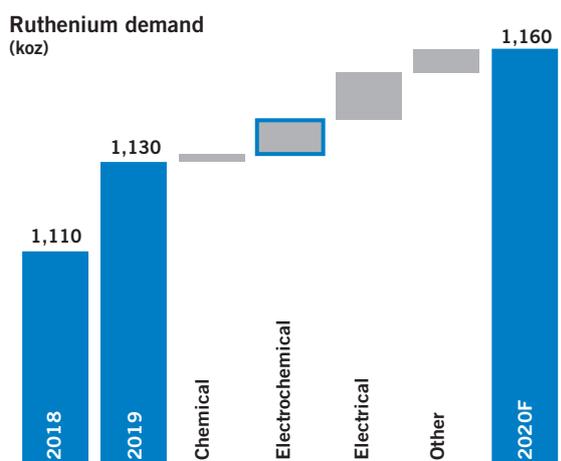




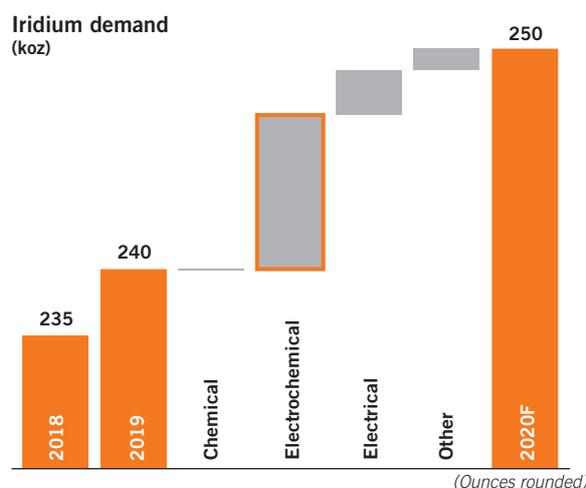
## MARKET SPOTLIGHT

### Iridium and ruthenium in the clean energy revolution

As two of the smaller PGM markets, iridium and ruthenium are highly sensitive to new demand opportunities. The iridium market surplus is likely to decrease this year, partly owing to strong demand growth in electrochemical end-uses, and the ruthenium deficit is expected to deepen. However, increasing mine supply and demand implications from the fallout from the coronavirus outbreak in China could offset some of the anticipated growth in both markets.



Source: SFA (Oxford)



(Ounces rounded)

**The largest clean hydrogen plant in Europe will use iridium- and ruthenium-coated electrodes.** The Djewels project in the Netherlands will convert electricity from renewable sources into 3,000 t of clean hydrogen a year.

**A significant proportion of the coating is lost during the process, generating regular top-up demand for iridium and ruthenium.** Electrode coatings have a typical lifetime of 6-12 months before they need to be replaced. Few other elements can survive the conditions involved in electrolysis, so demand is likely to be sustained irrespective of the metal price.

**Alkaline water electrolysis is increasing the role of PGMs in the hydrogen economy.** The electrochemical sector is forecast to experience strong growth this year, using iridium and ruthenium to meet the growing needs of the energy (hydrogen), environment (ship ballast water management) and hygiene (water treatment) sectors. Electrochemical demand for iridium and ruthenium is estimated to increase by 7 koz (+12%) and 9 koz (+5%) respectively this year.

**China is currently the largest electrochemical market for iridium and ruthenium.** Electrochemical uses account for 26% of iridium demand and 16% of ruthenium demand globally. The Chinese market accounts for more than half of each metal's consumption in the sector. Any slowdown in Chinese manufacturing as a result of the coronavirus could temporarily slow the requirement for electrode recoating and delay the addition of new capacity in the longer term.

**Despite demand growth, prices are likely to remain stable.** A high PGM basket price will stimulate an increase in South African mine production this year, so prices are unlikely to see much movement to the upside.



# PRECIOUS METALS REVIEW

## 79 Au Gold

	Close	Weekly change	High	Date	Low	Date
\$/oz	1,590	-3.08%	1,689	24/02/2020	1,572	28/02/2020
€/oz	1,446	-4.35%	1,561	24/02/2020	1,433	28/02/2020

**Safe-haven demand saw gold hit a new high.** More bad news on the spread of the coronavirus led to a jump in the gold price last Monday to a new seven-year high. Gold and bonds were bought while stocks were sold off. However, while equity markets continued to sell off and bond yields fell during the week, the gold price pulled back. It was then caught up in what looked like panic selling across commodities and stocks on Friday. The environment was right for gold to keep climbing so perhaps gold's liquidity meant it was sold off to cover losses elsewhere. Gold ETF holdings kept rising all week to hit a new record at 87.5 moz. The speculative net long

position on COMEX also hit a record on 18 February at 35.4 moz making it vulnerable to a reversal.

