

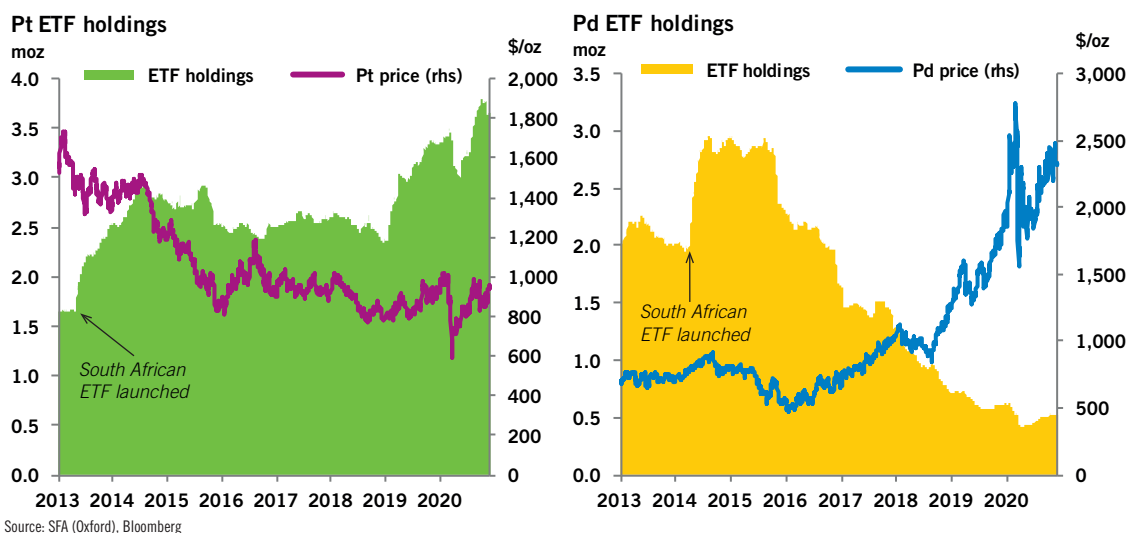


MARKET SPOTLIGHT

What is the platinum market balance?

Is the platinum market in surplus or deficit this year? There seems to be conflicting information available but the difference between a surplus and a deficit market depends on whether investment is included in demand or excluded. The approach that is most useful may depend on how the information is to be used. For forecasting, the longer-term price development using the industrial balance (excluding investment) may be more helpful because investment demand is highly variable and can become supply. Alternatively, for a tally of all the metal absorbed by the market, investment can be included.

Platinum investment demand is much more volatile than industrial demand. Since the first platinum ETF was introduced in 2007, annual investment demand (bars, coins and ETFs) has averaged 460 koz. However, that ranges from a low of 40 koz in 2018 to a high of 1.2 moz last year, with little change in the price. Over the same period, industrial demand (incl. jewellery) has varied between a high of 8.1 moz in 2007 (peak automotive demand) and a low of 6.4 moz in 2009 (recession), and averaged 7.4 moz.



The pool of physical investment can become a source of supply. Investors acquire excess metal when industrial demand is lower than supply and then sell the metal back to the market when industrial demand is greater than supply and prices are higher. This has occurred for palladium, and to a lesser extent rhodium, over the last few years as ETF holdings have declined while the metal prices have risen to record levels. Palladium ETF holdings peaked in 2014 at 2.9 moz and the price averaged \$803/oz that year. Currently, palladium ETF holdings are just over 500 koz with the price averaging \$2,165/oz so far this year. Meanwhile, platinum ETF holdings are close to a record level of 3.7 moz but the price is a long way below its record high of \$2,276/oz from 2008.

As physical investment is highly variable and can be supply as well as demand, **the industrial balance is the most relevant for companies deciding on capital investments in PGM production.**



PRECIOUS METALS REVIEW

79 Au Gold

| | Close | Weekly change | High | Date | Low | Date |
|-------|-------|---------------|-------|------------|-------|------------|
| \$/oz | 1,785 | -4.70% | 1,875 | 23/11/2020 | 1,774 | 27/11/2020 |
| €/oz | 1,493 | -5.48% | 1,580 | 23/11/2020 | 1,487 | 27/11/2020 |

Gold less needed as a safe haven? The price continued lower last week, falling to a four-month low, as it was weighed down by more positive news of coronavirus vaccines. There have now been three successful vaccines confirmed and the perception of risk in the market is shrinking on the expectation that economic growth will return once mass vaccination is rolled out. This rather ignores the huge economic problems caused by lockdowns. In other news, the General Services

Administration in the US has recognised Joe Biden as the winner of the presidential election. Donald Trump has agreed to have his team transition to the new administration, removing some political risk and further undermining gold's safe-haven appeal. Biden is expected to name former Federal Reserve Chair, Janet Yellen, to serve as Treasury Secretary, which is boosting prospects for fiscal stimulus. Along with protracted low interest rates, this bodes well for gold over the medium term.

