit risk of South Africa as investment grade. This was largely limited to international scale ratings, not the national scale ratings. The group has identified the following risks as a result of this downgrade, which are:

- Increased credit risk;
- Increased cost of capital; and
- Difficulty in obtaining funding.

In assessing the credit worthiness of local institutions, management uses the national scale long-term ratings which are unchanged. Management will continue monitoring these ratings.

Exposure to credit risk on trade and other receivables is monitored on a regular basis. Refer to note 19 for management's assessment. The credit risk arising from restricted cash, cash and cash equivalents and restricted investments is managed by ensuring amounts are only invested with financial institutions of good credit quality. The contracts for derivative financial assets were entered into with counterparties of good credit quality. The group has policies that limit the amount of credit exposure to any one financial institution. The audit and risk committee reviews the exposure on a quarterly basis.

The group's maximum exposure to credit risk is represented by the carrying amount of all financial assets determined to be exposed to credit risk, amounting to US$405.7 million as at 30 June 2018 (2017: US$498.7 million).

The social plan trust fund of US$2.4 million (2017: US$2.8 million) has been invested in unit trusts comprising shares in listed companies.

4 FINANCIAL RISK MANAGEMENT continued

CREDIT RISK continued

Financial institutions' credit rating by exposure (Source: Fitch Ratings and Global Credit Ratings)

	US dollar	
Figures in million	**2018**	2017
Cash and cash equivalents		
AA+	**—**	43
AA	**45**	30
AA-	**6**	22
	51	95
Restricted cash		
AA	**7**	6
AA-	**2**	—
	9	6
Restricted investments (environmental trusts)		
AA+	**109**	86
AA	**126**	90
AA-	**—**	24
	235	200
Derivative financial assets		
AA+	**9**	54
AA	**26**	2
AA-	**10**	85
	45	141

LIQUIDITY RISK

Prudent liquidity risk management implies maintaining sufficient cash and marketable securities, and the availability of funding through an adequate amount of committed credit facilities.

In the ordinary course of business, the group receives cash from its operations and is required to fund working capital and capital expenditure requirements. Management prepares cash flow forecasts weekly and ensures that surplus funds are invested in a manner to achieve market-related returns and to provide sufficient liquidity at the minimum risk. The group maintains and refinances committed credit facilities as medium-term forecasts require. The audit and risk committee reviews the updated forecasts quarterly. The group is able to actively source financing at competitive rates. Where necessary, funds will be drawn from its revolving credit facilities (refer to note 29).

4 FINANCIAL RISK MANAGEMENT continued

LIQUIDITY RISK continued

The following are the contractual maturities of financial liabilities (including principal and interest payments assuming the closing R/US$ exchange rate and interest rate at year end):

	US dollar	
Figures in million	**Current**	**More than 1 year**
2018		
Trade and other payables (excluding non-financial liabilities)	**56**	**—**
Derivative financial liabilities	**9**	**7**
Borrowings		
Due between 0 to six months	**51**	**—**
Due between six to 12 months	**—**	**—**
Due between one to two years	**—**	**42**
Due between two to five years	**—**	**362**
	116	**411**
2017		
Other non-current liabilities	—	1
Trade and other payables (excluding non-financial liabilities)	47	—
Borrowings		
Due between 0 to six months	4	—
Due between six to 12 months	142	—
Due between one to two years	—	2
Due between two to five years	—	24
	193	27

CAPITAL RISK MANAGEMENT

The primary objective of managing the group's capital is to ensure that there is sufficient capital available to support the funding requirements of the group, in a way that optimises the cost of capital and matches the current strategic business plan.

The group manages and makes adjustments to the capital structure, which consists of debt and equity, as and when borrowings mature or when funding is required. This may take the form of raising equity, market or bank debt or hybrids thereof. In doing so, the group ensures it stays within the debt covenants agreed with lenders. The group may also sell assets to reduce debt or schedule projects to manage the capital structure.

During the 2018 financial year the level of gearing increased due to the funding required for the acquisition of the Moab Khotsong operations (refer to note 14). Notwithstanding, the group continues to follow a conservative approach to debt and prefers to maintain low levels of gearing. Net debt is as follows:

	US dollar	
Figures in million	**2018**	2017
Cash and cash equivalents	**51**	95
Borrowings	**(407)**	(163)
Net debt	**(356)**	(68)

There were no changes to the group's approach to capital management during the year.

4 FINANCIAL RISK MANAGEMENT continued

FAIR VALUE DETERMINATION FOR FINANCIAL ASSETS AND LIABILITIES

The fair value levels of hierarchy are as follows:

Level 1: Quoted prices (unadjusted) in active markets for identical assets;

Level 2: Inputs other than quoted prices included within level 1 that are observable for the asset, either directly (that is, as prices) or indirectly (that is, derived from other prices);

Level 3: Inputs for the asset that are not based on observable market data (that is, unobservable inputs).

The following table presents the group's financial assets and liabilities that are measured at fair value by level at reporting date:

Figures in million (US dollar)	**Fair value hierarchy level**	**At 30 June 2018**	At 30 June 2017
Available-for-sale financial assets			
Investment in financial assets[1]		**1**	—
Fair value through profit and loss financial assets and liabilities			
Restricted investments[2]	**Level 2**	**66**	64
Derivative financial instruments[3]		**29**	141
Forex hedging contracts	**Level 2**	**(10)**	34
Rand gold hedging contracts	**Level 2**	**33**	105
US$ gold hedging contracts	**Level 2**	**6**	2

[1] Level 3 fair values have been valued by the directors by performing independent valuations on an annual basis.

[2] The majority of the level 2 fair values are directly derived from the Top 40 index on the JSE, and are discounted at market interest rate. This relates to equity-linked deposits in the group's environmental rehabilitation trust funds. The balance of the environmental trust funds are held to maturity and therefore not disclosed here.

[3] The fair value measurements are derived as follows:

Forex hedging contracts

(a) Zero cost collars: a Black-Scholes valuation technique, derived from spot rand/US$ exchange rate inputs, implied volatilities on the rand/US$ exchange rate, rand/US$ inter-bank interest rates and discounted at market interest rate (zero-coupon interest rate curve).

(b) Forward exchange contracts: spot rand/US$ exchange rate, rand and dollar interest differential (forward points) and discounted at market interest (zero-coupon bond interest rate curve).

Rand gold hedging contracts (forward sale contracts): spot rand/US$ exchange rate, rand and dollar interest rates (forward points), spot US$ gold price, differential between the US interest rate and gold lease interest rate which is discounted at market interest rate.

US$ gold hedging contracts (forward sale contracts): spot US$ gold price, differential between the US interest rate and gold lease interest rate and discounted at market interest rate.

Silver hedging contracts (zero cost collars): a Black-Scholes valuation technique, derived from spot US$ silver price, strike price, implied volatilities, time to maturity and interest rates and discounted at market interest rate.

The carrying values (less any impairment allowance) of short-term financial instruments are assumed to approximate their fair values.

The fair values of borrowings are not materially different to their carrying amounts since the interest payable on those borrowings is at floating interest rates. The fair value of borrowings are based on discounted cash flows using a current borrowing rate. The determination of the fair values are level 3 in the fair value hierarchy due to the use of unobservable inputs, including own credit risk.

5 REVENUE

ACCOUNTING POLICY

The group has determined that gold is its primary product and other metals produced as part of the extraction process are considered to be by-products of gold. Revenue arising from metal sales is only recognised when the significant risks and rewards of ownership have been transferred, neither continuing managerial involvement nor effective control over the metals sold has been retained, the amount of revenue and costs incurred can be measured reliably and it is probable that the economic benefits associated with the sale will flow to the group. These conditions are satisfied when the gold has been delivered in terms of the contract and the sales price fixed, as evidenced by the certificate of sale issued by the refinery. The sales price for the majority of the group's gold is based on the gold spot price according to the afternoon London Bullion Market fixing price for gold on the date the sale is concluded.

Revenues from by-product sales such as silver and uranium are credited to production costs as a by-product credit.

The effective portion of gains or losses on the derivatives designated as cash flow hedging items (forecast sales transactions) are recognised in revenue when the forecast sales transactions occur. See the accounting policy for derivatives and hedging activities in note 2.

		US dollar	
Figures in million	**2018**	2017	2016
Gold sales	**1 491**	1 363	1 264
Hedging gain[1]	**93**	53	—
Total revenue	**1 584**	1 416	1 264

[1] Relates to the realised effective portion of the Rand gold hedge. Refer to note 20 for further information.

6 COST OF SALES

		US dollar	
Figures in million	**2018**	2017	2016
Production costs (a)	**1 167**	1 089	914
Amortisation and depreciation of mining assets	**192**	179	144
Amortisation and depreciation of assets other than mining assets (b)	**8**	6	5
Rehabilitation expenditure/(credit) (c)	**5**	2	(3)
Care and maintenance costs of restructured shafts	**10**	8	8
Employment termination and restructuring costs (d)	**16**	5	1
Share-based payments (e)	**19**	29	23
Impairment of assets (f)	**386**	131	(3)
Other	**(3)**	(1)	(1)
Total cost of sales	**1 800**	1 448	1 088

(a) Production costs include mine production and transport and refinery costs, applicable general administrative costs, movement in inventories and ore stockpiles, ongoing environmental rehabilitation costs and transfers for stripping activities. Employee termination costs are included, except for employee termination costs associated with major restructuring and shaft closures, which are separately disclosed.

Production costs for 2018 include US$78.6 million related to the Moab Khotsong operations. Production costs related to Hidden Valley were US$78.5 million lower than the comparative period due to the capitalisation of costs during the plant upgrade and the development of the stage 5 and 6 cut back. Refer to note 15 for further information.

6 COST OF SALES

(a) Production costs continued

Production costs, analysed by nature, consist of the following:

	US dollar		
Figures in million	**2018**	2017	2016
Labour costs, including contractors[1]	**759**	662	559
Consumables	**266**	266	230
Water and electricity	**199**	170	148
Insurance	**7**	7	7
Transportation	**9**	13	12
Change in inventory[2]	**(16)**	27	7
Capitalisation of mine development costs	**(121)**	(97)	(93)
Stripping activities[3]	**(13)**	(6)	(3)
By-product sales	**(7)**	(17)	(23)
Royalty expense	**9**	16	12
Other	**75**	48	58
Total production costs	**1 167**	1 089	914

[1] Labour costs increased as a result of the acquisition of the Moab Khotsong operations, annual increases and bonuses.
[2] Change in inventory decreased as the physical gold stock increased mainly due to the acquisition of Moab Khotsong. The change in 2017 relates primarily to the effect of treating the run-of-mine stockpiles at Hidden Valley when the mining of stage 4 concluded.
[3] Stripping activities increased as a result of increased development at Hidden Valley.

(b) Amortisation and depreciation of assets other than mining assets includes the amortisation of intangible assets.

(c) For the assumptions used to calculate the rehabilitation costs, refer to note 26. This expense includes the change in estimate for the rehabilitation provision where an asset no longer exists as well as costs related to the rehabilitation process. For 2018, US$7.3 million (2017: US$7.1 million) (2016: US$4.8 million) was spent on rehabilitation in South Africa.

(d) The employment termination and restructuring costs in 2018 relates to a voluntary severance programme. The 2017 amount includes contractor fees for the optimisation of the Hidden Valley operation of US$4.8 million.

(e) Refer to note 34 for details on the share-based payment schemes implemented by the group.

(f) Impairment recognised during the year is an outcome of forecast cost inflation, a subdued forecast gold price and the resultant impact on margins. Lower resource values at Doornkop's Kimberley Reef and Target North further contributed to the impairment recognised. Refer to note 15 for further information. The impairment/(reversal of impairment) of assets consists of the following:

	US dollar		
Figures in million	**2018**	2017	2016
Tshepong Operations	**71**	19	—
Doornkop	**23**	—	(50)
Kusasalethu	**42**	52	—
Target 1	**51**	60	—
Joel	**11**	—	—
Unisel	**35**	—	—
Masimong	**24**	—	15
Target North	**106**	—	—
Hidden Valley	**—**	—	32
Other mining assets	**23**	—	—
Total impairment/(reversal on impairment) of assets	**386**	131	(3)

The impairment assessment performed at 30 June 2018 resulted from lower recoverable amounts driven by the lower increase in the forecast gold price relative to the forecast cost inflation assumptions used in the life-of-mine plans which impacted negatively on margins. There were no reversals of impairment recorded in the 2018 or 2017 financial years.

6 COST OF SALES continued

(f) Impairment continued

The recoverable amounts of the CGU's where impairments were recognised or reversed as at 30 June 2018 are as follows:

Operation	Impairment assessment	Recoverable amount
Figures in million		US dollar
Tshepong Operations	The impairment was mainly driven by sensitivity to fluctuations in the gold price. Furthermore the updated life-of-mine for the Tshepong operations presented a marginal decrease in recovered grade.	**538**
Joel	The updated life-of-mine for the Joel operation, presented a marginal decrease in recovered grade.	**63**
Target 1	Exploration drilling results during the year pointed towards lower grade estimates within certain blocks that have now been excluded from the life-of-mine plans.	**88**
Unisel	Excluded the Leader Reef from the life-of-mine plan to focus on the higher grade Basal Reef. This reduced the life-of-mine from four years to eighteen months.	**3**
Masimong	The impairment at Masimong was as a result of the depletion of the higher grade B Reef and subsequent reduced life-of-mine.	**4**
Kusasalethu	Kusasalethu's old section of the mine at the operation was excluded in the FY19 life-of-mine plan.	**155**
Doornkop	The impairment of Doornkop is primarily as a result of a decrease in the Kimberley Reef's resource values.	**198**
Target North	The impairment of Target North was as a result of a decrease in resource values.	**267**
Other mining assets	The updated life-of-mine plans for the CGU's in Freegold and Harmony resulted in the impairment of other mining assets.	**26**

The recoverable amounts of the CGU's where impairments were recognised or reversed as at 30 June 2017 are as follows:

Operation	Impairment assessment	Recoverable amount
Figures in million		US dollar
Tshepong Operations	The impairment was mainly driven by the restriction on hoisting capacity at Phakisa along with the general pressure on margins.	595
Target 1	Information gained from the underground drilling during the year indicated that some areas of the bottom reef of the Dreyerskuil are highly channelised, which negatively impacted on the overall grade for the operation. These areas were subsequently excluded from the life-of-mine plan. This, together with the general pressure on margins, reduced the profitability of the operation over its life and contributed to the decrease in the recoverable amount.	153
Kusasalethu	The impairment was driven by a reduction in the additional attributable resource value as a result of a decrease in the ounces. The company investigated the viability of a decline to extend the life. The business case showed that the option was not feasible and therefore the resource ounces were reduced.	214

The recoverable amounts of the CGU's where impairments were recognised or reversed as at 30 June 2016 are as follows:

Operation	Impairment assessment	Recoverable amount
Figures in million		US dollar
Hidden Valley	The updated life-of-mine plan for Hidden Valley resulted in lower production for the 2017 financial year as the mine would only process ore stockpiles followed by an extended period of care and maintenance, compared to the previous plan. Stripping activities for stage 5 were planned to recommence in the 2018 financial year according to the year-end life-of-mine plan.	22
Doornkop	The higher recoverable amount for Doornkop, which resulted in the reversal was mainly due to the increased rand gold price assumption, improvements in operational efficiencies during the 2016 financial year that resulted in increased production levels in the updated life-of-mine plan and new mining areas included in the life-of-mine plan based on additional exploration performed during 2016.	190
Masimong	Masimong is a low margin operation and had a remaining life of three years at the time. The exploration programme to locate additional areas of the higher grade B Reef proved unsuccessful and was stopped during the 2016 financial year. In addition, the grade estimation of the Basal Reef decreased and as a result a portion of the resource was abandoned at 30 June 2016. The lower resource value resulted in a lower recoverable amount and the recognition of an impairment.	32

The recoverable amounts for these assets have been determined on a fair value less costs to sell basis using the assumptions per note 15 in discounted cash flow models and attributable resource values. These are fair value measurements classified as level 3. During 2018, the resource multiples were reassessed in order to be reflective of current market conditions using multiples derived from past transactions with an adjustment for the gold price. The transactions were used to derive US$/oz multiples for resources. The resource per ounce values have decreased substantially as a result of the low levels of merger and acquisition activity influencing the marketability of resource companies in South Africa, and more specifically gold mining companies.

7 GAINS ON DERIVATIVES

Gains on derivatives include the fair value movements of derivatives which have not been designated as hedging instruments for hedge accounting purposes, the amortisation of day one gains and losses for derivatives and the hedging ineffectiveness. The day one adjustment arises from the difference between the contract price and market price on the day of the transaction.

	US dollar		
Figures in million	**2018**	2017	2016
Derivative gain[1]	**11**	81	30
Hedge ineffectiveness	**—**	1	—
Day one loss amortisation	**(3)**	(7)	—
Total gains on derivatives	**8**	75	30

[1] Relates primarily to foreign exchange collars (refer to note 20).

8 OTHER OPERATING EXPENSES

	US dollar		
Figures in million	**2018**	2017	2016
Profit on sale of property, plant and equipment	**—**	(3)	—
Social investment expenditure	**6**	6	4
Loss on scrapping of property, plant and equipment (refer to note 15)	**—**	10	4
Foreign exchange translation (gain)/loss (a)	**53**	(14)	43
Silicosis settlement provision/(reversal of provision) (b)	**(5)**	70	—
Provision/(reversal of provision) for ARM BEE Loan (c)	**(3)**	1	2
Other (income)/expenses - net	**2**	(2)	1
Total other operating expenses	**53**	68	54

(a) The majority of the foreign exchange gains and losses relates to the US$ borrowings. Refer to note 29 for more details.

(b) Refer to note 27 or details on the movement in the silicosis settlement provision.

(c) The provision was reversed following an increase in African Rainbow Minerals Limited's share price and dividends paid in the period between July 2017 and June 2018, which form part of the recoverability test at 30 June 2018. Refer to note 19 for further details on the ARM BEE loan.

