EDISON

Pan African Resources

Interim results

Elikhulu underpins recovery

Metals & mining

Pan African's (PAF) earnings and output in H1 were consistent with our prior FY19 expectations, with a 54.2% increase in gold produced from continuing operations and a 23.1% decline in AISC combining to result in a 116.7% increase in EPS in GBP. Compared with H218, there were substantial cost improvements at Barberton, the Barberton Tailings Retreatment Project (BTRP) and the Evander Tailings Retreatment Project (ETRP). Most encouragingly, unit working costs at Elikhulu were 4.3% lower than our long-term projections and a similar performance in FY20 will propel EPS to closer to c 2p/share.

Year end	Revenue (£m)	PBT* (£m)	EPS* (p)	DPS (p)	P/E (x)	Yield (%)
06/17	167.8	19.4	1.22	0.45	7.4	5.0
06/18	154.2	2.4	1.60	0.00	5.6	N/A
06/19e	164.9	31.1	1.14	0.38	7.9	4.2
06/20e	180.2	54.1	1.72	0.49	5.2	5.4

Note: *PBT and EPS are normalised, excluding amortisation of acquired intangibles and exceptional items.

Output expected to meet guidance of 170koz in FY19

Barberton Mines produced 38,550oz in H119 and we expect it to produce 42,321oz in H219. The BTRP produced 12,006oz in H119 and we expect it to produce 10,000oz in H219, while the ETRP produced 6,345oz in H1 and Elikhulu produced 15,292oz. However, we expect Elikhulu output to more than double in H219 to 31,733oz, with a full six-month contribution at full capacity (and incorporating the throughput hitherto directed through the ETRP), such that group-wide production will meet management's guidance of 170,000oz for FY19 with a 13,753oz contribution from residual vamping activities at Evander underground.

H219 forecast to be materially stronger than H119

Pan African's operational and financial environment is shaping up to be much more benign in H219 than H1, with a higher gold price (eg US$1,323/oz vs US$1,222/oz) and a steady (but not strengthening) rand forecast to almost double earnings in H219 vs H119. Coupled with a 72.1% decline in capex (updated estimate), we expect this to result in strongly positive cash flow in H219 (cf an outflow in H119).

Valuation: 17.69p plus 19.2m underground Wits oz

Our headline absolute valuation of PAF of 12.32p/share from its producing assets remains effectively unchanged since our last note. This increases to 17.69p/share (cf 17.01p previously) once new projects and other assets are taken into account, plus the value of c 19.2m underground Witwatersrand ounces, which could lie anywhere in the range of 0.17–4.05p per share, depending on market conditions. In the meantime, if PAF's historical average price to normalised EPS ratio of 9.4x in the period FY10–18 is applied to our forecasts, its share price could be expected to climb to 10.7p in FY19 and 16.1p in FY20 (with further potential increases thereafter). It also remains cheaper than its South African- and London-listed gold mining peers on at least 70% of valuation measures regardless of whether Edison or consensus forecasts are used. Finally, based on our assumptions, its dividend yield will be within the top ten of the 51 precious metals companies expected to pay a dividend over the course of the next 24 months, if not in FY19 then in FY20.

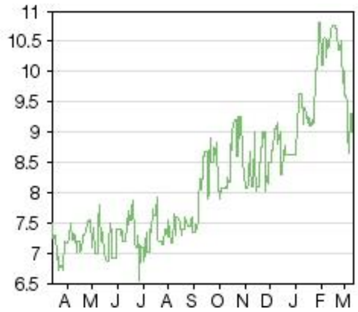
12 March 2019

Price	**9.0p**
Market cap	**£201m**

ZAR18.3064/£, ZAR14.1611/US$, US$1.2935/£

Net debt (£m) at end-December 2018 excluding ZAR130.5m (£7.1m) of MC Mining shares (formerly Coal of Africa)	102.7
Shares in issue	2,234.7m
*Effective 1,928.3m post-consolidation	
Free float	86%
Code	PAF
Primary exchange	AIM/JSE
Secondary exchange	N/A

Share price performance



%	1m	3m	12m
Abs	(13.5)	2.2	17.2
Rel (local)	(13.7)	(2.9)	19.7
52-week high/low		10.8p	6.5p

Business description

Pan African Resources has three major producing or near-producing precious metals assets in South Africa: Barberton (target output 95koz Au pa), the Barberton Tailings Retreatment Project (20koz) and Elikhulu (55koz) incorporating the Evander Tailings Retreatment Project (10koz).

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Edison profile page

Pan African Resources is a research client of Edison Investment Research Limited

Investment summary

Company description: African gold miner

Pan African is a South Africa-based gold mining group, which has dual primary JSE and AIM listings and operates three major assets in South Africa: Barberton (target output 95koz Au pa), the Barberton Tailings Retreatment Project (20koz) and Elikhulu incorporating the Evander Tailings Retreatment Project (55koz + 10koz).

Valuation: 17.69p and rising

In the medium to longer term, we estimate that Pan African is capable of generating average earnings of c 1.97p/share and paying average (maximum potential) dividends of approximately the same order of magnitude. At currently prevailing forex rates, we calculate that the net present value of such a dividend stream is 12.32p (discounted at 10% pa), to which an additional 5.37p can be immediately added for new business projects, which should increase once the details of the Royal Sheba feasibility study are known in a few months' time. In the meantime, Pan African is cheaper than its immediate peers on at least 70% of a range of valuation measures. On our forecasts, it will record a dividend yield among the top ten of the 51 precious metal miners expected to pay a dividend over the course of the next 24 months, if not in FY19 then almost definitely in FY20 (subject to there being no other new, major value-accretive projects competing for funding internally).

Financials: Net debt free in five years

PAF had net debt of £102.7m on its balance sheet as at 31 December 2018 (cf £91.0m as at June 2018, £42.2m as at December 2017 and £7.0m as at June 2017). As such, net debt equated to a gearing (net debt/equity) ratio of 82.2% (cf 78.6% as at end-FY18) and a leverage (net debt/[net debt + equity]) ratio of 45.1% (cf 44.4% as at end-FY18). As at end-December 2018, however, the most intense phase of capex at Pan African relating to Elikhulu has now been completed and we expect group capex to decline sharply to ZAR163.2m in H219 compared to ZAR585.9m in H119, with the result that negative cash flows before financing activities in H119 will reverse to become positive before financing activities in H219. While we forecast these to approximately cancel each other out in FY19, such that net debt at end-FY19 will be approximately that at end-FY18, beyond June 2019 we expect PAF to pay down its net indebtedness at a rate in excess of £20m per annum (excluding potential dividend distributions), such that it will be net debt free in early FY24 (all other things being equal).

