



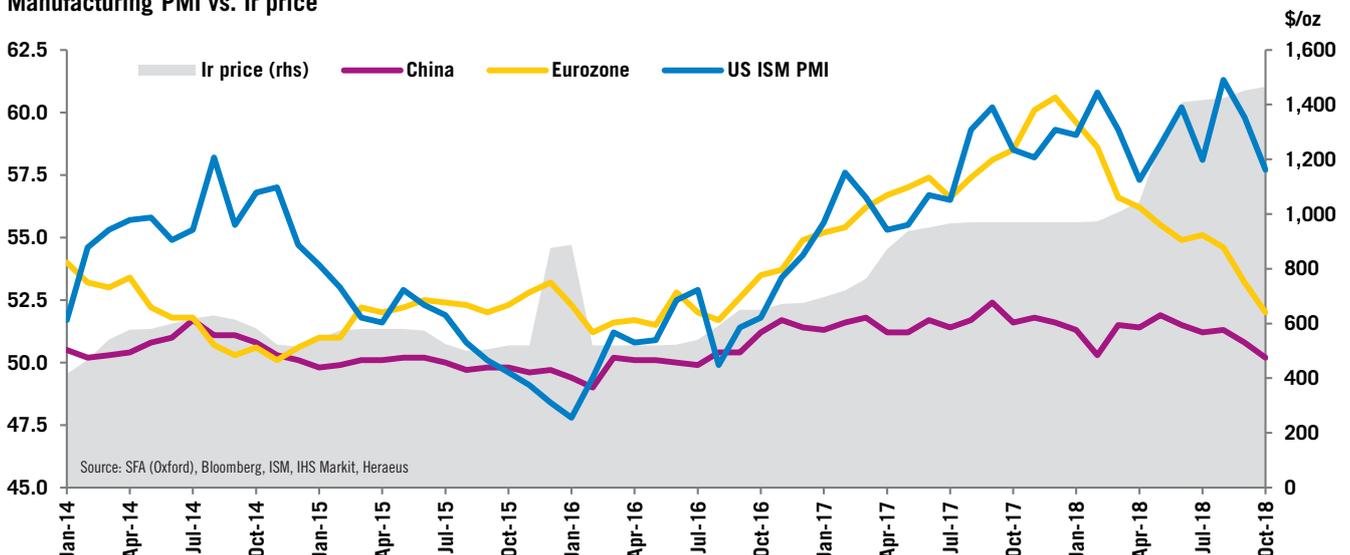
## MARKET SPOTLIGHT

### Inelastic demand may insulate iridium demand from its high price

**Iridium has a lower proportion of price elastic demand than other PGMs.** Therefore, it is less likely to see much substitution for price reasons, but slower global growth could still hit demand. The US has imposed tariffs on over \$200 billion of Chinese goods, and trade and economic growth are weakening. **The electrical sector accounts for a third of iridium demand.** Tariffs may raise prices and, along with slower economic growth, impact consumer demand, restraining iridium consumption in the near term.

**Moreover, China's economy is slowing.** GDP expanded by 6.5% in Q3'18, down from 6.7% in Q2'18. US economic growth has accelerated in 2018, but slowed in Q3'18, and is expected to ease further in 2019. Eurozone growth was 0.2% quarter-on-quarter in Q3'18, the slowest since Q2'14. Manufacturing PMIs have turned down, indicating less robust growth.

Manufacturing PMI vs. Ir price



**Despite the high iridium price, electrical demand is likely to be supported by 5G technology.** Iridium crucibles are used to help produce surface acoustic wave (SAW) filters for various electronic devices, such as smartphones. SAW filter sales are rising due to growth in the production of smartphones. Improvements in smartphone functionality are increasing the number of SAW filters that are used per device. In addition, the number of smart devices (e.g. in vehicles, not just smartphones) overall should also increase during the medium term. Over the next five years, smartphone sales are forecast to grow by around 3% p.a., driven by rising penetration in emerging markets.

**Lastly, major smartphone makers are also increasingly deploying OLED screens.** Growing adoption of next-generation OLED technology, e.g. phosphorescent OLEDs (PHOLEDs), should lift consumption of iridium-based materials in electronics. Various manufacturers are currently expanding PHOLED production capacity in preparation. In 2019, the OLED screen penetration rate is forecast to outrun that of traditional LCD displays, comprising 51% of the market and climbing to nearly 75% by 2025. **On this basis, the iridium price is likely to hold its ground.**



# PRECIOUS METALS REVIEW

## 79 Au Gold

	Close	Weekly change	High	Date	Low	Date
\$/oz	1,207	-2.05%	1,236	07/11/2018	1,207	09/11/2018
€/oz	1,066	-1.53%	1,084	06/11/2018	1,066	09/11/2018

**Mid-term elections take the spotlight, but gold is left on the sidelines.** In news terms, the Fed meeting was very much overshadowed by the US mid-term elections. In performance terms, it was US stocks that took all the attention as they continued their strong recovery from the late October lows. In contrast, interest in gold was very subdued. Large speculators reduced their already small net long position in gold futures to 1.3 moz. Gold ETFs, having gained over 1 moz to 68.3 moz in October, added only a few ounces in the first full week of November. Meanwhile, the gold price traded slightly lower, not even benefitting from a

weaker dollar against the euro and sterling mid-week. With the dollar then ending the week stronger gold's price slide continued.