**Another Fed rate cut is likely in March.** The probability of the Federal Reserve making another cut to interest rates at the 19 March meeting has now risen to 72%, which should benefit gold. With US Treasury yields at record lows, the 2-year Treasury yield fell to 1.075% and a rate cut is almost certain. However, while the impact of the coronavirus is likely to be slower global growth, another precautionary rate cut by the Fed will not inoculate the economy so it is unclear how much impact another rate cut might have.

## 47 Ag Silver

	Close	Weekly change	High	Date	Low	Date
\$/oz	16.78	-9.39%	18.95	24/02/2020	16.57	28/02/2020
€/oz	15.24	-10.72%	17.40	24/02/2020	15.18	28/02/2020

**The widespread roll-out of the 5G network this year was expected to boost silver demand,** but the fledgling industry is likely to be hit by the impact of the coronavirus by slowing the production of network equipment and devices, as well as suppressing smartphone demand in China (the largest consumer market). Demand could rebound in the second half of the year if the virus is contained by Q2. Electrical and electronic demand, the largest end-use for silver at around 250 moz per year, could be softer than anticipated this year owing to the effects of China's temporary manufacturing shutdown.

**Silver surged in price on Monday, reaching \$18.91/oz.** However, it was then sold off harder than gold to finish the week lower than where it started, underperforming gold yet again. The Silver Institute has predicted a 3% increase in industrial silver demand this year owing to strong electrical and electronic growth. However, with the coronavirus now spreading outside China, worries over industrial demand might be denting the silver price.

## 78 Pt Platinum

	Close	Weekly change	High	Date	Low	Date
\$/oz	866	-11.22%	979	24/02/2020	848	28/02/2020
€/oz	787	-12.40%	904	24/02/2020	775	28/02/2020

**Delayed China VI standard threatens heavy-duty platinum demand.** The China Association of Automobile Manufacturers (CAAM) has reportedly suggested delaying the implementation of the China VI emission standard for heavy-duty vehicles, in order to ease the burden on automakers after the coronavirus outbreak. The China VI standard was expected to rollout in some cities this year ahead of the deadline in 2021. A delay to its adoption could threaten platinum demand, as one of the only automotive sectors forecast to witness platinum demand

growth this year. Heavy-duty vehicle platinum demand in China was expected to grow from a low base by around 50% this year owing to the higher loadings required to meet the new emission standard.

The platinum price fell by 11.2% last week, to mark a new low for the year of \$866/oz. The outlook has not improved so the platinum price is expected to continue to slide lower.



# PRECIOUS METALS REVIEW

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

	Close	Weekly change	High	Date	Low	Date
\$/oz	2,614	-3.16%	2,884	27/02/2020	2,495	28/02/2020
€/oz	2,367	-4.82%	2,625	27/02/2020	2,276	28/02/2020

**Palladium player states no substitution this year, despite its high price.** Norilsk Nickel, the world's largest producer of palladium, noted that carmakers will not switch away from palladium in autocatalysts this year – which is the market consensus view. Instead, resources will be focused on meeting new emission legislation, including the China 6 standard and new real-world driving emissions tests in Europe. Norinickel continues to hold a strategic stockpile in its Global Palladium Fund, with sales for 2020 forecast to remain around 300-500 koz.

The palladium market is predicted to move into greater deficit this year owing to rising autocatalyst demand, but there could be some relief due to weak demand in China. Palladium sold off on Monday last week, but the price then rallied to a new record high of \$2,884/oz in an illiquid market, before pulling back. Overall, a deficit market is expected to keep the price elevated this year, but increased volatility may become more normal. As has just been witnessed in the German and US stock markets, record highs can quickly be followed by dramatic falls.

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

	Rhodium	Ruthenium	Iridium
Reporting week	\$13,000/oz	\$265/oz	\$1,520/oz
Previous week	\$12,950/oz	\$265/oz	\$1,520/oz

**Global car sales now predicted to fall by 2.5%**, owing to the impact from the coronavirus in China (source: Moody's), but even this could be optimistic. This is a downward revision from the 0.9% forecast at the start of the year. Car sales in China slumped by 83% year-on-year in the third week of February (source: CAAM). Rhodium demand is at risk due to its exposure to the Chinese market. Demand was forecast to increase by 30% in China this year owing to the higher

