

PRECIOUS APPRAISAL

No. 40

4th November 2024

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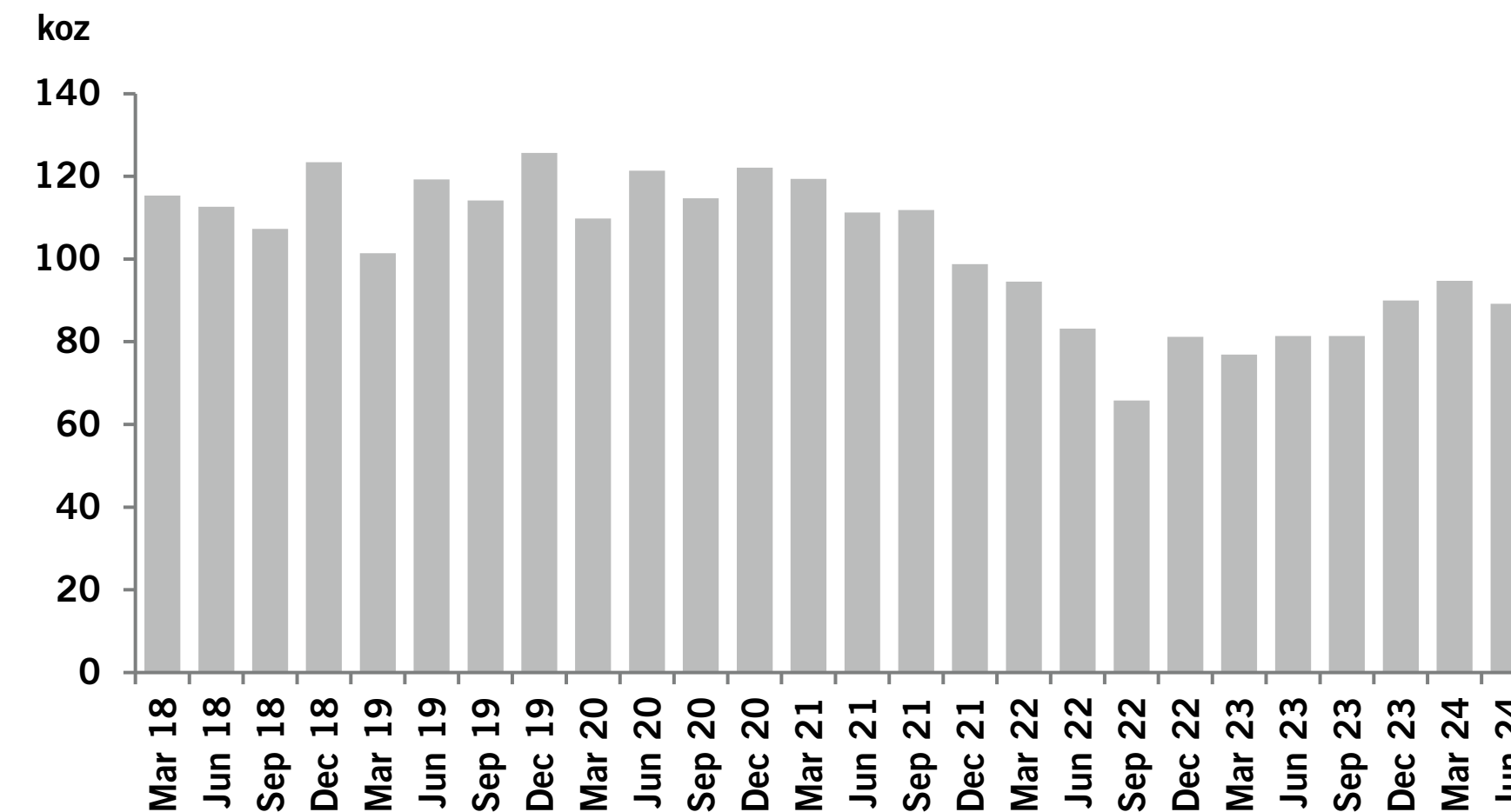
MARKET SPOTLIGHT

Palladium: too important to be sanctioned?

Sanctions on Russian palladium would be very disruptive to US and European businesses and that is most likely the reason that sanctions have not already been imposed. The suggestion of putting sanctions on Russian palladium was apparently raised at the G7 meeting. This resulted in the palladium price jumping by more than \$100/oz to over \$1,200/oz, its highest level in a year.

