

Quarterly Metals Report

Q2 — May 2023

Analysis and Forecasts for Base Metals,
Precious Metals, Iron Ore & Steel



Quarterly Metals Report

Analysis and Forecasts for Base Metals,
Precious Metals, Iron Ore & Steel

Summary	2
Market Overview	3
Aluminium	6
Copper	8
Lead	10
Nickel	12
Tin	14
Zinc	16
Iron Ore & Steel	18
Gold	20
Silver	22
Palladium	24
Platinum	25

Published by:
Sucden Financial Limited
18 May 2023

Author:



Daria Efanova
Research Associate

Research Desk
research@sucfin.com

Press Enquiries
press@sucfin.com

Industrial Commodities
+44 (0)20 3207 5430
industrials@sucfin.com

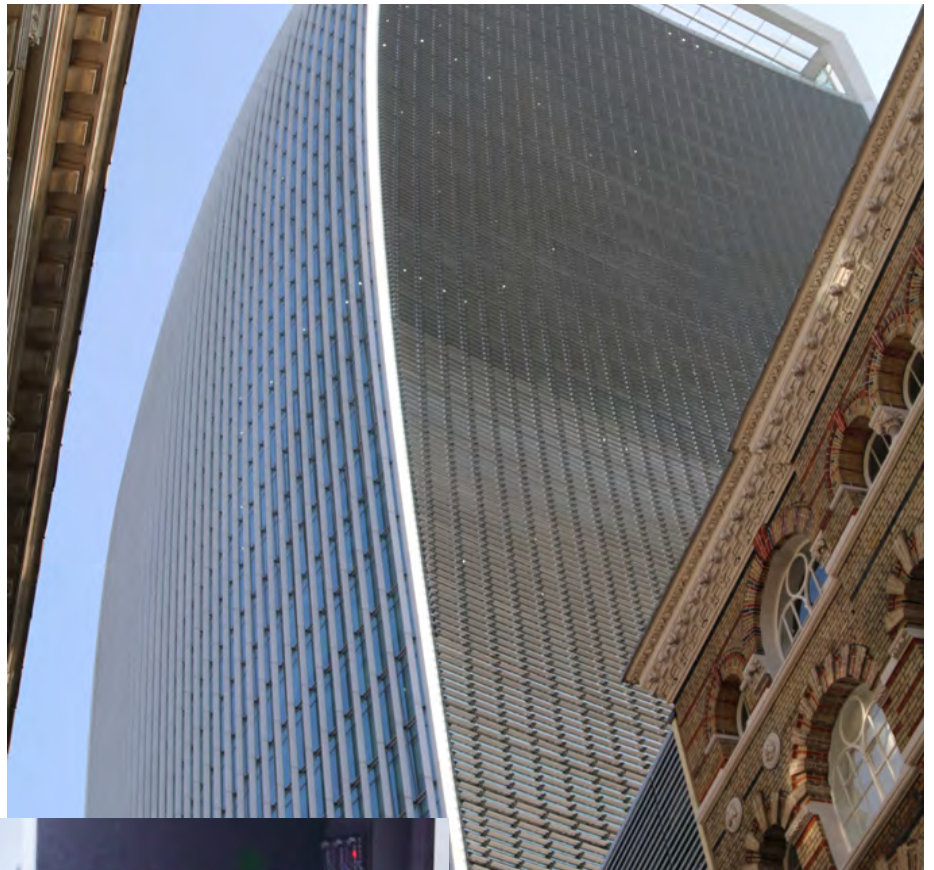
Trusted multi-asset solutions

With a history and heritage in commodity futures and options trading, Sucden Financial has evolved and diversified to become a leading global multi-asset execution, clearing and liquidity provider.

A proud history of trading

We are active in base and precious metals, iron ore and steel, offering multiple access points, help, experience and solutions for whatever price risk you face, or liquidity you require. We are a Category 1 member of the London Metal Exchange and a full member of the London Bullion Market Association.

We have a track record of 50 years in financial markets. Since our foundation in 1973, we have been supported by our parent, Sucden, one of the world's leading trading groups, while remaining fully independent in our day-to-day trading operations..



Opportunity Engineers

Sucden Financial's experienced and knowledgeable teams are central to our success, drawing on their expertise to exploit ever-changing markets, technology and trading environments, to keep our clients ahead. We are open minded, constantly evolving and adapting to tackle today's and tomorrow's opportunities.

Summary

The rally we saw in the first weeks of 2023 has stalled, and sentiment deteriorated since, especially in early May. Strong momentum out of China is absent, but recovery out of the region is underway, with services continuing to outperform. Downstream activity improved amid traditional peak season, but buyers have mostly purchased on the dip as needed. The demand outlook continues to struggle, with end-users showing continued softness in the goods' sales. While this should lead to further easing in the supply chain issues we have witnessed in the last couple of years, looming recessionary fears are weighing on our demand outlook. With the key central banks ending their monetary policy tightening cycle, the focus is poised to shift away from inflation-centric data to fundamentals, such as economic growth and consumer performance. The historically weaker dollar should provide robust support for metals, but with the lack of a strong incentive, we struggle to see base metals significantly higher in Q2 2023.

Aluminium (Al)

At the start of the year, base metals benefitted from reopening optimism from China but as momentum waned and we saw a lack of positive news out of China, prices declined, and aluminium was no exception. Alumina output improved on the back of growing bauxite into the region, with Guinea and Australia offsetting the losses from a lack of Indonesian material; the ban for which is set to be implemented in June 2023. Physical demand for aluminium is improving but remains low, but we expect any positive news from China to exacerbate price gains. Range: \$2,150-2,500/t.

Copper (Cu)

Copper prices have come down from the highs of \$9,500/t seen at the start of the year and while pessimism is subsiding, markets remain cautious and are waiting on the sidelines, in a wait-and-see mode. While Peru's government says that most of the roadblocks are now over, mines are struggling with transporting copper concentrate onto seaports to be shipped and sold, and we will continue to watch out for exports out of the region. Momentum should improve closer to the end of the quarter, thanks to continued recovery from the infrastructure segment. Range: \$8,000-9,150/t.

Lead (Pb)

Lead has been broadly range-bound, but we saw material flow pick up. With the end of the off-season in the battery replacement, operating rates should improve, and we expect higher withdrawal of stocks by market participants. On top of that, primary output is set to decline, given the traditional maintenance period, weighing on secondary production performance. A tighter spread is reaffirming the tightness assumption, but the upside is capped given a lack of momentum out of China, and we continue to watch for vehicle production figures in the near term. Range: \$2,020-2,250/t.

Nickel (Ni)

Nickel sold off at the start of the year, falling by 23% YTD, weighed down by concerns about weak demand and rising output from Indonesia, despite low exports out of the region. NPI prices weakened sharply due to weaker demand fundamentals from the stainless steel segment, and although we do see some recovery in Q2, it will be marginal. While we still hold our optimistic view of recovery true, the positive momentum is being priced further down the curve. Range: \$20,000-25,000/t

Tin (Sn)

Tin prices were better supported than the rest of the complex, given the news of Myanmar shutting down operations. This, coupled with the ban on tin ingot from Indonesia is set to weigh on mined output in summer months, and we do not expect participants to find replacement fast enough or at a sufficient scale to offset losses from key producers. As a result, China is poised to front-load on shipments ahead of the ban. For Q2'23, the tin outlook is delicately balanced between fragile demand, especially from soldering and semiconductor perspective, and stuttering supply. Range: \$22,000-28,440/t.

Zinc (Zn)

While most of idled capacity out of Europe is still absent, zinc prices continued to decline, falling more sharply than the declines that we have seen in natural gas prices. Demand for concentrate is expected to improve, resulting in a slight drawdown of concentrate stock. However, the decline is set to be marginal given the increase of imported concentrate. Zinc to lead ratio has declined sharply, and we expect the demand story, especially in the galvanised steel and auto segment, to keep the ratio at lower levels. This should also weigh on prices more in Q2 2023. Range: \$2,400-3,000/t.

Iron Ore & Steel

Iron ore futures sold off sharply in April, weighed down by weakening optimism out of China and subsequent output cuts from stainless steel producers. Q2 refined output still faced large uncertainties, and we expect prices to remain weak. Sustainable recovery should only coincide with protracted recovery in the construction sector, which we do not expect to take place until the latter half of the year. In the meantime, only when the steel mill cuts are deep enough to offset the demand losses, we then can expect prices to bottom out and recover. Range: \$90-115/mt.

Gold (Au)

Gold performed well in Q1, gaining 9%, as financial and economic uncertainty acted as a tailwind for the yellow metal. Weaker dollar, in conjunction with growing expectations of the final rounds of central banks' interest rate hikes have increased the attractiveness of the precious metal. The decline in yields is likely to further benefit gold, and while we believe the markets are pricing interest rate cuts too soon, this trend will give rise to gold. If central banks continue to purchase at their current rate and consumer demand rises in India and China, Q2 would be very favourable to gold. Range: \$1,950-2,100/oz.

Silver (Ag)

Silver fluctuated throughout the quarter, with its safe-haven qualities weighing on overall performance amid banking sector turmoil, and the metal closed the first month of Q2 at \$25.06/oz. In line with gold, expectations of Fed's interest rate decisions had an impact on the price of the metal, with investors watching out for signs of the end of the tightening campaign. Although we do not expect a pivot to take place before Q4, dovish stance by the Fed is likely to provide a strong case for silver, albeit to a lesser extent than its gold counterpart. Range: \$22.00 – 25.90/oz.

