

PRECIOUS APPRAISAL



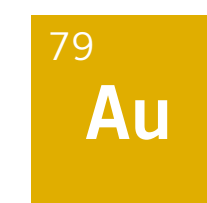
PRECIOUS APPRAISAL

23rd October 2023

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PRECIOUS METALS REVIEW

Gold



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	1,992	3.56%	1,997	20/10/2023	1,908	16/10/2023
€/oz	1,881	2.69%	1,885	20/10/2023	1,812	16/10/2023

Gold surprisingly resistant in the face of yet higher treasury yields.

Higher than expected US inflation in the previous week and retail sales above expectation last week boosted the odds of the Fed further tightening monetary policy in November. Despite this, gold held its momentum from the week before, rising as high as \$1,997/oz. Some of the rally was likely down to short covering, helped further by the escalation of the conflict in the Middle East motivating haven demand. Since the last peak in holdings back in May, 7.97 moz of gold have been deallocated from gold-backed ETFs. It appears that, despite the recent rally in the gold price, investors are more focussed on short-term pain caused by rapidly rising yields rather than opting to bet on potential longer-term gains once this trend reverses. Gold has made a base above the previous upward trend line which may act as a support for the next few weeks. It is possible that we could see some of these ETF investors jump back into funds this week if bearish sentiment shifts to a fear of missing out among institutional investors.

Gold finished last week's trading 3.56% higher at \$1,992/oz.

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Silver



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	23.57	3.73%	23.70	20/10/2023	22.37	17/10/2023
€/oz	22.25	2.83%	22.37	20/10/2023	21.21	17/10/2023

Silver coins gained popularity with lower prices in Q3. US Mint silver American Eagles were 8.19 moz in Q3'23, more than double the previous quarter when the quarterly average silver price was 2.6% higher, and also 5.6 moz higher than in Q3'22. Cumulative sales year-to-date (including the first two weeks of October) were 20.2 moz, 5.7 moz (39%) higher than in the same period in 2022. This is despite a higher interest rate environment, and a greater opportunity cost of holding physical metal over short-dated US treasury bills. The story is different in Australia, with bullion sales from Perth Mint seeing a 46% decline in silver product sales quarter-on-quarter in Q3'23, and cumulative sales down 31% year-to-date.

Global silver ETF holdings fell by 6.93 moz (-0.8%) last week, a continuation of the trend set in February this year. In the year to date, holdings have declined by 34.5 moz (-5%). The silver price rose less than the gold price last week and the gold-silver ratio sits at around 84.5, which considering the long-term average of 66.25, signals that silver is undervalued relative to gold.

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Platinum

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Pt

	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	903	2.70%	910	18/10/2023	877	16/10/2023
€/oz	853	1.81%	861	18/10/2023	833	16/10/2023

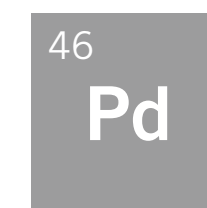
Weak platinum price performance delays possible PGM project supply pipeline. Tharisa has opted to delay commissioning of its Karo development project in Zimbabwe by a year to 2025. The decline in the PGM basket price and market volatility led to the decision, though the company states that this timeline can be shortened if market conditions improve in the interim. The Karo project has greater exposure to the palladium price than the average South African PGM mine, with palladium contributing 39.5% of 6E PGM production versus ~30% in South African shafts. The project is expected to produce ~80 koz of platinum once ramped-up, which in 2025 will be ~15% of Zimbabwe's mined supply. The country's platinum mine supply is forecast to rise by 3% to 500 koz this year, which will be a record, and it is the only major platinum producing region to increase output since the pandemic. Zimplats commissioned a new concentrator earlier this year which has helped to boost Zimbabwe's production.

The platinum price has followed gold higher in the last two weeks, with the help of a stronger rand since the beginning of the month. Last week, platinum managed to break above \$900/oz and managed to hold that level, closing the week at \$903/oz.