The US needs to import palladium. The US used 2.0 moz of palladium in 2023. The majority was for autocatalysts (88%) as gasoline light vehicles dominate demand even with BEVs gaining market share. The remainder was for various industrial applications. Mine production in 2023 was relatively modest at 330 koz, but even though the US is the largest region for autocatalyst recycling, total domestic supply falls short of demand. In fact, the situation is more complicated with the US importing and exporting significant quantities of palladium metal and material for recycling.

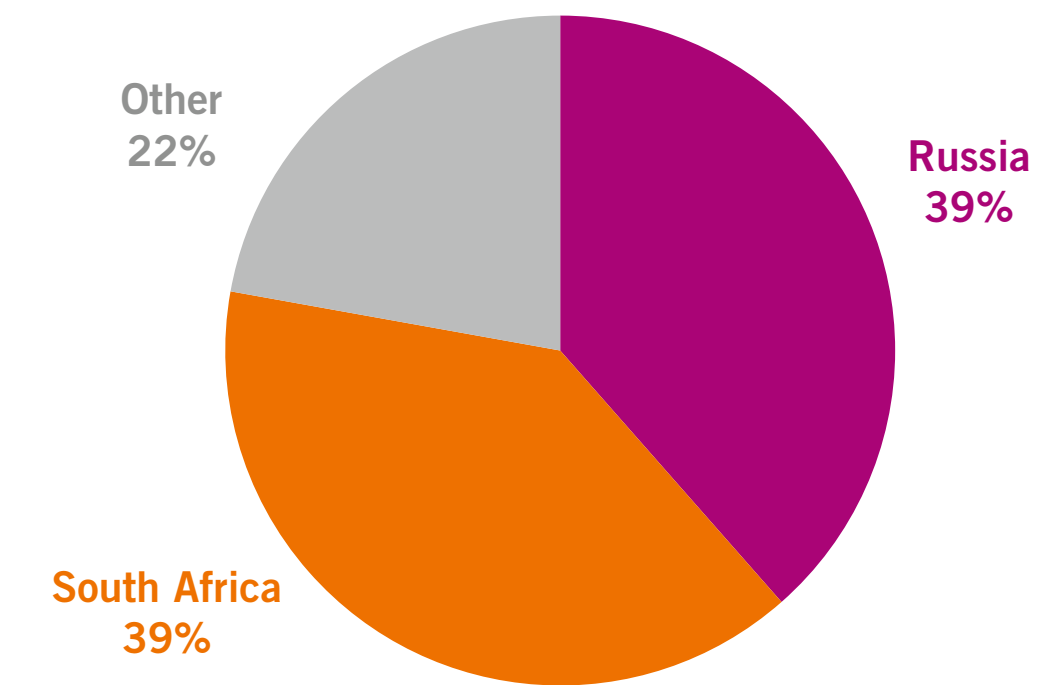
Stillwater quarterly palladium production



Source: SFA (Oxford), Sibanye-Stillwater

Europe is in a similar situation, with negligible mine production and quite large secondary supply from recycling autocatalysts and WEEE. However, supply still falls short of demand and the region needs to import palladium so automakers can meet emissions standards for combustion engine vehicles.

2023 US palladium imports



Source: SFA (Oxford), USGS

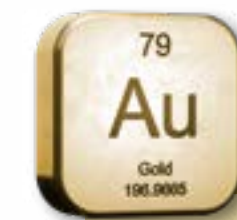
Replacing imports of Russian palladium would be extremely difficult. The US imported over 750 koz of palladium from Russia in 2023 while the EU imported more than 400 koz, and this would be impossible to replace at short notice. It is not surprising that two of the largest users of palladium import significant quantities from the largest producer. Russia’s typical output of palladium is around 2.7 moz each year. South Africa is the second-largest producer of palladium but most of its output is sold on contract, making it unavailable. Typically, around 30% or 700 koz of South African supply is already exported to the US, with a further ~200 koz going to Germany. The US and Europe are also the two largest regions for recycled palladium, so sourcing more secondary supply would also be problematic.

The palladium price typically performs well in the final months of the year, but last week’s price spike could already have set the upper limit.

