Wheaton Precious Metals

Q123 results

Q123 in line; looking to H2

Metals and mining

Wheaton Precious Metals' (WPM's) net earnings for Q123 were US$2.6m (or 2.5%) better than our forecast. In general, production of precious metals was slightly higher than our expectations, but sales, costs and depletion were in line. Our forecasts for FY23 have therefore remained substantially unchanged. However, we note that the broader market appears to be reticent in incorporating higher precious metals prices into its earnings estimates.

Year end	Revenue (US$m)	PBT* (US$m)	EPS* (c)	DPS (c)	P/E (x)	Yield (%)
12/21	1,201.7	592.1	132	57	39.0	1.1
12/22	1,065.1	497.7	112	60	46.0	1.2
12/23e	1,119.4	569.4	132	60	38.9	1.2
12/24e	1,358.4	631.3	139	62	37.0	1.2

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

Material improvements expected in H223

Wheaton's largest single asset, Salobo (accounting for c 33% of operating earnings and cash flows), continued to be affected by planned and corrective maintenance in Q123, which is anticipated to continue into Q223. Thereafter, we expect both production and sales to increase sharply (eg by 41% in Q4 cf Q1). We are also anticipating material improvements at Stillwater, Constancia and Voisey's Bay.

Production to improve 38% in four years

FY23 will largely be a year of consolidation for Wheaton, after which it will benefit from the development of at least three new projects (Goose, Blackwater and Marathon) and the Salobo III expansion. In the longer term, in addition to future stream acquisitions, the company should benefit from the development of Rosemont/Copper World and a potential further 33% expansion at Salobo, denoted Salobo IV. Even the long-dormant (but potentially huge) Pascua-Lama project on the border between Chile and Argentina appears to have momentum behind it. As a consequence, we are forecasting that production at Wheaton will reach nearly 850k gold equivalent ounces in FY27 (cf 613koz in FY23).

Valuation: Peers imply US$56.92 or C$76.90

Using a capital asset pricing model (CAPM)-type method, whereby we discount cash flows at a nominal 9.0% per year, our 'terminal' valuation of WPM in FY26 is little changed at US$52.99 (C$71.58) per share, assuming zero subsequent long-term growth in real cash flows. Alternatively, assuming no purchases of additional streams (which we think unlikely), we calculate a value per share for WPM of US$54.06, or C$73.03 or £42.89 in FY26, based on a 30.4x historical multiple of contemporary earnings. In the meantime, WPM's shares are trading on near-term financial ratios that are lower than those of its peers on at least 69% of common valuation measures if Edison forecasts are used or 63% if consensus forecasts are used. If WPM's shares were instead to trade at the average level of its peers, we calculate that its FY23 share value would be US$56.92, or C$76.90 or £42.13 (based on Edison forecasts).

9 May 2023

Price	**C$69.60**
Market cap	**C$31,518m**
	C$1.3509/US$, US$1.2603/£
Cash (US$m) at end-March (excluding US$1.8m in lease liabilities)	799.7
Shares in issue	452.8m
Free float	100.0%
Code	WPM
Primary exchange	TSX
Secondary exchanges	LSE, NYSE

Share price performance

%	1m	3m	12m
Abs	3.5	18.1	19.2
Rel (local)	3.6	21.1	24.8
52-week high/low		C$69.64	C$39.11

Business description

Wheaton Precious Metals is the world's pre-eminent ostensibly precious metals streaming company, with over 30 high-quality precious metals streams and early deposit agreements over mines in Mexico, Canada, Brazil, Chile, the US, Argentina, Peru, Sweden, Greece, Portugal and Colombia.

Next events

Ex-dividend date	18 May 2023
Q223 results	10 August 2023
Q323 results	9 November 2023
Q423/FY23 results	March 2024

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Edison profile page

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Q123 results summary

Wheaton's financial results for Q123 were very close to both our prior expectations and (post tax) its performance in Q422. In general, production of precious metals was slightly higher than our expectations, but sales, costs and depletion were in line, as a result of an increase in ounces produced but not yet delivered to Wheaton from its streaming counterparties. As a result, the main (positive) variances between our forecasts and WPM's actual results – in percentage terms (pre-tax) – were general and administrative costs (see page 4) and other income (predominantly interest received) to result in net earnings that were US$2.6m (or 2.5%) better than our prior expectations.

A complete analysis of WPM's underlying financial and operating results relative to both Q422 and Edison's prior expectations is provided in the exhibit below:

Exhibit 1: WPM Q123 results*

US$000s (unless otherwise stated)	Q122	Q222	Q322	Q422	Q123e	Q123	Change (%)	Variance (%)
Silver production (koz)	6,206	6,537	5,883	5,352	4,723	4,927	-7.9	4.3
Gold production (oz)	79,087	68,365	73,508	70,099	66,014	73,037	4.2	10.6
Palladium production (oz)	4,488	3,899	3,229	3,869	3,276	3,705	-4.2	13.1
Cobalt production (klb)	234	136	226	128	113	124	-3.1	9.7
Silver sales (koz)	5,553	5,848	5,234	4,935	4,165	3,749	-24.0	-10.0
Gold sales (oz)	77,901	84,337	62,000	68,996	61,687	62,605	-9.3	1.5
Palladium sales (oz)	4,075	3,378	4,227	3,396	2,791	2,946	-13.3	5.6
Cobalt sales (klb)	511	225	115	187	104	323	72.7	210.6
Average realised Ag price (US$/oz)	24.19	22.27	19.16	21.52	22.55	22.85	6.2	1.3
Average realised Au price (US$/oz)	1,870	1,872	1,728	1,725	1,891	1,904	10.4	0.7
Average realised Pd price (US$/oz)	2,339	2,132	2,091	1,939	1,567	1,607	-17.1	2.6
Average realised Co price (US$/lb)	34.61	34.01	22.68	22.62	18.16	15.04	-33.5	-17.2
Average Ag cash cost (US$/oz)	5.10	5.61	5.59	5.00	5.00	5.07	1.4	1.4
Average Au cash cost (US$/oz)	477	465	474	475	472	496	4.4	5.1
Average Pd cash cost (US$/oz)	394	408	353	357	282	294	-17.6	4.3
Average Co cash cost (US$/lb)	5.76	6.86	7.21	***16.52	3.27	***3.30	-80.0	0.9
Sales	307,244	302,922	218,836	236,051	216,843	214,465	-9.1	-1.1
Cost of sales								
Cost of sales, excluding depletion	69,994	74,943	60,955	61,730	51,109	51,964	-15.8	1.7
Depletion	57,402	65,682	55,728	53,140	46,087	45,000	-15.3	-2.4
Total cost of sales	127,396	140,625	116,683	114,870	97,196	96,964	-15.6	-0.2
Earnings from operations	179,848	162,297	102,153	121,181	119,647	117,501	-3.0	-1.8
Expenses and other income								
– General and administrative**	20,118	12,453	9,843	19,773	21,557	18,874	-4.5	-12.4
– Foreign exchange (gain)/loss			0					
– Interest paid/(received)	1,422	1,389	1,398	1,377	1,454	1,378	0.1	-5.2
– Other (income)/expense	229	-974	(3,003)	(3,935)	(5,492)	(7,387)	87.7	34.5
Total expenses and other income	21,769	12,868	8,238	17,215	17,520	12,865	-25.3	-26.6
Earnings before income taxes	158,079	149,429	93,915	103,966	102,128	104,636	0.6	2.5
Income tax expense/(recovery)	72	144	37	222	250	205	-7.7	-18.0
Marginal tax rate (%)	0.0	0.1	0.0	0.2	0.2	0.2	0.0	0.0
Net earnings	158,007	149,285	93,878	103,744	101,878	104,431	0.7	2.5
Average no. shares in issue (000s)	450,915	451,524	451,757	452,070	452,319	452,370	0.1	0.0
Basic EPS (US$)	0.350	0.331	0.208	0.229	0.225	0.231	0.9	2.7
Diluted EPS (US$)	0.350	0.330	0.208	0.229	0.224	0.230	0.4	2.7
DPS (US$)	0.15	0.15	0.15	0.15	0.15	0.15	0.0	0.0