Gridlock in Congress could lead to more political arguments, but less certainty on policy direction, which, if it weakens the dollar, should ultimately benefit gold. However, another rate hike by the Fed is expected in December which will lift the real interest rate into positive territory. This is a problem for the gold price since it tends to perform better in a negative real interest rate environment.

## 47 Ag Silver

	Close	Weekly change	High	Date	Low	Date
\$/oz	14.13	-4.41%	14.77	05/11/2018	14.11	09/11/2018
€/oz	12.48	-3.90%	12.97	05/11/2018	12.44	09/11/2018

**Silver may be cheap, but that has not made it popular.** US Mint silver American Eagle coin sales were 1.4 moz in October, less than half the level in September, but higher than in the previous year. Cumulative sales in the first 10 months were 13.5 moz, 3.4 moz (-20%) lower than in the same period in 2017. This is despite the silver price being over \$1/oz lower on average so far during 2018. Perth Mint silver coin and bullion sales were also down month-on-

month, but up year-on-year at 1.08 moz. Cumulative sales by the Perth Mint are down 0.5 moz year-to-date at 7.67 moz (-7%).

Global silver ETF holdings fell by 5.5 moz (-1%) in October to 530 moz and the slide has continued in November. Speculative interest in silver futures remains net short. The gold:silver ratio is now above 84.

## 78 Pt Platinum

	Close	Weekly change	High	Date	Low	Date
\$/oz	853	-1.99%	878	07/11/2018	853	09/11/2018
€/oz	753	-1.47%	769	06/11/2018	752	09/11/2018

**New diesel cars' low NO<sub>x</sub> emissions may not be enough to halt their sales decline.** New data from the ACEA show that all of the 270 new types of diesel car so far approved for the latest Euro-6d-TEMP standard had emissions well below the NO<sub>x</sub> threshold in real-world driving. The majority have emissions more than 50% below the 168 mg/km limit. Western European diesel market share is expected to be around 35% this year, down from over 44% last year, and automotive platinum demand could fall by around 250 koz. Clean new diesel cars are available, but

without a change in local and central government rhetoric this may not be enough to support sales in Europe.

**In the third quarter the share of diesel car sales in the EU fell to 34.7%** from 43.1% last year (source: ACEA). Diesel sales declined year-on-year in most, but not all, countries, with Denmark, Romania, Bulgaria and Poland bucking the trend. However, these four countries represented only 6.9% of total EU car sales in the third quarter.



# PRECIOUS METALS REVIEW

## <sup>46</sup> Pd **Palladium**

	Close	Weekly change	High	Date	Low	Date
\$/oz	1,111	-0.75%	1,141	07/11/2018	1,103	06/11/2018
€/oz	980	-0.35%	998	05/11/2018	967	06/11/2018

**High consumer sentiment is supporting US auto sales.** US light vehicle sales edged up 0.4% in October to a seasonally adjusted annualised rate of 17.59 million, the highest of the year so far. Year-to-date sales are also up just 0.5%, with the final sales figure expected to be around 17.2 million units.

While **the trend towards purchasing larger vehicles, SUVs and light trucks, is supportive of palladium demand**, they also cost more than passenger cars. US consumers' finances are stretched, but, while consumer sentiment remains high, auto sales are unlikely to drop by very much. The University of Michigan consumer sentiment

index was 98.3 in November, close to the highest level this year. However, US economic growth is forecast to slow in 2019 and further fiscal stimulus measures now look unlikely following the mid-term election results. If the political situation increases economic uncertainty consumers could become more cautious in their spending, which would hit auto sales and palladium demand.

**Palladium gains from diesel's decline in Europe.** While the market share of diesel cars is falling in Europe, the share of petrol vehicles has risen and was 58% in the third quarter.

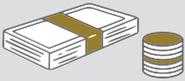
## <sup>45</sup> Rh <sup>44</sup> Ru <sup>77</sup> Ir **Rhodium, Ruthenium, Iridium**

	Rhodium	Ruthenium	Iridium
Reporting week	\$2,450/oz	\$285/oz	\$1,480/oz
Previous week	\$2,390/oz	\$285/oz	\$1,480/oz

**Around a third of total ruthenium demand comes from the electrical sector**, which includes chip resistors. Yageo, the world's top chip resistor manufacturer, reported record sales revenue in its FYQ2 results. The company expects substantial demand growth from automotive and industrial electronics, 5G and other new applications. Yageo appears to be able to pass on

rising input costs to its customers. The high ruthenium price does not seem to be impacting demand and there appears to be little scope for substitution.

