

HERAEUS PRECIOUS APPRAISAL

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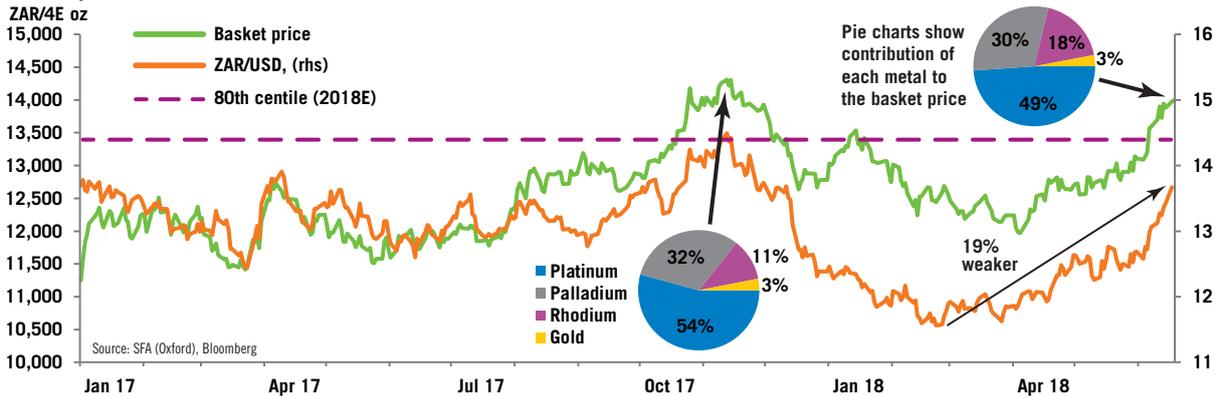


MARKET SPOTLIGHT

A weak rand is helping South African PGM miners' revenues

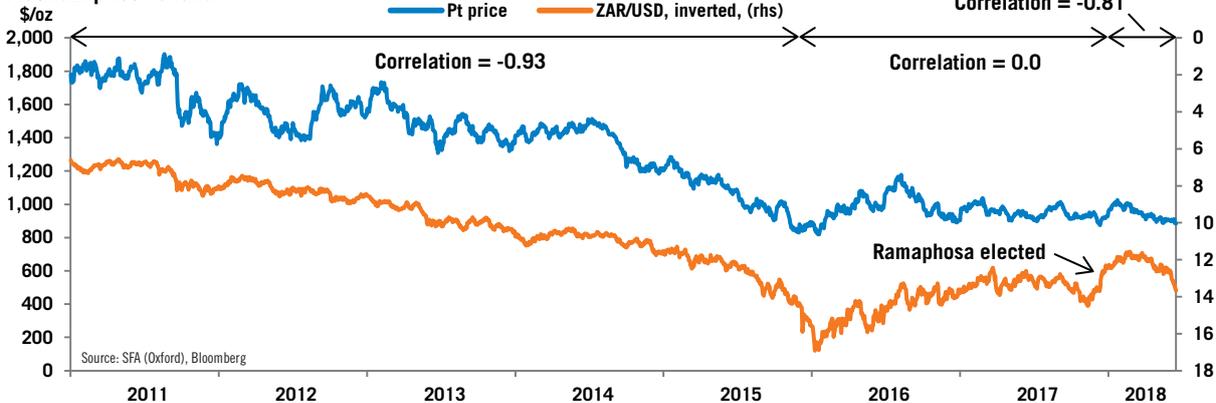
The low platinum price in combination with a strong rand has been squeezing South African PGM producers' revenues over the last few years. The basket price, i.e. the revenues generated from the metals that PGM miners produce, was below the cost of production for some operations. However, the recent weakness in the rand, along with a significant improvement in the rhodium price, has seen the basket price recover back above the 80th centile of the cost curve.

Basket price vs net cash costs



For more than 10 years the rand has had a strong negative correlation with the US\$ price of platinum, i.e. when the rand has strengthened the platinum price in \$/oz has increased. Starting in January 2016, the correlation broke down as the rand strengthened by 32% from 16.92:US\$ in January 2016 to 11.56:US\$ in February 2018. However, since then the correlation has returned. The rand has weakened 19% and although the platinum price has declined 11% in US\$ terms, the overall impact has been to increase the revenues generated by PGM miners in South Africa.

Platinum price vs rand



The strength in the rand, particularly following the elevation of Cyril Ramaphosa to ANC leader and President of South Africa, was out of line with the fundamentals of the South African economy, which has current account and government budget deficits, weak growth and very high unemployment. With interest rate differentials narrowing and these structural weaknesses in the South African economy, the rand is likely to continue to depreciate over the longer term and therefore keep the platinum price in dollar terms under pressure.



