EDISON

Pan African Resources

Finishing unfinished business

Evander underground closure

Metals & mining

On 2 May Pan African (PAF) announced that, after both internal and external reviews had concluded there was "no realistic prospect of mining [Evander 8 Shaft underground] on a sustainable and profitable basis", the decision had been taken to shut the operation by the end of May, with the loss of 1,700 jobs and at a cost of c ZAR160m (US$13.1m, or £9.5m). As a result, Evander's (EGM's) gold production for FY18 is now expected to be c 46koz vs a prior expectation of 67-69koz, while group production is expected to be 156-158koz vs a prior expectation of 177-181koz.

Year end	Revenue (£m)	PBT* (£m)	EPS* (p)	DPS (p)	P/E (x)	Yield (%)
06/16	168.4	45.9	2.08	0.88	3.4	12.6
06/17	167.8	19.4	1.22	0.45	5.7	6.5
06/18e	149.4	0.2	0.03	0.00	232.3	0.0
06/19e	131.0	28.8	0.92	0.38	7.6	5.5

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

More a liability than an asset as it was structured

Owing to its relatively high cost structure, Evander underground was (and was expected to remain) the lowest margin of Pan African's contributing operations. In the short term, however, we estimate that a 19koz production shortfall in H2, combined with the effects of an additional ZAR160m in immediate redundancy costs will effectively negate H118 underlying earnings as well as causing PAF to pass its final dividend. Otherwise, the Evander rehabilitation provision is fully funded by means of a ZAR311.0m (£18.4m) rehabilitation trust. In the meantime, the group is reviewing the merits of mining 8 Shaft's pillar. Note that management had already announced it would reassess its feasibility study on Egoli as a standalone project (which is expected to be completed imminently).

Valuation: Approximately 100% upside potential

Updating our long-term forecasts, our headline absolute valuation of PAF has fallen by 3.15p to 12.59p as a consequence of the decision to close EGM plus its H218 performance (vs a 5.37p share price decline since the possibility was first mooted in early February). Including new projects and other assets, however, our all-in valuation is 16.57p plus the value of c 20.1m underground Witwatersrand ounces, which could lie anywhere in the range 0.18-4.27p/share, depending on market conditions. More immediately, while PAF's FY18e price to normalised headline EPS ratio is above the top end of the historic range, its multiple in FY19 is below the average for the period FY10-17, while FY20's multiple will represent an historic low as Elikhulu contributes its first full year of production. Stated alternatively, if PAF's average price to normalised EPS ratio of 9.7x in the period FY10-17 is applied to our forecasts, then PAF's share price should be 8.9p in FY19 and 21.3p in FY20. In addition, it remains cheaper than its South African and London-listed gold mining peers on at least 44% of valuation measures on the basis of Edison's forecasts, or 80% on the basis of consensus forecasts. It also has the sixth highest forecast dividend yield of the 62 ostensibly precious metals' companies paying dividends (FY19 forecasts) and is trading below its interim book value of 11.8p/sh (H118).

16 May 2018

Price	**6.97p**
Market cap	**£156m**

ZAR16.8674/£, ZAR12.2049/US$, US$1.3794/£

Net debt (£m) at end December 2017*	42.2

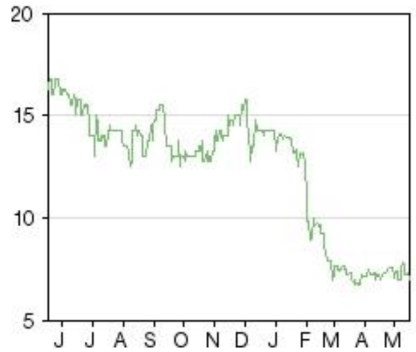
*Excludes ZAR73.6m (£4.4m) of MC Mining shares (formerly Coal of Africa)

Shares in issue**	2,234.7m

**Effective 1,798.3m post-consolidation

Free float	81%
Code	PAF
Primary exchange	AIM/JSE
Secondary exchange	N/A

Share price performance



%	1m	3m	12m
Abs	(2.9)	(27.7)	(55.0)
Rel (local)	(8.4)	(32.2)	(56.8)
52-week high/low		16.8p	6.7p

Business description

Pan African Resources has four major producing or near-producing precious metals assets in South Africa: Barberton (target output 95koz Au pa), the Barberton Tailings Retreatment Project (20koz), the Evander Tailings Retreatment Project (10koz) and Elikhulu (53koz).

Next events

FY18 results	September 2018

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Edison profile page

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

Updated guidance, forecasts, valuation and financials

On 27 February, PAF confirmed that Evander (EGM) is in a consultation process with its labour in terms of section 189 of the South African Labour Relations Act, which provides that, before retrenching, employers must consult any person whom they are required to in terms of the collective agreement. On 2 May it announced that, after both internal and external reviews had concluded there was “no realistic prospect of mining on a sustainable and profitable basis from [Evander 8 Shaft underground] in the current weak rand gold price environment”, the decision had been taken to shut the operation by the end of May, with the loss of 1,700 jobs and at a cost of c ZAR160m (US$13.1m, or £9.5m; which includes redundancies). In consequence, Evander Mines’ gold production for FY18 is now expected to be c 46koz compared to a prior expectation of 67-69koz. A table of Evander’s performance by half-year period is provided below, including our updated and prior forecasts in the light of PAF’s updated guidance:

Exhibit 1: EGM operational results, H116-H218e, actual, forecast and contingencies