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PRECIOUS METALS REVIEW

Gold



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	2,743	0.23%	2,790	31/10/2024	2,728	28/10/2024
€/oz	2,528	-0.15%	2,578	30/10/2024	2,516	31/10/2024

Investor buying of gold ETFs lifted gold demand in Q3'24. Total gold demand was 1,176 t in Q3'24, up sharply from Q2'24, but down slightly from Q3'23 (source: World Gold Council). Investment demand was particularly strong. Bar and coin demand was down 9% year-on-year but ETFs, showing the first positive quarter since Q1'22, gained 95 t. Overall investment demand was 364 t, more than double the, admittedly quite low, Q3'23 total.

Central banks added 186 t to their reserves, significantly lower than in Q3'23. After three quarters the total so far this year stands at 694 t. For the year as a whole, central bank buying may not match last year's total, but it could still be the third-highest year after 2022 and 2023.

Jewellery consumption was 12% lower year-on-year at 459 t, owing to the high gold price. Indian buyers bucked the trend as a cut in import duties helped to offset the price rise. It will be interesting to see if that strength has held into October, with Diwali last week being an auspicious time to buy gold.

Gold ETFs have added a further 0.9 moz (~28 t) in October, taking the total holdings to 84.1 moz.

The gold price hit another new high last week, before falling back. Speculative futures positioning has edged up to 29.6 moz net long. Although that is not quite as high as it was in mid-September, it is still very elevated by historical standards. Gold was also overbought and the price and RSI are showing divergence so a pullback and period of consolidation would be normal.

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Silver



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	32.59	-3.60%	34.55	29/10/2024	32.49	01/11/2024
€/oz	30.02	-3.99%	32.44	29/10/2024	29.60	01/11/2024

Peruvian silver production may rise this year as Buenaventura's silver output jumps. Buenaventura has significantly increased its silver production to 11.5 moz in the first three quarters of the year. Overall, the company is expected to produce 14.5-16.0 moz this year. The company has restarted two existing mines and is ramping up a new mine, Yumpag, which is expected to deliver 7.5-8.0 moz of silver this year. However, having already produced 6.0 moz in the first three quarters, Yumpag could exceed guidance and hit 8.5 moz this year. Peru was the third-largest silver producer in 2023 with output of 107.1 moz (source: The Silver Institute).

Silver has outperformed gold so far this year, but with the sell-off last week that gap narrowed and the gold:silver ratio increased to 84. The silver price has fallen back to a support zone from \$32.50 to \$32.00/oz.

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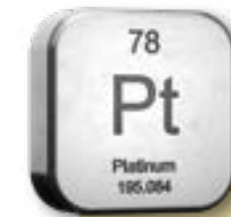
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Platinum



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	996	-2.94%	1,056	30/10/2024	987	31/10/2024
€/oz	918	-3.28%	976	29/10/2024	909	01/11/2024

Impala's Q3'24 results keep the company on track to hit production guidance. The first quarter of Impala Platinum's financial year (Q3'24) saw the company produce 382 koz of platinum, down 9% year-on-year owing to lower output across its own operations. For Impala's joint ventures, output at Two Rivers was flat while yield at Mimosa was 8% higher. Overall 6E production was down 5% quarter-on-quarter at 947 koz, but that is more than necessary to hit guidance. The company has maintained its FY2025 guidance for refined production at 3.45-3.65 moz 6E (~1.4-1.5 moz Pt).

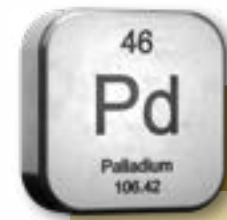
Nornickel has modestly increased its guidance for platinum production to 639-664 koz in 2024, from 567-605 koz, because the company finished a smelter rebuild more quickly than initially planned. Taking that into consideration, global platinum output is still expected to slip by around 3% to 5.4 moz this year.

The platinum price followed the palladium price lower last week, having hit its highest level since May.

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PRECIOUS METALS REVIEW

Palladium



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	1,108	-7.46%	1,248	29/10/2024	1,103	01/11/2024
€/oz	1,020	-7.89%	1,158	29/10/2024	1,015	01/11/2024

Stronger Russian palladium output now predicted for 2024. Nornickel has lifted its palladium production guidance to 2,624-2,728 koz from 2,296-2,451 koz after rebuilding a smelter earlier this year took less time than allocated. In the first three quarters of the year, palladium output was 2,156 koz. Global palladium output was estimated to slip by 3% this year, but if the upper end of Nornickel’s guidance is achieved then the total would be only marginally less than 2023’s 6.5 moz.