Palladium (Pd)

Palladium prices continued to diverge from other precious metals, noting a 19% decrease since the start of the year. Growing platinum-for-palladium substitution in combustion vehicles, and regulations promoting EV are weighing on the metal. Still, improved car sales in major economies amid easing supply bottlenecks and expected supply deficit will likely lead palladium prices to stabilise throughout the quarter. Range: \$1,380-\$1,700/oz

Platinum (Pt)

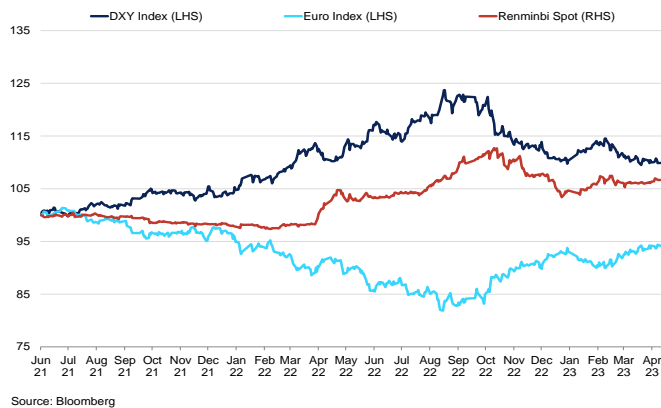
Platinum prices rallied during the quarter, as a softer dollar and power issues from South Africa offset the minor gains from the semiconductor space, pushing the metal to test March 2022 highs. The severity of power load-shedding in South Africa is set to increase during the Southern Hemisphere winter months, starting from June. Range: \$1,050-1,200/oz

Market Overview

Global Outlook: The global economic slowdown is underway across developed and developing countries, with many facing recession risks in the year's second half. Although inflation in Western countries is softening slowly as central banks are complete the last hikes of the most aggressive monetary tightening in decades, underlying price pressures are proving upwardly sticky. High interest rates and diminishing purchasing power weaken consumer confidence and investor sentiment, darkening the growth prospects of the world economy. The banking sector turmoil, caused by the collapse of Silicon Valley Bank (SVB) in March, has uncovered financial sector vulnerabilities, proving that risks to the global outlook are skewed to the downside. While these risks did not completely derail economic stability, they brought recessionary fears forward. We expect to see a bumpy ride accelerate in the second half of the year as policymakers juggle bringing inflation down and maintaining growth while preserving financial stability. On the upside, declining energy prices and tight labour markets make a sharp drop in consumption unlikely, suggesting that a softer landing is still possible. As central banks are ending their tightening cycles, we expect the focus to centre around GDP growth figures in Q2. Global growth is forecast to slow, and the IMF expects growth of 2.8% this year relative to 3.4% in 2022.

Major Economies - Currency Performance

Dollar starts to weaken and is past its peak, pushing the euro and renminbi higher.

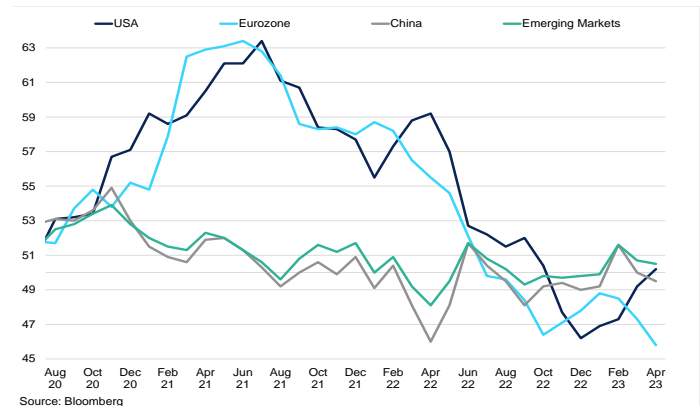


Oil: Oil fluctuated during the first quarter, driven by economic uncertainty and supply risks. In mid-March, the collapse of SVB and subsequent financial turmoil exacerbated recessionary fears lingering due to prolonged monetary tightening. This led the price of crude to fall to a 15-month low, with Brent oil prices dipping below \$72/bbl and WTI prices reaching \$67.48/bbl. The benchmark oil prices rebounded in April as OPEC+ announced a 3.66 mb/d supply cut (3.7% of global demand). At the same time, growth from the US shale patch, traditionally the most price-responsive source of oil, is currently limited by supply chain bottlenecks and higher costs. According to IEA, new cartel cuts could reduce output more than offset an increase in non-OPEC+ production, aggravating potential supply deficit risks and driving higher crude prices. While oil demand in OECD countries has underperformed in recent months due to warmer weather and sluggish industrial activity, China's economic recovery lifted global oil demand in Q1 by 810kb/d above year-earlier levels to 100.4 mb/d. Strong demand from China benefits Russian exports, which remain resilient despite Moscow's earlier pledge to cut production. Indeed, Russian oil exports in March soared to the highest since April 2020, at above 3 mb/d, thanks to continued demand from China, India, and Turkey. While ongoing concerns about global economic conditions increase the uncertainty of the worldwide demand picture, continued recovery in China could create upward pressure on crude oil prices in the next months. For Q2, with China being the powerhouse of energy consumption, the outlook for oil is cautiously optimistic.

PMIs: Global manufacturing remained in contractionary territory, with April's figure unchanged from the month before at 49.6. The manufacturing data provides some positive aspects, particularly in the supply chain bottlenecks, as pressures eased to the greatest extent in 14 years and input prices softened slightly as price growth decelerated. However, the prevailing trend of falling demand, and, in turn, new orders and exports, weighs on total output; the inventories continue to swell, further highlighting the looming weakness as the economies slip into a recession. US Manufacturing registered expansionary performance for the first time in six months in April, increasing to 50.2, up from 49.2 in March. Cost pressures rose at the sharpest pace since January, despite reports of increased stability in supply chains. The selling price pressures continued to build up as manufacturers went on to pass the accumulated inflated costs on to consumers.

Major Economies - Manufacturing PMIs

While performance remains in expansionary territory in the US and EMs, Eurozone is seeing significant declines in manufacturing activity.



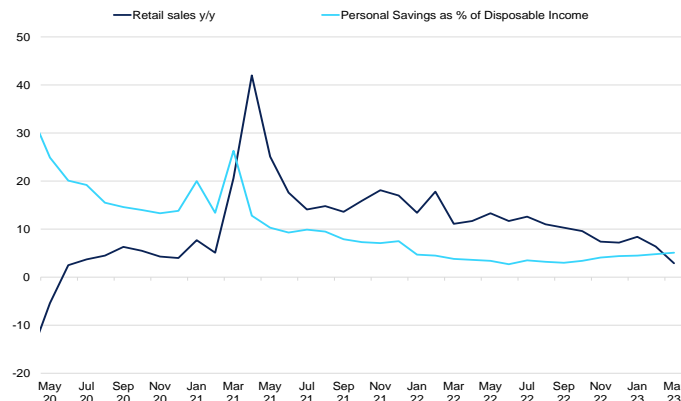
European PMI showed a sharp improvement in business activity, pointing to an encouraging momentum continuing into Q2, with the index increasing to an 11-month high of 54.1. Still, the robust increase was solely based on an increase in services activity, as manufacturing production decreased for the first time in three months. The strong improvement in demand for services offset a decline in new orders. Still, more pain is to be felt as price pressures, albeit softening, are still historically sharp and uncertainty surrounding the economic outlook could nose-dive new orders in the coming months. In China, we see a modest deceleration in manufacturing performance, with April figures falling to 49.5. Weaker-than-expected customer spending weighed on performance, with firms trimming their purchasing activity and inventories. Market conditions remained sluggish, and muted demand led to job reductions at the fastest pace since January.

US: With recent credit shockwaves reverberating from the banking woes in March, the underlying health of the US financial institutions has come under intense scrutiny. The collapses within the regional bank space represented the most significant US bank failures since the 2008 global financial crisis. Commercial bank lending decreased by \$105 billion in the last two weeks of March, and initial outflows of deposits from smaller to larger banks caused panic in the markets. While worries of financial contagion have calmed down following regulators' measures to shore up the sector, banks continue to tighten lending standards amid increased uncertainty and liquidity concerns. As tighter credit conditions generally act with a lag on the economy, US economic outlook for 2023 deteriorated as a result. While a broader banking crisis may have been avoided, tightening lending standards brought fears of recession forward. Even though consumer spending, which accounts for more than two-thirds of US economic activity, picked up in Q1 by \$129.60 billion, GDP growth during the first three months of 2023 missed expectations,

rising by 1.1% YoY. In March, retail sales also registered a bigger-than-expected drop as consumers restrained from making major purchases like automobiles, as well as big-ticket appliances and electronics. Softening demand for goods is impacting production, with recent data showing manufacturing production decreasing 0.5% in March, following a 0.6% increase in February. The decline, combined with tightening lending standards, is likely to have a negative impact on business investment. As demand slows, businesses hold excess inventory, reducing the incentive to place more orders with factories. We see that the extended period of high inflation has dented consumers' ability to spend to the same extent as they used to. In March, headline inflation eased for a ninth consecutive month to 5% YoY - the lowest level since May 2021; underlying price pressures remain strong and embedded in the economy. Core CPI rose more than expected at 5.6% YoY as stubbornly high rents keep underlying inflation pressures in place. According to recent University of Michigan data, consumers have little confidence the situation might change soon, expecting inflation to accelerate significantly in the year ahead.

US Retail Sales vs Personal Savings

Retail sales should continue to decline as consumers spend less.



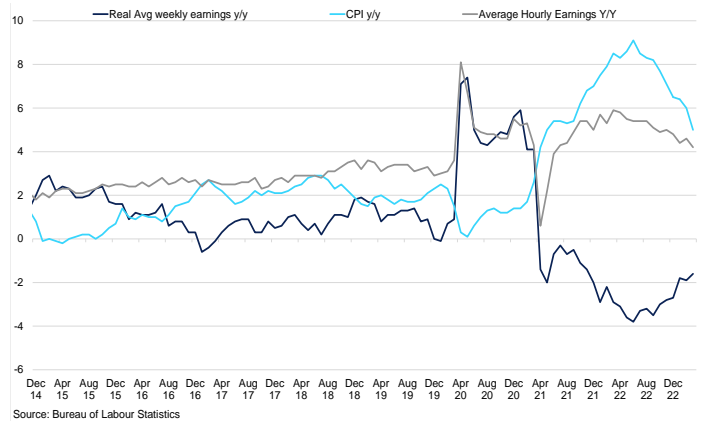
Source: US Census Bureau, Bureau of Economic Analysis

At the same time, the labour market, albeit showing signs of easing, remains tight in the face of deteriorating economic and monetary conditions. In March, hiring remained strong, and wages continued growing fast amid persistent inflation across key areas of the service industry. The unemployment rate has shown little net movement since early 2022, staying at 3.5%. In March, US employers added 236,000 jobs, with leisure and hospitality accounting for the largest gains. This labour supply-demand mismatch continues as US consumers do not cease to socialise, but employers still struggle to find staff discouraged by lockdown layoffs. While before the pandemic, such an increase in nonpayroll employment would have been considered robust; it marked the smallest gain since December 2020. Signs of labour market easing come from increasing new claims for unemployment benefits in April. While in the coming quarters unemployment is likely to increase, we predict that easing in the labour market would be modest. We expect labour market tightness to moderate over the coming quarters but remain elevated relative to previous economic downturns.