Sensitivities: Fewer than the usual South African profile

Our valuation of Pan African (above) has been conducted at an average long-term gold price of US$1,382/oz until 2040. Apart from gold price risk, other risks include the sovereign risk relating to South Africa, and normal geological and engineering risks relating to underground mining (albeit c 48% of future production is expected to be derived from tailings retreatment operations). However, note that this underground mining risk is considerably less than that normally associated with underground mining operations in South Africa, as Pan African's operating underground mine is located on a greenstone belt in Mpumalanga at Barberton and is not therefore a Witwatersrand asset in terms of either geology or the depth to which it mines (eg 1,700m), which is more typical of a Canadian underground mining operation than a South African one. Otherwise, normal commercial risks include exchange rate movements (in particular the rand/dollar and rand/sterling rates and, by extension, the sterling/dollar rate), regulatory risks and workforce risks.

H119 results summary

Earnings and output in H1 were consistent with our prior FY19 expectations, with a 54.2% increase in gold produced from continuing operations (to 81,014oz) and a 23.1% decline in AISC (to US$975/oz) combining to result in a 116.7% increase in EPS in sterling terms to 0.38p, despite a barely changed gold price in either US dollar or rand terms. Notable operational features of the results (compared with the prior six-month period – ie H218, rather than H118) were as follows:

- A 12.4% decline in the value of the rand versus the US dollar, from ZAR12.3050/US$ in the six months from January-June 2018, to ZAR14.1873/US$ in the six months from July-December 2018.
- A 5.9% decline in the value of sterling versus the US dollar, from US$1.3757/£ in the six months from January-June 2018, to US$1.2945/£ in the six months from July to December 2018.
- A 23.4% increase in tonnes milled at Barberton, albeit including a contribution of tonnes milled from surface sources, which made up 8.9% of the total.
- A 12.4% decline in unit working costs at Barberton, from ZAR4,405/t to ZAR3,860/t, albeit with the caveat that the costs associated with tonnes milled from surface sources (point 3, above) would inevitably have been lower than those associated with tonnes milled from underground sources.
- Output at Elikhulu reached its nameplate capacity of 1Mt per month in October 2018 and a site visit I attended confirmed that it would achieve its expanded rate of throughput of 1.2Mtpm to incorporate feedstock hitherto directed towards the ETRP from February 2019.
- Most encouragingly, unit working costs at Elikhulu were 4.3% lower than projected at ZAR32.00/t (cf our long-term projected level of ZAR33.44/t) to result in a unit cash cost of production of US$517/oz (the second lowest of the Pan African group, after the BTRP at US$510/oz); we anticipate that a similar performance in FY20 will result in Elikhulu becoming PAF's lowest cost producer and will propel group EPS towards c 2p/share.
- A 41.7% increase in tonnes processed at the BTRP after the successful commissioning of a regrind mill in May 2018.
- A 27.7% decline in unit working costs at the BTRP, from ZAR203/t to ZAR147/t (below Edison's long-term projected level of ZAR160/t).
- A 32.4% decline in (implied) unit working costs at the ETRP, from ZAR79.03/t to ZAR53.41/t – albeit under the influence of a 52.5% decline in higher cost tonnes from surface feedstocks. Nevertheless, the level of ZAR53.41/t is lower than our long-term projected cost of ZAR60.19/t.
- An estimated ZAR58.9m loss from underground operations at Evander, albeit these (vamping) operations were only sustained into H119 to provide water from the ETRP and will be discontinued in June. Note that, notwithstanding the discontinuation of these operations, Pan African will still retain the optionality around pillar mining at 8 Shaft (see pages 6–8).
- Notwithstanding the above improvements in productivity, there have been no fatalities recorded across the group for over 18 months, while the lost time injury frequency rate (LTIFR) improved to 1.77 (cf 4.05 in 2017) per million man hours and the reportable injury frequency rate improved to 0.53 (cf 0.62 in 2017) per million man hours. At the same time, Barberton's Fairview Mine reached one million fatality-free shifts in July 2018.

The other major feature of the results was the continued acceleration of capex into earlier time periods. In this case, group-wide capex was ZAR585.9m, with a ZAR494.9m contribution from capex related to Elikhulu, which thus comprised 84.5% of the total. While this contributed to an increase in group net debt, from £91.0m as at end-June 2018 to £102.7m as at end-December, hereafter capex is expected to decline sharply (to ZAR163.2m in H219 – Edison estimate) at precisely the time when earnings and cash flow are expected to leap ahead owing to increased production from higher-margin operations (see Exhibit 1):

Exhibit 1: PAF underlying P&L statement by half-year (H118–H219e) actual and expected

£000s (unless otherwise indicated)	H118 (as reported)	H218 (implied)	FY18	FY18 (underlying)	FY18 (as reported)	H119	H219e	FY19e (current)	FY19e (previous)
Mineral sales	82,900	74,000	156,900	108,500	108,500	75,300	91,067	166,367	160,310
Realisation costs	(1,500)	(1,200)	(2,700)	(2,000)	(2,000)	(600)	(830)	(1,430)	(199)
Realisation costs (%)	1.81	1.62	1.72	1.84	1.84	0.80	0.91	0.86	0.12
On-mine revenue	81,400	72,800	154,200	106,500	106,500	74,700	90,237	164,937	160,111
Cost of production	(69,600)	(69,200)	(138,800)	(77,700)	(77,700)	(54,200)	(55,933)	(110,133)	(104,226)
Depreciation	(5,900)	(5,100)	(11,000)	(4,900)	(4,900)	(5,300)	(5,701)	(11,001)	(13,157)
Mining profit	5,900	(1,500)	4,400	23,900	23,900	15,200	28,603	43,803	42,728
Other income/(expenses)	(800)	(14,900)	(15,700)	(4,200)	(4,200)	(1,400)	0	(1,400)	(1,252)
Loss in associate etc	(400)	400	0	0**	0**	0	0	0	0
Loss on disposals	0	(300)	(300)	0	0	0	0	0	0
Impairment costs	0	(106,300)	(106,300)	Excl.	(8,200)	0	0	0	0
Royalty costs	(300)	(300)	(600)	(400)	(400)	(400)	(2,719)	(3,119)	(1,394)
Net income before finance	4,400	(122,900)	(118,500)	19,300	11,100	13,400	25,885	39,285	40,082
Finances income	700	1,300	2,000	1,500	1,500	300			
Finance costs	(800)	(2,600)	(3,400)	(3,200)	(3,200)	(4,400)			
Net finance income	(100)	(1,300)	(1,400)	(1,700)	(1,700)	(4,100)	(5,455)	(9,555)	(9,555)
Profit before taxation	4,300	(124,200)	(119,900)	17,600	9,400	9,300	20,430	29,730	30,527
Taxation	(1,000)	27,600	26,600	2,100	2,100	(1,800)	(7,263)	(9,063)	(10,774)
Marginal tax rate (%)	23.3	22.2	22.2	(11.9)	(22.3)	19.4	35.6	29.1	35.3
PAT (continuing ops)	3,300	(96,600)	(93,300)	19,600	11,500	7,500	13,167	20,667	19,753
Loss from discontinued ops	N/A	N/A	N/A	(6,700)	(104,800)	N/A			
Profit after tax	3,300	(96,600)	(93,300)	12,900	(93,300)	7,500	13,167	20,667	19,753
Headline earnings	3,300	10,000	13,300	13,300	13,300	7,500	13,167	20,667	19,753
EPS (p)	0.18	(5.31)	(5.15)	0.71	(5.15)	0.39	0.68	1.07	1.02
HEPS* (p)	0.20	0.55	0.73	0.73	0.73	0.39	0.68	1.07	1.02
EPS from continuing ops (p)				1.08		0.39	0.68	1.07	1.02

Source: Pan African Resources, Edison Investment Research. Note: As reported basis. *HEPS = headline earnings per share (company adjusted basis). **Loss on assets held for sale reclassified into loss from discontinued operations.

