SA Mine

8th edition



Highlighting trends in the South African mining industry

September 2016



Content

1. Executive summary

2

2. South Africa's mining landscape

4

3 Integrating risk into business strategy

13

4. Safety

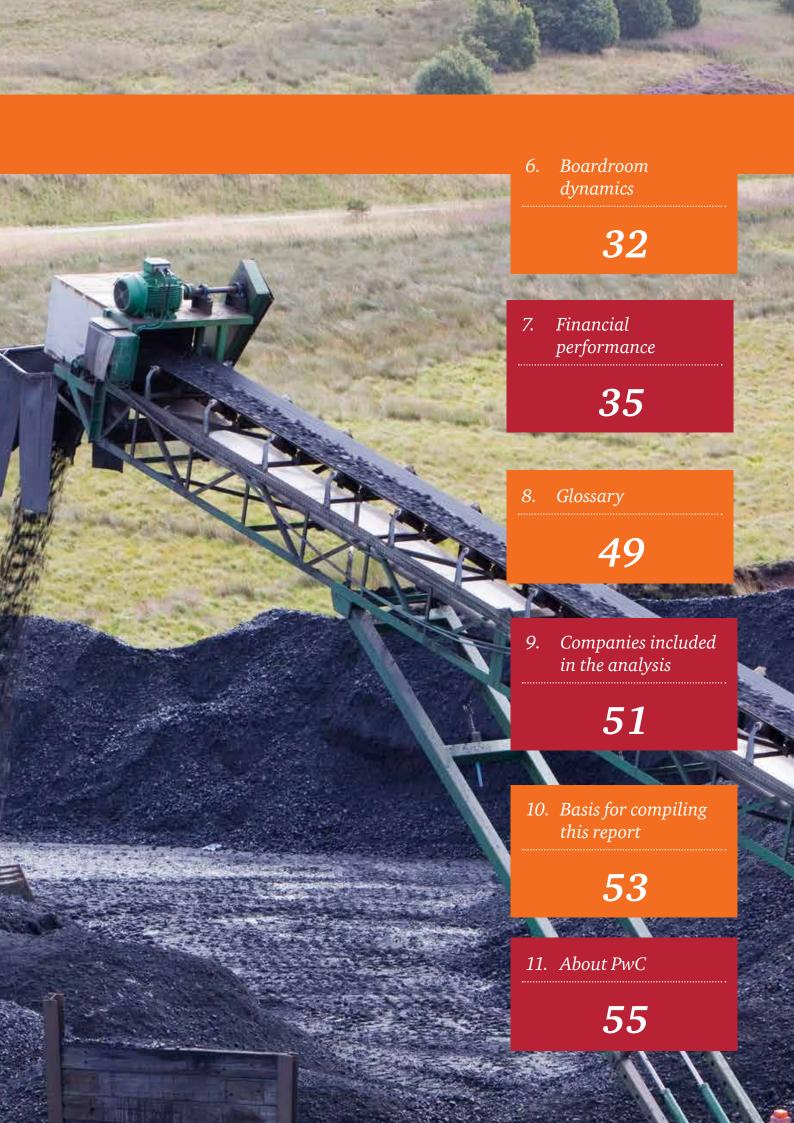
22

5. Improving value to stakeholders

25



The information contained in this publication is provided for general information purposes only, and does not constitute the provision of legal or professional advice in any way. Before making any decision or taking any action, a professional adviser should be consulted. No responsibility for loss to any person acting or refraining from action as a result of any material in this publication can be accepted by the author, copyright owner or publisher.



1 Executive summary





Highlights

	Current year R 'billions	Prior year R 'billions	•	
Revenue from ordinary activities	333	326	7	2%
Adjusted EBITDA	66	71	(5)	(7%)
Impairment charge	(60)	(21)	(39)	186%
Net profit	(46)	2	(48)	(2400%)
Distribution to shareholders	(8)	(22)	14	(64%)
Net operating cash flows	69	69	-	0%
Capital expenditure	(49)	(54)	5	(9%)
Total assets	709	710	(1)	0%

Executive summary

This is the eighth in our series of annual publications highlighting trends in the South African mining industry. The 2016 financial year was impacted by significant US-dollar commodity price decreases, which were offset by a substantially weaker rand from October 2015.

Despite flat revenues, increased costs continued to erode margins and with record impairments, resulted in the first aggregated loss since inception of this publication.

Companies had no choice but to cut back on new developments, refocus on profitable production rather than maximum production and reduce costs.

Reduction in capital expenditure is evident. The long-term nature of mining investments translates into a significant lag in the supply response to price changes. This lag contributes to the cyclical nature of the mining industry. Although there is no consensus, we have probably reached the bottom of the cycle, but may stay here for some time.

This is the first year in four years that value created increase and compnaies did not have to utilise retained funds

Scope

Our findings are based on the financial results of mining companies with a primary listing on the Johannesburg Stock Exchange (JSE), as well as those with a secondary listing on the JSE whose main operations are in Africa.

We have only included companies with a market capitalisation of more than R200 million at the end of June 2016 and have excluded companies with suspended listings.

In all, 31 companies met these criteria. Due to our earlier report date, four of these companies hadn't released their results at the time of writing and have been excluded from our financial analysis.

Section 9 provides a list of all mining companies included in our analysis. The number of entities reduced by

five from the prior year, one new entity, Buffalo Coal, was included, while six previously included entities were left out. Three of these entities had market capitalisations lower than R200 million as at 30 June 2016 and three were subject to corporate action.

Aquarius Platinum was taken over by Sibanye Gold, but as the transaction only became effective after Sibanye Gold's year end, its results are not included in the financial analysis. Minorities in Infrasors were largely bought out by Afrimat, and Traxys completed its acquisition of Metmar.

While many of the entities included in our analysis have international exposure, the bulk of their operations are in Africa. Global mining companies Anglo American¹, BHP Billiton, Glencore and South32 were excluded. While these companies have significant South African operations, their global exposure and size mean that they do not necessarily reflect trends in the South African mining environment. A global view on mining is provided in our annual global mining industry publication, Mine.²

The findings of this report are based on publicly-available information – predominantly annual reports for financial years ending no later than 30 June 2016. Where annual reports were not available, we used preliminary reviewed results.

Michal Kotze PwC Africa Energy Utilities & Mining Leader

Andries Rossouw Mining Assurance Partner & Project Leader

¹ Kumba Iron Ore and Anglo American Platinum are included in our analysis.

 $^{^2\} http://www.pwc.com/id/en/pwc-publications/industry-publications/energy--utilities---mining-publications.html$

2 South Africa's mining landscape





Overview

With the general outlook for the industry remaining subdued at best, 2016 marked another challenging year for miners. Performance was impacted by a slower than expected rate of economic growth, a prolonged and continuing downswing in commodity prices, an increase in short-term volatility, increased pressure on operating models and regulatory uncertainty.

Adding to the challenge is the increased difficulty in raising capital due to a loss of confidence by investors and capital markets being seen as a last resort. South Africa's possible credit ratings downgrade has also created some uncertainty within the market.

The slowdown in growth in the world's second-largest economy, China, which is a significant importer of commodities, is likely to have a negative impact on demand from other economies, including South Africa. The IMF estimates that a one percentage point decline on China's real GDP growth would lower South Africa's growth by 0.3 percentage points after one quarter.

The South African mining industry continued to face a myriad of challenges as a result of subdued commodity prices and a growing cost base despite positive efforts to reduce costs and focus on profitable production.

In addition, socio economic pressures in the country and labour challenges have put pressure on mines' operating environment.

The Q3 2016 South African Mining Industry Report by BMI indicated that South Africa has the highest cost of labour as a percentage of total costs among the major producers, averaging around 60%, whereas peers such as the United States and Australia average around 30-40%. The high proportion of labour cost is as a result of labour-intensive deeplevel conventional mining prevalent in South Africa.

Although our political system has credibility, the political risk index, as reflected in BMI's Q4 2016 South African Country Risk Report, indicates that factors such as the country's high degree of unionisation, the threat of industrial action and disruption to economic activity are a constant concern to investors. The results are that our short-term country risk index is 7th out of 13 countries regionally and 110th out of 176 countries globally.

Market capitalisation

The 2016 financial year saw an increase in market capitalisation predominantly as a result of the notable increase in the market capital of gold mining companies and a small increase in the market capital of platinum mining companies.

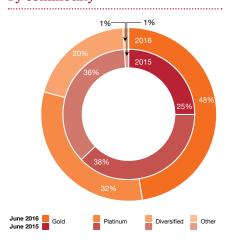
Market capitalisation of 31 companies analysed in this publication increased to R560 billion, or by 45%, as at 30 June 2016 (compared to R386 billion as at 30 June 2015). Market capitalisation grew further to R578 billion as at 31 August 2016, resulting in an aggregate increase of R192.6 billion, which is 50% more than 30 June 2015.

In our 2015 publication, we noted that diversified companies had been hardest hit by the decrease in coal and iron ore prices. This resulted in their share of the market capitalisation of the entities analysed in this report declining from 38% to 36%. The decline in their market capitalisation was more significant in the current year and saw further erosion of their market share to 20% of market capitalisation.

Gold mining companies enjoyed a significant increase in their market capitalisation, growing from 22% two years ago to 48% of companies analysed. This points to the fact that investors continue to see gold as a safe haven in a turbulent market.

Although platinum mining companies improved in the current year with their market capitalisation increasing from R155 billion in 2015 to R178 billion in 2016, their share of market capitalisation reduced from 38% to 32%.

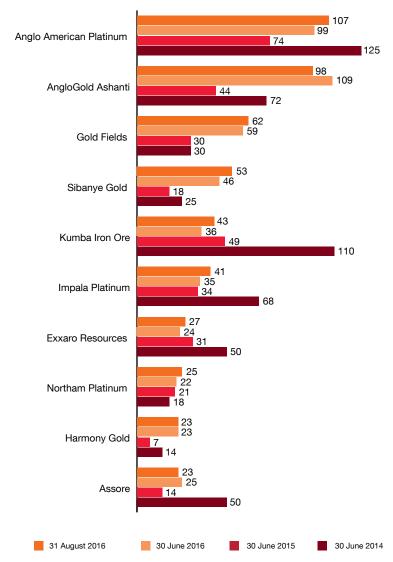
Figure 1: Market capitalisation by commodity



Source: I-Net Bridge, PwC analysis

The composition of the top 10 analysed in this publication has seen some change from 2015. Oakbay Resources and Energy and African Rainbow Minerals, which were ranked at 5th and 10th, respectively, in the prior year dropped off the top-10 list as at 30 June 2016 to make way for the return of Assore and Harmony.

Figure 2: Market capitalisation of the top-10 companies as at 31 August 2016 (R 'billions)



Source: I-Net Bridge, PwC analysis

Market capitalisation of the top-10 companies rose by R155 billion to R478 billion, a 48% increase, as at 30 June 2016, gaining a further R30 billion to 30 August 2016.

The most notable increase was that of AngloGold Ashanti at R65 billion, an increase of 148% since June 2015.

The increase in the price of gold, as a result of investors seeking a safer haven in gold, resulted in the market capitalisation of gold companies (included in the top 10 of the companies analysed) increase by R137.6 billion since June 2015.

Market capitalisation among diversified companies continued to be subdued with a decrease of R 9.2 billion since June 2015. Similar to our findings in our 2015 publication, the most notable decrease was seen in Kumba Iron Ore at R13 billion (27%) since June 2015. Although it did claw back some of the losses after June 2016.

Platinum companies had a steadier performance in 2016 in comparison to 2015, with a notable increase of R27 billion in 2016. The lion's share of the increase was seen in Anglo American Platinum, which increased by R25 billion (34%) since June 2015.

The volatility of share prices and market capitalisation is apparent. While mining investments are of a long-term nature, investors often follow a very short-term investment horizon.

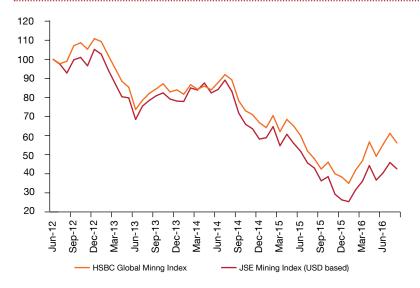
Figure 3: JSE Mining Index vs JSE All Share Index



June 2012 = 100

Source: I-Net Bridge, PwC analysis

Figure 4: JSE Mining Index vs HSBC Global Mining Index



June 2012 = 100

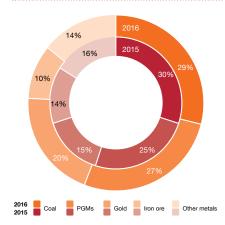
Source: I-Net Bridge, PwC analysis

Although the South African mining sector continues to lag within the JSE All Share Index, 2016 saw a marginal upturn as a result of the improved performance of the gold mining companies.