As a result of the rebuild the total smelting capacity has been increased by 25%, giving the potential for incremental output growth. Production guidance for 2025 has not been released. However, longer-term plans could be outlined at the company’s investor day which is expected to be held later this year after a two-year hiatus.

New ruling gives Stillwater some relief, but palladium output is still set to be reduced. The US Treasury Department has said that extraction and processing costs would be eligible for a tax credit under the final Section 45X rules. The 45X tax credit was created under the Inflation Reduction Act and offers a 10% production credit for US-based critical mineral production. This would make Sibanye-Stillwater’s US operations, which include both mining and smelting, eligible for the 10% credit. This will help with production costs but the new lower production plan is still necessary to bring down costs further. Stillwater’s palladium output next year is now expected to be a little under 200 koz, down from an estimated 340 koz this year.

The palladium price reached \$1,248/oz before running out of momentum. The price was boosted by the suggestion that Russian palladium exports could be hit by sanctions. However, this seems unlikely and the price has given back most of its gains and could retreat further.

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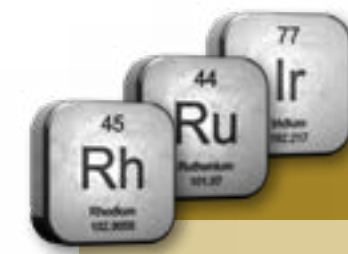
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Rhodium, Ruthenium, Iridium



	RHODIUM	RUTHENIUM	IRIDIUM
Reporting Week	\$5,175/oz	\$525/oz	\$5,100/oz
Previous Edition	\$5,225/oz	\$525/oz	\$5,100/oz

Western Digital's Q3'24 results confirm an upswing in hard disk drive sales. Western Digital, one of the leading global HDD manufacturers, has reported 14% growth quarter-on-quarter in HDD shipments. The growth has come almost entirely from cloud storage where sales were up 23% to 9.0 exabytes, from 7.3 exabytes in the previous quarter. The current technology uses 11 disks in each drive which contain ruthenium and platinum. The shift to alternative heat-assisted technology, which does not use ruthenium, is taking much longer as increasing the storage capacity based on the existing technology has been possible. Ruthenium electrical demand, which includes HDDs, is one of the two largest end-uses, equivalent to about 28% of total demand.

Last week, the rhodium price slipped by \$50/oz but the iridium and ruthenium prices remained stable.

