

#### 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. However, as gold has historically been used as a hedge against unstable or lower economic performance, improved economic performance may have a negative impact on the price for 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 2019, 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: 2009 - 2019**

Calendar year	Price per ounce (US\$)		
	High	Low	Average
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	1,268
2019	1,546	1,270	1,372

On October 17, 2019, the afternoon fixing price of gold on the London bullion market was US\$1,492/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. The use of lower gold prices in reserve calculations and life of mine plans could also result in material impairments of Harmony's investment in gold mining properties or a reduction in its reserve estimates and corresponding restatements of its reserves and increased amortization, reclamation and closure charges.

***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. 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'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 50% for silver. These limits can be amended from time to time. Hedging instruments that protect against the market price volatility of gold and silver may prevent us from realizing the full benefit from subsequent decreases in market prices with respect to gold and silver, however, which could cause us to record a mark-to-market loss, thus decreasing our profits. See Item 11: "Quantitative and Qualitative disclosure about market risk".

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. 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 sovereign 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 non-investment grade at BB+. 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 capita 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. In May 2018, Standard & Poor's affirmed its BB sovereign credit rating of South Africa with a stable outlook, however post year end in July 2019, the outlook was downgraded again to negative. 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") and the SEC's Industry Guide 7. Calculations of Harmony's mineral reserves are based on estimates of:

- future cash costs;
- future commodity prices;
- future currency exchange rates; and
- metallurgical and mining recovery 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 resources and 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 of new resources and reserves 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 resources or proved and probable reserves. To access additional resources and reserves, Harmony will need to complete development projects successfully, including extensions to existing mines and, possibly, establishing 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 resources and reserves, enhance existing resources and reserves or develop new operations in sufficient quantities to maintain or grow the current level of our resources and 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 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 of 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. 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 2018 Harmony acquired AngloGold Ashanti Limited's Moab Khotsoeng and Great Noliwa 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 or other business combination transactions 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 Moab Acquisition, 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 Klerksdorp, Orkney, Stilfontein, Hartbeesfontein ("**KOSH**") basin groundwater in order for Moab Khotsoeng operations and the mine operated by Kopanang Gold Mining Company Proprietary Limited (the mining company holding the remaining one-third interest in Margaret Water Company) (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 our results of operations and 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. Although the electricity supply in South Africa had improved prior to this year, Eskom began declaring load shedding in December 2018. The load shedding rose to Stage 4 (short of 4000 MW) in February 2019 and was reinstated in March 2019. Under Stage 4 load shedding, approximately 80% of the country's demand is met through scheduled load shedding 12 times over a four-day period for two hours at a time, or twelve times over an eight-day period for four hours at a time. Eskom's inability to fully meet the country's demand has led and may continue to lead to rolling blackouts, unscheduled power cuts and surveillance programs to ensure non-essential lighting and electricity appliances are powered off. There is no assurance that Eskom's efforts to protect the national electrical grid will prevent a complete national blackout.

Eskom's aging infrastructure, its need to replace or upgrade its power generation fleet and its deferral of routine maintenance due to financial constraints, may adversely affect electricity supply in South Africa. In addition, Eskom's ability to undertake necessary infrastructure and fleet upgrades, on commercially acceptable terms or otherwise, may be limited by the amount of debt it has outstanding, which has increased from R389 billion in fiscal 2018 to R441 billion on August 1, 2019. Any blackouts or other disruptions to power supply could have a material adverse effect on our business, operating results and financial condition.

Although management has been able to comply with the curtailment requirements in response to the load curtailment events experienced in our 2019 fiscal year and the first quarter of fiscal 2020 without incurring material production losses, there can be no guarantee that we will be able to comply with such curtailment requirements without incurring material production losses in the future. During the period of load shedding, Eskom used a significant amount of diesel to run its gas turbines and called on large power users to curtail their power demand. In addition, although Eskom applied to the National Energy Regulator of South Africa ("NERSA"), which regulates tariffs, for a 19.9% average increase in electricity tariffs for Eskom's 2018 to 2019 financial year, NERSA granted Eskom a 5.2% electricity tariff increase for this period. Eskom has expressed concern that this increase may not be adequate to prevent future electricity interruptions and indicated that it intends to challenge NERSA's decision not to grant the requested 19.9% tariff increase.

