

# PRECIOUS APPRAISAL



- 01 MARKET SPOTLIGHT
- 02 GOLD
- 03 SILVER
- 04 PLATINUM
- 05 PALLADIUM
- 06 RHODIUM, RUTHENIUM, IRIDIUM
- 07 TRENDS AND INVESTMENTS
- 08 ABOUT HERAEUS

## MARKET SPOTLIGHT

### South Africa's power problems could put pressure on PGM production

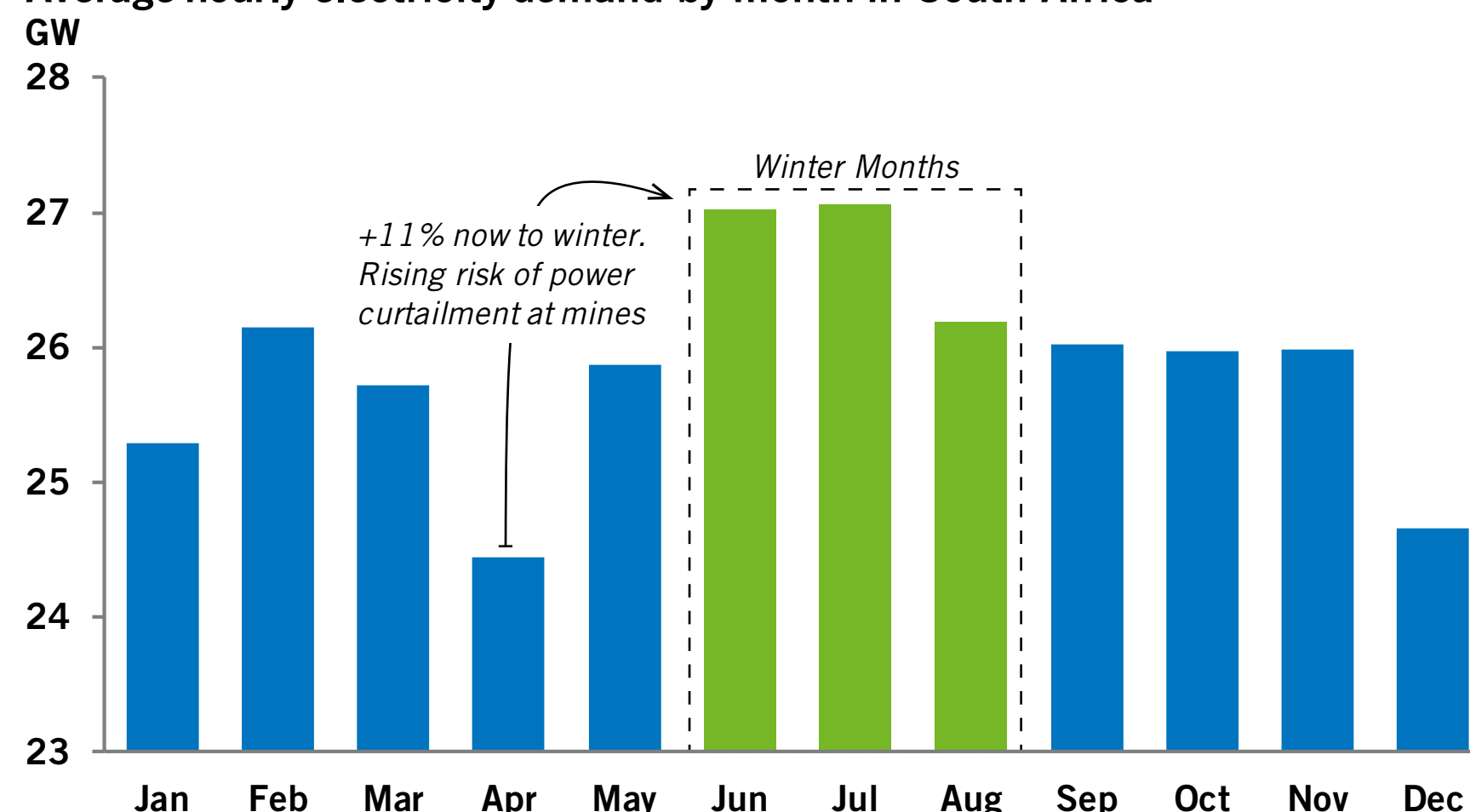
**The upcoming South African winter could put stress on PGM producers' power supply.** Demand for domestic electricity typically peaks during the Southern Hemisphere winter from June to August and is at its lowest in April. In 2022, load-shedding first reached Stage 6 in late June and was the most intense period on record. The additional demand load could lead to elevated stages of mandatory load curtailment at PGM operations, meaning a larger amount of their energy use must be reduced during peak times. Eskom moved the nation back to Stage 6 load-shedding last week. Peak demand last Thursday reached 30.7 GW, while maximum generation capacity was just 23.7 GW, resulting in 7 GW of excess demand (load-shedding). Slippage in maintenance and expansion projects plus unexpected outages are impairing generation capacity that had been planned to come online in time for the winter months.

