

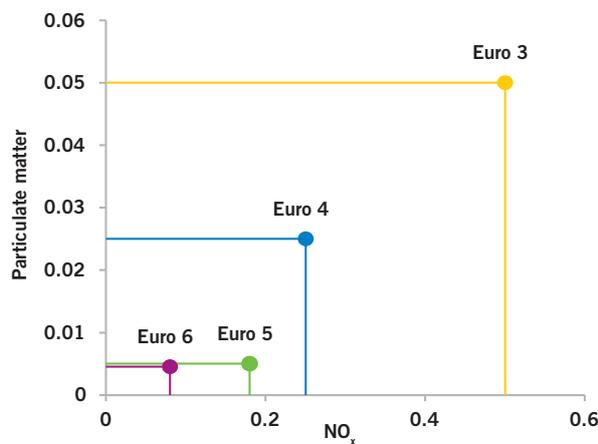


## MARKET SPOTLIGHT

### Will Euro 7 be a lifeline or loss for diesel and Pt demand?

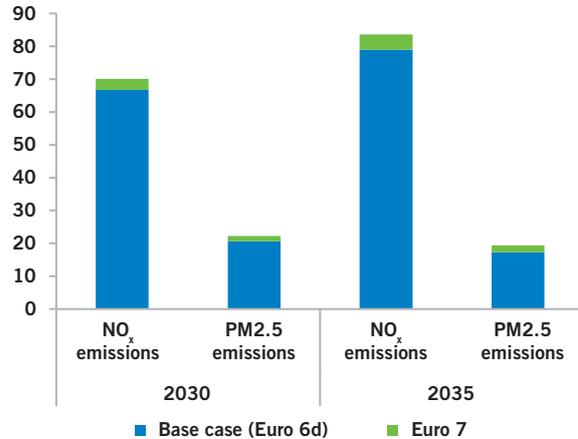
Western Europe remains the largest diesel light vehicle market in the world, despite diesel's declining market share over the past few years, accounting for 30% of global autocatalyst demand for platinum (~780 koz). Increasingly stringent vehicle emissions legislation for both diesel and gasoline engines has led to higher PGM autocatalyst loadings in recent years as catalyst manufacturers work with automakers to ensure vehicle emissions are compliant. Euro 6/VI is the current emissions standard in place across Europe and applied to all new cars from September 2015.

Diesel emissions standards: Europe  
g/km



Source: SFA (Oxford)

Emissions reduction Euro 6d vs. Euro 7  
% reduction from 2020



Source: SFA (Oxford), AERIS

The European Commission will be presenting a new legislative proposal for more stringent emissions standards, known as Euro 7/VI, later this year. The new legislation, which industry groups initially warned may threaten the future of new vehicles with internal combustion engines, could be implemented as soon as 2025. It is expected that Euro 7 will be the final emissions standard prior to all cars becoming zero-emission.

However, the additional benefit to air quality that Euro 7 could achieve beyond Euro 6d is limited. ACEA, with consultants AERIS, has analysed the impact of the roll-out of Euro 6 vehicles on air quality compared to the impact that a range of Euro 7 standards might have in future. For NO<sub>x</sub>, Euro 7 is estimated to deliver an additional reduction of only 3.4% by 2030. In contrast, the study showed that accelerated replacement of older vehicles with the latest Euro 6 vehicles, such as via an incentivised scrappage scheme, would deliver 6-25 times the NO<sub>x</sub> emission reduction benefits.

Diesel cars that meet current Euro 6 standards will continue to be an important choice for consumers, and PGM use in autocatalysts will be supported as Real Driving Emissions (RDE) testing works to ensure on-road compliance with Euro 6. Average NO<sub>x</sub> emissions from diesel vehicles are 45 mg/km and falling, and well below the 80 mg/km limit. The industry is likely to be wary of sinking costs into Euro 7, impacting the purchase price and total costs of ownership for operators and customers, when Euro 6 and RDE testing may, as studies have shown, to be sufficient. BEV infiltration is already contributing to demand destruction for diesel in Europe, and a further tightening of emissions legislation could accelerate this further. For heavy-duty vehicles, however, diesel is expected to remain the dominant powertrain, supporting platinum demand over the long-term.