9 OPERATING PROFIT/(LOSS)

The following have been included in operating profit/(loss):

	US dollar		
Figures in million	**2018**	2017	2016
Auditor's remuneration			
Made up as follows:			
External			
Fees - current year	**3**	2	2
Total auditor's remuneration	**3**	2	2

10 INVESTMENT INCOME

ACCOUNTING POLICY

Interest income is recognised on the effective interest method, taking into account the principal outstanding and the effective rate over the period to maturity, when it is determined that such income will accrue to the group. Dividend income is recognised when the shareholder's right to receive payment is established. This is recognised at the last date of registration.

Cash flows from interest and dividends received are classified under operating activities in the cash flow statement.

10 INVESTMENT INCOME continued

	US dollar		
Figures in million	**2018**	2017	2016
Interest income	**21**	20	16
Loans and receivables	**—**	1	2
Held-to-maturity investments	**12**	11	9
Cash and cash equivalents	**9**	8	5
Net gain on financial instruments[1]	**6**	—	1
Total investment income	**27**	20	17

[1] Relates to the environmental trust funds and the social trust fund. Refer to note 18.

11 FINANCE COSTS

ACCOUNTING POLICY

Borrowing costs are capitalised to the extent that they are directly attributable to the acquisition and construction of qualifying assets. Qualifying assets are assets that take a substantial time to get ready for their intended use. These costs are capitalised until the asset moves into the production phase. Other borrowing costs are expensed. The foreign exchange translation loss is included in the borrowing cost calculation to the extent that it is considered to be a part of interest.

	US dollar		
Figures in million	**2018**	2017	2016
Financial liabilities			
Borrowings	**18**	8	12
Total finance costs from financial liabilities	**18**	8	12
Non-financial liabilities			
Post-retirement benefits	**1**	1	1
Time value of money component of silicosis provision	**6**	—	—
Time value of money and inflation component of rehabilitation costs	**15**	13	11
Total finance costs from non-financial liabilities	**22**	14	12
Total finance costs before interest capitalised	**40**	22	24
Interest capitalised (a)	**(14)**	(5)	(5)
Total finance costs	**26**	17	19

(a) The capitalisation rate used to determine capitalised borrowing costs is:

	2018 %	2017 %	2016 %
Capitalisation rate	**10.5%**	4.2%	10.5%

The change in the rate from 2017 to 2018 is due to the effect of the foreign exchange translation loss in 2018 compared with a gain in 2017 on the calculation of the rate.

The change in the rate from 2016 to 2017 is due to the effect of the foreign exchange translation gain in 2017 compared with a loss of 2016 on the calculation of the rate.

12 TAXATION

ACCOUNTING POLICY

Taxation is made up of current and deferred taxation. The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet date in the countries where the group operates and generates taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred taxation is recognised on temporary differences existing at each reporting date between the tax base of all assets and liabilities and their carrying amounts. Substantively enacted tax rates are used to determine future anticipated effective tax rates which in turn are used in the determination of deferred taxation, except to the extent that deferred tax arises from the initial recognition of an asset or liability in a transaction that is not a business combination and does not affect the accounting or taxable profit or loss at the time of the transaction. Deferred tax is charged to profit or loss, except where the tax relates to items recognised in other comprehensive income or directly in equity in which case the tax is also recognised in other comprehensive income or directly in equity. The effect on deferred tax of any changes in tax rates is recognised in the income statement, except to the extent that it relates to items previously charged or credited directly to equity.

The principal temporary differences arise from amortisation and depreciation on property, plant and equipment, provisions, unutilised tax losses, unutilised capital allowances carried forward and unrealised gains and losses on the gold forward sale contracts. Deferred tax assets relating to the carry forward of unutilised tax losses and unutilised capital allowances are recognised to the extent that it is probable that future taxable profit will be available against which the unutilised tax losses and unutilised capital allowances can be utilised. The recoverability of these assets is reviewed at each reporting date and adjusted if recovery is no longer probable.

Deferred income tax is provided on temporary differences arising from investments in subsidiaries, joint ventures and associates, except where the timing of the reversal of the temporary difference is controlled by the group and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income tax assets and liabilities relate to income taxes levied by the same taxation authority on either the taxable entity or different taxable entities where there is an intention to settle the balances on a net basis.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

The group is subject to income tax in several jurisdictions. Significant judgement is required in determining the worldwide provision for income taxes. There are many transactions and calculations for which the ultimate tax determination is uncertain during the ordinary course of business. Where the final tax outcome is different from the amounts that were initially recorded, such differences will impact the income tax and deferred tax provisions in the period in which such determination is made.

Management has to exercise judgement with regard to deferred tax assets. Where the possibility exists that no future taxable income may flow against which these assets can be offset, the deferred tax assets are not recognised.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realised or the liability is settled. When different tax rates apply to different levels of taxable income, deferred tax assets and liabilities are measured using the average tax rates that are expected to apply to the taxable profit (tax loss) of the periods in which the temporary differences are expected to reverse. At the group's South African operations, such average tax rates are directly impacted by the profitability of the relevant mine. The deferred tax rate is therefore based on the current estimate of future profitability of an operation when temporary differences will reverse, based on tax rates and tax laws that have been enacted at the balance sheet date. The future profitability of each mine, in turn, is determined by reference to the LoM plan for that operation. The LoM plan is influenced by factors as disclosed in note 15, which may differ from one year to the next and normally result in the deferred tax rate changing from one year to the next.

12 TAXATION continued

The taxation (expense)/credit for the year is as follows:

	US dollar		
Figures in million	**2018**	2017	2016
SA taxation			
Mining tax (a)	**(3)**	(17)	(3)
- current year	**(3)**	(17)	(4)
- prior year	**—**	—	1
Non-mining tax (b)	**(13)**	(19)	(5)
- current year	**(13)**	(19)	(5)
Deferred tax (c)	**34**	73	(35)
- current year	**34**	73	(35)
Total taxation (expense)/credit	**18**	37	(43)

(a) Mining tax on gold mining taxable income in South Africa is determined according to a formula, based on the taxable income from mining operations. 5% of total revenue is exempt from taxation while the remainder is taxable at a higher rate (34%) than non-mining income (28%) as a result of applying the gold mining formula.

All qualifying mining capital expenditure is deducted from taxable mining income to the extent that it does not result in an assessed loss. Accounting depreciation is eliminated when calculating the South African mining tax income. Excess capital expenditure is carried forward as unredeemed capital to be claimed from future mining taxable income. The group has several tax paying entities in South Africa. In terms of the mining ring-fencing application, each ring-fenced mine is treated separately and deductions can normally only be utilised against mining income generated from the relevant ring-fenced mine.

(b) Non-mining taxable income of mining companies and the taxable income for non-mining companies are taxed at the statutory corporate rate of 28% (2017: 28%) (2016: 28%).The expense relates to non-mining tax arising from derivative gains (realised and unrealised) recognised on the foreign currency derivatives as well as the realised gains on the gold forward sale contracts. Refer to note 5 and 7 for details on the group's derivative gains recorded.

(c) The deferred tax rate used to calculate deferred tax is based on the current estimate of future profitability when temporary differences will reverse based on tax rates and tax laws that have been enacted at the balance sheet date. Depending on the profitability of the operations, the deferred tax rate can consequently be significantly different from year to year.

The deferred tax credit in the 2018 and 2017 years is mainly a result of the impairment of assets, a decrease in the weighted average deferred tax rate due to reduced estimated profitability at most South African operations, as well as the provision for silicosis settlement raised in 2017.

The deferred tax expense in 2016 includes the unwinding of the deferred tax asset related to the utilisation of unredeemed capital expenditure for Freegold (Harmony) Pty Ltd (Freegold) against mining taxable income due to increased profitability for Freegold during 2016.

(d) Mining and non-mining income of Australian entities and PNG operation are taxed at a standard rate of 30% (2017: 30%) (2016: 30%).

12 TAXATION continued

INCOME AND MINING TAX RATES

The tax rate remains unchanged for the 2016, 2017 and 2018 years.

Major items causing the group's income tax provision to differ from the South African mining statutory tax rate of 34% (2017: 34%) (2016: 34%) were:

	US dollar		
Figures in million	**2018**	2017	2016
Tax on net profit/loss at the mining statutory tax rate	**115**	6	(37)
Non-allowable deductions	**(30)**	(6)	(20)
Gain on bargain purchase	**—**	21	—
Share-based payments	**(8)**	(8)	(6)
Impairment of assets	**(17)**	(6)	(8)
Exploration expenditure	**(5)**	(4)	(4)
Finance costs	**(4)**	(3)	(3)
Other	**4**	(6)	1
Difference between effective mining tax rate and statutory mining rate on mining income	**(34)**	10	8
Difference between non-mining tax rate and statutory mining rate on non-mining income	**3**	4	1
Effect on temporary differences due to changes in effective tax rates[1]	**(54)**	(10)	(15)
Prior year adjustment	**—**	—	1
Capital allowances, sale of business and other rate differences[2]	**51**	43	33
Deferred tax asset not recognised[3]	**(33)**	(10)	(14)
Income and mining taxation	**18**	37	(43)
Effective income and mining tax rate (%)	**5**	185	40

[1] This mainly relates to the decrease in the deferred tax rate related to Freegold (12.5% to 8.7%) (2017: 20.0% to 12.5%), Randfontein Estates Limited (Randfontein) (3.8% to 1.8%) (2017: 10.1% to 3.8%) and Harmony Gold Mining Company Limited (Harmony) (19.4% to 10.5%) (2017: 21.1% to 19.4%) mainly due to a lower estimated profitability. In 2016, the increase in the deferred tax rates related to Harmony (12.5% to 21.1%) and Freegold (16.7% to 20.0%) mainly due to the higher estimated profitability is partially offset by the decrease in deferred tax rates for Randfontein (14.3% to 10.1%), mainly due to lower estimated profitability.

[2] This relates to the additional capital allowance that may be deducted from taxable income from mining operations in South Africa. A significant portion relates to Avgold Limited (Avgold) which has a 0% effective tax rate.

[3] This relates to tax losses and deductible temporary differences for which future taxable profits are uncertain and are not considered probable. The current year includes US$30.9 million deferred tax asset not recognized relating to Harmony company as a result of foreign exchange losses on the US dollar loan facility. The remaining deferred tax asset not recognised in 2018, 2017 and 2016 primarily relates to Hidden Valley and PNG exploration operations.

DEFERRED TAX

The analysis of deferred tax assets and liabilities is as follows:

	US dollar	
Figures in million	**2018**	2017
Deferred tax assets	**(29)**	(32)
Deferred tax asset to be recovered after more than 12 months	**(18)**	(15)
Deferred tax asset to be recovered within 12 months	**(11)**	(17)
Deferred tax liabilities	**112**	162
Deferred tax liability to be recovered after more than 12 months	**101**	135
Deferred tax liability to be recovered within 12 months	**11**	27
Net deferred tax liability	**83**	130

12 TAXATION continued

DEFERRED TAX continued

Deferred tax liabilities and assets on the balance sheet as of 30 June 2018 and 30 June 2017 relate to the following:

	US dollar	
Figures in million	**2018**	2017
Gross deferred tax liabilities	**112**	162
Amortisation and depreciation	**105**	140
Derivative assets	**7**	22
Gross deferred tax assets	**(29)**	(32)
Unredeemed capital expenditure	**(20)**	(10)
Provisions, including non-current provisions	**(8)**	(20)
Tax losses	**(1)**	(2)
Net deferred tax liability	**83**	130

Movement in the net deferred tax liability recognised in the balance sheet as follows:

	US dollar	
Figures in million	**2018**	2017
Balance at beginning of year	**130**	164
Credit per income statement	**(34)**	(73)
Tax directly charged to other comprehensive income	**(15)**	21
Moab Khotsong acquisition	**7**	—
Translation	**(5)**	18
Balance at end of year	**83**	130

	US dollar	
Figures in million	**2018**	2017
As at 30 June, the group had the following potential future tax deductions:		
Unredeemed capital expenditure available for utilisation against future mining taxable income[1]	**2 803**	2 606
Tax losses carried forward utilisable against mining taxable income[2]	**314**	378
Capital Gains Tax (CGT) losses available to be utilised against future CGT gains	**41**	43
As at 30 June, the group has not recognised the following deferred tax asset amounts relating to the above:	**885**	883
The unrecognised temporary differences are:		
Unredeemed capital expenditure[3]	**2 464**	2 429
Tax losses[2]	**304**	329
CGT losses[4]	**41**	43

[1] Includes Avgold US$1 230.4 million (2017: US$1 151.6 million), Randfontein US$156.6 million (2017: US$157.0 million), Moab Khotsong US$151.4 million (2017: US$nil) and Hidden Valley US$1 233.3 million (2017: US$1 277.1 million). These have an unlimited carry-forward period.
[2] Relates mainly to Hidden Valley and the PNG exploration operations. These have an unlimited carry-forward period.
[3] Relates to Avgold and Hidden Valley.
[4] The CGT losses relate to the gross CGT losses available to be utilised against future CGT gains.

DIVIDEND TAX (DT)

The withholding tax on dividends changed from 15% in 2016 to 20% in 2017 and remained unchanged at 20% in 2018.

13 EARNINGS/(LOSS) PER SHARE

BASIC EARNINGS/(LOSS) PER SHARE

Basic earnings/(loss) per share is calculated by dividing the net income attributable to shareholders by the weighted number of ordinary shares in issue during the year.

	2018	2017	2016
Ordinary shares in issue ('000)	**500 252**	439 957	437 299
Adjustment for weighted number of ordinary shares in issue ('000)	**(54 304)**	(1 077)	(624)
Weighted number of ordinary shares in issue ('000)	**445 948**	438 880	436 675
Treasury shares ('000)	**(52)**	(437)	(936)
Basic weighted average number of ordinary shares in issue ('000)	**445 896**	438 443	435 739

	US dollar		
	2018	2017	2016
Total net earnings/(loss) attributable to shareholders (millions)	**(321)**	17	66
Total basic earnings/(loss) per share (cents)	**(72)**	4	15

DILUTED EARNINGS/(LOSS) PER SHARE

For diluted earnings/(loss) per share, the weighted average number of ordinary shares in issue is adjusted to assume conversion of all potential dilutive ordinary shares as a result of share options granted to employees under the share option schemes in issue. A calculation is performed to determine the number of shares that could have been acquired at fair value, determined as the average annual market share price of the company's shares, based on the monetary value of the subscription rights attached to the outstanding share options. The number of shares calculated as above is compared with the number of shares that would have been issued assuming the exercise of the share options.

	2018	2017	2016
Weighted average number of ordinary shares in issue ('000)	**445 896**	438 443	435 739
Potential ordinary shares[1] ('000)	**19 423**	20 777	10 659
Weighted average number of ordinary shares for diluted earnings per share[1] ('000)	**465 319**	459 220	446 398

	US dollar		
	2018	2017	2016
Total diluted earnings/(loss) per share (cents)	**(72)**	4	15

[1] Because of the net loss attributable to shareholders in 2018, the inclusion of the share options as potential ordinary shares had an anti-dilutive (2017 and 2016: dilutive) effect on the loss (2017 and 2016: earnings) per share and were therefore not taken into account in the current year calculation. The issue price and the exercise price of share options issued to employees include the fair value of any service to be supplied to the entity in the future under the share option or other share-based payment arrangement.

DIVIDENDS

ACCOUNTING POLICY

Dividends declared are recognised in the period in which they are approved by the board of directors. Dividends are payable in South African rand.

Cash flows from dividends paid are classified under financing activities in the cash flow statement.

On 17 August 2017, the board declared a dividend of 3 US cents for the year ended 30 June 2017. US$11.4 million was paid on 16 October 2017.

13 EARNINGS/(LOSS) PER SHARE continued

DIVIDENDS continued

On 15 August 2016, the board declared a dividend of 4 US cents for the year ended 30 June 2016. US$14.9 million was paid on 19 September 2016. On 31 January 2017, the board declared an interim dividend of 4 US cents. US$17.5 million was paid on 20 March 2017.

	US dollar		
	2018	2017	2016
Dividend declared (millions)	**11**	33	—
Dividend per share (cents)	**3**	8	—

14 ACQUISITIONS AND BUSINESS COMBINATIONS

ACQUISITION OF THE MOAB KHOTSONG OPERATIONS

Effective 1 March 2018 the group acquired the Moab Khotsong and Great Noligwa mines and related infrastructure as well as gold-bearing tailings and the Nufcor uranium plant (collectively the Moab Khotsong operations) from AngloGold Ashanti Limited on a going concern basis. The addition of the Moab Khotsong operations will increase the group's production ounces, free cash flows and average underground gold recovery grade. The combined assets acquired and liabilities assumed constitute a business as defined by IFRS 3 *Business Combinations*.

For the four months ended 30 June 2018, the Moab Khotsong operations contributed revenue of US$139.9 million and profit of US$16.7 million to the group's results. Should the acquisition have occurred on 1 July 2017, the group’s unaudited consolidated revenue would have increased by a further US$259.8 million and unaudited consolidated profit would have increased by a further US$31.1 million.

Consideration transferred

The cash consideration paid to acquire the Moab Khotsong operations amounted to US$300.0 million.

Acquisition-related costs

The group incurred acquisition-related costs of US$7.5 million on advisory and legal fees. These costs are recognised as acquisition-related costs in the income statement. Furthermore, the group incurred US$4.9 million on the integration of the operation. These costs are recognised as corporate, administration and other expenditure on the income statement.

Identifiable assets acquired and liabilities assumed

The purchase price allocation (PPA) has been prepared on a provisional basis in accordance with IFRS 3. If new information obtained within one year of the acquisition date, about facts and circumstances that existed at the acquisition date, then the accounting for the acquisition will be revised. The values measured on a provisional basis include, *inter alia*, Property, plant and equipment, deferred tax and the finalisation of the effective date tax values.

