

# PRECIOUS APPRAISAL





# MARKET SPOTLIGHT

## Where does the palladium market go from here?

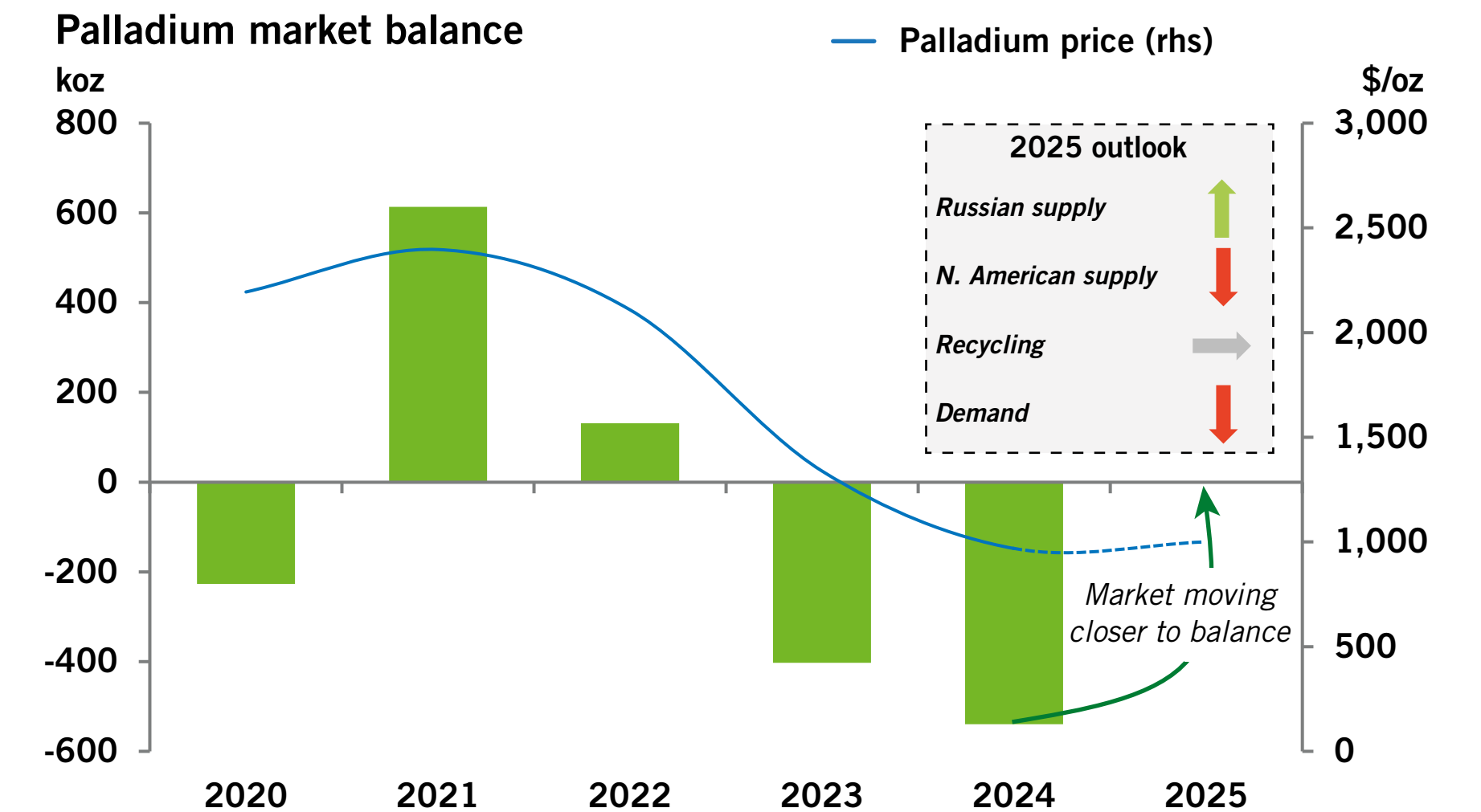
**North American palladium supply is on the decline.** The announcement that the Stillwater mine in Montana will almost halve palladium production year-on-year in 2025 to ~170 koz adds to the expected contraction in output from Impala Canada. The net impact is that North American palladium supply will fall by 25% in 2025, relative to 2023 levels. The decline in output at Stillwater is the largest reduction of PGM production in the current downcycle, but supply cuts in one region are only one part of the picture.

