

PRECIOUS APPRAISAL



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PRECIOUS METALS REVIEW

Gold



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	1,919	-0.10%	1,933	26/06/2023	1,893	29/06/2023
€/oz	1,758	-0.40%	1,775	26/06/2023	1,740	28/06/2023

Hawkish Fed could keep pressure on the gold price for longer. Federal Reserve Chair Jerome Powell reiterated his hawkish outlook for the July meeting of the monetary policy committee. He highlighted that policy may not be restrictive enough, nor has it been tight enough for long enough yet. This, and a batch of encouraging data for the US economy in the past fortnight, has raised expectations among market participants for more interest rate hikes. Interest rate traders now see the first cut to interest rates coming in May 2024, with a peak in late 2023, which could be a headwind for gold over the next 10 months as the dollar is likely to remain strong, and attractiveness of non-yielding assets falls. The risk is, of course, that extra-tight monetary policy tips the US economy into a recession, an outcome pointed to by numerous leading indicators. The economic uncertainty that comes with a recession could provide a catalyst for gold if it does arrive.

A dip in the gold price could be a tempting moment for consumers in India. The Indian gold price has slipped by 6.4% to ₹5,016/g since the beginning of May. In the typically price-sensitive market, this could be seen as a buying opportunity for consumers looking for a bargain. The local discount for gold has been narrowing this year, implying demand is gradually picking up in the second-largest gold-consuming nation after a relatively weak first quarter. Q1'23 demand in India was 113 tonnes, down 17% year-on-year (source: World Gold Council).

Gold is struggling to maintain strength, as market uncertainty from the collapses in some US regional banks that occurred in May has dissipated. The gold price is down 7.8% from its peak during that time and closed last week's trading at \$1,919/oz after successfully defending \$1,900/oz – a technical support level.

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Silver



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	22.74	1.79%	23.10	27/06/2023	22.28	29/06/2023
€/oz	20.83	1.48%	21.48	27/06/2023	20.41	27/06/2023

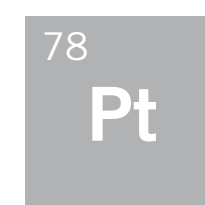
The future of solar silver demand looks bright in Europe. European solar start-ups have raised \$6 billion year-to-date, which is five-times the amount of funds raised by companies in the same period last year and is outperforming global company average financing totals. European installed photovoltaic (PV) capacity grew by 20% last year to 237 GW (source: IRENA). Although China accounts for ~80% of solar panel output, the EU is targeting domestic manufacturing of 30 GW by 2025. This would have made up ~75% of last year's new installations. As regional production grows, demand for silver paste in Europe should also rise. In 2022, global demand for silver paste in PV cells hit a record of 140 moz (source: The Silver Institute). This is expected to increase again in 2023 as silver demand from rapid expansions in renewable power generation outpaces levels of thriftiness.

The silver price was fairly stable last week, finishing slightly higher week-on-week at \$22.74/oz.

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Platinum



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	909	-1.56%	940	26/06/2023	890	30/06/2023
€/oz	832	-1.90%	861	26/06/2023	820	30/06/2023

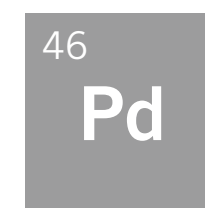
China’s platinum jewellery sector struggles to bounce back. Platinum jewellery fabrication in China slumped by 22% in Q1 (source: Platinum Guild International (PGI)). This marks the eighth consecutive quarter of year-on-year decline for the platinum jewellery industry, though a pick-up in fabrication was noted in March. Trading volumes on the Shanghai Gold Exchange (a proxy for domestic demand) are more than 50% lower year-to-date than in 2022 despite lockdowns hampering trading last year, indicating that weakness in fabrication may have continued into May (latest available data). Average daily trading volumes were 56 kg/day in the year to May, versus 124 kg/day in 2022. China’s platinum jewellery demand is forecast to show overall growth this year following a significant decline in 2022, though demand will remain significantly below pre-pandemic levels at 650 koz. A preference for gold jewellery in Q1’23 acted as a headwind for platinum consumption. PGI reports double-digit growth in gold jewellery demand in the first quarter. If the platinum price continues to slide, and the Pt: Au ratio stays above 2.0, it is possible that platinum jewellery demand could pick up as the discount between the two metals becomes attractive to consumers.