Source: WPM accounts, Edison Investment Research. Note: Change is Q123 cf Q422. Variance is actual cf forecast. *Excluding impairments, impairment reversals and exceptional items. **Forecasts now include stock-based compensation costs. ***Cobalt inventory is held on WPM's balance sheet at the lower of cost and net realisable value; cash cost per pound of cobalt sold during Q422 included an inventory impairment charge of US$1.6m, which resulted in an increase in cash costs of US$8.71/lb; cash cost per pound of cobalt sold during Q123 was net of the previously recorded inventory write-down of US$1.0m, which resulted in a decrease in cash costs of US$3.18/lb. Totals may not add up owing to rounding.

At the level of the individual mines, Zinkgruvan, Minto, Neves-Corvo, Constancia and Sudbury all outperformed our expectations in terms of production, while Los Filos, Antamina, San Dimas, Salobo and Voisey's Bay performed in line. Penasquito reported a notable under-sale of silver, relative to production, albeit this was not entirely unexpected in the light of Newmont's Q123 results, announced on 27 April. Compared with the prior year period, Salobo, Penasquito and Constancia experienced higher grades (albeit with lower recoveries in the cases of Salobo and Penasquito), while Constancia also experienced a higher rate of throughput. As previously announced by Vale, Salobo continued to be affected by planned and corrective maintenance, which is anticipated to continue into Q223. Antamina and Voisey's Bay experienced lower grades compared with a year ago, albeit this too was expected.

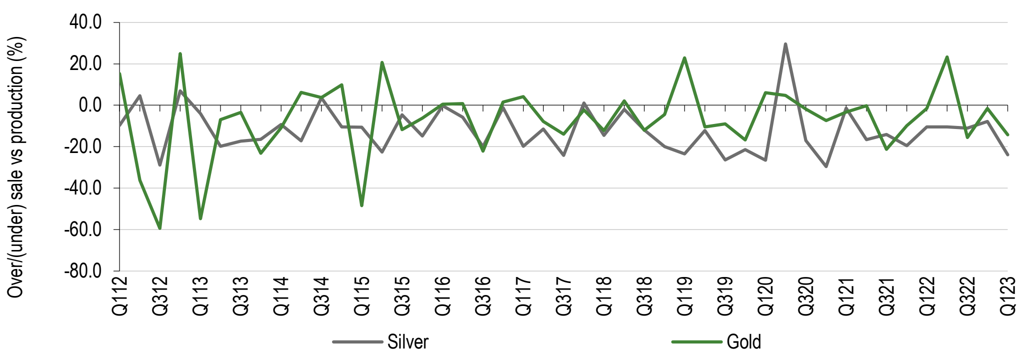
Entering Q223:

- Production at the Stillwater mine has recommenced after an incident during scheduled non-routine maintenance caused structural damage to the shaft headgear, winder house and winder rope, which resulted in production from the Stillwater West mine below the 50 level being suspended for approximately five weeks from 13 March.
- Full mining activities have resumed in the Pampacancha pit at Constancia, with the mining of higher-grade ore now expected in Q223, concurrent with a period of higher stripping from March to June, which is reported (by Hudbay) to be progressing well.
- Vale reports that physical completion of the Voisey's Bay underground mine extension was 83% at the end of Q123. Vale achieved the first ore production from the Reid Brook deposit – the first of two underground mines to be developed in the project – in Q221. Eastern Deeps (the second deposit) has now started to extract development ore from the deposit as well and is scheduled to start its main production ramp-up in H223, after a period of planned maintenance in Q223.

Ounces produced but not yet delivered

At 14.3%, the degree of under-sale of gold in Q123, relative to production, was greater than the prior historical average of 6.6% (from Q112 until Q422). Similarly, the 23.9% under-sale of silver relative to production was greater than its prior historical average of 11.8%, indicating a degree of re-stocking by Wheaton's counterparties in Q123 after the reverse process of 'flushing through' in Q422 (before the end of the financial year):

Exhibit 2: Over/(under) sale of silver and gold as a percentage of production, Q112–Q123

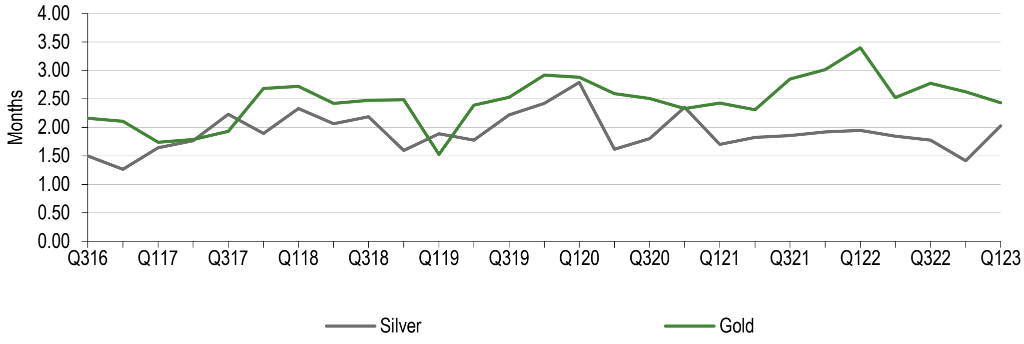


Source: Edison Investment Research, WPM. Note: As reported.

As a result, both gold and silver stocks increased, to 69,482oz and 3.2Moz, as at end-March (cf a marginally restated 62,602oz and 2.9Moz as at end-December), respectively.

Consequently, we calculate that gold and silver ounces produced but not yet delivered as at end-March now amount to 2.43 and 2.03 months of full-year production (cf 2.62 months and 1.41 months as at end-FY22), respectively, and compare with WPM's target levels of two to three months for gold and palladium and two months for silver (see below).

Exhibit 3: WPM ounces produced but not yet delivered, Q316–Q123 (months of production)



Source: Edison Investment Research, WPM. Note: As reported.