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PRECIOUS METALS REVIEW

Palladium



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	1,106	-2.30%	1,160	16/10/2023	1,098	19/10/2023
€/oz	1,044	-3.11%	1,101	16/10/2023	1,040	20/10/2023

Palladium-loaded light vehicle sales improving this year in China. Chinese electric vehicle sales are continuing to grow, though the rate of this sales growth has declined significantly this year. The average rate of BEV sales growth month-to-month is 30% versus 2022, but in Q3'23 was just 15.4%. In 2022, BEV sales grew 85% year-on-year. Since the Chinese government cut subsidies for electric-only vehicles at the start of the year, sales of hybrids with PGM-loaded autocatalysts have gained ground. Year-to-date sales of hybrids have totalled 2.34 million units, a 47% increase over cumulative sales of 1.60 million units at this point in 2022. Total autocatalyst-bearing light vehicles have shown growth of 4.2% year-on-year in 2023 to September. Sluggish BEV sales growth and an increase in palladium-containing light vehicles this year is expected to contribute to a slight improvement in Chinese palladium autocatalyst demand this year, which is forecast to rise to 2.7 moz.

The palladium price hit a new low of \$1,098/oz last week and, by the end of trading, palladium's premium to platinum had narrowed to \$203/oz.

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Rhodium, Ruthenium, Iridium



	RHODIUM	RUTHENIUM	IRIDIUM
Reporting Week	\$6,050/oz	\$475/oz	\$5,450/oz
Previous Week	\$5,550/oz	\$475/oz	\$5,300/oz

US hydrogen hub funding is expected to stimulate green hydrogen demand. The US Department of Energy has allocated \$7 billion in grants to its seven proposed clean hydrogen hubs. The projects are spread throughout the mainland US, and funding will come from the Inflation Reduction Act package, though allocation among projects is to be negotiated. Together, the hubs are expected to cover one-third of the US’s 10 mt ‘clean’ hydrogen production target by 2030. Six of the seven winning hubs plan to use hydrogen in industrial applications, while all intend to provide hydrogen for the transportation sector. All the proposed hubs intend to (at least partially) use renewable energy to produce green hydrogen through electrolysis, which could generate additional iridium and platinum demand where proton exchange membrane electrolyzers are used. In addition, hydrogen used in the transportation sector also provides potential demand for ruthenium used in fuel cell membranes. The funding package is possibly the largest ever for regional clean hydrogen projects and is expected to firm up the timeline and probability of project success among other green hydrogen projects in the US.

Rhodium and iridium prices again saw positive price movements last week. Rhodium gained 9% to \$6,050/oz, and iridium saw similar movement higher, closing the week’s trading at \$5,450/oz. Last week’s move in the iridium price puts it at the highest level since May 2022. Ruthenium defied the other precious metals last week, remaining at \$475/oz for another week.