The fair value of the identifiable net assets acquired was determined on the expected discounted cash flows based on the life-of-mine plans of the Moab Khotsong operations at post-tax real discount rates ranging between 8.20% and 11.30%, exchange rates ranging between R/US$11.86 and R/US$15.82, gold prices ranging between US$1 249/oz and US$1 302/oz and uranium prices ranging between US$30.44/lb and US$37.47/lb. The valuation was performed as at 1 March 2018.

The fair values as at the effective date are as follows:

	US dollar	
Figures in million	**2018**	2017
Property, plant and equipment	**322**	—
Environmental rehabilitation trust funds	**33**	—
Inventories	**6**	—
Deferred tax liabilities	**(7)**	—
Provision for environmental rehabilitation	**(57)**	—
Retirement benefit obligation	**(1)**	—
KOSH decant provision (refer to note 30)	**(3)**	—
Leave liabilities	**(12)**	—
Other payables	**(4)**	—
Fair value of net identifiable assets acquired	**277**	—

14 ACQUISITIONS AND BUSINESS COMBINATIONS continued

ACQUISITION OF THE MOAB KHOTSONG OPERATIONS continued

Goodwill

Goodwill arising from the acquisition has been recognised as follows:

Figures in million	US dollar 2018	US dollar 2017
Consideration paid	**300**	—
Fair value of net identifiable assets acquired	**(277)**	—
Goodwill	**23**	—

The goodwill has been allocated to the Moab Khotsong operations. The goodwill is attributable mainly to the skills and technical talent of the Moab Khotsong operations' work force. None of the goodwill recognised is deductible for tax purposes.

ACQUISITION OF FULL OWNERSHIP OF HIDDEN VALLEY

The group had a 50% interest in the mining and exploration assets located in the Morobe province, PNG. Newcrest Mining Limited (Newcrest) owned the remaining 50% interest in these assets. The assets include the Hidden Valley mine and the Wafi-Golpu project. On 19 September 2016 Harmony announced the agreement to purchase Newcrest PNG 1 Ltd, the wholly owned subsidiary of Newcrest which held Newcrest's 50% interest in the Hidden Valley joint venture, for a cash consideration of US$1. As part of the transaction, Newcrest made a once-off contribution of US$22.5 million (R309 million) towards Hidden Valley's future estimated environmental liability. The transaction was conditional upon certain regulatory approvals which were obtained on 25 October 2016 and Harmony gained control over Hidden Valley from this date.

The step-up transaction from joint control to control has been accounted for in terms of IFRS 3 *Business Combinations.*

Identifiable assets acquired and liabilities assumed

The fair values of the assets acquired and liabilities assumed are as follows:

Figures in million	Previously held interest	Acquired interest[1]	Total (100%)
	US dollar		
Fair value of identifiable net assets acquired			
Property, plant and equipment	46	46	92
Inventories (current)	35	35	70
Trade and other receivables (current)	2	1	3
Cash and cash equivalents	4	33	37
Provision for environmental rehabilitation	(35)	(35)	(70)
Trade and other payables (current)	(8)	(20)	(28)
	44	60	104
Less fair value of previously held interest[2]			(44)
Fair value of net identifiable assets acquired			**60**

[1] Harmony acquired the legal entity which held Newcrest's interest in Hidden Valley. This subsidiary contained certain assets and liabilities which were different to those held by Harmony with respect to its interest in Hidden Valley.

[2] The fair value of the previously held interest equalled the carrying amount of the assets and liabilities recognised by Harmony relating to the previously held interest at the date of acquisition and no gain or loss was recognised with respect to the deemed disposal of the previously held interest.

Gain on bargain purchase
As a result of the acquisition of Hidden Valley, a gain on bargain purchase of US$60 million was recognised in 2017. The gain on bargain purchase is calculated as the difference between the consideration paid of US$1 and the fair value of the net identifiable assets acquired of US$60.0 million.

15 PROPERTY, PLANT AND EQUIPMENT

	US dollar	
Figures in million	**2018**	2017
Mining assets (a)	**1 755**	1 625
Mining assets under construction (b)	**183**	237
Undeveloped properties (c)	**288**	414
Other non-mining assets (d)	**19**	16
Total property, plant and equipment	**2 245**	2 292

(a) Mining assets

ACCOUNTING POLICY

Mining assets including mine development costs and mine plant facilities are initially recorded at cost, where after they are measured at cost less accumulated depreciation and impairment. Costs include expenditure that is directly attributable to the acquisition of the items. Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the group and the cost of the item can be measured reliably.

The net assets of operations placed on care and maintenance are impaired to their recoverable amount. Expenditure on the care and maintenance of these operations is charged against income, as incurred. Mineral and surface use rights represent mineral and surface use rights for parcels of land both owned and not owned by the group.

Mineral and surface rights include acquired mineral use rights in production, development and exploration phase properties. The amount capitalised related to a mineral and surface right, either as an individual asset purchase or as part of a business combination, is the fair value at acquisition.

The group's mineral use rights are enforceable regardless of whether proved or probable reserves have been established. In certain limited situations, the nature of use changes from an exploration right to a mining right upon the establishment of proved and probable reserves. The group has the ability and intent to renew mineral use rights where the existing term is not sufficient to recover all identified and valued proved and probable reserves and/or undeveloped mineral interests.

Depreciation

Depreciation of mining assets is computed principally by the units-of-production method over life-of-mine based on estimated quantities of economically recoverable proved and probable reserves, which can be recovered in future from known mineral deposits.

In most instances, proved and probable reserves provide the best indication of the useful life of the group's mines (and related assets). However, in some instances, proved and probable reserves may not provide a realistic indication of the useful life of the mine (and related assets). This may be the case, for example, where management is confident that further inferred resources will be converted into measured and indicated resources and if they are economically recoverable, they can also be classified as proved and probable reserves. Management is approaching economic decisions affecting the mine on this basis, but has chosen to delay the work required to designate them formally as reserves.

In assessing which resources to include so as to best reflect the useful life of the mine, management considers resources that have been included in the life-of-mine plan. To be included in the life-of-mine plan, resources need to be above the cut-off grade set by management, which means that the resource can be economically mined and is therefore commercially viable. This consistent systematic method for inclusion in the life-of-mine plan takes management's view of the gold price, exchange rates as well as cost inflation into account. In declaring the resource, management would have had to obtain a specified level of confidence of the existence of the resource through drilling as required by the South African Code for Reporting Exploration Results, Mineral Resources and Mineral Reserves (SAMREC).

Additional confidence in the existence, commercial viability and economical recovery of such resources may be based on historical experience and available geological information, such as geological information obtained from other operations that are contiguous to the group's as well as where the group mines continuations of these other operations' orebodies and reefs. This is in addition to the drilling results obtained by the group and management's knowledge of the geological setting of the surrounding areas, which would enable simulations and extrapolations to be done with a reasonable degree of accuracy.

In instances where management is able to demonstrate the economic recovery of such resources with a high level of confidence, such additional resources, which may also include certain, but not all, of the inferred resources, as well as the associated future development costs of accessing those resources, are included in the calculation of depreciation. The future development costs are those costs that need to be incurred to access these inferred resources, for example the costs to complete a decline or level, which may include infrastructure and equipping costs. These amounts have been extracted from the cash flow projections for the life-of-mine plans.

Mineral rights associated with production phase mineral interests are amortised over the life of mine using the units-of-production method in order to match the amortisation with the expected underlying future cash flows.

15 PROPERTY, PLANT AND EQUIPMENT continued

(a) Mining assets continued

ACCOUNTING POLICY continued

Impairment

Testing for impairment is done in terms of the group policy as discussed in note 2.5.

Stripping activities

The removal of overburden and other mine waste materials is often necessary during the initial development of a mine site, in order to access the mineral ore deposit. The directly attributable cost of this activity is capitalised in full within mining assets under construction, until the point at which the mine is considered to be capable of commercial production.

The removal of waste material after the point at which a mine is capable of commercial production is referred to as production stripping.

When the waste removal activity improves access to ore extracted in the current period, the costs of production stripping are charged to the income statement as operating costs in accordance with the principles of IAS 2 Inventories.

Where production stripping activity both produces inventory and improves access to ore in future periods the associated costs of waste removal are allocated between the two elements. The portion which benefits future ore extraction is capitalised within stripping and development capital expenditure. If the amount to be capitalised cannot be specifically identified it is determined based on the volume of waste extracted compared with expected volume for the identified component of the orebody. Components are specific volumes of a mine's orebody that are determined by reference to the life-of-mine plan.

In certain instances significant levels of waste removal may occur during the production phase with little or no associated production. The cost of this waste removal is capitalised in full.

All amounts capitalised in respect of waste removal are depreciated using the units-of-production method based on proved and probable ore reserves of the component of the orebody to which they relate. The effects of changes to the life-of-mine plan on the expected cost of waste removal or remaining reserves for a component are accounted for prospectively as a change in estimate.

Scrapping of assets

Where significant adverse changes have taken place relating to the useful life of an asset, that asset is tested for impairment in terms of the group policy as discussed in note 2.5. Whether or not an impairment is recognised, it is then necessary to review the useful lives and residual values of the assets within the CGU – this is reviewed at least annually. Where necessary, the useful lives and residual values of the individual assets are revised.

Where the useful life of an asset is nil as a result of no future economic benefit expected from the use or disposal of that asset, it is necessary to derecognise the asset. The loss arising from the derecognition is included in profit or loss in the period in which the asset was derecognised.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS – GOLD MINERAL RESERVES AND RESOURCES

Gold mineral reserves and resources are estimates of the amount of ounces that can be economically and legally extracted from the group's properties. In order to calculate the gold mineral reserves and resources, estimates and assumptions are required about a range of geological, technical and economic factors, including quantities, grades, production techniques, recovery rates, production costs, commodity prices and exchange rates.

Estimating the quantities and/or grade of the reserves and resources requires the size, shape and depth of the orebodies to be determined by analysing geological data such as the logging and assaying of drill samples. This process may require complex and difficult geological judgements and calculations to interpret the data.

Because the economic assumptions used to estimate the gold mineral reserves and resources change from year to year, and because additional geological data is generated during the course of operations, estimates of the mineral reserves and resources may change from year to year. Changes in the reserves and resources may affect the group's financial results and financial position in a number of ways, including:

- Asset carrying values may be affected due to changes in estimated cash flows;
- Scrapping of assets to be recorded in the income statement, following the derecognition of assets as no future economic benefit expected;
- Depreciation and amortisation charged in the income statement may change as they are calculated on the units-of-production method;
- Environmental provisions may change as the timing and/or cost of these activities may be affected by the change in mineral reserves; and
- Useful life and residual values may be affected by the change in mineral reserves.

At the end of each financial year, the estimate of proved and probable gold mineral reserves and resources is updated. Depreciation of mining assets is prospectively adjusted, based on these changes.

15 PROPERTY, PLANT AND EQUIPMENT continued

(a) Mining assets continued

SENSITIVITY ANALYSIS - GOLD MINERAL RESERVES AND RESOURCES EFFECT ON DEPRECIATION

The group includes certain inferred resources in the denominator and future development costs in the numerator when performing the depreciation calculation for certain of its operations, where proved and probable reserves alone do not provide a realistic indication of the useful life of mine (and related assets). During periods presented, this related to Doornkop. Had the group only used proved and probably reserves in its calculations, depreciation for 2018 would have amounted to US$214.2 million (2017: US$200.6 million) (2016: US$153.4 million), compared with the reported totals of US$200.0 million (2017: $185.3 million) (2016: US$149.9 million).

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS – PRODUCTION START DATE

Various relevant criteria are considered in order to assess when the mine is substantially complete and ready for its intended use and moves into the production phase. Some of the criteria would include but are not limited to the following:

- The level of capital expenditure compared to the total project cost estimates;
- The ability to produce gold in a saleable form (where more than an insignificant amount of gold has been produced); and
- The ability to sustain the ongoing production of gold.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS – STRIPPING ACTIVITIES

The group capitalises stripping costs where they are considered to improve access to ore in future periods. Where the amount to be capitalised cannot be specifically identified, it is determined based on the volume of waste extracted compared with expected volume for the identified component of the orebody. This determination is dependent on an individual mine's design and life-of-mine plan and therefore changes to the design or life-of-mine plan will result in changes to these estimates. Identification of the components of a mine's orebody is made by reference to the life-of-mine plan. The assessment depends on a range of factors including each mine's specific operational features and materiality.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS – IMPAIRMENT OF ASSETS

The recoverable amount of mining assets is generally determined utilising real discounted future cash flows. Management also considers such factors as the quality of the individual orebody, market risk, asset specific risks and country risk in determining the fair value.

Key assumptions for the calculations of the mining assets' recoverable amounts are the commodity prices, resource values, marketable discount rates, costs to sell, exchange rates and the annual life-of-mine plans. In determining the commodity prices and resource values to be used, management assesses the long-term views of several reputable institutions on commodity prices and based on this, derives the commodity prices and resource values.

The life-of-mine plans are based on the proved and probable reserves as included in the Reserve Declaration, which are determined in terms of SAMREC and The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC), as well as resources where management has high confidence in the orebody and economical recovery of gold, based on historic and similar geological experience.

During the year under review, the group calculated the recoverable amounts (generally fair value less costs to sell) based on updated life-of-mine plans and the following gold price, silver price and exchange rates assumptions:

	2018	2017	2016
US$ gold price per ounce	**1 250**	1 200	1 189
US$ silver price per ounce	**17.00**	17.00	17.80
Exchange rate (R/US$)	**13.30**	13.61	13.86
Exchange rate (PGK/US$)	**3.17**	3.16	3.10
Rand gold price (R/kg)	**535 000**	525 000	530 000

The post-tax real discount rate for Hidden Valley was 9.91% (2017: 11.92%) (2016:11.77%) and the post-tax real discount rates for the South African operations ranged between 8.35% and 10.25% (2017: 8.98% and 11.81%) (2016: 8.43% and 11.48%), depending on the asset, were used to determine the recoverable amounts. Cash flows used in the impairment calculations are based on life-of-mine plans which exceed five years for the majority of the mines. Cash flows from potential projects, life-of-mine extensions and residual ounces can also be included in the impairment assessment where deemed appropriate. An additional risk premium is added to the post-tax real discount rates in these instances. Refer to note 6 for details of impairments recorded. The following is the attributable gold resource value assumption:

15 PROPERTY, PLANT AND EQUIPMENT continued

(a) Mining assets continued

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS – IMPAIRMENT OF ASSETS continued

	South Africa			Hidden Valley		
US dollar per ounce	**2018**	2017	2016	**2018**	2017	2016
Measured	**25.00**	32.69	40.86	**n/a**	n/a	n/a
Indicated	**8.00**	18.68	23.35	**5.84**	5.84	5.84
Inferred	**2.80**	4.67	5.84	**5.84**	5.84	5.84

Should management's estimate of the future not reflect actual events, further impairments may be identified.

Factors affecting the estimates include:
- Changes to proved and probable ore reserves;
- Economical recovery of resources;
- The grade of the ore reserves may vary significantly from time to time;
- Review of strategy;
- Unforeseen operational issues at the mines;
- Differences between actual commodity prices and commodity price assumptions;
- Changes in the discount rate and foreign exchange rates;
- Changes in capital, operating mining, processing and reclamation costs;
- Mines' ability to convert resources into reserves; and
- Potential production stoppages for indefinite periods.

SENSITIVITY ANALYSIS - IMPAIRMENT OF ASSETS

One of the most significant assumptions that influence the life-of-mine plans and therefore impairments is the expected commodity prices. The sensitivity scenario of a 10% decrease or increase in the commodity price used in the discounted cash flow models and the resource values used (with all other variables held constant) would have resulted in the following impairment being recorded as at 30 June 2018 and 2017:

	US dollar	
Figures in million	**2018**	2017
- 10% decrease		
Tshepong Operations[1]	**375**	281
Kusasalethu	**197**	157
Hidden Valley	**54**	79
Target 1	**122**	137
Doornkop	**149**	71
Masimong	**28**	30
Moab Khotsong[1]	**118**	—
Joel[1]	**64**	—
Target 3	**10**	—
Other surface operations	**39**	20
Target North	**132**	—
Unisel	**38**	17
Bambanani[1]	**16**	10
+ 10% increase		
Masimong	**4**	—
Target North	**79**	—
Unisel	**31**	—

[1] The carrying amounts of these CGU's include goodwill and any impairment losses are allocated first to goodwill and then to the identifiable assets.

At all other operations, a 10% increase in the gold price would have resulted in no impairments being recorded.

15 PROPERTY, PLANT AND EQUIPMENT continued

(a) Mining assets continued

The movement in the mining assets balance is as follows:

	US dollar	
Figures in million	**2018**	2017
Cost		
Balance at beginning of year	**3 094**	3 189
Fully depreciated assets no longer in use derecognised	**—**	(295)
Additions[1]	**198**	158
Deemed disposal of 50% of Hidden Valley	**—**	(332)
Acquisition of 100% of Hidden Valley	**—**	76
Acquisition of Moab Khotsong	**310**	—
Disposals	**(5)**	(1)
Scrapping of assets	**—**	(23)
Adjustment to rehabilitation asset	**(13)**	(1)
Transfers and other movements	**243**	21
Translation	**(223)**	302
Balance at end of year	**3 604**	3 094
Accumulated depreciation and impairments		
Balance at beginning of year	**1 469**	1 648
Fully depreciated assets no longer in use derecognised	**—**	(295)
Impairment of assets	**251**	112
Deemed disposal of 50% of Hidden Valley	**—**	(294)
Disposals	**(5)**	(1)
Scrapping of assets	**—**	(12)
Depreciation	**217**	187
Translation	**(83)**	124
Balance at end of year	**1 849**	1 469
Net carrying value	**1 755**	1 625

[1] Included in additions for 2018 is an amount of US$0.1 million for capitalised depreciation associated with stripping activities at the Hidden Valley operations.

