CIO Viewpoint
Commodity

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Metals: the three Gs driving metals

Key takeaways

- Commodity prices are again on an uptrend with the S&P GSCI up around 10% YTD in 2024 after declining -4% in 2023 and -19% in 2022 from its peak level in June amid the Russia-Ukraine war.
- The rally this time has been led by industrial and precious metals, which have each gained about 17% YTD.
- Key drivers for the outperformance are growth, green transition and geopolitical risks.
- A recovery in global industrial production led by Eurozone and China, coupled with ongoing green transition measures, augur well for the industrial metals complex while precious metals should continue to outperform amid rising geopolitical risks.
- Since prices have rallied significantly for some commodities, we may see a bit of a consolidation in the near-term, but the medium-term outlook remains bullish and short-term price corrections can be used to add exposure.

The three Gs driving metals in 2024

Commodity prices are again on an uptrend with the S&P GSCI up around 10% YTD in 2024 after declining -4% in 2023 and -19% in 2022 from its peak level in June in response to the Russia-Ukraine war which choked supply chains and sent commodity prices spiralling. The rally this time has been led by industrial and precious metals, which have each gained 17% YTD.

The overarching factors for such outperformance are:

• **Growth:** Global industrial production has recovered, impacting the macroeconomic outlook in Eurozone and China. U.S. economic growth is proving to be resilient.

• **Green energy transition:** The transition to renewable energy ensures robust demand for commodities in the near and longer term.

• **Geopolitical risks:** The continuing hot war in Ukraine and an expanding conflict in Middle East are driving safe-haven inflows into precious metals and causing supply concerns in industrial metals.

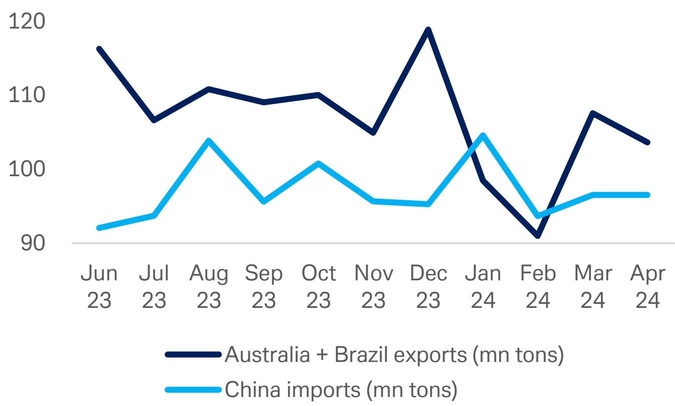
In this CIO Viewpoint, we provide a deep-dive and expand into the individual dynamics of iron ore, copper, platinum, silver and gold.

Iron Ore: The Asia factor

Iron ore is one of the most mined metals globally with more than 50 countries involved in its production. However, more than 80% of total global output comes from seven countries. Australia and Brazil are the top exporters followed by China. Despite being the third largest exporter, China is also the largest consumer/importer of iron ore, accounting for about 75% of global seaborne shipments. The key application is steel production, which in turn is used either domestically for construction activity in the property sector or exported to other economies. Chinese steel production accounts for about 50% of the world steel output.

Iron ore has been one of the worst performing base metals in 2024 with prices falling -13% YTD. However, since reaching its 2024 low of USD 101.5/t on April 5 it has recovered 22% on renewed optimism about China's economic recovery and restocking expectations. Following China's Politburo meeting, substantial economic support has been announced by the government, with specific sets of measures aimed at stabilising the property market. Refer to our CIO Special reports on the property sector stimulus CIO Special – China: strong support for the property sector | Investing Themes (deutschewealth.com) and China's modest macroeconomic recovery CIO Special – China: growth key to market upside | Investing Themes (deutschewealth.com).

Figure 1: Iron ore demand/supply dynamics



Source: Datastream, Deutsche Bank AG, Data as of May 22, 2024

These measures are important, as China's steel demand is largely influenced by its property sector performance. In particular, the liquidity infusion for local governments to buy unsold homes and down-sell it as affordable housing, the lowering of the minimum mortgage downpayment and interest rates and the removal of mortgage floors are likely to boost confidence and support property market transactions.