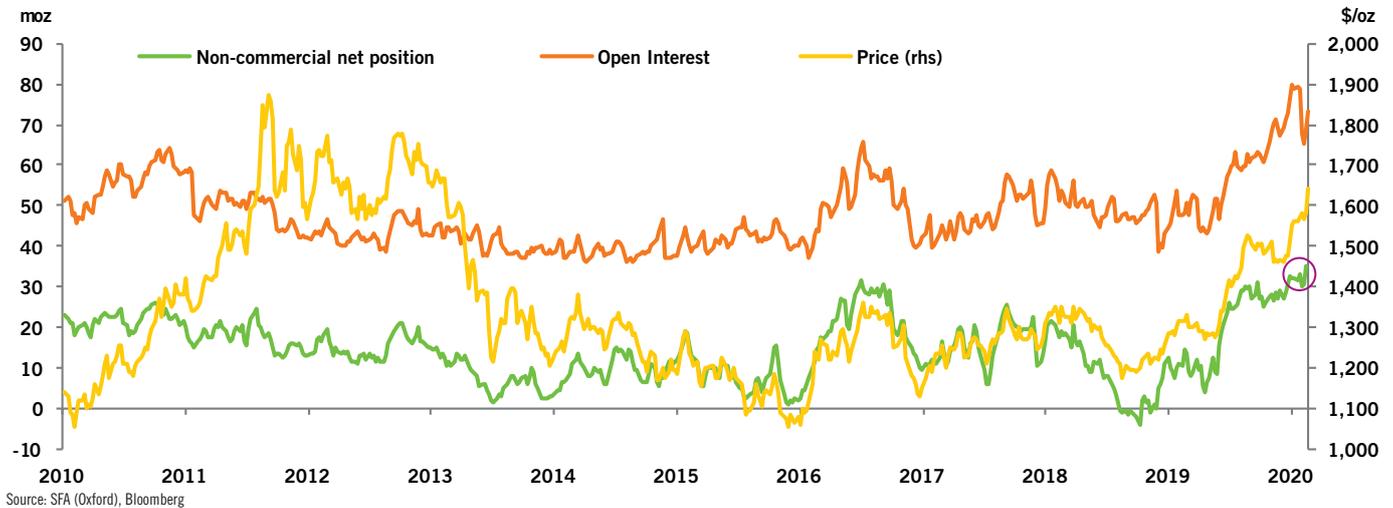
autocatalyst loadings required for automakers to meet the new stricter China 6 standard. Reduced auto demand could provide some near-term respite to the market, which saw prices climb to \$13,200/oz last week before closing at \$13,000/oz. Nonetheless, the market is projected to remain in deficit this year.

The ruthenium and iridium prices remain unchanged.

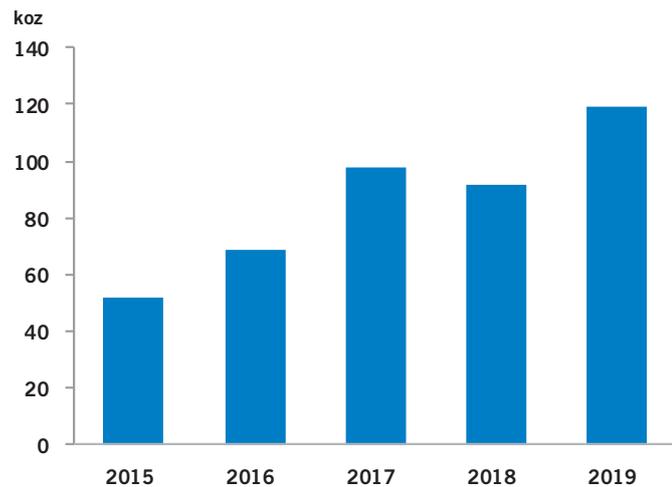


# TRENDS AND INVESTMENTS

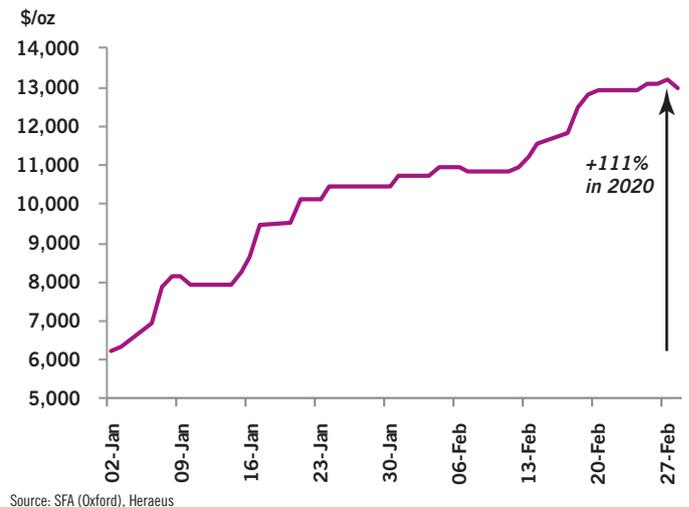
## Gold futures speculative net position



## China heavy-duty platinum demand



## Rhodium price



## 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



consulting analysts in tomorrow's commodities and technologies

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

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