Acquisition and deemed disposal of assets

On 1 March 2018 the group acquired Moab Khotsong. Included in this acquisition was property, plant and equipment with a fair value of US$321.5 million. Of the total acquisition costs, US$309.7 million relates to mining assets and US$11.8 million relates to other non-mining assets respectively. Refer to note 14 for more information relating to the acquisition.

During 2017 the group obtained 100% ownership of Hidden Valley. Included in this acquisition was property, plant and equipment with a fair value of US$92.6 million. Of the total acquisition costs, US$76.2 million relates to mining assets and US$15.6 million relates to assets under construction respectively. Refer to note 14 for more information relating to the acquisition.

Loss on scrapping of property, plant and equipment

Losses arising from the derecognition of property, plant and equipment no longer in use amounted to US$0.1 million 2017: US$10.3 million) (2016: US$4.4 million). No future economic benefits are expected from the use or disposal of these assets.

Stripping activities

Included in the balance for mining assets is an amount of US$18.9 million (2017: US$7.2 million) for stripping activities. The movement for 2018 relates to Kalgold and Hidden Valley. Depreciation of US$0.3 million (2017: US$0.4 million) were recorded for these activities.

15 PROPERTY, PLANT AND EQUIPMENT continued

(a) Mining assets continued

Transfer of assets

Transfer of assets relates to assets under construction transferred to mining assets. On 1 June 2018 commercial levels of production were achieved at Hidden Valley following the plant upgrade and the development of stage 5 and 6 cut back and as a result an amount of US$213.6 million was transferred. The remaining transfer of US$29.4 million relates to Tshepong Operations following the completion of a major project.

(b) Mining assets under construction

ACCOUNTING POLICY

At the group's surface mines, when it has been determined that a mineral property can be economically developed as a result of establishing proved and probable reserves, costs incurred to develop the property are capitalised as incurred until the mine is considered to have moved into the production phase. These costs include costs to further delineate the orebody and remove overburden to initially expose the orebody. At the group's underground mines, all costs incurred to develop the property, including costs to access specific ore blocks or other areas of the underground mine, are capitalised to the extent that such costs will provide future economic benefits. These costs include the cost of shaft sinking and access, the costs of building access ways, lateral development, drift development, ramps, box cuts and other infrastructure development.

Where a depreciable asset is used in the construction or extension of a mine, the depreciation is capitalised against the mine's cost.

Exploration properties acquired are recognised in the balance sheet within development cost and are shown at cost less provisions for impairment determined in accordance with the group's accounting policy on impairment of non-financial assets.

Mineral interests associated with development and exploration phase mineral interests are not amortised until such time as the underlying property is converted to the production stage.

Capitalisation of pre-production costs ceases when commercial levels of production are reached. Commercial levels of production are discussed under "production start date" above.

The movement in the mining assets under construction balance is as follows:

	US dollar	
Figures in million	**2018**	2017
Cost		
Balance at beginning of year	**237**	107
Additions[1]	**155**	121
Depreciation capitalised[2]	**24**	7
Deemed disposal of 50% of Hidden Valley	**—**	(8)
Acquisition of 100% of Hidden Valley	**—**	16
Finance costs capitalised[3]	**14**	5
Transfers and other movements	**(243)**	(20)
Translation	**(4)**	9
Balance at end of year	**183**	237

[1] For 2018 pre-production revenue of US$100.2 million (2017: US$nil) was credited against additions.
[2] Relates primarily to Hidden Valley.
[3] Refer to note 11 for further detail on the capitalisation rate applied

Refer to mining assets above for information relating to the acquisition of assets under construction.

(c) Undeveloped properties

ACCOUNTING POLICY

Undeveloped properties are initially recognised at cost, which is generally based on the fair value of resources obtained through acquisitions. The carrying values of these properties are tested annually for impairment. Once development commences, these properties are transferred to mining properties and accounted for in accordance with the related accounting policy.

15 PROPERTY, PLANT AND EQUIPMENT continued

(c) Undeveloped properties continued

The movement in the undeveloped properties balance is as follows:

	US dollar	
Figures in million	**2018**	2017
Cost		
Balance at beginning of year	**415**	372
Translation	**(21)**	43
Balance at end of year	**394**	415
Accumulated depreciation and impairments		
Balance at beginning and end of year	**1**	1
Impairment[1]	**105**	—
Balance at end of year	**106**	1
Net carrying value	**288**	414

[1] The impairment relates to Target North.

(d) Other non-mining assets

ACCOUNTING POLICY

Land is shown at cost and not depreciated. Other non-mining fixed assets are shown at cost less accumulated depreciation and accumulated impairment losses.

Other non-mining fixed assets are depreciated on a straight-line basis over their estimated useful lives as follows:

- Vehicles at 20% per year.
- Computer equipment at 33.3% per year.
- Furniture and equipment at 16.67% per year.

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each balance sheet date.

The movement in the non-mining assets balance is as follows:

	US dollar	
Figures in million	**2018**	2017
Cost		
Balance at beginning of year	**34**	29
Fully depreciated assets no longer in use derecognised	**—**	(1)
Additions	**3**	3
Acquisition of Moab Khotsong	**12**	—
Transfers and other movements	**(1)**	—
Translation	**(4)**	3
Balance at end of year	**44**	34

15 PROPERTY, PLANT AND EQUIPMENT continued

(d) Other non-mining assets continued

The movement in the non-mining assets balance: continued

	US dollar	
Figures in million	**2018**	2017
Accumulated depreciation and impairments		
Balance at beginning of year	**18**	15
Fully depreciated assets no longer in use derecognised	**—**	(1)
Depreciation	**4**	3
Impairment	**4**	—
Translation	**(1)**	1
Balance at end of year	**25**	18
Net carrying value	**19**	16

16 INTANGIBLE ASSETS

ACCOUNTING POLICY

Intangible assets consist of all identifiable non-monetary assets without physical substance. They are stated at cost less accumulated amortisation and accumulated impairment losses, if any. The following are the main categories of intangible assets:

Goodwill

Goodwill is an intangible asset with an indefinite useful life which is not amortised but tested for impairment on an annual basis, or when there is an indication of impairment. The excess of consideration transferred over the amount of any non-controlling interest in the acquiree and the acquisition-date fair value of any previously held equity interest in the acquiree over the fair value of the group's share of the identifiable net assets acquired is recorded as goodwill. Goodwill on acquisition of subsidiaries, joint ventures and businesses is included in intangible assets. Goodwill on acquisition of associates is included in investments in associates and tested for impairment as part of the overall balance.

Goodwill is tested annually for impairment and carried at cost less accumulated impairment losses. Goodwill is allocated to cash generating units for the purpose of impairment testing. The allocation is made to those cash generating units or groups of cash generating units that are expected to benefit from the business combination in which the goodwill arose. If the composition of one or more cash generating units to which goodwill has been allocated changes due to a re-organisation, the goodwill is re-allocated to the units affected.

The gain or loss on disposal of an entity includes the carrying amount of goodwill relating to the entity sold.

Technology-based assets

Acquired computer software licences that require further internal development are capitalised on the basis of costs incurred to acquire and bring to use the specific software. These technology-based assets are classified as intangible assets with a finite useful life. These assets are amortised on a straight-line basis over their estimated useful lives, which are reviewed annually, as follows:

- Computer software at 20% per year.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS - IMPAIRMENT OF GOODWILL

Due to the wasting nature of mining assets and the finite life of a mine's reserves, the allocation of goodwill to a shaft will eventually result in an impairment charge for the goodwill. The group tests annually whether separately identifiable goodwill has suffered any impairment in accordance with the accounting policy stated in note 2.5. These calculations use estimates as per note 15.

16 INTANGIBLE ASSETS continued

	US dollar	
Figures in million	**2018**	2017
Goodwill (a)	**36**	45
Technology-based assets (b)	**1**	1
Total	**37**	46

(a) Goodwill

	US dollar	
Figures in million	**2018**	2017
Cost		
Balance at beginning of year	**181**	161
Acquisition of Moab Khotsong	**23**	—
Translation	**(12)**	20
Balance at end of year	**192**	181
Accumulated amortisation and impairments		
Balance at beginning of year	**136**	104
Impairment[1]	**27**	19
Translation	**(7)**	13
Balance at end of year	**156**	136
Net carrying value	**36**	45
The net carrying value of goodwill has been allocated to the following cash generating units:		
Bambanani	**16**	17
Moab Khotsong	**20**	—
Tshepong Operations[1]	**—**	25
Joel[1]	**—**	3
Net carrying value	**36**	45

[1] In 2018 goodwill impairment of US$23.6 million (2017: US$19.4 million) was recorded for the Tshepong Operations and goodwill impairment of US$3.0 million (2017: US$nil) was recorded for Joel as the carrying values exceeded the recoverable values of the related cash generating units. Refer to note 6 for further details on the impairment assessment.

(b) Technology-based assets

	US dollar	
Figures in million	**2018**	2017
Cost		
Balance at beginning of year	**3**	13
Fully depreciated assets no longer in use derecognised	**—**	(11)
Additions	**1**	—
Translation	**(1)**	1
Balance at end of year	**3**	3

16 INTANGIBLE ASSETS continued

(b) Technology-based assets continued

	US dollar	
Figures in million	**2018**	2017
Accumulated amortisation and impairments		
Balance at beginning of year	**2**	11
Fully depreciated assets no longer in use derecognised	**—**	(11)
Amortisation charge	**1**	1
Translation	**(1)**	1
Balance at end of year	**2**	2
Net carrying value	**1**	1

ACCOUNTING POLICY - FINANCIAL ASSETS (APPLICABLE TO NOTES 17, 18, 19 AND 20)

Financial assets are initially measured at fair value when the group becomes a party to their contractual arrangements, with the exception of loans and receivables which are recognised on origination date. Transaction costs are included in the initial measurement of financial instruments, with the exception of financial instruments classified at fair value through profit or loss. The subsequent measurement of financial assets is discussed below.

A financial asset is derecognised when the right to receive cash flows from the asset has expired or the group has transferred its rights to receive cash and either (a) has transferred substantially all the risks and rewards of the asset, or (b) has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the assets.

On derecognition of a financial asset, the difference between the carrying amount and the sum of the consideration received and any cumulative gain or loss recognised in equity is recognised in profit or loss.

Financial assets and liabilities are offset and the net amount reported in the balance sheet when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis, or realise the asset and settle the liability simultaneously.

The group classifies financials assets as follows:

- **Loans and receivables** are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They arise when the group provides money, goods or services directly to a debtor with no intention of trading the receivable. Loans and receivables are subsequently measured at amortised cost using the effective interest method. Loans and receivables include trade and other receivables (excluding VAT and prepayments), restricted cash and cash and cash equivalents.

  - **Cash and cash equivalents** are defined as cash on hand, deposits held at call with banks and short-term highly liquid investments with original maturities of three months or less. Cash and cash equivalents exclude restricted cash.

  - **Trade and other receivables** are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method, less provision for impairment. If collection of the trade receivable is expected in one year or less it is classified as current assets. If not, it is presented as non-current assets. A provision for impairment of receivables is established when there is objective evidence that the group will not be able to collect all amounts due according to the original terms of receivables. The amount of the provision is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the effective interest rate. The carrying amount of the asset is reduced through the use of a provision for impairment (allowance account) and the amount of the loss is recognised in the income statement. When a trade receivable is uncollectible, it is written off against the allowance account for trade receivables. Subsequent recoveries of amounts previously written off are credited in the income statement.

- **Available-for-sale financial assets** are non-derivatives that are either designated in this category or not classified in any of the other categories. They are included in non-current assets unless the investment matures or management intends to dispose of the investment within 12 months of the balance sheet date. Available-for-sale financial assets are subsequently carried at fair value. The fair values of quoted investments are based on current bid prices. If the fair value for a financial instrument cannot be obtained from an active market, the group establishes fair value by using valuation techniques. The group assesses at each balance sheet date whether there is objective evidence that a financial asset or a group of financial assets is impaired.

- **Held-to-maturity investments** are non-derivative financial assets with fixed or determinable payments and fixed maturities that the group's management has the positive intention and ability to hold to maturity. The group's held-to-maturity investments are subsequently measured at amortised cost using the effective interest method. The group assesses at the end of each reporting period whether there is objective evidence that a held-to-maturity investment is impaired as a result of an event. A portion of restricted investments held by the trust funds (refer to note 18) are classified as held-to-maturity investments.

ACCOUNTING POLICY - FINANCIAL ASSETS (APPLICABLE TO NOTES 17, 18, 19 AND 20) continued

- **Financial assets at fair value through profit or loss** have two sub-categories: financial assets held-for-trading, and those designated at fair value through profit or loss at inception. Derivative assets are categorised as held for trading unless designated as hedging instruments (refer to note 2.3). These assets are subsequently measured at fair value with gains or losses arising from changes in fair value recognised in the income statement in the period in which they arise.

17 RESTRICTED CASH

	US dollar	
Figures in million	**2018**	2017
Non-current (a)	**6**	5
Current (b)	**3**	1
Total restricted cash	**9**	6

(a) The amount primarily relates to funds set aside to serve as collateral against guarantees made to the Department of Mineral Resources (DMR) in South Africa for environmental and rehabilitation obligations. Refer to note 26. The funds are invested equally in short term money market funds and call accounts.

(b) Cash of US$1.4 million relates to monies released from the environmental trusts as approved by the DMR which may only be used for further rehabilitation.

18 RESTRICTED INVESTMENTS

	US dollar	
Figures in million	**2018**	2017
Investments held by environmental trust funds (a)	**235**	200
Investments held by social trust funds (b)	**2**	3
Total restricted investments	**237**	203

(a) Environmental trust funds

ACCOUNTING POLICY

Contributions are made to the group's environmental trust funds, created in accordance with statutory requirements, to fund the estimated cost of pollution control, rehabilitation and mine closure at the end of the life of the group's mines. The trusts are consolidated into the group as the group exercises control of the trusts. The measurement of the investments held by the trust funds is dependent on their classification under financial assets. Income received and gains are treated in accordance with these classifications.

The environmental trust funds are irrevocable trusts under the group's control. Contributions to the trusts are invested in interest-bearing short-term and medium-term cash investments and medium term equity-linked notes issued by commercial banks that provide guaranteed interest and additional interest or growth linked to the growth of the Top 40 index of the JSE. The equity-linked notes are designated as fair value through profit or loss investments and recorded at fair value whilst the interest-bearing short-term investments are classified either as held-to-maturity and recorded at amortised cost or as cash and cash equivalents and recorded at fair value. These investments provide for the estimated cost of rehabilitation at the end of the life of the group's mines. Income earned on the investments is retained in the funds and reinvested.

18 RESTRICTED INVESTMENTS continued

(a) Environmental trust funds continued

The environmental trust funds consist of:

	US dollar	
Figures in million	**2018**	2017
Held-to-maturity financial assets	**169**	137
Cash and cash equivalents (loans and receivables)	**2**	2
Fair value through profit or loss financial assets	**64**	61
Total environmental trust funds	**235**	200

Reconciliation of the movement in the investments held by environmental trust funds:

	US dollar	
Figures in million	**2018**	2017
Balance at beginning of year	**200**	167
Interest income	**12**	11
Fair value gain	**6**	—
Moab Khotsong acquisition[1]	**33**	—
Equity-linked deposits acquired	**—**	15
Maturity/(acquisition) of held-to-maturity investments	**—**	(16)
Net (disposal)/acquisition of cash and cash equivalents	**(1)**	2
Translation	**(15)**	21
Balance at end of year	**235**	200

[1] Refer to note 14 for further information. The amount includes US$5.0 million relating to Nufcor SA. Upon receipt the funds were invested within held-to-maturity financial assets.

(b) The social trust fund

The social trust fund is an irrevocable trust under the group's control. The purpose of the trust is to fund the social plan to reduce the negative effects of restructuring on the group's workforce, to put measures in place to ensure that the technical and life skills of the group's workforce are developed and to develop the group's workforce in such a manner as to avoid or minimise the effect of job losses and a decline in employment through turnaround or redeployment strategies.

The social trust fund investment comprises a unit trust portfolio that is exposed to the fair value changes in the equity market and is classified as a fair value through profit or loss investment.

19 TRADE AND OTHER RECEIVABLES

	US dollar	
Figures in million	**2018**	2017
Non-current assets		
Financial assets		
Loans to associates (b)	**8**	9
Loan to ARM BBEE Trust (c)	**19**	17
Provision for impairment (b) (c)	**(9)**	(12)
Total non-current trade and other receivables	**18**	14
Current assets		
Financial assets		
Trade receivables (gold)	**39**	27
Other trade receivables	**9**	9
Provision for impairment	**(4)**	(4)
Trade receivables - net	**44**	32
Interest and other receivables (a)	**—**	6
Employee receivables	**1**	1
Non-financial assets		
Prepayments	**6**	6
Value added tax	**23**	30
Income and mining taxes	**9**	1
Total current trade and other receivables	**83**	76

(a) No impairment allowance is necessary in respect of any balances included in interest and other receivables as all amounts are classified as fully performing.

(b) The balance in 2018 comprises US$8.4 million (2017: US$8.8 million) owed by Pamodzi Gold Limited (Pamodzi). Pamodzi was placed into liquidation during 2009 and the loan was provided in full. Harmony is a concurrent creditor in the Pamodzi Orkney liquidation.

(c) During 2016, Harmony advanced US$13.5 million to the ARM BBEE Trust, shareholder of African Rainbow Minerals Limited (ARM). The trust is controlled and consolidated by ARM, who holds 12.7% of Harmony's shares. Harmony is a trustee of the ARM BBEE Trust. The loan is subordinated and unsecured. The interest is market related (3 months JIBAR plus 4.50%) and is receivable on the maturity of the loan on 31 December 2022. During the year, the loan was tested for impairment and a reversal of US$3.2 million was recognised following an increase in the ARM share price, compared to a provision of US$1.0 million recorded in June 2017. The recoverable amount of US$18.5 million (2017: US$14.0 million) was calculated using a discounted cash flow model. The cash flows in the model includes projected interest payments and projected ARM share price on the expected repayment date.