PRECIOUS METALS REVIEW

79 Au Gold

	Close	Weekly change	High	Date	Low	Date
\$/oz	1,269	-0.73%	1,284	19/06/2018	1,262	21/06/2018
€/oz	1,091	-0.86%	1,109	19/06/2018	1,087	22/06/2018

Gold has dropped as the dollar strengthens, and continuing trade tensions are creating risk for gold demand, particularly from East Asia. The prospect of additional interest rate rises from the Federal Reserve appears to have boosted the dollar, particularly against emerging market currencies. Investors are looking for somewhere to ride out the storm that is being created by the 'back and forth' situation over trade. This is leading many to look towards the US and the dollar, as the outlook for the American economy is still relatively strong despite the concerns around trade. As a result, the dollar continues to gain against the majority of currencies but the yen outperformed last week (USDJPY -0.6%). Under this

environment, the gold (and silver) price is expected to be capped on the upside but has the potential to fall further over the summer period.

One possible cause of the lack of safe haven move to gold is that there are concerns over the future of the Chinese yuan. A possible outcome of the trade war is that China might devalue its currency, or be unable to stop it from falling, which would make gold more expensive in the country. China is the single largest consumer of gold and buyers there are very responsive to the price, so, in this scenario, demand should be expected to decline.

47 Ag Silver

	Close	Weekly change	High	Date	Low	Date
\$/oz	16.40	-0.99%	16.63	18/06/2018	16.20	21/06/2018
€/oz	14.10	-1.17%	14.34	18/06/2018	14.01	21/06/2018

The dollar strength has been weighing on all the precious metals, but silver and the PGMs, as more industrial precious metals, have suffered more than gold. The gold:silver ratio reached a six-month low of 75.2 on 15 June but by the end of last week had risen back to 77.3. Silver has a more direct impact from trade and if the escalating tariffs affect the demand for electronics, then silver demand will drop as well. The threats of tariffs on an additional \$200 billion of Chinese goods on Tuesday and retaliation by the EU on Wednesday resulted in further declines in the silver price.

Speculative investors trading in silver futures increased their total long positions, which benefit as the price rises, and reduced their short position on 12 June, resulting in the largest one week change on record. The net position increased from 188 moz to 337 moz on 12 June as the long position rose to 660 moz, the highest level since April 2017. However, the price had dropped by 3.4% by 19 June so the futures net position is expected to follow it lower.

78 Pt Platinum

	Close	Weekly change	High	Date	Low	Date
\$/oz	874	-1.56%	892	18/06/2018	858	22/06/2018
€/oz	751	-1.79%	769	18/06/2018	739	22/06/2018

The Chinese government has announced it is establishing a hydrogen energy and fuel cell industry alliance and is supportive of the development of fuel cell vehicles. The government is aiming to create a supportive policy for fuel-cell car development but it appears that there will not be subsidies for the vehicles. Miao Wei, the Minister of Industry and Information Technology, said the government aims to "motivate energy enterprises and carmakers to increase investment" rather than invest directly. However, there already exists a fuel cell bus market in China so the government support could push more major

Chinese automakers to accelerate and expand into this fuel, with potential positives for platinum demand.

The decline in precious metals last week pushed down the platinum price past its low of \$873/oz from December 2017, and it is now at its lowest level for over two years. In January 2016 the platinum price fell to \$811/oz, the lowest since the collapse in the price following the 2008 financial crisis when the price dropped to \$781/oz.



PRECIOUS METALS REVIEW

⁴⁶ Pd **Palladium**

	Close	Weekly change	High	Date	Low	Date
\$/oz	954	-3.79%	1,000	18/06/2018	951	21/06/2018
€/oz	820	-4.08%	862	18/06/2018	819	22/06/2018

Bloomberg New Energy Finance's (BNEF) latest Electric Vehicle Outlook expects petrol and diesel powered vehicles to peak in sales in the mid-2020s. It follows that palladium demand should peak around the same time. By 2025, BNEF estimates that sales of electric vehicles (EVs) will account for 11% of global passenger vehicle sales and that annual growth of EVs will reach a rate that starts to reduce the sales of cars solely powered

by internal combustion engines (ICEs). The automotive industry is the source of 80% of total palladium demand, so the metal price is very dependent on the demand from this sector. However, palladium demand may peak a little later than ICE car sales as BNEF's definition of EVs includes plug-in hybrids, which have palladium-containing catalysts. BNEF tends to be optimistic about the rate of EV uptake compared to other forecasts.