	H116	H216	H117	H217	H118	H218e (previous)	FY18e (previous)	H218e (current)	FY18e (current)
Tonnes milled underground (t)	200,942	207,339	161,872	98,912	174,233	169,000	343,233	69,022	243,255
Head grade underground (g/t)	5.80	5.60	5.40	6.19	6.10	6.10	6.10	6.10	6.10
Underground gold contained (oz)	37,471	37,351	28,103	19,688	34,171	33,144	67,315	13,537	47,708
Tonnes milled surface (t)	0	0	0	0	0	0	0	0	0
Head grade surface (g/t)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Surface gold contained (oz)	0	0	0	0	0	0	0	0	0
Tonnes milled (t)	200,942	207,339	161,872	98,912	174,233	169,000	343,233	69,022	243,255
Head grade (g/t)	5.80	5.60	5.40	6.19	6.10	6.10	6.10	6.10	6.10
Contained gold (oz)	37,471	37,351	28,103	19,688	34,171	33,144	67,315	13,537	47,708
Recovery (%)	97	99	94	96	96	98	96.9	98	96.4
Production underground (oz)	36,370	37,126	26,477	18,827	32,734	32,482	65,216	13,266	46,000
Production surface (oz)	0	0	0	0	0	0	0	0	0
Total production (oz)	36,370	37,126	26,477	18,827	32,734	32,482	65,216	13,266	46,000
Recovered grade (g/t)	5.63	5.57	5.09	5.92	5.84	5.98	5.91	5.98	5.88
Gold sold (oz)	36,370	37,126	26,477	18,827	32,734	32,482	65,216	13,266	46,000
Average spot price (US$/oz)	1,105	1,221	1,256	1239	1,368	1,320	1,344	1,320	1,354
Average spot price (ZAR/kg)	483,309	605,265	565,009	526,341	588,723	503,603	546,328	517,968	568,318
Total cash cost (US$/oz)	995	918	1,457	1,986	1,306	1,382	1,344	2,743	1,721
Total cash cost (ZAR/kg)	435,190	454,756	655,304	843,821	562,407	527,442	544,955	1,076,194	710,526
Total cash cost (US$/t)	180.15	163.58	238.34	378.96	245.44	265.71	255.42	527.12	325.37
Total cash cost (ZAR/t)	2,450.00	2,532.68	3,334.00	4,995.61	3,286.00	3,153.05	3,220.54	6,433.49	4,179.08
Implied revenue (US$000s)	40,189	44,773	33,255	22,288	44,780	42,876	87,656	17,511	62,291
Revenue (ZAR000s)	546,731	685,865	465,296	289,601	599,398	508,781	1,108,180	213,721	813,120
Implied revenue (£000s)	26,219	31,052	26,025	17,754	33,971	30,901	64,871	12,620	46,591
Implied cash costs (US$000s)	36,199	33,916	38,581	37,484	42,764	44,905	87,669	36,383	79,147
Cash costs (ZAR000s)	492,308	525,124	539,681	494,125	572,530	532,865	1,105,395	444,054	1,016,584
Implied cash costs (£000s)	23,635	23,754	30,188	29,701	32,401	32,359	64,760	26,326	58,727
Forex (ZAR/£)	20.8300	22.0942	17.8771	16.6418	17.6703	16.4673	17.0688	16.8674	17.2689
Forex (ZAR/US$)	13.6000	15.4132	13.9875	13.2130	13.3900	11.8664	12.6282	12.2049	12.7975
Forex (US$/£)	1.5328	1.4335	1.2778	1.2596	1.3182	1.3875	1.3529	1.3875	1.3529
Capex (US$ 000's)	5,287	5,313	8,000	8,350	7,916	3,576	11,492	2,897	10,814
Capex (ZAR 000's)	71,900	81,900	111,900	110,300	106,000	42,436	148,436	35,363	141,363
Capex (GBP 000's)	3,452	3,712	6,259	6,613	5,999	2,577	8,576	2,097	8,095

Source: Edison Investment Research, Pan African Resources

Note that, owing to Evander's predominantly fixed cost base, aggregate costs in rand terms have been left unchanged (pro-rata for five months, instead of six), and that otherwise plant throughput is presumed to have declined markedly. Foreign exchanged rates have been honed to reflect a recent, very minor weakening of the rand against both the US dollar and sterling. Nevertheless, even prior to the decision to shut the 8 Shaft underground operation it was notable that, while EGM was expected to account for c 36.7% of PAF's group-wide gold output in FY18, it was expected to account for only c 0.6% of gross profits. Moreover, even if costs were to return to our forecast, long-term steady-state level of ZAR2,671/t, it would have resulted in an average EBITDA margin only 14.7% over the life of operations, ie EGM underground would still have been the lowest margin of PAF's operations.

The Evander rehabilitation provision is fully funded by means of a ZAR311.0m (£18.4m at prevailing forex rates) rehabilitation trust and these funds will be used to finance Evander's underground closure costs and associated rehabilitation. In the meantime, the group is reviewing the merits of mining the Evander 8 Shaft pillar, which may extend the final closure date of the shaft, generate positive cash flows and assist with further employment opportunities for those affected by the Section 189 process. Moreover, in recognition of the possibility that operations at Evander's existing infrastructure could cease in the foreseeable future, on 28 March, PAF announced it would reassess the feasibility study on the Egoli project (see our note entitled, Pan African Resources: A second glance at the first half, published in April 2018) as a standalone project. This is expected to be completed by the end of the current financial year.

Evander Tailings Retreatment Project (ETRP)

At the same time, Edison has reduced its production forecasts for the ETRP by 891oz to bring them exactly into line with the upper end of management's guidance range for the full year. In this case, tonnes processed from surface feedstocks is presumed to have settled at approximately the level as in H118, but at a fractionally lower grade (see Exhibit 2, below). Nevertheless, the plant will still achieve a high level of capacity utilisation (91.0% vs a management target of 150-160ktpm, or 75-80%, on a sustainable, long-term basis). Metallurgical recoveries are similarly expected to moderate to their long-term, sustainable target level of 45% (vs 56% in H118).