The movement in the provision for impairment of current trade receivables during the year was as follows:

	US dollar	
Figures in million	**2018**	2017
Balance at beginning of year	**4**	2
Impairment loss recognised	**1**	1
Translation	**(1)**	1
Balance at end of year	**4**	4

19 TRADE AND OTHER RECEIVABLES continued

The movement in the provision of non-current loans receivable during the year was as follows:

	US dollar	
Figures in million	**2018**	2017
Balance at beginning of year	**12**	13
Impairment loss recognised	**—**	1
Reversal of impairment loss	**(3)**	(3)
Translation	**—**	1
Total provision of non-current loans receivable	**9**	12

The ageing of current trade receivables at the reporting date was:

	US dollar	
Figures in million	**Gross**	**Impairment**
30 June 2018		
Fully performing	**42**	**1**
Past due by 1 to 30 days	**1**	**—**
Past due by 31 to 60 days	**2**	**—**
Past due by 61 to 90 days	**—**	**—**
Past due by more than 90 days	**1**	**1**
Past due by more than 361 days	**2**	**2**
	48	**4**
30 June 2017		
Fully performing	31	—
Past due by 1 to 30 days	1	—
Past due by 31 to 60 days	—	—
Past due by 61 to 90 days	1	1
Past due by more than 90 days	1	1
Past due by more than 361 days	2	2
	36	4

The ageing of non-current loans receivable at the reporting date was:

	US dollar	
Figures in million	**Gross**	**Impairment**
30 June 2018		
Fully performing	**19**	1
Past due by 1 to 30 days	**—**	—
Past due by 31 to 60 days	**—**	—
Past due by 61 to 90 days	**—**	—
Past due by more than 361 days	**8**	8
	27	9

19 TRADE AND OTHER RECEIVABLES continued

The ageing of non-current loans receivable continued

Figures in million	US dollar Gross	US dollar Impairment
30 June 2017		
Fully performing	17	3
Past due by 1 to 30 days	—	—
Past due by 31 to 60 days	—	—
Past due by 61 to 90 days	—	—
Past due by more than 361 days	9	9
	26	12

The majority of fully performing trade receivables are indirectly associated with financial institutions of good credit quality. Provisions for the other loans and receivables have been raised following an assessment of their credit risk by management.

During 2017 and 2018 there was no renegotiation of the terms of any receivable.

As at 30 June 2018 and 30 June 2017, there was no collateral pledged or held for any of the receivables.

20 DERIVATIVE FINANCIAL ASSETS

Figures in million	US dollar 2018	US dollar 2017
Financial assets		
Non-current	**6**	24
Rand gold hedging contracts - hedge accounted (a)	**5**	23
US$ commodity contracts (b)	**1**	1
Current	**39**	117
Rand gold hedging contracts - hedge accounted (a)	**29**	82
US$ commodity contracts (b)	**5**	1
Foreign exchange hedging contracts (c)	**5**	34
Total derivative financial assets	**45**	141

Figures in million	US dollar 2018	US dollar 2017
Financial liabilities		
Non-current	**1**	—
Rand gold hedging contracts - non-hedge accounted (a)	**1**	—
Current	**15**	—
Foreign exchange hedging contracts (c)	**15**	—
Total derivative financial liabilities	**16**	—

20 DERIVATIVE FINANCIAL ASSETS continued

a) Harmony has entered into rand gold forward sale derivative contracts to hedge the risk of lower rand/gold prices. Cash flow hedge accounting is applied to the majority of these contracts, resulting in the effective portion of the unrealised gains and losses being recorded in other comprehensive income (other reserves - refer to note 25). During the year ended 30 June 2018, the contracts that matured realised a gain of US$93.2 million (2017: US$54.7 million), of which US$93.2 million (2017: US$53.5 million) has been included in revenue. There was no ineffective portion in the current year (2017: US$1.2 million). The unamortised portion of the day one gain or loss amounted to US$0.9 million at 30 June 2018 (2017: US$2.6 million). The loss from non-hedge accounted rand gold forward sale contracts included in gains on derivatives amounted to US$0.9 million (2017: US$nil).

b) Harmony maintains a hedging programme for Hidden Valley by entering into commodity hedging contracts. The contracts comprise US$ gold forward sale derivative contracts as well as silver zero cost collars which establish a minimum (floor) and maximum (cap) silver sales price. Hedge accounting is not applied and the resulting gains and losses are recorded in gains on derivatives in the income statement. The gain amounted to US$2.7 million (2017: US$1.5 million).

c) Harmony maintains a foreign exchange hedging programme in the form of zero cost collars, which sets a floor and cap US$/Rand exchange rate at which to convert US dollars to Rands, and foreign exchange forward contracts. As hedge accounting is not applied, the resulting gains and losses have been recorded in gains on derivatives in the income statement (refer to note 7). These gains amounted to US$8.8 million (2017: US$79.6 million).

The following table shows the open position at the reporting date:

	FY19				FY20				TOTAL
2018	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	
US$ZAR									
Zero cost collars									
US$m	**94**	**53**	**45**	**60**	**—**	**—**	**—**	**—**	**252**
Floor	**14.09**	**14.14**	**13.14**	**13.09**	**—**	**—**	**—**	**—**	**13.69**
Cap	**15.09**	**15.08**	**13.80**	**13.77**	**—**	**—**	**—**	**—**	**14.54**
Forward contracts									
$m	**8**	**59**	**69**	**65**	**18**	**18**	**18**	**18**	**273**
FEC	**13.55**	**13.50**	**13.63**	**13.76**	**14.59**	**14.76**	**14.94**	**15.12**	**13.95**
R/gold									
'000 oz	**54**	**51**	**53**	**41**	**43**	**34**	**15**	**9**	**300**
R'000/kg	**697**	**621**	**630**	**614**	**622**	**643**	**631**	**655**	**639**
US$/gold									
'000 oz	**24**	**24**	**20**	**18**	**6**	**4**	**—**	**—**	**96**
US$/oz	**1 288**	**1 291**	**1 335**	**1 338**	**1 370**	**1 400**	**—**	**—**	**1 318**
Total gold									
'000 oz	**78**	**75**	**73**	**59**	**49**	**38**	**15**	**9**	**396**
US$/silver									
'000 oz	**240**	**240**	**90**	**90**	**90**	**—**	**—**	**—**	**750**
Floor	**17.10**	**17.10**	**17.30**	**17.30**	**17.40**	**—**	**—**	**—**	**17.19**
Cap	**18.10**	**18.10**	**18.30**	**18.30**	**18.40**	**—**	**—**	**—**	**18.19**

Refer to note 4 for the details on the fair value measurements.

21 INVESTMENTS IN ASSOCIATES

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

The investments in associates are evaluated for impairment by comparing the entire carrying value of the investment (including loans to associates and preference shares) to the recoverable amount, which is the higher of value in use or fair value less costs to sell. Discounted cash flow models are used to calculate the net present value of the investments. The cash flows in the models include expected interest and capital payments on loans, dividends, redemption amounts and proceeds on disposal.

(a) Harmony acquired a 32.4% interest in Pamodzi on 27 February 2008, initially valued at US$46.5 million. Pamodzi was listed on the JSE and had interests in operating gold mines in South Africa. Pamodzi was placed in liquidation in March 2009. As at 30 June 2018, the liquidation process has not been concluded. Refer to note 19(b) for details of the loan and provision of impairment of the loan.

(b) Rand Refinery provides precious metal smelting and refining services in South Africa. Harmony holds a 10.38% share in Rand Refinery. This investment is a strategic investment for the group as Rand Refinery is the only company that provides such services in South Africa. Although the group holds less than 20% of the equity shares of Rand Refinery, the group is able to exercise significant influence by virtue of having a right to appoint a director on the board. Through the 10.38% shareholding and the right to appoint a director on the board, the investment has been accounted for as an associate.

In December 2014, Rand Refinery drew down US$88.1 million on an irrevocable subordinated shareholders' loan. Harmony's portion of the shareholders' loan was US$10.4 million. The original loan facility agreement allowed for any unpaid balance to be converted to equity after two years. An amended agreement was concluded on 5 June 2017, converting the loan to cumulative, redeemable preference shares of no par value. The fair value of the loan on conversion was US$5.6 million, resulting in a loss of US$1.2 million.

In 2018, the recoverable amount of the investment in Rand Refinery, after accounting for the current period share in profit, was calculated at US$6.1 million using a discount rate of 15.7%. This resulted in the recognition of an impairment of US$1.2 million.

Rand Refinery has a 31 August year-end.

The net investment in Rand Refinery consists of:

	US dollar	
Figures in million	**2018**	2017
Investment in associate	**6**	4
Investment in ordinary shares[1]	**—**	—
Redeemable preference shares	**6**	4
Net investments in associates	**6**	4

[1] Carried at cost less accumulated impairment.

The movement in the investments in associates during the year is as follows:

	US dollar	
Figures in million	**2018**	2017
Balance at beginning of year	**4**	—
Conversion to preference shares	**—**	6
Share of profit/(loss) in associate	**4**	(2)
Impairment loss	**(1)**	—
Translation	**(1)**	—
Balance at end of year	**6**	4

22 INVESTMENT IN JOINT OPERATIONS

MOROBE MINING JOINT VENTURES (MMJV) PARTNERSHIP AGREEMENT

The group has a 50% interest in the mining and exploration assets located in the Morobe province, PNG. Newcrest owns the remaining 50% interest in these assets. This partnership was formed during the 2009 financial year through a range of transactions and was completed by 30 June 2009. The assets included the Hidden Valley operation and the Wafi-Golpu project. During the 2017 year, Harmony purchased Newcrest's 50% interest in Hidden Valley. The key remaining asset in the joint arrangement is the Wafi-Golpu project. The joint arrangement is accounted for as a joint operation.

23 INVENTORIES

ACCOUNTING POLICY

Inventories, which include bullion on hand, gold-in-process, gold in lock-up, ore stockpiles and consumables, are measured at the lower of cost and net realisable value. Net realisable value is assessed at each reporting date and is determined with reference to relevant market prices.

The cost of bullion, gold-in process and gold in lock-up is determined by reference to production cost, including amortisation and depreciation at the relevant stage of production. Ore stockpiles are valued at average production cost. Stockpiles and gold in lock-up are classified as non-current assets where the stockpile exceeds current processing capacity and where a portion of static gold in lock-up is expected to be recovered more than 12 months after balance sheet date.

Gold in-process inventories represent materials that are currently in the process of being converted to a saleable product. In-process material is measured based on assays of the material fed to process and the projected recoveries at the respective plants. In-process inventories are valued at the average cost of the material fed to process attributable to the source material coming from the mine or stockpile plus the in-process conversion costs, including the applicable depreciation relating to the process facility, incurred to that point in the process. Gold in-process includes gold in lock-up which is generally measured from the plants onwards.

Gold in lock-up is expected to be extracted when plants are demolished at the end of their useful lives, which is largely dependent on the estimated useful life of the operations feeding the plants.

At the group’s open pit operations, gold in-process represents production in broken ore form.

Consumables are valued at weighted average cost value after appropriate allowances for slow moving and redundant items.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

Judgement in applied in estimating the provision for stock obsolescence. The provision is recognised, on items not considered critical, as a percentage of the value of the inventory depending on the period elapsed since the inventory was purchased or issued. Inventory held for longer than 5 years is written down to zero unless there is sufficient evidence of a recoverable amount.

	US dollar	
Figures in million	**2018**	2017
Gold in lock-up	**3**	3
Gold in-process, ore stockpiles and bullion on hand[1]	**45**	21
Consumables at weighted average cost (net of provision)[2]	**82**	65
Total inventories	**130**	89
Non-current portion of gold in lock-up and gold in-process	**(3)**	(3)
Total current portion of inventories	**127**	86
Included in the balance above is:		
Inventory valued at net realisable value	**15**	15

[1] The restoration of run-of-mine stockpiles at Hidden Valley was the main reason for the increase in ore stockpiles.
[2] The increase in consumables is mainly as a result of Hidden Valley and the Moab Khotsong acquisition. Refer to note14 for more information.

During the year, an increase of US$2.3 million (2017: US$2.8 million) to the provision for slow moving and redundant stock was made. The increase in 2018 and 2017 in the provision was primarily the result of additional redundant stock items identified in PNG and provided for. The total provision at 30 June 2018 was US$20.4 million (2017: US$19.0 million).

24 SHARE CAPITAL

ACCOUNTING POLICY

Ordinary shares are classified as equity, incremental costs directly attributable to the issue of new shares or options are shown in equity as a deduction, net of tax, from the proceeds.

The cost of treasury shares is eliminated against the share capital balance.

AUTHORISED

1 200 000 000 ordinary shares with no par value (2017: 1 200 000 000 ordinary shares of 50 SA cents each).

ISSUED

500 251 751 ordinary shares with no par value (2017: 439 957 199 ordinary shares of 50 SA cents each). All issued shares are fully paid.

During the year, all issued and authorised shares with a par value of 50 SA cents each were converted into ordinary shares of no par value.

SHARE ISSUES

Harmony conducted a placement of new ordinary shares to qualifying investors to raise up to US$100.0 million, which represented approximately 15 per cent of the group's existing issued ordinary share capital prior to the placement. The placement was conducted through an accelerated bookbuild. The net proceeds of the placement were to be used to pay down part of the outstanding bridge loan raised for the acquisition of the Moab Khotsong operations.

During June 2018, a total of 55 055 050 new ordinary shares were placed with existing and new institutional investors at a price of R19.12 per share, raising gross proceeds of US$82.7 million. Costs directly attributable to the issue of the shares amounted to US$3.7 million.

African Rainbow Minerals Limited (ARM) agreed to subscribe for an additional 11 032 623 shares at R19.12 a share to maintain its shareholding of 14.29% post the placement of shares, subject to Harmony shareholder approval. Refer to note 37 for details on events subsequent to year end.

An additional 5 239 502 (2017: 2 657 720) shares were issued relating to the exercise of share options by employees. Note 34 set out the details in respect of the share option scheme.

TREASURY SHARES

Included in the total of issued shares is an amount of 335 shares held by Lydenburg Exploration Limited, a wholly owned subsidiary of the company and 47 046 shares held by the Kalgold Share Trust. As the trust is controlled by the group, the shares are treated as treasury shares. The 28 507 shares held by the Tlhakanelo Trust as at 30 June 2017 were sold in August 2017.

25 OTHER RESERVES

	US dollar	
Figures in million	**2018**	2017
Foreign exchange translation reserve (a)	**(1 650)**	(1 528)
Hedge reserve (b)	**27**	84
Share-based payments (c)	**253**	224
Post-retirement benefit actuarial gain/(loss) (d)	**(1)**	(2)
Acquisition of non-controlling interest in subsidiary (e)	**(57)**	(57)
Equity component of convertible bond (f)	**41**	41
Repurchase of equity interest (g)	**(13)**	(13)
Other	**(2)**	(4)
Total other reserves	**(1 402)**	(1 255)

(a) The balance of the foreign exchange translation reserve movement represents the cumulative translation effect of the group's off-shore operations. The US dollar amount includes the translation effect from rand to US dollar.

(b) During the year, Harmony entered into Rand gold hedging contracts. Cash flow hedge accounting is applied to these contracts, resulting in the effective portion of the unrealised gains and losses being recorded in other comprehensive income (other reserves). Refer to note 20 for further information.

25 OTHER RESERVES continued

(b) Hedge reserve continued

The reconciliation of the hedge reserve is as follows:

	US dollar	
Figures in million	**2018**	2017
Balance at beginning of year	**84**	—
	17	128
Net gain on Rand gold contracts	**21**	160
Deferred tax thereon	**(4)**	(32)
	(74)	(43)
Released to revenue	**(93)**	(54)
Deferred tax thereon	**19**	11
	—	(1)
Released to gains on derivatives (hedge ineffectiveness)	**—**	(1)
Deferred tax thereon	**—**	—
Balance at end of year	**27**	84

(c) Share-based payments

	US dollar	
Figures in million	**2018**	2017
Balance at beginning of year	**224**	197
Share-based payments expensed (i)	**29**	27
Balance at end of year	**253**	224

(i) The group issues equity-settled instruments to certain qualifying employees under an employee share option scheme and employee share ownership plan (ESOP) to purchase shares in the company's authorised but unissued ordinary shares. Equity share-based payments are measured at the fair value of the equity instruments at the grant date and are expensed over the vesting period, based on the group's estimate of the shares that are expected to vest. Refer to note 34 for more details.

(d) The actuarial gains or losses related to the post-retirement benefit obligation will not be reclassified to the income statement.

	US dollar	
Figures in million	**2018**	2017
Balance at beginning of year	**(2)**	(2)
Actuarial loss	**1**	—
Balance at end of year	**(1)**	(2)

(e) On 15 March 2004, Harmony announced that it had made an off-market cash offer to acquire all the ordinary shares, listed and unlisted options of Abelle Limited, held by non-controlling interests. The excess of the purchase price of US$86.5 million (A$123 million) over the carrying amount of non-controlling interest acquired, amounting to US$57 million, has been accounted for under other reserves.

(f) On 24 May 2004, the group issued a convertible bond. The amount representing the value of the equity conversion component is included in other reserves, net of deferred income taxes. The equity conversion component is determined on the issue of the bonds and is not changed in subsequent periods. The convertible bonds were repaid in 2009.

(g) On 19 March 2010, Harmony Gold Mining Company Limited concluded an agreement with African Vanguard Resources (Proprietary) Limited (AVRD), for the purchase of its 26% share of the mining titles of the Doornkop South Reef. The original sale of the 26% share in the mining titles was accounted for as an in-substance call option by AVRD over the 26% mineral right. The agreement to purchase AVRD's 26% interest during the 2010 financial year is therefore considered to be a repurchase of the option (equity interest). The 26% interest was transferred from AVRD to Harmony in exchange for Harmony repaying the AVRD Nedbank loan and the issue of 2 162 359 Harmony shares. The difference between the value of the shares issued of US$20.5 million, the liability to the AVRD and transaction costs, have been taken directly to equity.