Note that Exhibit 17 is presented on the basis of the FY18 column (column 4, above) where ‘discontinued operations’ are fully consolidated.

Otherwise, in the wake of the closure of large-scale underground mining operations at Evander, Barberton accounted for 62.4% of group-wide costs of production and provides some idea of inflationary pressures in the period under review (H119 vs H118):

- Salaries and wages (46% of the total): +7.9% in rand terms (vs +7.6% in FY18) after Barberton signed a three-year wage agreement with annual increases over the period of c 6.5% and 5.5% for National Union of Mineworkers and United Association of South Africa members, respectively.
- Electricity (12% of the total): +14.1% in rand terms (vs +9.6% in FY18) reflecting the regulator’s average national increase of 5.3% from 1 April 2018 plus increased consumption at the BTRP in the aftermath of the installation of the new regrind mill in May 2018.
- Mining and processing (28% of the total): +19.3% in rand terms (vs -9.6% in FY18) owing to increased tonnages mined.
- Engineering and technical (7% of the total): -6.7% in rand terms (vs +13.0% in FY18) following a reduction in secondary support costs and a series of cost saving initiatives.
- Security (5% of the total): +88.1% in rand terms as a result of an increased focus on addressing illegal mining activities and one-off costs incurred during instances of community unrest.

FY19 guidance

Management reiterated its production guidance of 170,000oz in FY19. This reflects:

- Elikhulu achieving a throughput rate of 1.0Mtpm in December and an anticipated throughput rate of 1.2Mtpm from February onwards.
- Barberton achieving its production targets from the end of FY18 onwards under the influence of two (cycling) production platforms. Management is now in the process of establishing a third such platform (the 256 level platform), which will increase underground mining flexibility still further in conjunction with a concurrent 60% increase in underground development rates.
- The successful installation of the 1.7MW regrind mill at the BTRP, which has allowed it to efficiently treat coarser fraction tailings from H119 onwards and open up the older (albeit lower-grade) Harper dumps for processing.

A summary of our (unchanged) aggregate production expectations – albeit honed for H119 results and forecast H219 performance – by business segment, is as follows:

Exhibit 2: PAF group-wide production, actual and forecast, FY14–FY19e (oz)

Operation	FY14	FY15	FY16	FY17	H118	H218	FY18	Q119	Q219 (implied)	H119	H219e	FY19e (current)	FY19e (previous)
Barberton UG	88,738	81,493	84,690	71,763	32,159	40,966	73,125	21,278	17,272	38,550	42,321	80,871	84,641
BTRP	22,885	24,283	28,591	26,745	8,452	9,052	17,504	5,923	6,083	12,006	10,000	22,006	20,000
Barberton	**111,623**	**105,776**	**113,281**	**98,508**	**40,611**	**50,018**	**90,629**	**27,201**	**23,355**	**50,556**	**52,321**	**102,877**	**104,641**
Evander UG	76,556	63,558	73,496	43,304	32,734	15,831	48,565	3,815	5,006	8,821	4,932	13,753	0
ETRP	0	6,523	18,151	29,473	11,937	9,313	21,250	3,819	2,526	6,345	**0	**6,345	20,000
Evander	**76,556**	**70,081**	**91,647**	**72,777**	**44,671**	**25,144**	**69,815**	**7,634**	**7,532**	**15,166**	**4,932**	**20,098**	**20,000**
Elikhulu	0	0	0	0	0	0	0	2,894*	13,134	15,292	31,733**	47,025**	45,359
Total	**188,179**	**175,857**	**204,928**	**173,285**	**85,282**	**75,139**	**160,444**	**37,729**	**44,021**	**81,014**	**88,986**	**170,000**	**170,000**

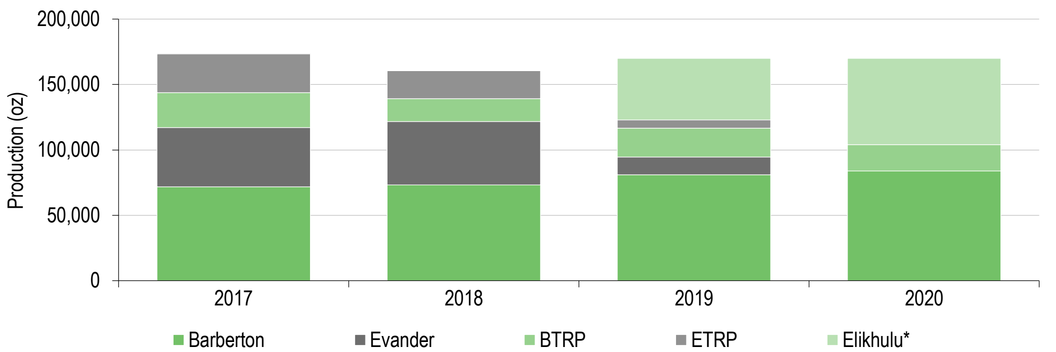
Source: Edison Investment Research, Pan African Resources. Note: Numbers may not add up owing to rounding. UG = underground. *Includes 736oz of capitalised pre-production output in August. **ETRP throughput processed via Elikhulu plant from H219 onwards.

Forecasts, guidance and producing assets valuation

Four producing assets consolidating into three (more efficient) assets

In addition to reiterating its production guidance for FY19, management provided production guidance for FY20 at the same level. However, while no change is expected at the aggregate level, we anticipate that there will be no contribution to production from underground operations at Evander at all, while all of the ETRP's output will henceforward be directed via the Elikhulu plant to benefit from cost synergies and economies of scale.

