



MARKET SPOTLIGHT

Rhodium – more price volatility ahead

The rhodium price is correcting after reaching its highest level since 2008. It had risen by more than a third this year at its peak last week, after climbing by 43% last year. The price was very overbought and the rise was looking overextended as the price was more than \$800/oz above its 200-day moving average. The rhodium price is notoriously volatile and in each of the last three rallies the price reached a peak more than \$1,200/oz above its 200-day moving average. The current rally has not reached the same extremes as previous ones, so that potentially leaves some room for further upside.



The rhodium market is relatively small at only 1.1 moz, meaning relatively minor changes in demand can influence the price. Autocatalyst demand accounts for 78% of total rhodium demand and usage is rising. There has been strong demand from China owing to tighter emissions standards. Consumption has also grown in Europe due to the new Worldwide Harmonised Light Vehicle Test Procedure and Real Driving Emissions standards. These regulations have led to a sharp increase in rhodium loadings on catalytic converters to meet more challenging emissions tests for NO_x (of the PGMs, rhodium is the best catalyst for reducing NO_x).

The rising rhodium price could lead to some thrifting in the glass industry, but it is unlikely to happen for autocatalysts. Unlike 2008 when manufacturers replaced rhodium with palladium in gasoline autocatalysts, the rhodium price is not currently high enough relative to the palladium price and the technical challenge is much greater considering the more stringent emissions legislation. The palladium market is in deficit, so increasing the use of palladium is not an ideal solution.

Rhodium demand has been robust, but after a sharp rally the price could follow palladium lower. In the medium term the price should recover as long as auto sales don't underperform in Europe, the US or China.



PRECIOUS METALS REVIEW

79 Au Gold

	Close	Weekly change	High	Date	Low	Date
\$/oz	1,295	-1.27%	1,325	25/03/2019	1,287	29/03/2019
€/oz	1,154	-0.75%	1,176	25/03/2019	1,146	29/03/2019

US Treasury yield curve inversion fans recession fears, supports gold. Following the Federal Reserve's more cautious outlook, the yield on the 10-year Treasury fell to a 14-month low and below that of the three-month Treasury. Since this event, a shift from risk assets to safe havens was observed, including a 273 koz increase in gold ETF holdings. Both previous inversions occurred 1-2 years before the early 2000s recession and the 2008 great recession. The gold price is likely to stay on an upward trend while the yield curve remains inverted and real interest rates continue to fall.

Central banks continue to buy gold. The Russian central bank added over 1 moz of gold to its vaults in February. The bank had been buying at a similarly high rate in the second half of last year but added only 0.53 moz in December and January combined. China bought gold for the third consecutive month after its two-year break, adding 320 koz last month. Central banks are playing a greater role in gold demand after raising their purchases by 74% to 20.9 moz in 2018, 15% of global demand (source: World Gold Council). This year is also likely to be strong as more countries, such as India (which started buying again in 2018), look to increase their gold reserves.

47 Ag Silver

	Close	Weekly change	High	Date	Low	Date
\$/oz	15.14	-1.73%	15.59	25/03/2019	14.98	28/03/2019
€/oz	13.49	-1.21%	13.77	25/03/2019	13.34	29/03/2019

India favours silver on low price relative to gold. Silver imports to India rose by 80% year-on-year in Q4'18 and by 130% in January. This appears to be a response to the gold:silver ratio holding around 85 for much of Q4'18, the highest it has been since 1993. At the same time the Indian gold price reached all-time highs, impacting demand for the metal as imports fell 23% year-on-year

in Q4'18. The gold price has fallen somewhat in India on a stronger rupee. Around a sixth of global silver demand is from India. The gold:silver ratio is currently around 86, meaning there is still reason for consumers to favour silver. This is supportive of silver jewellery and investment demand in the near future, and should prevent the ratio from moving much higher.

78 Pt Platinum

	Close	Weekly change	High	Date	Low	Date
\$/oz	849	0.13%	871	27/03/2019	834	28/03/2019
€/oz	756	0.57%	773	27/03/2019	744	28/03/2019

Rising costs in South Africa pose a risk to the mining industry. South Africa's state-controlled power company Eskom is planning to hike the price of power by 13.8% this year, 8.1% in 2020 and 5.2% in 2021. Mining costs will also rise from wage negotiations in the PGM sector this year. The Minerals Council estimates 90,000 jobs could be at risk from mine closures, equivalent to almost a third of the combined PGM and gold sector workforces. However, this is likely to be a worst case scenario. PGM mining is getting relief from high palladium and rhodium prices and a weak rand which has increased revenues and reduced the risk of shaft closures.

