

PRECIOUS APPRAISAL



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PRECIOUS METALS REVIEW

Gold



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	1,976	-0.99%	2,015	17/04/2023	1,969	19/04/2023
€/oz	1,801	-0.94%	1,835	20/04/2023	1,799	21/04/2023

High prices take the shine off a strong quarter for Chinese gold demand.

Overall demand for gold in China appears to have been relatively robust during Q1'23, despite rising prices denting demand in the second half of March. Withdrawals from the Shanghai Gold Exchange were relatively strong in March at 157 tonnes, compared to 100 tonnes in March 2022. The strong year-on-year growth may be partially related to the impact of Covid restrictions that began in Shanghai in March 2022, but it is an indication that wholesale demand has improved. This view is supported by Q1'23 imports of gold from Hong Kong totalling 87 tonnes, the highest level since 2015. Consumer gold demand in China fell by 17% last year to 825 tonnes (source: World Gold Council) as the country wrestled to control the coronavirus. Demand should increase on an annual basis this year as the country recovers from the disruption. Gross domestic product output surprised to the upside in Q1'23, plus retail and transport indicators are positive, suggesting that relatively vigorous growth may be expected this year. Falling premiums on gold in Shanghai versus London are an indication that consumer demand has weakened as the gold price has risen to almost all-time highs in yuan terms.

Risk of a recession in the US continues to rise despite the US economy growing in the first quarter.

The Bloomberg composite recession indicator for the US is at 65%, the UK at 65%, Germany at 60% and the Eurozone at 45% within the next 12 months. If the US enters a recession later in the year, the Fed is likely to cut rates, reducing US bond yields and dollar strength. This could push the gold price higher above \$2,000/oz. In the shorter term, market consensus is for a 25 bp hike in the Federal Funds Target Rate on 3 May, which could be a headwind for gold if the dollar strengthens.

Gold hit a more than two-week low during last week's trading and has yet to recover from the decline on 14 April.

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Silver



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	24.96	-1.16%	25.61	17/04/2023	24.65	19/04/2023
€/oz	22.76	-1.08%	23.28	17/04/2023	22.57	19/04/2023

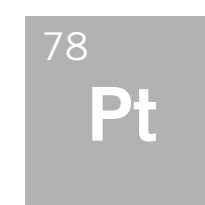
Global silver demand reached a record high last year of 1,242 moz, representing growth of 18% year-on-year (source: The Silver Institute). Demand growth was led by expansions in the solar industry leading to greater silver powder requirements, and from exceptionally high jewellery demand in India. Demand for silver paste rose by 28% year-on-year to 140 moz, indicating that growth in photovoltaic installations offset efforts at thrifting in 2022. An increase in the production of solar cells in China was responsible for a large proportion of the expansion. Production of cells jumped and exports escalated by 56% to 155 GW, with nearly half of all shipments going to Europe. It is expected that expansions will continue in photovoltaic module production and installations will reach record levels this year. This is likely to bolster silver paste demand to also reach record levels, possibly as high as 160 moz (source: The Silver Institute), as lower polysilicon prices and greater module production capacity enable delayed projects to be completed. China is also planning to streamline land and planning processes to accelerate industrial-scale solar installations, which could help to keep photovoltaic silver demand elevated.

The silver price pulled back slightly last week, returning to below \$25/oz. The gold:silver ratio bounced from 77.9 to nearly 80.

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Platinum



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	1,122	7.55%	1,135	21/04/2023	1,044	17/04/2023
€/oz	1,023	7.64%	1,033	21/04/2023	950	17/04/2023

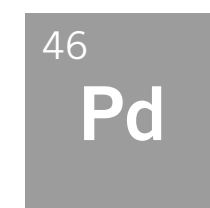
Heavy-duty automotive platinum demand could fall flat. North American heavy-duty platinum autocatalyst demand accounts for ~20% of global heavy-duty consumption and has recovered by 18% to >120 koz since the pandemic. Manufacturing PMIs in the US are currently in contraction (<50). Historically, this coincides with the bottom of the business cycle for sales of large, class-8 trucks. Sales have, however, been trending upwards for the last 12 months. Sales of ~65,000 units in Q1'23 are 30% higher than a year ago. Some of the year-on-year increase is supply-side driven, as manufacturers have benefited from supply chains that are less restricted by semiconductor chip availability. Volvo Trucks (16% US heavy-duty market share) has upgraded its 2023 sales guidance, and now expects 3.25% growth in new registrations this year. A turnaround in manufacturing PMIs would likely result in an uptick in truck sales from current levels, though risk is skewed to the downside as evidence of a coming recession builds. Consumer spending fell in March for a second month, lending standards have tightened significantly, and last week the Philly Fed's Manufacturing Index fell unexpectedly to its lowest point (ex-Covid lockdowns) since March 2009. The US economy is bending but is yet to break. If (when) it does, levels of freight transport and demand for new trucks could fall and with it, platinum demand from the heavy-duty sector, with the platinum price also likely to be affected.