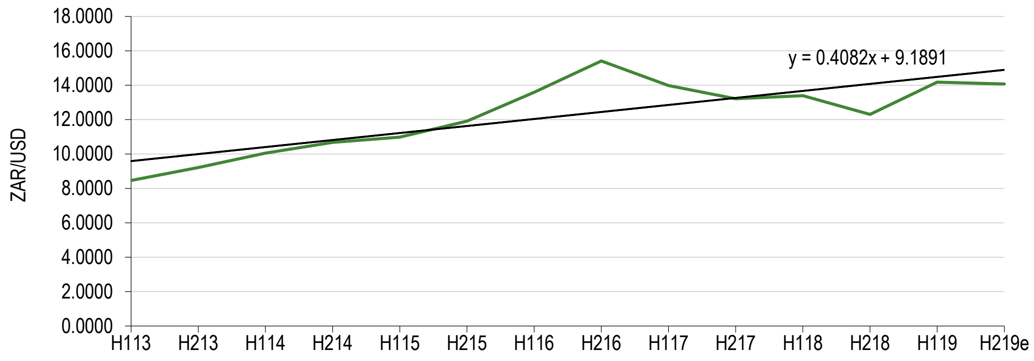
Exhibit 3: Edison estimate of PAF production, FY17–FY20e (oz)



Source: Edison Investment Research. Note: *Elikhulu plant incorporating ETRP throughput from H219 onwards.

At the same time, the price of gold has increased by more than US$100/oz (or 9.8%) in US dollar terms, from c US$1,202/oz in mid-November to c US$1,300/oz currently, while the rand (which otherwise often performs in counter-phase to the gold price) has done little more than arrest a declining trend in its value versus the US dollar:

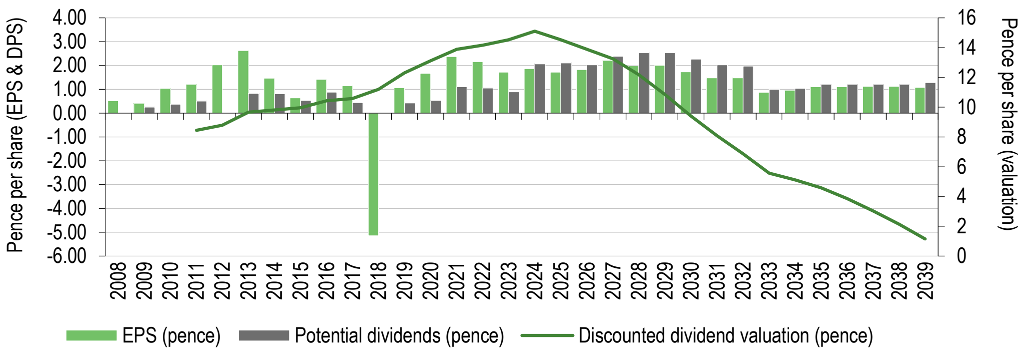
Exhibit 4: ZAR/USD, H113–H219e



Source: Edison Investment Research, Pan African Resources

The three effects (forecast production, gold price and forex) serve to underpin our ostensibly unchanged longer-term earnings and cash flow expectations, and consequently our absolute valuation of PAF (based on its existing producing assets) at 12.32p per share cf 12.50p previously (see Return to dividend paying status in FY19 a priority, published on 11 October 2018), based on the present value of our estimated maximum potential stream of dividends payable to shareholders over the life of its mining operations (applying a 10% discount rate).

Exhibit 5: PAF estimated life of operations diluted EPS and (maximum potential) DPS*



Source: Edison Investment Research, Pan African Resources. Note: *From FY24. Excludes discretionary exploration investment.

Note that our updated (normalised) EPS forecast of 1.14p in FY19 (see Exhibit 17) compares to a mean consensus forecast of 1.52p within a range 1.00–2.00p (source: Refinitiv, 12 March), while our FY20 forecast of 1.72p compares to a mean consensus of 2.08p within a range 1.80–2.70p.

Other assets

Other major assets attributable to Pan African include the residual resource at Evander (including the Rolspruit and Poplar projects), Egoli (formerly the 2010 pay channel project), the Fairview sub-vertical shaft project, the Evander 8 Shaft Pillar project and the Royal Sheba project.

Evander underground

In the wake of the Evander underground closure, we deem the Evander underground resource to be one of PAF's assets, albeit one that should now be valued as an in-situ resource, rather than on the basis of future earnings, cash flows, dividends, etc. As at 30 June 2018, the underground resource at Evander (including Rolspruit, Poplar and Evander South, but excluding 8 Shaft and Egoli, which are valued separately – see Exhibit 10) amounted to 19.2Moz, categorised as follows:

Exhibit 6: Evander underground resource estimate

Resources	Tonnes (kt)	Grade (g/t)	Moz
Measured	0	0.00	0.000
Indicated	45,318	10.54	15.362
Inferred	16,560	7.21	3.840
Total	**61,878**	**9.65**	**19.202**

Source: Pan African Resources, Edison Investment Research

The value of Witwatersrand basin resources (where Evander is located) has proved to be persistently difficult to place within a global context – a problem exacerbated by an absence of pure Wits basin exploration companies. PAF bought Evander from Harmony in mid-2012 at a price equivalent to US$5.26 per resource ounce (albeit the gold price was then materially higher, averaging US$1,668/oz in that year). More recently, Sibanye acquired Wits Gold (although not then a pure exploration company) at a price equivalent to US$0.22/oz, at a time when the gold price was c US$1,225/oz. On the basis of these two valuation points, the in-situ value of the Evander underground assets could range from 0.22–5.24 US cents per PAF share, as shown below:

Exhibit 7: EGM underground valuation range

Valuation basis	Wits Gold acquisition in December 2013	PAF acquisition of EGM in 2012
In-situ value (US$/oz)	0.22	5.26
Implied EGM underground valuation (US$m)	4.2	101.0
Ditto (US cents per share)	0.22	5.24
Ditto (pence per share)	0.17	4.05

Source: Edison Investment Research

Evander 8 Shaft pillar mining

In the meantime, management commissioned a feasibility study into the merits of mining the Evander 8 Shaft pillar and high-grade areas in proximity to the pillar in order to extend the final closure date of the shaft, generate positive cash flows and provide further employment opportunities for those affected by the Evander Section 189 retrenchment process. Total resources at 8 Shaft (incorporating the 8 Shaft pillar), which are not included in those in Exhibits 6 and 7, above, amount to 4.6Moz, as follows:

Exhibit 8: Evander 8 Shaft resource

Resources	Tonnes (kt)	Grade (g/t)	Moz
Measured	2,220	15.90	1.135
Indicated	2,040	14.26	0.935
Inferred	6,760	11.54	2.508
Total	**11,020**	**12.92**	**4.578**

Source: Pan African Resources, Edison Investment Research

The feasibility study on the 8 Shaft pillar project has recently been completed and a decision on whether to proceed or not with the project will be made in the next few weeks. A summary of results of the feasibility study are as follows:

- initial capex of ZAR15.4m;
- total capex of ZAR56m;
- throughput rate of 11.5ktpm producing 30koz per annum, on average, with peak production of 39koz in the second year of operations;

- three-year life-of-mine; and
- a project pre-tax NPV of US$19.4m (1.0 US cents per share) at a 10% real discount rate.