The competition is charged for haul truck powertrains. BHP, the world’s largest mining company by market cap, is favouring battery electric conversion for its haul truck fleet over hydrogen fuel cell powertrains. Anglo American Platinum (AAP) has introduced the fuel cell mine haul truck at Mogalakwena platinum mine in South Africa to reduce emissions. AAP’s truck features a fuel cell system with the power of 8-10 average fuel cell passenger cars. BHP’s analysis shows that fuel cell trucks yield about the same efficiency as diesel, whereas battery packs outperform. Fuel cells have their advantages in mining applications: shorter refuelling breaks than batteries, no battery degradation etc. However, the technology is less mature, and companies looking to decarbonise faster may look to BEVs as an alternative to diesel in the short to medium term. The market for off-road applications is relatively large, and in 2023 is forecast to require ~170 koz of platinum globally. The population of surface mining trucks is estimated to be nearly 60,000 units.

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Palladium



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	1,231	-4.44%	1,350	26/06/2023	1,213	28/06/2023
€/oz	1,127	-4.72%	1,233	26/06/2023	1,110	28/06/2023

Palladium price decline puts profits and production at risk for palladium-rich mines in North America. Last week, palladium had an intraweek low of \$1,213/oz on Wednesday. If the price continues to slide, palladium-rich mines in North America may be at risk of closure. The average North American PGM basket price in Q2'21 was \$2,831/4Eoz. In Q2'23 it was \$1,457/4Eoz. Over that period, the US Producer Price Index has averaged 10.8%, resulting in significantly higher cash costs for mining operations. All-in sustaining cost at Stillwater mine in Montana was \$1,861/2Eoz following two adverse events (major river flooding and shaft damage) that added to overall costs. The mine produced 325 koz of palladium in 2022, and 77 koz of palladium in Q1'23, accounting for ~5% of global palladium production. Impala Canada's Lac des Iles mine produced ~210 koz of palladium in 2022, and is also experiencing significant cost inflation and difficulty finding experienced labour. From 1998 to 2018, the average palladium price was \$491/oz. Impala Canada's mine was closed for nearly two years from Q4'08 as the palladium price sunk as low as \$169.50/oz. The palladium price is not yet low enough to force a reaction, but if it slides significantly lower, that could induce cost-cutting at mines and ultimately partial or even full closure.

The palladium price finished last week at \$1,231/oz, the lowest price since the beginning of 2019.

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PRECIOUS METALS REVIEW Rhodium, Ruthenium, Iridium



	RHODIUM	RUTHENIUM	IRIDIUM
Reporting Week	\$4,850/oz	\$495/oz	\$5,050/oz
Previous Week	\$6,350/oz	\$495/oz	\$5,150/oz

The Paris Olympics is a golden opportunity for green hydrogen. The 2024 Paris Olympic Games will employ several hundred hydrogen fuel cell vehicles to enable ‘low carbon’ transport during the games. The fuel cells in the vehicles will contain ruthenium-platinum catalysts, and the hydrogen to power them will use hydrogen (in-part) produced from water electrolysis. A high-profile demonstration such as the Olympic Games is an opportunity to test a large-scale fleet of fuel cell vehicles. The use of these vehicles with green hydrogen fuel supports demand for iridium via proton exchange membrane electrolyzers. Iridium and ruthenium demand in the hydrogen economy is currently relatively small, although it is beginning to accumulate. The rate of project announcements has grown since the introduction of the US Inflation Reduction Act and the REPowerEU initiative last year, both of which will provide subsidies for green hydrogen production.