**Secondary supply should stay relatively low after a difficult 24 months.** Secondary supply of palladium dropped significantly in 2023, and the impact of the falling palladium price is still being felt in the autocatalyst recycling market this year as expected volumes are only marginally higher. Moving into 2025, a moderate recovery is possible, though total secondary supply is still expected to be significantly lower than in 2021-2022.

**However, Russian output is expected to rise in 2025** as Nornickel’s refined output rebounds from smelter maintenance that took place this year. In fact, Nornickel’s production is forecast to rise by ~280 koz to 2.73 moz of palladium in 2025, offsetting North American losses.

**Palladium demand is expected to drop by 3% to a 15-year low of 9.1 moz in 2025.** Automotive demand is forecast to slip as combined ICE and hybrid production falls, despite an increase in overall light-vehicle production due to BEVs still gaining ground.

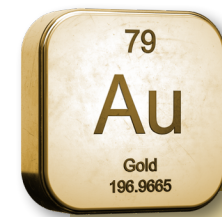
**The net effect of the Stillwater announcement is a tighter market than initially expected for 2025, but still closer to balance than in 2024.** Production curtailments in North America have been a short-term catalyst for the palladium price rally. Next year, improved Russian output and a drop in demand more than offset this. As a result, the market should be much closer to balance, meaning the price could pull back while remaining volatile.



Source: SFA (Oxford), Bloomberg

# PRECIOUS METALS REVIEW

## Gold



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	2,623	1.57%	2,623	20/09/2024	2,547	18/09/2024
€/oz	2,351	0.89%	2,352	20/09/2024	2,295	18/09/2024

**Dollar the biggest loser, gold a winner from the Fed's rate cut.** The 50 bp cut to interest rates delivered by the Federal Reserve last week is more of an admission that cuts were overdue by one FOMC meeting, rather than heightened dovishness. Fed chairman Jerome Powell indicated that markets should not expect this rate of interest rate cuts going forward, something that interest rate speculators seem to be buying for now. Immediately after the cut, the dollar slumped and gold breached \$2,600/oz for the first time ever, before dropping just as fast back to \$2,550/oz. The big cut last week and the prospect of lower financing/borrowing costs going forward to Q4'24 and 2025 add to gold's support. The conflict in the Middle East heating up again also adds to the geopolitical risk premium gold can enjoy, adding another layer of support.

Overall, it seems the way higher for gold is wide open, though a period of consolidation is likely as market expectations for the rate cut path for the rest of the year are refined. Market pricing currently sees another two 25 bp cuts between now and the new year, largely matching the outlook of the FOMC dot plot. This should continue to lend strength to the gold price, as the dollar declines.

Following the post-FOMC meeting volatility, the gold price continued higher. By Friday's close, the price had made another new all-time-high of \$2,623/oz.

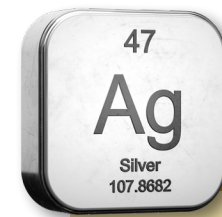
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# PRECIOUS METALS REVIEW

## Silver



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	31.27	1.22%	31.43	20/09/2024	29.71	18/09/2024
€/oz	28.02	0.54%	28.66	19/09/2024	26.76	18/09/2024

**Silver consolidated below \$31/oz last week but still outperformed gold.** The gold:silver ratio fell to 83 last week as the returns from the higher-beta metal outstripped gold, despite the latter reaching new all-time highs in the \$2,600s. Similarly for other commodities, lower interest rates are typically favourable for the silver price. In the first 24 months of the last three rate cutting cycles (2000, 2007, 2019), silver gained an average of 32%. As a semi-industrial metal, silver can directly benefit from lower borrowing costs stimulating demand. History would suggest that the silver price still has significant upside potential from here, though breaking through strong resistance in the \$31-\$32/oz area will be the first challenge. Investment demand is not offering much support at present, with ETFs having sold off 7.5 moz last week. Silver finished right at this key level at \$31.27/oz last week, maintaining the five-month trading range.