# PRECIOUS METALS REVIEW

## 79 Au Gold

	Close	Weekly change	High	Date	Low	Date
\$/oz	1,808	1.41%	1,818	08/07/2021	1,789	05/07/2021
€/oz	1,524	1.29%	1,536	08/07/2021	1,507	05/07/2021

**Federal Reserve edges closer to taper.** Minutes from the June meeting of the Federal Open Market Committee released last week confirmed the sentiment from various officials that tapering of the Fed's \$120 bn asset purchase programme may start earlier than they had anticipated at earlier meetings. While not imminent, the likelihood is growing, which would be headwind for gold. Most officials also expect higher interest rates in 2023, a year earlier

than previous projections. There was acknowledgement of rising inflation, but the Fed still seems satisfied that this is largely transitory, so gold is forecast to continue to benefit until the Fed acts. In Europe, the ECB has updated its inflation target to 2%, from the current target of just below 2%, and is allowing it to be exceeded when needed if inflation remains high and central banks don't act then the gold price should ultimately rise.

## 47 Ag Silver

	Close	Weekly change	High	Date	Low	Date
\$/oz	26.12	-1.07%	26.77	06/07/2021	25.76	09/07/2021
€/oz	22.02	-1.19%	22.61	06/07/2021	21.77	08/07/2021

**China's solar PV installations could comfortably exceed 100 GW next year,** according to Asia Europe Clean Energy (Solar) Advisory, following a potentially a weaker than anticipated 2021. As noted in an earlier HPM Spotlight, the high price of certain raw materials used in solar panels has seen some marginal PV projects delayed until 2022 or cancelled entirely. The high prices of polysilicon and solar glass are forecast to prevail for most of this year. The country's NEA has also recently announced that solar projects approved in 2019/20, but which are not connected by the end of 2021, will be included in next

year's quota rather than being revoked. The combination of delayed projects and automatic carry-over of approval could see a surge in installations in 2022. While a weaker 2021 could weigh on silver demand from the photovoltaics (PV) market, this is expected to be countered by a strong recovery in 2022. Silver consumption in PV accounted for 101 moz last year (source: The Silver Institute). The silver price underperformed gold once again last week. The Fed is sounding slightly more hawkish but monetary policy is not changing while inflation is already high, so eventually the price is expected to move higher.

## 78 Pt Platinum

	Close	Weekly change	High	Date	Low	Date
\$/oz	1,099	0.98%	1,121	06/07/2021	1,069	08/07/2021
€/oz	927	0.90%	946	06/07/2021	901	08/07/2021

**Piece-based pricing and branded collections could help lift platinum jewellery demand,** according to the latest Insight report from Platinum Guild International (PGI). Historically, retailers in China have sold jewellery based on weight and the spot market price at the time. Branded products are sold on piece-based pricing and this is helping to drive up revenue and create perceived value for consumers, which lifts sales. PGI notes that the higher margin opportunity associated with branded collections has been fundamental to the adoption of platinum in India, a mature gold market, where platinum is now competitive. The platinum jewellery market had a slow start to the year, as Covid-related restrictions continued to weigh on key markets. Consumer sentiment is expected to improve moving into the second half of the year with

growing optimism around vaccines and an economic recovery. Platinum demand associated with jewellery fabrication is forecast to reach around 1.7 moz this year, an 11% year-on-year recovery but below pre-pandemic levels.

**Platinum lease rates have been rising in July,** signalling a temporary squeeze on liquidity. One-month and three-month lease rates have moved up a few percentage points. The platinum market remains well-supplied and a surplus of close to 1 moz is forecast for the full year (excluding investment), so the rise is likely to be short-lived. The platinum price is now close to flat for the year and, with a large surplus (ex. investment), it may not return to the highs seen earlier in the year.