General and administrative expenses

At the time of its Q422 results, WPM provided guidance for non-stock general and administrative (G&A) expenses of US$47–50m or US$11.75–12.50m per quarter for FY23 (cf US$47–49m in FY22, US$42–44m in FY21 and US$40–43m in FY20), including all employee-related expenses, charitable contributions, etc, but excluding performance share units (PSU) and equity settled stock-based compensation. In the event, at US$11.5m, non-stock G&A expenses in Q123 were below the bottom of the range implied by WPM's official guidance for the ninth quarter in succession.

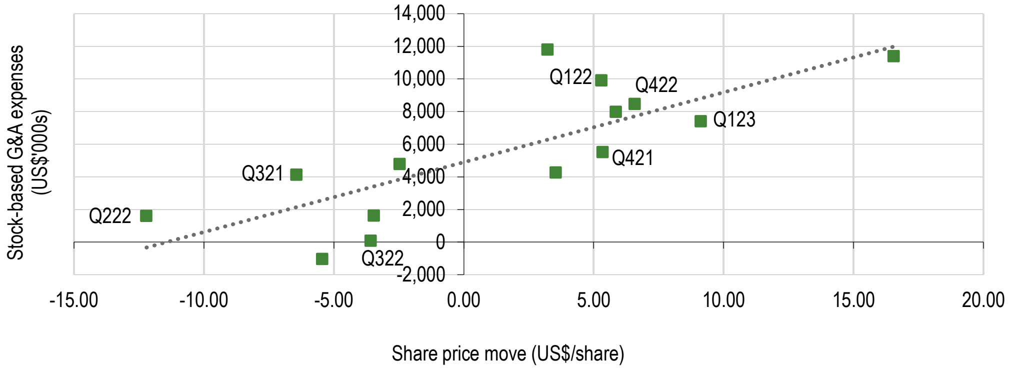
Exhibit 4: WPM general and administrative expenses, Q121–Q123 (US$000s)

Item	Q121	Q221	Q321	Q421	FY21	Q122	Q222	Q322	Q422	FY22	Q123
G&A salaries excluding PSU* and equity settled stock-based compensation	4,709	4,634	4,283	4,618	18,244	5,345	5,061	4,629	4,187	19,222	5,021
Other (inc. depreciation, donations and professional fees)	5,632	5,852	5,173	6,818	23,475	4,871	5,784	5,137	7,112	22,905	6,456
Non-stock based G&A	**10,341**	**10,486**	**9,456**	**11,436**	**41,719**	**10,216**	**10,845**	**9,766**	**11,299**	**42,127**	**11,477**
Guidance	10,500–11,250	10,500–11,250	10,500–11,250	11,717–13,717	**42,000–44,000**	11,750–12,250	11,750–12,250	11,750–12,250	11,750–12,250	**47,000-49,000**	11,750-12,500
PSU* accrual	305	6,672	2,824	4,203	14,004	8,560	110	(1,491)	7,035	14,214	5,855
Equity settled stock-based compensation	1,325	1,307	1,315	1,315	5,262	1,342	1,498	1,568	1,439	5,846	1,542
Stock-based G&A	**1,630**	**7,979**	**4,139**	**5,518**	**19,266**	**9,902**	**1,608**	**77**	**8,474**	**20,060**	**7,397**
Total general & administrative	**11,971**	**18,465**	**13,595**	**16,954**	**60,985**	**20,118**	**12,453**	**9,843**	**19,773**	**62,187**	**18,874**
Total/Non-stock based G&A (%)	**+15.8**	**+76.1**	**+43.6**	**+48.3**	**+46.2**	**+96.9**	**+14.8**	**+0.8**	**+75.0**	**+47.6**	**+64.5**

Source: WPM, Edison Investment Research. Note: *Performance share units. Totals may not add up owing to rounding.

Given the performance of WPM's shares during the quarter, stock-based G&A expenses in Q123 were closely in line with our prior estimate for the quarter (as shown in Exhibit 5, below):

Exhibit 5: Graph of historical share price move (US$/share) versus quarterly stock-based G&A expenses, Q419–Q123



Source: Edison Investment Research (underlying data: Bloomberg and Wheaton Precious Metals)

The analysis of stock-based G&A expenses over the past 14 quarters relative to the change in WPM's share price (also in US dollars) continues to exhibit a close Pearson product-moment (correlation) coefficient between the two of 0.78, which remains statistically significant at the 5% level for a directional hypothesis (ie there is less than a 5% probability that this relationship occurred by random chance) and this therefore continues to form the basis of our quarterly and full-year forecasts for G&A expenses in Exhibit 8.

FY23 and five-year and 10-year guidance

At the time of its 21 February production and sales announcement, Wheaton also provided detailed production guidance for FY23 (for the first time), as well as for the five years from FY23–27 (inclusive) and the 10 years from FY23–32 (inclusive). These remain unchanged.

Following the acquisition of Sabina by B2Gold, however, the latter exercised its option to acquire 33% of the Goose stream under the terms of its precious metals purchase agreement (PMPA) with Wheaton in exchange for a cash payment of US$46m (resulting in a gain on partial disposal, inter alia, of US$5m). We have now updated our long-term production model to reflect this sale (see Exhibit 6, below). Note that both Wheaton's guidance and Edison's forecasts include the Marathon, Curipamba and Goose streams (but not yet the Fenix stream), but exclude the Keno Hill and Yauliyacu streams (which have now also been sold).

Exhibit 6: WPM precious metals production – Edison forecasts cf guidance

	FY23e	FY23–27 average*	FY23–32 average
Previous Edison forecast			
Silver production (Moz)	18.9		
Gold production (koz)	335.9		
Cobalt production (klb)	721		
Palladium production (koz)	14.5		
Gold equivalent (koz)	602.5	777	792
Current Edison forecast			
Silver production (Moz)	19.1		
Gold production (koz)	342.9		
Cobalt production (klb)	732		
Palladium production (koz)	15.0		
Gold equivalent (koz)	612.7	773	788
WPM guidance			
Silver production (Moz)	20.0–22.0		
Gold production (koz)	320–350		
Cobalt & palladium production (koz AuE)	22–25		
Gold equivalent (koz)	600–660	810	850

Source: WPM, Edison Investment Research forecasts. Note: *Edison forecasts include Salobo III from FY23, Rosemont/Copper World from FY27 and Antamina extension from FY28.

WPM's updated five-year and 10-year guidance is based on standardised pricing assumptions of US$1,850/oz gold, US$24.00/oz silver, US$1,800/oz palladium and US$18.75/lb cobalt. Of note in this context is an implied gold/silver ratio of 77.1x, which compares with its current ratio of 78.8x, but a long-term average of 61.5x (since gold was demonetised in August 1971). At the standardised prices indicated, our gold equivalent production forecast of 612.7koz gold equivalent (AuE) for FY23e lies well within WPM's guidance range of 600–660koz AuE.