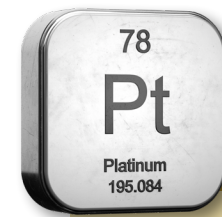
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# PRECIOUS METALS REVIEW

## Platinum



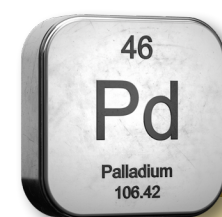
	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	978	-2.83%	1,002	16/09/2024	966	19/09/2024
€/oz	877	-3.45%	902	16/09/2024	871	18/09/2024

**A recent decline in ETF holdings suggests investors are losing faith in future price appreciation.** So far in Q3'24, platinum ETFs have fallen by 367 koz (or 9% of total holdings), having risen 437 koz in the previous quarter. As of Friday last week, total platinum ETF holdings stood at 3.09 moz, down from the recent peak of 3.45 moz in June. The current rate of outflows marks the largest liquidation of platinum ETF *ever* in ounce terms. The largest portion of the sell-off in August coincided with a 5% decline in the price during the month. Most ETF shares bought during the platinum rally earlier in the year will still be underwater at current prices, so the large amount of recent selling is potentially a worrying sign for investor sentiment. Palladium ETFs saw a similar pattern of inflows in May, but thus far in Q3'24 outflows have been less extreme, totalling just 5% of total holdings.

After a strong week previously, the platinum price failed to build on this strength and again closed below \$1,000/oz.

# PRECIOUS METALS REVIEW

## Palladium



	CLOSE	WEEKLY CHANGE	HIGH	DATE	LOW	DATE
\$/oz	1,077	0.73%	1,125	18/09/2024	1,042	19/09/2024
€/oz	965	0.02%	1,011	18/09/2024	942	19/09/2024

**EU BEV market share drops in August with emissions targets looming.**

Some of this can be explained by the seasonality in car sales seen in Europe. August has been, on average, a relatively weak month for sales after April over the last 10 years. Year-to-date, the share of BEVs in EU market sales is now 12.6% versus 13.9% in January-August last year as sales have contracted by more than 8% to 902,000 units. The number of catalysed vehicle sales (ICE + all hybrids) has risen concurrently by 3% year-on-year from January-August to 6.05 million units. This ultimately is a positive move for automotive palladium demand in the European Union, and has been driven by the hybrid section of the market expanding from 1.77 million units in the first eight months of 2023 to 2.14 million units over the same period this year.

**In 2025, the European car fleet must have emissions 15% lower than the 2021 benchmark according to the EU’s own targets,** or automakers will face fines potentially stretching into billions of euros. At the current rate of BEV adoption, this will be a challenge. Either regulations or targets must change, or automakers must further incentivise non-ICE sales. The former is reportedly under consideration by an industry lobby group led by the Renault CEO which wants the implementation of the 2025 targets pushed back by two years. Emissions targets can be met by a combination of BEV and hybrid sales. Both have a lower emissions footprint than pure-ICE cars.

With BEVs seemingly struggling, boosting the number of hybrids in the fleet could enable the targets to be met, and provide some upside for palladium demand in the next 24 months. As a rule of thumb, for every 1 million extra hybrid/pure-ICE sales, 3E PGM demand grows by ~150 koz.

**Germany has begun to reintroduce some BEV subsidies to offset the slump.** Earlier in September, the government passed a draft law adding back and improving some subsidies for company fleet BEVs that amount to ~€600 million each year over the next few years, starting this year. Germany’s BEV sales have fallen dramatically since subsidies were cut in August last year for fleets, and for individual sales in January this year. The boost to handouts and tax benefits should help to bolster German BEV sales, though we will have to wait and see how impactful the subsidies will be this time round.