In line with expectations, Jeremy Powell announced a 25bps increase in the latest Fed statement, lifting the Fed funds rate to a new target range of 5.00% to 5.25%. Policymakers adopted a more dovish stance in light of inflation showing signs of moderating in an economy dealing with lingering uncertainty stemming from banking sector problems. While the economic data suggests that the US economy is slowing down, we are yet to see the full impact tighter credit conditions will have on households and businesses. After a year of the most aggressive tightening campaign in decades, we believe May's interest hike will be the final one of the cycle and expect the target range to stay high for longer, as any pivot before Q4 seems unlikely.

US CPI vs Average Hourly Earnings YoY

Inflation is softening but remains higher than wage growth.

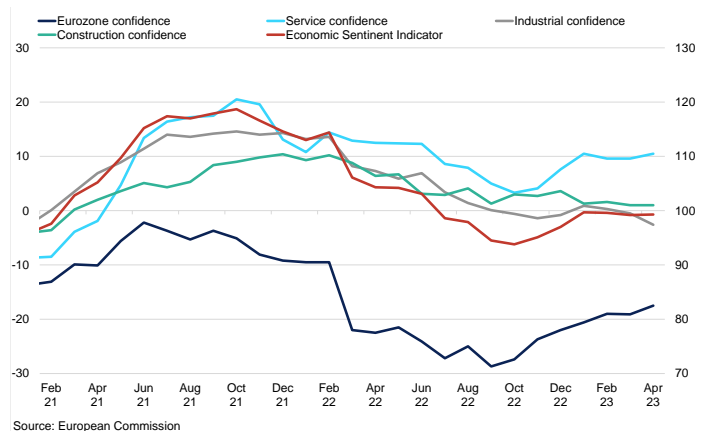


Source: Bureau of Labour Statistics

Europe: With an exceptionally mild winter and warm months now on the horizon, Europe can leave behind the fears of an energy-driven crisis for the upcoming quarter. Gas prices have decreased by 70% across all key gas markets since mid-December amid a lack of demand and strong stock levels. The market focus has shifted to continued sticky inflation and growing recessionary fears. While confidence in Europe continues to recover, improving by 1.6 points to -17.5 in April, it remains well below its long-term average, outlining a muted economic outlook. The latest retail sales data indicated to a continued downward trend, making a positive contribution to Q1 GDP unlikely. European manufacturing was considerably weaker in April, falling to 45.5 from 47.3 in March, way below the estimate of 48.0. The number indicated the biggest contraction in the manufacturing sector since May 2020: squeezed purchasing power, tightening financial conditions, and a shift to inventory destocking could cap manufacturing further. New orders fell the most in four months and employment growth slowed to the lowest since December 2020, indicating that we could see weaker production in the coming months. Meanwhile, Eurozone Services PMI exceeded expectations in April, increasing to 56.6 from 55 in the previous month. The outperformance of services relative to manufacturing was the widest seen since 2009, pointing to increasingly unbalanced growth.

Eurozone Confidence Factors

We see overall softness in industrial and construction sectors, while services are recovering driven by pent-up demand.



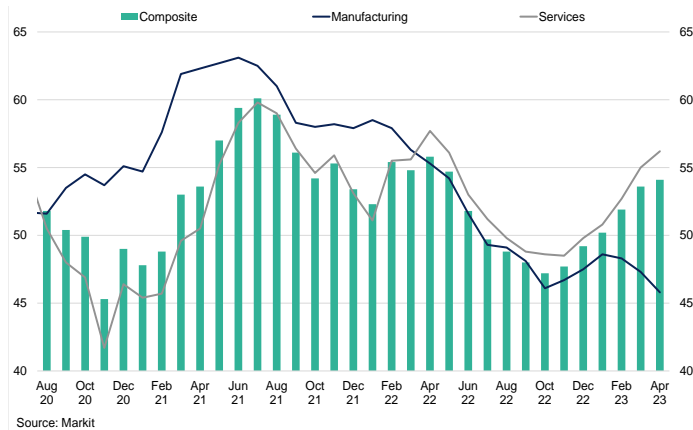
Source: European Commission

In April, annual CPI was slightly above expectations at 7.0%, up from 6.9% in March, with robust demand for services driving overall performance. At the same time, core inflation eased for the first time since June 2022, rising by 5.6% YoY in April, compared to 5.7% in March. As the declines in energy prices are not passing through to consumer prices quickly enough, we do not expect a smooth softness of CPI in the coming months. Inflationary pressures will likely remain high, but we expect price growth to plateau, prompting lower inflationary growth in Q4

2023. The labour market remains robust, with an exceptionally low unemployment rate of 6.5% in March, hardly changed by the slower growth at the end of 2022. Wage pressures could still accelerate further with expectations of widespread workforce shortages across services this summer. As a result of such tight labour markets and inflation compensation effects, wages are expected to grow at rates well above historical averages, hampering ECB's efforts to get inflation back to its 2% target. Indeed, March's wage growth figure stood at 5% YoY as wages are still catching up after workers lost a substantial chunk of their real wages to historically high inflation in 2022.

Manufacturing vs Services Eurozone PMI

The last months have seen a growing divergence between industrial production and services.



Source: Markit

At the latest ECB meeting, Christine Lagarde announced a 25bps interest hike, which indicates that fighting inflation remains the central focus of policymakers even amid the growing fears of a banking sector crisis. According to the ECB President, the European banks are much more resilient than in 2008, with no risk of contagion spreading from the Credit Suisse collapse. The policymakers revised their GDP growth prediction to 0.1% in Q1 2023 and 0.3% in Q2. We expect broad stagnation in the first half of the year as the eurozone remains beset with challenges.

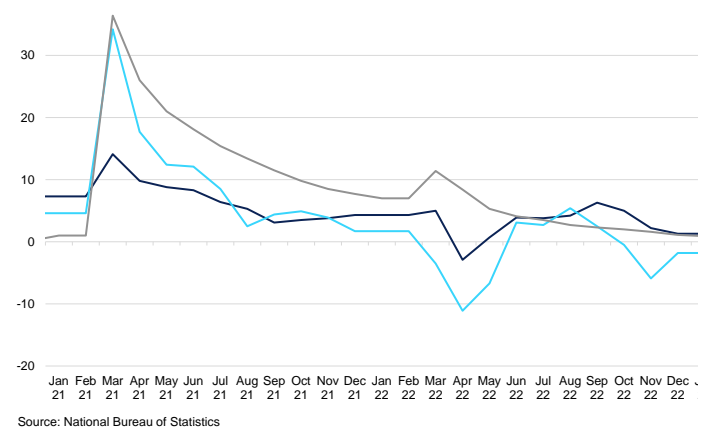
China: China shows signs of bouncing back after a tough 2022, which saw the country's GDP grow more slowly than the world's economy for the first time in decades at only 3%. In Q1, the second-largest economy surpassed expectations, rising by 4.5% YoY. The lifting of covid restrictions at the start of the year came at a time of decreased demand for Chinese exports, which traditionally drove the second-largest economy's growth, attributing to 20% of GDP. The focus is now on domestic consumption to offset the consequences of the global economic downturn. As shops reopened and travel restrictions ended, retail sales in March rose by 10.6% YoY driven by an increase in sales of jewellery and clothing, as well as a strong rebound in sales of automobiles. The boost comes mostly from high-income consumers turning towards luxury products. Indeed, brands like LVMH and Porsche reported a sharp rise in quarterly sales, surpassing expectations with an 18% YoY increase. Still, the expected pent-up demand of Chinese consumers has not materialised as robustly as anticipated and persisting low consumer confidence index proves that it would take some time before Chinese consumers have a higher willingness to start spending a bigger chunk of the \$827 billion savings that they have built up over the last three years under lockdown. Muted inflation reflects a relatively weak domestic demand, with CPI in March rising by 0.7% YoY, at the slowest pace since September 2021, and below the official target of 3%. PPI decreased by 2.5% YoY, the fastest pace since June 2020. As shoppers are keeping cautious, uncertainty about consumer behaviour will likely create a volatile exit for the economy.

March data pointed to an uneven economic rebound, with services activity rising sharply but manufacturing losing momentum amid muted overseas appetite for Chinese exports. In April, manufacturing PMI continued decreasing, shrinking from 51.9 to 49.2, suggesting that a

strong rebound from post-Covid reopening is unlikely to materialise. Smaller firms and exporters are particularly vulnerable amid weaker foreign demand. Fixed asset investment in January-March was below expectations, slowing to 5.1% YoY. This stems from a lot of uncertainty during the pandemic and the CCP's mixed signals regarding private investment over the last year. Real estate investment continues to stay low, reflecting the caution of home buyers and developers. While the construction sector may have already bottomed out and could see positive movements going forward, decreasing the ability to rely on external markets makes us expect Chinese policymakers will put more focus on domestic consumption rather than pursue a traditional infrastructure push, to generate higher productivity growth.

China's Industrial Production, Retail Sales, Private Investment

While industrial production has seen some recovery, domestic-driven performance is not rebounding as robustly as expected.



Source: National Bureau of Statistics

The PBoC has taken measures to boost consumption and help recover from the property market crisis. In March, the central bank announced a 25bps reduction in the required reserve ratio for commercial banks to keep liquidity sufficient for economic recovery. Weak CPI allows the government to launch more monetary easing policies in the second half of the year to reach the target GDP growth of 5%. While such actions might stimulate the economy through increased consumption, foreign investors could start withdrawing capital from China, putting downward pressure on the renminbi. Even if we perceive a sequential improvement in China's economy due to the recent reopening, we predict it would not be a sustained boom. Heightened geopolitical risks, persistent property sector crisis, and weakening demand for Chinese exports amid a global slowdown will likely make it difficult to boost trend growth. We expect China's growth momentum to improve slightly in the next few months and then start waning in Q4.

Emerging Markets: High interest rates globally holding back consumption and investment, core inflation stubbornly keeping above target levels, and growing risks of recession coupled with financial uncertainty are driving the global trends this quarter, and emerging markets are no exception. In H2 2023, these economies will likely feel the impact more acutely as post-pandemic recovery momentum fades and the effect of aggressive monetary tightening filters through. As higher interest rates typically take six to nine months to feed through to activity, the lagged impact means that growth in many emerging markets is poised to soften more than expected. The pressures to raise interest rates are easing, as Western counterparts are finalising their year-long tightening campaigns, but a pivot is still not priced in for the near term. This is likely to lead to emerging markets' increased cost of servicing debt and capital outflow pressures for longer. Central banks in Latin America and parts of Asia are likely to run large interest rates at a time of subdued economic growth. As recessionary expectations grow, weaker demand from key major trading partners is expected to take a toll on emerging market economies. While higher growth in China would be positive for emerging markets, we do not expect it to be enough to offset slower growth in the US and Europe.