Exhibit 2: ETRP operational results, H216-H218e

	H117	H217	H118	H218e (previous)	FY18e (previous)	H218 (current)	FY18 (current)
Tonnes processed from surface feedstocks (t)	240,495	227,115	184,161	200,000	384,161	185,000	369,161
Head grade surface feedstocks (g/t)	1.80	2.01	2.00	2.00	2.00	1.93	1.96
Surface feedstocks gold contained (oz)	13,918	14,647	11,842	12,860	24,702	11,460	23,302
Tonnes processed tailings (t)	940,489	913,624	907,969	900,000	1,807,969	900,000	1,807,969
Head grade tailings (g/t)	0.30	0.30	0.30	0.32	0.31	0.30	0.30
Tailings gold contained (oz)	9,071	8,812	8,758	9,259	18,017	8,681	17,438
Total tonnes processed (t)	1,180,984	1,140,739	1,092,130	1,100,000	2,192,130	1,085,000	2,177,130
Head grade (g/t)	0.61	0.64	0.59	0.63	0.61	0.58	0.58
Contained gold (oz)	22,989	23,459	20,600	22,120	42,719	20,140	40,740
Recovery (%)	65.0	57.8	56.0	45.0	51.2	45.0	51.5
Production tailings (oz)	4,444	3,669	3,248	5,787			
Production surface (oz)	11,480	9,880	8,689	4,167			
Total production (oz)	15,924	13,549	11,937	9,954	21,891	9,063	21,000
Recovered grade (g/t)	0.42	0.37	0.34	0.28	0.31	0.26	0.30
Gold sold (oz)	15,924	13,549	11,937	9,954	21,891	9,063	21,000
Average spot price (US$/oz)	1,224	1,239	1,021	1,320	1,157	1,320	1,150
Average spot price (ZAR/kg)	550,380	526,341	439,542	503,603	469,254	517,968	473,977
Total cash cost (US$/oz)	545	561	723	842	778	855	782
Total cash cost (ZAR/kg)	245,178	238,372	311,075	321,403	315,771	335,606	321,662
Total cash cost (US$/t)	7.35	6.70	7.90	7.62	7.76	7.14	7.52
Total cash cost (ZAR/t)	103.00	88.06	106.00	60.19	98.07799	60.19	96.50283
Implied revenue (US$000s)	19,491	16,672	12,188	13,139	25,327	11,963	24,151
Revenue (ZAR000s)	272,597	218,706	163,193	155,912	319,105	146,009	309,202
Implied revenue (£000s)	15,254	13,251	9,246	9,469	18,715	8,622	17,868
Implied cash costs (US$000s)	8,682	7,646	8,626	8,385	17,011	7,751	16,377
Cash costs (ZAR000s)	121,434	100,454	115,496	99,504	215,000	94,604	210,099
Implied cash costs (£000s)	6,793	6,062	6,536	6,043	12,579	5,609	12,145
Forex (ZAR/£)	17.8771	16.6418	17.6703	16.4673	17.07	16.8674	17.27
Forex (ZAR/US$)	13.9875	13.2130	13.3900	11.8664	12.63	12.2049	12.80
Forex (US$/£)	1.2778	1.2596	1.3182	1.3875	1.35	1.3875	1.35
Capex (US$000s)	0	0	97	0	97	0	97
Capex (ZAR000s)	0	0	1,300	0	1,300	0	1,300
Capex (£000s)	0	0	74	0	74	0	74

Source: Edison Investment Research, Pan African Resources

Effectively, the ETRP represents a substantial pilot plant, designed to prove recovery and cost parameters, before the development of the much larger Elikhulu project (as before, see Pan African Resources: A second glance at the first half, published in April 2018). To benefit from Elikhulu's economies of scale however, management has stated that Elikulu's capacity will be increased by 200ktpm from December 2018 to incorporate the existing ETRP throughput. The additional construction associated with this initiative will increase capex by c ZAR65m (US$5.3m, or £3.9m), but is not expected to alter the timeline at Elikhulu, with first gold still expected in August 2018 and full commissioning at the end of September 2018. However, management will continue to source toll-treatment material with higher grades than the ETRP's reserve and resource grades, thereby taking commercial advantage of the fact that it is the only retreatment operator in the area and is therefore (effectively) the buyer of choice – or even the buyer of last resort – for tailings assets in the region.

Short-term forecasts

After producing 85koz of gold in H118, our updated group-wide production estimate (as per Exhibits 1 and 2) in FY18 is 157.6koz, which correlates closely to management's updated guidance of 156-158koz (thereby implying production of 92-96koz in H218):

Exhibit 3: PAF group-wide production, actual and forecast, FY14-FY18e

Operation	FY14	FY15	FY16	FY17	H118	H218e (previous)	FY18e (previous)	H218e (current)	FY18e (current)	FY19e (previous)	FY19e (current)
Barberton	88,738	81,493	84,690	71,763	32,159	40,885	73,044	40,885	73,044	94,641	94,641
Evander	76,556	63,558	73,496	43,304	32,734	32,482	65,216	13,266	46,000	67,645	0
BTRP	22,885	24,283	28,591	26,745	8,452	9,115	17,567	9,115	17,567	20,000	20,000
ETRP	0	6,523	18,151	29,473	11,937	9,954	21,891	9,063	21,000	10,000	10,000
Elikhulu	0	0	0	0	0	0	0	0	0	15,700	15,700
Total	**188,179**	**175,857**	**204,928**	**173,285**	**85,282**	**92,436**	**177,717**	**72,329**	**157,611**	**207,985**	**140,341**

Source: Edison Investment Research, Pan African Resources. Note: Numbers may not add up owing to rounding.

Note that our forecast of group-wide production of 140.3koz in FY19 is exactly in line with that set out in the Sensitivities section of our note Pan African Resources: A second glance at the first half, published in April 2018, in which we considered the possibility of the Evander 8 Shaft underground operation being closed. Within the historical context, a degree of risk is probably attached to our production forecasts at Barberton in FY19, but that this is offset (in roughly equal degree in our opinion) by the upside risk to Edison's production forecast at Elikhulu and the ETRP. Inasmuch as Elikhulu and the ETRP are (and are expected to be) higher-margin operations than Barberton, the financial consequences of this aggregate risk may be regarded as 'conservative'.