That said, demand from infrastructure (~26% of total steel demand in China) is now reaching close to the level of demand from property sector (31%). Although demand from the property sector remains weak – as the new measures have yet come into play – infrastructure and manufacturing sectors are still growing strongly in China. Industrial output accelerated to 6.7% in April from 4.5% in March and compared to analyst expectations of 5.5%. Manufacturing PMI remained expansionary for the second straight month.

Figure 2: Iron ore prices and China's industrial output

Source: Datastream, Deutsche Bank AG, Data as of May 22, 2024

In terms of supply, better-than-expected weather conditions in Brazil led to higher output and shipments. Chinese ore importers have been continuing to buy iron ore for the last six months despite weak steel output due to low iron ore prices, restocking requirements, and expectations of property sector recovery.

To achieve its climate goals, reduce carbon emissions and increase energy savings, the Chinese government has been capping steel production at around 1bn tons. As a result, China's crude steel output has been declining gradually.

However, this reduction will probably be offset by higher production in other regions such as India and Southeast Asia. For example, India plans to double its steel output by 2030. India is the fifth largest iron ore exporter but may turn into a net importer by 2030, given the infrastructure build-out planned domestically. We expect iron ore's short-term demand environment to improve on the back of the China optimism. In the medium term, a shift in demand dynamics from China to India, Vietnam, Thailand, and other Asian countries is likely to emerge and be the key future driver for iron ore.

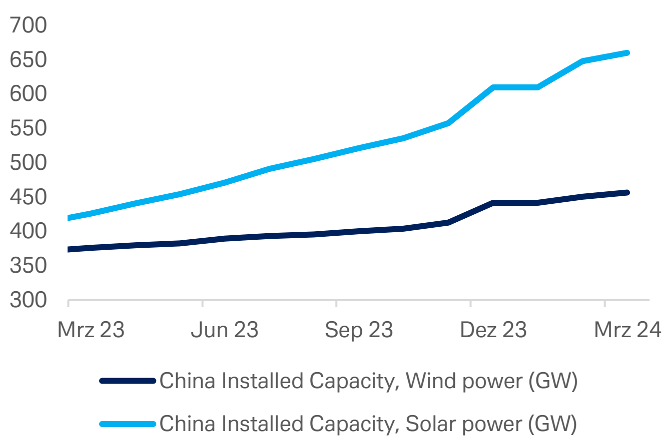
Copper: A play on green/future technologies

Sustained growth in renewables has provided the backbone for copper's demand dynamics. China's new solar and wind capacity installations increased by a robust 36% and 49% YoY, respectively, in Q1 2024. Grid spending accelerated as well in March to reach a strong 15% YoY growth for Q1. Industrial production has also been growing in China, with the production of "new energy" (i.e. electric) vehicles up 27% YoY YTD. Output of appliances, which accounts for around 15% of Chinese copper demand, has also been showing decent growth. Air conditioner production increased by around 10% YoY in Q1 2024, while washing machine output was up by close to 12%. In addition, the surge in AI will need more and more data center capacity and copper wires will be needed to power them. IEA expects the power demand from data centers to surge by around 75% by 2026 in its base case scenario. Somewhere around 20-40t of copper is estimated to be required for a megawatt of data center power.