Aluminium

LME Aluminium 3MO (\$)



Source: Bloomberg, 11.05.2023

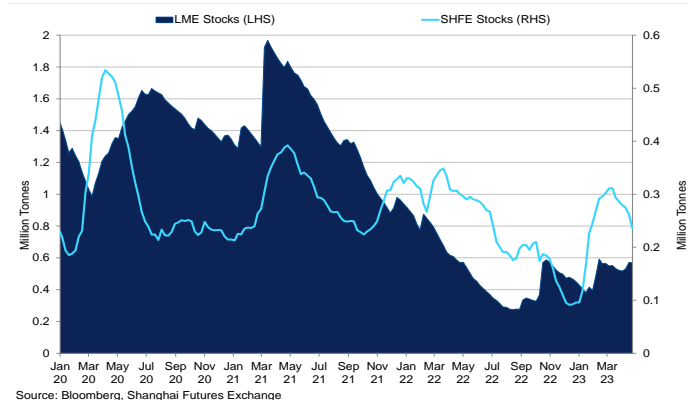
Sentiment



Overview: Aluminium, alongside other metals, benefitted from reopening optimism from China, driving prices to test the highs of \$2,700/t in January. This momentum, however, did not last, and prices declined back to December lows of \$2,260/t, maintaining range-bound trading since. LME stocks improved in January and since then kept unchanged at 565,200t. Still, the cash to 3-month spread tightened into backwardation in early May, up to \$10/t. This suggests that the near-term appetite for the 3-month is building, supporting our view of cautious optimism being brought slightly further down the curve instead of completely discounted. In China, operating rates are seen improving slightly, but the abundance of bauxite and, in turn, alumina weighed on premiums slightly in recent weeks.

LME vs SHFE Aluminium Stocks

LME stocks have improved recently, but levels remain at 2005 lows.

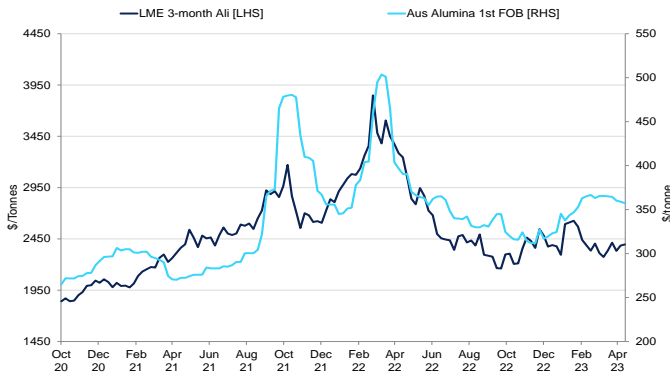


Outlook: Domestic metallurgical-grade alumina output in March increased by 8.6% m/m and 4.7% y/y to 6.64m mt. As alumina plants in

Shanxi and Henan are unwilling to resume or increase production due to poor profitability and bauxite shortages, the total alumina output is estimated at 6.54m mt in April, down 4% y/y. Given peak production season, we expect alumina output to increase in Q2'23 on a month-on-month basis. Overall, the supply surplus of alumina extended in March, resulting in 249,000 mt in Q1 2023, which weighed on the alumina prices. Even with a slight pickup of activity, the alumina supply is still ample, and we expect this to weigh on premiums slightly. Indeed, Chinese alumina premiums softened slightly to CNY2,905/mt in April. Australian alumina prices have converged slightly with LME prices: rising to \$365/mt in February and March on the FOB basis, given that the arb window has been closed since early January. In April, we have seen prices drift slightly lower. Domestically, lower alumina prices are removing some of the support for aluminium prices; however, they create an attractive price point for downstream producers to purchase material. As a result, we saw alumina port inventories diminish slightly from holiday season peak, given the gradual resumption of operating rates from downstream purchasers; the levels now stand at 308,000mt as of April 21st, down 62,000 mt from early January. But again, as of now, this improvement is not sustainable and driven more by downstream activity than a resumption of robust demand. Even with ingots, inventory was in seasonal accumulation through February, but we expect this to slow down and inventories not to grow in the coming weeks and perhaps even deplete slightly. China's primary aluminium output was 3.67m mt in March, up by 2.9% y/y, but down 2.0% m/m. Enterprises in Yunnan still reduced production, and the output increase contributed by the resumption of enterprises in Guizhou and Sichuan was very limited. Aluminium output totalled 9.92m mt from January to March, up 4.8% y/y, and the installed aluminium capacity reached 45.25m mt by the beginning of April. From a domestic production standpoint, we continue to see recovery in smelting production in China, but previously curtailed Yunnan capacity is yet to be brought back online. Social inventory continued to decline as consumption out of warehouses accelerated.

LME Aluminium Price vs Australia Alumina FOB Price

Even with a slight pickup of activity, the alumina supply is still ample, and we expect this to weigh on premiums.

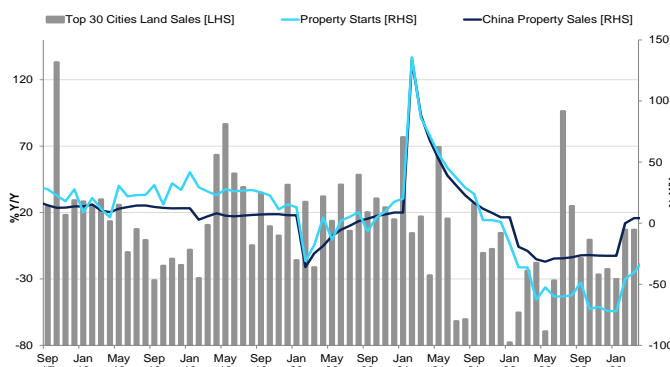


Source: Bloomberg, Platts

In downstream sectors, the operating rates across wire & cable and extrusion segments maintained an upward trend on the back of improving momentum out of the construction and engineering sectors. Given the recent infrastructure push from the government, the housing market has been improving, with Chinese provinces planning to increase spending on major construction projects this year. Despite the property sector being on the background of government focus, we expect construction to continue to improve in 2023, with growth accelerating in H2 2023. This is further supported by plans to increase province spending on major construction projects as the government aims to boost both sectors of the economy later in the year. In the US, aluminium extrusion market is forecast to grow at 6.5-7.0% p.a. for the next decade, with rods & bars and pipes & tubes driving the pace of growth. Almost 70% of US aluminium extruded products manufacturers sell nationwide, so domestic economic performance remains a key driver behind US extrusion prices. Recent banking sector woes led to markets pricing out another rate hike this year. Given the pause of interest rates, this could give the housing market some breathing room, and mortgage expectations should ease slightly. With that in mind, we could see marginal demand from consumers for new builds buying the dip. While this would not bring in a sustainable flow of buyers, this should still boost homebuilder confidence in the coming months. From a longer-term perspective, confidence remains below the longer-term average. As mortgage expectations cool, the cost and availability of housing inventory will remain a key constraint for prospective home buyers. This year's forecast remains muted.

Chinese Property Market Indicators

We expect the Chinese property market has bottomed out and will continue to slowly recover.



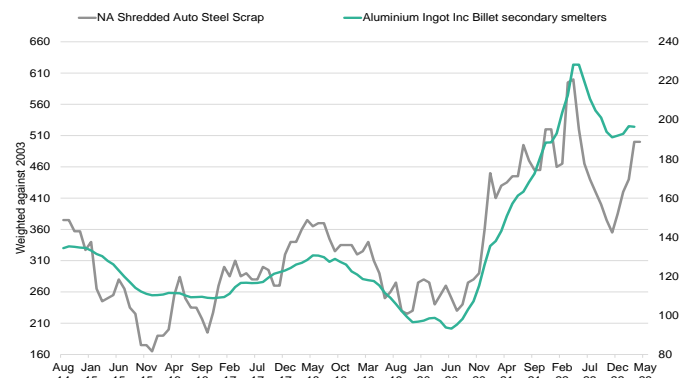
Source: Bloomberg

One sector we see significant upside in is electric vehicles, which continued to post double-digit growth across key producers, despite fears of an energy crisis and a recession this year. Aluminium's qualities make it a desirable metal to use in autos: lightweight strength, design

flexibility, longevity, low maintenance, and sustainability. In ICE vehicles alone, 1kg of aluminium replaces 2kg of steel and 20 kg of CO2 emissions over the vehicle's lifetime. Per light vehicle, the replacement of ICE to EVs eliminates about 90kg of traditional aluminium components, but offsetting this loss, BEVs likely employ 180kg or more of aluminium. Key applications for EVs include battery and motor housings as well as body structural components to improve crash management systems. This shift drove extrusion usage in the US auto sector to grow over the last decade. By 2030, total aluminium content per vehicle is estimated to reach 258kg on average, an increase of 24% from 2021. Given North America's preference for bigger-sized vehicles, the employment of aluminium is likely to be greater in these models. We see that EV demand is very strong, particularly for lower-carbon aluminium. The relatively inexpensive cost of producing aluminium extrusions, coupled with the ease of recycling, has expanded its many applications in industry. Recycling represents roughly 35% of global aluminium production and only requires about 8% of the energy required for aluminium production. This is projected to boost the demand for various aluminium components in automobiles over the coming years.

Shredded Auto Steel Scrap and Aluminium Ingot Billet Prices with Secondary Smelters

The use of scrap is growing and is set to develop in the longer term.



Source: Bureau of Labour Statistics

Extrusions should do relatively well in the longer term, with EVs driving the trend in the coming decades. However, this year's overall performance is likely to see a slower pace of growth, given the low level of housing starts, coupled with a mixed outlook for vehicle sales. While EVs are set to continue growing rapidly, ICE vehicles are improving from the easing of supply chains, overall performance is set to remain broadly unchanged compared to 2022. This will likely change in 2024, and we expect to see growth accelerate then. More than that, secondary aluminium will come into play more this year, and this trend should drive higher use of recycled material for end users. The continued lack of hydropower should not yet weigh on aluminium production, and we expect bauxite import and, in turn, alumina production to remain stable, weighing on domestic prices. Physical demand for aluminium is improving but remains low, but we expect any positive news from China to exacerbate price gains. Domestic capacity is recovering and is set to grow to 45m mt in 2023; still, aluminium reserves remain low, enough to support only 3% of total demand. It would take about eight years of full capacity to avoid further drawdowns; however, the market focus has shifted from inventory to more macro figures out of China and the US. The longer-term outlook remains positive, and the share of recycled material continues to grow rapidly, spurred on by a sharp reduction in energy use. We have also seen COMEX deferring long-term contracts, putting pressure on supply further down the line.