Platinum rallied alongside palladium last week, reaching a more than three-month high of \$1,135/oz. Fundamentally, the platinum market is likely to be in a small deficit this year, though this should not impact end-users' ability to source metal as levels of refined above-ground stocks are more than sufficient to meet demand.

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Palladium



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	1,605	6.47%	1,648	18/04/2023	1,493	17/04/2023
€/oz	1,463	6.55%	1,502	18/04/2023	1,361	17/04/2023

Ever-growing BEV market share threatens palladium’s largest end-use. Europe’s new vehicle sales saw 29% growth year-on-year in March, bringing Q1’23 sales to 2.7 million units, nearly 18% higher than in Q1’22 (source: ACEA). Although automakers are now competing with high interest rates and the threat of economic decline, low sales last year due to numerous supply chain issues are adding to strong year-on-year growth. In 2022, Western European palladium autocatalyst demand declined by 2% to ~1.2 moz as substitution for platinum became more widespread, and the transition to BEVs aided further demand destruction. The ACEA forecasts that the EU’s new car sales will grow by 6% this year to 9.8 million units. However, this will not benefit palladium autocatalyst demand as BEV market share is forecast to continue its upward trend in the region after hitting 12.1% last year, offsetting gains in units sold. Prices of BEVs are also falling, improving their appeal to lower-income customers, and automakers are pushing hard to grow electrified vehicle sales.

Inflation Reduction Act update reduces number of eligible electric cars. Stimulating sales of BEVs in the US may face headwinds in the near term from the increasingly stringent sourcing requirements around critical mineral and other battery components, which take effect from April as part of the Inflation Reduction Act. The number of BEVs eligible for the full \$7,500 tax credit after recent updates has shrunk to 10 models.

Palladium rallies on short-covering. Non-commercial specs’ net short position in palladium is on par with the shortest it has ever been at more than 700 koz. The palladium price finished last week 6.5% higher week-on-week at \$1,605/oz.

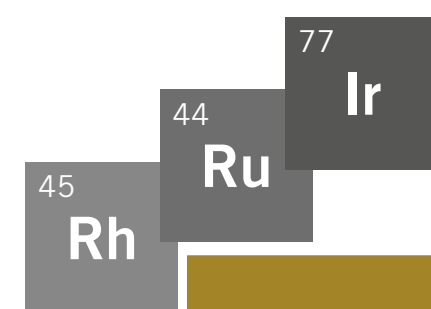
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Rhodium, Ruthenium, Iridium



	RHODIUM	RUTHENIUM	IRIDIUM
Reporting Week	\$8,950/oz	\$525/oz	\$5,150/oz
Previous Week	\$8,450/oz	\$525/oz	\$5,150/oz

Japan is expected to double-down on 2017 hydrogen plan. Japan has long been a forerunner in hydrogen power and fuel cell technology, having been the first nation to develop a national hydrogen roadmap in 2017. The government plans to provide an update to this roadmap in May. The update is suggested to include \$113 billion in funding over 15 years and updated goals for hydrogen production and developments for the domestic supply chain. Refreshed targets and funding may help to kick-start the fuel cell light-vehicle sector that has stagnated since the release of the first consumer vehicle in 2014. A portion of hydrogen production goals is likely to be green and produced using iridium-containing electrolyzers. Currently, only a small portion of iridium end-use is in the hydrogen economy. However, this sector is forecast to grow rapidly over the next decade as more countries adopt hydrogen roadmaps.

New proposed US emissions standards could benefit rhodium.