In spite of the improvement noted in the current year, the scale of the continued challenges facing the industry as a whole, have resulted in the JSE All Share Index outperforming the JSE Mining Index, as illustrated in Figure 3.

The JSE All Share Index has had a steady increase since 2012, pointing to the continued relatively strong performance of the overall market. However, the mining sector continues to lag behind despite the bullish gold market since the Brexit referendum in the UK.

Figure 5: Percentage mining revenue per commodity 2016 vs 2015



Source: Stats SA, PwC analysis

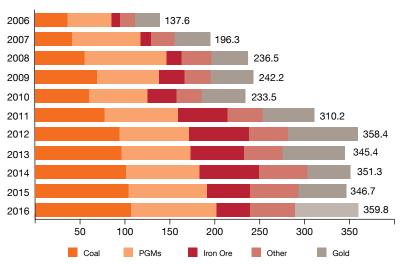
Over the years we have observed that the JSE Mining Index's movements (adjusted for the impact of exchange rates) have been closely correlated to the movement in the HSBC Global Mining Index's movements. Notable underperformance was observed in the period after the Marikana tragedy in September 2012.

However, the performance aligned again in 2013 and 2014. Since November 2015 we see a gap opening between the indexes as investors priced in additional risk for emerging markets. (Figure 4)

The JSE Mining Index represents a bigger share of precious metal miners compared to global mining indexes. Given gold's impressive performance over the last year, one would have expected a better performance of the JSE All Share index. Unfortunately its performance was more than offset by weaker platinum performance and emerging market uncertainty.

Contribution by commodity

Figure 6: Annual mining revenue per commodity (R 'billions)



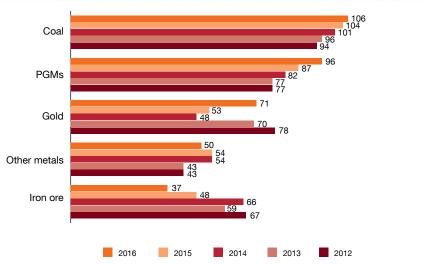
Source: Stats SA, PwC analysis

Coal maintained its strong position as the leading South African mining commodity revenue generator. Although the share of revenue decreased marginally to 29% from 2015 to 2016, total coal mining revenue increased by R1.3 billion from a high base of R104.4 billion in 2015.

Gold's share of mining revenue increased significantly from 15% in 2015 to 20% in 2016, primarily on the back of stronger gold prices and the weakening rand. Although this increase is from a relatively lower base, gold revenue increased by R17.9 billion to R71.1 billion, or by 34% since 2015.

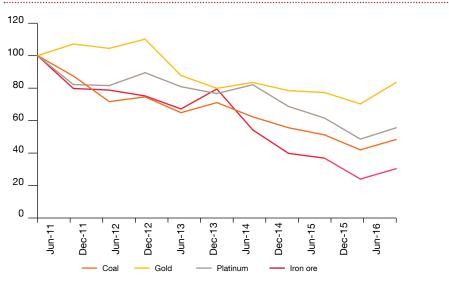
PGMs' share of mining revenue grew from 25% to 27%. This is an R8.6 billion increase from R87 billion in 2015. Similarly to findings in our 2015 report, iron ore's share of mining revenue continued its downward trend from 14% in 2015 to 10% in 2016. The decrease in the share of revenue is not surprising given that iron ore prices have been declining.

Figure 7: Annual mining revenue per commodity (R 'billions)



Source: Stats SA, PwC analysis

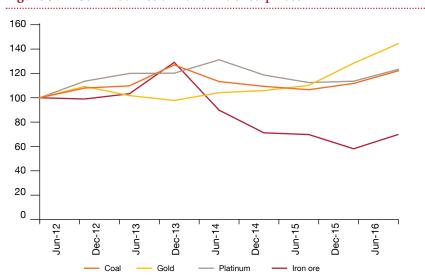
Figure 8: Commodities at USD-indexed prices



June 2011 = 100

Source: Worldbank, PwC analysis

Figure 9: Commodities at Rand-indexed prices



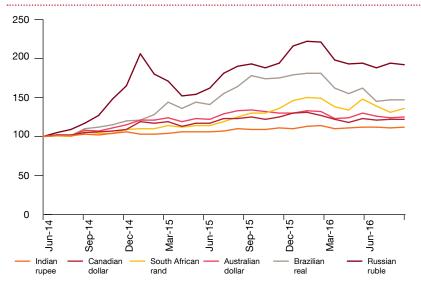
June 2012 = 100

Source: Worldbank, PwC analysis

Although commodity prices increased overall since December 2015, prices continue to perform well below prices seen prior to the 2008 financial crisis and, except for gold, they are still below June 2015 price levels.

Gold prices have, as at June 2016, increased above June 2015 levels pointing to the fact that gold has been seen as a safe haven for investors.

Figure 10: Comparison of indexed USD exchange rates



June 2014 = 100 Source: Worldbank, PwC analysis

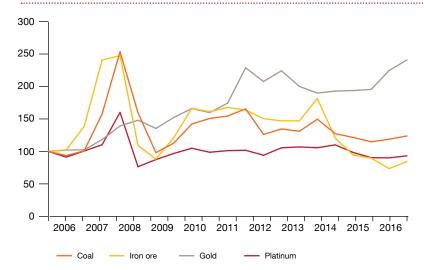
Persistent depreciation of the rand has led to a notable increase in rand commodity prices to above those seen in 2012. However, the unrelentingly meagre performance in the price of iron ore has seen a substantial decrease in rand iron ore prices since December 2013. This decrease was temporarily halted with a marginal increase in the rand iron ore price since December 2015.

The rand has continued to depreciate against the US dollar, similar to the experience of other resource-rich countries. The impact is that although US-dollar prices of commodities have decreased over the years, as reflected in Figure 8, the real impact of price declines has been somewhat mitigated by the weaker currency.

Since September 2015 emerging market currencies have weakened further on the threat of increased interest rates in the USA and risk aversion impacting emerging markets.

In South Africa, internal politics and the threat of a ratings downgrade also did not do the rand any favours. This additional weakening came as a lifeline to mining companies as US-dollar commodity prices hit post financial crisis lows in December 2015 and January 2016.

Figure 11: Indexed CPI adjusted real-rand prices per commodity



 $June\ 2005 = 100$

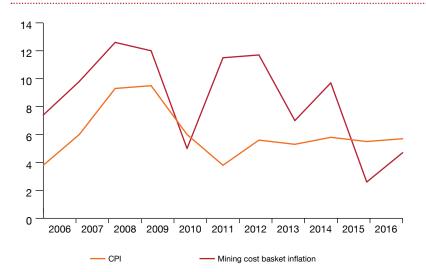
Source: World Bank. Stats SA, PwC analysis

Figure 11 shows the real-rand price levels per commodity for South Africa's main revenue-generating commodities. Rand prices were adjusted by applying standard consumer price index increases for the last 10 years. The CPI-adjusted real price of gold for the last 10 years has been on an upward trajectory since the 2008 financial crisis.

Judging by the CPI-adjusted real prices for the last ten years, one would have expected the mining industry to have been performing relatively well, as all these prices are above the 2006 price levels. The reality is that mining input costs increased significantly more than the CPI.

We've calculated a basket of mining cost inflation and compared that to CPI in Figure 12.

Figure 12: Basket of Mining costs vs CPI



Source: Stats SA, PwC analysis

Figure 12 uses cost increases over the last 10 years, weighted based on the breakdown of operating expenses for 2015, as shown in Figure 22. The following were used as a basis for the increases:

- Employee benefits and contractors: PwC Remchannel annual unionised staff increases (Note that this is based on the base salary and does not take into account production bonuses and other benefits, which can be significant.)
- Consumables and mining supplies:
 CPI, steel price PPI, diesel PPI and chemicals PPI
- · Utilities: Electricity and water PPI
- Transportation costs: Diesel PPI and electricity PPI
- Royalties: PwC's SA Mine analysis

Exploration and other costs were excluded.

It is these cost increases that have put the mining industry under significant pressure. Although price plays a key role in profitability, there are large fixed cost elements associated with mining, and production levels therefore play a significant role in determining profitability.

Production

Iron ore is the only commodity that showed real production growth over the last 10 years. Timely mine and transport infrastructure development allowed production growth to happen in order to benefit from the higher iron ore prices in the recent commodity price boom.

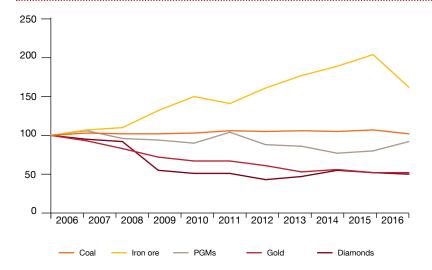
The recent lower prices have resulted in a decrease in production with a focus on producing profitable tonnes in 2016 rather quantity.

The recent increase in the gold price has stabilised the long-term declining production trend for gold. However, the challenges of deep-level gold mining means it is unlikely that production will grow in a conventional mining environment despite higher prices.

Platinum production was impacted by industrial action between 2012 and 2014 and production levels have not been brought back to pre-2012 levels. In the low-price environment, and due to a lack of investment in new capacity, it is unlikely that production will recover from existing levels. Our recent *Platinum on a knife-edge*¹ report raises concerns about the ability of the industry to deliver new production.

Coal has delivered a solid performance over the last 10 years, with marginal increases in production in the last few years. The current low coal prices are likely to hamper any potential growth in short- to medium-term supply. The short-term trend already seems to indicate a marginal decrease.

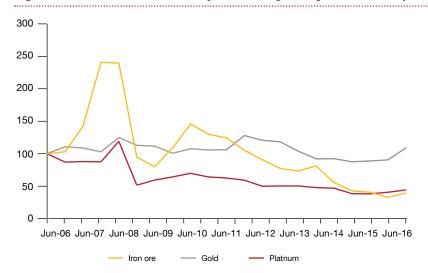
Figure 13: Indexed annual production per commodity



June 2006 = 100 Source: Stats SA, PwC Analysis

Lower production without changing the cost structure to reflect the lower production results in higher unit cost increases. When one assesses real prices using unit-cost increases for the various commodities, the unsustainability of low prices becomes evident, with all commodities trading well below the average of the last 10 years.

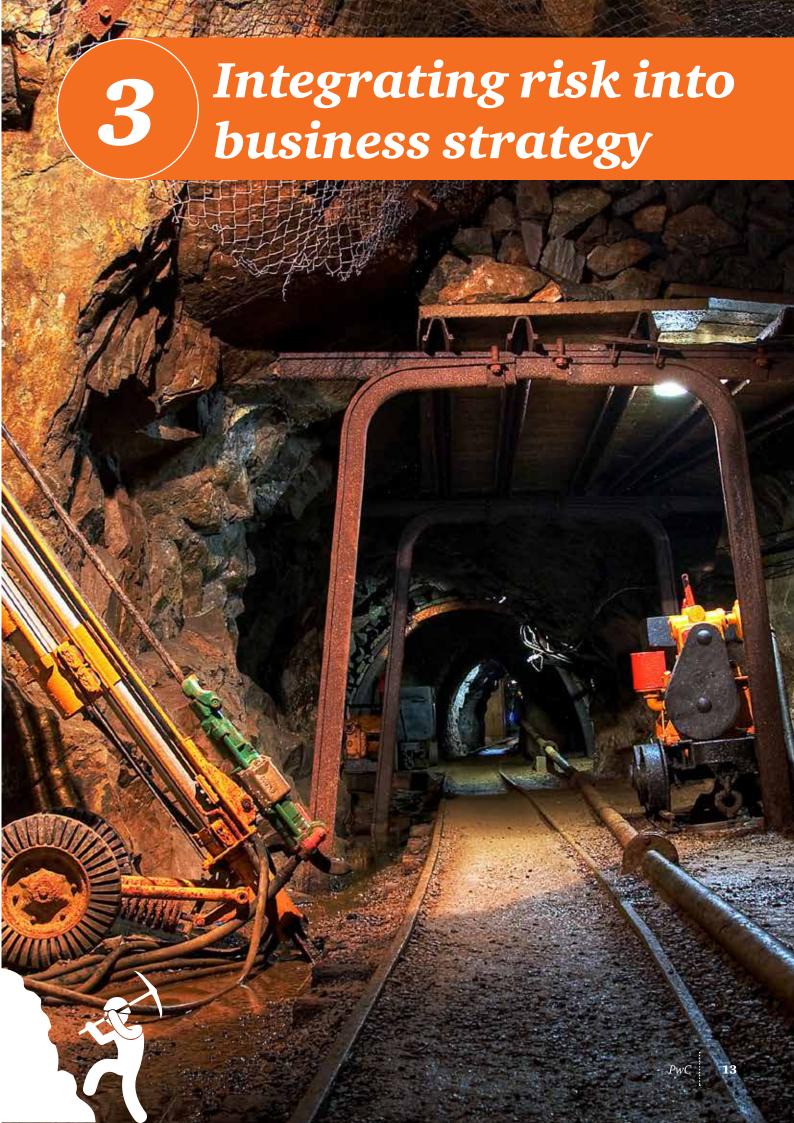
Figure 14: Indexed unit cost adjusted real prices per commodity:



June 2006 = 100 Source: World Bank, PwC Analysis

Mining companies' responses to the lower prices is to reduce costs by revisiting supply agreements, rationalisations and closure of unprofitable operations. There seems to be reasonable success in this regard by most of the large players.