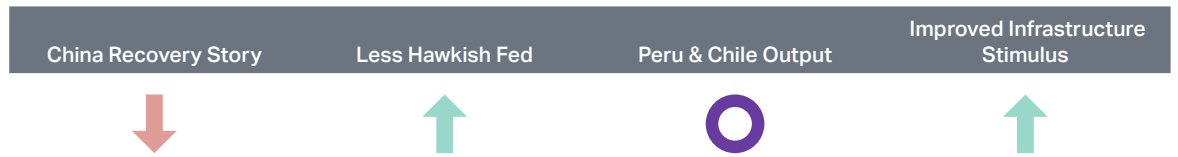
Copper

LME Copper 3MO (\$)



Source: Bloomberg, 11.05.2023

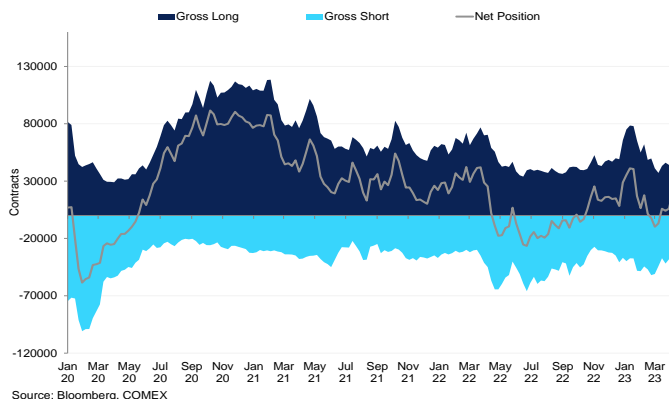
Sentiment



Overview: By the end of last year, markets grew optimistic as China announced the lifting of lockdown restrictions and we saw positive bets build-up, with COT pushing prices higher to test the \$9,500/t, the level not seen since June 2022. This increase in net length has been primarily due to a reduction in shorts. At the same time, longs were broadly unchanged, suggesting that while pessimism is subsiding, markets remain cautious and are waiting on the sidelines, in a wait-and-see mode. Since then, however, we have struggled to see protracted economic recovery out of the region. While service data pointed to continued recovery, at 57.8, the manufacturing and construction sectors remain near the lows, and the former struggled to see the recovery sustained in the longer term. Protests in Peru and mining complications out of Chile have weighed on total output during Q1, but given muted demand, the market remains relatively balanced.

COMEX Managed Money Positions

Net length has remained marginally positive since April.

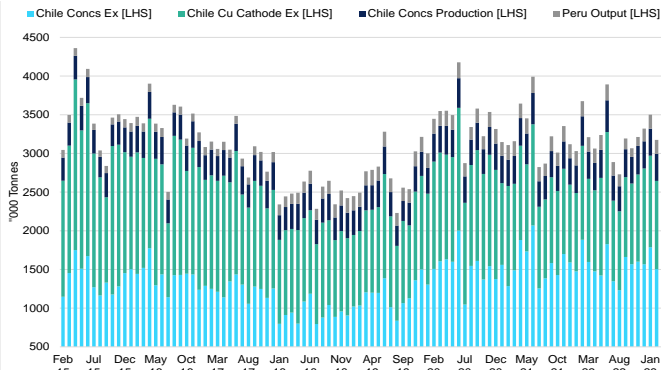


Source: Bloomberg, COMEX

Outlook: Chile, the biggest copper-producing nation, saw copper production weaken on a year-on-year basis, down by 4.7%, to 436,000mt in March. Whilst up from the lowest monthly level in 6 years of 381,100 mt in February, output from Codelco underperformed once again, at 119,400mt. Production from Escondida rose by 13.5% to 92,400 tonnes, while Collahuasi produced 42,900 tonnes, -16.2% y/y. Codelco anticipates that output woes of 2022 will prevail this year, with production expected to decline by 7.0% to 1.35-1.42m mt. The company struggles to see output rising back to 2021 levels until the end of the decade, given the continuous underinvestment. Meanwhile, the recent government plan for new mining royalties is being slowed, given industry complaints. This has brought some confidence back to the market, sparking new investment decisions, but most of the players remain in the wait-and-see mode before long-term commitment. We suspect TCs out of the region will remain low in the near term. Water restrictions continue to hamper mine production, given a prolonged drought and project delays from deteriorating ore quality. A tighter supply/demand balance is more likely to solidify support at current levels rather than push the prices sustainably higher in Q2 2023. Stockpiles on the LME are near the lowest levels in 18 years, at 67,700t. And COMEX stocks are also at 2014 lows. Still, the market is relatively balanced in the near term, given the low demand from China and other regions. Peru's exports came in 20% lower y/y in January and February, even as output continued to post positive growth y/y throughout the unrest. While the government says that most of the roadblocks are now over, mines are struggling with transporting copper concentrate onto seaports to be shipped and sold. Still, Las Bambas will work to progressively reduce stockpiles of copper concentrate held on site. We saw the company draw on full power to accelerate production, according to the electricity data. The data did not indicate whether the transport of ore has improved, which remains key, given the output during the protest was robust. Still, global production for this year is set to stay as robust as 2022, at 25.4mt. The recent TC increase to \$88/t agreed by Freeport-McMoRan and Chinese smelters for 2023 suggests that it is the refined supply growth that should be limited by smelter capacity in the meantime.

Chile and Peru Production vs Exports

Both Peru and Chile saw reduced production throughout the January-February period.

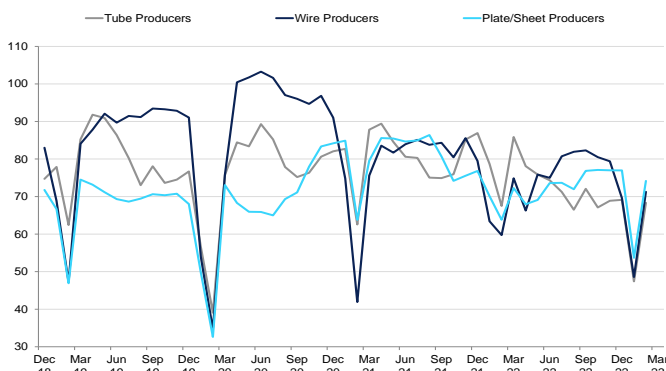


Source: Banco Central de Chile, Banco Central de Reserva del P

Copper cathode output stood at 951,400mt in March, up by 4.8% m/m and 12.1% y/y. This brought the YTD figure to 2.71mt. China's copper cathode output is estimated to have improved marginally in April, flat m/m but double-digit growth y/y, based on the current production schedules. In the second quarter of 2023, some new projects will be put into operation, but this will make a limited contribution to total copper output. Recent copper price decline triggered downstream players to restock as needed, while traders bought goods at lower prices for delivery of long-term orders. Goods under warrants have been continuously flowing into the market recently, which has had an impact on spot premiums, pushing them slightly higher in April to \$30/t. However, the levels remain in the lower ranges historically. With prices testing the \$8,850/t lows, this could spur further enthusiasm for downstream purchases, but inventory build-up is unlikely to accelerate rapidly, and instead, material should flow straight to consumption. With the import window slightly open, this should result in a marginal increase in shipments from bonded zone warehouses. Although the overall orders were not robust yet, consumption has shown resilience.

Copper Operating Rates in China

Operating rates have improved from lows seen at the start of this year.

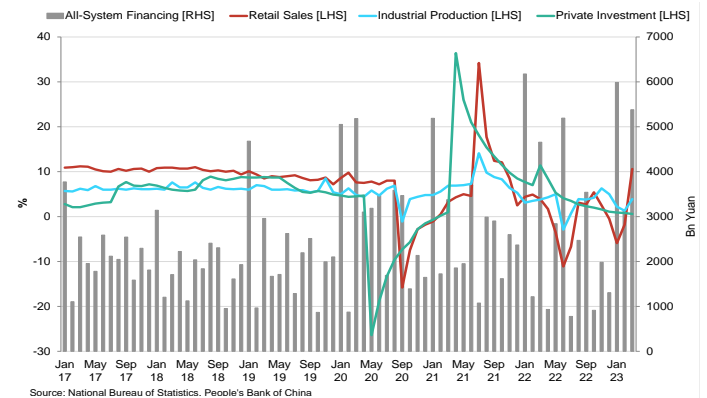


Construction and infrastructure projects broke ground in March, and orders for photovoltaics and wind power have continued to improve. This, combined with policy support for real estate and infrastructure, is expected to bolster consumption later in the year. We anticipate the government prioritising the consumers and businesses instead of the traditional property sector, giving some upside for the metal given the overall build-up of confidence, but not seeing the jump that took place in the past following the previous exit from lockdowns. Property sector recovery is likely to accelerate in H2 2023. Still, cathode production is set to improve in the coming months. Operating rates of semi-finished products have improved strongly in recent months; wire is up to 87.06%, while plate/sheet underperformed at 77.00%, suggesting that telecommunication is performing better than construction. Tube stocks remained elevated, given muted demand.

China imported 173,825 mt of copper scrap in February, a surge of 33.96% m/m and a y/y growth of 58.30%. But the overall level is only slightly above the 2022 average. The slow consumption recovery of secondary copper rods has reduced the demand for scrap. Due to the sluggish recovery of real estate consumption, orders underperformed. If the end-user consumption fails to improve in the near term, the demand for high-grade copper scrap should fall. Still, over the longer term, the scrap rate is expected to increase to 22% of supply by 2031 (up from 14% in 2016), given the growing scrap availability combined with ESG pressures. The importance of copper in the net-zero future, combined with a weak project pipeline, is likely stimulate interest in M&A as market participants search for additional tonnes. After a modest 1.7% increase in global demand for 2022 to 25.9m tonnes, we expect slightly slower growth in 2023 before the effect of both global market recovery and demand for the net-zero transition will raise demand levels. Beyond 2025, the case for material deficit is building, unless either new supply arrives unexpectedly, or prices rise to such an extent that existing projects are accelerated. We are still not seeing a major commitment of financing to advance new mining projects, even as companies talk of the importance of more copper.