Otherwise, readers will note that Edison's medium-term production forecasts are within 5% of WPM's guidance for the period FY23–27 and within 8% of its longer-term guidance for FY23–32. However, we regard this as within an acceptable range of variance, especially given WPM's traditional under-sale of metal relative to production of this order of magnitude. In addition, these estimates necessarily exclude potential future stream acquisitions.

Growth opportunities

Short-term opportunities

In the short term, production of palladium and gold at Stillwater (operated by Sibanye-Stillwater) will increase under the influence of the Fill-the-Mill project at East Boulder (although the Blitz project has now been delayed to 2024, following the suspension of growth capital activities owing to COVID-19). Similarly, the Voisey's Bay underground project is ramping up to full production, while First Majestic is increasing production at San Dimas by restarting mining operations at the past-producing Tayoltita mine to add another 300tpd (12%) to throughput. In addition, it has been investigating the installation of a 3,000tpd high-intensity grinding mill circuit and an autogenous grinding mill to improve recoveries and reduce operating costs.

Medium-term opportunities

In the medium term, Wheaton has four projects that are progressing on their route to production:

- B2Gold has reaffirmed Sabina's formal construction decision for the Goose project with the intention of achieving first production in 2025. In the meantime, it has initiated an exploration programme to further define untapped potential and unlock further opportunities for growth.
- On 9 March, Artemis announced the approval of its BC Mines Act Permit for the Blackwater project, which was the last major permit required ahead of major construction work. It also closed the associated US$385m project loan facility. In 2022, the company announced the start

of site preparation work at the plant site, including site clearing, bulk earthworks and sediment/erosion control. Since then, it has executed an order for construction equipment, with the initial fleet expected to be delivered in Q423 and to be 'shovel ready' in H224.

- In November, Generation Mining received the final environmental approvals for its Marathon palladium-copper project in northern Ontario. This year, it is aiming to secure key provincial permits, related to species at risk, tree harvesting and water quality, etc, so that early construction works can commence. More recently, it has announced positive results on an updated feasibility study for the project, presenting an optimised design with increased process plant throughput. It has also finalised an offtake term sheet with Glencore for copper concentrate and executed a mandate letter to arrange a senior secured project finance facility of up to US$400m, with a syndicate including Export Development Canada, together with ING Capital and Societe Generale acting as the mandated lead arrangers. This last arrangement represents a key milestone in the financing process for the development of the project. The start of construction is anticipated in Q323 and production in Q3–Q425, to which end it has already purchased an unused, surplus SAG mill and a ball mill.
- Adventus Mining signed the investment contract for the Curipamba project with the Ecuadoran government in December and is planning for the start of formal construction of the project.

Long-term opportunities

Salobo

On 24 October 2018, Vale announced the approval of the Salobo III brownfields mine expansion, intended to increase processing capacity at Salobo from 24Mtpa to 36Mtpa, with start-up at that point scheduled for H222 and an estimated ramp-up time of 15 months. According to its agreement with Vale at the time, depending on the grade of the material processed, WPM was to have made a payment to Vale for this expansion, subject to a 90-day completion test, which WPM estimated was to have been in the range US$550–670m in FY23–25, in return for which it was to be entitled to its full 75% attributable share of expanded gold production.

After the end of Q422 however, Wheaton and Vale agreed to amend the Salobo PMPA to adjust the expansion payment terms to provide increased flexibility for the ramp-up of the expansion, while also maintaining an incentive for Vale to maximise grade on an annual basis. The expansion payment will now be phased, with Wheaton making an initial payment once actual throughput is expanded above 32Mtpa and a second payment if actual throughput is expanded above 35Mtpa by 1 January 2031. The total cumulative payments will range from US$283m to US$552m, dependent on Vale's timing for each of the production increases. Where before Edison had been forecasting that Wheaton would make total payments to Vale of US$552m in FY23 and FY24, we are now forecasting that it will make the whole payment (of US$530m) in FY24. In addition, Wheaton will be required to make annual payments of between US$5.1m and US$8.5m for a 10-year period following payment of the expansion payments if the Salobo mine maintains a high-grade mine plan.

These payments compare to WPM's purchase of a 25% stream from Salobo in August 2016 for a consideration of US$800m (see our note Going for gold, published on 30 August 2016), the US$900m it paid for a similar stream in March 2015 (when the gold price averaged US$1,179/oz) and the US$1.33bn it paid for its original 25% stream in February 2013.

As at the end of Q123, the Salobo III mine expansion was reported to be complete:

Exhibit 7: Physical completion of Salobo III, by quarter, Q219–Q123

	Q219	Q319	Q419	Q120	Q220	Q320	Q420	Q121	Q221	Q321	Q421	Q122	Q222	Q322	Q422	Q123
Physical completion (%)	15	27	40	47	54	62	68	73	77	81	85	90	95	98	99	100
Change (%)	8	12	13	7	7	8	6	5	4	4	4	5	5	3	1	1

Source: Vale, Edison Investment Research

According to Vale, the project successfully commenced at the end of 2022 and is expected to achieve full capacity in Q424. Once full capacity at Salobo III has been completed, however, WPM believes that reserves and resources at the mine could support a further 33% capacity increase, from 90ktpd to 120ktpd (denoted Salobo IV). In addition to its long-term underground potential, WPM believes such an expansion could nevertheless still be supported by open-pit mining alone. Under the terms of its agreement with Vale, there would be no additional payment due from WPM in respect of the Salobo IV expansion.

Rosemont/Copper World

Another major project with which WPM has a streaming agreement for attributable gold and silver production is Rosemont in Arizona (now part of the wider Copper World complex).

Rosemont/Copper World is near a number of large porphyry-type producing copper mines and will be one of the largest copper mines in the United States, with initial output of c 86,000t copper per year from mined sources, accounting for c 8% of total US copper production, rising to c 101,000tpa after 16 years. Total by-product production of silver attributable to WPM is estimated to be c 1.7Moz Ag pa for Phase I, followed by c 2.4Moz Ag pa for Phase II.

The evolution of the project from Rosemont to Copper World

In March 2019, Rosemont/Copper World's operator, Hudbay, received both a Mine Plan of Operations from the US Forest Service and a Section 404 Water Permit from the US Army Corps of Engineers (ACOE), which was effectively the final material administrative step before the Rosemont mine could start development. Subsequently, Hudbay indicated it would seek board approval to start construction work by the end of CY19, which would have enabled first production 'by the end of 2022'. In the meantime, it started early works to run concurrently with financing activities (including a potential joint venture partner).

