HERAEUS Precious Appraisal

11th March 2019

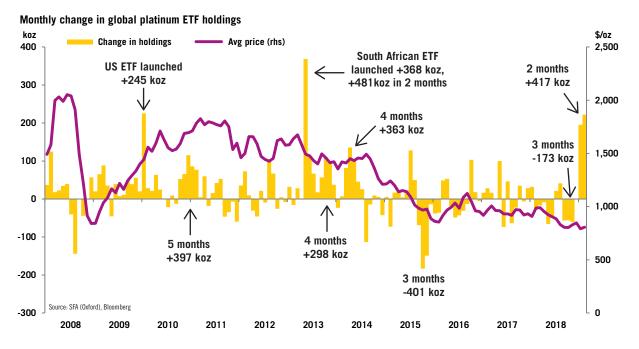
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Heraeus



Will platinum investment demand balance the market in 2019?

The first two months of 2019 saw the largest monthly inflows into platinum ETFs globally since 2013. Global ETF holdings rose by 195 koz and 222 koz in January and February respectively. This was the second-highest ever two-monthly gain after April and May 2013 when the first South African ETF was launched.



The size of the movement suggests that it is institutional investors taking a position. There were significant purchases in the US (+70 koz), UK (+165 koz) and South Africa (+167 koz). The large jump in ETF holdings is specific to platinum (+18% in two months). Palladium ETF holdings have gone up by 17 koz (+2%). The gold price has performed better than platinum. Gold ETFs have seen some inflows in 2019 (+1.3 moz, +2%) but not the same percentage, while silver ETFs are down 5 moz (-1%). The interest in platinum could have been on relative value grounds, since platinum has been trading close to 10-year price lows and at the largest discount to gold and palladium yet seen. Speculative futures investors have taken the opposite view as they follow price momentum. The net speculative futures position on NYMEX went negative in early February as a large amount of shorts were built up while the price was falling. Once institutional investors have built their ETF position, it is unlikely to change very much in the near term, so it is doubtful that these large increases in ETF holdings will continue.

ETF buying is unlikely to be enough to soak up all the surplus metal that is being produced this year, since the platinum market is forecast to have a surplus of over 1 moz before investment. Adding bar and coin investment, which is likely to be 200-250 koz, will still not be sufficient to balance the market. **In the absence of supply disruptions in South Africa** (power shortages, industrial action), **the platinum price is likely to remain under pressure.**

PRECIOUS METALS REVIEW

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		Close	Weekly change	High	Date	Low	Date
\$/	/oz	1,299	-0.21%	1,301	08/03/2019	1,281	07/03/2019
€/	/oz	1,155	0.97%	1,159	08/03/2019	1,133	05/03/2019

Gold drops on positive trade news. The gold price has fallen \$49/oz from its peak of \$1,348/oz since 20 February as it failed to break through the resistance level around \$1,350/oz which has been unbroken since 2014. Aiding the move away from gold was some more convincing news that the US and China are approaching a trade deal which could see tariffs lifted on \$200 billion (out of \$250 billion) worth of goods. Additionally, US GDP for Q4'18 came in above expectations at 2.6% and the dollar has strengthened. However, the pullback in the gold price seems likely to be temporary as the ECB stated it will resume monetary support to banks and that it won't raise interest rates this year at its meeting last week, echoing sentiment being shown by central banks worldwide. Meaningful downward revisions in the ECB's and OECD's GDP forecasts for most developed and emerging economies demonstrate the global economic risks which could see gold test the \$1,350/oz level again.

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		Close	Weekly change	High	Date	Low	Date
\$/	'oz	15.35	0.30%	15.37	08/03/2019	14.97	07/03/2019
€/	'oz	13.65	1.48%	13.67	08/03/2019	12.96	06/03/2019

Global slowdown hits electronics, silver's largest demand segment. Monthly sales of semiconductors, published by the Semiconductor Industry Association, contracted in January by 5.7% year-on-year to \$35.5 billion. This is the first month of negative growth since July 2016. Semiconductors' widespread use in electronics makes them a useful indicator for the industry. Electronics accounts for around 250 moz of silver demand, a quarter of total

demand. The World Semiconductor Trade Statistics (WSTS), which provides the semiconductor sales data, forecasts a 3% drop in global sales for 2019. The gold:silver ratio peaked at over 85.5 last week – the highest it has been since December – and will continue to remain high while fundamentals are weaker relative to gold.

t Platinum

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ų		Close	Weekly change	High	Date	Lo	w Date	
	\$/oz	816	-5.47%	854	04/03/2019	81	2 08/03/2019	
	€/oz	726	-4.38%	752	04/03/2019	72	5 08/03/2019	

More platinum supply from Northam in 2019. The company will commence with the reprocessing of tailings to produce PGM material by May of this year at Northam's newly recommissioned metallurgical plant at the Eland mine. Additionally, trial mining is expected to begin at Kukama shaft by the end of the year. Northam says Eland could contribute up to 150 4E koz (90 koz of platinum) to annual production. However, it is likely to take the mine around four years to reach steady-state production, assuming technical challenges at the mine can be overcome. Northam produced 256 4E koz in H2'18, up 4.1% from H2'17. Going forward, Booysendal South mine will ramp up, having started production last year, and output is expected to reach 215 4E koz (~129 koz of platinum) by 2022. If this expansion goes ahead

as currently planned then, along with other expansions in the industry supported by the strong palladium and rhodium prices, platinum supply could remain high. With the demand outlook being weak and the market already in surplus, platinum prices will underperform.