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, or the operation of the power stations directly, and result in curtailed supply. For example, in June 2018, during wage negotiations with the National Union of Mines ("NUM"), workers embarked on an illegal strike which resulted in power constraints and load curtailment. 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 February 2019, the President of South Africa announced the vertical unbundling of Eskom. While full-state ownership will be maintained, the unbundling is expected to result in the separation of the Eskom's generation, transmission and distribution functions into separate entities, which may require legislative and/or policy reform. It is expected that this process will take time to implement, causing continued poor reliability of the supply of electricity and an instability in prices and a possible tariff increase above inflation, which are expected to continue through the unbundling process. Should Harmony experience further power tariff increases, its business operating results and financial condition may be adversely impacted.

As mentioned above, although Eskom applied to NERSA for a 19.9% average increase in electricity tariffs for Eskom's 2018/2019 financial year, NERSA granted Eskom a 5.2% electricity tariff increase for this period. In 2018, NERSA granted Eskom an additional 4.4% tariff increase adjustment from the Regulatory Clearing Account ("RCA") for the 2019/2020 financial year. As mentioned above, Eskom has indicated that it intends to challenge NERSA's decision not to grant the requested 19.9% tariff increase and recently filed court papers to challenge the 4.4% tariff increase in the RCA ruling. In the same period, Eskom submitted their multi-year price determination application to NERSA for the 2018/2019 financial year to the 2021/2022 financial year, initially requesting 15% for these years. The application was later revised to 17%, 15% and 15% for the 2019/2020, 2020/2021 and 2021/2022 financial years, respectively. In March 2019, NERSA awarded Eskom tariff increases of 9.4% (effectively 13.8% when combined with the previously agreed 4.4% increase that comes into effect April 2019), 8.1% and 5.2%, for the 2019/2020, 2020/2021 and 2021/2022 financial years, respectively. NERSA also announced the approval of R3.869 billion from the RCA in costs incurred by Eskom over and above the previously regulated costs. The recovery period from the consumer is yet to be determined.

Eskom is also expected to submit to NERSA requests for three RCA applications for the 2014/2015, 2015/2016 and 2016/2017 fiscal years, amounting to nearly R66 billion. Should all three applications be granted and included in the tariff increase request in one year, this could result in approximately a 34% tariff increase. Should we experience further power tariff increases, our business operating results and financial condition may be adversely impacted.

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 2019 - Managing our Social and Environmental Impacts - Environmental management and stewardship" on pages 80 to 102.

**We may experience problems in identifying, financing and managing new acquisitions or other business combination transactions 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 other business combination transactions or to make acquisitions of selected precious metal producing companies or assets. For example, in 2018 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 or entering into other business combination transactions involves a number of risks including:

- our ability to identify appropriate assets for acquisition and/or to negotiate an acquisition or combination 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 or enter into another business combination transaction 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 - 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, 2019, Harmony had substantial amounts of property, plant and equipment, goodwill and other assets on its consolidated balance sheets. Impairment charges of R3,898 million relating to property, plant and equipment and other assets were recorded in fiscal 2019. 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 Policies and 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;
- dam, 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 2019 - Ensuring employee safety and well-being - maintaining stability in our workforce -Safety and health" on pages 33 to 49.

***Illegal and artisanal mining, including theft of gold and copper bearing material, and other criminal activity at our operations could pose a threat to the safety of employees, result in damage to property and could expose the Company to liability***

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 and artisanal mining could result in the depletion of mineral deposits, potentially making the future mining of such deposits uneconomic.



Illegal and artisanal mining (which may be by employees or third parties) is associated with a number of negative impacts, including environmental degradation and human rights abuse. Effective local government administration is often lacking in the locations where illegal and artisanal miners operate because of rapid population growth and the lack of functioning structures, which can create a complex social and unstable environment.

Criminal activities such as trespass, illegal and artisanal mining, sabotage, theft and vandalism could lead to disruptions at certain of our operations.

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 2017, 2018 and fiscal 2019, inflation was 5.1%, 4.4% and 4.5%, 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 Item 5: "Operating and Financial Review and Prospects - Operating Results - Electricity in South Africa - Tariffs". 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 2017 at 6.6% and 2018 at 4.7%, while the annualized inflation stood at 4.5% at the end of fiscal 2019.