47 Ag Silver

| | Close | Weekly change | High | Date | Low | Date |
|-------|-------|---------------|-------|------------|-------|------------|
| \$/oz | 22.63 | -6.93% | 24.28 | 23/11/2020 | 22.35 | 27/11/2020 |
| €/oz | 18.93 | -7.68% | 20.45 | 23/11/2020 | 18.72 | 27/11/2020 |

Silver demand boosted by higher Chinese solar installations. The forecast for China's photovoltaic (PV) installation has been revised higher to 34-38 GW in 2020 (source: AECEA) after China's National Energy Administration revealed that new capacity reached 18.7 GW in the first nine months of the year. Installations are on track to exceed 2019 by as much as 26%, and silver consumption in China's PV market is forecast to account for around 27 moz this year. Annual PV installations are predicted to continue growing over the next few years,

with the 14th Five-Year Plan (2021-2025) expected to accelerate the country's clean energy transition. China is the largest PV market in the world, accounting for 27% of global installations last year (30.1 GW) and around 24 moz of silver. While the Chinese market has shown strong growth in the face of the pandemic, other regions, particularly Europe, have suffered and global silver PV demand is expected to decline year-on-year in 2020. The silver price has managed to perform roughly in line with gold for several weeks so near term it could slip lower.

78 Pt Platinum

| | Close | Weekly change | High | Date | Low | Date |
|-------|-------|---------------|------|------------|-----|------------|
| \$/oz | 965 | 1.39% | 972 | 27/11/2020 | 919 | 23/11/2020 |
| €/oz | 808 | 0.60% | 815 | 25/11/2020 | 778 | 23/11/2020 |

A no-deal Brexit could cut UK vehicle production by 2 million units over the next five years due to a contraction in demand from possible World Trade Organization (WTO) tariffs (source: SMMT). Failure to agree a deal by the end of 2020 could cost the sector £55.4 billion (\$74 billion) in tariffs by 2025, on top of the billions that have already been lost as a result of Covid-19 this year. If no deal is reached before 31 December, WTO tariffs, including 10% on cars and 22% on vans and trucks, would apply on imports and exports. This would make the UK car market, one of the largest in Europe, considerably less

competitive. In 2019, of the 1.3 million cars built in the UK, accounting for 75 koz of platinum, more than 80% were exported. In a no-deal scenario, annual production is forecast to fall below 1 million units (-23% from 2019). The impact of Brexit threatens to exacerbate the decline of Europe's autocatalyst platinum demand which is already under strain from the shrinking market share of diesel cars. Platinum has rallied recently but looks expensive above \$900/oz considering its weak industrial demand outlook.



PRECIOUS METALS REVIEW

⁴⁶ Pd **Palladium**

| | Close | Weekly change | High | Date | Low | Date |
|-------|-------|---------------|-------|------------|-------|------------|
| \$/oz | 2,427 | 4.39% | 2,433 | 27/11/2020 | 2,320 | 24/11/2020 |
| €/oz | 2,032 | 3.62% | 2,035 | 27/11/2020 | 1,957 | 25/11/2020 |

China's car sales recorded another strong month in October, up by 9.3% year-on-year to 2.11 million units. However, the selling rate has slowed slightly as October recorded just a 0.8% increase from September. China's economic growth signals were mixed last month, as retail sales continue to lag industrial output. Passenger car sales were down 9.9% year-on-year in the period January-October to 15.49 million units (source: CAAM)

and full-year sales are expected to be lower year-on-year. However, owing to higher loadings to meet tighter emission standards, palladium demand in China, the largest source of palladium autocatalyst demand, is actually forecast to grow year-on-year, by around 4% to 2.3 moz. While processing problems in South Africa are restraining refined output, the palladium price can remain supported above \$2,200/oz.

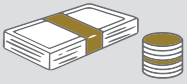
⁴⁵ Rh ⁴⁴ Ru ⁷⁷ Ir **Rhodium, Ruthenium, Iridium**

| | Rhodium | Ruthenium | Iridium |
|----------------|-------------|-----------|------------|
| Reporting week | \$16,300/oz | \$295/oz | \$1,670/oz |
| Previous week | \$16,300/oz | \$295/oz | \$1,670/oz |

Ruthenium use in electronics helps facilitate device miniaturisation. Advancing technologies such as 5G, the Internet of Things and Artificial Intelligence have led to rapid growth in the volume of digital data stored in clouds, smartphones and computers. Increased miniaturisation is needed to meet this growing demand for data storage. Tanaka has developed an improved ruthenium precursor which will help to facilitate device miniaturisation, improve performance and reduce energy consumption in semiconductor devices used in electronics. Precursors are volatile compounds used to