**Deep mines with high concentrator utilisation could be most at risk.** More than 28% (1.2 moz) of South Africa's mined platinum supply comes from operations with a depth of over 1,000 m. Operations with deeper working levels have higher electricity demand for the additional cooling, pumping, hoisting etc. required. Typically, producers reduce power to a variety of non-critical services, including the concentrator, in order to maintain underground mining production during load-shedding. However, where concentrators are operating at full capacity, producers will find it difficult to catch up on production between these periods. Having experienced frequent high-level load-shedding in the last 12 months, producers have improved power management by various means, and as a result there have been no underground shifts lost to date.

**South African platinum supply is predicted to rise by 3% this year to 4.1 moz owing to a drawdown of stockpiles accumulated in 2022.** Maintenance of smelting facilities last year resulted in the build-up of approximately 300 koz 6E PGMs during a time of high-level load-shedding. The majority of this build-up was due to the delayed restart of Anglo American Platinum's Polokwane smelter which is now operating.

**Troubles with processing could tighten the PGM markets.** Most of the stockpiled material should be processed and refined during 2023. However, if power availability from Eskom is poor, South African refined supply could fall short of forecasts. The PGM markets look tight this year as smelter maintenance in Russia is likely to reduce output. Although the global economic outlook is relatively weak this year and PGM prices have been declining, production hold-ups could result in price volatility.

Average hourly electricity demand by month in South Africa



Source: SFA (Oxford), Eskom

# PRECIOUS METALS REVIEW

## Gold



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	1,996	-0.60%	2,049	13/04/2023	1,982	10/04/2023
€/oz	1,818	-1.62%	1,852	13/04/2023	1,812	14/04/2023

**Sticky core inflation keeps at least one more Fed rate hike on the table.**

The gold price was strong during the first months of the year, up more than 11% and climbing above the \$2,000/oz mark. April data releases from the US have supported the gold price above this key level as market hopes for a dovish pivot from the Fed spread. Headline inflation falling to a two-year low of 5% in March will probably not be sufficient to halt monetary policy action against inflation, as underlying core inflation ticked up for the first time in six months to 5.6%. The dollar index has declined to a 12-month low as the market anticipates May’s Fed meeting to include the final hike of the cycle, helping to support gold above \$2,000/oz. With inflation now in line with the Federal Funds Rate, multiple future hikes appear less likely. Further dollar weakness could push gold to a new all-time high.

**Strong retail demand also helps the price.** The US Mint sold 436 koz of gold bullion coins in the first quarter, making it the second-best comparable period after Q1’99 during which 694 koz of coins were sold near the end of a 12-year bear market in gold. Strong retail demand for gold bullion is also seen in other markets. The Australian Mint’s sales rebounded by 54% month-on-month in March to 80.5 koz. Gold hit year-to-date highs again last week, but gave up some gains on Friday afternoon and closed back below \$2,000/oz.

**India’s gold demand may not receive much of a seasonal boost this April.**

The Akshaya Tritiya festival this weekend in India is typically an auspicious time for domestic gold purchases. However, this year’s festival is coinciding with a historically high gold price, which could result in muted buying by price-conscious consumers. The large discounts currently being offered by retailers of up to \$30/oz is a signal that domestic gold demand is weak. The decline in gold imports carried over from December into January, with just 12 tonnes imported (-74% year-on-year). The price has since risen further which is likely to have restricted imports during the rest of Q1’23. Since 2010, India’s gold demand has had a negative correlation with the gold price. Therefore, if the gold price remains near all-time highs, demand could be muted until a new psychological baseline is established.