# PRECIOUS METALS REVIEW

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

	Close	Weekly change	High	Date	Low	Date
\$/oz	2,816	1.22%	2,883	06/07/2021	2,769	06/07/2021
€/oz	2,374	1.10%	2,433	06/07/2021	2,344	07/07/2021

**Low new-vehicle inventory will impact the US car market in Q3**, with the next three months predicted to record the weakest sales in 2021 (source: Cox Automotive). Despite the impact of the semiconductor chip shortage on vehicle production and inventory, new car sales in the US have defied expectations so far this year. However, momentum appears to be slowing. Vehicle sales in June are estimated to have fallen to a seasonally adjusted annual rate of 16.4 million, down from the 17.0 million recorded in May. June is expected to mark the second consecutive month of slowing sales after the peak of 18.8 million in April, one of the strongest months in history (source:

Cox Automotive). At the start of last month, new-vehicle inventory was running 43% behind levels for the same period last year and 54% that of 2019. Automakers have benefitted from consumers' pent-up demand so far this year but limited light-vehicle supply could see sales in the second half of the year fall below those in H1'21. Palladium consumption attributed to autocatalyst demand in North America is forecast to be ~1.7 moz this year, as the strong first-half recovery in sales lifts PGM requirements. Palladium's rally has slowed as it reached the \$2,800/oz area, but the price is likely to stay elevated until Russian refined output recovers.

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

	Rhodium	Ruthenium	Iridium
Reporting week	\$18,450/oz	\$795/oz	\$6,150/oz
Previous week	\$19,950/oz	\$795/oz	\$6,150/oz

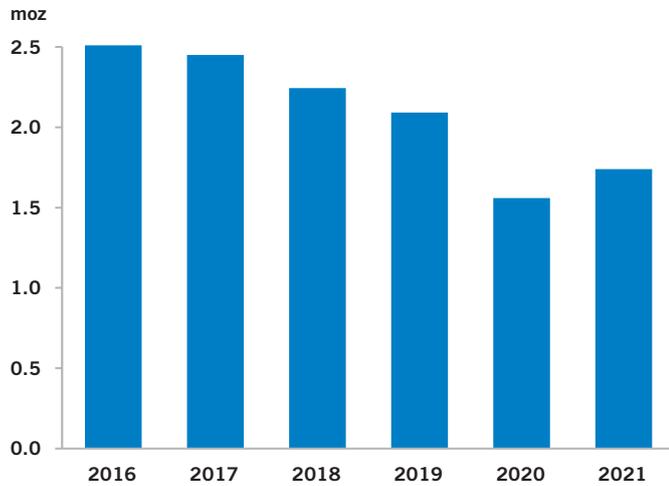
**The rhodium price has dropped back to levels last seen in early January**, bringing its year-to-date price performance to a modest 4.4%. Nonetheless, it remains at extremely high levels by historical standards, when compared to the average prices from 2019 and 2020 (\$3,923/oz and \$11,620/oz respectively). At today's prices, rhodium is still a considerable incentive for supply investment, particularly in rhodium-rich UG2 regions of South Africa. However, producers are right to exercise caution as rhodium has a history of volatile price action. Fortunately,

future demand for iridium and ruthenium from the hydrogen economy strengthens the long-term investment case for mining the UG2 Reef which contains the highest proportion of these small PGMs. There is significant Rh-Ir-Ru-rich production capacity that can be brought online with relatively low capital requirements and short lead times (1-2 years) should the price environment remain favourable. Meanwhile, iridium and ruthenium prices held steady.