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

***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 review has been commissioned involving various PNG government agencies. The legislation being reviewed includes the PNG Mining Act 1992, PNG Mining (Safety) Act 1977 and applicable regulations. Mineral Policy and mining-specific sector policies including biodiversity offsets, 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.

In 2014, the PNG Government instigated a review of the tax regime with a final report issued by the Tax Review Committee in October 2015. 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. Further changes, including a Capital Gains Tax, have been indicated to be introduced from 1 January 2020 and draft legislation has been issued for discussion. Harmony, via the Chamber of Mines, has submitted on aspects of the draft legislation.

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\$295 million (R4,167 million) was drawn down and outstanding as of June 30, 2019. See Item 5: "Operating and Financial Review and Prospects - 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.

***Uncertainty relating to the nature and timing of the potential phasing out of LIBOR, and agreement on any new alternative reference rates may adversely impact our borrowing cost***

LIBOR, the London Interbank Offered Rate, is widely used as a reference for setting interest rates on loans globally. We have used LIBOR as a reference rate on our US\$350 million three-year syndicated term loan and revolving credit facility as well as our US\$24 million four-year loan. Combined we had R4,426 million (US\$313 million) outstanding on these facilities at year-end.

On July 27, 2017, the UK Financial Conduct Authority, or FCA, which regulates LIBOR, has announced that it intends to stop encouraging or requiring banks to submit LIBOR rates after the end of 2021. There is therefore no guarantee the LIBOR reference rate will continue in its current form post 2021. Various alternative reference rates are being considered in the financial community. The Secured Overnight Financing Rate, has been proposed by the Alternative Reference Rate Committee, a committee convened by the US Federal Reserve that includes major market participants and on which regulators participate, as an alternative rate to replace US dollar LIBOR.

On August 19, 2019, Harmony and a syndicate of local and international lenders entered into a loan facility agreement, pursuant to which Harmony and the lenders agreed that a new reference rate will be agreed upon by mutual consent. However there is no guarantee that a transition from LIBOR to a new reference rate will not result in market disruptions, and possibly result in increases to our borrowing costs. See Item 5: "Operating and Financial Review and Prospects - Liquidity and Capital Resources".

***Mining companies face strong competition***

The mining industry is competitive in all of its phases. Harmony competes 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. 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 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 HDSAs, women in mining in South Africa, and 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 2019 - Ensuring employee safety and well-being - maintaining stability in our workforce-employee relations"* on pages 49 to 56.

In PNG, consideration is being given by government to revisions of local content policy which will severely restrict the utilization of off-shore-based "Fly-In, Fly Out" expatriate employees, and prescribe increased levels of participation by locally-owned businesses in the provision of goods and services. This will adversely affect the capacity of Harmony to engage and retain appropriately skilled human resources, and manage the costs of goods and services to its operations. It will also necessitate the application of additional resources to the construction or provision of housing for residential employees, and the recruiting and training of local landowners and landowner businesses.

**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, which is about 93% 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 addition, in South Africa, a variety of legacy issues such as housing, migrant labor, education, poor service delivery and youth unemployment can lead to communities and unions working together to create instability in and around mining operations. During 2020, one of our mines based in the Free State, known as Unisel, will reach the end of its economic and operating life which will result in the discontinuation of mining operation on the mine. The mine employs about 850 employees most of whom are expected to be absorbed into other Harmony operations

In October 2018, 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. The Company has experienced a relatively peaceful labor environment since the conclusion and implementation of the said wage agreement. However 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 2019 - Ensuring employee safety and well-being - maintaining stability in our workforce-employee relations"* on pages 49 to 56. 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 2019 - Operating context - Stakeholder engagement"* on pages 24 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 our mines' operating life.

In PNG, the workforce is not significantly unionized. However, operations are subject to disruption as a result of actions taken by landowners and occupants of the land within the area of impact of such operations, including the blockading of access routes to the operations. These disruptions generally arise as a result of grievances with regard to the non-distribution by the State to local communities of mine-derived royalties and other benefits, or in relation to the participation of local businesses in the provision of goods and services to the operations.

#### **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 2019 - Ensuring employee safety and well-being - maintaining stability in our workforce - Safety and health"* on pages 33 to 49.