A detailed production model relating to the Evander 8 Shaft pillar project is not currently available to investors. However, making a number of other assumptions regarding unit working costs, the timing of capex and taxes etc, we calculate an NPV for potential dividends payable by the project to investors of £11.2m, at its customary 10% discount rate, or 0.58p/share.

Egoli

The Egoli project contains more than 1Moz of gold in the measured and indicated categories of resources. Unlike historical operations at Evander's 8 Shaft, where mining operations were located some 10km in tramming distance from ore hoisting infrastructure, the tramming distance between the Egoli ore body and 7 Shaft is no more than 4.5km. Furthermore, Egoli would not suffer from 8 Shaft's inability to process ore and waste streams separately. As a result, the ore body may be accessed within in a relatively short time frame and with relatively little risk.

The results of a recent optimisation study based on an earlier DRA Global feasibility study on Egoli are:

- initial capex of ZAR870m (vs ZAR572m previously);
- a pre-tax internal rate of return of 34% based on a gold price of ZAR547,000/kg;
- a project pre-tax NPV of ZAR1.04bn at a 12.4% real discount rate or ZAR1.354m at a 10% discount rate; and
- an incremental all-in sustaining cost of c ZAR300,000/kg over the life of the mine.

On the basis of these, plus a number of other assumptions, we calculate an NPV for potential dividends payable by Egoli to investors of £69.1m, at our customary 10% discount rate, or 3.59p/share. While management is not making the Egoli project a priority owing to its deep level 'Witwatersrand' nature, it is, nevertheless, studying a number of scenarios whereby the project can be started on a small scale, only evolving into a larger-scale operation over time and funded via its own internally generated cash flows.

Royal Sheba

Recent drilling at Royal Sheba comprised 40 holes with lengths of 80–250m completed in November 2018 and increased resources from 720koz to 757koz – 49% of which is at or near surface at a grade of 1.96g/t over a 900m strike length and with a 150m down-dip extension to the south at an angle of 50°.

Exhibit 9: Total Royal Sheba resource

Resources	Tonnes (kt)	Grade (g/t)	oz
Measured	4,050	2.47	321,000
Indicated	3,840	2.80	346,000
Inferred	1,070	2.65	91,000
Total	**8,970**	**2.62**	**757,000**

Source: Pan African Resources, Edison Investment Research. Note: Open pit cut-off grade 0.5g/t; underground cut-off grade 1.7g/t.

The mineralisation is encapsulated in a shear envelope of the Sheba Fault, ranging in width from 8–25m, with gold occurring in sulphide minerals and as native gold. In-situ grades range from 0.5g/t to 174g/t. Significantly, the mineralisation is non-refractory and amenable to processing via normal carbon-in-leach (CIL) methods and, as a result, could increase gold production from Barberton 'significantly' in future years by means of an open pit and a simple expansion of processing capacity. Management has commissioned a definitive feasibility study at Royal Sheba, which it expects to finalise in the coming months. Among other things, the study will now include a review of possible near-term improvements to underground ore handling logistics and infrastructure, and existing processing plant throughput capacity. Under almost any circumstances, however, it is expected that the project will be financeable from debt and cash flows only, without recourse to the equity markets. In the meantime, at Pan African's prevailing enterprise value rating of US$11.77 per resource ounce, Royal Sheba's resources are worth a pro rata US$8.9m, or 0.46 US cents or 0.36p, per share.

New Consort MMR project

Following the success at Royal Sheba, Pan African has also embarked on an extended exploration programme within Barberton Mines' mining right at the New Consort mine. The programme is centred around historical workings and is targeting the Main Maiden Reef (MMR) as a potential new satellite deposit for Royal Sheba

The first phase of drilling eight holes is now 75% complete and is testing the orebody on a single 100m x 100m slice. The assay results from four of the six completed holes indicate discrete zones of mineralisation occurring as lenses within a 40m zone in the footwall of the Consort bar up to the first serpentine contact. In addition, the drill holes also intersected another amphibolite-serpentine contact around 70–80m further into the footwall and assay results indicate that pay shoots of mineralisation exist near this contact as well.

Fairview sub-vertical shaft

Finally, Pan African has commenced construction of a new sub-vertical shaft at Fairview to bypass the hoisting bottleneck at its No 3 Decline and to facilitate improved access to additional mining platforms below 42 Level at the high-grade 11-block of the MRC. To date, development of top and bottom access is reported to be nearly complete with shaft development commencing shortly. Project capex is forecast to be ZAR105m over two to three years. Following commissioning of the shaft, it is expected that productivity improvements will yield an additional 7–10koz of gold per annum owing to the increased hoisting capacity.

Group valuation

Including its growth projects, an updated summary of our overall valuation of PAF (including the 8 Shaft pillar project for the first time) is therefore now as follows:

Exhibit 10: PAF absolute valuation summary

Project	Current valuation (pence/share)	Previous valuation (pence/share)
Existing producing assets (incl Elikhulu)	12.32	12.50
Egoli	3.59	3.53
Fairview Sub-Vertical Shaft Project	0.47	0.46
Royal Sheba	0.36*	0.36*
MC Mining shares	0.37	0.16
Evander 8 Shaft Pillar project	0.58	-
Sub-total	**17.69**	**17.01**
EGM underground resource	0.17–4.05	0.17–4.15
Total	**17.86–21.74**	**17.18–21.16**

Source: Edison Investment Research. Note: *Provisional pending finalisation of DFS.

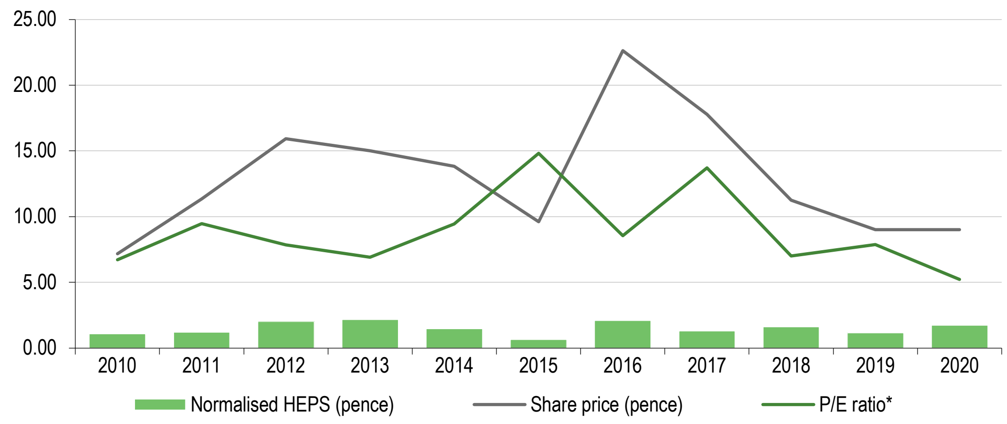
Note that the increase in value of PAF's shareholding of 13.1m MC Mining shares reflects merely the increase in the latter's share price from c ZAR4.50/share prior to November 2018 to c ZAR9.99/share currently (adjusted for the appropriate forex rate effect into sterling).