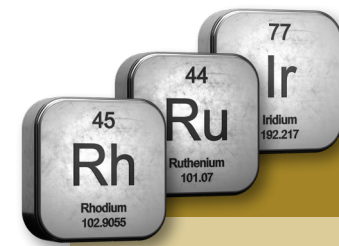
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# PRECIOUS METALS REVIEW

## Rhodium, Ruthenium, Iridium



	RHODIUM	RUTHENIUM	IRIDIUM
Reporting Week	\$5,175/oz	\$400/oz	\$5,100/oz
Previous Edition	\$5,275/oz	\$400/oz	\$5,100/oz

**Ballard – one of the world’s largest fuel cell producers – is restructuring to account for a slower hydrogen market.** The company is seeing delays to the uptake of proton-exchange membrane (PEM) fuel cell and green hydrogen technology, even in China where fuel cell vehicles have made the most headway in terms of sales volume. Globally as well, green hydrogen projects are facing delays and a lack of final investment decisions, despite the number of project announcements largely keeping up its momentum. From October 2023 to May 2024, the number of announced projects grew by 15% in terms of capital investment. However, the number of feasibility studies grew by just 2% (source: Hydrogen Council). The successful and timely development of green hydrogen projects is key for the iridium and ruthenium markets. For iridium, adoption of PEM electrolysis projects is the most important factor, and for ruthenium, the extent that fuel cell vehicles can capture market share is the primary concern. The further that widespread adoption is pushed out, the longer the iridium and ruthenium markets will have to wait to see demand rise.

The rhodium price dropped by \$100/oz last week, while iridium and ruthenium both remained stable.