ACCOUNTING POLICY - PROVISIONS (APPLICABLE TO NOTES 26, 27, 28 AND 30)

Provisions are recognised when the group has a present legal or constructive obligation as a result of past events where it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate of the amount of the obligation can be made.

The amount recognised as a provision is the net present value of the best estimate of the expenditure required to settle the present obligation at balance sheet date using a pre-tax rate that reflects current market assessment of the time value of money and the risks specific to the obligation. The estimate takes into account the associated risks and uncertainties. The increase in the provision due to the passage of time is recognised as interest expense.

Provisions are reviewed at each balance sheet date and adjusted to reflect the current best estimate. If it is no longer probable that an outflow of economic benefits will be required, the provision is reversed.

26 PROVISION FOR ENVIRONMENTAL REHABILITATION

ACCOUNTING POLICY

Estimated long-term environmental obligations, comprising pollution control, rehabilitation and mine closure, are based on the group's environmental management plans in compliance with current technological, environmental and regulatory requirements.

Based on disturbances to date, the net present value of expected rehabilitation cost estimates is recognised and provided for in full in the financial statements. The estimates are reviewed annually and are discounted using a pre-tax risk-free rate that is adjusted to reflect the current market assessments of the time value of money and the risks specific to the obligation.

Annual changes in the provision consist of finance costs relating to the change in the present value of the provision and inflationary increases in the provision estimate, as well as changes in estimates. The present value of environmental disturbances created are capitalised to mining assets against an increase in the rehabilitation provision. If a decrease in the liability exceeds the carrying amount of the asset, the excess is recognised immediately in the income statement. If the asset value is increased and there is an indication that the revised carrying value is not recoverable, impairment is performed in accordance with the accounting policy dealing with impairments of non-financial assets. Rehabilitation projects undertaken, included in the estimates are charged to the provision as incurred. The cost of ongoing current programmes to prevent and control pollution is charged against income as incurred. Over time, the liability is increased to reflect an interest element, and the capitalised cost is depreciated over the life of the related asset.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

Significant judgement is applied in estimating the ultimate rehabilitation cost that will be required in future to rehabilitate the group's mines. Ultimate cost may significantly differ from current estimates. The following rates were used in the calculation of the provision:

	2018 %	2017 %	2016 %
South African operations			
Inflation rate	**5.50**	6.50	6.75
Discount rates			
- 12 months	**6.70**	7.50	8.00
- one to five years	**7.00**	7.60	8.40
- six to nine years	**8.20**	8.40	9.00
- ten years or more	**8.60**	9.10	9.20
PNG operations:			
Inflation rate	**6.00**	6.60	5.00
Discount rates	**6.25**	6.25	6.25

The group's mining and exploration activities are subject to extensive environmental laws and regulations. The group has made, and expects to make in the future, expenditures to comply with such laws and regulations, but cannot predict the full amount of such future expenditures. Estimated future reclamation costs are based principally on legal and regulatory requirements.

26 PROVISION FOR ENVIRONMENTAL REHABILITATION continued

The following is a reconciliation of the total liability for environmental rehabilitation:

	US dollar	
Figures in million	**2018**	2017
Provision raised for future rehabilitation		
Balance at beginning of year	**201**	148
Change in estimate - Balance sheet	**(13)**	(1)
Change in estimate - Income statement	**5**	(1)
Utilisation of provision	**(7)**	(7)
Time value of money and inflation component of rehabilitation costs	**15**	13
Acquisitions[1]	**57**	35
Translation	**(18)**	14
Total provision for environmental rehabilitation	**240**	201

[1] The 2018 acquisition relates to the Moab Khotsong operations (refer to note 14). The 2017 acquisition relates to Hidden Valley.

The provision for environmental rehabilitation for PNG amounts to US$71.7 million (2017: US$73.9 million) and is unfunded.

While the ultimate amount of rehabilitation costs to be incurred in the future is uncertain, the group has estimated that, based on current environmental and regulatory requirements, the total undiscounted cost for the mines, in the current monetary terms, is as follows:

	US dollar	
Figures in million	**2018**	2017
Future net undiscounted obligation		
Ultimate estimated rehabilitation cost	**338**	273
Amounts invested in environmental trust funds (refer to note 18)	**(235)**	(200)
Total future net undiscounted obligation	**103**	73

With the introduction of the National Environmental Management Act (NEMA) Regulations on Financial Provisioning, effective from February 2020, there may be changes to the estimate of the liability and the way in which the group funds the obligation.

The group intends to finance the ultimate rehabilitation costs from the money invested in environmental trust funds as well as the proceeds on sale of assets and gold from plant clean-up at the time of mine closure. The group has guarantees in place, some cash-backed, relating to some of the environmental liabilities. Refer to notes 17 and 36.

27 PROVISION FOR SILICOSIS SETTLEMENT

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

Significant judgement is applied in estimating the cost that will be required in future to settle any claims against the group's mines. The ultimate cost may differ from current estimates.

The provision amount was based on estimates of number of potential claimants, levels of disease progression and take-up rates. These estimates were informed by historic information, published academic research and professional opinion.

The key assumptions that were made in the determination of the provision amount include:
- Silicosis prevalence rates;
- Estimated settlement per claimant;
- Benefit take-up rates;
- Disease progression rates; and
- Timing of cash flows

A discount rate of 8.5% (2017:8.0%) was used, based on government bonds with similar terms to the obligation.

There is uncertainty with regards to the rate at which potential claims would be reported as well as the benefit take-up rates. Refer to sensitivity analysis on the key assumptions below.

27 PROVISION FOR SILICOSIS SETTLEMENT continued

i) Consolidated class action.
Harmony and certain of its subsidiaries (Harmony group), together with other mining companies, are named in a class action for silicosis and tuberculosis which was certified by the Johannesburg High Court in May 2016.

A gold mining industry working group which includes Harmony (the working group) was formed in November 2014 to address issues relating to the compensation and medical care for occupational lung diseases in the gold mining industry in South Africa. The working group engaged all stakeholders on these matters and on 3 May 2018, announced that they have reached an agreement with the lawyers representing the claimants in the silicosis class action litigation. The settlement is subject to certain suspensive conditions, including the agreement being approved by the South Gauteng High Court.

Management had estimated Harmony's provision towards the silicosis settlement at US$67.0 million (2017: US$70.0 million) as at 30 June 2018. Annual changes in the provision consist of time value of money (recognised as finance costs) and changes in estimates (other operating expenses). The change in estimate is a gain of US$4.9 million due to a change in the timing of expected cashflows. The contributions are expected to be settled by cash flows from the group's South African operations and will occur over a number of years. The nominal amount for Harmony group is US$86.3 million.

The following is a reconciliation of the total provision for the silicosis settlement:

	US dollar	
Figures in million	**2018**	2017
Provision raised for settlement		
Balance at beginning of year	**70**	—
Initial recognition	**—**	70
Change in estimate	**(5)**	—
Time value of money and inflation component	**6**	—
Translation loss	**(4)**	—
Total provision for silicosis settlement	**67**	70

Sensitivity analysis

The impact of a reasonable change in certain key assumptions would increase or decrease the provision amount by the following amounts:

	US dollar	
Figures in million	**2018**	2017
Effect of an increase in the assumption:		
Change in benefit take-up rate[1]	**5**	6
Change in silicosis prevalence[2]	**5**	6
Change in disease progression rates[3]	**2**	3
Effect of a decrease in the assumption:		
Change in benefit take-up rate[1]	**(5)**	(6)
Change in silicosis prevalence[2]	**(5)**	(6)
Change in disease progression rates[3]	**(2)**	(3)

[1] Change in benefit take-up rate: the take-up rate does not affect the legal cost allocation, but a 10% change results in a proportionate change in the other values.
[2] Change in the silicosis prevalence: the assumptions that will result in a change in the estimated number of cases are either a 10% change in the assumed labour number or a 10% change in the disease risk.
[3] Change in disease progression rates: a one year shorter/longer disease progression period was used. This assumption is not applicable to the dependant or TB classes.

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated.

A change in the settlement claim amount would result in a change in the provision amount on a rand for rand basis.

The ultimate outcome of these matters remains uncertain, with a possible failure to reach a settlement or to obtain the requisite court approval of the settlement. The provision recorded in the financial statements is consequently subject to adjustment or reversal in the future, depending on the progress of the working group discussions and stakeholder consultations, and the ongoing legal proceedings.

27 PROVISION FOR SILICOSIS SETTLEMENT continued

ii) Individual claims.
Harmony and one of its subsidiaries received a summons from Richard Spoor Attorneys on behalf of an employee. The plaintiff was claiming damages from Harmony and one of its subsidiaries, and another gold mining company. The plaintiff had alleged to have contracted silicosis with progressive massive fibrosis during the course of his employment. The action was subsequently withdrawn against Harmony and its subsidiaries.

28 RETIREMENT BENEFIT OBLIGATION

ACCOUNTING POLICY

The group provides medical cover to current employees and certain retirees through certain funds. The medical accounting costs for the defined benefit plan are assessed using the projected unit credit method. The health care obligation is measured at the present value of the estimated future cash outflows using government bond interest rates consistent with the terms and risks of the obligation. Actuarial gains and losses as a result of these valuations are recognised in other comprehensive income (OCI) at revaluation date. Actuarial gains and losses recognised in OCI will not be recycled to profit or loss. The future liability for current and retired employees and their dependants is accrued in full based on actuarial valuations obtained annually.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

An updated actuarial valuation is carried out at the end of each financial year. Assumptions used to determine the liability include a discount rate of 9.8%, no increases in employer subsidies (in terms of the agreement) and mortality rates according to the SA 1956/62 mortality table (SA “”a mf”” tables) (retirement age of 65) and a medical inflation rate of 7.9% (2017: discount rate of 10.0%, retirement age of 60 and 8.0% inflation rate) (2016: discount rate of 9.7%, retirement age of 60 and 7.7% inflation rate).

Management determined the discount rate by assessing government bonds with similar terms to the liability. The changes to the discount rate and medical inflation rate are similar to changes in interest and inflation rates in South Africa.

(a) Pension and provident funds

The group contributes to several pension and provident funds governed by the Pension Funds Act, 1956 for the employees of its South African subsidiaries. The pension funds are multi-employer defined contribution industry plans. The group’s liability is therefore limited to its monthly determined contributions. The provident funds are funded on a “monetary accumulative basis” with the member’s and employer’s contributions having been fixed in the constitution of the funds.

The Australian group companies make contributions to each employee’s superannuation (pension) funds in accordance with the Superannuation Guarantee Scheme (SGS). The SGS is a Federal Government initiative enforced by law which compels employers to make regular payments to regulated funds providing for each employee on their retirement. The SGS were set at a minimum of 9.5% of gross salary and wages for the 2018 year (2017: 9.5%). The fund is a defined contribution plan.

The PNG Superannuation Act 2002 requires a compulsory employer contribution of 8.4% (2017: 8.4%) into an approved superannuation (pension) fund if an employee is appointed for a period of three months or more. The approved superannuation funds are defined contribution plans.

Substantially all the group’s employees are covered by the above mentioned retirement benefit plans. Funds contributed by the group for the 2018 financial year amounted to US$49.0 million (2017: US$40.6 million).

(b) Post-retirement benefits other than pensions

Harmony inherited a post-retirement medical benefit obligation, which existed at the time of the Freegold acquisition in 2002. The group also inherited various post-retirement medical benefit obligations with the acquisition of the Moab Khotsong operations (refer to note 14). Given the materiality of these new obligations, the details have not been included in the discussion below. Except for the abovementioned employees, Harmony has no other post-retirement obligation for the other group employees.

The group’s obligation is to pay a subsidy of 2% for every completed year of employment up to a maximum of 50% of total medical aid contributions, commencing on date of retirement. Should the employee die, either in service or after retirement, this benefit will transfer to his/her dependants. The medical aid tariffs are based on the Bestmed medical scheme (Bestmed) options.

The liability is unfunded and will be settled out of cash and cash equivalents when it becomes due. The liability is based on an actuarial valuation conducted during the year ended 30 June 2018, using the projected unit credit method. The next actuarial valuation will be performed on 30 June 2019.

28 RETIREMENT BENEFIT OBLIGATION continued

(b) Post-retirement benefits other than pensions continued

The principal actuarial assumptions used to determine the present value of unfunded obligations are discussed above. In addition the following was also considered:

- It is assumed that all Continuation and Widow Members (CAWMs) will remain on the current benefit option and income band. For employed members, post-employment contributions were assumed to be equal to the average payable for the current CAWMs membership;
- It is assumed that not all employed members will remain employed until retirement therefore estimated resignation and ill-health retirement rates are also taken into account;
- It is assumed that 90% of employed members will be married at retirement or earlier death and that wives are four years younger than their husbands.

Through the post-employment medical plan, the group is exposed to a number of risks, the most significant of which are discussed below:

- **Change in bond yields:** A decrease in the bond yields will increase the plan liability.
- **Inflation risk:** The obligation is linked to inflation and higher inflation will lead to a higher liability.
- **Life expectancy:** The obligation is to provide benefits for the life of the member, so increases in life expectancy will result in an increase in the plan's liabilities.

The net actuarial loss for 2018 was mainly due to exits of employed and retired members being lower than expected and actual subsidy inflation being higher than assumed (2017: net actuarial gain was mainly exits of current employees being higher than expected, partially offset by exits of CAWMS being lower than expected and the actual subsidy inflation being higher than assumed).

	US dollar	
Figures in million	**2018**	2017
Present value of unfunded obligations	**13**	14
Current employees	**4**	5
Retired employees	**9**	9
Movement in the liability recognised in the balance sheet		
Balance at beginning of year	**14**	11
Contributions paid	**(1)**	(1)
Finance costs	**1**	1
Net actuarial (gain)/loss recognised during the year[1]	**(1)**	—
Moab Khotsong acquisition (refer to note 14)	**1**	—
Translation	**(1)**	3
Balance at end of year	**13**	14

[1] The net actuarial (gain)/loss has been recorded in other comprehensive income.

	US dollar	
Figures in million	**2018**	2017
The net liability of the defined benefit plan is as follows:		
Present value of defined benefit obligation	**13**	14
Fair value of plan assets	**—**	—
Net liability of defined benefit plan	**13**	14

28 RETIREMENT BENEFIT OBLIGATION continued

(b) Post-retirement benefits other than pensions continued

The effect of a percentage point increase and decrease in the assumed medical cost trend rate is as follows:

	US dollar	
Figures in million	**2018**	2017
Effect of a 1% increase on:		
Aggregate of service cost and finance costs	**—**	—
Defined benefit obligation	**2**	2
Effect of a 1% decrease on:		
Aggregate of service cost and finance costs	**—**	—
Defined benefit obligation	**(1)**	(1)

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. The analysis is performed on the same basis for 2017.

The group expects to contribute approximately US$0.7 million to the benefit plan in 2019.

The weighted average duration of the defined benefit obligation is 14 years.

ACCOUNTING POLICY - FINANCIAL LIABILITIES (APPLICABLE TO NOTES 29 AND 31)

Financial liabilities are initially measured at fair value when the group becomes a party to their contractual arrangements. Transaction costs are included in the initial measurement of financial liabilities, with the exception of financial liabilities classified at fair value through profit or loss. The subsequent measurement of financial liabilities is discussed below. A financial liability is derecognised when the obligation under the liability is discharged, cancelled or expires. The group classifies financial liabilities as follows:

- **Borrowings** are initially recognised at fair value net of transaction costs incurred and subsequently measured at amortised cost, comprising original debt less principal payments and amortisation, using the effective yield method. Any difference between proceeds (net of transaction cost) and the redemption value is recognised in the income statement over the period of the borrowing using the effective interest rate method.

  Fees paid on the establishment of the loan facilities are capitalised as a pre-payment and amortised over the period of the facility to which it relates, to the extent it is probable that some or all of the facility will be drawn down. To the extent there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is expensed.

  Borrowings are classified as current liabilities unless the group has an unconditional right to defer settlement of the liability for at least 12 months after the balance sheet date.

- **Trade and other payables** are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method. Payables are classified as current liabilities if payment is due within a year or less. If not, they are presented as non-current liabilities.

29 BORROWINGS

FACILITIES

Nedbank Limited

The R1 billion (US$76.7 million) Nedbank revolving credit facility (RCF) was entered into on 20 February 2017. US$22.4 million was repaid on the facility in September 2017. US$40.2 million was drawn down on the same facility in April 2018.

Interest accrues on a day-to-day basis over the term of the loan at a variable interest rate.

US dollar facilities

US$140 million was repaid on the US$250 million RCF in August 2017. On 28 July 2017, Harmony concluded an agreement for a new three-year syndicated facility of US$350 million (US$175 million term loan plus US$175 million RCF). The facility was negotiated on similar terms to the previous US$250 million facility. US$175 million was drawn down on the term loan in August 2017. US$40 million was drawn down on the RCF during November 2017. A further $110 million was drawn down on the same facility in February 2018.

On 18 October 2017, Harmony concluded an agreement for a new 12-month bridge loan of US$200 million in order to partially fund the acquisition of the Moab Khotsong operations (refer to note 14). The facility was concluded with similar terms and covenants as the existing loan facilities. US$200 million was drawn down on the bridge loan in February 2018. US$50 million was repaid in April 2018 and a further US$100 million was repaid in June 2018. Refer to note 37 for details of events after the reporting date.