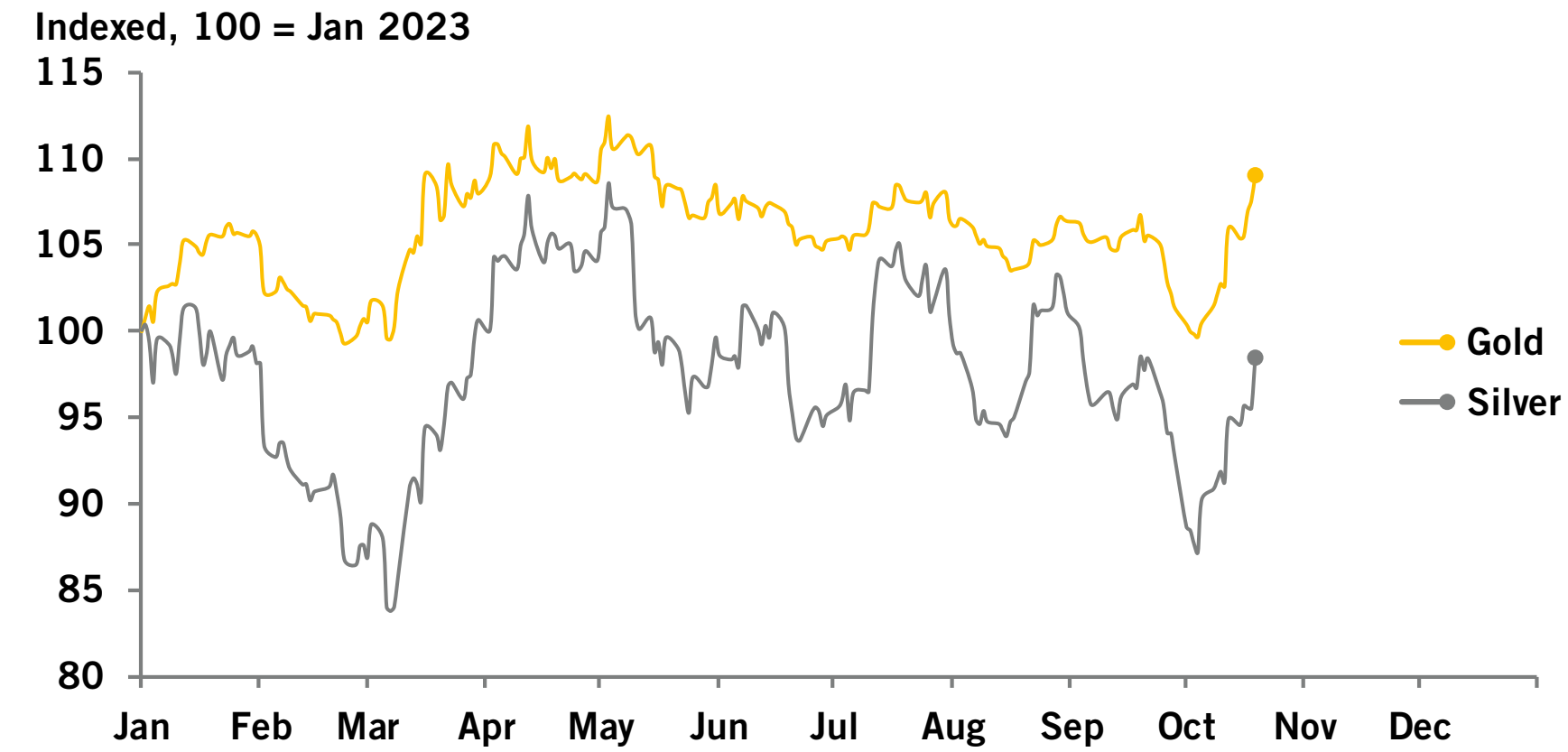
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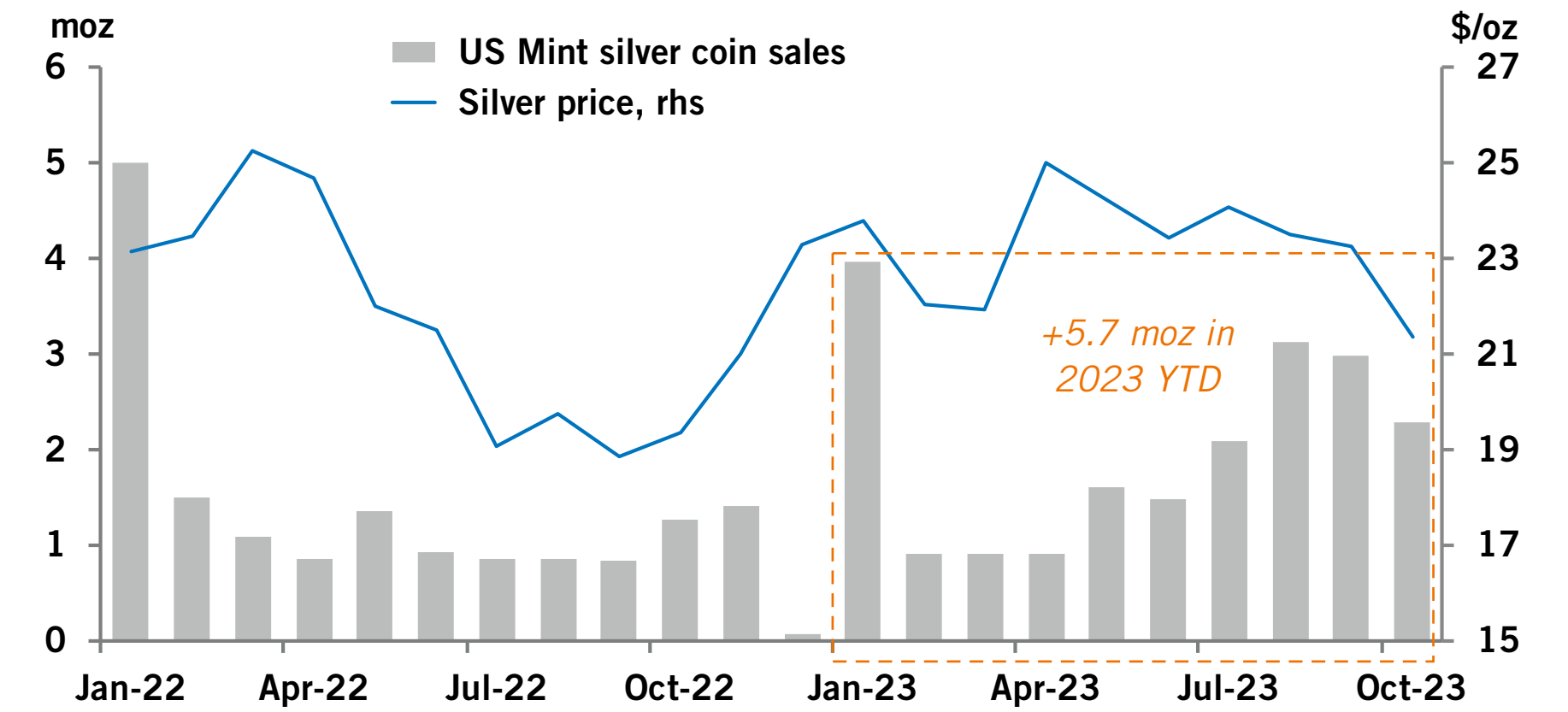
TRENDS AND INVESTMENTS