As a result of the considerations outlined above, our detailed financial forecasts for PAF for H218 and FY18 are therefore now as shown in Exhibit 4. Note however that, when Pan African does report its FY18 results in September, it may well opt to disclose them with Evander 8 Shaft underground reflected as a discontinued operation (which will be the subject of a separate note towards the end of the financial year).

Exhibit 4: PAF underlying P&L statement by half-year (H115-H218e) actual and expected

£000s (unless otherwise indicated)	H115	H215	H116	H216	H117	H217	H118	H218 (previous)	FY18e (previous)	H218 (current)	FY18e (current)
Mineral sales	68,126	72,951	75,632	93,728	105,046	101,256	82,900	87,936	170,836	68,809	151,709
Realisation costs	(295)	(396)	(269)	(687)	(1,548)	(1,346)	(1,500)	(978)	(2,478)	(765)	(2,265)
Realisation costs (%)	0.43	0.54	0.36	0.73	1.47	1.47	1.81	1.11	1.45	1.11	1.49
On-mine revenue	67,831	72,555	75,363	93,041	103,498	99,911	81,400	86,958	168,358	68,043	149,443
Gold cost of production	(52,727)		(48,935)	(51,102)	(65,188)	(68,933)	(69,600)	(70,803)		(63,568)	
Pt cost of production	(1,797)		(1,651)	(1,796)	(2,300)	(2,529)	0				
Coal cost of production					(10,568)	(5,972)	0				
Cost of production	(54,524)	(55,889)	(50,586)	(57,637)	(78,056)	(77,435)	(69,600)	(70,803)	(140,403)	(63,568)	(133,168)
Depreciation	(4,676)	(5,661)	(5,277)	(5,180)	(6,450)	(8,032)	(5,900)	(9,238)	(15,138)	(9,309)	(15,209)
Mining profit	8,631	11,005	19,500	30,225	18,992	14,444	5,900	6,918	12,818	(4,833)	1,067
Other income/(expenses)	523	(273)	(3,486)	(8,697)	2,175	(2,302)	(800)		(800)	(9,486)	(10,286)
Loss in associate etc	(128)	0	0	0	256	0	(400)		(400)		(400)
Loss on associate disposal	(140)		0	0	0	0	0		0		0
Impairment costs	(56)	(2)	0	0	0	0	0		0		
Royalty costs	(795)	(852)	(1,194)	(1,606)	(968)	(1,764)	(300)	(982)	(1,282)	42	(258)
Net income before finance items	8,034	9,878	14,819	19,923	20,455	10,377	4,400	5,936	10,336	(14,277)	(9,877)
Finances income	321	28	144	299	70	0	700				
Finance costs	(498)	(1,960)	(558)	(891)	(1,079)	0	(800)				
Net finance income	(177)	(1,932)	(414)	(592)	(1,009)	(1,025)	(100)	(529)	(629)	(529)	(629)
Profit before taxation	7,857	7,946	14,405	19,331	19,446	9,352	4,300	5,407	9,707	(14,806)	(10,506)
Taxation	(2,310)	(1,823)	(3,480)	(4,754)	(5,475)	(2,871)	(1,000)	(1,689)	(2,689)	1,386	386
Marginal tax rate (%)	29	23	24	26	28	31	23.3	31.2	27.7	9.4	3.7
Deferred tax											
Profit after taxation	5,548	6,122	10,925	14,577	13,970	6,482	3,300	3,718	7,018	(13,420)	(10,120)
EPS (p)	0.30	0.33	0.60	0.82	0.93	0.43	0.18	0.21	0.39	(0.75)	(0.56)
HEPS* (p)	0.31	0.33	0.60	0.82	0.91	0.43	0.20	0.21	0.39	(0.75)	(0.56)
Diluted EPS (p)	0.30	0.33	0.60	0.80	0.93	0.43	0.18	0.20	0.38	(0.73)	(0.55)
Diluted HEPS* (p)	0.31	0.33	0.60	0.80	0.91	0.43	0.20	0.20	0.38	(0.73)	(0.55)

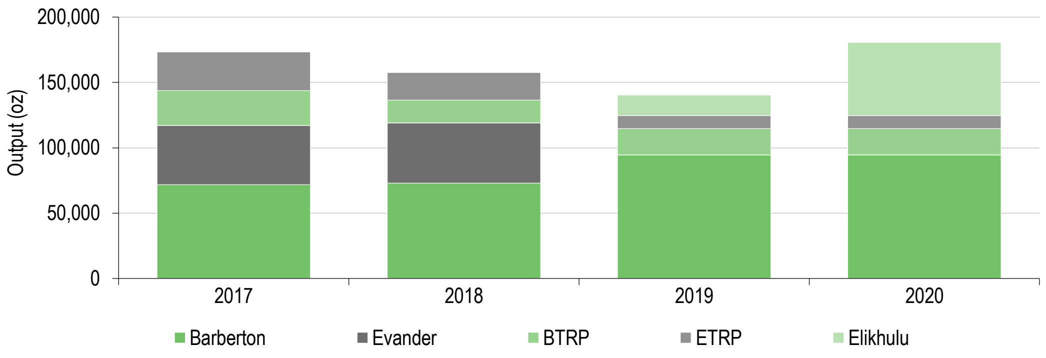
Source: Pan African Resources, Edison Investment Research. Note: As reported basis; *HEPS = headline earnings per share (company adjusted basis).