Platinum ETFs saw another 132 koz of inflows last week for a YTD change of +643 koz. Of last week's move, 10 koz was in each of the US and the UK while the

remainder was in South Africa. This change goes more than halfway to balancing the market this year.

China signals increased support for fuel cell vehicles. The Chinese authorities are supporting the construction of hydrogen refuelling stations. China is aiming to put 100,000 fuel-cell cars onto the road by 2025 by providing targeted support in key cities, before reaching 1 million vehicles by 2030. This is similar to the strategy employed to kick-start the battery electric vehicle industry, a field in which China is now leading. If China is successful in reaching its fuel-cell targets it would create a cumulative ~25 koz of platinum demand to 2025 and ~190 koz to 2030, creating a more positive long-term price outlook for the metal.



PRECIOUS METALS REVIEW

46 Pd Palladium

	Close	Weekly change	High	Date	Low	Date
\$/oz	1,374	-11.32%	1,579	26/03/2019	1,335	28/03/2019
€/oz	1,225	-10.69%	1,394	26/03/2019	1,192	28/03/2019

Palladium price correction is now underway. The price of palladium fell by \$175/oz or 11.3% last week, the largest relative weekly move since early 2016 when the price was at \$563/oz. Almost \$100/oz was lost on both Wednesday and Thursday, the price eventually bouncing at the 100-day moving average. As previously mentioned in this report, the palladium price has been over-extended and was called a "bubble" by the CEO of Anglo American. A price above \$1,600/oz proved too much for potential buyers and bids dried up. Once the price fell through \$1,500/oz it would have triggered stops, adding to the downward pressure. Watch out for a 'dead cat bounce' as this correction may not be over. Despite this, the fundamentals remain intact with a structural deficit still in place. Next year will be key for tightening emissions standards and higher loadings as China 6a legislation is implemented. Substitution to platinum will not occur in this time horizon so palladium is likely to remain expensive.

Nornickel to build 600 koz PGM mine. The company has confirmed it will start production on the South Cluster mining project this year, with mine ramp-up starting in 2021-2022 and full production in 2027. At full production the mine is expected to produce 20 tonnes of PGMs (around 510 koz of palladium, 120 koz of platinum and 15 koz of rhodium), making it one of the largest in the world. An expansion at the Talnakh processor will provide the required concentrating capacity for the additional mine output. With other palladium-focused projects in development, there is potential for an easing in market conditions in the longer term.

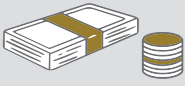
EV growth in China may slow as subsidies are cut back. The number of electric cars eligible for national government subsidies is being reduced and the size of the support is being halved. Local governments are phasing out subsidies completely within three months. This significant change will reduce the popularity of electric vehicles. For each percentage point that the market share of EVs is reduced, palladium gains 20 koz of demand, which could add some support to palladium demand.

45 Rh 44 Ru 77 Ir Rhodium, Ruthenium, Iridium

	Rhodium	Ruthenium	Iridium
Reporting week	\$3,100/oz	\$275/oz	\$1,460/oz
Previous week	\$3,300/oz	\$275/oz	\$1,460/oz

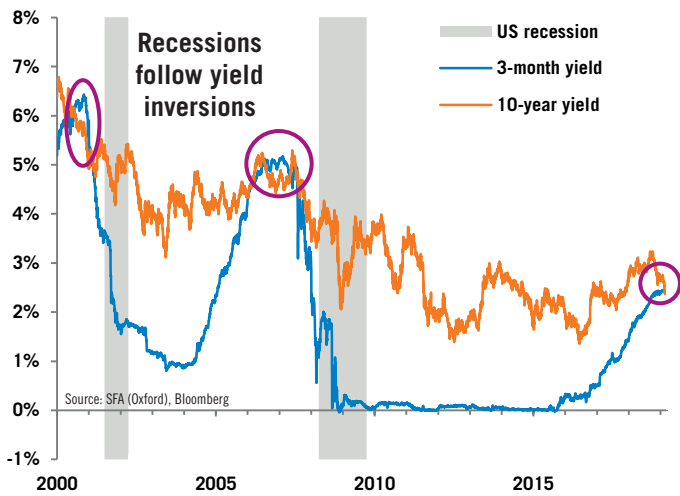
Rhodium price comes off in sympathy with palladium. After a \$35/oz gain early in the week, the rhodium price then fell \$235/oz, following palladium's big sell-off. There are currently few buyers in the market and a surplus of sellers, a rapid U-turn from the situation over the last six weeks which saw the price gain over \$800/oz. If palladium continues to slide, the rhodium price is