# PRECIOUS METALS REVIEW

## Silver



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	25.25	1.09%	26.09	14/04/2023	24.74	10/04/2023
€/oz	23.01	0.50%	23.59	14/04/2023	22.71	10/04/2023

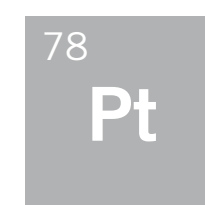
**The work-from-home electronics boom has busted.** The first quarter marked the second straight quarter of large decline in PC shipments worldwide. Preliminary data point to a 29% fall year-on-year globally (source: IDC), with Apple (-40.5%), and Dell (-31%) taking the largest hit. Electrical and electronics end-uses account for 31.5% of net global silver demand and is estimated to have been more than 320 moz last year. Demand for silver in electronics boomed during the pandemic as production of PCs, smartphones and other devices soared. This effect is waning and with heightened levels of economic uncertainty, large corporations are likely to delay updates to measure the potential fallout, which could crimp growth or even lower silver demand in this sector in 2023, particularly in Europe and the US.

**The silver price has more short-term upside potential.** Silver closed higher for the fifth week in a row last week and closed above \$25/oz for the first time since last April. Buying from safe-haven demand in the wake of the Silicon Valley Bank collapse has dissipated, but the silver price has held up, supported by a 30% fall in real yields on 10-year US Treasury bonds and a weaker dollar. Silver could see resistance around \$26/oz, as the next round number level and a region of technical resistance.

- 01 MARKET SPOTLIGHT
- 02 GOLD
- 03 SILVER
- 04 **PLATINUM**
- 05 PALLADIUM
- 06 RHODIUM, RUTHENIUM, IRIDIUM
- 07 TRENDS AND INVESTMENTS
- 08 ABOUT HERAEUS

# PRECIOUS METALS REVIEW

## Platinum



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	1,043	3.13%	1,060	14/04/2023	989	10/04/2023
€/oz	950	2.54%	958	13/04/2023	912	11/04/2023

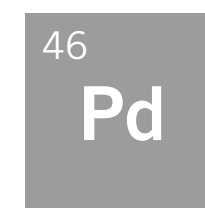
**The rhodium price has tipped the balance on platinum supply consolidation.** Northam Platinum has withdrawn its offer for Royal Bafokeng Platinum (RBP), citing two PGM price-based conditions that constitute a material change in circumstances: i) rhodium trading below \$9,000/oz for 12 consecutive trading days, and ii) the South African basket price falling below ZAR33,000, again for 12 successive days. This development opens the door for Impala Platinum to complete on the transaction as the largest shareholder of RBP with a competing offer already on the table. As of the end of last week, Impala held ~44.5% of RBP shares. If Impala were to take over operation of RBP’s assets, it could boost the longevity of the contiguous Lease Area, extending its PGM production profile in the long term, and potentially enable cost savings from operational synergies. In the near term, a change of ownership is not likely to change PGM production.

**Will South Africa’s troubles hinder the platinum price?** The rand has weakened against the dollar this year, reflecting risk-averse sentiment in global financial markets, as worsening issues with Eskom’s power supply add to economic weakness and compound the view of South Africa as a higher-risk investment destination. In addition, the economic outlook does not appear to be promising for commodity exporters. The IMF last week released its lowest five-year global growth forecast since 1990 of ~3% annually to 2028. Last week’s stronger showing for the rand helped the platinum price to reach its highest level since January. However, the rand could resume its weakening trend versus the dollar for the reasons mentioned above. Platinum’s strong negative correlation with the rand-dollar exchange rate suggests that the recent rally above \$1,000/oz may run out of steam fairly soon.

- 01 MARKET SPOTLIGHT
- 02 GOLD
- 03 SILVER
- 04 PLATINUM
- 05 **PALLADIUM**
- 06 RHODIUM, RUTHENIUM, IRIIDIUM
- 07 TRENDS AND INVESTMENTS
- 08 ABOUT HERAEUS

# PRECIOUS METALS REVIEW

## Palladium



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	1,508	2.58%	1,532	13/04/2023	1,411	10/04/2023
€/oz	1,373	2.00%	1,385	13/04/2023	1,301	10/04/2023