RBP also ramping up production. Royal Bafokeng Platinum (RBP) produced 368 4E koz in 2018, up 12.2% (+40 koz) on 2017. The company is targeting production of 450-480 4E koz (266-307 koz of platinum) in 2019 and 500 4E koz in 2020 from a ramp-up of yield at its mechanised Styldrift mine. The high rhodium price has also led to the reopening of parts of the BRPM South shaft which will ramp up to a production rate of around 16 koz of platinum per year.

PRECIOUS METALS REVIEW



Palladium

			Close	Weekly change	High	Date	Low	Date
	\$/	ΟZ	1,516	-2.37%	1,557	04/03/2019	1,502	05/03/2019
	€/	ΟZ	1,349	-1.12%	1,373	07/03/2019	1,327	05/03/2019

US light vehicle sales disappointing in February but light trucks continue to outperform. Sales fell 2.9% year-onyear to a seasonally adjusted, annualised rate (SAAR) of 16.61 million units, short of analysts' estimates of 16.7 million and the lowest since August 2017, according to Automotive News. The market accounts for 1.7 moz of annual palladium demand. Sales at major automakers Fiat Chrysler, Toyota, Honda and Nissan all fell short of analysts' forecasts. Sales headwinds specific to the start of this year include the government shutdown and exceptionally cold weather. The SAAR will need to rise back above 17 million to hit current full-year forecasts, which could be a challenge given the higher interest rate environment. On the positive side for palladium demand, SUVs and pick-ups now make up 69% of the market,

as sales increased 1.7% year-on-year while passenger cars fell 11.9% (source: MarkLines). Overall, palladium demand from the region is likely to be flat or fall slightly.

High palladium price bringing on new production. Impala has said construction at the Waterberg project is planned to start in 2021, with output potentially commencing in 2024. This is the earliest it could start and delays to projects are common. It has been estimated that the project could have annual production of 450 koz of palladium and 290 koz of platinum. Impala Platinum's guidance for FY2019 (July 2018 to June 2019) is given as 1.5-1.6 moz of platinum (~0.90-0.99 moz of palladium) against FY2018 production of 1.468 moz (0.849 moz of palladium).

Rhodium, Ruthenium, Iridium

Rh ⁻		Rhodium	Ruthenium	Iridium
	Reporting week	\$3,025/oz	\$275/oz	\$1,460/oz
	Previous week	\$2,825/oz	\$275/oz	\$1,460/oz

Rhodium has reached a new high of \$3,025/oz, the highest price since October 2008, after gaining \$200/oz last week. The price has now been rising for the last eight weeks. Ruthenium and iridium prices are unchanged at present.

New rhodium production is not enough to offset

scheduled shaft closures. The ramp-up at Booysendal South mine by Northam is estimated to add a little over 10 koz to annual rhodium production over the next two years. The developments at RBP's South shaft will also add about 3 koz per year. Furthermore, the high rhodium price is key to Northam's efforts to reopen the

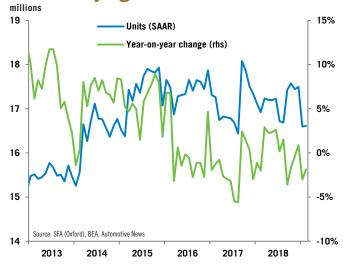
rhodium-rich Eland mine. However, the shafts planned for closure at Impala Platinum have a relatively high rhodium grade but are high cost and have relatively low palladium grade. Consequently, this is expected to result in a drop in rhodium supply of more than 20 koz over the next two years and there are other contractions planned at Anglo American platinum. In the longer term, while the Waterberg project has the potential to significantly increase palladium supply, it has extremely low rhodium content. Therefore, the rhodium market is forecast to remain tight as supply is expected to fall next year and, given currently announced plans, supply will continue to edge lower afterwards.

TRENDS AND INVESTMENTS

Gold and silver prices



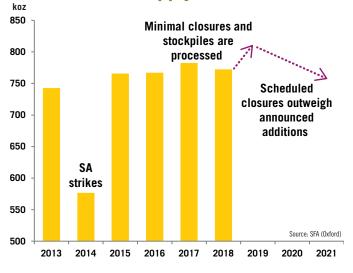
US monthly light vehicle sales



Pt/Pd/Rh/basket ZAR price performance



Rhodium mine supply



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