Historical, relative and peer group valuation

Historical

Exhibit 11, below, depicts PAF's average share price in each of its financial years, from FY10 to FY17 and compares this with normalised HEPS in the same year. For FY19 to FY20, the current share price (of 9.0p) is compared with Edison's forecast normalised HEPS for FY19 to FY20. As is apparent from the graph, PAF's price to normalised HEPS ratio for FY19 remains below the average of its recent historical range of 9.4x (based on our forecasts – see Exhibit 17, below) Nevertheless, it is set to fall further – to a record low within the context of the time frame – in FY20, assuming that it meets Edison's (and consensus) earnings' expectations including the first full year of contribution from Elikhulu.

Exhibit 11: PAF historical price to normalised HEPS ratio, FY10–FY20e



Source: Edison Investment Research. Note: *Completed historical years calculated with respect to average share price within the year shown and normalised HEPS; zero normalisation assumed before 2016.

Stated alternatively, if PAF's average contemporary price to normalised EPS ratio of 9.4x in the period FY10-18 is deemed 'correct', then its share price should be 10.7p in FY19 and 16.1p in FY20 (with further increases anticipated from FY21 onwards).

Relative

In the meantime, over the next two years PAF remains cheaper than its South Africa- and London-listed gold mining peers on at least 70% of valuation measures (20 out of 30 individual measures in the table below), regardless of whether Edison or consensus forecasts are used.

Exhibit 12: Comparative valuation of PAF with South African peers

	EV/EBITDA (x)		P/E (x)		Yield (%)	
	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
AngloGold Ashanti	4.4	4.2	13.6	11.3	0.9	0.9
Gold Fields	4.0	3.6	17.0	14.2	1.9	2.3
Sibanye	3.8	3.4	11.1	7.5	0.0	3.6
Harmony	3.4	2.6	13.0	7.2	0.5	1.0
Centamin	4.3	3.7	18.2	15.1	4.6	5.5
Average (excluding PAF)	**4.0**	**3.5**	**14.6**	**11.1**	**1.6**	**2.7**
PAF (Edison)	5.3	3.6	7.9	5.2	4.2	5.5
PAF (consensus)	4.4	3.7	5.9	4.3	4.7	8.0

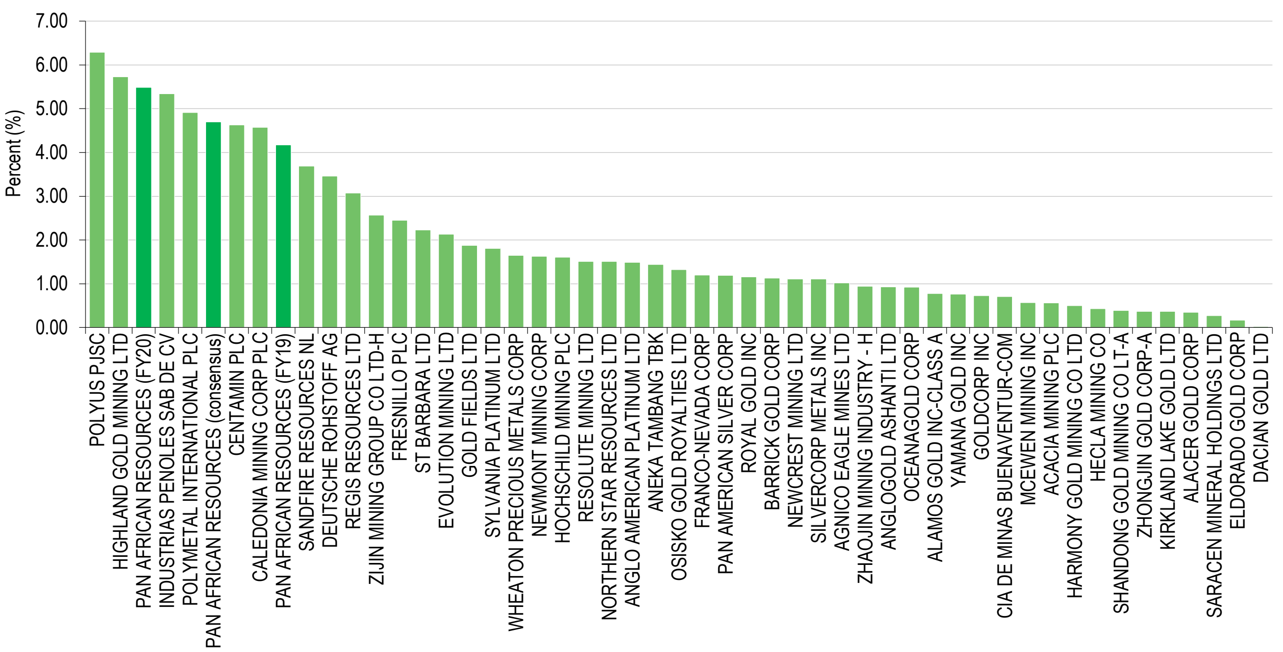
Source: Edison Investment Research, Refinitiv. Note: Consensus and peers priced at 12 March 2019.

Dividend

PAF has a target dividend payout ratio of 40% of net cash generated by operating activities, after allowing for the effect of sustaining capital on cash flow, contractual debt repayments and one-off items. After sustaining the costs related to the Evander underground closure in FY18, the Pan African board elected not to recommend a final dividend for that year. However, it stated that recommencing distributions to shareholders is a priority for the future.

Cash flows before financing activities were negative £14.3m in H119 and we forecast that they will be positive £11.3m in H219 under the influence of an improved operating performance, a better gold price, a steady rand and very significantly reduced capex. As a result, we expect group indebtedness at the end of FY19 to be similar to that at the end of FY18. Given that PAF's dividend policy is for a payout of 40% of net cash generated by operating activities after allowing for the effect of sustaining capital (but not expansionary capital other than value accretive new growth projects), we believe there is scope for the board to recommend a dividend up to 0.38p/share this year. Self-evidently, the extent to which this is done will depend on developments between now and September 2019 as well as due regard for PAF's banking covenants (see Exhibit 16). However, given that any dividend declared for FY19 would be paid in FY20, such a distribution would not affect the ratios pertinent to PAF's banking covenants for end-FY19, but rather H120 (ie at 31 December 2019), when we forecast that PAF will be in the process of paying down net debt at a rate in excess of £20m per annum (excluding dividend distributions). If our dividend forecast is correct, however, then Pan African will still have a dividend yield in the top ten of the 51 ostensibly precious metals companies paying dividends to shareholders over the course of the next 12 months. Note that there is no certainty nor guidance that an FY19 dividend will be paid; however, we observe that, in extremis, Pan African could fund our forecast FY19 dividend via the realisation of its shareholding in MC Mining. Should it pass its dividend for FY19 however, then we would regard it as an almost racing certainty (all other things being equal) that it would make a full distribution to shareholders in FY20 (see Exhibit 13, below). If it were to pass its dividend in FY19, it would also create the possibility that the company could instigate an interim dividend payment to shareholders in H120 in recompense.