At the end of last week, the rhodium price dipped below iridium for the first time since August 2017. Rhodium has been PGM miners’ cash cow for the last few years, and lower prices will add pressure to miners’ balance sheets, particularly in South Africa where it makes up the largest portion of the PGM basket.

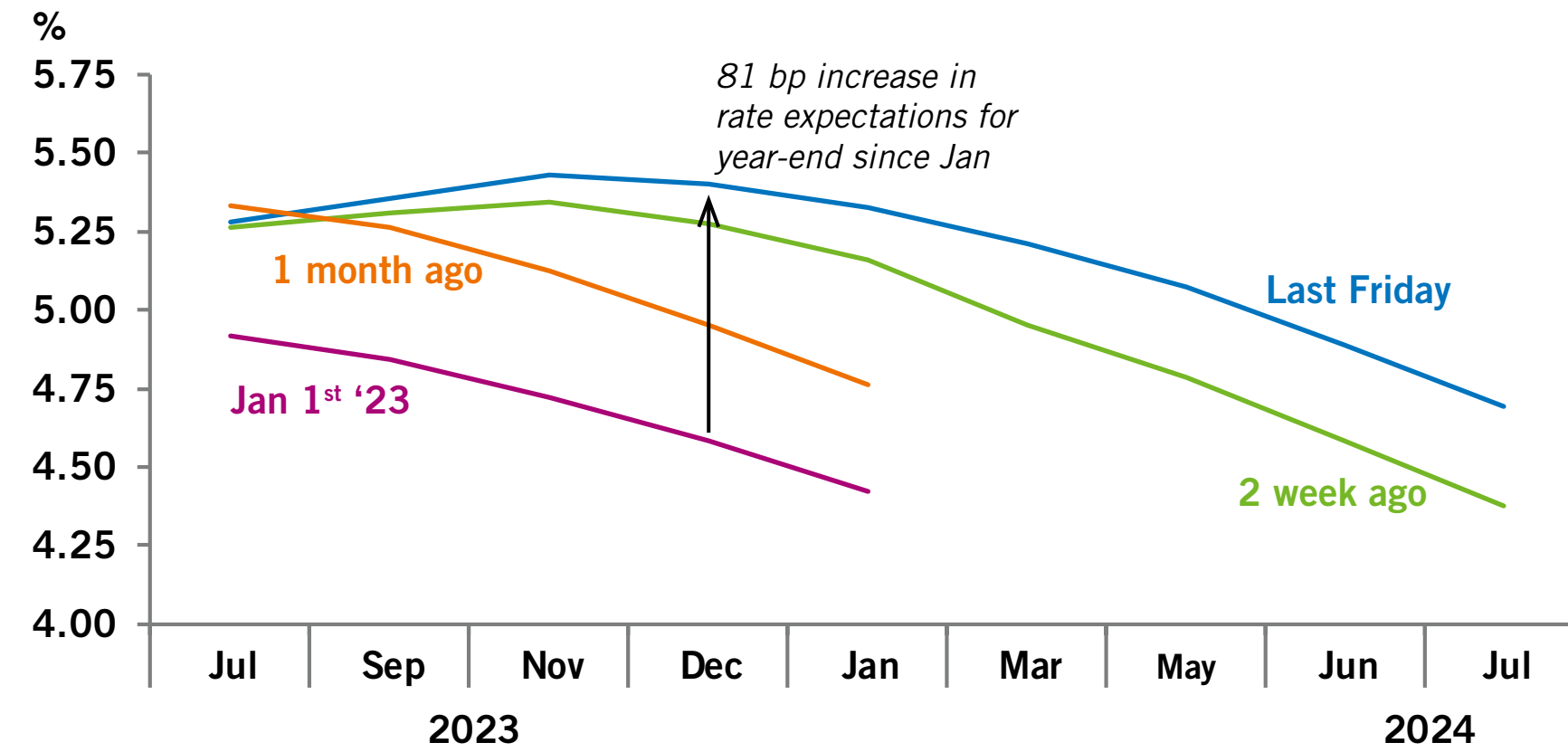
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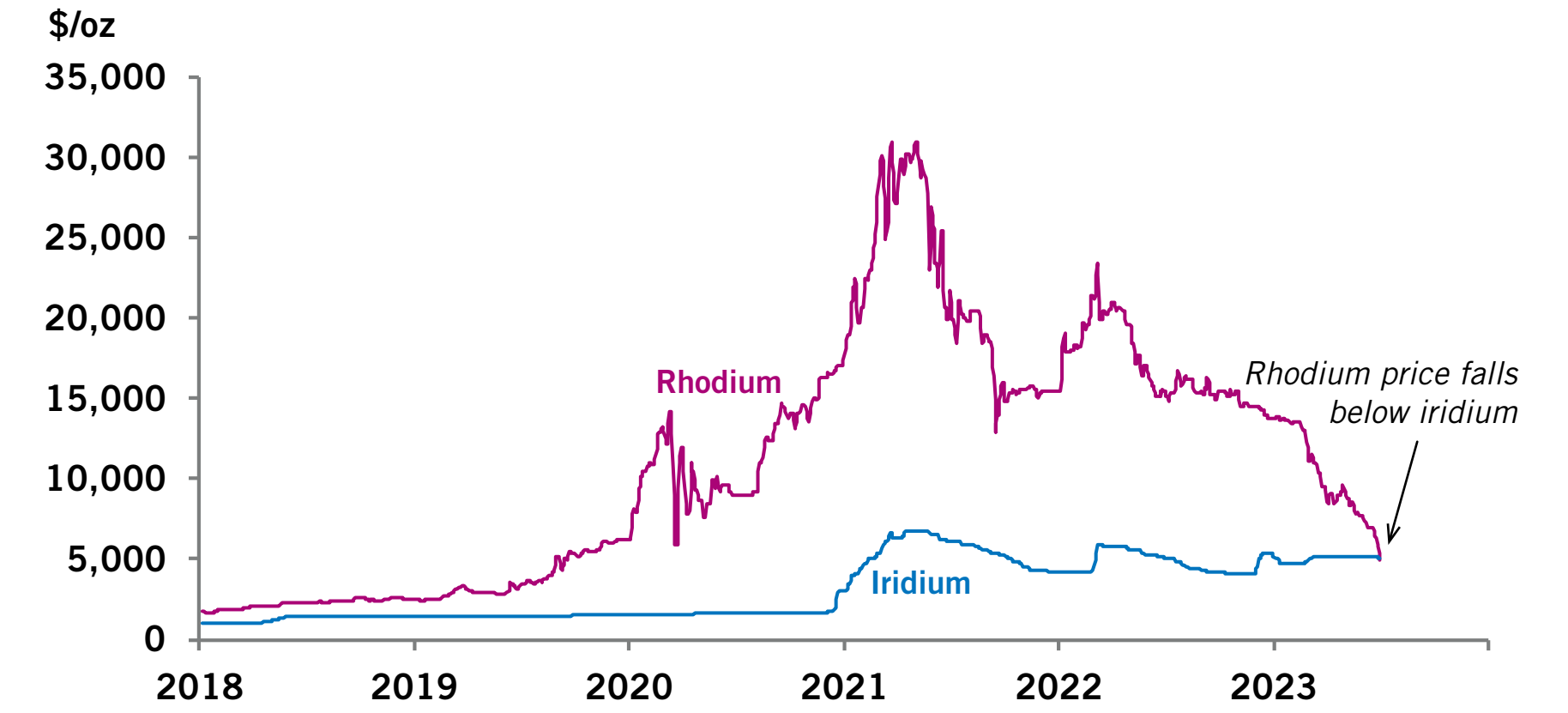
TRENDS AND INVESTMENTS