A legal challenge, lunched in July 2019, has since delayed the project. However, Hudbay has continued to explore in and around the area of the mine and, on 22 September 2021, announced the intersection of additional high-grade copper sulphide and oxide mineralisation predominantly located on its wholly owned patented mining claims (denoted Copper World). To date, seven deposits have been identified at Copper World with a combined strike length of over 7km and, on 15 December 2021, Hudbay announced a maiden mineral resource at Copper World of 272Mt in the indicated category and 142Mt in the inferred category, both at an average grade of 0.36% copper. The mineralisation consists of both skarn and porphyry copper sulphides with a significant oxidised component along a regional fault along the west side of the Rosemont, Bolsa and Broad Top Butte deposits known as the Backbone Fault. As a consequence of this exploration, it was determined that approximately 33Mt of inferred mineral resources at the Bolsa deposit, which were previously considered to be waste in the resource pit shell used for Rosemont's NI 43–101 feasibility study, could now potentially be converted into reserves, which would result in less waste being mined at Rosemont, thereby reducing costs and energy consumption per tonne of ore mined. In addition, the Rosemont deposit also contains oxide mineralisation that was previously classified as waste, which could be processed with the oxide mineralisation at Copper World, and it is expected that further synergies will be identified as Hudbay explores the gap between Bolsa and Rosemont. Note, the Copper World discovery is included in WPM's area of interest under its PMPA with Hudbay.

A new development plan

As a result of these discoveries, Hudbay has adjusted its plan to develop the district. Among other things, it has now acquired a private land package totalling approximately 4,500 acres to support an operation on private lands. The initial technical studies for Copper World were incorporated into a preliminary economic assessment (PEA) investigating the development of the Copper World deposits in conjunction with an alternative plan for the Rosemont deposit, which was announced to the market on 8 June 2022, and proposed a two-phase mine development plan. The first phase of the mine plan requires only state and local permits and reflects an approximate 16-year mine life. The second phase then extends the mine life to 44 years and incorporates an expansion onto federal lands to mine the entire Rosemont and Copper World deposits. The second phase of the mine plan will be subject to the federal permitting process and the company expects that it will be able to pursue the federal permits within the constraints imposed by the courts' most recent legal decisions if any subsequent appeals are not successful.

In this context, on 24 May 2022, Hudbay received a favourable decision from the US District Court for the District of Arizona on all issues relating to the development of Copper World, including that Copper World and Rosemont are not connected under the National Environmental Policy Act (NEPA) and, therefore, that the ACOE does not have an obligation to include Copper World as part of its NEPA review of Rosemont. The District Court also granted Hudbay's motion to dismiss the Copper World preliminary injunction request filed by the plaintiffs in the two lawsuits challenging the Section 404 Clean Water Act permit for Rosemont on the basis that the lawsuits were moot after the company surrendered its 404 permit back to the ACOE in April 2022. The ACOE has never determined that there are jurisdictional waters of the United States on the Copper World site and Hudbay has independently concluded through its own scientific analysis that there are no such waters in the area. In this respect, Hudbay believes the District Court's decision, together with the 12 May 2022 decision, clarifies the permitting path for Copper World, including the requirements to receive federal permits for the second phase only (ie years 16 to 44 of the project) under existing mining regulations.

PEA completed and PFS underway ahead of potential project sanctioning in 2024

Resources were reported to have expanded materially to 792Mt in the measured category, 381Mt in the indicated category and 262Mt in the inferred category at the time of Hudbay's PEA at an average grade of 0.40% copper. In April 2022, the company commenced early works at Copper World with initial grading and clearing activities at site and, in January, it received an approved right-of-way from the Arizona State Land Department that will allow for infrastructure such as roads, pipelines and powerlines to connect the properties in the company's private land package. Subsequent to the end of the quarter, it also announced the receipt of confirmation from the Army Corps of Engineers that its previous surrender of the Section 404 Clean Water Act permit for the former Rosemont project had been formally accepted and revoked, as requested. Clearing and grading work to prepare the Copper World site, including the construction of roads and other facilities, is continuing. In the meantime, main facility engineering has been completed and metallurgical test work is being analysed as part of concentrate leaching trade-off evaluations.

Hudbay expects to conclude a pre-feasibility study for Phase I of the Copper World project in the middle of this year. Among other things, this will focus on converting the remaining inferred mineral resources to measured and indicated status and the evaluation of many of the project's optimisation and upside opportunities. It will then complete a definitive feasibility study as well as receiving all required state and local permits over the next 12 months, while simultaneously evaluating a variety of financing options, including a potential minority joint venture partner, prior to project sanction potentially as early as 2024. As such, Edison is continuing to forecast production from Rosemont/Copper World attributable to WPM in FY27. However, readers should note that any acceleration in the process of being granted federal permits could allow Hudbay earlier access to higher-grade areas of the orebody, especially at Rosemont. In the meantime, it is continuing exploration and technical work at site to support its feasibility studies.

Antamina

In April 2022, Antamina announced a US$1.6bn investment that will lengthen the mine's useful life from 2028 to 2036. Currently, the mine is carrying out a third and final 'public participation' with residents of the northern Andean region of Ancash, where the mine is located, and is awaiting a response from the local authority, Senace, regarding the company's request to modify its environmental impact assessment to allow the mine to extend its operating life by eight years. Production and the mine's operational footprint would remain the same and it hopes to achieve mine extension approval in the middle of this year. The mine, which is co-owned by Glencore, BHP, Teck and Mitsubishi Corp, is Peru's largest, and the world's second-largest, copper mine.

Pascua-Lama

WPM's contract with Barrick provided for a completion test that, if unfulfilled by 30 June 2020, would result in WPM being entitled to the return of its upfront cash consideration of US$625m less a credit for any silver delivered up to that date from three other Barrick mines (at which point it would have no further streaming interest in the mine). Given the test was unfulfilled, WPM had the right to an estimated US$252.3m (WPM's carrying value of Pascua-Lama) repayment from Barrick in FY20. Given the long-term optionality provided by the Pascua-Lama project, however, WPM instead opted not to enforce the repayment of its entitlement and to maintain its streaming interest in the project (which was originally expected to deliver an attributable 1.7–12.0Moz silver pa, averaging 5.2Moz Ag pa, to WPM at a cost of US$3.90/oz inflating at 1% per year). A Chilean court ordered Pascua-Lama to close in 2020.

However, Barrick is advancing a high-level study into Pascua-Lama, which it reports to be nearing completion. The study is understood to be focusing on the fact that a substantial portion of the resource could be processed by leaching or agitated leaching, which would require only modest modifications to the circuit already built. This raises the possibility that the orebody could be developed in a different manner and Barrick's goal is to demonstrate a viable project to both the Chilean and Argentinian governments. If successful, it would then pursue permitting options (and, in particular, water permits) and build out a new model for the project's development, in which case an investment decision on Pascua-Lama could be forthcoming as early as 2024.

Other potential future growth opportunities

Wheaton reports that its development team remains 'exceptionally busy' evaluating new opportunities. In general, WPM expects to be conducting due diligence processes on approximately 10–12 projects at any one time, which it expects to narrow to three to four target projects over approximately 12 months. Most of the opportunities currently being evaluated by WPM are reported to be the precious metal by-product streams of base metal mines, although there are also reported to be some high-margin, purely precious metals mines included in the evaluation process. In the first instance, WPM would fund any such transactions via the US$2bn available under its revolving credit facility, plus the US$799.7m in cash that it has on its balance sheet (at end-Q123) and, potentially, its US$300m at-the-market equity programme.