Exhibit 13: Global precious metal mining companies ranked by forecast dividend yield, PAF highlighted (%)



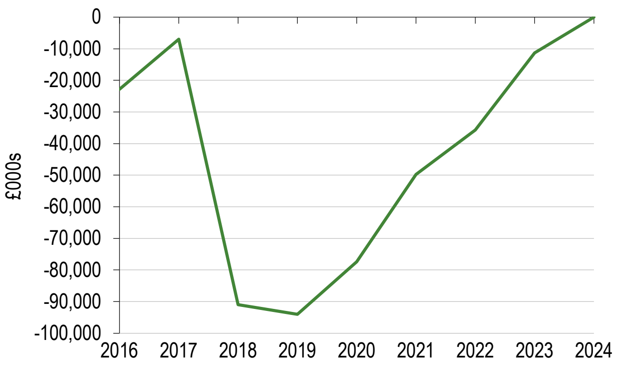
Source: Refinitiv for peers and PAF (consensus), Edison Investment Research for PAF FY19 and FY20. Note: Consensus data for peers priced 12 March 2019.

Financials

PAF had net debt of £102.7.0m on its balance sheet as at 31 December 2018 (cf £91.0m as at June 2018, £42.2m as at December 2017 and £7.0m as at June 2017). As such, net debt equated to a gearing (net debt/equity) ratio of 82.2% (cf 78.6% as at end-FY18) and a leverage (net debt/[net debt + equity]) ratio of 45.1% (cf 44.0% as at end-FY18).

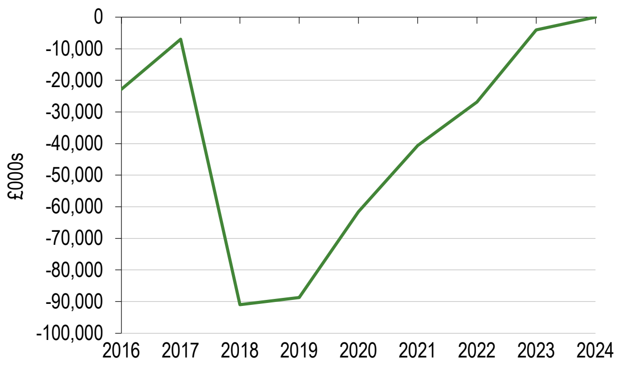
However, as at end-December, the most intense phase of capex relating to Elikhulu has now been completed and we expect group capex to decline sharply to ZAR163.2m in H219 compared to ZAR585.9m in H119, with the result that negative cash flows before financing activities in H119 will reverse to become positive cash flows before financing activities in H219. While we forecast these to approximately cancel each other out in FY19, beyond June 2019 we expect PAF to pay down its net indebtedness at a rate in excess of £20m per annum (excluding potential dividend distributions), as follows:

Exhibit 14: PAF estimated funding requirement, FY16 to FY24e (current)



Source: Edison Investment Research, Pan African Resources

Exhibit 15: PAF estimated funding requirement, FY16 to FY24e (previous)



Source: Edison Investment Research, Pan African Resources

Debt is principally financed via a ZAR1bn revolving credit facility (£54.6m at current exchange rates) plus a ZAR1bn term loan facility relating to the Elikhulu project and a banking facility. Principal on the Elikhulu facility is payable in equal instalments until maturity in June 2024, while the revolving credit facility (RCF) itself has been restructured to extend its maturity from mid-2020 previously to at least beyond mid-2024 currently. The group's RCF debt covenants and their actual recorded levels within recent history are as follows:

Exhibit 16: PAF group debt covenants

Measurement	Constraint	H119 (actual)	FY18 (actual)	H118 (actual)	FY17 (restated)	FY17 (actual)	H117 (actual)	FY16* (actual)	H116 (actual)
Net debt:equity	Must be less than 1:1	0.85	0.78	0.19:1	0.02:1	0.01:1	0.17:1	0.35:1	0.50:1
Net debt:EBITDA	Must be less than 2.5:1	3.24	3.73	2.25:1	0.08:1	0.05:1	0.48:1	0.12:1	0.13:1
Interest cover ratio	Must be greater than four times	3.64	4.61:1	4.62:1	19.32:1	10.00	21.99	23.98	18.08
Debt service cover ratio	Must be greater than 1.3:1	2.85	3.84:1	1.85:1	9.11:1	N/A	N/A	N/A	N/A

Source: Pan African Resources. Note: *Subsequently restated for disposals.

Note that, with the agreement of its bankers, PAF's net debt:EBITDA covenant is measurable only on 31 December 2019 to accommodate the construction of the Elikhulu project, while the interest cover ratio was reduced to 2.5:1 as at December 2018 (with the requirement that it be 4:1 thereafter).

Miscellaneous

Operational

On 7 September 2018, PAF announced that Barberton Mines Pty Ltd had successfully concluded a three-year wage agreement with the National Union of Mineworkers (the NUM) and the United Association of South Africa (UASA), which together represent the majority of workers at Barberton. The agreement provides for an average annual wage increase of approximately 6.5% and 5.5% for NUM and UASA members respectively over three years in local currency terms. The negotiations were successfully concluded with no industrial action or work stoppages, which compares with a settlement of +8% per annum after 2.5 days of stoppages in the equivalent negotiations in 2017.

Accounting

Separately, management has announced that the group's presentation currency is expected to change to US dollars, from sterling, for Pan African's results for the full year to end-June 2019.