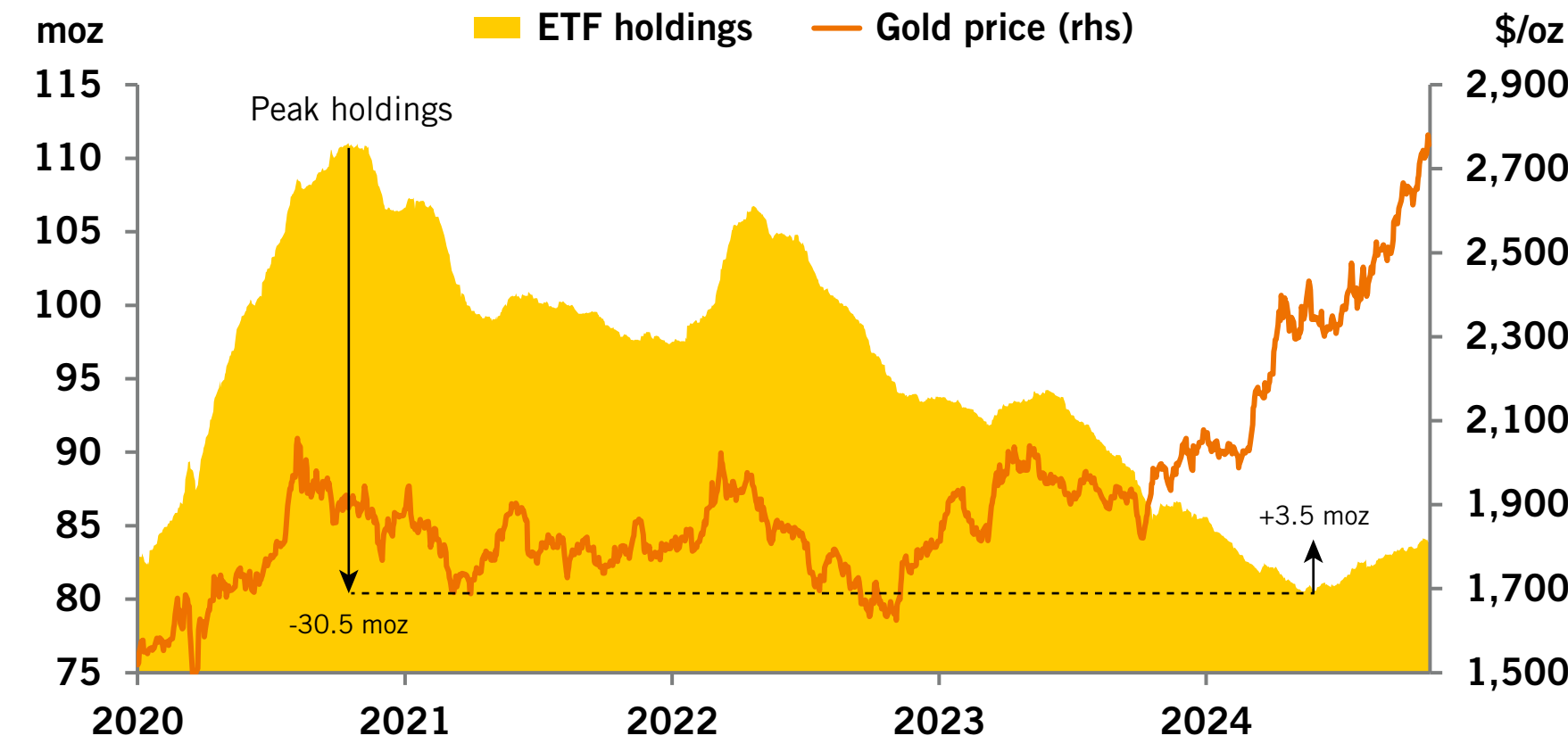
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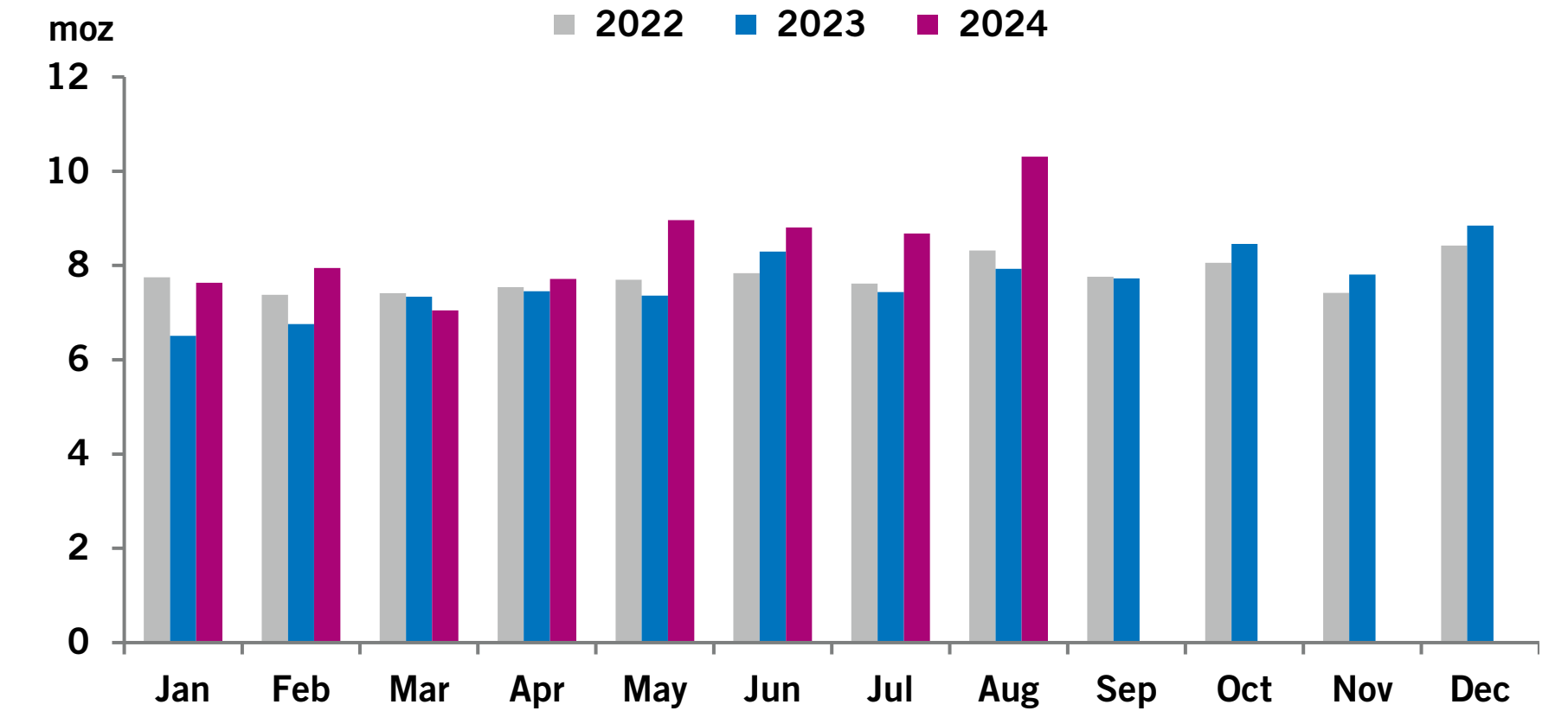
TRENDS AND INVESTMENTS