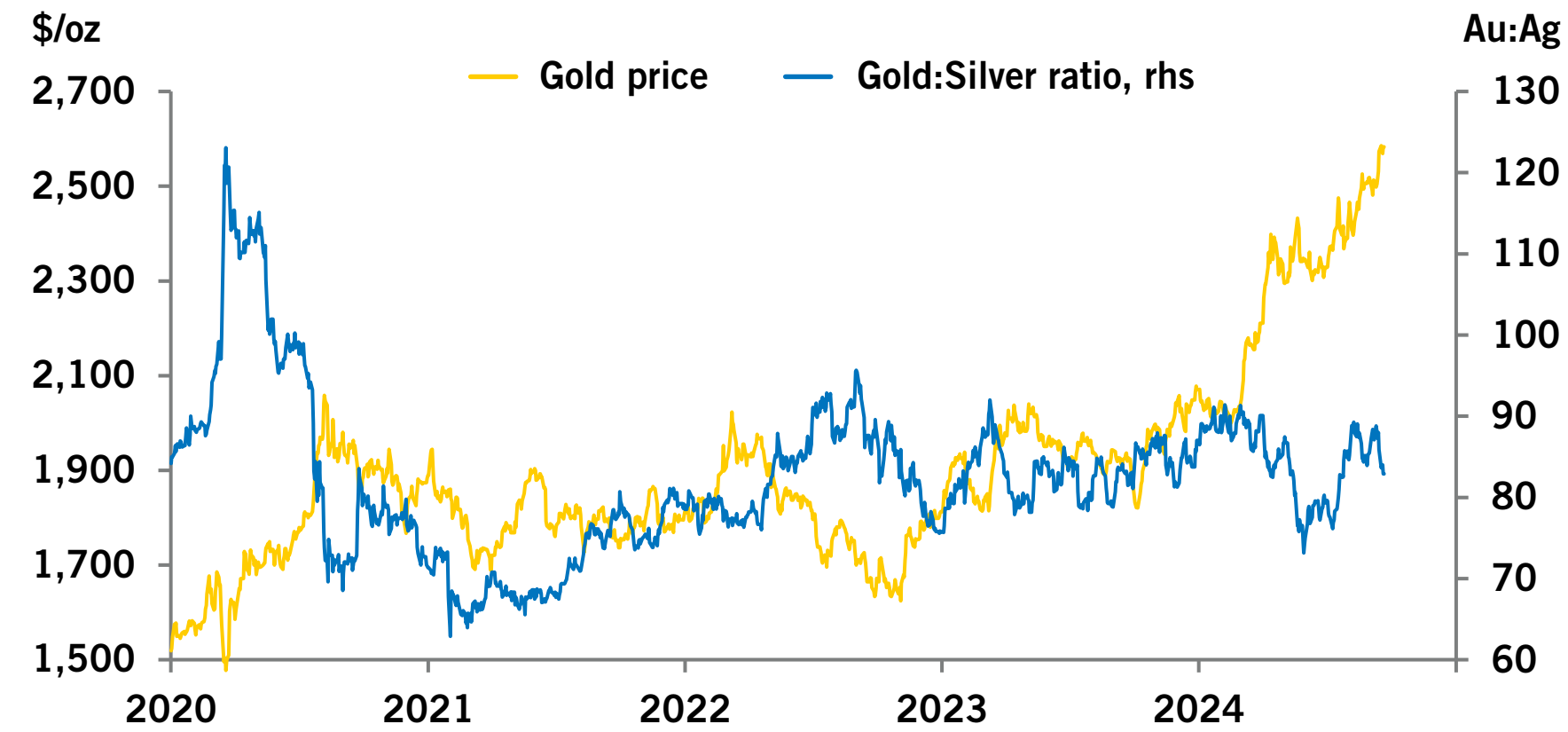
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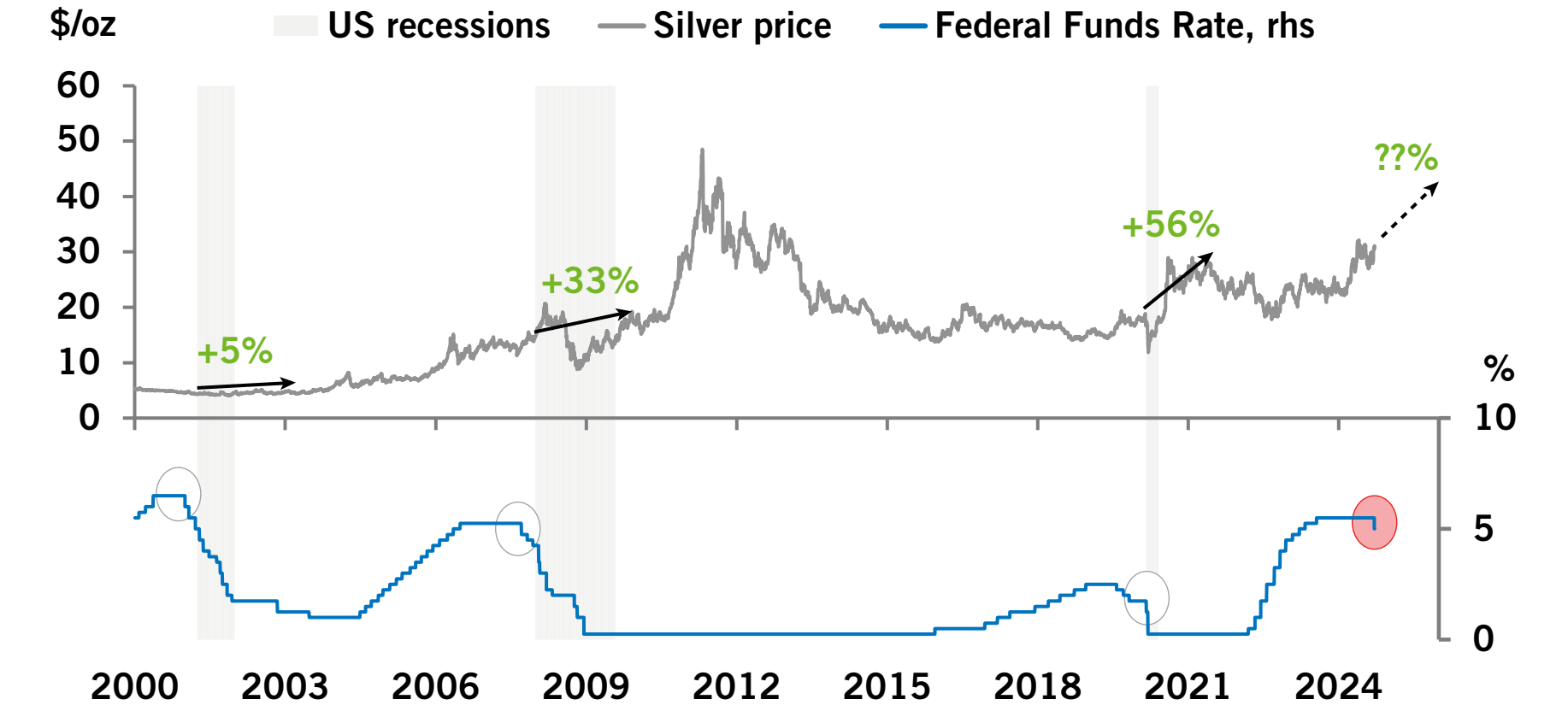
## TRENDS AND INVESTMENTS