**Palladium demand is slipping in China.** First-quarter passenger vehicle sales in China were 6.7% lower year-on-year, and combustion engine (ICE) passenger vehicles underperformed electrified vehicles, falling 10% year-on-year. The decline was due to a poor month in January, but sales did increase year-on-year in both February and March. China’s auto industry was expected to face weaker demand early in the first quarter following the expiry of national tax incentives for ICE vehicles and purchase subsidies for new energy vehicles (NEVs). Sales and production figures are set to grow year-on-year in Q2’23 owing to the low base from last year, as major cities were shut down when Covid spread. Chinese palladium autocatalyst demand is facing a number of bumps in the road. Firstly, the market share of BEVs is trending higher, even with fewer subsidies. Electric vehicle producers have been active in a price war this year to attract customers. China’s best-selling SUV, the Tesla Model Y, had a 13.5% price cut in January, and other producers followed suit. Substitution of some platinum into gasoline autocatalysts instead of some palladium is also affecting palladium demand. In aggregate, China’s palladium autocatalyst demand is forecast to fall marginally this year. This mirrors global demand, which is also forecast to fall slightly to under 7.7 moz.

The palladium price has built a base above \$1,400/oz over the last four weeks and has rallied 12% since the second week of March owing to a weakening dollar. It is unlikely that this rally will continue much higher because macroeconomic downside pressure is building as a US recession seems more likely.

# PRECIOUS APPRAISAL

17<sup>th</sup> April 2023

01 MARKET SPOTLIGHT

02 GOLD

03 SILVER

04 PLATINUM

05 PALLADIUM

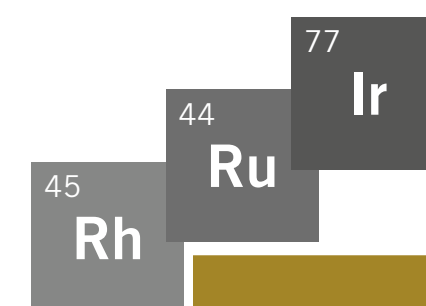
06 **RHODIUM, RUTHENIUM, IRIDIUM**

07 TRENDS AND INVESTMENTS

08 ABOUT HERAEUS

# PRECIOUS METALS REVIEW

## Rhodium, Ruthenium, Iridium



	RHODIUM	RUTHENIUM	IRIDIUM
Reporting Week	\$8,450/oz	\$525/oz	\$5,150/oz
Previous Week	\$9,050/oz	\$525/oz	\$5,150/oz

**The EU takes a step to enable new green hydrogen demand.** European Union states have agreed on a programme to build a coordinated hydrogen refuelling network every 200 km along the partially completed Trans-European Transport Network, and in 424 major cities. This could mean more than 100 new fuelling stations along the 21,500 km of routes which must be completed by 2030. As of the end of 2022, there were 178 hydrogen refuelling stations in Europe, mostly in Germany, though not all are active (source: Clean Hydrogen Partnership). Through this initiative, the EU could enable faster uptake of hydrogen fuel cell vehicles in places where they are currently not feasible due to the low density of refuelling stations. This would give ruthenium demand a boost.

While the EU is taking the lead in enabling an end-use market, Australia is the top destination for green hydrogen production projects. The Australian government estimates that 40% of all global clean hydrogen projects are based there, a portion of which include iridium-loaded proton-exchange membrane electrolyzers. Encouraging green hydrogen end-uses and expanding electrolyser deployment are forecast to boost demand for iridium over the next five years from a relatively low base at present.

While the ruthenium and iridium prices stayed stable over the Easter weekend, rhodium saw some volatility, rising briefly back above \$9,000/oz before falling to a new cycle low of \$8,450/oz by the end of last week.