Exhibit 17: Financial summary

£'000s	2013	2014	2015	2016	2017	2018	2019e	2020e
Year end 30 June	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS								
Revenue	133,308	154,202	140,386	168,404	167,759	154,200	164,937	180,192
Cost of sales	(71,181)	(106,394)	(110,413)	(108,223)	(134,007)	(138,800)	(110,133)	(102,022)
Gross profit	62,127	47,808	29,973	60,181	33,752	15,400	54,804	78,170
EBITDA	53,276	44,165	28,448	57,381	32,417	14,800	51,686	75,971
Operating profit (before GW and except.)	47,278	34,142	18,110	46,925	21,924	3,800	40,685	62,544
Intangible amortisation	0	0	0	0	0	0	0	0
Exceptionals	7,232	(12)	(198)	(12,183)	(1,248)	(122,300)	(1,400)	(1,252)
Other	0	0	0	0	0	0	0	0
Operating profit	54,510	34,130	17,912	34,742	20,676	(118,500)	39,285	61,292
Net interest	197	(191)	(2,109)	(1,006)	(2,523)	(1,400)	(9,555)	(8,460)
Profit before tax (norm)	47,475	33,951	16,001	45,919	19,401	2,400	31,130	54,084
Profit before tax (FRS 3)	54,707	33,939	15,803	33,736	18,153	(119,900)	29,730	52,832
Tax	(12,133)	(7,155)	(4,133)	(8,234)	(243)	26,600	(9,063)	(20,919)
Profit after tax (norm)	35,342	26,796	11,868	37,685	19,158	29,000	22,067	33,165
Profit after tax (FRS 3)	42,574	26,785	11,670	25,502	17,910	(93,300)	20,667	31,913
Average number of shares outstanding (m)	1,619.8	1,827.2	1,830.4	1,811.4	1,564.3	1,809.2	1,928.3	1,928.3
EPS - normalised (p)	2.18	1.46	0.64	2.08	1.22	1.60	1.14	1.72
EPS - FRS 3 (p)	2.63	1.47	0.64	1.41	1.14	(5.15)	1.07	1.65
Dividend per share (p)	0.83	0.82	0.54	0.88	0.45	0.00	0.38	0.49
Gross margin (%)	46.6	31.0	21.4	35.7	20.1	10.0	33.2	43.4
EBITDA margin (%)	40.0	28.6	20.3	34.1	19.3	9.6	31.3	42.2
Operating margin (before GW and except.) (%)	35.5	22.1	12.9	27.9	13.1	2.5	24.7	34.7
BALANCE SHEET								
Fixed assets	249,316	223,425	220,150	230,676	273,635	245,100	273,693	270,272
Intangible assets	38,628	37,040	37,713	38,682	41,425	49,200	50,936	52,673
Tangible assets	209,490	185,376	181,533	190,725	224,687	192,800	219,656	214,500
Investments	1,199	1,010	905	1,269	7,523	3,100	3,100	3,100
Current assets	26,962	23,510	17,218	22,016	37,090	20,000	17,810	34,945
Stocks	6,596	5,341	3,503	4,399	7,583	2,700	4,159	6,014
Debtors	15,384	12,551	10,386	14,891	14,813	14,800	11,851	12,851
Cash	4,769	5,618	3,329	2,659	9,447	700	0	14,279
Current liabilities	(24,066)	(24,012)	(22,350)	(32,211)	(31,251)	(33,400)	(45,908)	(36,409)
Creditors	(23,202)	(19,257)	(17,301)	(25,230)	(27,105)	(28,200)	(38,410)	(31,209)
Short-term borrowings	(864)	(4,755)	(5,049)	(6,981)	(4,146)	(5,200)	(7,498)	(5,200)
Long-term liabilities	(80,004)	(63,528)	(67,850)	(69,506)	(62,893)	(115,900)	(116,365)	(117,190)
Long-term borrowings	(11,133)	(8,141)	(16,313)	(18,456)	(12,290)	(86,500)	(86,500)	(86,500)
Other long-term liabilities	(68,871)	(55,387)	(51,537)	(51,049)	(50,603)	(29,400)	(29,865)	(30,690)
Net assets	172,208	159,396	147,167	150,975	216,581	115,800	129,230	151,617
CASH FLOW								
Operating cash flow	61,618	45,996	26,423	47,130	29,945	(1,900)	56,791	62,375
Net Interest	314	(606)	(2,109)	(1,006)	(2,141)	(1,400)	(9,555)	(8,460)
Tax	(13,666)	(8,536)	(3,943)	(7,777)	(8,003)	0	(8,198)	(20,094)
Capex	(27,197)	(21,355)	(19,554)	(14,097)	(36,748)	(94,200)	(42,035)	(10,007)
Acquisitions/disposals	(96,006)	0	(760)	(30,999)	8,364	4,400	0	0
Financing	47,112	349	(235)	15,207	34,638	9,800	0	0
Dividends	0	(14,684)	(15,006)	(9,882)	(13,290)	(8,200)	0	(7,237)
Net cash flow	(27,826)	1,164	(15,184)	(1,425)	12,764	(91,500)	(2,998)	16,577
Opening net debt/(cash)	(18,913)	7,228	7,278	18,033	22,778	6,989	91,000	93,998
Exchange rate movements	594	(839)	(276)	812	238	(1,447)	0	0
Other	1,090	(375)	4,705	(4,131)	2,787	8,936	0	0
Closing net debt/(cash)	7,228	7,278	18,033	22,778	6,989	91,000	93,998	77,421

Source: Company sources, Edison Investment Research

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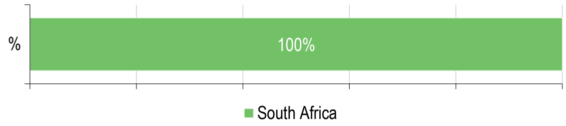
Revenue by geography



Management team

Chairman: Keith Spencer

Keith is a qualified mining engineer with 48 years' experience. He has managed some of the largest gold mines in the world including Kloof and Greenside colliery as general manager. In 1989 he was appointed consulting engineer for Gold Fields of South Africa (GFSA) encompassing Driefontein, Doornfontein, the Greenside colliery and Tsumeb base metals mine. He served as a board member of all GFSA gold mines. In 1999 he joined Metorex, becoming operations director in 2001.

CEO: Cobus Loots

Cobus's experience includes mining-specific acquisitions and finance as well as the management of both exploration and production mineral assets – most recently before 2009 as managing director of Shanduka Resources. Cobus has been a director of Pan African Resources since 2009 (financial director in 2009–2011 and a non- executive director in 2011–2013). He served as joint CEO alongside Ron Holding until assuming the office of financial director on 1 October 2013. He was appointed CEO on 1 March 2015

FD: Deon Louw

Deon has extensive finance and business experience, including investment banking, advisory and business administration in the finance and mining sectors. He has fulfilled the roles of financial director of Sentula Mining, chief financial officer of Shanduka Coal, director of resource finance advisers and head of resource structured finance at Investec Bank. Deon was appointed financial director on 1 March 2015.

Independent non-executive director: Thabo Mosololi

Thabo brings a wealth of experience in financial management, corporate governance and audit, having qualified as a chartered accountant with KPMG in 1994. Since then, he has served on various boards as a member and chairman of audit committees in the resources, and other sectors in South Africa. He is currently COO of Sun International, responsible for its South African operations, and continues to operate MFT Investment Holdings, a family-owned investment company strategically placed to capitalise on B-BBEE investment opportunities.

Principal shareholders	(%)
Allan Gray Pty Ltd	28.24%
PAR GOLD Pty Ltd	13.71%
Investec	7.96%
Coronation Fund Managers	6.99%
Public Investment Corporation	5.39%
Truffle Asset Management	4.81%
Prudential	4.08%

Companies named in this report

AngloGold Ashanti (ANGJ), Gold Fields (GFIJ), Sibanye (SGLJ), Harmony (HARJ), Centamin (CEY)

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