### Gold price vs. gold:silver ratio



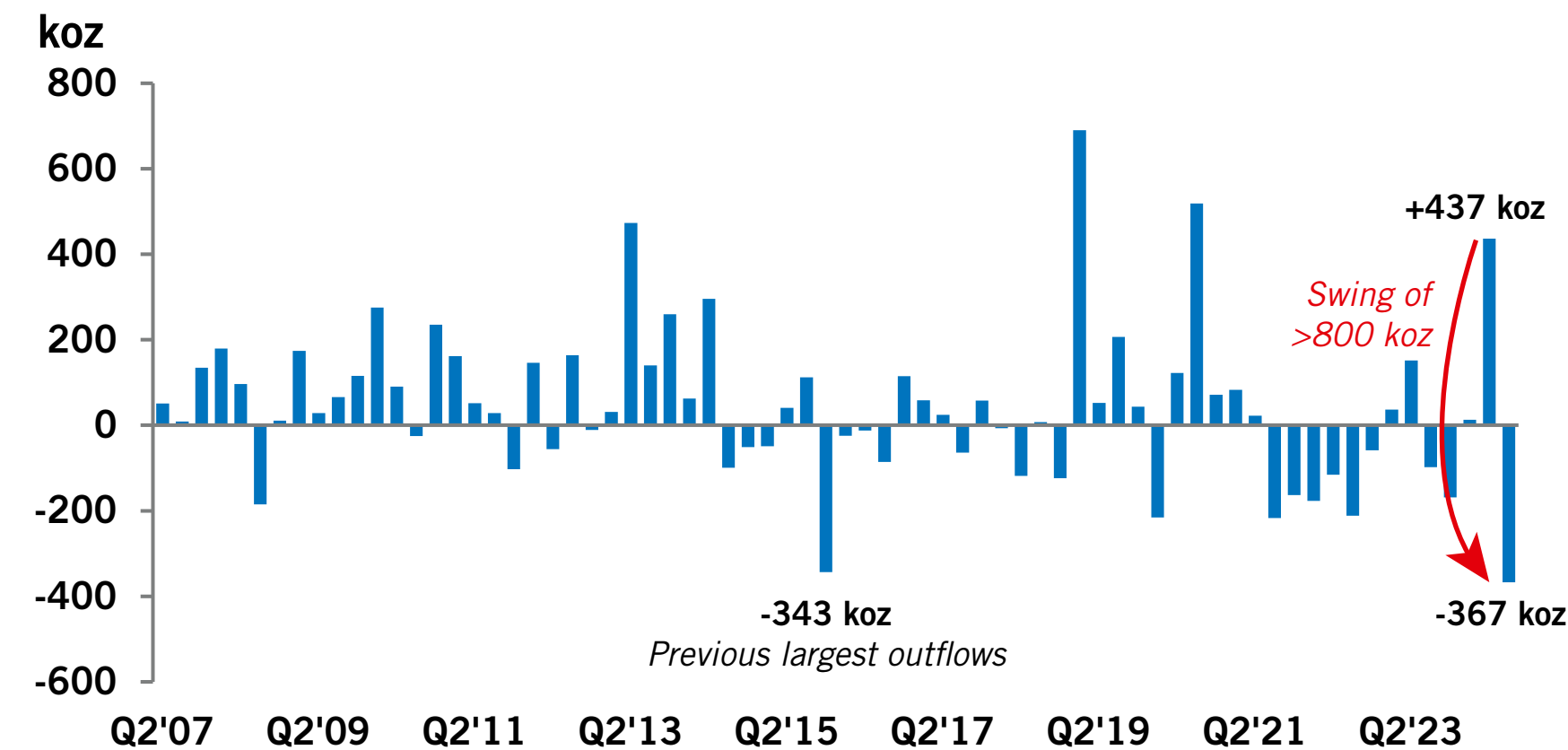
Source: SFA (Oxford), Bloomberg