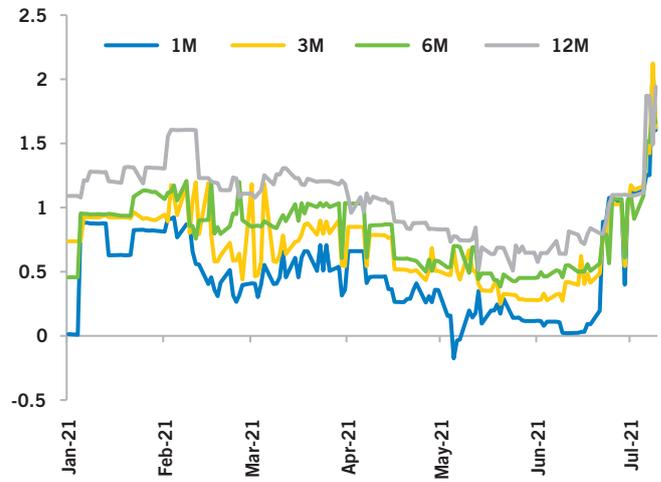
# TRENDS AND INVESTMENTS

## Platinum jewellery demand



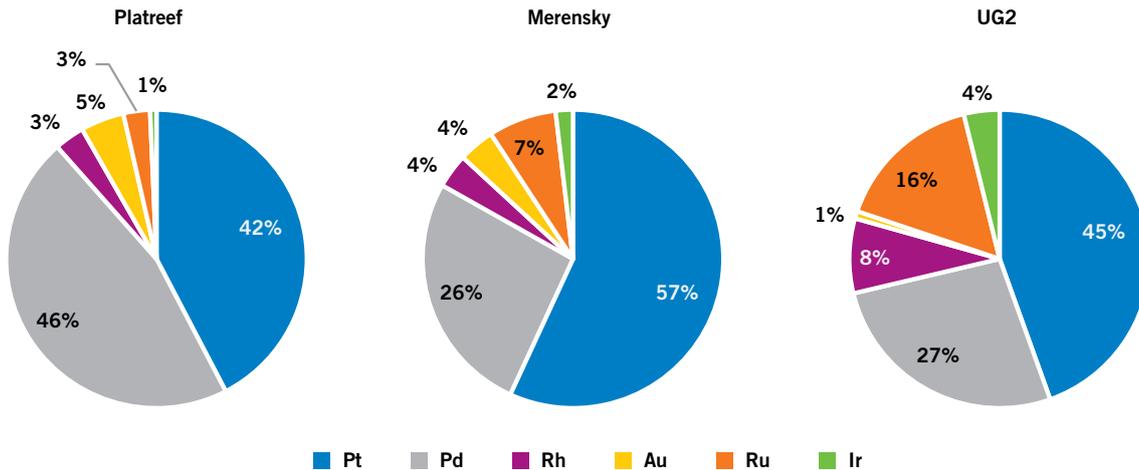
Source: SFA (Oxford)

## Platinum lease rate indicators



Source: SFA (Oxford), Bloomberg

## South Africa prill split by orebody



Source: SFA (Oxford)

## 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

[www.herae.us/trading-market-report](http://www.herae.us/trading-market-report)

Heraeus Precious Metals imprint can be found [here](#)

### 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

## DISCLAIMER

This document is being supplied to the recipient only, on the basis that the recipient is reasonably believed to be a professional market participant in the precious metals market. It is directed exclusively at entrepreneurs and especially not intended for the use of consumers. The material contained in this document has no regard to the specific investment objectives, financial situation or particular need of any specific recipient or organisation. It is not provided as part of a contractual relationship. It is not and should not be construed as an offer to sell or the solicitation of an offer to purchase or subscribe for any investment or as advice on the merits of making any investment. This report has been compiled using information obtained from sources that Heraeus and SFA (Oxford) Ltd ("SFA") believe to be reliable but which they have not independently verified. Further, the analysis and opinions set out in this document, including any forward-looking statements, constitute a judgment as of the date of the document and are subject to change without notice. There is no assurance that any forward-looking statements will materialize. Therefore,

neither SFA nor Heraeus warrants the accuracy and completeness of the data and analysis contained in this document. Heraeus and SFA assume no liability for any losses or damages of whatsoever kind, resulting from whatever cause, through the use of or reliance on any information contained in this document. However, in so far as a liability claim exists under German law, Heraeus and SFA shall have unlimited liability for willful or grossly negligent breach of duty. Unless expressly permitted by law, no part of this document may be reproduced or distributed in any manner without written permission of Heraeus. Heraeus specifically prohibits the redistribution of this document, via the internet or otherwise, to non-professional or private investors and neither Heraeus nor SFA accepts any liability whatsoever for the actions of third parties in reliance on this document. Prices quoted are interbank (offer) prices for gold, silver, platinum and palladium. Rhodium, ruthenium and iridium quotes reflect the Heraeus offer price at the time of writing.