The Environmental Protection Agency's new standards for fleet-wide average emissions require a 60% reduction in NO_x emissions by 2030. Adding rhodium to autocatalysts can help to reduce NO_x emissions, but the simplest route for automakers may be to encourage a faster adoption rate for BEVs in the US. The market share of BEVs as a proportion of new sales is one of the lowest among the developed automotive markets (7.2% vs. 71% in Norway in 2022), therefore there is potential to tap into a large market.

Once again, the rhodium price was the only mover amongst the small PGMs last week. The price rose slightly to \$8,950/oz, while ruthenium and iridium both remained flat week-on-week.

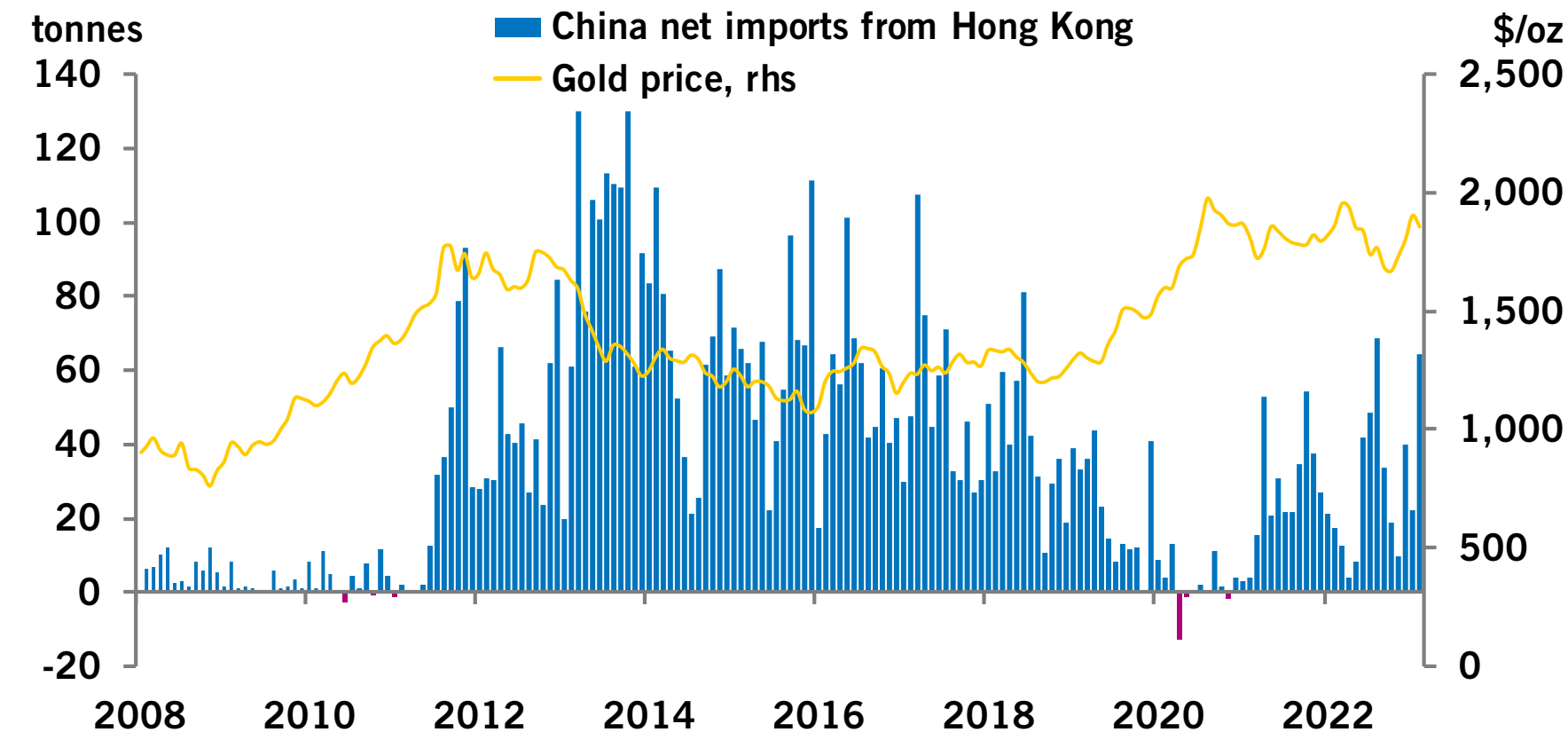