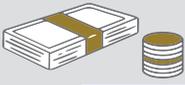
⁴⁵ Rh ⁴⁴ Ru ⁷⁷ Ir **Rhodium, Ruthenium, Iridium**

	Rhodium	Ruthenium	Iridium
Reporting week	\$2,250/oz	\$275/oz	\$1,425/oz
Previous week	\$2,250/oz	\$275/oz	\$1,425/oz

The PGM mining industry is struggling with the low platinum price, so a burdensome Mining Charter would increase the risk of supply cuts and reduced future expansions. This could spark higher prices because the markets are tight and South Africa supplies over 75% of the market in each of rhodium, iridium, and ruthenium. The latest draft of the South African Mining Charter has caused contention with the Minerals Council South Africa as it includes provisions which may discourage investment, increasing the risk of mine closures and low future investment. The Minerals Council highlighted a number of requirements which it said came as a surprise, particularly surrounding the establishment of new mining rights. The Mining Council, previously the Chamber of Mines, is an organisation which represents the views of the mining companies to the government. South Africa has struggled with having high policy uncertainty while under Zuma's leadership and it was hoped by many that

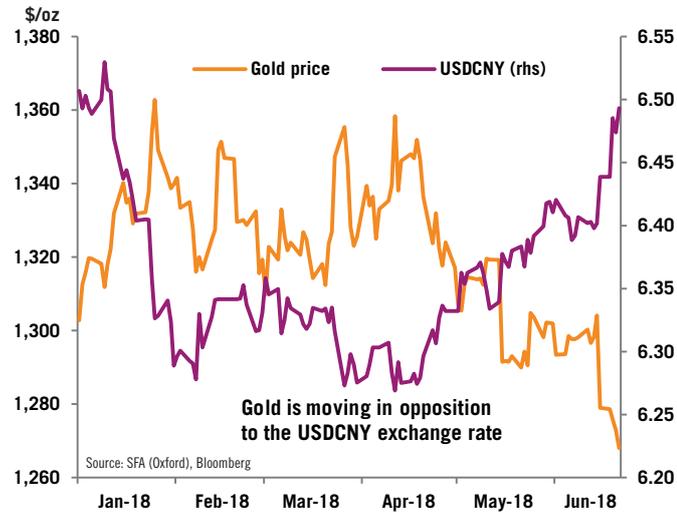
Ramaphosa would bring greater stability, but this draft does not suggest that cooperation with industry has improved significantly.

Furuya Metal is planning to increase its ruthenium refining capacity to 60 tons per year by the end of 2019. Currently, Furuya has the capacity to process 29 tons of ruthenium per year but will expand it through a ¥1.6 billion investment. The expansion is expected to increase in several stages: by the end of this year capacity should reach 42 tons per year. Furuya stated that the expansion is in response to growing demand for the high-purity ruthenium targets that are used in hard-drive production. The scale of this project demonstrates a high level of confidence from Furuya in the future of this technology, and consequently the ruthenium price may have further to rise as demand grows.

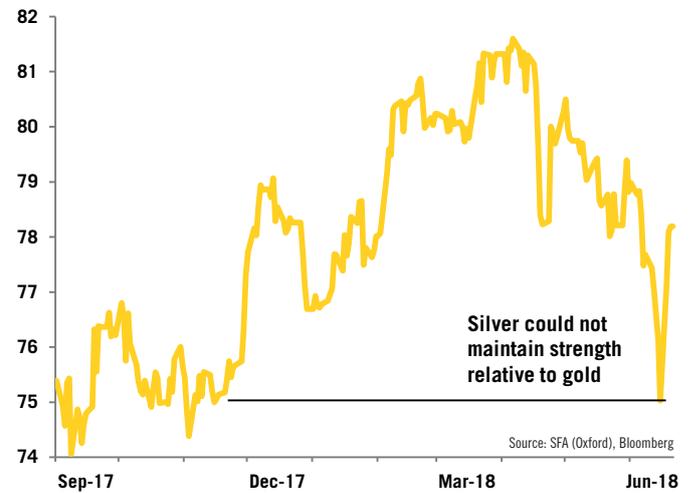


TRENDS AND INVESTMENTS

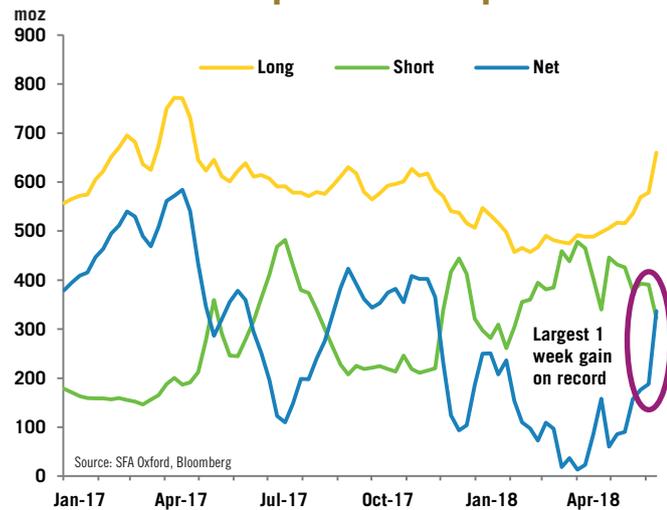
Gold vs USDCNY



Gold:Silver ratio



Silver futures speculators' position



Platinum price



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