¹ http://www.pwc.co.za/en/publications/platinum-perspectives-brochure.html



Risks facing the mining industry

Given the current economic downturn and slump in commodity prices, coupled with negative investor sentiment, the mining industry is faced with many related challenges and risks that need to be effectively addressed to ensure survival of the companies and the industry.

In the current period we have noted companies increasingly focus in more significant detail on their risks, mainly due to the impact of the changing environment forcing management to make tough operational and financial decisions to ensure sustainability.

We analysed the risks disclosed as priorities by mining companies in their integrated reports.

There were limited changes in the risks recognised compared to the prior year, when the highest-ranking risks included labour relations; sustainable business plans or budgets; the volatility of metal prices and exchange rates; infrastructure access and capacity; the regulatory, political and legal environments; high operating costs; and skills availability.

In the current year, most companies' top exposures also include liquidity and capital management and climate change.

The table below indicate the top risks disclosed by mining companies, but is by no means meant to present a comprehensive list of all risks faced by the industry.

Risks disclosed by mining companies

Risk description	Movement from prior year	Mitigation strategies
Labour relations		
The industry has seen reduced labour unrest in 2016. However, due to the negative impact of strikes on businesses, continued focus on maintaining labour		Imminent and ongoing wage negotiation processes and extensive union engagement.
stability has been present through imminent and ongoing wage negotiation		Two-to-three-year wage agreements.
processes and wage agreements with trade unions.		Implementation of improved communication structures and channels.
		Redesign of incentive structures and greater focus and tightening of performance-related measures.
Sustainable business plans or budget	s	
As noted in 2015, mining companies continue to struggle to perform in line with business plans for both current and planned expansion projects.		Improve production output by considering future objectives such as technology and innovation, diversifying resource base, acquiring additional and appropriate staff and fleet resources, and ensuring projects are in place to sustain and improve production.
		Core focus on operational plans to be more realistic in the current environment.
		Focus on creating a viable business for years to come through improvement projects.

Volatile commodity prices and foreign exchange fluctuations The market price for commodities continues to be significantly volatile due to global economic conditions that are beyond the control of companies in South Africa. This could have a negative impact on revenue, cash flows, profitability and asset values. Transactions denominated in foreign currencies expose companies to exchange rate fluctuations, which could result in significant accounting volatility. Focussing on profitable production rather than maximum production. Operating costs Operating costs have continued to increase as a result of increases in the cost of: Production inflation; Labour; Electricity; and Oossumables. Electricity costs have risen with above-inflation price increases. Operating costs affect profitability as well as the ability to implement the planned business strategy and to ensure that the business is sustainable. Reliance on third-party infrastructure Wear supply and sustainability in the face of one of the worst droughts South Africa has experienced presents a risk to the mining industry. Power security remains a key obstacle that could indee growth in the mining sector in South Africa and elsewhere in Africa. At worst, power outages can impact production and employee safety; at best, it can add significantly to the cost of operations.	Risk description	Movement from prior year	Mitigation strategies
continues to be significantly volatile due to global economic conditions that are beyond the control of companies in South Africa. This could have a negative impact on revenue, cash flows, profitability and asset values. Transactions denominated in foreign currencies expose companies to exchange rate fluctuations, which could result in significant accounting volatility. Enhanced business planning processes. Pocussing on profitable production rather than maximum production. Operating costs Operating costs have continued to increases in the cost of: Production inflation; Labour; Consumables. Electricity; and Consumables. Electricity costs have risen with above-inflation price increases. Operating costs affect profitability as well as the ability to implement the planned business strategy and to ensure that the business is sustainable. Reliance on third-party infrastructure Water supply and austainability in the face of one of the worst droughts South Africa has experienced presents a risk to the mining industry. Power security remains a key obstacle that could hinder growth in the mining sector in South Africa and elsewhere in Africa. At worst, power outages can impact production and employee safety; at best, it can add significantly to the cost of	Volatile commodity prices and foreign	exchange fluctuations	
on revenue, cash flows, profitability and asset values. Transactions denominated in foreign currencies expose companies to exchange rate fluctuations, which could result in significant accounting volatility. Deparating costs Operating costs Production inflation; I abour; Electricity; and Consumables. Electricity costs have risen with above-inflation price increases. Operating costs affect profitability as well as the ability to implement the planned business strategy and to ensure that the business is sustainable. Restructure of businesses to generate sustainabile free cash flow at lower commodity prices. Encourage efforts to drive higher production. Encourage efforts to drive higher productivity. Capital and management resources are applied to enhance productivity and cost control. Weakening currencies in other countries and decrease in fuel and steel prices offsetting higher cost. Weakening currencies in other countries and decrease in fuel and steel prices offsetting higher cost. Electricity in plement the planned business is sustainabile. Reliance on third-party infrastructure Water supply and sustainability in the face of one of the worst droughts South Africa has experienced presents a risk to the mining industry. Energy and water saving measures continue to be implemented. Energy and water saving measures continue to be implemented. Energy suppliers and investigations into renewable energy options. The relationship with utility suppliers has been cemented through clear and open communication lines.	continues to be significantly volatile due to global economic conditions that are beyond the control of companies in South		cash generations. Budgeted planning based on updated
Transactions denominated in foreign currencies expose companies to exchange rate fluctuations, which could result in significant accounting volatility. Derating costs Operating costs have continued to increases in the cost of: Production inflation; Electricity; and Consumables. Electricity costs have risen with above-inflation price increases. Operating costs affect profitability as well as the ability to implement the planned business strategy and to ensure that the business is sustainable. Reliance on third-party infrastructure Water supply and sustainability in the face of one of the worst droughts South Africa has experienced presents a risk to the mining industry. At worst, power outages can impact production in the mining sector in South Africa and elsewhere in Africa. At worst, power outages can impact production and employee safely, at best, it can add significantly to the cost of it can add sign	on revenue, cash flows, profitability and		Restructure of businesses to generate
result in significant accounting volatility. Pourating costs Operating costs have continued to increase as a result of increases in the cost of: Production inflation; Labour; Electricity; and Consumables. Electricity costs have risen with above-inflation price increases. Operating costs affect profitability as well as the ability to implement the planned business strategy and to ensure that the business is sustainable. Reflance on third-party infrastructure Water supply and sustainability in the face of one of the worst droughts South Africa has experienced presents a risk to the mining industry. Power security remains a key obstacle that could hinder growth in the mining sector in South Africa and elsewhere in Africa. At worst, power outages can impact productions. The relationship with utility suppliers has been cemented through clear and open communication lines.	currencies expose companies to		commodity prices.
Operating costs Operating costs have continued to increase as a result of increases in the cost of: Production inflation; Electricity; and Consumables. Electricity costs have risen with above-inflation price increases. Operating costs affect profitability as well as the ability to implement the planned business strategy and to ensure that the business is sustainable. Reliance on third-party infrastructure Water supply and sustainability in the face of one of the worst droughts South Africa has experienced presents a risk to the mining sector in South Africa and elsewhere in Africa. At worst, power outages can impact production and employee safety; at best, it can add significantly to the cost of			
Departing costs have continued to increase as a result of increases in the cost of: Production inflation; Labour; Electricity; and Consumables. Electricity costs have risen with above-inflation price increases. Operating costs affect profitability as well as the ability to implement the planned business strategy and to ensure that the business is sustainable. Reliance on third-party infrastructure Water supply and sustainability in the face of one of the worst droughts South Africa has experienced presents a risk to the mining industry. Power security remains a key obstacle that could hinder growth in the mining sector in South Africa and elsewhere in Africa. At worst, power outages can impact production and employee safety; at best, it can add significantly to the cost of			
increase as a result of increases in the cost of: Production inflation; Electricity; and Consumables. Electricity costs have risen with above-inflation price increases. Operating costs affect profitability as well as the ability to implement the planned business strategy and to ensure that the business is sustainable. Reliance on third-party infrastructure Water supply and sustainability in the face of one of the worst droughts South Africa has experienced presents a risk to the mining industry. Power security remains a key obstacle that could hinder growth in the mining sector in South Africa and elsewhere in Africa. At worst, power outages can impact production and employee safety; at best, it can add significantly to the cost of			
Labour; Electricity; and Consumables. Electricity costs have risen with above-inflation price increases. Operating costs affect profitability as well as the ability to implement the planned business strategy and to ensure that the business is sustainable. Reliance on third-party infrastructure Water supply and sustainability in the face of one of the worst droughts South Africa has experienced presents a risk to the mining industry. Power security remains a key obstacle that could hinder growth in the mining sector in South Africa and elsewhere in Africa. At worst, power outages can impact production and employee safety; at best, it can add significantly to the cost of	increase as a result of increases in the		
Labour; Electricity; and Consumables. Electricity costs have risen with above-inflation price increases. Operating costs affect profitability as well as the ability to implement the planned business strategy and to ensure that the business is sustainable. Reliance on third-party infrastructure Water supply and sustainability in the face of one of the worst droughts South Africa has experienced presents a risk to the mining industry. Power security remains a key obstacle that could hinder growth in the mining sector in South Africa and elsewhere in Africa. At worst, power outages can impact production and employee safety; at best, it can add significantly to the cost of	Production inflation;		
• Consumables. Electricity costs have risen with above- inflation price increases. Operating costs affect profitability as well as the ability to implement the planned business strategy and to ensure that the business is sustainable. Reliance on third-party infrastructure Water supply and sustainability in the face of one of the worst droughts South Africa has experienced presents a risk to the mining industry. Power security remains a key obstacle that could hinder growth in the mining sector in South Africa and elsewhere in Africa. At worst, power outages can impact production and employee safety; at best, it can add significantly to the cost of	• Labour;		
Electricity costs have risen with above- inflation price increases. Operating costs affect profitability as well as the ability to implement the planned business strategy and to ensure that the business is sustainable. Reliance on third-party infrastructure Water supply and sustainability in the face of one of the worst droughts South Africa has experienced presents a risk to the mining industry. Power security remains a key obstacle that could hinder growth in the mining sector in South Africa and elsewhere in Africa. At worst, power outages can impact production and employee safety; at best, it can add significantly to the cost of		V	applied to enhance productivity and cost
inflation price increases. Operating costs affect profitability as well as the ability to implement the planned business strategy and to ensure that the business is sustainable. Reliance on third-party infrastructure Water supply and sustainability in the face of one of the worst droughts South Africa has experienced presents a risk to the mining industry. Power security remains a key obstacle that could hinder growth in the mining sector in South Africa and elsewhere in Africa. At worst, power outages can impact production and employee safety; at best, it can add significantly to the cost of	Consumables.		control.
Sperating costs affect profitability as well as the ability to implement the planned business strategy and to ensure that the business is sustainable. Reliance on third-party infrastructure Water supply and sustainability in the face of one of the worst droughts South Africa has experienced presents a risk to the mining industry. Power security remains a key obstacle that could hinder growth in the mining sector in South Africa and elsewhere in Africa. At worst, power outages can impact production and employee safety; at best, it can add significantly to the cost of			and decrease in fuel and steel prices
Water supply and sustainability in the face of one of the worst droughts South Africa has experienced presents a risk to the mining industry. Power security remains a key obstacle that could hinder growth in the mining sector in South Africa and elsewhere in Africa. At worst, power outages can impact production and employee safety; at best, it can add significantly to the cost of	as the ability to implement the planned business strategy and to ensure that the		Chacturing Ingrior Coat.
of one of the worst droughts South Africa has experienced presents a risk to the mining industry. Power security remains a key obstacle that could hinder growth in the mining sector in South Africa and elsewhere in Africa. At worst, power outages can impact production and employee safety; at best, it can add significantly to the cost of Continue to be implemented. Focus on contingency plans, agreements with energy suppliers and investigations into renewable energy options. The relationship with utility suppliers has been cemented through clear and open communication lines.	Reliance on third-party infrastructure		
with energy suppliers and investigations into renewable energy options. that could hinder growth in the mining sector in South Africa and elsewhere in Africa. The relationship with utility suppliers has been cemented through clear and open communication lines. At worst, power outages can impact production and employee safety; at best, it can add significantly to the cost of	of one of the worst droughts South Africa has experienced presents a risk to the		
sector in South Africa and elsewhere in Africa. The relationship with utility suppliers has been cemented through clear and open communication lines. At worst, power outages can impact production and employee safety; at best, it can add significantly to the cost of	Power security remains a key obstacle		with energy suppliers and investigations
production and employee safety; at best, it can add significantly to the cost of	sector in South Africa and elsewhere in		been cemented through clear and open
	production and employee safety; at best, it can add significantly to the cost of		

Bulk commodity exports are reliant on the road, rail and port infrastructure.