Figure 3: China new energy vehicle production

Source: Datastream, Deutsche Bank AG, Data as of May 22, 2024

Figure 4: China renewable energy installed capacity

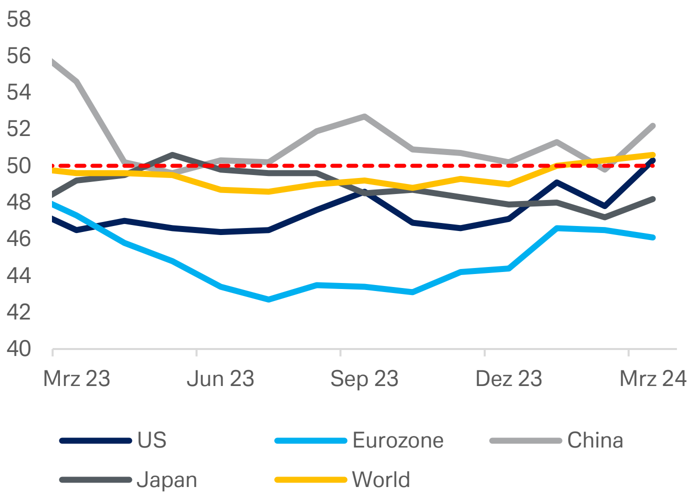


Source: Datastream, Deutsche Bank AG, Data as of May 22, 2024

Copper has experienced a change in fortunes, after a meagre price return of 1.2% last year. Since their YTD low in February, copper prices have risen occasionally by around 30% as the whole commodities complex has climbed higher.

But China is not the only cause for optimism on the demand side. Global manufacturing PMI pointed towards an expansion in February for the first time since August 2022, helping to bolster investment sentiment.

Figure 5: Global manufacturing PMI



Source: Datastream, Deutsche Bank AG, Data as of May 22, 2024

In addition, copper supply dynamics also keep us confident on the copper price outlook. Chile, the world's biggest copper producer, saw a -2% fall in its copper output in 2023, meaning that annual output has now not risen since 2018 due to declining ore grades and water issues. Zambian mined output is also under the risk of disruption as the country grapples with power outages.

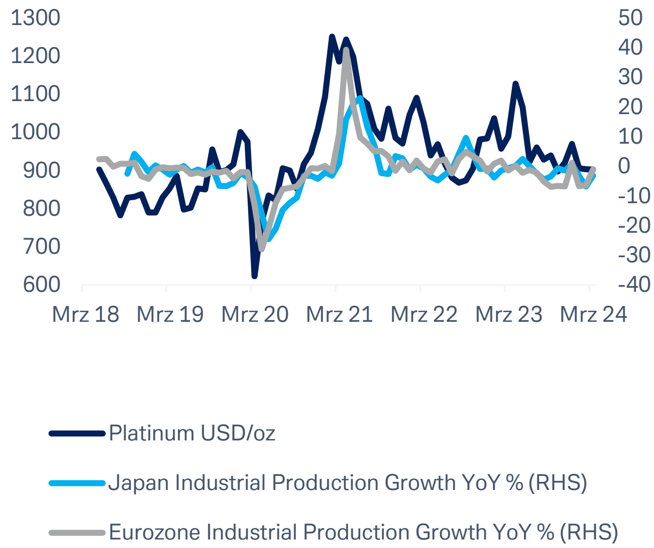
By contrast, the recent restrictions on Russian metals announced jointly by the U.S. and the UK are unlikely to have a substantial and lasting effect on copper supply. These restrictions prevent the delivery of Russian copper, aluminum and nickel to the London Metals Exchange and Chicago Mercantile Exchange. While this does not effectively stop buyers or traders sourcing Russian metals directly, it does create the risk of buyers' self-sanctioning and avoiding Russian copper altogether. However, even in that scenario we would point to the capacity of Asian buyers such as China and India to absorb Russian copper, possibly at a discount, much in the same way as has happened with Russian oil.

Platinum: Pick-up in vehicle production key

Platinum is used in a wide variety of applications. Currently its primary applications are in automotive emissions aftertreatment (catalytic converters), followed by jewellery, but it also has a diverse range of other uses. Diesel and petrol vehicle exhausts contain different mixes of gases and pollutants. Both require PGM-based emissions control catalysts (PGMs: Platinum Group Metals) but with differing quantities of platinum, palladium and rhodium.

Platinum is particularly important for controlling emissions from diesel-powered vehicles, and palladium is only a partial substitute for platinum in this application.

Figure 6: Platinum prices are correlated with automobile production



Source: Datastream, Deutsche Bank AG. Data as of May 22, 2024.