While it is difficult, or impossible, to predict potential future stream acquisition targets with any degree of certainty, it is possible to highlight two that may be of interest to WPM in due course for which it already has strong, existing counterparty relationships, being:

- the platinum group metal by-product stream at Sudbury (operated by Vale); and
- the 30% of the gold output at Constancia (operated by Hudbay) that is not currently subject to any streaming arrangement.

FY23 guidance and forecasts

In the light of WPM's FY23 guidance, and recent moves in metals prices, forex rates and WPM's share price, Edison has updated its quarterly forecasts for Wheaton for FY23 as follows:

Exhibit 8: WPM FY23 forecast, by quarter*

US$000s (unless otherwise stated)	Q123	Q223e (prior)	Q223e	Q323e (prior)	Q323e	Q423e (prior)	Q423e	FY23e	FY23e (prior)
Silver production (koz)	4,927	4,723	4,723	4,723	4,723	4,723	4,723	19,097	18,894
Gold production (oz)	73,037	85,746	85,746	87,149	87,149	97,005	97,005	342,937	335,914
Palladium production (koz)	3,705	3,514	3,514	3,871	3,871	3,871	3,871	14,961	14,532
Cobalt production (klb)	124	201	201	204	204	204	204	732	721
Silver sales (koz)	3,749	4,723	4,153	4,723	4,723	4,723	4,723	17,349	18,336
Gold sales (oz)	62,605	85,725	79,977	87,128	87,128	96,984	96,984	326,694	331,524
Palladium sales (oz)	2,946	3,500	3.161	3,856	3,856	3,856	3,856	13,818	14,002
Cobalt sales (klb)	323	201	201	204	204	204	204	931	712
Avg realised Ag price (US$/oz)	22.85	25.16	25.62	25.19	25.90	25.19	25.90	25.17	24.58
Avg realised Au price (US$/oz)	1,904	2,006	2,002	2,006	2,000	2,006	2,000	1,982	1,985
Avg realised Pd price (US$/oz)	1,607	1,606	1,470	1,635	1,452	1,635	1,452	1,489	1,614
Avg realised Co price (US$/lb)	15.04	15.84	15.84	15.84	15.84	15.84	15.84	15.56	16.18
Avg Ag cash cost (US$/oz)	5.07	5.12	5.11	5.12	5.13	5.13	5.14	5.11	5.10
Avg Au cash cost (US$/oz)	496	463	462	461	461	457	4.57	467	462
Avg Pd cash cost (US$/oz)	294	289	265	294	261	294	261	269	291
Avg Co cash cost (US$/lb)	3.30	2.85	2.85	2.85	2.85	2.85	2.85	3.01	2.91
Sales	214,465	299,664	274,359	303,291	305,417	323,062	325,128	1,119,368	1,142,859
Cost of sales									
Cost of sales, excluding depletion	51,964	65,404	59,623	66,086	65,976	70,248	70,137	247,701	252,847
Depletion	45,000	59,625	53,874	60,945	60,184	65,882	64,948	224,006	232,538
Total cost of sales	96,964	125,029	113,497	127,031	126,160	136,130	135,085	471,707	485,386
Earnings from operations	117,501	174,635	160,862	176,260	179,256	186,931	190,043	647,661	657,474
Expenses and other income									
– General and administrative**	18,874	18,627	18,837	17,488	17,396	17,488	17,396	72,503	75,159
– Foreign exchange (gain)/loss								0	0
– Net interest paid/(received)	1,378	1,454	1,454	1,454	1,454	1,454	1,454	5,741	5,817
– Other (income)/expense	(7,387)	(4,676)	(7,968)	(3,347)	(7,567)	(2,575)	(8,101)	(31,023)	(16,090)
Total expenses and other income	12,865	15,405	12,324	15,595	11,283	16,366	10,749	47,221	64,886
Earnings before income taxes	104,636	159,230	148,538	160,665	167,973	170,565	179,294	600,440	592,588
Income tax expense/(recovery)	205	250	250	250	250	250	250	955	1,000
Marginal tax rate (%)	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2
Net earnings	104,431	158,980	148,288	160,415	167,723	170,315	179,044	599,485	591,588
Average no. shares in issue (000s)	452,370	452,319	452,838	452,319	452,838	452,319	452,838	452,721	452,319
Basic EPS (US$)	0.231	0.351	0.327	0.355	0.370	0.377	0.395	1.32	1.31
Diluted EPS (US$)	0.230	0.350	0.326	0.353	0.369	0.375	0.394	1.32	1.30
DPS (US$)	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.60	0.60

Source: WPM accounts, Edison Investment Research. Note: *Excluding impairments, impairment reversals and exceptional items. **Forecasts now include stock-based compensation costs. Totals may not add up owing to rounding.

Our fractionally improved basic EPS forecast of US$1.32/share for FY23 is 10.0% above the largely unchanged consensus forecast of US$1.20/share (source: Refinitiv, 3 May 2023), potentially indicating that the market is being reticent in incorporating the recent rises in precious metals prices into its WPM estimates. In this context, it is worth noting that our gold and silver price forecasts for the remainder of the year are US$2,000/oz and US$25.90/oz, respectively, which are those prevailing at the time of writing.

Exhibit 9: WPM FY23 consensus EPS forecasts (US$/share), by quarter

	Q123	Q223e	Q323e	Q423e	Sum Q1–Q423e	FY23e
Edison forecasts	0.231	0.327	0.370	0.395	1.323	1.32
Mean consensus	0.231	0.30	0.33	0.33	1.191	1.20
High consensus	0.231	0.37	0.39	0.39	1.381	1.48
Low consensus	0.231	0.21	0.25	0.25	0.941	1.01

Source: Refinitiv, Edison Investment Research. Note: As at 3 May 2023.

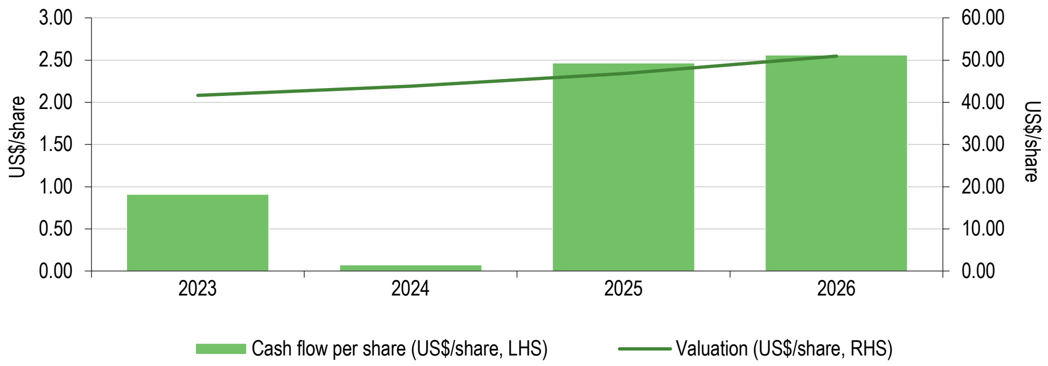
Valuation

Absolute

WPM is a multi-asset company that has shown a willingness and desire to buy streams in the past to maintain production and maximise shareholder returns. As a result, rather than our customary method of discounting maximum potential dividends over the life of operations back to FY23, in the case of WPM (as with Newmont and Endeavour), we discount forecast cash flows back over four years from the start of FY23 and then apply an ex-growth terminal multiple to forecast cash flows in that year (ie FY26) based on an appropriate discount rate.