Risk description

Movement from prior year

Mitigation strategies

Regulatory, political and legal environment

Regulatory uncertainty is still identified as a significant concern in 2016 by many companies.

Uncertainty surrounding the negotiations, legal proceedings and enforceability of the Mining Charter metrics, and the potential consequences of non-compliance, are currently highly topical areas. The proposed new charter issued in 2016 is also subject to debate.

Furthermore, the threat of regulatory changes increases uncertainty and can affect long-term sustainability and viability of companies.



The Chamber of Mines and the Department of Mineral Resources (DMR) continue to remain involved in a legal petition to the High Court to determine the interpretation and enforceability of the Mining Charter scorecard metrics.

A further lawsuit has been brought against the DMR regarding the constitutionality of the Mining Charter itself.

Climate change regulations with the signing of the Paris Agreement at COP21.

Employee safety and health

Safety remains a priority

Poor safety performance puts employees lives at risk, affects employee morale, increases costs, reduces productivity and damages reputation.

A few underground fires during the year resulted in significant damage and some fatalities.

Exposure to noise and dust continue to remain a significant occupational health risk, especially given the focus on silicosis claims in the industry.

HIV and TB continue to impact employees' health.

Absenteeism has a real impact on productivity.



Behaviour-based training, disease management programmes and awareness programmes.

Annual medical examinations for all employees.

Daily monitoring of workplace conditions for heat, noise and airborne pollutants.

Provision of medical facilities or medical aid coverage.

Human resource skills and capacity

Global competition for expertise and skills in technical fields and leadership capabilities continue to put pressure on human resources and skills.



Focus on having positive and open relationships with employees and trade unions

Create workplaces where employees feel safe, respected and valued.

Develop appropriate remuneration policies.

Develop policies and practices to retain key talent.

Risk description	Movement from prior year	Mitigation strategies		
Liquidity and capital management				
The deteriorating liquidity and cash flow impact on mines' ability to fund capital programmes and also (in particularly acute circumstances) to carry on day-to-day		Ensure minimum counterparty credit ratings. Negotiate extensions of short-term		
activities continues to be a risk to the mining industry.		facilities to bridge cash requirements at operations when required.		
As finance facilities expire, difficulties may be encountered in extending or		Disposal of non-core assets.		
renegotiating terms due to worsened capital markets.		Reduction of debt.		
Compliance with environmental standa	ards			
Compliance with environmental standards continues to remain a significant risk for mining companies.		Ensure standards are implemented from the top down to limit the impact of operations.		
A consequence of mining operations is environmental damage resulting from dust, noise or the leakage of harmful		Integrate environmental management into relevant business and planning decisions.		
substances.		Clarification is sought on the implementation of GNR1147 with various		
Environmental damage can have a knock- on effect on the health and wellbeing of many stakeholders such as employees, contractors and surrounding communities.		points being considered by mining companies and the regulator.		
This could lead to substantial fines and penalties for environmental non-compliance and, in a worst-case scenario,				
to the removal of mining licences and mine closure.				
New regulations (GNR1147) in terms of the National Environmental Management				
Act and its amendments requiring various environmental provisioning have				
been met with mixed views in terms of implementation.				

Other risks

In addition to the high-profile risks identified consistently across the companies analysed, we expand on the following:

- Liquidity and capital management;
- Renewed focus on cost of mining;
- · Water scarcity; and
- · Climate change.

Liquidity and capital management

One particular risk exposure which has received significant attention in the prior year and is again in the current year a focus point throughout the industry is that of liquidity. Coupled with the liquidity risk is the increased focus of capital management to strengthen the balance sheet.

Many mining companies are in the process of renegotiating the terms of their debt facilities with financial institutions, or will be doing so in the near future with the aim of increasing the maturity of these debts.

Given the current environment of low commodity prices and high production costs, combined with downbeat investor sentiment towards resources companies, access to capital remains a challenge and the issue of equity less attractive.

It seems inevitable that some companies may not be able to make large terminal repayments from profits and may have to enter into negotiations with loan providers in order to agree on more workable arrangements.

Furthermore, companies may not be able to achieve favourable terms for new debt finance, and in some cases the terms on offer could be prohibitive. Where finance has been obtained in currencies such as the US dollar and British pound, the risk is compounded due to the substantial weakening and volatility of the rand over the last year.

Improving the balance sheet is a priority for most companies, as this leads to improved creditworthiness, which facilitates capital raising should this be necessary. The recent revision to a negative outlook of South Africa's sovereign credit rating by various ratings agencies increases the cost of debt.

Companies are actively reviewing their current capital projects and are either postponing or reducing capital expenditure to rather use the free cash flow to reduce debt.

Companies are also examining core operations/businesses and their returns to identify non-core assets to be sold or closed. Proceeds of sales are usually used to reduce debt.

Renewed focus on cost of mining

Due to weak commodity prices, companies have increased focus on cost savings. Although the weaker rand and the lower fuel price does bring relief, focusing on sustainable cost reduction and optimising mining activities will ensure improved margins and see companies through the current commodity cycle.

Initiatives implemented to curb costs have covered a range of activities, including more accurate project planning and holding project managers and contractors to initial agreed targets, while ensuring that capital is maintained not to harm the business in the long term.

Key areas focused on to reduce costs include:

- Direct operating costs;
- Corporate overheads;
- Restructuring of corporate and regional structures;
- Exploration expenses;
- Administration expenses;
- Stabilising and reducing the workforce;
- Cancellation of near-mine and greenfield growth projects that demonstrate inadequate returns; and
- Unlocking cash in working capital.

Companies are forced to rethink and review their way of doing business and to consider whether alternatives are not available, thereby eliminating inefficiencies while maintaining current production levels.

Another focus point to reduce costs or increase revenues is the embracing of technologies and innovation. Unfortunately the lack of available cash also means a lack of investment in new technology.

New technologies are being used to:

- Improve mining recoveries;
- Monitor power usage on a minuteby-minutes basis;
- Monitor plants, pump stations and pipelines to determine potential problems and security issues, including theft and damage, as well as optimise utilisation; and
- Improve fleet management by optimising use and maintenance.

Through the use of new technologies, companies have access to more data, which they can analyse and use to inform better decisionmaking.

Water scarcity

Water remains a critical risk and focus point for the industry.

When we talk about a licence to operate, we focus on a broad set of factors that can prevent a company from working and continuing as a going concern. Those issues can be social (e.g. industrial action and community protests), environmental (pollution of land and water resources) or regulatory (laws and directives) that can stop operations or impose financial and/or criminal liability.

In the 11th Annual Global Risks Report 2016 released by the World Economic Forum (WEF) water crises moved from being recognised as the biggest single global risk in 2015 to third place on the Top 10 risks in terms of impact in the current year.¹ Despite this improvement, it is clear that water remains a critical natural resource.

Biodiversity loss and ecosystem collapse is also included among the top 10 risks in terms of impact, down one from last year in sixth position, while climate change has moved off the top 10 list, but remains a focus point.

The global risks landscape, 2016

Top 10 risks in terms of	Top 10 risks in terms of Impact			
Likelihood				
Large-scale involuntary migration	Failure of climate-change mitigation and adaptatio			
Extreme weather events	Weapons of mass destruction			
Failure of climate-change mitigation and adaptation	Water crises			
Interstate conflict	Large-scale involuntary migration			
Natural catastrophes	5 Energy price shock			
Failure of national governance	6 Biodiversity loss and ecosystem collapse			
Unemployment or underemployment	Fiscal crises			
Data fraud or theft	Spread of infectious diseases			
Water crises	Asset bubble			
Illicit trade	Profound social instability			

Source: WEF 11th Annual Global Risks Report, Pwc analysis

South Africa is a water-stressed country and the pressure on available water resources has increased due to an increasing number of people migrating from rural to urban areas. The current significant drought has reduced water levels in the country's dams and rivers, with water restrictions being implemented in several urban and mining areas. We've even seen mines put on care and maintenance as a result of this.

Water availability is not the only concern. Also of concern is the quality of water in South Africa. Numerous sources of pollution are impacting the quality of this scarce resource, which could further impact its usability. Research conducted by numerous credible institutions has raised significant concerns about the quality of water in South Africa's river systems and dams.

Mining companies require a continuous supply of water and restrictions on water consumption can significantly impact operations and subsequently profitability. This is forcing mining companies to optimise water consumption and put measures in place to maximise the use of water, especially since operations are often in locations where water availability is already a concern. The implementation of water re-use, recycling and conservation practices are therefore particularly critical in mines.

Climate change

Failure of climate change mitigation and adaptation has risen to become the most significant risk in terms of impact in the latest *Annual Global Risks Report and is now third in the top 10 list of risks in terms of likelihood.*

At the end of 2015, a big shift from business as usual was achieved with the signing of the Paris Agreement at COP21. All 195 countries agreed to a goal to limit global temperature increases to less than 2°C above pre-industrial levels and to reach net-zero greenhouse gas emissions by 2050.

With the climate agreement taking effect in 2020, governments will likely implement new requirements for reporting on climate issues, with additional mitigation and adaptation measures being rolled out.

Commentators note that it is likely that:

- The global economy will evolve to a low-carbon model;
- Investors will look more closely at climate-related risk and opportunity;
- Investment in clean technology will grow dramatically;
- Pressure will grow for businesses to set 2°C science based targets; and
- An international carbon market will emerge.

Some businesses have already started doing business differently. For example:

- Improved risk analysis and reporting to demonstrate how operations are being made more resilient;
- Preparing for carbon pricing and participating in conversations to find the 'right' price;
- Engaging the board and having climate action on the agenda more frequently;
- Clean finance, including building on actions and pledges made with new investment in clean technology; and
- Deeper understanding of their full value chains (supply and disposal risks and/or opportunities).

Risks posed by climate change for the mining sector

In a global scenario where very little effort is made to curb greenhouse gas emissions (i.e. the low-mitigation scenario), annual average temperatures are projected to rise drastically. The increases in average temperature is associated with increases in the number of very hot days, heatwave days and high fire-danger days across South Africa. Key implications of these changes may include an increased risk of veld and forest fires.

In a global scenario where there is a great deal of effort to curb greenhouse gas emissions (i.e. the high-mitigation scenario), the amplitudes of the projected changes in temperature and extreme temperature events are somewhat less, but still significant.

The projected changes in rainfall and related extreme events exhibit more uncertainty than the projected temperature changes. South Africa is projected to become generally drier. A minority of individual climate models project general rainfall increases over eastern South Africa, a plausible future that also requires consideration in the formulation of climate-change adaptation policies.

There is evidence that eastern South Africa may experience increases in wet spells (i.e. prolonged periods of rainfall that may cause wet coal events), an increase in the occurrence of dry spells and increases in the occurrence of 1-in-15 year and 1-in-150 year rainfall events.

The projected changes in rainfall patterns under high mitigation is very similar to the patterns projected under low mitigation.

In light of the above scenarios, a number of vulnerabilities can be identified in the mining sector, including:

- Mining pits may be flooded and inundated with water, leading operations to cease completely.
- Heavy rains may impact transport systems bringing employees to work, thus potentially hindering production.
- Hotter and drier temperatures may increase wildfires that threaten facilities and lives.
- Disruption in electricity supply to a mine due to wild fires, lightning or extreme winds.
- Increased occupational health and safety risks due to extreme heat.
 Extreme heat and heat waves impact on working conditions as well as technical thresholds of equipment.