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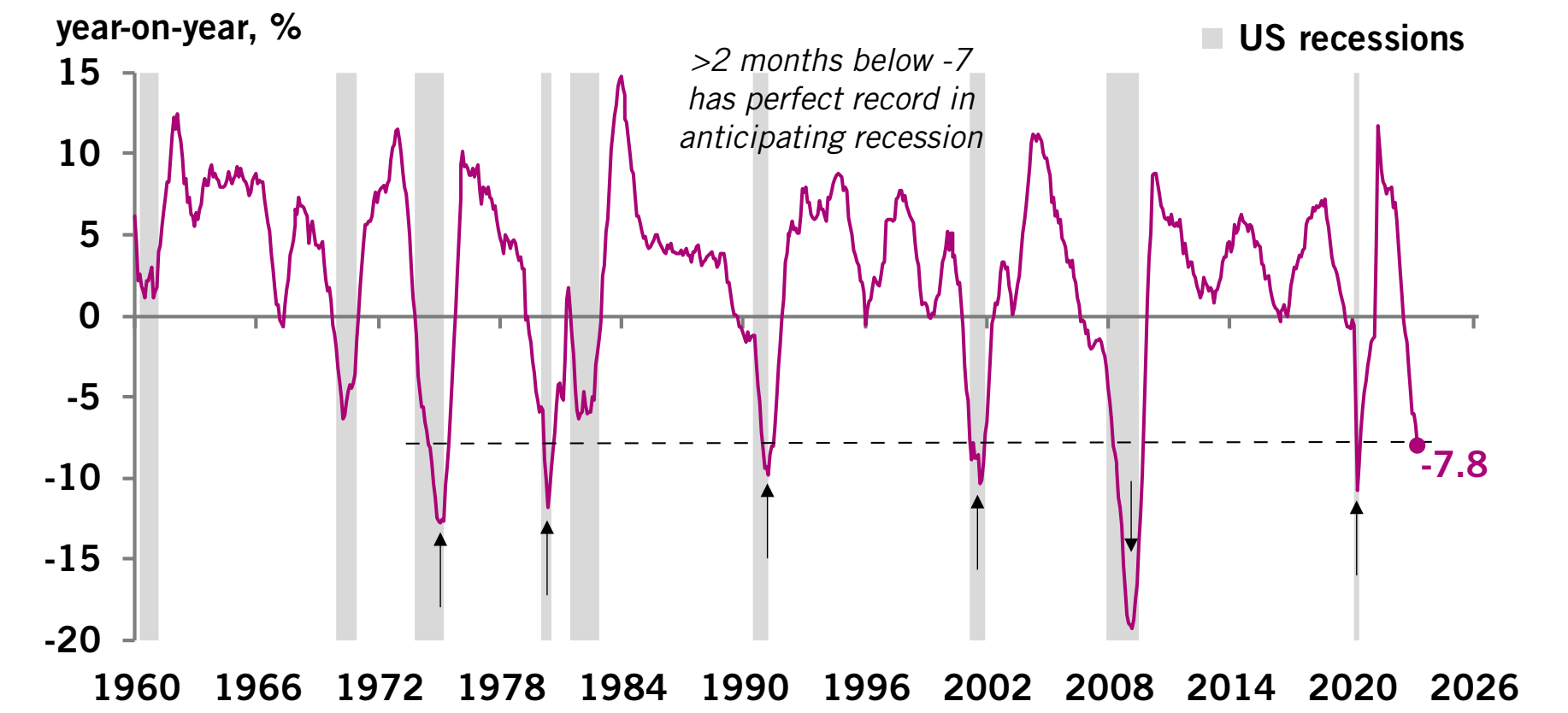
TRENDS AND INVESTMENTS

China's gold imports from Hong Kong



Source: SFA (Oxford), Bloomberg

The Conference Board Leading Economic Index



Source: SFA (Oxford), Conference Board, NBER

YTD platinum price



Source: SFA (Oxford), Bloomberg

YTD palladium price



Source: SFA (Oxford), Bloomberg

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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

USA

Phone: +1 212 752 2180

tradingny@heraeus.com

China

Phone: +86 21 3357 5658

tradingsh@heraeus.com



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The Heraeus Precious Appraisal is 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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