Our estimate of WPM's 'terminal' pre-financing cash flow in FY26 is ostensibly unchanged at US$2.56/share (cf US$2.58/share previously), as shown below:

Exhibit 10: WPM cash flow per share and related valuation (US$/share), FY23–26

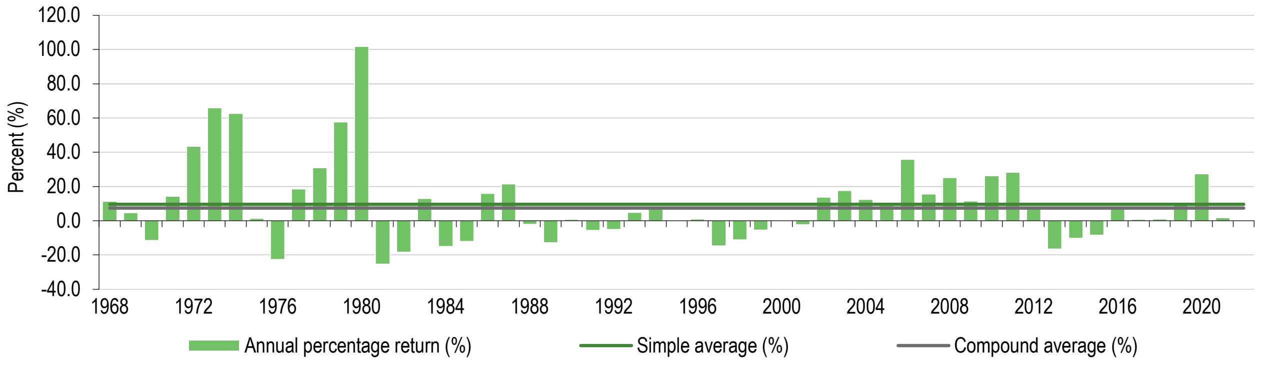


Source: Edison Investment Research. Note: Valuation line assumes cash flow per share growth rate of 4.0% pa post-FY26 in nominal terms, which equals the average US rate of CPI inflation since 1972 (ie 0% per annum growth in real terms).

Readers should note that the increase in cash flows predicted in FY23 and the corresponding decline in cash flows forecast in FY24 relative to our last two notes has arisen almost solely as a result of our revised forecast that Wheaton will make a payment of US$530m to Vale in respect of the Salobo III expansion in FY24, rather than a payment of US$552m split across both FY23 and FY24.

Otherwise, assuming 4% growth in nominal cash flows beyond FY26 (ie 0% growth in real cash flows) and applying a discount rate of 9.0% (being the expected long-term required nominal equity return), our terminal valuation of the company at end-FY26 is US$52.99/share (cf US$53.37/share previously), or C$71.40/share. However, readers should note that this valuation is inherently conservative in that it assumes zero growth in (real) cash flows beyond FY26. This is inconsistent with the gold price, which has risen at a compound average annual growth rate of 7.4% per annum from 1967 to 2022 and at a simple average annual growth rate of 9.6% per annum (as depicted below):

Exhibit 11: Gold price annual performance, 1968–2022



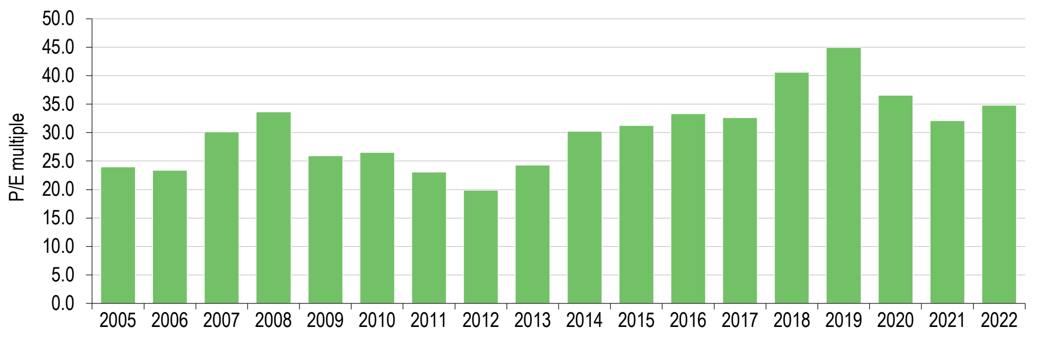
Source: Edison Investment Research (underlying data: US Bureau of Labor Statistics, Bloomberg, kitco.com, South African Chamber of Mines)

It is also inconsistent with WPM's longer-term historical performance, wherein operational cash flows have increased at a compound average annual growth rate of 21.0% pa for the 17 years between FY05 and FY22, while its operational cash flows per share have increased at compound average annual growth rate of 14.1% pa.

Historical

Excluding FY04 (part-year), WPM's shares have historically traded on an average P/E multiple of 30.4x current year basic underlying EPS, excluding impairments (cf 38.9x Edison or 42.5x Refinitiv consensus FY23e – see Exhibit 13).

Exhibit 12: WPM's historical current year P/E multiples, 2005–22



Source: average share price data Bloomberg, Edison Investment Research calculations

Applying this 30.4x multiple to our (ostensibly unchanged) EPS forecast of US$1.78 in FY26 (cf US$1.80 previously) implies a potential value per share for WPM of US$54.06 or C$73.03 in that year.

Relative

From a relative perspective, it is notable that WPM is cheaper than its peers on at least 69% (25 out of 36) of the valuation measures observed in Exhibit 13 if Edison estimates are used or 63% (23 out of 36) of the same valuation measures if consensus forecasts are used.

Exhibit 13: WPM comparative valuation versus a sample of operating and royalty/streaming companies

	P/E (x)			Yield (%)			P/CF (x)		
	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Royalty companies									
Franco-Nevada	43.6	39.5	40.9	0.8	0.9	0.9	30.9	28.5	29.2
Royal Gold	33.7	31.8	31.9	1.0	1.0	1.1	20.3	18.4	17.9
Sandstorm Gold	69.0	52.8	37.2	1.0	1.0	1.0	15.9	14.6	11.6
Osisko	45.7	41.5	36.1	0.9	0.9	0.9	23.8	22.1	20.7
Average	**48.0**	**41.4**	**36.5**	**0.9**	**0.9**	**1.0**	**22.7**	**20.9**	**19.9**
WPM (Edison forecasts)	**38.9**	**37.0**	**30.3**	**1.2**	**1.2**	**1.4**	**27.8**	**24.0**	**20.8**
WPM (consensus)	**42.5**	**36.8**	**36.4**	**1.1**	**1.1**	**1.2**	**29.7**	**25.3**	**25.5**
Implied WPM share price (US$)*	**63.57**	**57.62**	**62.18**	**65.15**	**67.10**	**73.41**	**42.04**	**44.88**	**49.27**

Source: Refinitiv, Edison Investment Research. Note: Peers priced on 3 May 2023. *Derived using Edison forecasts and average consensus multiples.