In medical applications, platinum is used in chemotherapy, as well as being used as in alloys for dental materials and biomedical devices such as stents and pacemakers. In the glass industry, platinum-rhodium alloys are used to produce fibreglass and high-quality flat glass for TVs and phone screens. And, very importantly, as the world moves towards net zero carbon emissions, growth in fuel cell vehicles is expected to lead to significant platinum demand in this application.

The platinum market recorded a deficit of 878 koz in 2023, whilst the market deficit is expected to continue through 2024, at 418 koz, with several of the ongoing market themes persisting. Notably, total platinum supply decreased by -2% in 2023 and is forecast to decrease by another -1% in 2024, leaving 2024 supply 6% below the average annual supply over the previous five years (including the Covid-19 years).

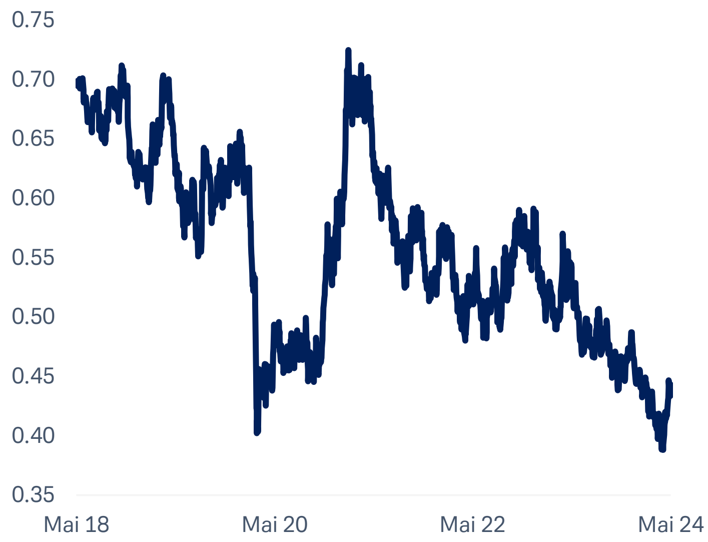
The significant decline in the Platinum Group Metals basket price has eroded profitability at a number of operations and all of the major producers have announced plans to restructure their operations. Recycling supply is also a focus, Q4 2023 was the weakest quarter in an available time series, 2023 recycling was 25% below the preceding five-year average, and although a 7% recovery is expected in 2024, there are several caveats to that outlook.

Demand, on the other hand, remains robust. Although total demand is expected to decline -6% in 2024, that is coming off the back of a record year for industrial demand in 2023 and is also the result of a weaker investment outlook for bar and coin in the U.S. and Japan and expected ETF disinvestment due to the higher-for-longer interest rate environment. Despite 2023 likely being the post-Covid peak for internal combustion engine

(ICE) vehicle production, analysts are seeing a trend towards increased hybridisation, which is more PGM-intensive and likely to support automotive demand well into the future.

Net platinum imports into China and Hong Kong reached 327 koz in January and February, their highest level at this point in the year since 2017, eclipsing near-record years 2021 and 2022. Net platinum U.S. imports totalled 1.23 Moz in 2023, their highest level since 2004. This year-on-year increase reflects its substitution of palladium and improving demand following Covid and the semiconductor shortage. Likewise, in January, net imports were 130 koz, their fastest start to the year for more than two decades, suggesting North American physical imports will continue last year's trend.

Figure 7: Platinum/Gold ratio at multi-year lows



Source: Datastream, Deutsche Bank AG. Data as of May 22, 2024.

Given the aforementioned dynamics, the price increase of around 5% since the beginning of the year is probably a bit disappointing, the platinum price does not yet reflect a market entering a second year of material deficits which cumulatively will reduce above-ground stocks by -25% between 2022 and 2024. The lack of a price response so far appears to reflect broad destocking across the automotive industry. These elevated stocks arose because of contractual delivery commitments in combination with the underproduction of vehicles compared with the planned volume due to the impacts of Covid and the semiconductor shortage, over 2020-2022. In addition, demand from China has been highly price sensitive, with volumes picking up at prices approaching or below USD900/oz but softening at prices above USD1,000/oz. In the medium term, there should still be upside to platinum prices on the back of carbon transition requirements.