Note that management's anticipated cost of ZAR160m (£9.5m, US$13.1m) relating to the closure of the Evander 8 Shaft underground operation has been included under 'Other income/(expenses)'. As such, it is included in our forecast of EPS and HEPS, but not in our forecast of Normalised EPS in Exhibit 16 on page 12. In the meantime, our FY18 EPS forecast of a loss of 0.56p per share (above) compares with a mean consensus estimate of 0.886p, within the range (0.10)-2.40p (source: Bloomberg, 3 May 2018, excluding Edison). Our (normalised) forecast of 0.92p for FY19 compares with our previous forecast of 1.22p (including a full contribution from Evander) or 0.99p/share (excluding Evander) and with a mean consensus of 1.392p/share, within a range of 0.669-2.90p/share. Note that our gold price forecast for FY19 remains unchanged at US$1,291/oz.

Long-term forecasts and absolute valuation

More significant to PAF in the medium to long term, the development of Elikhulu (which is now underway and fully funded) should increase output to c 181koz (cf 250koz including Evander previously) over the next two financial years. As such, Elikhulu will largely replace production lost from Evander underground – albeit at a much higher margin – which underpins our longer-term earnings and cash-flow expectations:

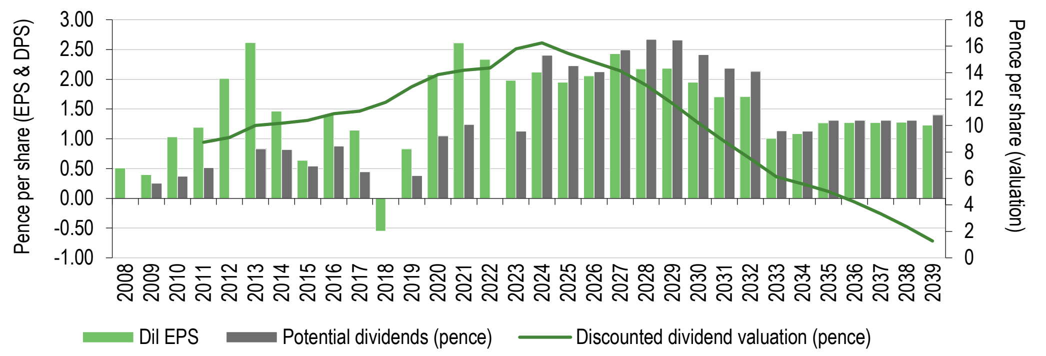
Exhibit 5: Edison estimate of PAF production, FY17-FY20e (oz)



Source: Edison Investment Research

As a result of Evander's relatively high-cost and low-margin profile however, the effect of its closure on earnings and our valuation is much more muted than the effect on production. Updating our long-term forecasts to reflect the closure of Evander's underground operations, our average EPS forecast during the period FY20-31 (based on PAF's existing three producing assets only) reduces by 12.1%, from 2.48p/share (including Evander, previously) to 2.18p/sh excluding Evander (vs 2.20p/share excluding Evander previously). Our absolute value of PAF decreases from 15.74p/share (including Evander underground) to 12.59p/sh excluding Evander underground (vs estimate of 13.20p/share excluding Evander previously, but also excluding exceptional closure costs), 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 6: PAF estimated life of operations diluted EPS and (maximum potential) DPS



Source: Edison Investment Research, Pan African Resources

In partial recompense, PAF could continue to count the Evander underground resources as one of its assets, albeit one that would be valued as an in-situ resource, rather than on the basis of future earnings, cash-flows, dividends etc. At the current time, we estimate the underground resource at Evander (including 7 Shaft vamping, Rolspruit, Poplar and Evander South, but excluding 8 Shaft and Egoli, which is valued separately – see Exhibit 9) to be 20.1Moz, categorised as follows:

Exhibit 7: Evander underground resource estimate

Resources	Tonnes (kt)	Grade (g/t)	Moz
Measured	0	0.00	0.000
Indicated	48,297	10.24	15.896
Inferred	18,350	7.18	4.236
Total	**66,647**	**9.40**	**20.131**

Source: Pan African Resources, Edison Investment Research

The value of Witwatersrand resources has proved persistently difficult to place within a global context – a problem exacerbated by an absence, currently, 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 during the year). Since then, we estimate that PAF will have mined 411,841oz from Evander excluding the ETRP (385,230oz from underground sources), ie implying only 1.2% depletion relative to the acquired resource, on a contemporary basis). More recently, Sibanye acquired Wits Gold (although then not 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. Otherwise, a value for in-situ Witwatersrand gold ounces may be imputed from the US$2.78/oz value calculated by us for Bushveld platinum equivalent ounces (there still being pure platinum explorers in South Africa) in our report, Mining overview: Unlocking the price to NPV discount, published in November 2017 – contingent on investors accepting the similarities between Bushveld and Witwatersrand geology in terms of depth, reef width and continuity, mining methods etc. On the basis of these three valuation points, the in-situ value of the Evander underground assets could range from 0.25-5.89 US cents per PAF share, as shown below:

Exhibit 8: EGM underground

Valuation basis	Wits Gold acquisition in December 2012	Bushveld PtE exploration oz (Edison November 2017)	PAF acquisition of EGM in 2012
In-situ value (US$/oz)	0.22	2.78	5.26
Implied EGM underground valuation (US$m)	4.4	56.0	105.9
Ditto (US cents per share)	0.25	3.11	5.89

Source: Edison Investment Research

Including its growth projects, as discussed in our note Pan African Resources: A second glance at the first half, published in April 2018, a summary of our overall valuation of PAF is therefore as follows:

Exhibit 9: PAF absolute valuation summary

Project	Current valuation excl EGM (pence/sh)	Previous valuation excl EGM (pence/sh)	Previous valuation incl EGM (pence/sh)
Existing three producing assets plus Elikhulu	12.59	13.20	15.74
Egoli	3.31	3.18	3.18
Fairview Sub-Vertical Shaft Project	0.43	0.42	0.42
MC Mining shares*	0.24	0.25	0.25
Sub-total	**16.57**	**17.05**	**19.59**
EGM underground resource	0.18-4.27	0.18-4.27	-
Total	**16.75-20.84**	**17.23-21.32**	**19.59**

Source: Edison Investment Research. Note: *See our note, Pan African Resources: Canning coal, 17 May 2017.