The rhodium price has bounced back by \$60/oz to \$2,450/oz. Reported ruthenium and iridium prices were unchanged week-on-week.

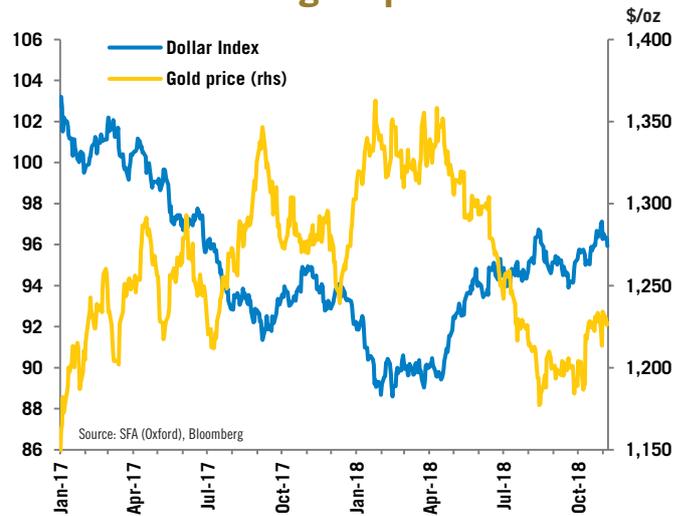


# TRENDS AND INVESTMENTS

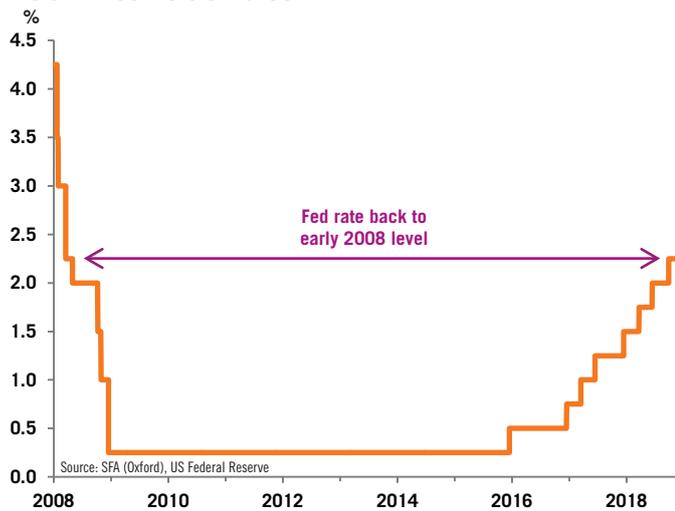
## Silver ETF holdings



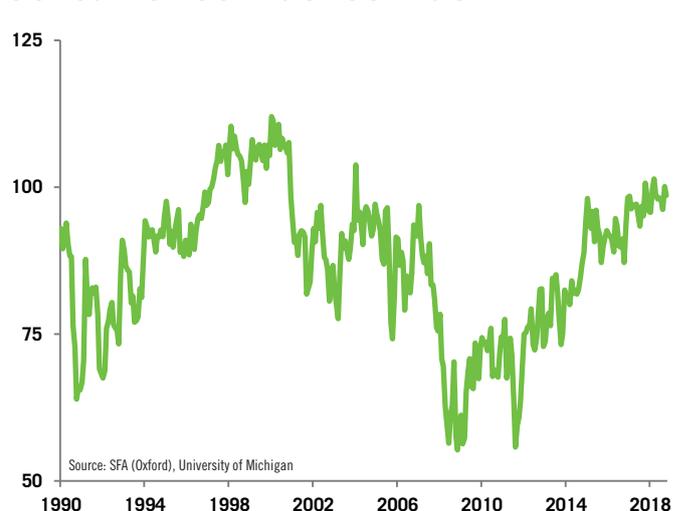
## Dollar Index and gold price



## Fed interest rate



## Consumer confidence index



## Heraeus Precious Metals

Europe, Middle East, Africa & other regions  
Phone: +49 6181 35 2750  
edelmetallhandel@heraeus.com

South East Asia  
Phone: +852 2773 1733  
tradinghk@heraeus.com

United States of America  
Phone: +1 212 752 2180  
tradingny@heraeus.com

China  
Phone: +86 21 3357 5658  
tradingsh@heraeus.com

The HERAEUS PRECIOUS APPRAISAL produced in collaboration with:

**SFA (Oxford) Ltd**  
United Kingdom  
Phone: +44 1865 784366  
www.sfa-oxford.com



The Oxford Science Park, Oxford,  
United Kingdom, OX4 4GA

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