Gold ETF holdings



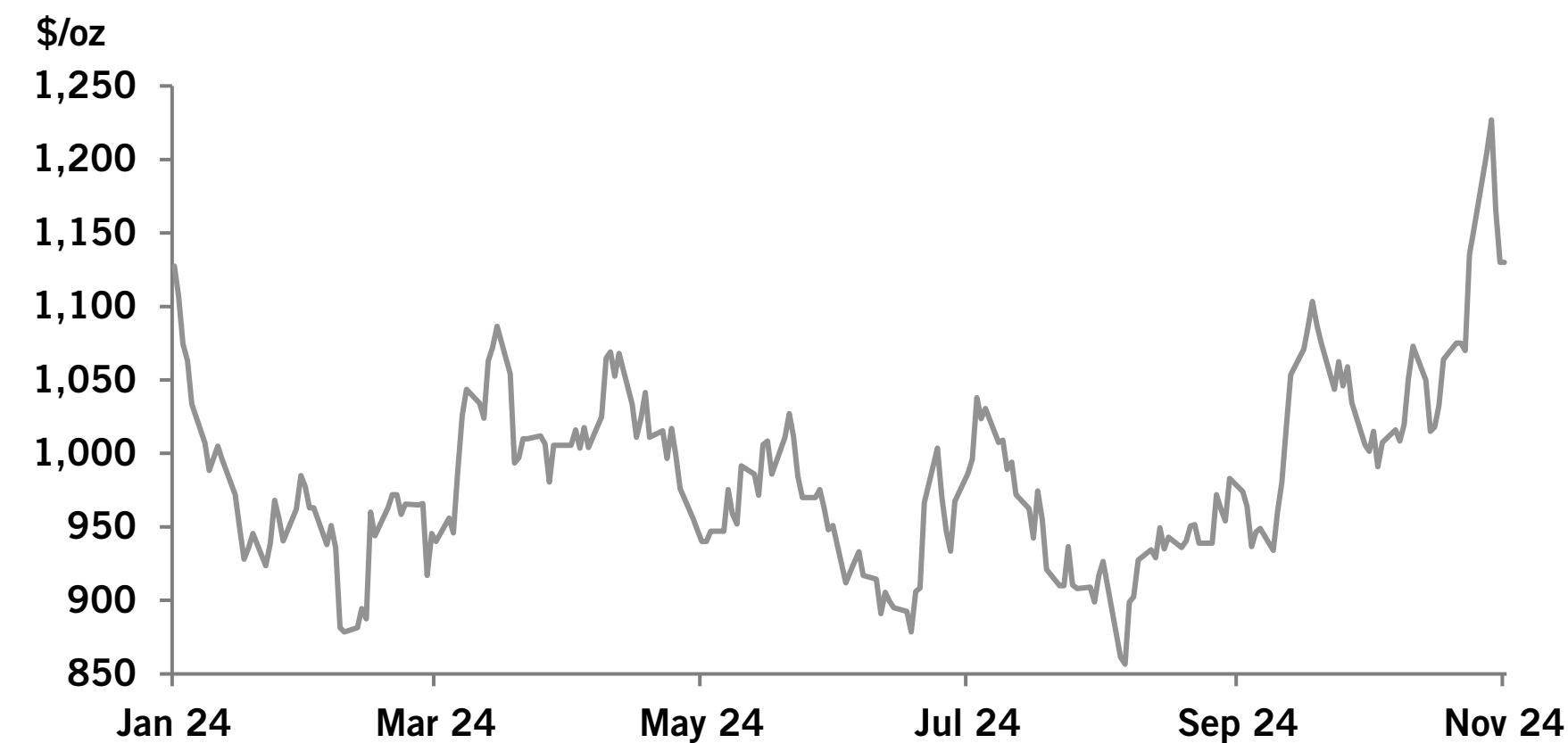
Source: SFA (Oxford), Bloomberg

Peru monthly silver production



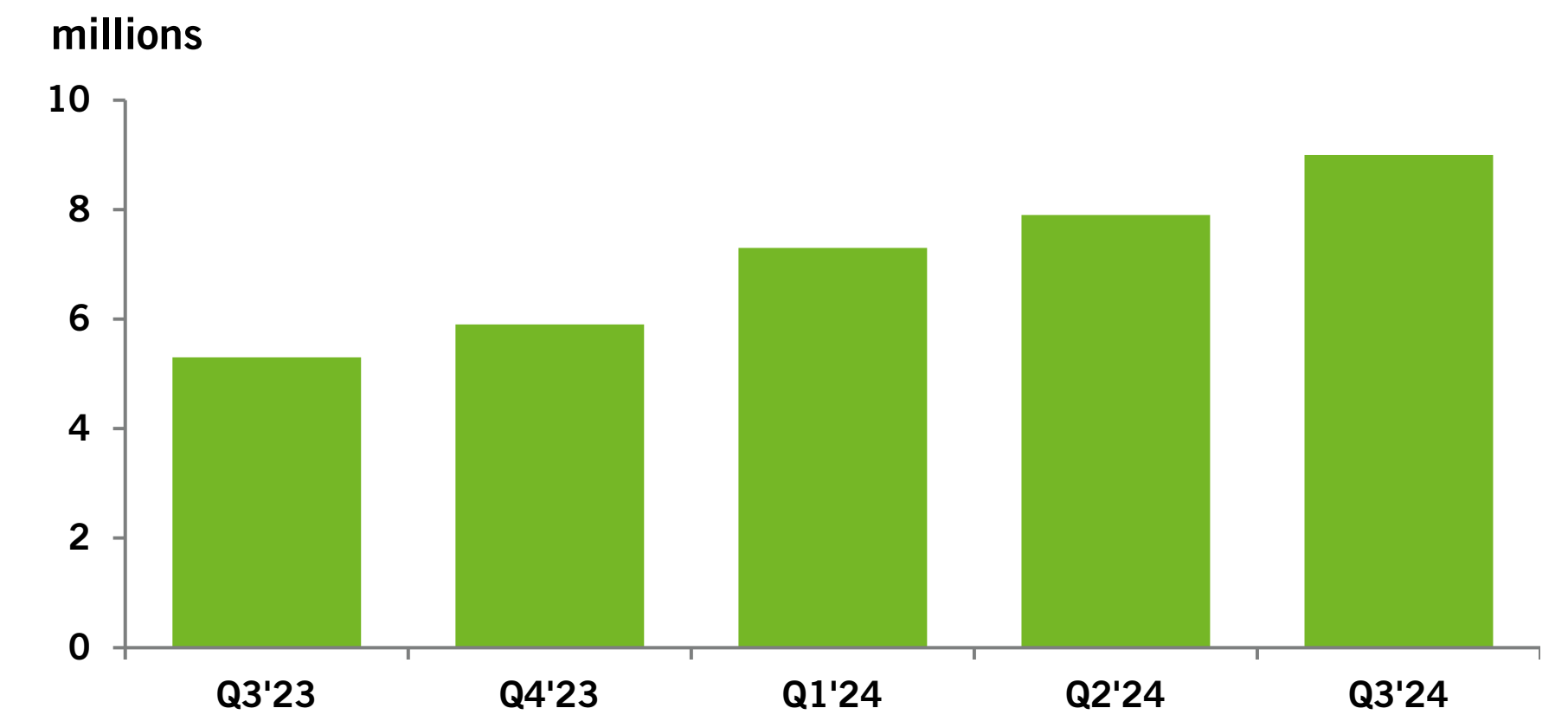
Source: SFA (Oxford), Central Bank of Peru

Palladium price



Source: SFA (Oxford), Bloomberg

Western Digital cloud unit sales



Source: SFA (Oxford), Western Digital

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