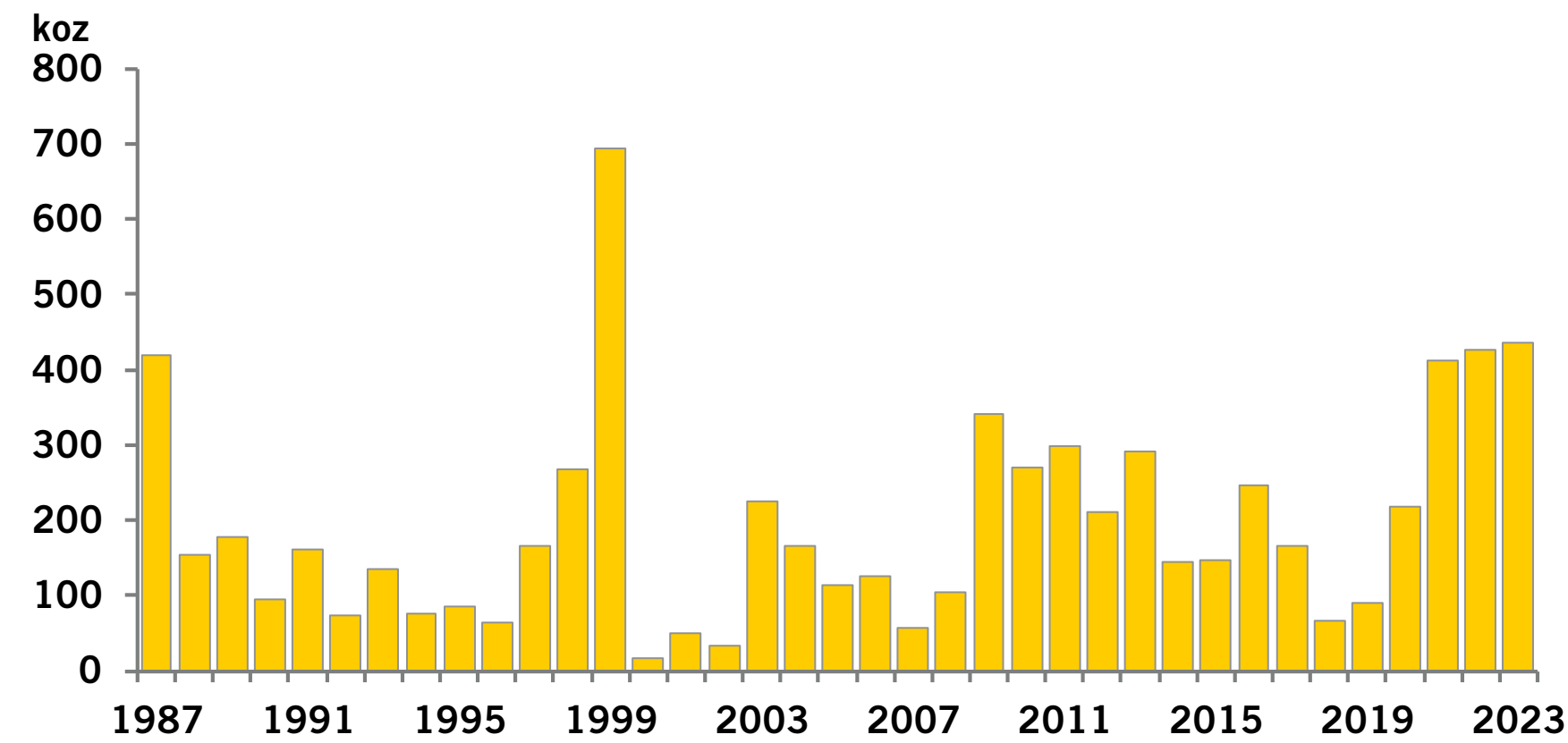
# PRECIOUS APPRAISAL

17<sup>th</sup> April 2023

- 01 MARKET SPOTLIGHT
- 02 GOLD
- 03 SILVER
- 04 PLATINUM
- 05 PALLADIUM
- 06 RHODIUM, RUTHENIUM, IRIIDIUM
- 07 **TRENDS AND INVESTMENTS**
- 08 ABOUT HERAEUS