***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.

Harmony has been subject to numerous claims, including class actions or similar group claims relating to silicosis and other occupational lung diseases, and could be subject to similar claims in the future. For instance, in May 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 includes mineworkers and dependents whose parents died after contracting silicosis and/or TB while working at the mines. The certification of the class means that the claimants were able to sue the mining companies as a class. 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 in May 2018. The terms of the settlement is available on the Harmony website. The settlement was subject to certain conditions, including that an unconditional order of court, sanctioning the settlement agreement to make the settlement agreement an order of court, is obtained from the High Court. Such an order was obtained on July 26, 2019, subject to certain conditions which is expected to be fulfilled in December 2019. See Item 8: "*Financial Information - Consolidated Statements and Other Financial Information - Legal Proceedings*" and "*Integrated Annual Report for the 20-F 2019 - Ensuring employee safety and well-being - maintaining stability in our workforce - Safety and health*" on pages 33 to 49 for further information. See note 26 "*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 African Rainbow Minerals 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. On July 26, 2019, the Johannesburg High Court approved a R5.2 billion settlement of the silicosis and tuberculosis class action suit between the Working Group and lawyers representing affected mineworkers. The Working Group will continue with its efforts to find common ground with all stakeholders, including government, labor and the claimants' legal representatives.

As a result of the ongoing work of the Working Group and engagements with affected stakeholders since December 31, 2016, Harmony provided 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, 2019 the provision in Harmony's statement of financial position was R942 million. Harmony believes that this remains a reasonable estimate of its share of the estimated cost in relation to the Working Group of the settlement of the class action claims and related costs. The final settlement costs and related expenditure may, however, be higher than the recorded provision depending on various factors, such as, among other things, differences in the number and profile of eligible claimants actually compensated compared to current estimates and fluctuations in foreign exchange rates.

If Harmony or any of its subsidiaries were to face a significant number of additional 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 actions.

***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. On December 4, 2018, South Africa's Parliament adopted the CRC's report dated November 15, 2018 in which it recommended that section 25 of South Africa's Constitution be amended to make explicit that expropriation of land without compensation is a legitimate option for land reform. While the CRC's report recommended that such amendment to South Africa's Constitution be tabled and passed before the South African general elections in May 2019, the ad hoc committee responsible for preparing the bill to amend South Africa's Constitution has not yet submitted a timeline for meetings or public hearings. On March 13, 2019, the CRC announced that the work to amend section 25 of South Africa's Constitution would not be finished before the South African general elections in May 2019 and that consequently the matter would be taken up by Parliament after the elections. 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 proposed amendment to section 25 of South Africa's Constitution or any legislation resulting in the expropriation of land or greater government intervention could disrupt our operations, 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, 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 transferred 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 of Mineral Resources and Energy ("**Minister**") introduced the Mineral and Petroleum Resources Development Amendment Bill, 2013 (the "**MPRDA Bill**") into Parliament. The South African Department of Mineral Resources (as it then was known, but now is referred to as the Department of Mineral Resources and Energy ("**DMRE**")) 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 certain concerns 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. While the MPRDA Bill was not formally withdrawn by Parliament, it lapsed on March 28, 2019. Although Parliament has the ability to revive a lapsed Bill, it seems unlikely that it will revive the MPRDA Bill given both the Minister's and Cabinet's support for its withdrawal.

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 beneficiaries 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 became effective, as amended by the notice published in the Government Gazette on December 19, 2018 and read with the Implementation Guidelines for the Broad Based Socio-Economic Empowerment Charter for the Mining and Minerals Industry, 2018 ("**Implementation Guidelines**") published on the same date. 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. The first annual reporting for compliance with Mining Charter III is on or before March 31, 2020.

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.

While Mining Charter III was effective from September 27, 2018, many of its provisions are vague and untested despite the publication of the Implementation Guidelines for the 2018 Mining Charter in the Government Gazette on December 19, 2018. See Item 4: "Information on the Company - Business Overview - Regulation - Mineral Rights - South Africa - The Mining Charter".

On March 26, 2019, the Minerals Council South Africa (previously the Chamber of Mines) ("**MCSA**") filed an application for the judicial review and setting aside of certain clauses of Mining Charter III. The MCSA had engaged in ongoing attempts to reach a compromise with the Minister on certain provisions that are problematic for the industry, and which would be detrimental to its sustainability.