Market implied US interest rates



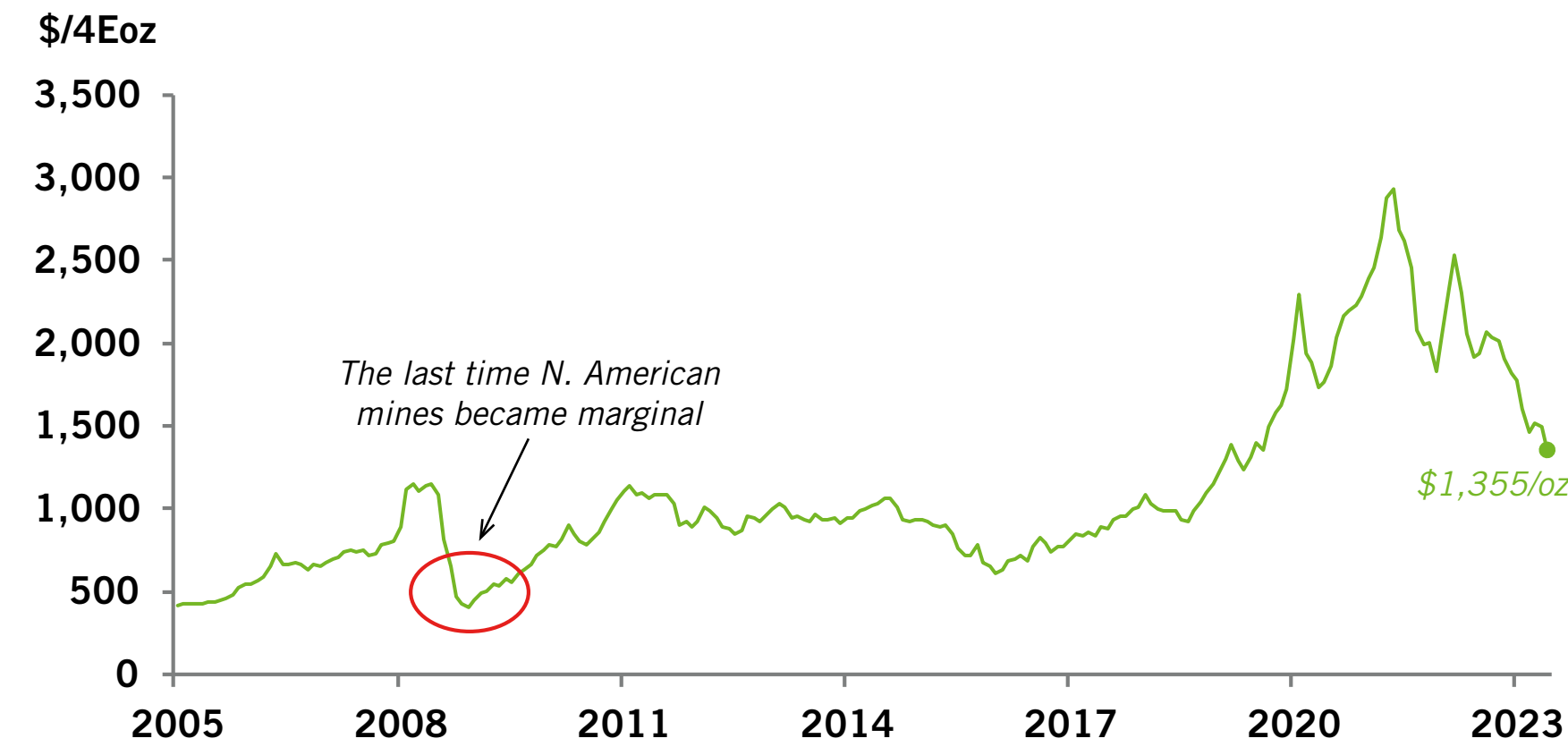
Source: SFA (Oxford), Bloomberg

Rhodium price vs. Iridium price



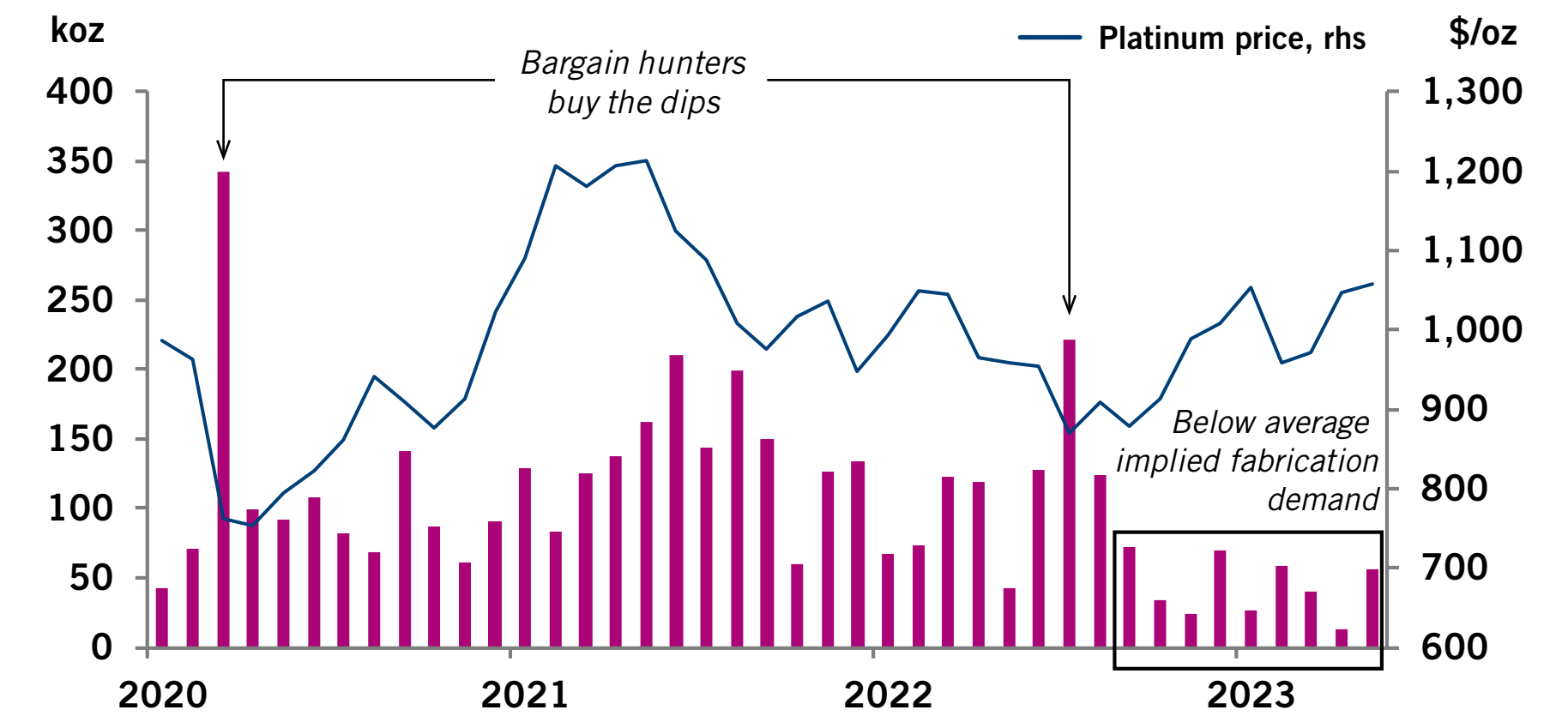
Source: SFA (Oxford), Heraeus

North American PGM basket price



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

SGE trading volumes



Source: SFA (Oxford), Shanghai Gold Exchange, Bloomberg

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