China Macro Indicators

Retail sales continue to rebound, exceeding the highs of 2022, suggesting greater push from consumers.



We expect the policies from the Chinese government introduced by the government to begin filtering through the economy. While consumer recovery should be underway, construction should only start to see a slight improvement in conditions. Still, it is not enough to drive market sentiment. On the contrary, we expect to see some weakness trickle through the markets, with global recessionary risks accelerating by the end of Q2 2023. Inventories are poised grow marginally during the period. Copper continues to be macro-driven, and with the Fed slowing on the monetary policy tightening and seeing the terminal rates peak, this could mean a weaker dollar and hence provide support for copper at current levels in the meantime. However, at the same time, new supply volumes from large mining projects coming to the market should keep prices suppressed in the medium term, and we expect to see a marginal surplus for 2023/2024. Momentum for copper is set to improve closer to the year-end, on improving fundamentals and longer-term decarbonisation trend for copper.

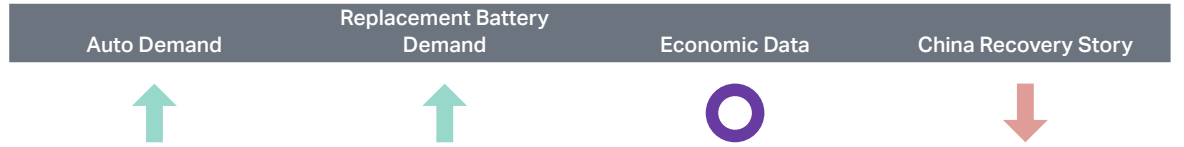
Lead

LME Lead 3MO (\$)



Source: Bloomberg, 11.05.2023

Sentiment

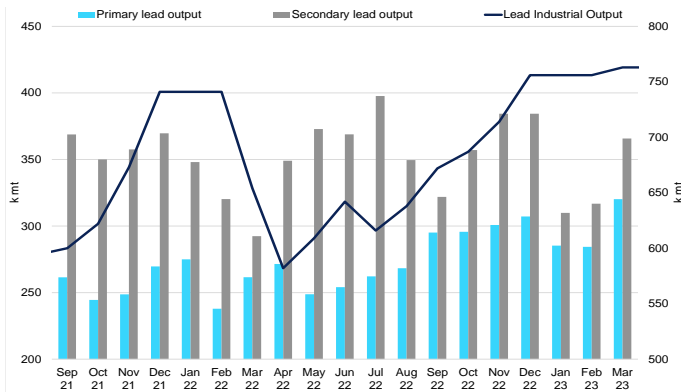


Overview: Lead has been broadly range-bound, struggling to break out of the support and resistance of \$2,060/t and \$2,180/t, respectively, in recent months. The material flow did rise, given the improvement in logistics following the Chinese holiday season in February. Still, battery producers remained in the off-season until the end of April. Given the low demand from battery producers, we saw SHFE stock increase in recent weeks. We expect the material to remain in social warehouses and go directly into the industry upon return. The zinc-to-lead premium continued to fall rapidly, to \$550/t, given a sharper decline in zinc demand outlook than in lead. This is further exacerbated by a slow recovery in demand for stainless steel while battery demand for vehicles has remained stable.

March, up 12.6% from February and 22.4% on the year. Cumulative output in January-March surged 14.9% from the same period last year. In April, primary and secondary lead smelters in Henan and Anhui carried out new rounds of maintenance, and the regional lead ingot inventories declined further given lower mined output. At the same time, lower lead prices during the month encouraged downstream enterprises to purchase primary lead at lower levels, benefitting from price dips. Therefore, the social inventory of lead ingots in the main consumption regions declined more abruptly. As a result, China's lead ingot grade 1 East China premium tightened to -85CNY/mt. April and May's primary output should fall slightly, given there are maintenance plans at large-scale primary lead refineries. Lead ingot supply should tighten further, and in-plant inventories will likely stay low. The output of primary lead smelters in Q2 2023 is expected to decline from the first quarter. This will weigh on the supply of primary material in China, and even with robust secondary production, overall production might decrease.

Lead Output: Primary and Secondary

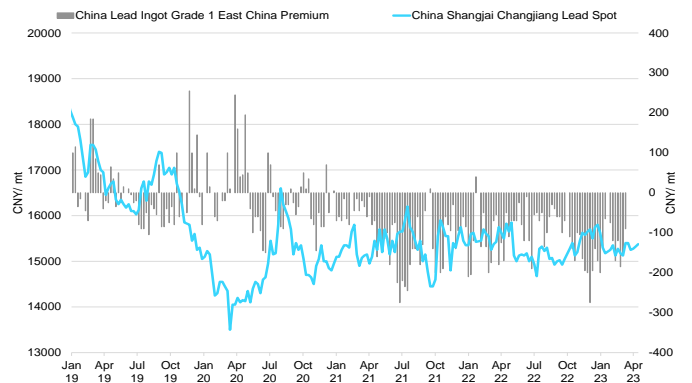
Both outputs saw increased in March following the end of holiday season in China.



Source: National Bureau of Statistics in China

East China Lead Ingot Grade 1 Premium vs China Shanghai Chengjiang China Spot

The premium begun to CNY85/mt in April, still discounted.



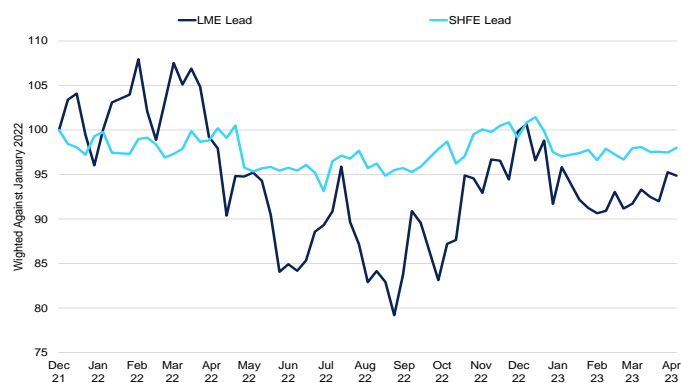
Source: Shanghai Metals Exchange, Antaike Information Development

Outlook: Primary output was at the highest level in years in March, but the outlook is set to slow in May, given the traditional maintenance taking place during the period. China produced 320,200 mt of primary lead in

Industrial production in China improved slightly in March, supported by secondary production as the Chinese holidays ended. The recent recoveries on both the y/y and m/m levels put the secondary production on a better foot to resume into the summer months when we usually see the peak of production from secondary lead. Indeed, the secondary refined lead output in March increased by 16.6% m/m and 30.3% y/y to 326,900 mt. The supply of secondary lead resumed, and the discounts of secondary refined lead prices expanded to 200 yuan/mt. In this scenario, some downstream preferred to purchase the secondary lead. Therefore, the inventory of primary lead smelters stopped falling, as more secondary was taken instead. We saw some restocking take place ahead of the May Day holiday, but maintenance plans from primary producers will weigh on the inventory of primary lead smelter. In April, the overall output of secondary refined lead may decrease slightly, given maintenance, especially in Anhui and Jiangxi.

LME and SHFE Lead Prices (weighted against January 2022)

SHFE continues to outperform the LME prices, and most recently saw some moderate strength, while LME remained lacklustre.



Source: LME, SHFE

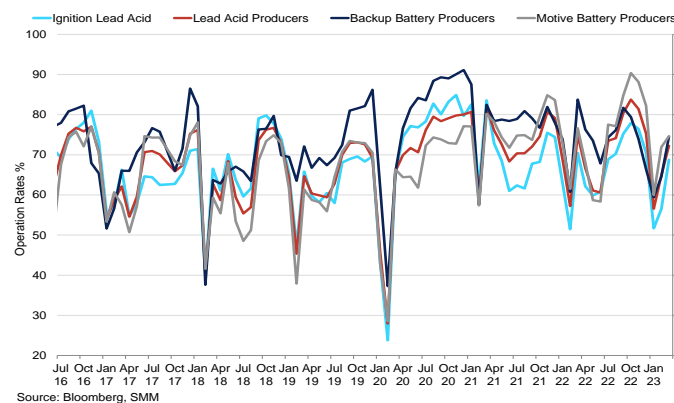
The battery replacement off-season intensified in April, and traders were less willing to purchase lead. The terminal consumption of lead-acid batteries has become increasingly sluggish in recent weeks. This encouraged sales promotions among the wholesale markets, with main model 48V20Ah prices at RMB360/mt. Enterprises still purchased as needed as lead prices fluctuated at low level. This highlights that demand remains lacklustre, and most spot purchases are taking place on a needs-only basis, with downstream buyers benefitting from lower lead prices. At the same time, the market supply of battery scrap gradually decreased, and smelters were purchased as needed. The average operating rate across lead-acid battery producers in Jiangsu, Zhejiang, Jiangxi, Hubei and Hebei provinces stood at 65% in the first week of April, and rates have declined further into April given the poor orders ahead of the holidays. The operating rates are expected to recover as some smelters resume work after Labour Day.

Batteries dominate the global lead market, accounting for 85% of use - of these, some 60% go into ICE vehicles, and the remaining 40% are used in stationary energy storage applications. Even with the new energy sector developing rapidly, especially in the electric vehicle space, we do not think the fundamental demand for lead will improve in the near term. Passenger vehicle sales improved across the board, with the biggest producers posting positive month-on-month growth. US passenger vehicle sales increased to 295,257 units, up 23% m/m and 11% y/y, as dealer inventories replenished through higher production volumes. Still, those gains are being muted by elevated prices and rising financing costs seen by consumers. According to the data in the latest CPI report, even with big-ticket items seeing the sharpest correction in prices amongst the goods, absolute costs remain high enough. This, coupled with a diminishing propensity to purchase from consumers, should weigh on prices further. In Europe, the sales resilience is even more impressive given the continued energy crisis challenges bringing recessionary risks forward. According to ACEA, passenger car registrations rose 28.8% in March to more than 1m units. BEVs comprised nearly 14% of the total figure, whereas plug-in hybrids reduced slightly to 7.2%. Likewise, battery production has remained healthy so far this year, at above 200 per

month, versus 100 in 2015. Whilst it is expected that EVs will represent more than 50% of global car production by 2030, all vehicles, regardless of type, require low-voltage batteries to operate. Lead-acid batteries remain the key driver behind this trend. Even BEVs have a low-voltage lead-acid battery that turns on before the main battery to check various safety functions and as a backup for any autonomous driving functions. Thanks to a high level of recyclability of lead within the battery space, at 99% in the EU and the US, further efficiency gains can be achieved through the use of lead in batteries. Moreover, the intermittent nature of renewable energy sources such as wind and solar remains. Stationary battery storage, often lead-acid based, is likely to be part of the solution as it can increase the proportion of renewables installed capacity to satisfy baseload energy demand.