Sources of risk cannot be viewed in isolation, as one type of weather condition or a single weather event could have multiple impacts on mining activities.

The examples below illustrate the compounding effect of two different weather conditions and events:

Hot, dry conditions

Occupational, health and safety standards exceeded:

Heat exhaustion

Medical emergencies

Reduction in operational efficiency due to fatigue

Transport systems impacted:

Buckling of rail tracks

Reduced life of road asphalt

Tyre deterioration

Increase in potholes

Wild fires:

Threatening stockpiles, mine and power plant infrastructure

Smoke an reduced visibility

Disruption in electricity supply to mines

Equipment's operating threshold exceeded:

Overheating of equipment and vehicles

Increased dust loads:

Stress on mining equipment

Health and safety concerns

Extreme rainfall with lightning and wind gusts

Disruption in transport systems:

Bridges and roads washed away

Lightning damaging electronic signaling equipment

Employees unable to get to work

Train derailment due to wind gusts

Damage to infrastructure:

Wind gusts damaging infrastructure

Ash dam failure due to flooding

Impact on mining:

Flooding of the mine pit

Heavy rains eroding slope stability

Electricity supply:

Lightning disrupting electricity supply due to mine

Stockpiles:

Flooded drainage systems

Washed away of stockpiles

Resilience as the basis for action

While the concept of resilience is not new, it is being advocated by the WEF and the International Union for Conservation of Nature (IUCN) as a means to enable business and society to overcome global challenges.

The mining sector has long understood that ongoing management of social and natural capital is critical to securing its ongoing licence to operate. However, it is now more important than ever before for the mining sector to see that the successful functioning of mining is inextricably linked to and dependent upon the resilience of the broader social-ecological system within which companies operate.

The more a system's resilience is compromised through approaching critical thresholds, the less able it is to respond well to shocks and support thriving businesses.

Embedding the management of broader system resilience into day-to-day decision-making will ensure that a mine is better able to continue operating and create value; respond to opportunities arising from change; and to anticipate, identify and adapt to emerging risks.





Mining companies continue to focus priority attention on creating a safe working environment for all their employees. Company CEOs highlight this fact in their annual reports and do not shy away from the fact that additional funds are being invested in mining operations to avoid loss of life, injuries and safety stoppages.

According to statistics made available by the Department of Mineral Resources (DMR), safety continues to improve. Fatalities are showing a declining trend over the last five years and are substantially better than they were 20 years ago.

The platinum statistics for 2014 and 2015 were impacted by the prolonged closure of the Rustenburg shafts of Anglo American Platinum, Impala Platinum and Lonmin. These are generally deep-level shafts with increased risk.

As a result of the lengthy strikes in the mining industry, employees had to redo safety induction training. It is therefore unfortunate that there were again more fatalities in 2016.

Gold Platinum Coal Other

2012 2013 2014 2015 2016

Figure 15: Fatalities per commodity for years ended 30 June

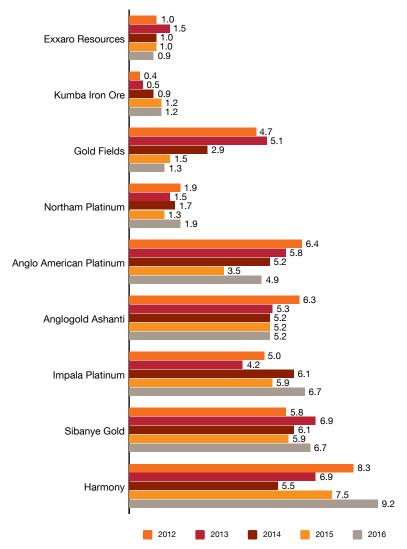
 $\textbf{Source:}\ Department\ of\ Mineral\ Resources,\ PwC\ analysis$

An improvement has been noted across all commodities over the last five years.

Traditionally, mining companies used lost time injury frequency rate (LTIFR) as a benchmark to track safety performance. However, annual reports now have different safety measurements to track their performance as all companies strive to deliver on their commitment to a zero-harm working environment.

There are also some inconsistencies between the reporting of LTIFR, hence one shouldn't take the absolute numbers as a comparison. However, year-on-year movement does indicate the direction of performance. Four of the companies reflected an improvement.

Figure 16: Top 9 companies' lost time injury frequency per million man hours



Source: Company annual reports



The monetary benefit received by stakeholders in an industry is often summarised by companies in their value-added statements.

Almost 41% of the companies included in our 2016 analysis had readily-available value-added statements – these companies represent 84% of revenue for all companies analysed.

Although we could not ensure consistency in disclosures in all cases, we made certain adjustments based on information shared in annual reports (e.g. employee taxes) to ensure a level of consistency.

The accompanying table shows how the value created, being the difference between income and direct purchases, was distributed to the various stakeholders.

Value distributed

	2016	2015	2014*	2013*	2012*	2011*	2010*
Funds reinvested	32%	36%	33%	41%	27%	32%	43%
Employees	38%	37%	37%	38%	27%	30%	36%
Shareholder dividends	3%	9%	11%	19%	20%	11%	12%
Direct taxes	5%	9%	9%	10%	10%	11%	9%
Employee taxes	8%	8%	7%	7%	6%	6%	6%
Mining royalties	2%	2%	4%	3%	2%	3%	5%
Borrowings	5%	5%	4%	4%	3%	1%	1%
Community investments	1%	1%	1%	1%	1%	0%	0%
Funds (utilised) retained	6%	(7%)	(6%)	(23%)	4%	6%	(12%)
Total value created	100%	100%	100%	100%	100%	100%	100%

st Comparative figures were taken from our 2015 publication to illustrate the cycle impact Source: PwC analysis

Total value created by the entities analysed increased by 5%, from R158 billion to R167 billion. The increase is largely attributed to better performance by the gold companies.

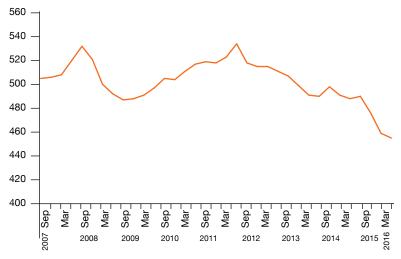
Funds reinvested in the form of capital additions and acquisitions was 32% of total value created (2015: 36%), which is lower than in previous years. In a low commodity price environment, companies have reduced their capital spending and are focusing more on managing their working capital and reducing debt. While cash preservation strategies have effectively been maintained, the significant reduction in capital expenditure will inevitably slow down future growth.

Companies continue to feel the burden of high labour costs, adding pressure on margins. This, despite a reduction in the number of employees. The value received by employees represented 38% of total value created (2015:37%).

Labour unrest will remain one of the top risks in the mining industry, which contributes about 7% to the country's GDP, as the industry grapples with high job losses in the wake of low commodity prices.

Government continues to engage with mining companies to mitigate the impact of the struggling industry on employees.

Figure 17: Directly employed mining employees (thousands)



Source: Stats SA, PwC analysis

Shareholder dividends represented 3% of total value created (2015: 9%). This is a significant decrease from prior years, as companies follow through on their cash preservation strategies in reaction to lower commodity prices.

Higher percentages in previous years mainly related to Kumba Iron Ore's exceptional performance.

The state received 15% (2015: 19%) of total value created, which consists of direct taxes, employee taxes and mining royalties. The actual contribution received by the state is significantly higher, however, with indirect taxes like VAT, import and export duties also being collected.

As more companies start to report their total payments made to governments in line with the Extractive Industries' Transparency Initiative, we will in future be able to better assess that contribution.

The challenge continues to remain one of determining how to increase the size of the pie to create more value for all stakeholders in an environment of ever-increasing costs, reducing margins and increased volatility.

Creating an environment with adequate infrastructure, less policy and regulatory uncertainty, and a skilled yet flexible workforce should go a long way towards attracting investment and benefiting all stakeholders.

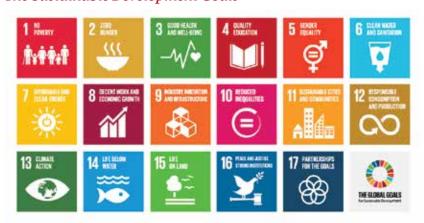
Sustainable Development Goals and mining in South Africa

What are the SDGs?

The Global Goals for Sustainable Development were agreed by 193 countries at the United Nations Sustainable Development Summit in September 2015. They include 17 Sustainable Development Goals (SDGs) to end poverty, fight inequality and injustice, and tackle climate change by 2030.¹

SDGs are centred on economic, social and environmental progress and set the agenda for all nations to tackle these challenges. The SGDs place an emphasis on good growth that will deliver social and environmental value, as well as optimal long-term economic benefit for all, as opposed to growth that is short term to the benefit of only a few. The SDGs are 17 goals underpinned by 169 targets to achieve those goals.

The Sustainable Development Goals



Why do the SDGs matter for mining?

Understanding the SDGs will give your company insight into how the policy and regulatory environment in which you operate will evolve, assisting you to develop more resilient business models.

Analysing your alignment with the SDGs will give you a view on how your business activities help or hinder governments from achieving the goals, or take them in the wrong direction.

Actively aligning business strategies with the SDGs, will enable companies to maintain or strengthen their licence to operate and to establish a distinct competitive advantage over those companies that neither understand their contribution nor revise their strategies accordingly.

Aligning with the SDGs will allow your business to understand and better respond to the risks and opportunities, characterised by rapid change and disruption across social, environmental and economic dimensions.

Forward-thinking companies that develop business strategies that embrace the growth potential of responsible environmental and societal policies, and drive sustainable business practices through their value chains, are due to see the benefit of increases in performance.

1 "Business planning on Sustainable Development Goals needed to action CEO concerns about stakeholders" PwC South Africa. http://www.pwc.co.za/en/press-room/sustainable-development-goals.html Do you understand the implications of the SDGs and how do you prioritise the goals for your business?

How do you quantify and minimise the potential risks, and explore opportunities?



This is a big shift from the time when business saw sustainability as side issue, only useful for reducing energy or waste disposal costs or supporting worthy community causes.

Top business impacts in the energy, utilities and mining sectors











How relevant are these to South Africa?

The South African Government developed and published the National Development Plan (NDP) in 2012. This aims to eliminate poverty and reduce inequality by 2030. The NDP's objectives appear to be similar to a number of the SDGs.

The National Business Initiative (NBI) mapped the SDG goals and targets with the NDP objectives and discovered that more than 90% of the NDP's 72 stated objectives can be mapped to the 169 SDG targets with the same implementation timeframe.²

Can the mining industry contribute to the SDGs?

Mining is one of the industries that has the most interconnections between the different SDGs and thus has the potential to positively influence and contribute to achieving all 17 SDGs.

The SDGs are not mutually exclusive, creating a positive impact in one will have a benefit across others, amplifying the impact for the effort made. It's also true to say a positive impact in one may have unintended negative consequences in another, so understanding the outcomes and impacts of activity will be crucial.

PwC conducted an SDG Engagement Survey in 2015 and found that companies ranked SDG 8 (decent work and economic growth) as the top SDG they have the greatest impact on, which also offers the greatest business opportunity.

Companies in the energy, utilities and mining sector said they have the greatest impact on SDG 7 (affordable and clean energy), with SDG 8 (decent work and economic growth) and SDG 13 (climate action) also among the top-three goals identified.

We investigated some of the SDGs to see how relevant they are to the mining sector in a positive and in some a negative way and also looked at the contributions being made by mitigating factors to reduce the negatives.

Interconnections could be made between economic development; providing opportunities for decent employment; opportunities for quality education; good health and well-being with correct programmes; and industry innovation and infrastructure.

While these connections are mostly positive, the negative connections due to mining practices include environmental degradation, influence on water resources, armed conflicts, worsening economic and social inequality, and violation of human rights.³

These positive and negative contributions, together with the mitigation measures to improve outcomes of certain impacts, will contribute to achieving the SDGs.

Direct positive impacts

Affordable and clean energy (SDG 7)

Mining is energy intensive so innovative ways of using energy more efficiently are required. Mining operations should share ideas about incorporating energy-efficient measures and the prospects of utilising renewable energy sources with energy providers.

Mining operations are often situated in rural areas where energy supply is limited and not readily available. Partnerships could be established with these communities to create and share the use of energy infrastructure. Being able to produce your own power requirements will create potential for large environmental and financial benefits, as well as lessening the load on the national power grid.

The South African mining industry has been hugely effective in improving efficiencies in the use of electricity in the last eight years to address Eskom supply shortfalls and the subsequently higher cost of electricity.