likely to head lower too. Rhodium and palladium prices broadly trend together due to their similarities in supply and demand: gasoline cars being their largest source of demand and South Africa being a significant source of supply. Ruthenium and iridium prices remain unchanged but there are signs that ruthenium is readily available.

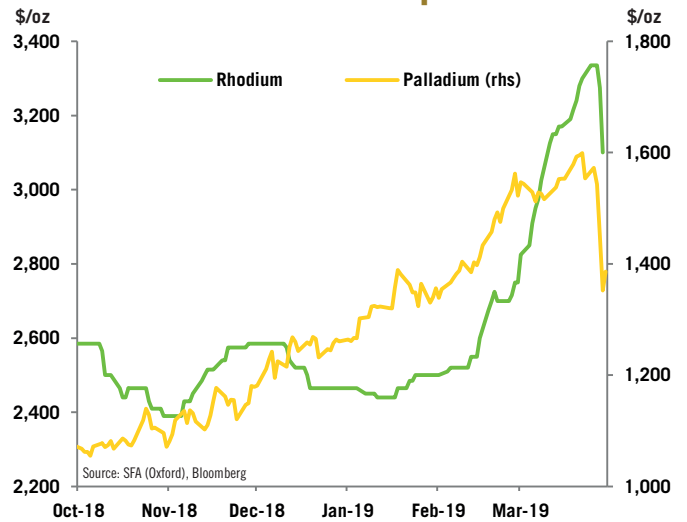


TRENDS AND INVESTMENTS

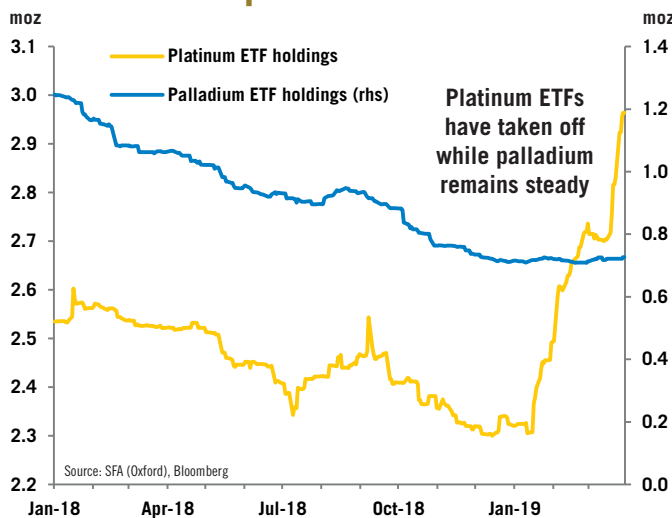
10-year and 3-month Treasury yields



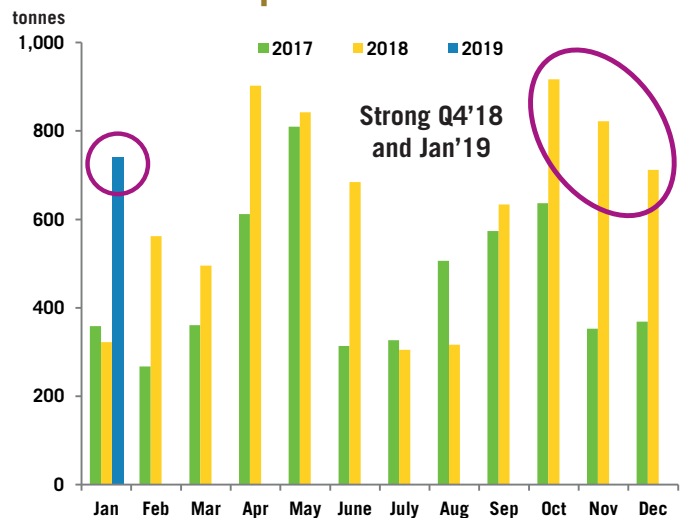
Palladium and rhodium prices



Platinum and palladium ETFs



India silver imports



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