China Battery Operating Rates

We saw operating rates improve marginally in March, and we expect further strength in the coming months.



Source: Bloomberg, SMM

In China, maintenance for both primary and secondary took place, capping the overall production until the end of May. However, this was timed with the end off-season from the battery producers, likely to help diminish the inventories and push lead prices higher domestically. Prices have remained range-bound in recent months, but the spread has flipped into a backwardation again, highlighting the growing tightness assumption. This should help narrow the gap between zinc and lead, given the tighter balance between car sales between car sales and stainless steel for zinc. Still, lead's upside is capped given the lack of momentum out of China, and we will continue to watch passenger and electric vehicle sales to help guide the outlook for prices. Given the slowing vehicle turnover, the longer-term trend of diminishing secondary material availability means fewer vehicles are returning to the market, and scrap prices are set to benefit from this trend.

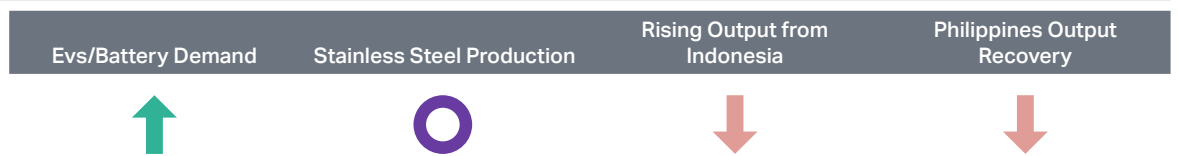
Nickel

LME Nickel 3MO (\$)



Source: Bloomberg, 11.05.2023

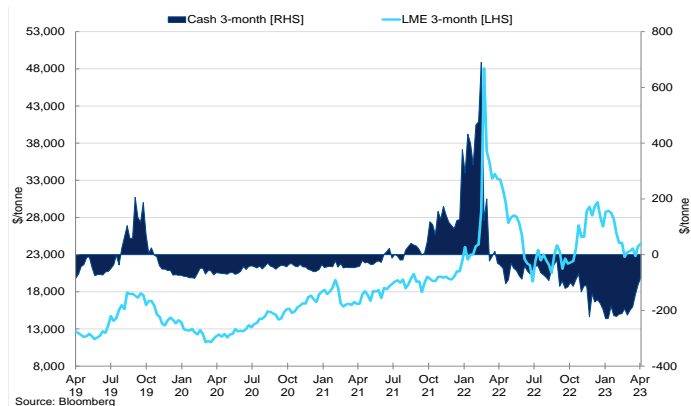
Sentiment



Overview: Nickel sold off at the start of the year, falling by 23% YTD, weighed down by concerns about weak demand and rising output from Indonesia, despite low exports out of the region. The metal found support at \$22,100/t, October's lows, and has traded sideways since. Still, markets are worried about the short-term outlook, with the spread jumping higher to -\$66/t, the highs not seen since September, resulting from the tin story with Myanmar. The fact that it is still in contango indicates that concerns about the supply have tightened but not enough to impact the overall market. Even a rapid decline in SHFE stocks in Q1 2023 struggled to bring domestic prices higher, and the peaking interest rates from the US have primarily driven the recent upside.

LME Nickel Price vs Cash to 3-month Spread

The cash to 3-month spread tightened sharply while prices remained broadly unchanged.

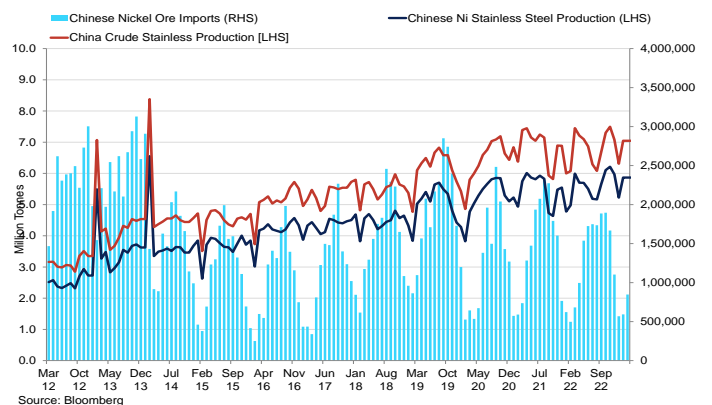


Source: Bloomberg

Outlook: In March, nickel ore arrivals at Chinese ports stood at 1.87m WMT, down 2.4% m/m. Still, shipments flowing out of the ports in the Philippines were 1.55m WMT, up 82.8% m/m. In March, the Philippines' nickel ore mines increased their output, given the improvement in the weather conditions in the country. We expect nickel ore shipments from the Philippines to gradually increase in the coming months. With May entering a dry season, we should see production out of the Philippines higher into November, when the rainy season would begin again. But ore demand in China remained slack; thus, the port arrivals were slower than expected, and we saw China's nickel ore at seven ports decline slightly back to 663,870wmt in the week ending May 1st. With the drop in nickel prices in April, nickel ore prices in China also fell, and NPI plants were less willing to buy in fear of a further fall. However, Ni 1.5% ore prices should bottom out on a CIF basis in May, as the Philippines will continue to ship steadily. Some restocking is set to take place from June/July, as the supply of ore will outweigh the demand recovery.

Chinese Nickel Ore Imports vs Stainless Steel Production

Nickel ore imports are already seen improving, while stainless steel production remained lackluster.

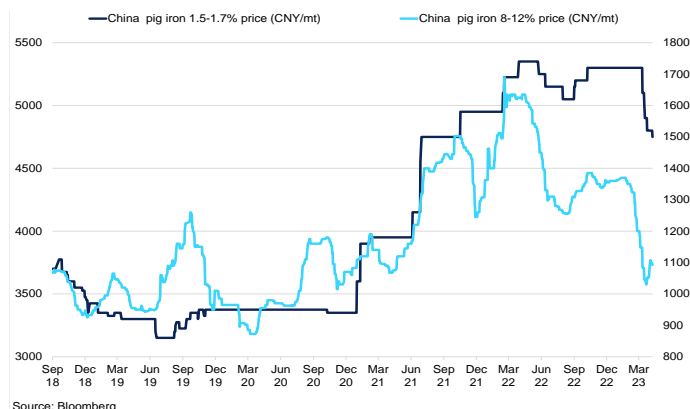


Source: Bloomberg

According to preliminary estimates by the USGS, mined nickel production in Indonesia jumped 54% y/y to 1.6m mt in 2022, making it the top global producer. Still, only 4% of overall mined production left the country as export as a matte. In recent years, the new production lines of NPI in Indonesia have continued to increase, while the growth of local demand is relatively limited. Indonesian NPI thus continued to flow back to the domestic market. At present, the domestic supply is in a surplus, and some domestic NPI manufacturers are at a loss. March figures stood at 100,400mt, down 1.4% m/m and up 24.5% y/y and April is set to improve slightly. Overall, Indonesian NPI output rose despite the poor demand from the stainless steel sector and the reduced construction of power equipment. In China, however, the story differs slightly, with March figures showing NPI output declining to 29,800mt by 9.0% m/m and 23% y/y, given a strong cut in stainless steel mills' production. NPI prices declined rapidly, with the high grade 8-12% NPI plunging to CNY1,030/mt. The 1.5-1.7% prices declined less sharply, down to CNY4,800/mt. With the improvement of the new energy sector, the companies were more active in switching from the high-grade NPI-based production lines to producing high-grade nickel matte spurred by the higher profits of the latter, further weighing on demand for high-grade NPI. March high-grade output stood at 23,500mt. We could see some withdrawals of NPI from the stocks by stainless steel buyers from April as mills see a slight recovery. As a result, NPI prices should remain low but bottom out.

Nickel NPI Prices

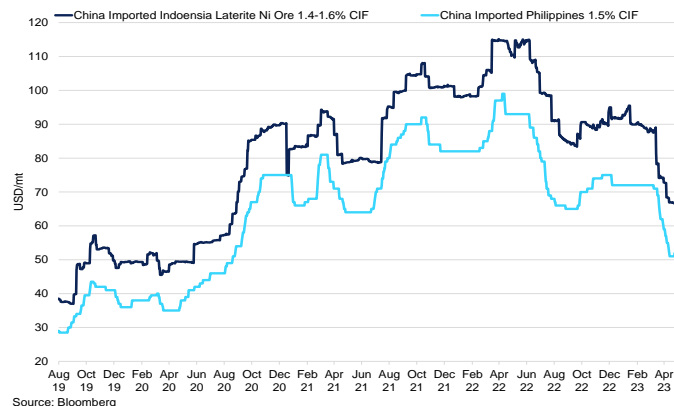
The 8-12% prices declined more rapidly given the recent shift away from high-grade NPI to high-grade matte instead.



According to SMM, Chinese stainless steel output totalled 2.68m mt in March, down 5.4% m/m and 11.6% YoY. The output of 200-series stainless steel fell 3.7% m/m to 871,000 mt, 300-series dropped 7.4% m/m to 1.37m mt, and 400-series declined 2.6% m/m to 439,000 mt. Many stainless steel mills cut production on low-profit margins. In April, Chinese stainless steel mills that had previously reduced output may resume normal operation, and mills in Indonesia will also restart production on a small scale. The total output of stainless steel will grow marginally, and the 300 series will benefit from that recovery the most; profits should improve somewhat. In addition to the muted domestic and foreign demand, the weakening cost support was a key driver behind the drop in stainless steel prices, which declined sharply to \$100/mt. We continue to pay attention to inventory consumption amid low raw material prices and declining spot supply. We saw some stainless steels build up some of their NPI stock on the back of lower prices, but given the lacklustre demand acceleration, that accumulation might slow. The supply glut persists, given the slow decline in inventory, while the costs gradually weaken, failing to support stainless steel prices. Therefore, stainless steel futures are expected to soften.

Nickel Ore Import Prices

We expect to see more expansion plans into Q2, and a surplus of supply, especially with the Philippines, could return to the market.