² Mapping the SDG targets and NDP Objectives Infographic. NBI, 2016

Decent work and economic growth (SDG 8)

Mining has the potential to provide large economic multipliers through local procurement. In areas where labour has low skill levels, mining companies have the opportunity to invest in creating partnerships to increase local business opportunities. Partnerships may help to drive more sustainable, long-term, diversified economic growth in all regions.

Industry, innovation and infrastructure (SDG 9)

Shared use of infrastructure could allow mining operations to provide areas where development is slow with access to the latest technologies and information. They could work alongside the relevant government departments to provide technologies to disadvantaged areas.

Additionally, the shared use of power lines, roads, pipelines and railways developed and maintained by the mining sector could have significant positive impacts on the livelihoods of neighbouring communities and create economic benefits in the area.

In addition to economic infrastructure, mining companies, in compliance with their social and labour plans, often construct education and health facilities to support communities.

Negative impacts, with mitigation measures, have the potential to improve any impact

Clean water and sanitation (SDG 6)

Mining uses significant amounts of water and can have a negative impact on the quality of the water in surrounding water resources. Contributing to this SDG would require the reduction of an operation's water footprint in both quantity and quality.

Specific water efficiency measures that aid the mine in recycling its waste water and treating it accordingly can be implemented. In the process the mine should ensure that the treated water is supplied to alternative users and for other uses, such as neighbouring communities or agriculture.

Climate action (SDG 13)

Understanding the potential impacts of climate change on a mining operation, one can develop and integrate climate change adaptation strategies into company policies.

The aim to change the way you operate and reduce your greenhouse gas (GHG) emissions will contribute to the effects of climate change in the long term. The link to SDG7 to create affordable clean energy emphasises the interconnectivity of the SDGs.

The South African platinum mining industry contributes significantly to global emission controls and the potential for hydrogen fuel cells as an alternative clean energy in the long term.

Life on land (SDG 15)

Mining has negative physical and biophysical impacts on the environment, which alter the ability of ecosystems to provide valuable services to society and the environment that depends on these ecosystems to function normally. Mining operations are heavily regulated in this regard and are required to mitigate their negative impacts.

Mining companies should focus on conservation programmes; protection of threatened or endangered species; elimination of invasive species; restoration of displaced or disrupted ecosystems; and the use of biodiversity offsets to contribute to this SDG.

Which SDGs should my company focus on?

The SDGs represent a new challenge – the 17 goals and 169 targets, evolving indicators, new regulation and incentives that will accompany the latter will add a layer of complexity. But business is used to complexity. As the requirements and process around SDGs are formalised, business should factor them in to their own processes and operating practices.

Nevertheless, it's easy to see how individual businesses will struggle to focus on addressing all SDGs. In our SDG Engagement Survey, only 1% of companies said they would even be assessing their impact across all 17 SDGs, let alone tackling them all, with many planning to prioritise those they view as most material.

Agreeing your engagement with the SDGs is a board-level debate and decision, as well-informed debate is required in order to hone in on the right set of priorities to drive the strategy. Two critical business imperatives stand out to encourage engagement with the SDGs:

Security

Businesses that align their strategy with national priorities will most likely be given their licence to operate, by governments and citizens alike. Those that do not, or which struggle to demonstrate alignment with the national interest, cannot expect equivalent treatment, so creating competitive disadvantage; and

Resilience

The South African Government is using the SDGs along with the NDP objectives to inform development of policy and regulation. Those businesses that are aware of, and aligned with, the SDGs are more likely to have alignment with emerging policy, giving them more resilient business models.

Many of the SDGs interconnect with others and some generate more value than others so defining the optimal strategy is challenging.

We recognise a structured approach to these conversations is required if they're to be productive and so have thought through not only the key considerations, but also developed a tool to show where your business has value at risk if the SDGs fail. Both are useful to use when defining business impact and shaping conversations.

Further reading

Make it your business: Engaging with the Sustainable Development Goals



https://www.pwc.com/gx/en/sustainability/ SDG/SDG%20Research_FINAL.pdf

Make it your business: Engaging with the Sustainable Development Goals a South African Perspective



https://www.pwc.co.za/en/assets/pdf/make-it-your-business.pdf

Navigating the SDGs: a business guide to engaging with the UN Global Goals



https://www.pwc.com/gx/en/sustainability/publications/PwC-sdg-guide.pdf

6 Boardroom dynamics





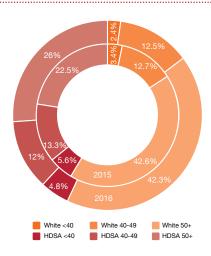
Board composition

Examination of the companies included in this analysis suggests that the mining industry currently exceeds the minimum levels of HDSA board representation required by the Mining Charter. The Mining Charter required a minimum of 40% representation by 31 December 2014.

HDSAs made up 43% of board members(prior year 41% of the companies analysed). This small increase suggests that companies are incrementally altering the composition of their boards to gradually reflect the racial demographics of the country.

When board composition is analysed by age, it is interesting to note that 32% (2015: 35%) of board members are younger than 50 and 53% (2015: 54%) of these board members are HDSAs.

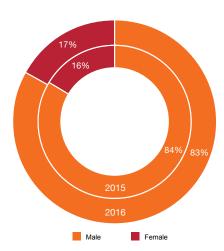
Figure 18: Board composition by race and age



Source: Company websites, annual reports. PwC analysis

Female representation at board level also exceeds the minimum requirements of 10% by 2014 set out in the Mining Charter.

Figure 19: Board composition by gender



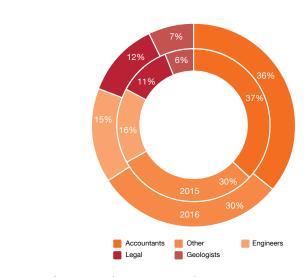
Source: Company websites, annual reports. PwC analysis

The mining industry (and corporate governance environment) has experienced rapid and substantial change over the last several years. In order to cope with the demands of the current industry climate, boards need to be increasingly dynamic and have a broad skill set capable of dealing with all manner of challenges.

The average board size of the companies analysed was nine, enabling an adequate spread of skills. The smallest board had five members and the largest had 15.

Although qualifications do not tell the full story of capability and experience, the following analysis of board members by their primary qualification demonstrates the diversity of academic and commercial fields represented. The change from the prior year has been minimal with accountants and engineers making up the majority of board members of the companies analysed.

Figure 20: Board skills represented



Source: Company websites, annual reports. PwC analysis



Five-year summary

The information included in this section differs from that in the rest of our analysis as it includes the aggregated results of those top companies reported on in each edition of *SA Mine*. The column for 2015 presented below relates to the results of the companies included in our previous edition, while in the current financial review, we analyse the results of this year's top companies for both 2016 and 2015.

The reason for the difference in revenue for 2015 in this summary and the income statement used in the financial performance section may be ascribed to the exclusion of some entities from the publication and the inclusion of others.

Five-year summary of financial performance

	2016 R 'billions	2015 R 'billions	2014 R 'billions	2013 R 'billions	2012 R 'billions
Revenue	333	335	327	332	339
Adjusted EBITDA	66	75	100	92	123
Net (loss)/profit	(46)	2	5	25	65
Adjusted EBITDA margin	20%	22%	31%	28%	36%
Cash flow from operating activity	69	62	69	69	112
Total capital expenditure	49	55	57	71	70
Total assets	709	724	694	714	650

Source: PwC analysis

The five-year summary shows flat revenue with significantly reduced profitability as a result of continued increases in cost pressures and marked impairments.



Aggregated cash flows

	Current year	Prior year	Difference	% change
	R 'billions	R 'billions	R 'billions	
Free cash flows		•		
Cash generated from operations before working capital changes	75	80	(5)	(6%)
Working capital changes	4	(2)	6	(300%)
Cash generated from operations after working capital changes	79	78	1	1%
Other	(1)	4	(5)	(125%)
Income taxes paid	(9)	(13)	4	(31%)
Net operating cash flows	69	69	-	0%
Purchases of PPE	(49)	(54)	5	(9%)
Free cash flow	20	15	5	33%
Cash flows related to investing activities				
Purchase of investments	(6)	(3)	(3)	67%
Sale of investments	12	2	10	500%
Other	(2)	(1)	(1)	100%
Net investing cash flows	4	(2)	6	(300%)
Cash flows related to financing activities				
Proceeds from issue of ordinary shares	4	7	(3)	(42%)
Proceeds from interest-bearing liabilities	38	44	(6)	(13%)
Repayment of interest-bearing liabilities	(49)	(36)	(13)	36%
Distribution to shareholders	(8)	(22)	14	(64%)
Net financing activities	(14)	(7)	(7)	97%
Net increase/(decrease) in cash and cash equivalents	10	6	5	71%
Cash and cash equivalents at the beginning of period	32	26	6	23%
Cash and cash equivalents at the end of the year	42	32	11	31%

Source: PwC analysis

Free cash flows

Free cash flow is defined as cash from operating activities less purchase of property, plant and equipment. It provides an indication of a company's ability to settle debt, pay dividends and fund acquisitions.

Last year reflected the worst free cash flow position since the financial crises in 2008. This year shows an improvement, albeit not as a result of underlying performance, but rather due to cash management practices.

Cash flow from operations before working capital changes weakened further by 6% due to lower margins on the back of weaker commodity prices and higher input costs.

Weak cash flows forced companies to manage their working capital, resulting in a decrease in inventories and an increase in trade payables and therefore only a marginally better cash flow from operations position.

The significantly lower iron ore cash from operations was partially offset by an improvement in platinum cash flows as the comparative period still included the impact of the 2014 Rustenburg strike action.

Lower profitability resulted in lower taxes paid and capital expenditures were also cut to a bare minimum, allowing free cash flows to improve from the previous year's low base.

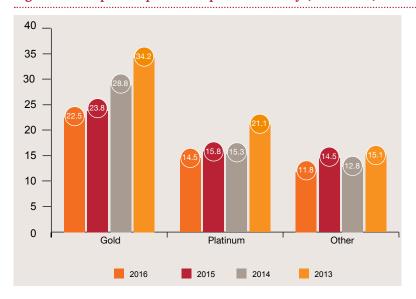
Purchase of property, plant and equipment

Purchase of property, plant and equipment decreased by 9% (R5 billion). The decrease was below expectations and well below the 23% decrease seen globally, as reported on in PwC's annual review of global trends in the mining industry: Mine 2016: Slower, lower, weaker, but not defeated¹.

The weaker rand meant that largely USD-denominated capital expenditures in the rest of the world translated into an increase or a lower decrease in rand terms, despite stable or decreased capital expenditure in USD terms.

Almost all companies reduced their capital expenditure from the prior year, or if not reduced, incurred capital expenditure at a similar level. The only real exceptions are Gold Fields with a R1.5 billion increase, mainly as a result of the weaker rand and Lonmin's increase of R0.6 billion due to the impact of the strike in 2014.

Figure 21: Capital expenditure per commodity (R 'billions)



Source: PwC analysis

Of the aggregated capital expenditure, 86% was incurred by only nine companies:

- AngloGold Ashanti: R8.5 billion (down from R9.2 billion).
- Gold Fields: R8.1 billion (up from R6.6 billion, but only a 4% increase in USD terms).
- Kumba Iron Ore: R6.7 billion (down from R8.5 billion).
- Anglo American Platinum: R5.2 billion (down from R6.9 billion).
- Impala Platinum: R3.6 billion (down from R4.5 billion).
- Sibanye Gold: R3.3 billion (up from R3.2 billion).
- Exxaro Resources: R2.4billion (down from R3.2 billion).
- Harmony Gold: R2.4 billion (down from R2.8 billion).
- Royal Bafokeng Platinum: R2 billion (up from R1.7 billion).

http://www.pwc.com/id/en/pwc-publications/industry-publications/energy--utilities---mining-publications/mine-2016--slower--lower--weaker----but-not-defeated.html

Investing activities

A number of companies announced their intention to sell non-core assets as a means to generate cash and strengthen their balance sheets. However, very few sales came to fruition and a few platinum transactions were cancelled, probably as a result of the significantly lower platinum prices towards the end of 2015.

AngloGold Ashanti followed its successful USD105 million Navachab sale last year with the USD819 million sale of Cripple Creek & Victor in the USA. The proceeds were mainly used to settle debt.

Sibanye Gold successfully acquired Aquarius Platinum in April 2016 for R4.3 billion. This transaction will only be reflected in next year's SA Mine as the transaction closed after Sibanye's December year end.

Sibanye Gold's purchase of Anglo American Platinum's Rustenburg mines is still subject to regulatory approvals, but is expected to be concluded before the 2016 year end.