The application aligns with the MCSA's previously stated view that most aspects of Mining Charter III represent a reasonable and workable framework. However, the MCSA's application contends that Mining Charter III does not fully recognize the continuing consequences of previous empowerment transactions, particularly in relation to mining right renewals and transfers of such rights. According to the MCSA, this constitutes a breach of the declaratory order on the matter issued by the North Gauteng High Court in April 2018. The ultimate outcome of the review application and ongoing discussions with the Minister remains uncertain.

Harmony cannot guarantee that it will meet all the targets set out by Mining Charter III. 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 our ability to obtain any new mining rights. Any such suspension or cancellation could have a material adverse effect on our results of operations and 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.

Permitting of the Wafi-Golpu project has been delayed. The Wafi-Golpu Joint Venture ("WGJV") entered into a Memorandum of Understanding (MOU) with the State in December 2018, targeting a special mining lease ("SML") grant by June 2019. Since the signing of the MOU in December 2018, a legal matter between the provincial and national government has interrupted the permitting process, and continues to do so. The WGJV remains ready to engage with the Government of PNG and the Regulators. At this stage the permitting time line and road map are still to be redefined.

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

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.

#### ***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 implement various measures to ensure the safety and health of persons working at a mine as far as reasonably practicable. 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 applicable 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 some of the jurisdictions in which Harmony operate, the regulatory authority also issues closure notices for the operation or parts thereof, following the occurrence of an injury or death thereat. In the past, certain of our operations have also been temporarily suspended for safety reasons. Such closure notices 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 Harmony 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 DMRE. 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, 47 of 1999, the National Water Act, 36 of 1998 ("NWA") and the National Environmental Management Act, 107 of 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 were originally published in November 2015 and amended in October 2016. Further revisions and proposed amendments were published, the most recent of which was dated May 17, 2019. The proposed financial provision 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 revisions and amendments proposed in 2019, for instance, Harmony estimated that it may be subject to an increase in the financial provision set aside for mine rehabilitation anywhere between R2.9 – R3.6 billion. Harmony believes that it will realize an additional liability of R37 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, which was to expire in February 2019, was extended to February 2020 and, on the basis of recent correspondence from the DEFF may be set to expire in February 2021.

Harmony continues to engage with DEFF and the DMRE regarding matters relating to financial provision including the financial provision regulations, as well as the adjustment of financial provision in respect of the mining operations. There is concern about the ambiguity of the provisions and how they can be operationalized with the prescribed transitional time frames, which may result in misinterpretation, mis-application and potential disputes with DEFF. See note 25 "Provision for environmental rehabilitation" to our consolidated financial statements set forth beginning on page F-1.

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 2019 - Managing our Social and Environmental Impacts - Environmental management and stewardship" on pages 80 to 102 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 and investor withdrawal.

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. As the impacts of dust generation, waste storage, water quality or shortages may be immediate and directly adverse to those communities, poor environmental management practices, or, in particular, adverse changes in the supply or quality of water can result in community protest, regulatory sanctions or ultimately in the withdrawal of community and government support for company operations. Mining operations must therefore be designed to minimize their impact on such communities and the environment, including by changing mining plans, by modifying operations or by relocating the affected people to an agreed location. Responsive measures may also include restoration of the livelihoods of those impacted. In addition, we are obliged to comply with the terms and conditions of all the mining rights we hold.

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.

Delays in projects attributable to a lack of community support or community-related disruptions or delays can translate directly into a decrease in the value of a project or into an inability to bring the project to, or maintain, production. The cost of implementing these and other measures to support sustainable development could increase capital expenditure and operating costs and therefore impact Harmony's reputation, business, 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**

Greenhouse gases ("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 in various phases of discussion or implementation, including the Kyoto Protocol, the Copenhagen Accord and the Paris Agreement, a treaty negotiated at the Conference of the Parties of the UN Framework Convention on Climate Change in Paris in December 2015 (the "**Paris Agreement**"). The Paris Agreement, which requires developed countries to set targets for emissions reductions, came into force on November 4, 2016. South Africa ratified the Paris Agreement on April 22, 2016 and endorsed its nationally-determined contribution, which requires that GHG emissions in South Africa peak in 2020 to 2025, plateau from 2025 to 2035 and decline from 2036 onwards. PNG ratified the Paris Agreement on September 21, 2016. Additional measures addressing GHG emissions may be implemented at national or international levels in various countries.