Stated alternatively, were Wheaton to trade at the average multiples of its peers, we calculate that its share price in FY23 would be US$56.92, or C$76.90.

Financials: US$797.9m (US$1.76/share) in net cash

As at 31 March, WPM had US$799.7m in cash on its balance sheet and no debt outstanding under its US$2bn revolving credit facility. As such (including a modest US$1.8m in leases), it had US$797.9m in net cash overall after generating US$135.1m in operating cash flow during the quarter.

Exhibit 14: WPM cash, net cash and operating cash flow, by quarter, Q420–Q123

(US$m)	Q420	Q121	Q221	Q321	Q421	Q122	Q222	Q322	Q422	Q123
Cash/(debt)	192.7	191.2	235.4	372.5	226.0	376.2	448.6	494.6	696.1	799.7
Net cash/(debt)	6.0	187.7	232.1	369.4	223.2	373.5	446.2	492.5	694.1	797.9
Operating cash flow	208.0	232.2	216.3	201.3	195.3	210.5	206.4	154.5	172.0	135.1

Source: Wheaton Precious Metals

In addition, WPM has long-term investments, in the form of equity share- and warrant-holdings, in listed companies in the sum of US$309.1m as at 31 March, or US$0.68/share.

In FY23 we estimate that WPM will generate US$838.0m from (net) operating activities, before consuming US$425.9m (cf US$1,004.0m previously – lower on account of the deferral of the Salobo III payment) in investing activities and paying out up to US$272.1m in forecast dividends to leave the company with net cash of US$834.1m on its balance sheet as at end-FY23. However, investors should note that the timing of payments relating to the Salobo III, Santo Domingo, Blackwater, Goose, Curipamba, Marathon and Rosemont/Copper World streams is uncertain and inasmuch as investments are delayed, we calculate that it is possible that Wheaton could register a larger cash balance on its balance sheet by the year end. Either way, in the absence of any major new asset acquisitions, we do not expect that Wheaton will require recourse to its debt facilities in the foreseeable future (all other things being equal).

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Exhibit 15: Financial summary

$000s	2020	2021	2022	2023e	2024e	2025e
Year end 31 December	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS						
Revenue	1,096,224	1,201,665	1,065,053	1,119,368	1,358,440	1,548,641
Cost of Sales	(266,763)	(287,947)	(267,621)	(247,701)	(314,563)	(353,037)
Gross Profit	829,461	913,718	797,432	871,667	1,043,877	1,195,604
EBITDA	763,763	852,733	735,245	799,164	971,374	1,123,100
Operating profit (before amort. and excepts.)	519,874	597,940	503,293	575,158	629,792	770,812
Intangible Amortisation	0	0	0	0	0	0
Exceptionals	4,469	162,806	164,214	(6,960)	0	0
Other	387	190	7,680	31,023	0	0
Operating Profit	524,730	760,936	675,187	599,221	629,792	770,812
Net Interest	(16,715)	(5,817)	(5,586)	(5,741)	1,501	1,054
Profit Before Tax (norm)	503,159	592,123	497,707	569,417	631,293	771,866
Profit Before Tax (FRS 3)	508,015	755,119	669,601	593,480	631,293	771,866
Tax	(211)	(234)	(475)	(955)	(1,000)	(1,000)
Profit After Tax (norm)	503,335	592,079	504,912	599,485	630,293	770,866
Profit After Tax (FRS 3)	507,804	754,885	669,126	592,525	630,293	770,866
Average Number of Shares Outstanding (m)	448.7	450.1	451.6	452.7	452.8	452.8
EPS - normalised (c)	112	132	112	132	139	170
EPS - normalised and fully diluted (c)	112	131	112	132	139	170
EPS - (IFRS) (c)	113	168	148	131	139	170
Dividend per share (c)	42	57	60	60	62	72
Gross Margin (%)	75.7	76.0	74.9	77.9	76.8	77.2
EBITDA Margin (%)	69.7	71.0	69.0	71.4	71.5	72.5
Operating Margin (before GW and except.) (%)	47.4	49.8	47.3	51.4	46.4	49.8
BALANCE SHEET						
Fixed Assets	5,755,441	6,046,427	6,039,813	6,241,748	6,840,346	6,494,857
Intangible Assets	5,521,632	5,940,538	5,753,111	5,955,046	6,553,644	6,208,155
Tangible Assets	33,931	44,412	30,607	30,607	30,607	30,607
Investments	199,878	61,477	256,095	256,095	256,095	256,095
Current Assets	201,831	249,724	720,093	844,870	597,947	1,390,366
Stocks	3,265	12,102	13,817	2,634	3,196	3,644
Debtors	5,883	11,577	10,187	6,134	7,444	8,486
Cash	192,683	226,045	696,089	836,102	587,307	1,378,236
Other	0	0	0	0	0	0
Current Liabilities	(31,169)	(29,691)	(30,717)	(30,023)	(33,229)	(35,073)
Creditors	(30,396)	(28,878)	(29,899)	(29,205)	(32,411)	(34,255)
Short term borrowings	(773)	(813)	(818)	(818)	(818)	(818)
Long Term Liabilities	(211,532)	(16,343)	(11,514)	(11,514)	(11,514)	(11,514)
Long term borrowings	(197,864)	(2,060)	(1,152)	(1,152)	(1,152)	(1,152)
Other long term liabilities	(13,668)	(14,283)	(10,362)	(10,362)	(10,362)	(10,362)
Net Assets	5,714,571	6,250,117	6,717,675	7,045,081	7,393,550	7,838,636
CASH FLOW						
Operating Cash Flow	784,843	851,686	749,429	844,730	972,707	1,123,455
Net Interest	(16,715)	(5,817)	(5,586)	(5,741)	1,501	1,054
Tax	(2,686)	(503)	34	(955)	(1,000)	(1,000)
Capex	149,648	(404,437)	(44,750)	(425,941)	(940,179)	(6,800)
Acquisitions/disposals	0	0	0	0	0	0
Financing	22,396	7,992	10,171	0	0	0
Dividends	(167,212)	(218,052)	(237,097)	(272,079)	(281,824)	(325,780)
Net Cash Flow	770,274	230,869	472,201	140,013	(248,795)	790,929
Opening net debt/(cash)	774,766	5,954	(223,172)	(694,119)	(834,132)	(585,337)
HP finance leases initiated	0	0	0	0	0	0
Other	(1,462)	(1,743)	(1,254)	0	0	0
Closing net debt/(cash)	5,954	(223,172)	(694,119)	(834,132)	(585,337)	(1,376,266)

Source: company sources, Edison Investment Research.

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