Anglo American Platinum's intention is still to exit their Bokoni mine and Union mines.

Anglo American is also still intent on exiting its coal and iron ore assets in South Africa. It will be interesting to see who will take up these interests.

Exxaro Resources purchased Total Coal South Africa for R3.4 billion in August 2015, giving them an opportunity to become a bigger coal exporter. The investment is aligned with the current coal portfolio.

Financing activities

Equity

Very few share issues took place in the current year. In the last two years it was mainly the platinum companies that raised equity. In the current year, Impala Platinum raised R3.9 billion equity for the completion of its 16 and 20 shaft complexes. In the prior year, Northam Platinum, Royal Bafokeng platinum and Tharisa all raised substantial equity amounts.

Lonmin also raised USD395 million after its year end. The rights issue was done at a 94% discount to the price when the rights issue was announced in November 2015.

In the current low-price environment, raising cash through equity is often seen as a last resort. However, the significant impact of the 2012-2014 industrial action in the platinum sector meant that companies had to raise equity in order to fund their developments.

Borrowings

A number of companies restructured their debt to improve repayment profiles. In the prior year net debt of R8 billion was raised. This year net debt of R10 billion was settled. AngloGold Ashanti accounted for a net R11 billion debt settlement with proceeds from the sale of their Cripple Creek and Victor subsidiary.

Distribution to shareholders

Expected decline in the issuing of dividends was noted. Dividends paid decreased by R14 billion from R22 billion to R8 billion.

The biggest decrease came from Kumba Iron Ore's dividend, which decreased from R15 billion in the prior year to R3.3 billion in the current year. They also did not declare any dividends in their December 2015 financial year.

Other notable dividends include R1.1 billion by African Rainbow Minerals, R1 billion by Exxaro Resources and smaller dividends by most of the gold producers.

Aggregated income statement

	Current year	Prior year	Difference	% change
	R 'billions	R 'billions	R 'billions	
Revenue from ordinary activities	333	326	7	2%
Operating expenses	(267)	(255)	(12)	4%
Adjusted EBITDA	66	71	(5)	(7%)
Impairment charge	(60)	(21)	(39)	186%
Depreciation	(42)	(37)	(5)	11%
PBIT	(36)	13	(49)	(400%)
Net interest	(10)	(7)	(3)	43%
Tax expense	(2)	(8)	6	(75%)
Equity accounted income	2	4	(2)	(50%)
Net (loss)/profit	(46)	2	(48)	(4700%)
Adjusted EBITDA margin	20%	22%	(2%)	
Net profit margin	(14%)	1%	(15%)	

Source: PwC analysis

Revenue

Revenue increased by a mere 2% (R7 billion) from the prior year.

The platinum companies have seen revenue increase by 12% from prior year due to increases in production compared to the strike-affected prior year.

The gold companies' revenue increased by 4% (R4.4 billion) despite lower production as a result of the higher rand gold price. The weaker rand more than offset the drop in realised USD gold prices.

The other mining companies decreased in revenue by 11% (R9.9 billion), mainly driven down by lower iron ore prices, which resulted in a R11.5 billion decrease in revenue at Kumba Iron Ore.

Other miners reflected fairly stable revenue with Exxaro Resources growing revenue by R1.9 billion due to higher export sales volume (including ECC from September) and increased sales to Medupi Power Station.

Revenue

	Current year	Prior year	Difference	% change
	R 'billions	R 'billions	R 'billions	
Gold	133	129	4	4%
Platinum	123	110	13	12%
Other	77	87	(10)	(11%)

Source: PwC analysis

Operating expenses

Operating expenses increased by R12 billion, which is a 4% increase from the prior year. This increase is substantially lower than the 14% increase in the prior year and well above the 10% increases experienced over recent years.

The increase was as a result of the post-strike increase in production by the platinum companies, which contributed R11 billion of the increase. Gold companies' and most other companies' operating costs remained largely unchanged.

The low increase in operating cost is testimony to the various savings initiatives implemented by management, including reduction in marginal production, renegotiation of supply agreements and a reduction in overhead structures.

Lower input costs such as fuel and steel, which benefited from lower commodity prices, also contributed to lowering operating expenses.

A breakdown of the operating expenses for companies that disclosed expenses by nature (representing 87% of aggregated revenue) is depicted in the table below, with the year-on-year increase for these companies included in the table.

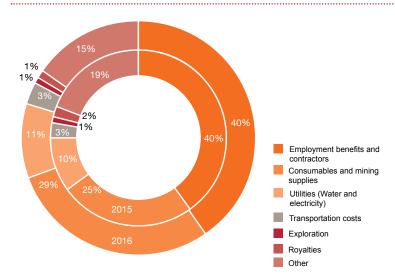
Breakdown of operating expenses

Year-on-year increases (decreases) in operating expenses

Cost component	Current year, excluding platinum strike companies	Current year	Prior year
Employment benefits and contractors	(2.2%)	5.2%	8.90%
Consumables and mining supplies	4.4%	20.3%	10.30%
Utilities	14.7%	18.4%	13.40%
Transportation costs	9.2%	9.4%	2.60%
Royalties	(24.7%)	(40.8%)	(32.00%)
Exploration	(17.1%)	9.6%	(31.90%)

Source: PwC analysis

Figure 22: Breakdown of operating expenses



Source: PwC analysis

Labour costs

Labour costs still make up the majority of mining companies' costs, accounting for 40%.

Labour cost increased by 5.2%. The increase was mainly driven by the platinum companies following the post-strike increase in production. Excluding platinum companies, there was actually a decrease in employment costs.

Average year-on-year increase in total guaranteed packages in the mining industry (%)

Employee category	2011	2012	2013	2014	2015	2016
Executives	8.8	8.3	6.5	6.5	7.4	4.1
Management	8.8	8.1	7.0	6.6	6.5	5.6
General staff	10.7	8.9	6.3	6.8	-	6.3
Unionised staff	8.9	8.3	7.2	8.8	6.9	8.2
Total average lift to payroll	8.8	8.4	7.2	7.0	7.1	5.9

Source: PwC Remchannel semi-annual Salary and Wage Movement Survey

Consumables

Consumables increased by 20.3% due to increased production by the platinum companies. However, excluding platinum companies, the increase was 4.4%, which reflects a below-inflation increase as a result of cost saving measures implemented and lower purchase prices for commodities such as steel.

Utilities

In February 2016, The Chamber of Mines joined others in an objection to Eskom's R22 billion Regulatory Clearing Account application to the National Electricity Regulator of South Africa (Nersa). As a result the tariff increase was limited to 8%. Utilities account for 11% of total costs in mining.

Royalties

Royalties have decreased mainly as a result of the decrease at Kumba Iron Ore. Lower profitability results in a lower percentage applied to the lower revenue achieved.

Transportation costs

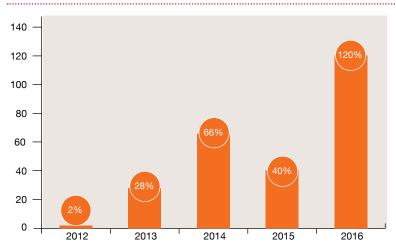
Transportation costs mainly relate to the suppliers of bulk commodities e.g. iron ore and coal. Lower fuel costs and record low USD shipping rates somewhat offset the weaker rand.



Impairment

The continuance in low commodity prices has as expected resulted in another record year for impairments in the industry, with a total of R 60 billion in impairment provisions. R157 billion was impaired over the last 5 years, almost wiping out the last 3 years of capital expenditure in the industry.

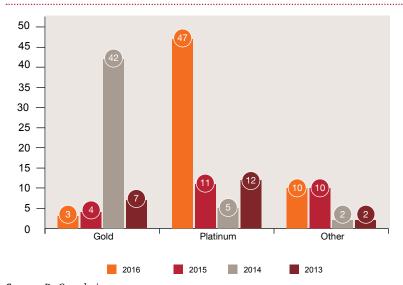
Figure 23: Impairment as a percentage of capital expenditure



Source: PwC analysis

Recent record rand gold prices have assisted in avoiding significant additional gold impairments. Platinum's low prices, has however, led to R47 billion in impairments.

Figure 24: Impairment per commodity (R 'billions)



Source: PwC analysis

The largest contributors to the impairment provisions were:

- Lonmin: R21.7 billion.
- Anglo American Platinum: R16.9 billion.
- Kumba Iron Ore: R6 billion.
- Royal Bafokeng Platinum: R 4.5 billion.
- Atlatsa Resources: R3.3 billion.
- Gold Fields: R2.4 billion.
- Exxaro Resources: R1.8 billion.

Depreciation

Depreciation increased by R5 billion mainly due to increased production by the platinum mines.

Net interest

Net interest expenses increased by R3.6 billion due to higher interest-bearing borrowings, higher interest rates on renegotiated facilities and the weaker rand where borrowings are denominated in foreign currencies.

Taxation

Despite an aggregated loss before taxation, there was still a R2 billion tax expense. Losses generated from goodwill impairments does not give rise to a tax benefit. In addition, a number of companies have tax losses for which no deferred tax assets are created as it is currently not considered as probable that these tax losses will be realised.

Net loss

This is the first year since the start of this publication in 2009 that an aggregated net loss was recorded by the industry. The main reason for the loss is the large impairment provisions raised in the current year. However, the record low EBITDA margin, as discussed above, is a significant contributor.

The EBITDA margin of 20% is 2% lower than in the previous year. This low EBITDA percentage, which serves as an approximation of cash earnings, is not sustainable.

Eight companies achieved a higher than average EBITDA percentage.

Companies with EBITDA above 20%

	Current year	Prior year
Petmin	63%	61%
Gold Fields	36%	32%
Kumba Iron Ore	33%	47%
Exxaro Resources*	33%	23%
Assore*	28%	41%
AngloGold Ashanti	25%	24%
Sibanye Gold	21%	28%
Harmony Gold	20%	4%

^{*}Note: These companies have significant equity income from associates not associated with revenue, which positively influences their EBITDA percentage.

Source: PwC analysis

Different commodities had vastly different performance outcomes for the year.

Analysis by commodity

EBITDA

	Current year R 'billions	Prior year R 'billions	Difference R 'billions	% change
Gold	34	31	3	10.2%
Platinum	10	9	1	7.6%
Other	22	31	(9)	(28.9%)

EBITDA margin

	Current year	Prior year	Difference
	%	%	
Gold	26%	24%	2%
Platinum	9%	9%	0%
Other	28%	35%	(6%)

Net profit/(loss)

	Current year R 'billions	Prior year R 'billions	Difference R 'billions	% change
Gold	(2)	(3)	1	(23.8%)
Platinum	(44)	(9)	(35)	413.7%
Other	0	14	(14)	(100%)

Source: PwC analysis

These losses or minimal profits indicate the challenges experienced by the industry. It is in particular the platinum industry that is experiencing significant challenges. See PwC's Platinum on a knife-edge² report for a more in-depth look at the platinum industry.

² http://www.pwc.co.za/en/publications/platinum-perspectives-brochure.html

Foreign exchange impact

The impact of the rand exchange rate on performance is quite substantial. When converting the aggregated income statements at the relevant average US-dollar exchange rate, a substantial difference in performance emerges.

The prolonged weakening of the rand since the end of 2013 has continued to impact comparative performance based on presentation currency. With lower dollar commodity prices being masked by a weaker rand, performance will be weaker in dollar terms.