### Silver price vs. Federal Funds Rate



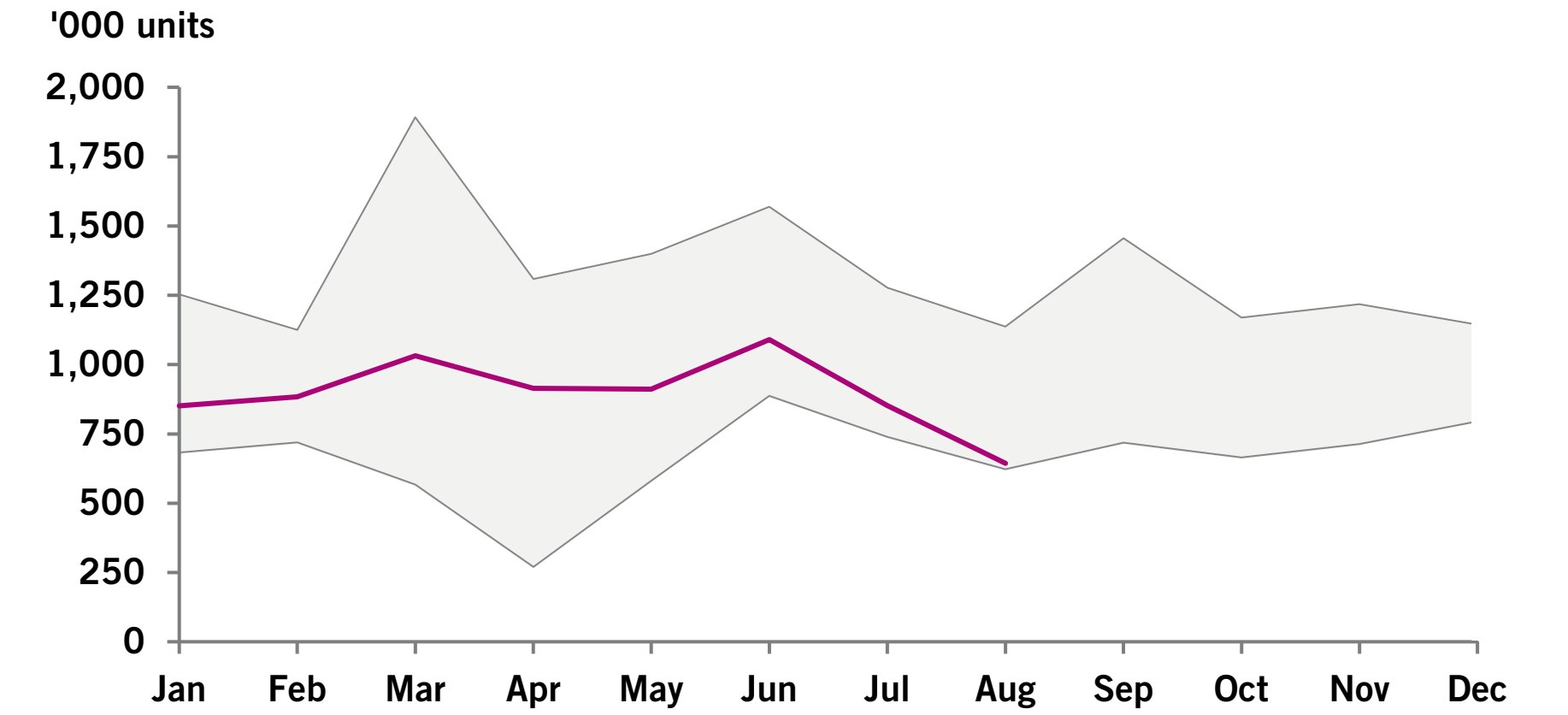
Source: SFA (Oxford), Bloomberg, Incrementum AG