TERMS AND DEBT REPAYMENT SCHEDULE AT 30 June 2018

	Interest charge	Repayment terms	Repayment date	Security
Nedbank Limited (Secured loan - rand revolving credit facility)	1, 3 or 6 month JIBAR plus 3.15%, payable at the elected interest interval	Repayable on maturity	February 2020	Cession and pledge of operating subsidiaries' shares and claims
US dollar facility (Secured loan)	3 or 6 month LIBOR plus 3% for the RCF and 3.15% for the term facility, payable at the elected interest interval	Repayable on maturity	July 2020	Cession and pledge of operating subsidiaries' shares and claims
US dollar bridge loan (Secured loan)	LIBOR, plus elected interest of 2.5% first 6 months, 3% next 3 months, 3.5% last 3 months.	Repayable on maturity	October 2018	Cession and pledge of operating subsidiaries' shares and claims

DEBT COVENANTS

The debt covenant tests for both the rand and US dollar facilities are as follows:

- The group's interest cover ratio shall not be less than five (EBITDA[1]/Total interest paid);
- Tangible Net Worth[2] to total net debt ratio shall not be less than six times or eight times when dividends are paid;
- Leverage[3] shall not be more than 2.5 times.

[1] Earnings before interest, taxes, depreciation and amortisation (EBITDA) as defined in the agreement excludes unusual items such as impairment and restructuring cost.
[2] Tangible Net Worth is defined as total equity less intangible assets.
[3] Leverage is defined as total net debt to EBITDA.

At the time of entering into the bridge loan the Tangible Net Worth to total net debt ration covenant was renegotiated and relaxed from 6 times to 4 times for the full term of the bridge loan. No breaches of the covenants were identified during the tests in the 2017 and 2018 financial years.

29 BORROWINGS continued

INTEREST BEARING BORROWINGS

	US dollar	
Figures in million	2018	2017
Non-current borrowings		
Nedbank Limited (secured loan - R1.0 billion revolving credit facility)	**36**	23
Balance at beginning of year	**23**	—
Draw down	**41**	24
Repayments	**(24)**	—
Translation	**(4)**	(1)
US$250 revolving credit facility (secured loan)	**—**	—
Balance at beginning of year	**—**	139
Draw down	**—**	30
Repayments	**—**	(30)
Amortisation of issue costs	**—**	1
Transferred to current liabilities	**—**	(140)
US$350 facility (secured loan)	**321**	—
Draw down	**325**	—
Issue cost	**(7)**	—
Amortisation of issue costs	**3**	—
Total non-current borrowings	**357**	23
Current borrowings		
Nedbank Limited (secured loan - R1.0 billion revolving credit facility)	**—**	—
Balance at beginning of year	**—**	20
Repayments	**—**	(20)
US$250 revolving credit facility (secured loan)	**—**	140
Balance at beginning of year	**140**	—
Repayments	**(140)**	—
Transferred from non-current liabilities	**—**	140
US$200 bridge loan facility (secured loan)	**50**	—
Draw down	**200**	—
Repayments	**(150)**	—
Total current borrowings	**50**	140
Total interest-bearing borrowings	**407**	163

29 BORROWINGS continued

INTEREST BEARING BORROWINGS continued

	US dollar	
Figures in million	**2018**	2017
The maturity of borrowings is as follows:		
Current	**51**	140
Between one to two years	**36**	—
Between two to five years	**320**	23
	407	163

	US dollar	
Figures in million	**2018**	2017
Undrawn committed borrowing facilities:		
Expiring within one year	**—**	110
Expiring after one year	**61**	53
	61	163

EFFECTIVE INTEREST RATES

	2018 %	2017 %
Nedbank Limited - rand revolving credit facility	**10.2**	10.5
US$250 million revolving credit facility	**4.2**	3.9
US$350 million facility	**4.8**	—
US$200 million bridge loan	**4.5**	—

30 OTHER NON-CURRENT LIABILITIES

	US dollar	
Figures in million	**2018**	2017
KOSH deep groundwater pollution liability (a)	**3**	—
Sibanye Beatrix ground swap royalty	**—**	1
Total non-current liabilities	**3**	1

(a) KOSH deep groundwater pollution liability

Harmony purchased selected mining infrastructure in the Klerksdorp, Orkney, Stilfontein, Hartebeesfontein (KOSH) area from AngloGold Ashanti Limited (refer to note 14). During an assessment of the environmental liabilities associated with this purchase, a risk related to the potential decant and pollution of deep ground mine water from the re-watered underground workings was identified.

Due to the interconnected nature of mining operations, any proposed solution needs to be a combined one supported by all the mines located in these gold fields. As a result, the Mineral and Petroleum Resources Development Act (MPRDA) requires that the affected mining companies develop a Regional Mine Closure Strategy to be approved by the Department of Mineral Resources. Harmony has commissioned a detailed assessment of the mine void after closure to provide clarity on the locality and volume of water expected to decant after mine closure and the quality of the decant water. Simulations have shown that the potential impact from this decant is low and that it will not impact on any down-gradient receptors, including the Vaal River.

A contingent liability acquired in a business combination is recognised in the acquisition accounting if it is a present obligation and its fair value can be measured reliably. Based on Harmony's assessment, a liability of US$3.2 million has been raised as part of the liabilities assumed in the business combination.

31 TRADE AND OTHER PAYABLES

ACCOUNTING POLICY

The group accrues for the cost of the leave days granted to employees during the period in which the leave days accumulate.

Figures in million	US dollar 2018	US dollar 2017
Financial liabilities		
Trade payables	**43**	40
Other liabilities (a)	**13**	7
Non-financial liabilities		
Payroll accruals	**41**	28
Leave liabilities (b)	**38**	30
Shaft related accruals	**42**	37
Other accruals	**15**	7
Value added tax	**6**	4
Total current trade and other payables	**198**	153

During the 2018 financial year, Harmony acquired Moab Khotsong operations. Refer to note 14 for details of the transaction and the balances taken on as a result.

(a) Other liabilities

Includes a loan from Village Main Reef Limited of US$3.6 million. The loan was taken-on with the acquisition of the Moab Khotsong operations. The loan is unsecured, interest free and has no fixed terms of payment.

(b) Leave liabilities

Employee entitlements to annual leave are recognised on an ongoing basis. An accrual is made for the estimated liability for annual leave as a result of services rendered by employees up to the balance sheet date.

The movement in the liability recognised in the balance sheet is as follows:

Figures in million	US dollar 2018	US dollar 2017
Balance at beginning of year	**30**	23
Benefits paid	**(31)**	(29)
Total expense per income statement	**29**	31
Acquisitions[1]	**12**	3
Translation (gain)/loss	**(2)**	2
Balance at end of year	**38**	30

[1] Acquisitions of Moab Khotsong operations in 2018 and Hidden Valley in 2017.

32 CASH GENERATED BY OPERATIONS

	US dollar		
Figures in million	**2018**	2017	2016
Reconciliation of profit/(loss) before taxation to cash generated by operations:			
Profit/(loss) before taxation	**(339)**	(20)	109
Adjustments for:			
Amortisation and depreciation	**200**	185	149
(Reversal of impairment)/impairment of assets	**386**	131	(3)
Share-based payments	**28**	29	23
Net decrease in provision for post-retirement benefits	**—**	(1)	(1)
Net increase/(decrease) in provision for environmental rehabilitation	**(2)**	(8)	(7)
Profit on sale of property, plant and equipment	**—**	(3)	—
Loss on scrapping of property, plant and equipment	**—**	10	4
(Profit)/loss from associates	**(3)**	1	—
Gain on bargain purchase	**—**	(60)	—
Interest received	**(27)**	(20)	(17)
Finance costs	**26**	17	19
Inventory adjustments	**(16)**	31	7
Foreign exchange translation difference	**52**	(16)	45
Non cash portion of gains on derivatives	**43**	(7)	(25)
Day one loss amortisation	**3**	6	—
Silicosis settlement provision	**(5)**	70	—
Other non-cash adjustments	**(2)**	(5)	1
Effect of changes in operating working capital items			
Receivables	**(8)**	(30)	12
Inventories	**(31)**	2	5
Payables	**29**	8	1
Cash generated by operations	**334**	320	322

ADDITIONAL CASH FLOW INFORMATION

The income and mining taxes paid in the statement of cash flow represents actual cash paid less refunds received.

At 30 June 2018, US\$61.2 million (2017: US\$163.4 million) (2016: US\$177.9 million) of borrowing facilities had not been drawn down and is therefore available for future operation activities and future capital commitments. Refer to note 29.

a) Acquisitions of investments/business
The conditions precedent for the acquisition of Moab Khotsong operations in 2018 and full ownership of Hidden Valley in 2017 were fulfilled and the transaction were completed in the respective years. Refer to note 14 for details on the acquired assets, including cash acquired and assumed liabilities.

b) Principal non-cash transactions
Share-based payments (refer to note 34).

33 EMPLOYEE BENEFITS

ACCOUNTING POLICY

- Pension, provident and medical benefit plans are funded through monthly contributions. The group pays fixed contributions into a separate entity in terms of the defined contribution pension, provident and medical plans which are charged to the income statement in the year to which they relate. The group's liability is limited to its monthly determined contributions and it has no further liability, legal or constructive, if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods. Refer to note 28 for details of the post-retirement medical benefit plan.
- Termination benefits are payable when employment is terminated before the normal retirement date, or whenever an employee accepts voluntary redundancy in exchange for these benefits. The group recognises termination benefits at the earlier of the following dates: (a) when the group can no longer withdraw the offer of those benefits; and (b) when the entity recognises costs for a restructuring that is within the scope of IAS 37 and involves the payment of termination benefits. In the case of an offer made to encourage voluntary redundancy, the termination benefits are measured based on the number of employees expected to accept the offer. Benefits falling due more than 12 months after balance sheet date are discounted to present value.

33 EMPLOYEE BENEFITS continued

	2018	2017
Number of permanent employees as at 30 June:		
South African operations[1]	**32 520**	26 478
International operations[2]	**1 511**	1 403
Total number of permanent employees	**34 031**	27 881

	US dollar	
Figures in million	2018	2017
Aggregate earnings		
The aggregate earnings of employees including directors were:		
Salaries and wages and other benefits	**695**	563
Retirement benefit costs	**49**	41
Medical aid contributions	**18**	15
Total aggregated earnings[3]	**762**	619

[1] Increase in 2018 due to the acquisition of the Moab Khotsong operations.
[2] The MMJV employees included in the total is 114 (2017: 103).
[3] These amounts have been included in cost of sales, corporate expenditure and capital expenditure.

During the 2018 financial year, US$16.8 million (2017: US$6.5 million) was included in the payroll costs for termination costs. Termination costs include the cost relating to the voluntary retrenchment and restructuring process as well as retrenchments due to shaft closures (refer to note 6).

34 SHARE-BASED PAYMENTS

ACCOUNTING POLICY

The group operates an equity-settled share-based payments plan where the group grants share options to certain employees in exchange for services received.

Equity-settled share-based payments are measured at fair value that includes market performance conditions but excludes the impact of any service and non-market performance conditions of the equity instruments at the date of the grant. The share-based payments are expensed over the vesting period, based on the group's estimate of the shares that are expected to eventually vest. The group used an appropriate option pricing model in determining the fair value of the options granted. Non-market vesting conditions are included in assumptions about the number of options that are expected to vest. At each balance sheet date, the estimates of the number of options that are expected to become exercisable are revised. The impact of the revision of original estimates, if any, is recognised in the income statement, with a corresponding adjustment to equity. The proceeds received net of any directly attributable transaction costs are credited to share capital (nominal value) and share premium when the options are exercised.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

The fair value of options granted is being determined using either a binomial, Black-Scholes or a Monte Carlo valuation model. The significant inputs into the model are: vesting period, risk free interest rate, volatility, price on date of grant and dividend yield.

34 SHARE-BASED PAYMENTS continued

EMPLOYEE SHARE-BASED PAYMENTS

The group's 2012 employee share ownership plan (ESOP) ended in 2017. The plan was an equity-settled and cash settled employee ownership plan.

The group has the 2006 employee share ownership plan that is active. The objective of these schemes is to recognise the contributions of employees to the group's financial position and performance and to retain key employees.

The total cost relating to employee share-based payments is made up as follows:

	US dollar	
Figures in million	**2018**	2017
2012 employee share ownership plan	**—**	1
2006 share plan	**28**	28
Total employee share-based payments	**28**	29

The directors are authorised to issue up to 60 011 669 ordinary shares to participants who have received awards in accordance with Harmony's employee share incentive schemes.

Subsequent to the annual general meeting held on 1 December 2010, 11 115 289 share option awards have been issued in terms of the 2006 share plan. 52 376 102 outstanding share option awards have been granted in terms of the 2006 share plan.

Options granted under the 2006 share plan

The 2006 share plan consists of share appreciation rights (SARs), performance shares (PS) and restricted shares (RS). The share plan is equity-settled.

Award	Vesting	Performance criteria
SARs	SARs will vest in equal thirds in year three, four and five, subject to the performance conditions having been satisfied. The SARs will have an expiry date of six years from the grant date and the offer price equals the closing market prices of the underlying shares on the trading date immediately preceding the grant.	*2009 to 2013 allocation:* The group's headline earnings per share must have grown since the allocation date by more than the South African Consumer Price Index (CPI).
PS	The PS will vest after three years from the grant date, if and to the extent that the performance conditions have been satisfied.	*2015 to 2016 allocation:* • 50% of the number of rights awarded are linked to the total shareholder return of the group on an absolute basis. • 50% of the number of rights awarded are linked to the total shareholder return of the group as compared to that of the South African gold index. *2014 allocation:* • the number of the rights awarded are linked to the group's performance in comparison to the South African Gold Index.
RS	The RS will vest after three years from grant date.	The participant is still employed within the group.

Termination of employees' participation in the share plan is based on "no fault" and "fault" definitions.

- Fault — All unvested and unexercised SARs and all PS and RS not yet vested are lapsed and cancelled.
- No fault — Accelerated vesting occurs and all unvested and unexercised share options are settled in accordance with the rules of the plan.

Executive management is encouraged to retain performance shares when they vest and a minimum shareholding requirement has been introduced to achieve this. This shareholding is meant to align shareholder and executive objectives to grow total shareholder return.

34 SHARE-BASED PAYMENTS continued

EMPLOYEE SHARE-BASED PAYMENTS continued

Options granted under the 2006 share plan continued

Activity on share options

	SARs		PS	RS
Activity on options and rights granted but not yet exercised	**Number of options and rights**	**Weighted average option price (SA rand)**	**Number of rights**	**Number of rights**
For the year ended 30 June 2018				
Balance at beginning of year	**12 476 697**	**32.60**	**37 848 573**	**701 412**
Options granted and accepted	**—**	**—**	**14 406 437**	**—**
Rights vested and locked up	**—**	**—**	**(278 629)**	**—**
Options exercised	**(794 351)**	**24.37**	**(3 594 838)**	**(120 000)**
Options forfeited and lapsed	**(1 834 486)**	**52.86**	**(5 954 259)**	**(30 416)**
Balance at end of year	**9 847 860**	**50.20**	**42 427 284**	**550 996**

	SARs		PS	RS
Activity on options and rights granted but not yet exercised	**Number of options and rights**	**Weighted average option price (SA rand)**	**Number of rights**	**Number of rights**
For the year ended 30 June 2017				
Balance at beginning of year	14 156 782	34.74	34 978 038	859 974
Options granted and accepted	—	—	9 320 599	—
Options granted	113 899	21.89	(160 271)	—
Options exercised	(451 187)	27.49	(2 171 953)	(158 562)
Options forfeited and lapsed	(1 342 797)	47.39	(4 117 840)	—
Balance at end of year	12 476 697	32.60	37 848 573	701 412

	SARs		PS and RS	
Options and rights vested but not exercised at year end	**2018**	2017	**2018**	2017
Options and rights vested but not exercised	**5 331 335**	2 869 859	**—**	—
Weighted average option price (SA rand)	**36.26**	57.52	**n/a**	n/a

34 SHARE-BASED PAYMENTS continued

EMPLOYEE SHARE-BASED PAYMENTS continued

Options granted under the 2006 share plan continued

Activity on share options continued

List of options and rights granted but not yet exercised (listed by grant date)	Number of options and rights	Award price (SA rand)	Remaining life (years)
As at 30 June 2018			
Share appreciation rights			
16 November 2012	**1 127 510**	**68.84**	**0.4**
15 November 2013	**3 891 126**	**33.18**	**1.4**
17 November 2014	**4 829 224**	**18.41**	**2.4**
	9 847 860		
Performance shares			
16 November 2015	**19 950 203**	**n/a**	**0.4**
17 February 2016	**512 000**	**n/a**	**0.4**
29 November 2016	**8 360 578**	**n/a**	**1.4**
15 November 2017	**13 604 503**	**n/a**	**2.4**
	42 427 284		
Restricted shares[1]			
16 November 2012	**137 749**	**n/a**	**0.4**
16 November 2015	**413 247**	**n/a**	**0.4**
	550 996		
Total options and rights granted but not yet exercised	**52 826 140**		

[1] The 2012 and 2015 restricted shares vested in November 2015 and November 2018 respectively. Restricted shares that were not exercised, partially or fully, at that time remain restricted for a further three years, but were supplemented by a matching grant of restricted shares. All restricted shares are then only settled after the end of a further three year period.

	US dollar	
Figures in million	**2018**	2017
Gain realised by participants on options and rights traded during the year	**13**	8
Fair value of options and rights exercised during the year	**14**	8

Measurement

The fair value of equity instruments granted during the year was valued using the Monte Carlo simulation on the market-linked PS, Cox-Ross- Rubinstein binomial tree on the SARs and spot share price on grant date for the RS.

(i) Assumptions applied at grant date for awards granted during the year

	Performance shares
29 November 2016 allocation	
Risk-free interest rate	7.41%
Expected volatility[1]	47.66%
Expected dividend yield	0.00%
Vesting period (from grant date)	3 years

[1] The volatility is measured as annualised standard deviation of historical share price returns, using an exponentially weighted moving average (EWMA) model, with a lambda of 0.99. The volatility is calculated on the grant date, and takes into account the previous three years of historical data.