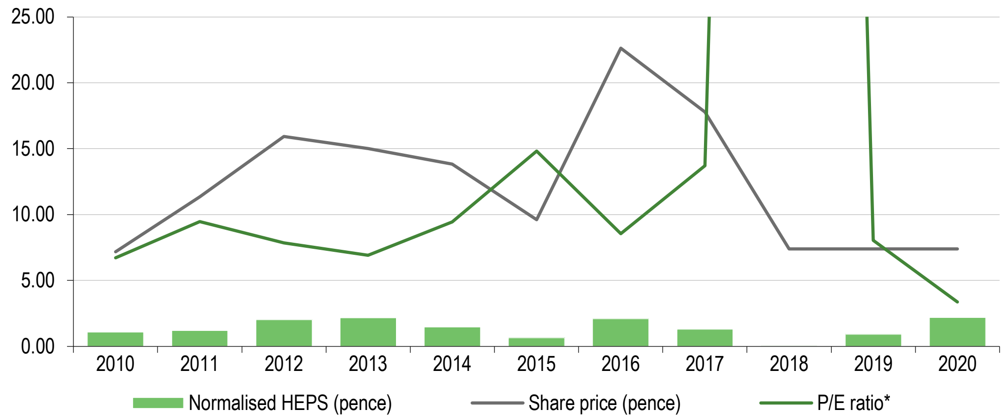
Note that the valuation changes to Egoli and the Fairview Sub-Vertical Shaft project reflect changes to prevailing foreign exchange rates only.

Historic and relative valuation

Historic

Notwithstanding the fact that PAF's price to normalised HEPS ratio is above the top of its recent historical range (based on our forecasts), it falls to well within the range (and below the average) in FY19 and to well below the minimum of the recent historical range assuming the recovery anticipated in FY20, by which time we expect Elikhulu to be operating at full capacity.

Exhibit 10: PAF historical price to normalised HEPS ratio, FY10-FY20e



Source: Edison Investment Research, Bloomberg. Note: *Completed historic 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 9.7x in the period FY10-17 is deemed to be 'correct', then its share price should be 8.9p in FY19 and 21.3p in FY20.

Relative

In the meantime, over the next two years PAF remains cheaper than its South African and London-listed gold mining peers on at least 44% of valuation measures (ie 16 out of 36 measures in the table below on an individual company basis) using Edison's forecasts or 80% of measures (ie 29 out of 36 measures) using consensus forecasts:

Exhibit 11: Comparative valuation of PAF with respect to South African peers

	EV/EBITDA (x)		P/E (x)		Yield (%)	
	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
AngloGold Ashanti	4.0	3.9	12.3	10.8	1.2	1.5
Gold Fields	3.8	3.4	21.2	15.9	2.9	4.1
Sibanye	4.9	4.0	14.9	9.3	2.0	2.9
Harmony	3.2	2.7	8.9	10.0	0.9	1.4
Randgold Resources	10.8	10.2	22.9	21.0	3.9	4.7
Centamin	5.0	4.9	14.9	15.9	4.2	5.1
Average (excluding PAF)	**5.3**	**4.8**	**15.8**	**13.8**	**2.5**	**3.3**
PAF (Edison)	10.9	3.5	234.8	8.0	0.0	5.2
PAF (consensus)	4.7	2.9	8.0	5.2	2.8	8.3

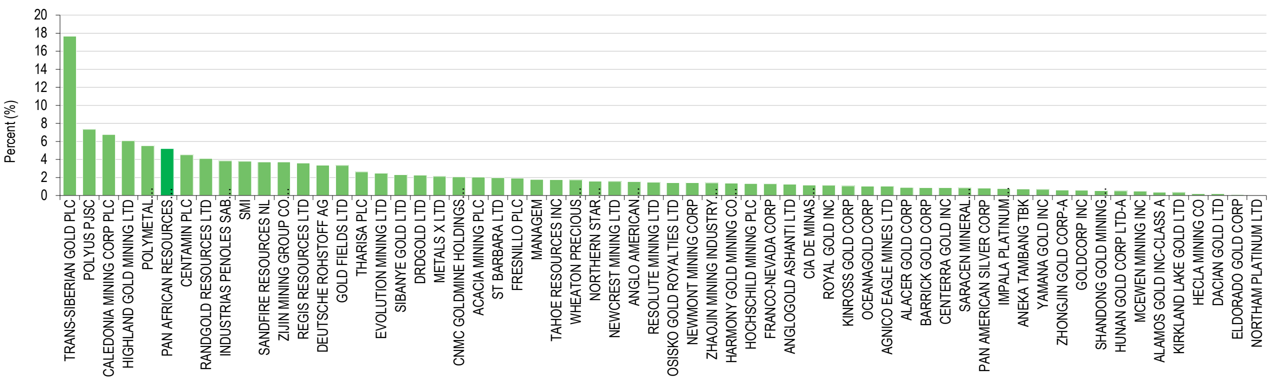
Source: Edison Investment Research, Bloomberg. Note: Peers priced at 3 May 2018.

Dividend

PAF has a target dividend pay-out ratio of 40% of net cash generated by operating activities, after allowing for the cash flow effect of sustaining capital, contractual debt repayments and one-off items. In addition, in FY17, the board took the view that the proceeds from the sale of Uitkomst were eligible to contribute to the dividend payout on the grounds that they constituted a viable return to shareholders relative to the original price paid for the investment.