Silver: rising deficit to drive prices

The growth expected in silver use for industrial fabrication is partly based on cyclical factors such as overall global GDP growth and gains for the sectors of specific relevance to silver such as construction and consumer electronics.

Further increases should flow through from structural changes such as the shift within vehicle production from ICE (internal combustion engine) to BEVs (battery electric vehicles) and from ongoing decarbonisation efforts (such as photovoltaic panel installations).

Underpinning silver's fundamentals is current robust demand from industrial applications. This continued to push higher last year, reaching a new all-time record, fuelled by the remarkable rise in solar demand (silver is a key component of solar cells). Sluggish silver supply, owing to a slight decline in global mine production, was another factor contributing to silver's supply/demand deficit last year. Analysts at the Silver Institute (an industry body) remain confident that such deficit conditions will remain in place for the foreseeable future. Their projections for 2024 see the gap between supply and demand growing by 17%, thanks to ongoing growth in industrial demand, a recovery in jewelry and silverware and still stagnant supply from both mine production and recycling.

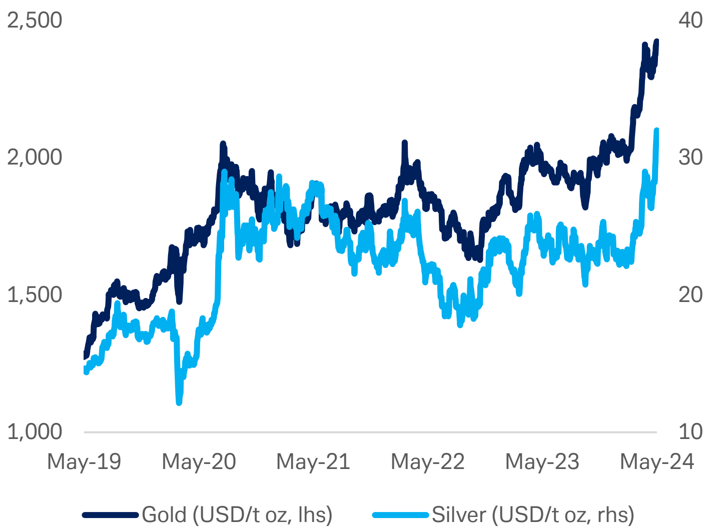
Silver did quite well in April with a price rise of around 5%. The price increase gained momentum in May. On May 21, silver reached a 13-year high of around USD32.50/ounce, trading 35% above the level at the beginning of the year. Since then, the price of silver has fallen only moderately. The gold/silver ratio in fact inched up at the beginning of the year and was trading at a historically high level around 90:1. In the meantime, this level has come back towards 75:1. Gold benefited for quite a while from clearer "safe haven" interest while silver was hurt by broader industrial metal weakness – at least until beginning of March, before optimism about a recovery in global industrial production picked up. A key challenge silver has been facing is that above-ground inventories are still high.

Figure 8: Gold/silver ratio remains elevated

Source: Datastream, Deutsche Bank AG, Data as of May 22, 2024

However, given the high likelihood of looser US monetary policy later this year, investor interest in precious metals is likely to be healthy in H2 2024. Silver's supply-demand conditions are also expected to be again supportive in 2024. Robust gains from photovoltaic applications are expected to see industrial demand reach a new all-time high (analysts forecast a +9% gain in 2024). Jewellery fabrication is expected to recover in 2024 by a modest 4%. The metal's strong fundamentals should support its price, increasing the likelihood that silver could outperform gold in the second half of 2024 and into next year.