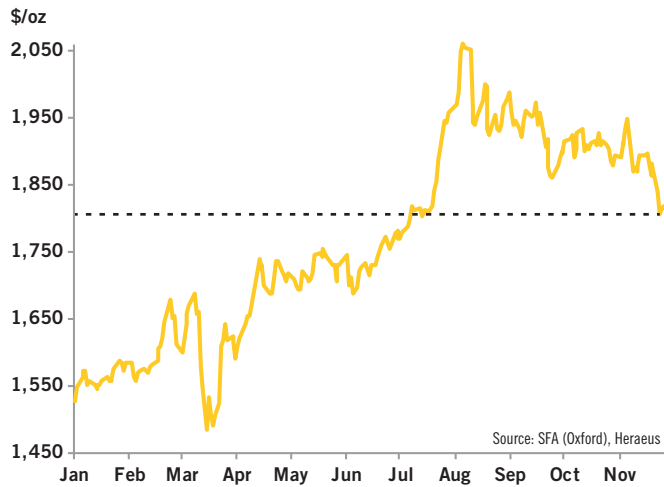
deposit metal films for conductive lines in semiconductor devices. Electrical applications such as semiconductors are the largest demand sector for ruthenium, accounting for around 340 koz of metal last year (35% of total demand).

The ruthenium and iridium prices remained unchanged last week. Rhodium held on to its record high price with ease, given the supply-induced tightness the market is currently experiencing.

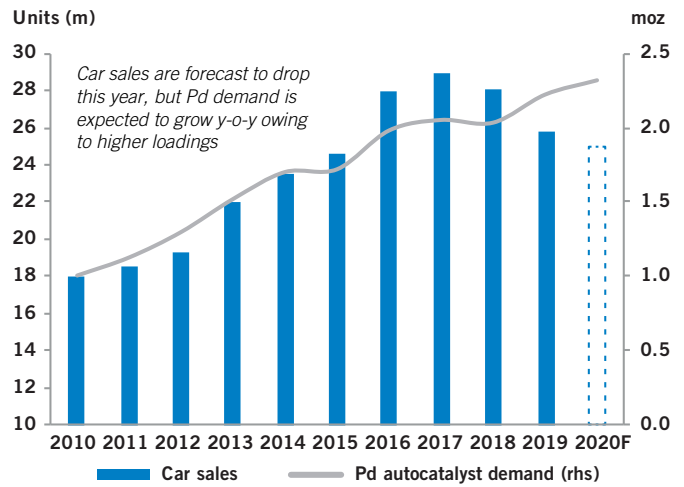


TRENDS AND INVESTMENTS

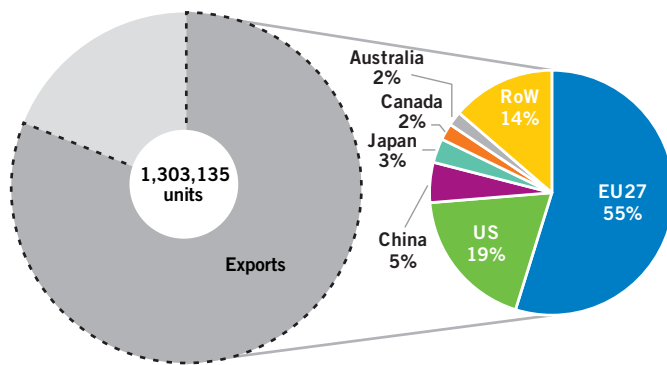
Gold price



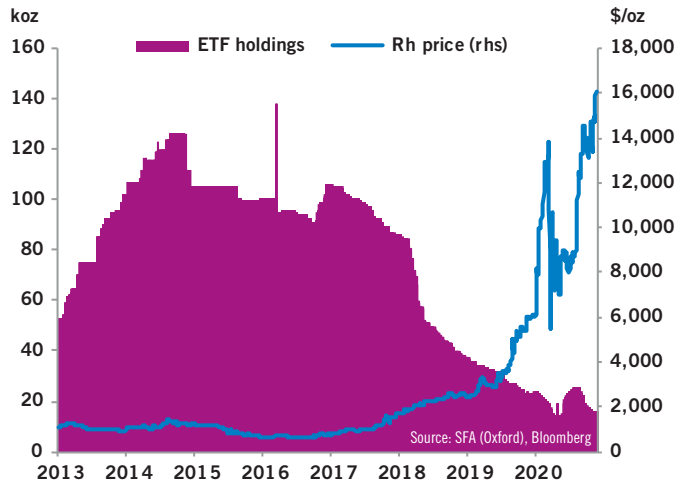
China car sales



UK car production and exports



Rhodium ETF holdings



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