Precious metals price performance index



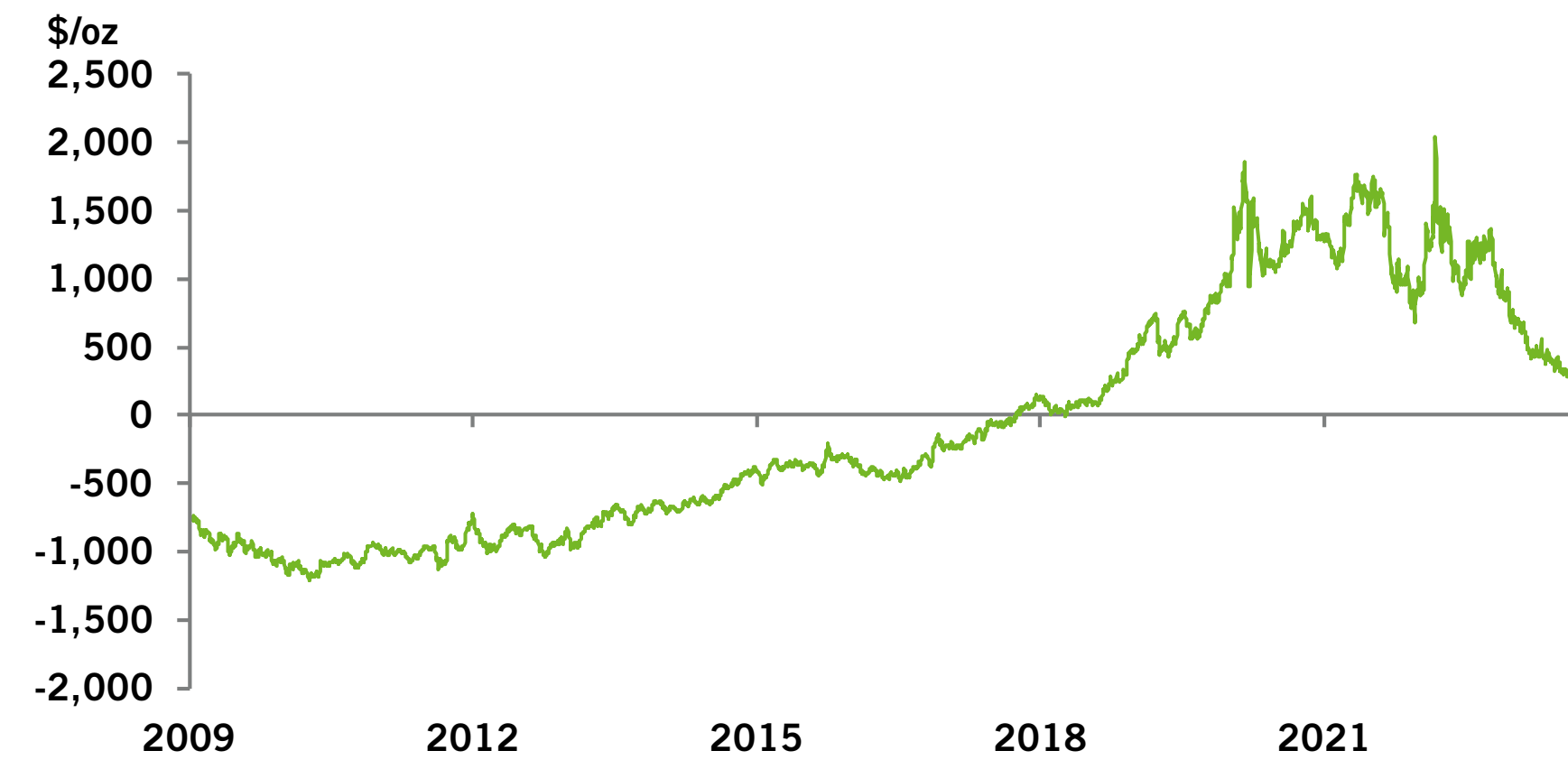
Source: SFA (Oxford), Bloomberg

US Mint silver coin sales



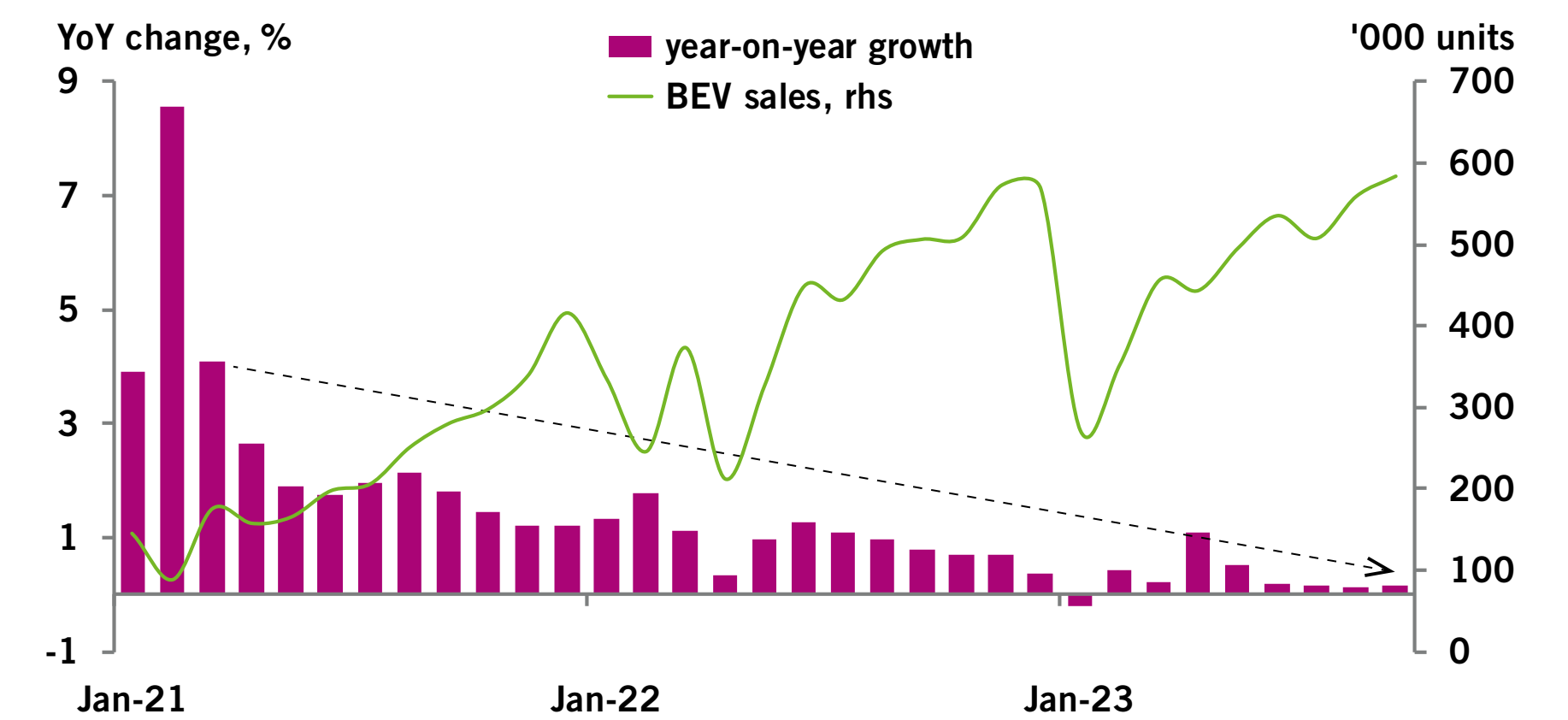
Source: SFA (Oxford), Bloomberg

Palladium's premium to platinum



Source: SFA (Oxford), Bloomberg

China BEV sales growth



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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