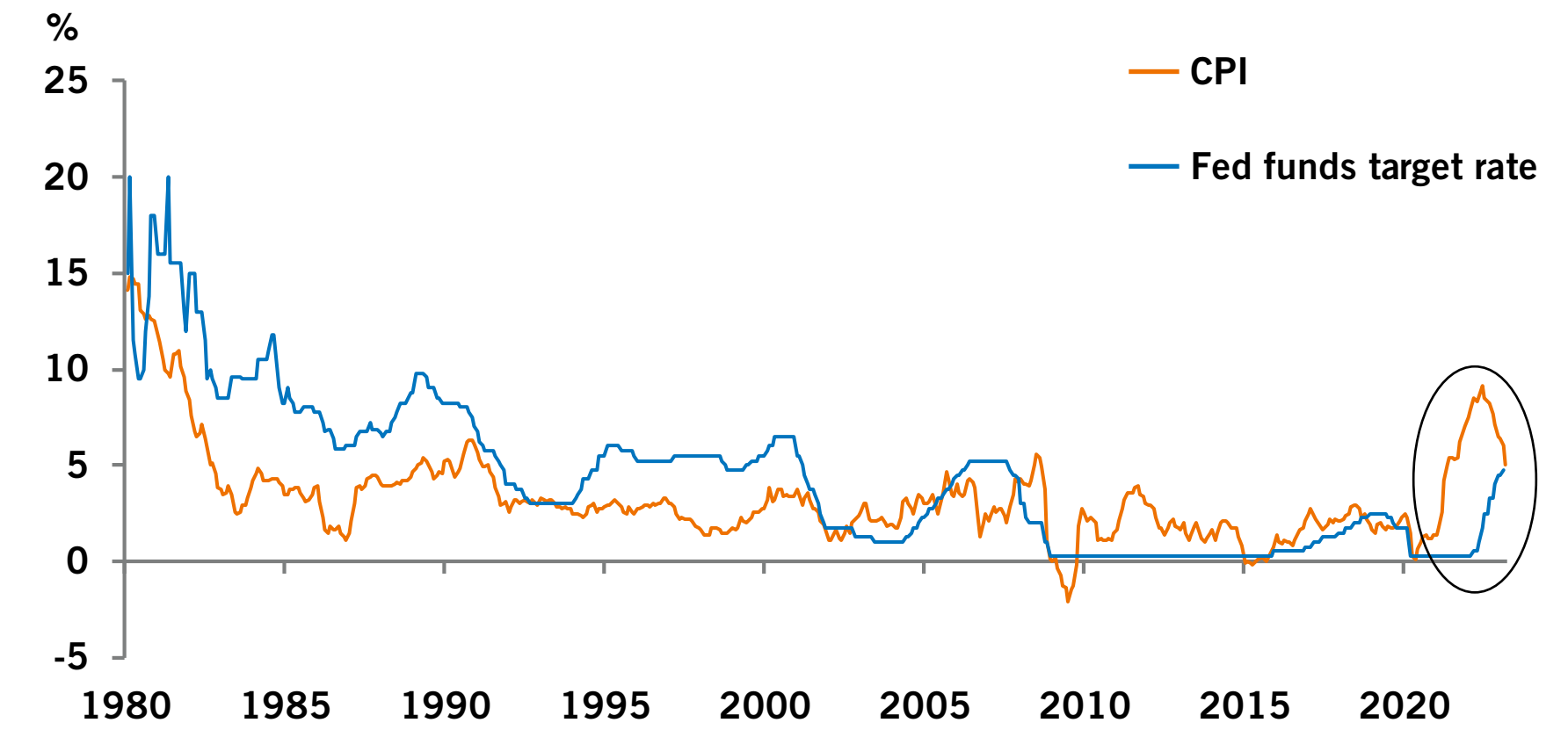
# TRENDS AND INVESTMENTS

## US Mint gold eagle sales in Q1



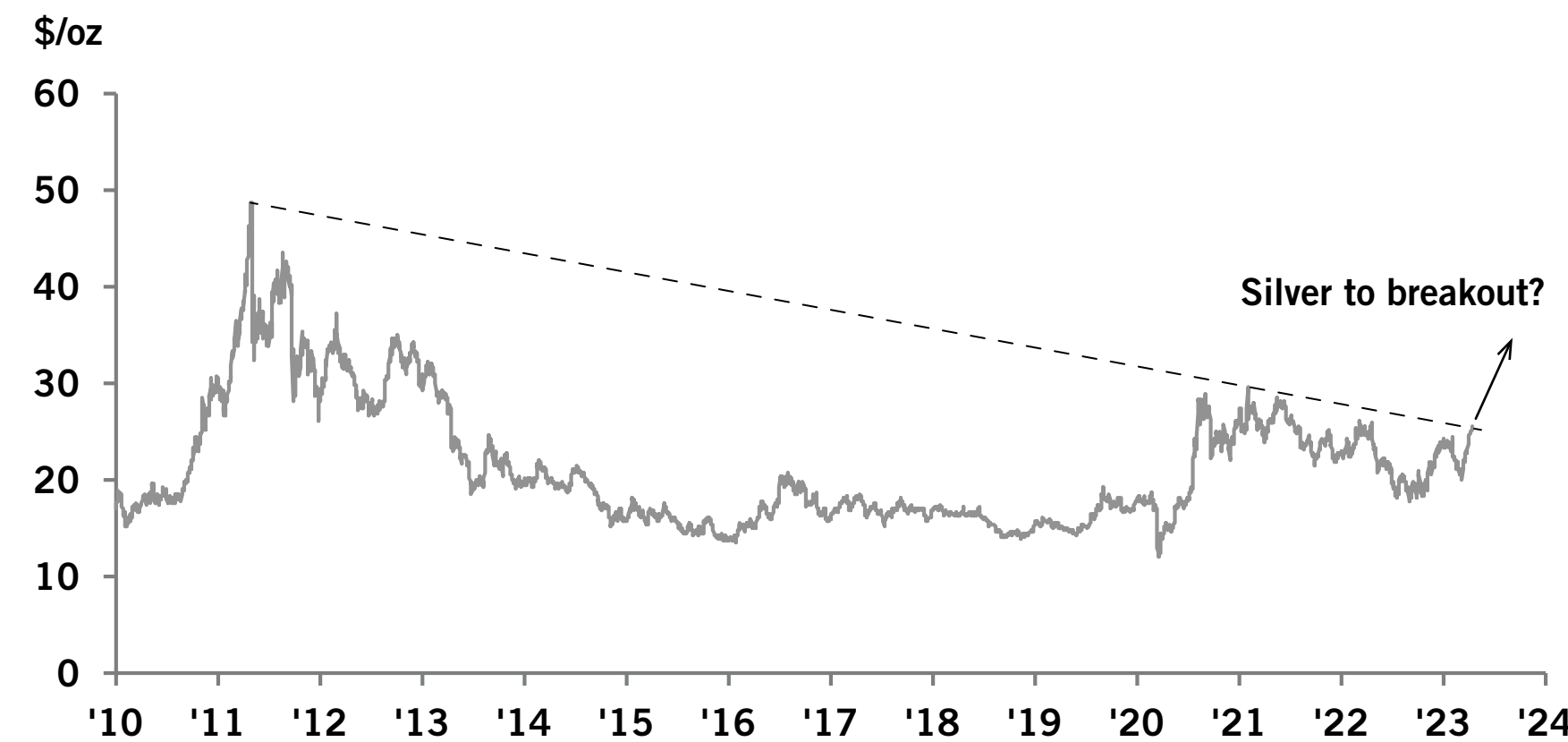
Source: SFA (Oxford), US Mint

## US inflation and interest rates



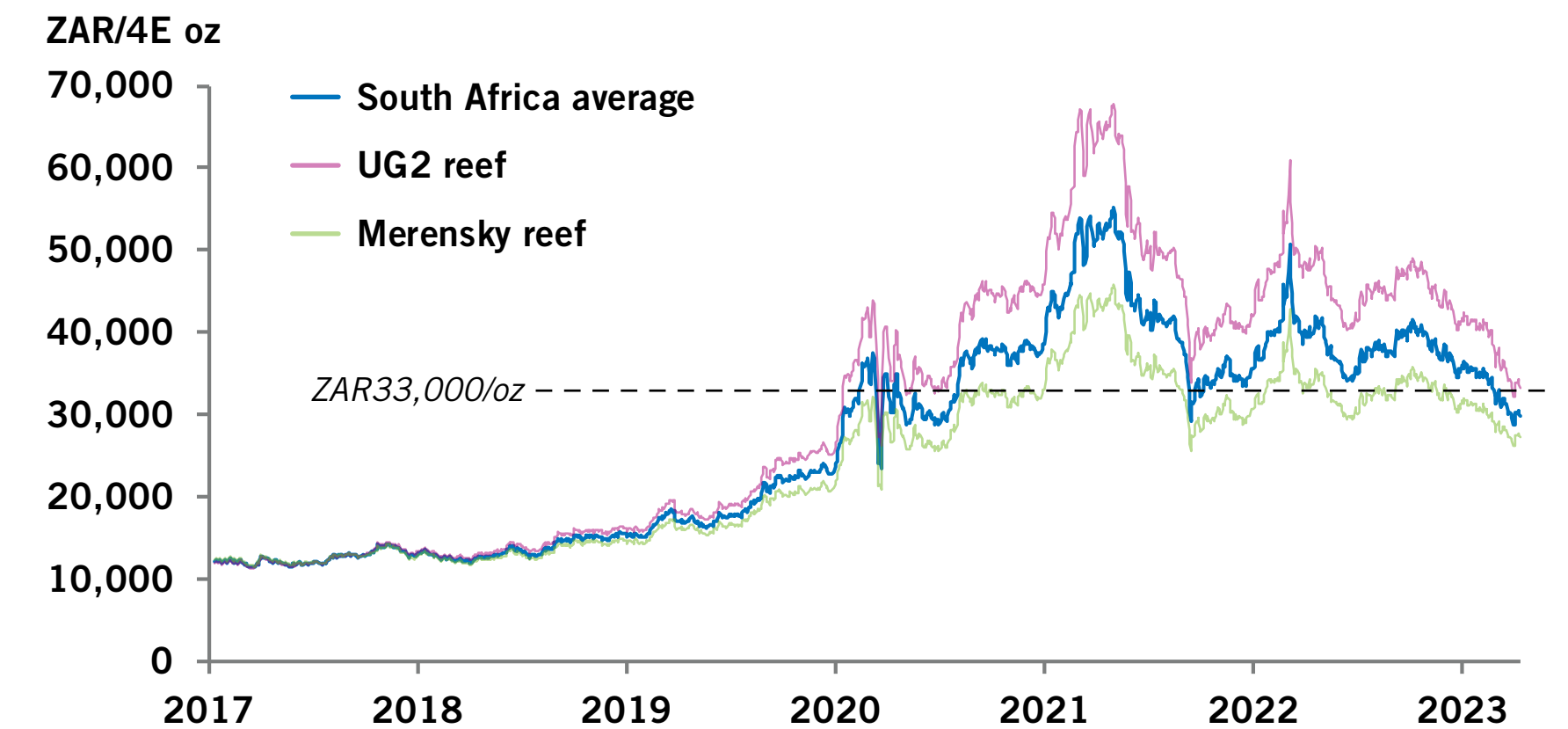
Source: SFA (Oxford), Bloomberg

## Silver price



Source: SFA (Oxford), Bloomberg

## PGM basket prices



Source: SFA (Oxford), Bloomberg. Note: 4E = platinum, palladium, rhodium, gold.



# PRECIOUS APPRAISAL

17<sup>th</sup> April 2023

- 01 MARKET SPOTLIGHT
- 02 GOLD
- 03 SILVER
- 04 PLATINUM
- 05 PALLADIUM
- 06 RHODIUM, RUTHENIUM, IRIIDIUM
- 07 TRENDS AND INVESTMENTS
- 08 **ABOUT HERAEUS**

# ABOUT HERAEUS

Learn more about important trends in the precious metals markets on a weekly basis with our Heraeus Precious Appraisal. **Please subscribe: [www.herae.us/trading-market-report](http://www.herae.us/trading-market-report).**