Income statement

	Current year	Prior year	Difference	%
	USD 'billions	USD 'billions	USD 'billions	change
Revenue from ordinary activities	25	30	(5)	(17%)
Operating expenses	(20)	(23)	3	(13%)
Adjusted EBITDA	5	7	(2)	(29%)
Impairment (charge)/reversal	(5)	(2)	(3)	150%
Depreciation	(3)	(3)	-	0%
PBIT	(3)	2	(5)	(250%)
Net interest	(1)	(1)	-	0%
Tax expense	-	(1)	1	(100%)
Equity accounted income	-	-	-	
Discontinued operations	-	-	-	
Net profit	(4)	-	(4)	

Financial position

	Current year	Prior year	Difference	% change
	R 'billions	R 'billions	R 'billions	
Current assets				
Cash and cash equivalents	46	35	11	31%
Inventories	58	58		0%
Receivables and other current assets	34	38	(4)	(11%)
Assets held for sale			(1)	(100%)
Total current assets	138	132	6	5%
Non-current assets				
Mining and production assets	414	418	(4)	(1%)
Goodwill		9	(2)	(22%)
Investments	96	89		8%
Other non-current assets	54	62	(8)	(13%)
Total non-current assets	571	578	(7)	(1%)
Total assets	709	710	(1)	0%
Share capital and reserves				
Share capital	385	328	57	17%
Reserves and non-controlling interest	13	94	(81)	(86%)
Total equity	398	422	(23)	(5%)
Current liabilities				
Accounts payable and other liabilities	62	59	2	3%
Interest bearing liabilities	17	21	(4)	(19%)
Total current liabilities	80	80	(0)	(0%)
Non-current liabilities				
Interest bearing liabilities	118	100	18	18%
Deferred taxation liabilities	63	64	(1)	(2%)
Other non-current liabilities	50	44	6	14%
Liabilities held for sale	. 1		11	100%
Total non-current liabilities	231	208	24	12%
Total liabilities	311	288	23	8%
Total equity and liabilities	709	710	(1)	0%

Key ratios

	Current year	Prior year	Global mine ratios
Net borrowings (R 'billions)	89	86	-
Gearing percentage (%)	18%	17%	32%
Solvency ratio (times)	2.3	2.5	1.8
Current ratio (times)	1.7	1.7	1.4
Acid ratio (times)	1.0	0.9	1.0

Despite a challenging year, solvency and liquidity ratios remained relatively strong. The solvency ratio has weakened marginally to 2.3 from 2.5 in the prior year, yet is still significantly better than the global equivalent of 1.8. The ratios indicate that the South African mining industry is less geared than the trend is globally.

Market capitalisation compared to net asset value recovered to 1.5 times. Although it is still below the 1.7 of two years ago, this is a marked improvement on the 1.0 recorded last year. The bulk of the improvement relates to the recovery among gold companies.

At an individual company level as at 30 June 2016, 15 out of 27 (2014: 21 out of 35) companies had net book values exceeding their market capitalisations.

Working capital

After the well-publicised liquidity concerns of the last two years, there has been a marginal improvement as companies raised equity and sold off noncore assets to address the situation.

The acid ratio of 1.0 is now in line again with the global average. Although low, it can be accepted. However, the average rate hides the individual low liquidity experienced by some companies. Twelve companies had acid ratios of less than 1.0 and even worse, eight had current ratios of less than 1.0.

A large number of companies have made significant effort to restructure their balance sheets, preserve cash and contain costs. Liquidity risk is still a major concern, as reflected in various integrated reports, where strategies to address the issue have been shared.

Cash increased by R11 billion from the prior year. Current liabilities decreased from the prior year, mainly as a result of reduction in short-term borrowings or short-term interest-bearing debt from Kumba Iron Ore and Anglo American Platinum, which recorded decreases of R5.4 billion and R4.1 billion, respectively . The decrease was offset by Lonmin's increase in borrowings of R7 billion. Northam settled the R1.4 billion domestic medium-term notes that were under current liabilities in the previous year.

Accounts payable has remained relatively flat, factoring in increased production and inflation from the previous year, which is an indication of the cost-control measures put in place.

Financing

The net debt position increased from R86 billion to R89 billion despite the increase in cash. A number of companies took on initiatives to improve their position:

- Implats raised R4bn in cash through a share issue, reducing its net debt position significantly.
- Kumba reduced its debt by 42% from R7.9bn to R4.6bn by focusing on cost, capital preservation and suspending dividends.
- AngloGold Ashanti used the proceeds from the sale of a subsidiary to pay off a portion of its bonds.

The exchange rate played a significant role, particularly for December yearend companies. Although Gold Fields' underlying USD borrowings remained flat, its translated rand borrowing increased by R7 billion.

Additional funding was also raised through borrowing to fund BBEE transactions, acquisitions undertaken or operations. This resulted in a number of companies net debt profile increasing, including ARM, Exxaro Resources and Lonmin.

The gearing ratio has increased from 17% in the prior year to 18%, which is still lower than the global average. The increase in gearing is due to the decrease in equity as a result of the net-loss position for the year and increase in borrowings.



acid ratio	(current assets less inventory)/current liabilities
adjusted EBITDA	EBITDA adjusted for impairment charges
adjusted EBITDA margin	adjusted EBITDA/revenue
BEE	black economic empowerment
CPI	consumer price index, published by Statistics South Africa
current ratio	current assets/current liabilities
DMR	Department of Mineral Resources
DWS	Department of Water and Sanitation
EBITDA	earnings before interest, tax, depreciation and amortisation
EBITDA margin	EBITDA/revenue
EITI	Extractive Industries Transparency Initiative
ETF	exchange-traded fund
FDI	foreign direct investment
gearing percentage	net borrowings/(net borrowings plus equity)
HDSA	historically disadvantaged South Africans
ICMM	International Council on Mining and Metals
IMF	International Monetary Fund
JSE	Johannesburg Stock Exchange
LTIFR	lost time injury frequency rate
market capitalisation	The market value of the company calculated as the number of shares outstanding, multiplied by the share price
MPRDA	Mineral and Petroleum Resources Development Act
NERSA	National Energy Regulator of South Africa
net borrowings	interest-bearing debt, less cash
NWA	National Water Act
NWRS 2	National Water Resources Strategy 2
PBIT	profit before interest and tax
PGMs	platinum group minerals
PPI	producer price index
SLP	social and labour plan

9 Companies included in the analysis



	Year end
African Rainbow Minerals Limited	June 2016
Anglo American Platinum Limited	December 2015
AngloGold Ashanti Limited	December 2015
Assore Limited	June 2016
Atlatsa Resources Limited	December 2015
Buffalo Coal Corporation	December 2015
Coal of Africa Limited*	June 2016
Diamondcorp plc	December 2015
DRDGOLD Limited	June 2016
Eastern Platinum Limited	December 2015
Exxaro Resources Limited	December 2015
Firestone Energy Limited*	June 2016
Gold Fields Limited	December 2015
Harmony Gold Mining Company Limited	June 2016
Impala Platinum Holdings Limited	June 2016
Jubilee Platinum plc*	June 2016
Kibo Mining plc	December 2015
Kumba Iron Ore Limited	December 2015
Lonmin plc	September 2015
Merafe Resources Limited	December 2015
Northam Platinum Limited	June 2016
Oakbay Resources & Energy Limited	February 2016
Pan African Resources Limited	June 2016
Petmin Limited	June 2016
Resource Generation Limited*	June 2016
Royal Bafokeng Platinum Limited	December 2015
Sibanye Gold Limited	December 2015
Tharisa plc	September 2015
Trans Hex Group Limited	March 2016
Wescoal Holdings Limited	March 2016
Wesizwe Platinum Limited	December 2015

 $^{* \}textit{Financials not available at time of writing the report}$



We aggregated the financial results of mining companies with a primary listing on the Johannesburg Stock Exchange (JSE) and mining companies whose main operations are in Africa and that have a secondary listing on the JSE, for the financial year ends to June 2016. We used a cut-off market capitalisation of R200 million and excluded all companies with suspended listings.

Our selection criteria excluded global mining companies Anglo American, BHP Billiton, South32 and Glencore Xstrata. Although these companies have a significant South African footprint, their global exposure and size mean that they do not necessarily reflect trends in the South African mining environment. While a large number of the entities included also have international exposure, the bulk of their operations are in Africa.

The results aggregated in this report have been sourced from information that is publicly available and consists primarily of annual reports or reviewed results made available to shareholders. Companies have different year ends and report under different accounting regimes.

Information has been aggregated for the financial years of individual companies and no adjustments have been made to take into account different reporting requirements and year ends. As such, the financial information shown for 2016 covers reporting periods from 1 October 2014 to 30 June 2016, with each company's results included for the 12-month financial reporting period that falls into this time frame.

Information for the previous year comprises information for the 27 companies selected in the current year, except where indicated otherwise.

All currency figures in this publication are reported in South African rand, except where specifically stated otherwise. The results of companies that report in currencies other than the rand have been translated at the average rand exchange rate for the financial year, with balance sheet items translated at the closing rand exchange rate.

Some diversified companies undertake part of their activities outside the mining industry. No attempt has been made to exclude such non-mining activities from the aggregated financial information.



Contributors

- Nthato Makhetha
- Jaco Viviers
- Jayne Mammat
- Juan Coetzee
- Laetitia Le Roux
- Luyanda Mngadi
- Michelle Botas
- Nico Oosthuizen
- Pieter Theron
- Rene Richter
- Scott Williams
- Vuyiswa Khutlang

11 About PwC





Our global footprint as a firm means we have the right people to support you everywhere



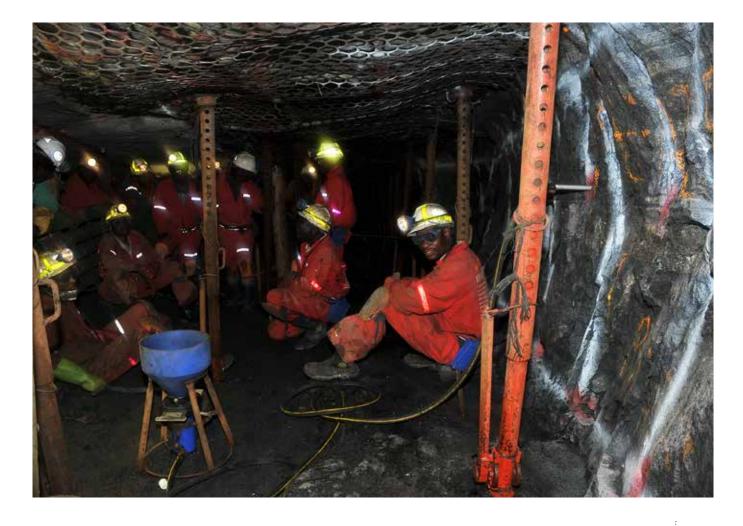
Navigating the territory....

Our ability to quickly combine the right competencies, market knowledge and mining industry insights – uniquely for each client issue and territory – sets us apart from the rest.

We help organisations explore opportunities, navigate risk, achieve business goals and change business networks across Africa. Our professionals have financial and operational experience, knowledge of business processes, and industry insight which enables us to listen and understand your goals and the environment (competitive, economic and regulatory) in which you operate and provide you with a solution that's right for your organisation.

Our African mining practice actively recruits seasoned, multi-disciplined leaders with proven industry experience, a demonstrated ability to solve the most difficult business problems and a history of leading successful and sustainable continuous improvement initiatives from start to finish. We believe it's critical that our professionals can quickly understand your business, challenges and culture and then design and implement an effective solution for your organisation.

Apart from our extensive global reach and our deep level of industry experience and skills, building relationships with our clients is key to us. This is the core of what makes partnering with us effective and the return on your investment with us invaluable.



An extensive African Footprint

Our offices...



Africa is a vital part of our agenda....

PwC is the leading network in Africa based on staff numbers, turnover and office footprint. With 66 offices in 36 countries and more than 9000 people, our ability to quickly combine the right competencies, market knowledge and mining industry insights – tailored to each client issue and territory – sets us apart from the rest.

Our PwC Mining Centres of Excellence (MCoE) in the south, east and west market regions in Africa are equipped to assist with the various requirements and requests of companies operating within the mining industry. Our strategies are developed and matured to ensure that we support all companies operating throughout the African continent, made possible through concerted co-ordination across Africa.

Contacts

With mining experts working in each key mining area across South Africa, our teams are helping clients deliver on specific projects and organisational growth aspirations. We offer advisory, tax and audit services to global corporations and locally-listed companies.

We complement this with:

- A suite of niche mining consulting capabilities focused on optimising value across mining operations and effectively managing risk; and
- A comprehensive client feedback programme to ensure we are consistently delivering on individual client needs.

For any mining related queries, services or assistance required, please contact our Mining Centre of Excellence at mining.africa@za.pwc.com.

Jock O'Callaghan

Global Mining Leader

Melbourne, Australia T: +61 (3) 8603 6137

E: jock.ocallaghan@pwc.com

Michal Kotze

Africa Energy, Utilities and Mining Leader

Johannesburg, South Africa

T: +27 11 797 4603

E: michal.kotze@pwc.com

Andries Rossouw

Mining Assurance Partner and Project Leader

Johannesburg, South Africa

T: +27 11 797 4060

E: andries.rossouw@pwc.com

Nthato Makhetha

Mining Assurance Partner and Project Coordinator

Johannesburg, South Africa

T: +27 11 797 5889

E: nthato.makhetha@pwc.com







©2016 PricewaterhouseCoopers ("PwC"), the South African firm. All rights reserved. In this document, "PwC" refers to PricewaterhouseCoopers in South Africa, which is a member firm of PricewaterhouseCoopers International Limited (PwCIL), each member firm of which is a separate legal entity and does not act as an agent of PwCIL. (16-19498)