Despite our assumption that PAF is now likely to pass its FY18 dividend, within the global context and on the basis of our FY19 expectations, PAF continues to have the sixth highest dividend yield of the 62 ostensibly precious metals' companies paying dividends to shareholders:

Exhibit 12: Global gold mining companies ranked by forecast dividend yield (%)



Source: Bloomberg (BEst Div Yld BF12M) for peers, Edison Investment Research for PAF FY19. Note: Consensus data for peers priced 3 May 2018.

Financials

PAF had £42.2m of net debt on its balance sheet as at 31 December 2017 after the payment of a net £8.1m final dividend in late December (cf £7.0m as at June 2017, £33.2m as at December 2016, £22.8m as at 30 June 2016, £16.2m as at 31 December 2015 and £18.0m as at 30 June 2015). As such, at the interim stage, net debt equated to a gearing (net debt/equity) ratio of 19.9% and a leverage (net debt/[net debt + equity]) ratio of 16.6%.

PAF's major immediate capital requirement relates to the development of the Elikhulu project. As at end-December 2017, ZAR511.7m in capex had been expended on the project and ZAR671.4m by mid-February 2018 (excluding capitalised borrowing costs). Including the project to expand Elikulu's throughput capacity by 200ktpm from December 2018 to incorporate the existing ETRP feed (see page 4), Edison's forecasts for PAF's immediate future capital expenditure commitments on the project are shown in Exhibit 13:

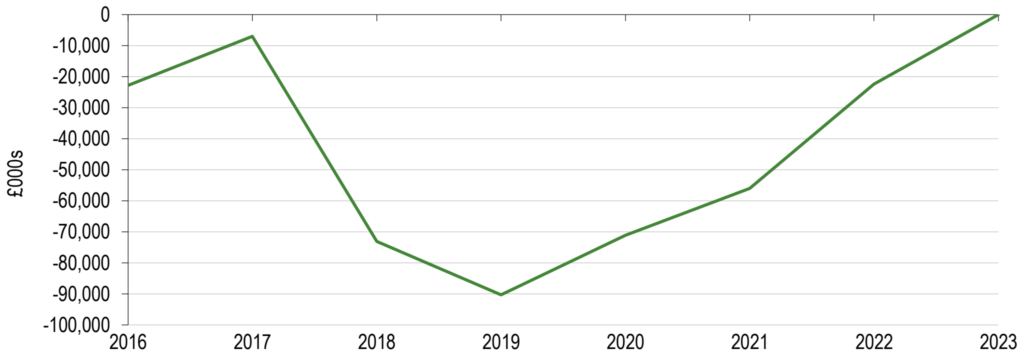
Exhibit 13: Estimated Elikhulu capex requirements by financial year

£000s	H218	FY19	FY20	FY21	FY22
Total capex*	23,735	34,487	9,067	18,366	18,366

Source: Pan African Resources, Edison Investment Research. Note: *Includes sustaining capex, but excludes phase 3 capex, which commences in FY26.

As a result, after investing activities, we estimate that PAF will experience net negative cash flow in FY18 and FY19, before a positive trend sets in once again from FY20 onwards. Maintaining a dividend policy of 40% of free cash flows less sustaining capital, debt repayments and exceptional items, PAF's funding requirement, on our estimates, will evolve as follows in the period from FY16 to FY23e:

Exhibit 14: PAF estimated funding requirement, FY16 to FY23e



Source: Edison Investment Research, Pan African Resources

Note that PAF's maximum funding requirement of £90.3m in FY19, as estimated by Edison, equates to ZAR1,524m at prevailing forex rates, or contemporary gearing (debt/equity) of 42.0% and leverage (debt/[debt+equity]) of 29.6%.

Debt is financed via a ZAR1bn revolving credit facility (£59.3m at current exchange rates), of which ZAR676.6m (£31.8m) was drawn down as at end-H118, plus a banking facility. To ensure the group has adequate working capital and continuation of funding for operations and growth projects, in the light of the closure of the Evander 8 Shaft underground operations, Pan African is in the process of finalising an additional standby facility of approximately ZAR100m. Also, in the past, Rand Merchant Bank (a division of First Rand) has provided PAF with all the necessary approvals for a ZAR1bn underwritten five-year debt facility for Elikhulu.

The group's revolving credit facility (RCF) debt covenants and their actual recorded levels within recent history are as follows:

Exhibit 15: PAF group debt covenants

Measurement	Constraint	H118 (actual)	FY17 (actual)	H117 (actual)	FY16* (actual)	HY16 (actual)
Net debt:equity	Must be less than 1:1	0.19:1	0.01:1	0.17:1	0.35:1	0.50:1
Net debt:EBITDA	Must be less than 2.5:1	2.25:1	0.05:1	0.48:1	0.12:1	0.13:1
Interest cover ratio	Must be greater than four times	4.62:1	10.00	21.99	23.98	18.08
Debt service cover ratio	Must be greater than 1.3:1	1.85:1	N/A	N/A	N/A	N/A

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

Note that, on our current FY18 forecasts, we predict that PAF will 'break' its net debt:EBITDA and interest cover covenants. However, this contingency has already been partially pre-empted by management and the providers of the RCF, which have agreed to temporarily waive the net debt:EBITDA condition during the period in which capex relating to Elikhulu is at its most intense.