Figure 9: Silver prices lagging gold



Source: Datastream, Deutsche Bank AG, Data as of May 22, 2024

Gold: the safe-haven factor

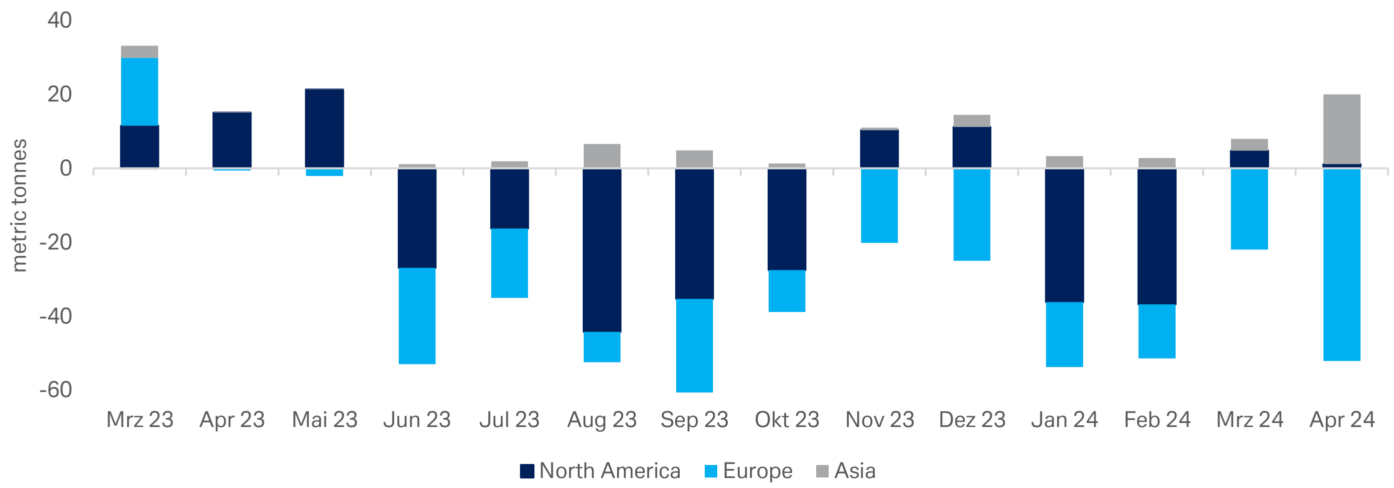
In mid-April, gold reached a new record high of USD2,431/ounce, which was probably partly due to "safe haven" purchases due to a possible escalation in the Middle East feared at the time. At USD2,450/ounce, another all-time high was reached on May 20. The drivers are explained in our CIO Viewpoint on Gold [CIO Viewpoint – Gold: still time to shine | Asset Class Insights (deutschewealth.com)].

Chinese gold ETFs have seen inflows five months in a row. April attracted RMB9bn (USD1.3bn), the strongest month on record, pushing the total AuM to another historical high of RMB46bn (USD6.4bn). North American funds saw their second consecutive monthly inflow, albeit small, attracting USD124m in April. Europe once again led global outflows, losing USD4bn in April and representing the eleventh consecutive month of losses. Funds listed in the UK, France and Germany led outflows. One reason might be that yields of German Bunds and UK Gilts both saw notable increases in April, further dimming investor interest in gold ETFs.

Central bank net demand totalled 290t in Q1 – the strongest start to any year on record. Reported purchases remained broadly based, with China, Turkey and India leading the way. For example, April saw no stoppage in the PBoC's gold purchasing spree. China's official gold holdings now stand at 2,264t, accounting for 4.9% of total foreign exchange reserves, the highest ever. So far in 2024, China has accumulated 29t of gold. The Reserve Bank of India grew its gold reserves by 19t during the first quarter, exceeding last year's annual net purchases (16t). The Central Bank of Turkey continued to accumulate gold through Q1. It bought a further 30t, bringing its gold reserves to 570t. The central bank has now bought gold for ten consecutive months, helping to lift gold reserves towards levels seen a year ago before the presidential elections.