On February 19, 2019, South Africa's National Assembly adopted the draft Carbon Tax Bill, which was sent to the NCOP to be debated and voted upon and then to the President. The Bill became law and came into effect on June 1, 2019 upon the President's assent and signature as the Carbon Tax Act, 15 of 2019 ("**Carbon Tax Act**").

Gas emissions reported to the DEFF for a company's National Greenhouse Gas Emission Reporting submission will be taxed at a base value of R120 per tonne of carbon dioxide equivalent. As such, Promethium Carbon has estimated Harmony's tax liability due to the carbon tax.

The National Greenhouse Gas Emission Reporting Regulation stipulates that any company with emissions above a specific threshold must report its emissions to DEFF. These thresholds are stipulated in the regulations for various activities.

In addition, the DEFF published the Climate Change Bill, dated June 8, 2018 ("**2018 Climate Change Bill**"), 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.

The carbon tax has been designed to fix liability on the person who conducts an activity in South Africa that results in GHG emissions above a certain threshold. The carbon tax design requires the calculation of liability to be based on the sum of GHG emissions, which result from fuel combustion, industrial processes and fugitive emissions. Taxpayers must determine emissions in accordance with the reporting methodology approved by the DEFF. The tax will be phased in over time. The first phase, which ends in 2022, is designed to be revenue-neutral in terms of its aggregated impact, given the complementary tax energy incentives and reduction or credit for the current electricity levy.

At this time it is not possible to determine the ultimate impact of the Carbon Tax Act 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. The 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.

South African companies are faced with a changing landscape in terms of non-financial risks like climate change. In the past these risks were only reported, and mitigation strategies were voluntary. However, with the new Carbon Tax Act, government is attempting to curb greenhouse gas emissions with the "polluter pays principle". Based on published legislation, commentary and governmental information, carbon tax poses a low cost to Harmony until December 31, 2022. From phase 2 onwards, carbon tax might also affect the price of electricity. The Carbon Tax Act is still unclear on various aspects including on how electricity costs will be impacted. However, it is expected that the cost of electricity impact Harmony in phase 2 between R100 million to R 500 million per from fiscal year 2023 to fiscal year 2030.

The Minister of Environmental Affairs at the time 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. Such regulatory initiatives and related costs could have a material adverse effect on our business, operating results and financial condition.

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 2019 - Managing our Social and Environmental Impacts - Environmental management and stewardship" on pages 80 to 102 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, 54 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 2019 - Managing our Social and Environmental Impacts - Environmental management and stewardship" on pages 80 to 102.

***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; implementation of the financial provision regulations may require us to include provision in our financial statements for rehabilitation***

Due to the interconnected nature of mining operations at Doornkop, Kusasalethu and Moab Khutsong, 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 DMRE 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 Harmony, 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 proposed revisions and amendments to these regulations the most recent of which was published in May 2019 are likely to affect the amount of financial provision that is set aside for rehabilitation of a 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. Among other things, the financial provision regulations:

- require that preliminary and general costs are included in the financial provision calculations;
- impose VAT (at 15%) on the financial provision calculations;
- prohibit the withdrawal of trust funds for concurrent rehabilitation (even in circumstances where the financial provision exceeds the evaluated environmental liability); and
- require that funds are retained in perpetuity by the Minister of Minerals and Energy for latent and residual environmental impacts notwithstanding the granting of a closure certificate.

Compliance with the proposed financial provision regulations will result in a significant increase in the required financial provision required by mining companies. As a result, the financial provision regulations have been strongly opposed by the mining industry. In response to this opposition, revisions and amendments to these regulations have been proposed and DEFF extended the date by which mining companies must comply with the financial provision regulations from February 2019 to February 2020, which date may be extended again to February 2021, pending agreement of amendments to the current regulations and approval by the Minister, as the amended regulations are still in draft form. Harmony is implementing the following steps to ensure that funds are available to top up its financial provision, if necessary:

- facilitating concurrent rehabilitation;
- re-purposing infrastructure; and
- accelerated mine closure rehabilitation where operations have reached the end of its geological life.

Should the regulator require the financial provision regulations be implemented in 2020 and/or should the financial provision regulations, as they may be amended, remain onerous, MCSA has indicated that it will exercise its legal options on these regulations on behalf of the mining industry.

Currently, no provision for any potential liability has been made in our financial statements under the financial provision regulations. If provision needs to be made, and is substantial, this could have a material adverse effect on our results of operations and financial condition.