34 SHARE-BASED PAYMENTS continued

OTHER SHARE-BASED PAYMENTS

On 20 March 2013 Harmony signed transaction and funding agreements to give effect to an empowerment transaction to dispose of 30% of its Free State based Phoenix operation (Phoenix) to BEE shareholders, which includes a free-carry allocation of 5% to a community trust that has been created and is currently controlled by Harmony. The transaction closed on 25 June 2013, following the fulfilment of the last condition precedent. In terms of the agreements Phoenix was transferred to a newly incorporated subsidiary; 'PhoenixCo' which subsequently changed its name to Tswelopele Beneficiation Operation (TBO).

The awards to the BEE partners have been accounted for as in-substance options as the BEE partners will only share in the upside, and not the downside of their equity interest in TBO until the date the financing provided by Harmony is fully repaid. On this date the options will be exercised and a non-controlling interest in TBO will be recognised. The award of the options to the BEE partners is accounted for by the group as an equity- settled share-based payment arrangement. The in-substance options carry no vesting conditions and the fair value of the options of US$2.3 million was expensed on the grant date, 25 June 2013.

35 RELATED PARTIES

None of the directors or major shareholders of Harmony or, to the knowledge of Harmony, their families, had an interest, directly or indirectly, in any transaction from 1 July 2015 or in any proposed transaction that has affected or will materially affect Harmony or its subsidiaries, other than as stated below.

Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the group, directly or indirectly, including any director (whether executive or otherwise) of the group.

During 2018, the executive directors received remuneration of US$2.5 million, comprising of US$1.3 million for salaries, US$0.2 million for retirement contributions, US$1.0 million for bonuses and US$0.3 million from the exercising or settlement of share options. The non-executive directors received US$0.8 million in directors' fees.

During 2017, the executive directors received remuneration of US$2.0 million, comprising of US$1.2 million for salaries, US$0.2 million for retirement contributions, US$0.4 million for bonuses and US$0.2 million from the exercising or settlement of share options. The non-executive directors received US$0.7 million in directors' fees.

The following directors and prescribed officers own shares in Harmony at year-end:

	Number of shares	
Name of director/prescribed officer	**2018**	2017
Directors		
Andre Wilkens	**101 301**	101 301
Frank Abbott[1]	**747 817**	606 742
Harry 'Mashego' Mashego	**593**	593
Ken Dicks	**35 000**	35 000
Prescribed officers		
Beyers Nel[1]	**42 486**	17 553
Johannes van Heerden	**75 000**	25 000
Philip Tobias[1]	**42 916**	11 750

[1] The movement in shares for the 2018 financial year includes the vesting of performance shares that were voluntarily locked up in terms of the minimum shareholding requirement of the 2006 Share Plan but remain beneficially owned.

Modise Motloba, Harmony's deputy chairman, is a director of Tysys Proprietary Limited (Tysys). Tysys entered into a contract with the group during the 2017 financial year to provide services relating to the group's small and medium enterprise development projects. The contract has a value of up to US$0.4 million per annum. Approximately US$0.4 million (2017: US$0.1 million) was paid during FY18 relating to services rendered in the current and prior financial years. The contract has a 30-day notice period.

All the production of the group's South African operations is sent to Rand Refinery in which Harmony holds a 10.38% interest. Refer to note 21.

35 RELATED PARTIES continued

US dollar		
Figures in million	**2018**	2017
Sales and services rendered to related parties		
Joint operations	**1**	—
Total	**1**	—

Figures in million	**2018**	2017
Purchases and services acquired from related parties		
Associates	**3**	2
Total	**3**	2

36 COMMITMENTS AND CONTINGENCIES

COMMITMENTS AND GUARANTEES

US dollar		
Figures in million	**2018**	2017
Capital expenditure commitments		
Contracts for capital expenditure	**16**	12
Share of joint venture's contract for capital expenditure	**4**	16
Authorised by the directors but not contracted for	**124**	60
Total capital commitments	**144**	88

Contractual obligations in respect of mineral tenement leases amount to US$4.3 million (2017: US$13.0 million). This includes US$4.2 million (2017: US$12.7 million) for the MMJV.

US dollar		
Figures in million	**2018**	2017
Guarantees		
Guarantees and suretyships	**10**	1
Environmental guarantees[1]	**35**	37
Total guarantees	**45**	38

[1] At 30 June 2018, US$5.4 million (2017: US$4.7 million) has been pledged as collateral for environmental guarantees in favour of certain financial institutions. Refer to note 17.

CONTINGENT LIABILITIES

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

Contingencies will only realise when one or more future events occur or fail to occur. The exercise of significant judgement and estimates of the outcome of future events are required during the assessment of the impact of such contingencies.

Litigation and other judicial proceedings as a rule raise difficult and complex legal issues and are subject to uncertainties and complexities including, but not limited to, the facts and circumstances of each particular case, issues regarding the jurisdiction in which the suit is brought and differences in applicable law. Upon resolution of any pending legal matter, the group may be forced to incur charges in excess of the presently established provisions and related insurance coverage. It is possible that the financial position, results of operations or cash flows of the group could be materially affected by the outcome of the litigation.

36 COMMITMENTS AND CONTINGENCIES continued

CONTINGENT LIABILITIES continued

The following contingent liabilities have been identified:

(a) On 1 December 2008, Harmony issued 3 364 675 Harmony shares to Rio Tinto Limited (Rio Tinto) for the purchase of Rio Tinto's rights to the royalty agreement entered into prior to our acquisition of the Wafi deposits in PNG. The shares were valued at US$23 million on the transaction date. An additional US$10 million in cash will be payable when the decision to mine is made. Of this amount, Harmony is responsible for paying the first US$6 million, with the balance of US$4 million being borne equally by the joint operators.

(b) The group may have a potential exposure to rehabilitate groundwater and radiation that may exist where the group has and/or continues to operate. The group has initiated analytical assessments to identify, quantify and mitigate impacts if and when (or as and where) they arise. Numerous scientific, technical and legal studies are underway to assist in determining the magnitude of the contamination and to find sustainable remediation solutions. The group has instituted processes to reduce future potential seepage and it has been demonstrated that Monitored Natural Attenuation (MNA) by the existing environment will contribute to improvement in some instances. Water treatment facilities were successfully implemented at both Doornkop and Kusasalethu. These facilities are now assisting in reducing our dependency on Rand Water and will be key in managing any post closure decant should it arise.

In terms of Free State operations, Harmony has taken the initiative to develop a comprehensive regional closure plan which will ensure that there is sufficient water for our organic growth initiatives. The geohydrological studies confirm that there is no risk of decant in Welkom.

Should the group determine that any part of these contingencies require them being recorded and accounted for as liabilities, that is where they become estimable and probable, it could have a material impact on the financial statements of the group.

(c) Due to the interconnected nature of mining operations in South Africa, any proposed solution for potential flooding and potential decant risk posed by deep groundwater needs to be a combined one, supported by all the mines located in these goldfields. As a result, the Department of Mineral Resource and affected mining companies are involved in the development of a regional mine closure strategy. Harmony operations have conducted a number of specialist studies and the risk of surface decant due to rising groundwater levels has been obviated at the entire Free State region and Kalgold. Therefore, there is no contingency arising from these operations. Additional studies have been commissioned at Doornkop and Kusasalethu. In view of the limitation of current information for accurate estimation of a liability, no reliable estimate can be made for these operations.

(d) The individual Harmony mining operations have applied for the respective National Water Act, Section 21 Water Use Licenses (WUL) to the Department of Water and Sanitation (DWS). As part of the Water Use License Application (WULA) process for the respective operations, Harmony has requested certain exemptions (relevant to the respective mining operations) from GNR 704 of 4 June 1999, "Regulations on the use of water for mining and related activities aimed at the protection of water resources". The respective WULA's have subsequently not yet been approved by DWS. Two Water Use Licences have been issued by DWS for Kalgold and Kusasalethu, with neither licence having any material impact to the operation. The remaining WULA's have not yet been approved by DWS. The WUL conditions for the respective operations are subsequently not yet known and the subsequent potential water resource impact liability as part of the mine rehabilitation and closure process (to which DWS is an important participant and decision maker) is uncertain. The existing WUL for Moab Khotsong, which was recently acquired by Harmony, has already been approved by the DWS. The transferral of the licence and its conditions to Harmony is currently being processed.

(e) In terms of the sale agreements entered into with Rand Uranium, Harmony retained financial exposure relating to environmental disturbances and degradation caused by it before the effective date, in excess of US$5.1 million of potential claims. Rand Uranium is therefore liable for all claims up to US$5.1 million and retains legal liability. The likelihood of potential claims cannot be determined presently and no provision for any liability has been made in the financial statements.

(f) Legal proceedings commenced in December 2010 against the Hidden Valley mine in PNG over alleged damage to the Watut River (which runs adjacent to the Hidden Valley mine), alleged to have been caused by waste rock and overburden run-off from the mine. The damages sought by the plaintiffs were not specified. The defendants intend to defend the claims. No active steps have been taken by the plaintiffs in this proceeding for more than five years. It is not practicable to make any reasonable assessment of the prospects of the plaintiffs succeeding should they proceed with these claims, nor the potential liability of the defendants if the plaintiffs were to succeed. As a result, no provision has been recognised in the financial statements for this matter.

37 SUBSEQUENT EVENTS

(a) On 12 July 2018, shareholders approved the special resolution to issue 11 032 623 new ordinary shares to African Rainbow Minerals Limited at the placing price of R19.12 to raise a total of R211 million (US$15.9 million). The proceeds raised from the ARM Placing were to be used to repay part of the outstanding bridge loan raised for the acquisition of Moab Khotsong.

(b) On 18 July 2018, the remaining outstanding balance of US$50 million was repaid on the US$200 million bridge loan.

(c) On 4 October 2018, Harmony reached a mutually acceptable settlement with the Financial Sector Conduct Authority of South Africa. The dispute related to incorrect financial results reported for the March 2007 quarter. Harmony informed shareholders and the authorities of the error in August 2007. Subsequently Harmony reviewed all financial accounting procedures and systems to ensure that a similar error would not occur. Following various discussions with the authorities, an administrative penalty of R30 million (US$2.2 million) was imposed and paid by Harmony.

38 SEGMENT REPORT

ACCOUNTING POLICY

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker (CODM). The chief operating decision-maker has been identified as the CEO's office.

The group has one main economic product, being gold. In order to determine operating and reportable segments, management reviewed various factors, including geographical location as well as managerial structure. It was determined that an operating segment consists of a shaft or a group of shafts or open pit mine managed by a single general manager and management team.

Effective 1 July 2017, Harmony integrated Tshepong and Phakisa into a single operation, Tshepong operations. This was to take advantage of their close proximity, which allows existing infrastructure to be optimised. These two separate segments now form one segment. The results for all periods presented have been re-presented for this change.

After applying the qualitative and quantitative thresholds from IFRS 8, the reportable segments were determined as: Tshepong operations, Bambanani, Joel, Doornkop, Target 1, Kusasalethu, Masimong and Unisel. All other operating segments have been grouped together under all other surface operations.

The CODM has been identified as the CEO's office consisting of the chief executive officer, financial director, director corporate affairs, chief operating officer: new business, chief executive officer: South-east Asia and chief operating officer: South Africa. When assessing profitability, the CODM considers the revenue and production costs of each segment. The net of these amounts is the production profit or loss. Therefore, production profit has been disclosed in the segment report as the measure of profit or loss. The CODM also considers capital expenditure when assessing the overall economic sustainability of each segment. The CODM, however, does not consider depreciation or impairment and therefore these amounts have not been disclosed in the segment report.

Segment assets consist of mining assets and mining assets under construction included under property, plant and equipment which can be attributed to the segment. Current and non-current group assets that are not allocated at a segment level form part of the reconciliation to total assets.

A reconciliation of the segment totals to the group financial statements has been included in note 39.

38 SEGMENT REPORT continued

	Revenue 30 June			Production cost 30 June			Production profit/ (loss) 30 June			Mining assets 30 June			Capital expenditure# 30 June			Ounces produced* 30 June			Tons milled* 30 June		
	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016
	US$ million			US$ million			US$ million			US$ million			US$ million			oz			t'000		
South Africa																					
Underground																					
Tshepong Operations (a)	**419**	372	341	**296**	270	222	**123**	102	119	**585**	645	571	**78**	52	43	**302 026**	283 827	289 968	**1 893**	1 869	1 956
Moab Khotsong	**130**	—	—	**74**	—	—	**56**	—	—	**268**	—	—	**13**	—	—	**105 969**	—	—	**360**	—	—
Bambanani	**126**	116	112	**70**	64	56	**56**	52	56	**48**	57	55	**5**	6	7	**90 698**	88 415	96 870	**257**	254	256
Joel	**74**	96	84	**72**	69	57	**2**	27	27	**72**	69	49	**19**	18	15	**52 566**	72 211	73 239	**501**	567	597
Doornkop	**152**	114	102	**110**	91	72	**42**	23	30	**197**	227	203	**21**	18	14	**110 245**	85 939	87 772	**767**	706	695
Target 1	**127**	111	126	**103**	99	86	**24**	12	40	**91**	154	192	**24**	24	22	**91 758**	85 809	108 895	**749**	822	814
Kusasalethu	**193**	189	143	**158**	153	125	**35**	36	18	**156**	217	256	**22**	21	25	**142 395**	141 270	124 198	**738**	670	736
Masimong	**117**	107	91	**90**	82	72	**27**	25	19	**4**	33	33	**10**	9	8	**84 332**	81 599	78 190	**714**	706	716
Unisel	**57**	67	64	**60**	62	52	**(3)**	5	12	**3**	40	37	**7**	6	4	**41 152**	51 280	54 785	**415**	436	467
Surface																					
All other surface operations	**157**	134	110	**116**	102	88	**41**	32	22	**40**	37	30	**12**	19	5	**114 778**	102 175	95 553	**15 595**	12 179	12 112
Total South Africa	**1 552**	1 306	1 173	**1 149**	992	830	**403**	314	343	**1 464**	1 479	1 426	**211**	173	143	**1 135 919**	992 525	1 009 470	**21 989**	18 209	18 349
International																					
Hidden Valley[b]	**32**	110	91	**18**	97	84	**14**	13	7	**281**	175	44	**122**	98	8	**92 015**	95 327	72 565	**2 757**	3 186	1 906
Total international	**32**	110	91	**18**	97	84	**14**	13	7	**281**	175	44	**122**	98	8	**92 015**	95 327	72 565	**2 757**	3 186	1 906
Total operations	**1 584**	1 416	1 264	**1 167**	1 089	914	**417**	327	350	**1 745**	1 654	1 470	**333**	271	151	**1 227 934**	1 087 852	1 082 035	**24 746**	21 395	20 255
Reconciliation of the segment information to the consolidated income statement and balance sheet (refer to note 39)	**—**	—	—	**—**	—	—	**—**	—	—	**1 117**	1 312	1 045									
	1 584	1 416	1 264	**1 167**	1 089	914	**417**	327	350	**2 862**	2 966	2 515	**333**	271	151	**1 227 934**	1 087 852	1 082 035	**24 746**	21 395	20 255

Capital expenditure for international operations excludes expenditure spent on Wafi-Golpu of US$22.4million (2017: US$14.5 million).

(a) Tshepong and Phakisa were two separate segments for the 2017 financial year. As of 1 July 2017, they have been integrated into Tshepong Operations and have been treated as one segment for the 2018 financial year. June 2017 and 2016 amounts have been re-presented as a result of the integration.

(b) Capital expenditure for 2018 comprises of expenditure of US$203.0 million net of capitalised revenue of US$81.4 million. No revenue was capitalised in 2017.

* Production statistics are unaudited.

39 RECONCILIATION OF SEGMENT INFORMATION TO CONSOLIDATED INCOME STATEMENTS AND BALANCE SHEETS

	US dollar		
Figures in million	**2018**	2017	2016
Reconciliation of production profit to consolidated profit/(loss) before taxation			
Total segment revenue	**1 584**	1 416	1 264
Total segment production costs	**(1 167)**	(1 089)	(914)
Production profit	**417**	327	350
Cost of sales items other than production costs	**(633)**	(359)	(174)
Amortisation and depreciation of mining assets	**(192)**	(179)	(144)
Amortisation and depreciation of assets other than mining assets	**(8)**	(6)	(5)
Rehabilitation credit (net)	**(5)**	(2)	3
Care and maintenance cost of restructured shafts	**(10)**	(8)	(8)
Employment termination and restructuring costs	**(16)**	(5)	(1)
Share-based payments	**(19)**	(29)	(23)
(Impairment) of assets/reversal of impairment	**(386)**	(131)	3
Other	**3**	1	1
Gross profit/(loss)	**(216)**	(32)	176
Corporate, administration and other expenditure	**(63)**	(38)	(28)
Exploration expenditure	**(11)**	(18)	(13)
Gain on derivatives	**8**	75	30
Other operating expenses	**(53)**	(68)	(54)
Operating profit/(loss)	**(335)**	(81)	111
Gain on bargain purchase	**—**	60	—
Loss on liquidation of subsidiaries	**—**	(1)	—
Share on profit/(loss) from associate	**3**	(1)	—
Acquisition-related costs	**(8)**	—	—
Investment income	**27**	20	17
Finance costs	**(26)**	(17)	(19)
Profit/(loss) before taxation	**(339)**	(20)	109
Reconciliation of total segment assets to consolidated assets includes the following:			
Non-current assets			
Property, plant and equipment	**500**	638	563
Intangible assets	**37**	46	59
Restricted cash	**6**	5	4
Restricted investments	**237**	203	170
Other non-current assets	**1**	—	—
Investments in associates	**6**	4	—
Inventories	**3**	3	3
Other non-current receivables	**18**	14	12
Derivative financial asset	**6**	24	—
Current assets			
Inventories	**127**	86	79
Restricted cash	**3**	1	1
Trade and other receivables	**83**	76	44
Derivative financial assets	**39**	117	25
Cash and cash equivalents	**51**	95	85
	1 117	1 312	1 045