## Heraeus Precious Metals

### Europe, Middle East, Africa & other regions

Phone: +49 6181 35 2750  
[edelmetallhandel@heraeus.com](mailto:edelmetallhandel@heraeus.com)

### South East Asia

Phone: +852 2773 1733  
[tradinghk@heraeus.com](mailto:tradinghk@heraeus.com)

### USA

Phone: +1 212 752 2180  
[tradingny@heraeus.com](mailto:tradingny@heraeus.com)

### China

Phone: +86 21 3357 5658  
[tradingsh@heraeus.com](mailto:tradingsh@heraeus.com)



The Heraeus Group is a broadly diversified and globally leading family-owned technology company, headquartered in Hanau, Germany. The company's roots go back to a family pharmacy started in 1660. Today, the Heraeus group includes businesses in the environmental, electronics, health and industrial applications sectors. Customers benefit from innovative technologies and solutions based on broad materials expertise and technological leadership.

Heraeus Precious Metals is globally leading in the precious metals industry. The company is part of the Heraeus Group and covers the value chain from trading to precious metals products to recycling. It has extensive expertise in all platinum group metals as well as gold and silver.

The Heraeus Precious Appraisal is produced in collaboration with:

### SFA (Oxford) Ltd

United Kingdom  
Phone: +44 1865 784366  
[www.sfa-oxford.com](http://www.sfa-oxford.com)  
The Oxford Science Park,  
Oxford, United Kingdom, OX4 4GA



consulting analysts in tomorrow's commodities and technologies

## 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.