March pushed Q1 imports into China to 324t, 17% higher yoy and the strongest quarter for imports since 2015. Rising imports in Q1 were mainly the result of stronger local demand during the quarter. Globally, Q1 gold jewellery consumption of 479t was -2% softer yoy. Initially aided by the mild correction in the gold price during January and February, demand pulled back as the March rally took off. Jewellery demand remains under pressure so far in Q2, due to unprecedented price levels. Although buying will likely be encouraged by any price pullbacks, demand might stay subdued. Industrial demand for gold in Q1 rose by 10% yoy to 79t. This growth was driven by the electronics sector, which saw a 13% yoy rise to 64t. Other industrial applications saw a small rise of 2% yoy to 12t

Figure 10: Gold ETF demand



Source: Datastream, Deutsche Bank AG, Data as of May 22, 2024

Looking ahead, jewellery consumption may remain weak amid seasonality and the elevated gold price. But we believe the continuing need for value preservation and gold's current high profile will likely support gold investment by retail customers in China while demand from central banks is also likely to continue. However, potential gold buyers will first have to get used to the high price level, so that a (short) consolidation phase could possibly be on the horizon for the time being. Geopolitical risks currently appear to be priced in only to a limited extent. This could change later this year, which is why gold is likely to remain in demand as insurance for portfolios.

Conclusion

A recovery in global industrial production led by Eurozone and China, coupled with ongoing green transition measures, augur well for the industrial metals complex while precious metals should continue to outperform amid rising geopolitical risks. The recently announced property stimulus measures in China and an overall recovery in industrial production are likely to prop up iron ore prices. Copper is likely to benefit from the strong push in renewables and new energy vehicles in China and limited global supply along with the uptake of AI. Meanwhile, platinum should gain from a pick-up in vehicle production as well as continued geopolitical uncertainties. The structural trends for silver remain solid and prices should increase on the back of rising supply deficit. Gold is well-placed as a "safe haven" investment amid rising geopolitical risks. Since prices have rallied significantly for some commodities including silver, gold and copper, however, we may see a bit of a consolidation in the near term. The medium-term outlook remains bullish though and short-term price corrections can be used to add exposure.

Glossary

A catalytic converter is an exhaust emission control device which converts toxic gases and pollutants in exhaust gas from an internal combustion engine into less-toxic pollutants by catalyzing a redox reaction.

The Chicago Mercantile Exchange or CME is a futures exchange which trades in interest rates, currencies, indices, metals, and agricultural products.

The Chinese Politburo has 25 members, who also tend to hold important state positions.

Exchange Traded Funds (ETFs) are investment funds traded on stock exchanges.

A gigawatt (GW) is a unit of measurement of electrical power. For some context, a gigawatt is equal to 1 billion watts.

The London Metal Exchange is a futures and forwards exchange in London, United Kingdom with the world's largest market in standardised forward contracts, futures contracts and options on base metals. The exchange also offers contracts on ferrous metals and precious metals.

People's Bank of China (PBoC) is the central bank of the people's republic of China.

The renminbi (RMB) is the official currency of the People's Republic of China.

The Reserve Bank of India (RBI) is the central bank of India.

Purchasing manager indices (PMI) provide an indicator of the economic health of the manufacturing sector and are based on five major indicators: new orders, inventory levels, production, supplier deliveries and the employment environment. The composite PMI includes both manufacturing and services sectors. They can be published by public sector or private agencies (e.g. Caixin, Nikkei).

The S&P GSCI is the first major investable commodity index. It is one of the most widely recognized benchmarks that is broad-based and production weighted to represent the global commodity market beta.

USD is the currency code for the U.S. Dollar.

Appendix

Performance	22.5.2019 - 22.5.2020	22.5.2020 - 22.5.2021	22.5.2021 - 22.5.2022	22.5.2022 - 22.5.2023	22.5.2023 - 22.5.2024
S&P GSCI	-40.4%	59.4%	63.5%	-19.7%	16.8%
Gold	36.3%	9.1%	-5.3%	11.0%	20.7%
Copper	-10.8%	87.6%	-4.2%	-14.7%	27.7%
Silver	17.9%	60.4%	-20.6%	8.7%	32.4%
Iron Ore	-3.0%	105.1%	-36.4%	-17.1%	16.0%
Platinum	3.7%	43.5%	-19.9%	11.9%	-2.0%

Source: LSEG Datastream, Deutsche Bank AG. Data as of May 22, 2024.

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