See *"Integrated Annual Report for the 20-F 2019 - Managing our Social and Environmental Impacts - Environmental management and stewardship"* on pages 80 to 102.

***The use of contractors at certain of Harmony'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. A settlement in the silicosis class action claims has been reached and a provision for silicosis has been made. A provision of R942 million has been recognized at June 30, 2019 for Harmony's potential cost to settle the silicosis and tuberculosis class actions that have been instituted against it in South Africa. 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 2019 - Ensuring employee safety and well-being-maintaining stability in our workplace - Safety and health*" on pages 33 to 49 for further information. See note 26 "*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 cybercrime 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.

South Africa's upcoming data protection legislation, the Protection of Personal Information Act, 4 of 2013 ("POPIA") is enacted but not yet in force. Only provisions enabling the appointment of the Information Regulator to regulate, perform functions and exercise powers in connection with POPIA and the making of regulations are in force. Once a commencement date has been announced, organizations will have 12 months within which to become compliant with POPIA. Failure to comply with POPIA may lead to penalties and fines between R1 million - R10 million.

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 €20 million.

***The failure of a tailings storage facility could negatively impact Harmony's business, reputation, operating results and financial condition***

Mining companies face inherent risks in their operation of tailings storage facilities. Tailings storage facilities are engineered structures built for the containment of the uneconomical milled ore residue and water, known as tailings. The use of tailings storage facilities exposes Harmony to certain risks, including the failure of a tailings dam due to events such as high rainfall, overtopping of the dam, piping or seepage failures. The potential occurrence of a dam failure at one of Harmony's tailings storage facilities could lead to the loss of human life and extensive property and environmental damage.

Harmony maintains measures to manage its dams' safety, including compliance with the International Council on Mining and Metals' Tailings Governance Position Statement, Harmony's Code of Practice and undertakes routine reviews by independent consulting companies. Although Harmony has a tailings storage facility management system, the effectiveness of its designs, construction quality or regular monitoring cannot be guaranteed throughout its operations and it cannot be guaranteed that these measures will prevent the failure of one or more of its tailings dams or that such potential failure will be detected in advance. In addition, although Harmony generally requires its partners to maintain such systems, we cannot guarantee that our partners maintain similar safety precautions or monitoring systems on their tailings storage facilities. There is no assurance that any safety measures implemented will prevent the failure of any tailings storage facility.

The failure of a tailings storage facility will lead to multiple legal proceedings and investigations, which could include securities class actions, criminal proceedings and public civil actions (against Harmony or individuals) for significant amounts of damages. Furthermore, the elimination of the "conventional" practice of storing wet tailings (e.g. alternatively filtering, "dry" stacking and compacting the tailings) could require the research and development of new technologies, which could lead to additional large expenditures. As a result of the dam failure in Brazil in 2015 and 2019, and Canada in 2014 (neither of which are associated with Harmony) or as a result of future dam failures, additional environmental and health and safety laws and regulations may be forthcoming globally, including in jurisdictions where Harmony operates, which may ban the storage of wet tailings completely. In addition, changes in laws and regulations may impose more stringent conditions in connection with the construction of tailings dams, particularly with respect to upstream tailings dams which could also be made illegal, the licensing process of projects and operations and increased criminal and civil liability for companies, officers and contractors.

Furthermore, the unexpected failure of a dam at a tailings storage facility could lead to the need for a large expenditure on contingencies and on recovering the regions and people affected, extensive and permanent environmental damage and the payment of penalties, fines or other money damages. The occurrence of any of such risks could have a material adverse effect on Harmony's business, operating results and financial condition.

***The upgrade of an integrated Enterprise Resource Planning (ERP) system could have an adverse effect on Harmony's results of operations and financial condition***

The upgrade and operation of an ERP system is an inherently high-risk initiative due to the potential for cost and time overruns. In addition, if Harmony experiences difficulties with the upgrade and operation of the system, the company's ability to report and manage technical and financial information could be compromised, which could have an adverse effect on the company's results of operations and financial condition. Harmony is currently in the project initiation phase with go-live planned towards the end of the 2020 calendar year.

***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, 2019. 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, EU Regulation 2017/821 on supply chain due diligence obligations for self-certification for EU importers of gold originating from conflict-affected and high-risk areas, 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-Markets-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.