### Quarterly change in Pt ETF holdings



Source: SFA (Oxford), Bloomberg

### 2024 EU27 passenger car sales vs. 10yr range



Source: SFA (Oxford), ACEA



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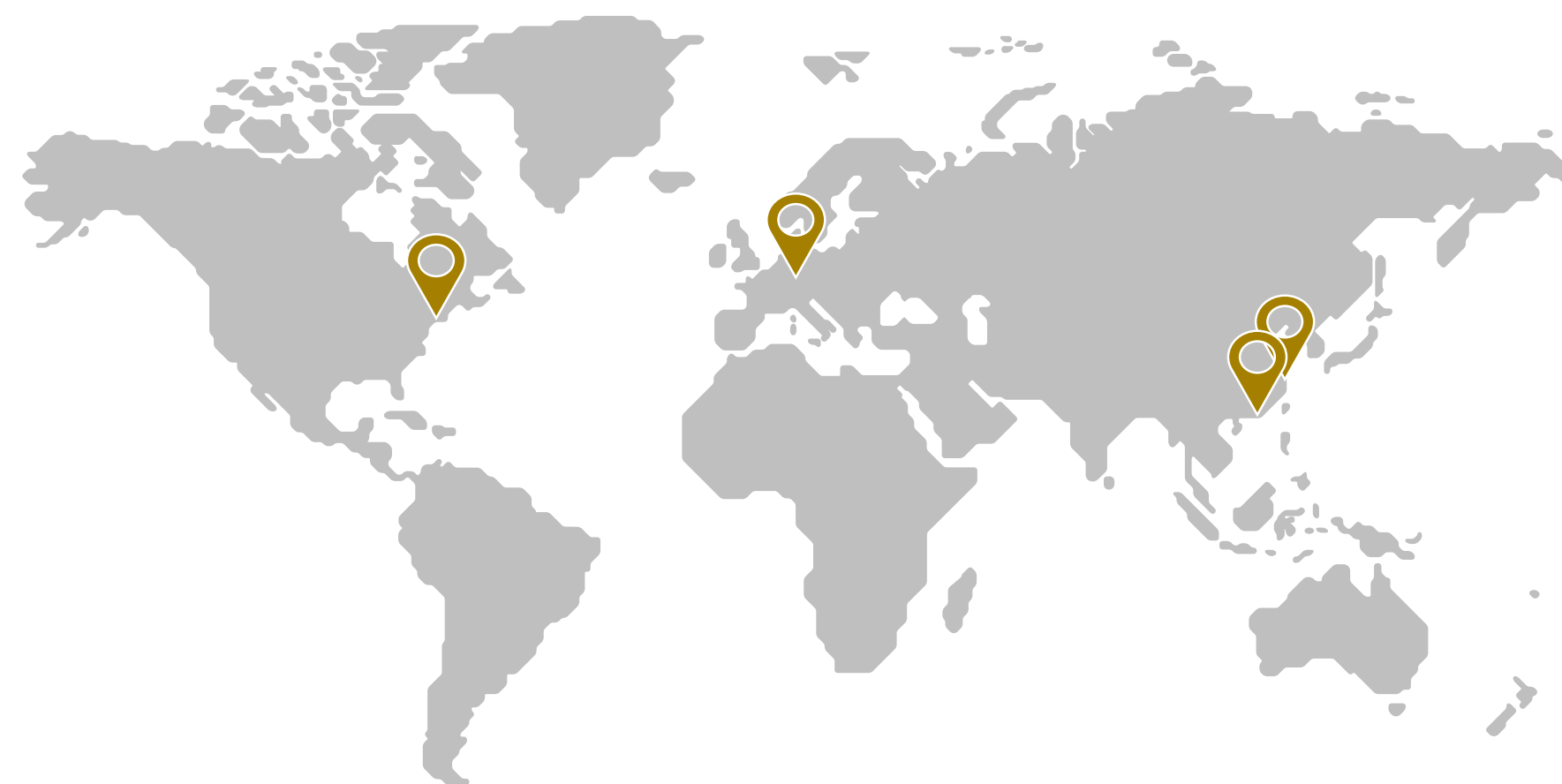
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