Exhibit 16: Financial summary

£'000s	2010	2011	2012	2013	2014	2015	2016	2017	2018e	2019e
Year end 30 June	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS										
Revenue	68,344	79,051	100,905	133,308	154,202	140,386	168,404	167,759	149,443	130,994
Cost of sales	(40,554)	(45,345)	(46,123)	(71,181)	(106,394)	(110,413)	(108,223)	(134,007)	(133,168)	(78,066)
Gross profit	27,790	33,705	54,783	62,127	47,808	29,973	60,181	33,752	16,276	52,928
EBITDA	25,023	28,540	45,018	53,276	44,165	28,448	57,381	32,417	16,018	50,288
Operating profit (before GW and except.)	21,897	25,655	41,759	47,278	34,142	18,110	46,925	21,924	809	35,358
Intangible amortisation	0	0	0	0	0	0	0	0	0	0
Exceptionals	(335)	0	(48)	7,232	(12)	(198)	(12,183)	(1,248)	(10,686)	(1,252)
Other	0	0	0	0	0	0	0	0	0	0
Operating profit	21,562	25,655	41,711	54,510	34,130	17,912	34,742	20,676	(9,877)	34,107
Net interest	594	762	516	197	(191)	(2,109)	(1,006)	(2,523)	(629)	(6,579)
Profit before tax (norm)	22,491	26,417	42,274	47,475	33,951	16,001	45,919	19,401	180	28,779
Profit before tax (FRS 3)	22,156	26,417	42,226	54,707	33,939	15,803	33,736	18,153	(10,506)	27,527
Tax	(7,656)	(9,248)	(12,985)	(12,133)	(7,155)	(4,133)	(8,234)	(243)	386	(12,246)
Profit after tax (norm)	14,835	17,169	29,290	35,342	26,796	11,868	37,685	19,158	566	16,533
Profit after tax (FRS 3)	14,500	17,169	29,242	42,574	26,785	11,670	25,502	17,910	(10,120)	15,282
Average number of shares outstanding (m)	1,366.3	1,432.7	1,445.2	1,619.8	1,827.2	1,830.4	1,811.4	1,564.3	1,798.3	1,798.3
EPS - normalised (p)	1.07	1.20	2.03	2.18	1.46	0.64	2.08	1.22	0.03	0.92
EPS - FRS 3 (p)	1.04	1.20	2.02	2.63	1.47	0.64	1.41	1.14	(0.56)	0.85
Dividend per share (p)	0.37	0.51	0.00	0.83	0.82	0.54	0.88	0.45	0.00	0.38
Gross margin (%)	40.7	42.6	54.3	46.6	31.0	21.4	35.7	20.1	10.9	40.4
EBITDA margin (%)	36.6	36.1	44.6	40.0	28.6	20.3	34.1	19.3	10.7	38.4
Operating margin (before GW and except.) (%)	32.0	32.5	41.4	35.5	22.1	12.9	27.9	13.1	0.5	27.0
BALANCE SHEET										
Fixed assets	74,324	97,281	86,075	249,316	223,425	220,150	230,676	273,635	328,762	353,387
Intangible assets	36,829	38,229	23,664	38,628	37,040	37,713	38,682	41,425	43,161	44,897
Tangible assets	37,495	59,052	62,412	209,490	185,376	181,533	190,725	224,687	278,078	300,967
Investments	0	0	0	1,199	1,010	905	1,269	7,523	7,523	7,523
Current assets	17,677	15,835	41,614	26,962	23,510	17,218	22,016	37,090	21,527	19,328
Stocks	1,126	1,457	1,869	6,596	5,341	3,503	4,399	7,583	5,057	4,374
Debtors	3,795	4,254	6,828	15,384	12,551	10,386	14,891	14,813	11,222	9,706
Cash	12,756	10,124	19,782	4,769	5,618	3,329	2,659	9,447	0	0
Current liabilities	(7,084)	(8,960)	(11,062)	(24,066)	(24,012)	(22,350)	(32,211)	(31,251)	(79,889)	(92,845)
Creditors	(7,084)	(8,960)	(11,062)	(23,202)	(19,257)	(17,301)	(25,230)	(27,105)	(19,075)	(14,810)
Short-term borrowings	0	0	0	(864)	(4,755)	(5,049)	(6,981)	(4,146)	(60,814)	(78,036)
Long-term liabilities	(11,431)	(13,410)	(14,001)	(80,004)	(63,528)	(67,850)	(69,506)	(62,893)	(63,939)	(65,032)
Long-term borrowings	0	(181)	(869)	(11,133)	(8,141)	(16,313)	(18,456)	(12,290)	(12,290)	(12,290)
Other long-term liabilities	(11,431)	(13,228)	(13,132)	(68,871)	(55,387)	(51,537)	(51,049)	(50,603)	(51,648)	(52,741)
Net assets	73,487	90,746	102,626	172,208	159,396	147,167	150,975	216,581	206,461	214,837
CASH FLOW										
Operating cash flow	25,207	31,968	49,092	61,618	45,996	26,423	47,130	29,945	5,799	40,064
Net Interest	594	762	516	314	(606)	(2,109)	(1,006)	(2,141)	(629)	(6,579)
Tax	(7,476)	(10,743)	(11,616)	(13,666)	(8,536)	(3,943)	(7,777)	(8,003)	1,432	(11,153)
Capex	(6,764)	(21,712)	(17,814)	(27,197)	(21,355)	(19,554)	(14,097)	(36,748)	(69,914)	(39,554)
Acquisitions/disposals	0	0	(1,549)	(96,006)	0	(760)	(30,999)	8,364	5,210	0
Financing	48	1,545	259	47,112	349	(235)	15,207	34,638	0	0
Dividends	0	(5,376)	(7,416)	0	(14,684)	(15,006)	(9,882)	(13,290)	(8,014)	0
Net cash flow	11,609	(3,557)	11,471	(27,826)	1,164	(15,184)	(1,425)	12,764	(66,115)	(17,222)
Opening net debt/(cash)	(2,369)	(12,756)	(9,943)	(18,913)	7,228	7,278	18,033	22,778	6,989	73,104
Exchange rate movements	(281)	925	(1,813)	594	(839)	(276)	812	238	0	0
Other	(940)	(181)	(688)	1,090	(375)	4,705	(4,131)	2,787	0	0
Closing net debt/(cash)	(12,756)	(9,943)	(18,913)	7,228	7,278	18,033	22,778	6,989	73,104	90,326

Source: Company sources, Edison Investment Research

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