Still, construction should continue improving, with H2 2023 seeing stronger growth. Until then, demand remains lacklustre. Right now, the only spotlight for nickel is in the EVs. Despite tougher rules for tax credits, US EV sales are expected to grow to 1.4mn in 2023, accounting for 10% of total light-duty vehicle sales. This puts the US EV market in a better position to achieve the 2030 goals, but it will take time to form a mature domestic EV value chain. European BEV sales might stutter a bit in 2023. Globally, almost one in five cars sold worldwide this year will be electric vehicles, according to IEA, with sales already passing the 10m mark for the first time globally. This year's sales are projected to rise to 14m vehicles, including both the pure battery and hybrid models. China accounted for almost two-thirds of all-electric car sales in 2022, mainly because of a subsidy programme. In the longer term, the share of nickel usage is shifting away from stainless steel to batteries thanks to the increased use of scrap and decreasing nickel intensities in stainless steel. Still, nickel demand is set to nearly double, by 2.6MT from 2021 to 2030, with 50% of demand for stainless steel and 27% for EVs. EV demand is set to be the key driver behind nickel consumption this decade. Still, the market remains tight, with pressure on Class 1 supply as the world draws down inventories, whereas Class 2 is expected to be oversupplied but not enough to offset the shortage in Class 1. Stainless steel demand is growing, but the use of nickel in that area is diminishing, and scrap is increasing. In 2023, Indonesian supply additions will leave the market slightly oversupplied, although fast-growing EV demand represents some upside, keeping the metal use balanced.

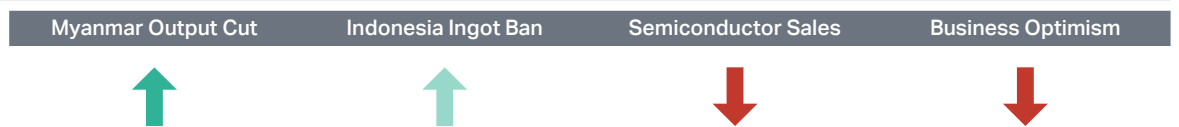
With major central bank moves out of the way, the micro factors will likely drive the focus again. Given the slow recovery from lockdown restrictions, confidence in China remains muted. While we still hold our optimistic view of recovery true, but the positive momentum is being priced further down the curve. In particular, we expect to see more expansion plans into Q2, and a surplus of supply, especially with the Philippines, could return to the market. NPI output should remain stable and improve slightly, and CIF might bottom out. However, overall demand remains low. China's recovery is slow, and stainless steel mills' improvement in production is not poised to offset the demand story. As a result, our outlook is for NPI prices to be flat with some upside. Nickel prices are set to remain in the lower ranges. But with the return of the overnight trading, some liquidity has been brought back into the market, with volumes at June 2022 highs at the time of writing, and volatility should subside as a result, especially for the arb players between SHFE and LME. Given the balanced demand-supply outlook, we struggle to see a strong appetite for prices out of the longer-term ranges.

Tin

LME Tin 3MO (\$)



Sentiment

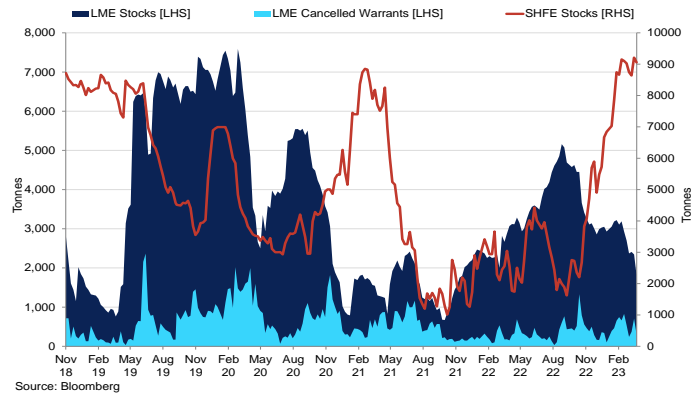


Overview: Tin prices benefitted on the back of China’s reopening confidence into the new year; however, those gains quickly disappeared as the demand story weakened. Still, thanks to the lower dollar value, and lower production news out of Myanmar, tin prices managed to gain 4.40% during the quarter. Recovery out of China has been slow, and we continue to watch out for moves out of the region to guide the outlook for base metals. Despite recent mining complications, SHFE stocks remain at 2017 highs, at 9,211mt, and global demand is seeing a further slowdown, especially from the global semiconductor and electronics sales. The Chinese recovery will likely continue gaining ground in the coming months, and while not robust, should provide some support for prices.

imports from Myanmar were about 13,300mt, a decrease of 22% y/y. In Q1 2023, ore exports from the region underperformed, falling by 44% y/y, but this is given the high base in Q1 2022 when Myanmar’s tin ore and concentrate exports hit a multi-year high, but that was mainly due to the sell-off of concentrate stocks by the local government. LME spreads jumped higher on the back of the Myanmar announcement to \$300/t, but since then, cash to 3-month returned close to contango, as markets do not yet see supply tightness as imminent. Myanmar has announced the suspension of its mining operations from August 2023, and mines with existing licenses will have three months to adapt to the new requirements. We expect China to front-load on imports from the region ahead of the deadline. This should keep the TCs for concentrate in China stable in the higher ranges in the coming months. TCs of Sn 40% concentrate in Yunnan currently average 182,000 yuan/mt and 186,250 yuan/mt for Sn 60% concentrate in Guangxi, Jiangxi and Hunan.

LME vs SHFE Tin Stocks

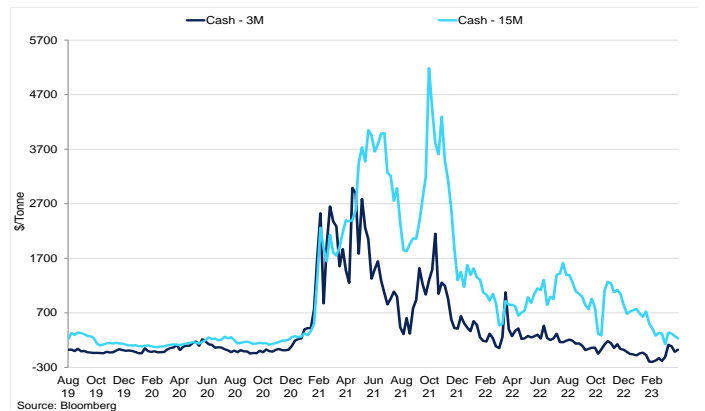
SHFE Deliverable stocks remain at historically high levels.



Outlook: In April, tin jumped higher after the news of Myanmar shutting down operations; the country represents 77% of China’s ore imports, although its reliance has been reducing. In March 2023, China’s tin ore

Tin LME Spreads

Cash to 3-month spread has flipped back into backwardation.

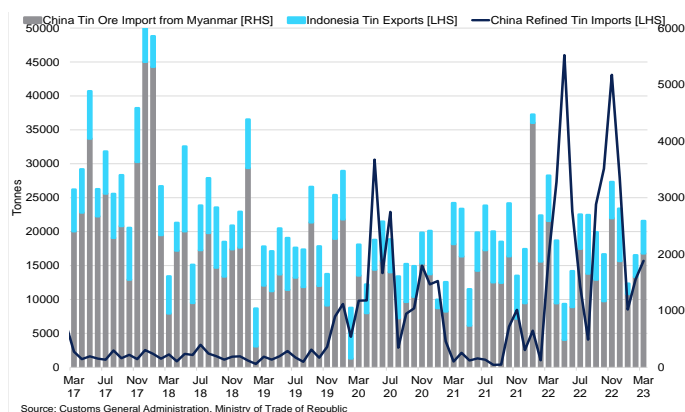


Coupled with Myanmar’s mining suspension, the Indonesian ban on exports of all unprocessed metal ore from June 2023 could weigh on import figures starting H2 2023. January to March exports out of the region declined by 41%, and the closed arb window has limited import interest into China. Since China’s mining output makes up about a third of the total supply, we expect Chinese mines to accelerate production. Still, it may be difficult for Indonesia to suspend tin mining and exports entirely, and instead, we are likely to see a reduction in tin ore supply but not a complete cut-off. The shock has not caused a significant rally in tin prices despite Myanmar’s and Indonesian share of total ore support. There’s a fair bit of buffer stock in China at the moment, and given muted demand for material, Chinese smelters may be looking for other sources of ore import but we do not expect rapid changes to take place until summer. As a result of a smaller surplus forecast this year, we expect tin prices will remain off the recent lows. DRC, Australian, and Nigerian exports into China totalled 23,500t, 11,500t, and 3,000t, respectively. However, we do not suspect these alternative sources can be ramped up fast enough or at a sufficient scale to offset losses from key producers.

Domestic refined tin output was 15,114mt in March, up 18.2% m/m but down 0.5% y/y, and the combined output in Q1’23 was flat, according to SMM. The month-on-month growth has been supported by low figures during the first two months of the year, but flat y/y growth suggests a lack of smelter appetite. Most other smelters should still maintain stable production in Q2’23; this should help reduce some of the concentrate stocks. Liquidity on the LME remains low, with volumes averaging at 1,200 across the 30-day moving average, meaning any bursts of volatility could trigger a disproportionate price reaction in the meantime. By the end of Q2 2023, we expect investors to focus more on tin’s poor demand picture. The bearish stance made sense given a significant easing in soldering demand from a slowing consumer electronics sector and the build in visible inventory in China. According to Canalys, global smartphone shipments in Q1’23 fell by 12% y/y, the 5th consecutive quarter of decline. Since the start of this year, the unfavourable macro environment has eased slightly, but the digital consumer market has not recovered as rapidly. Electronics prices in the US have suffered the most from easing inflationary pressures in recent months, given the lack of demand. The electronics PMI returned to contraction territory, highlighting subdued operating conditions in the global electronics sector. The downturn was mild yet indicated the eighth contraction in the past nine months. The renewed reduction was largely reflective of subdued global economic conditions and the sharp waning of the rebound from the reopening of the Chinese economy. Weak global demand was a running theme and was reportedly the primary factor driving downturns in a number of indices reading, including output, new orders and purchasing activity. Positively, supply chains were allowed the chance to recover further. Average lead times shortened to the greatest extent since December 2001, as subdued input demand reduced pressure on suppliers and logistical capacity. This was also reportedly a key factor driving the rate of input cost inflation to its softest since October 2020. Firms aimed to protect profits by partially passing higher cost burdens on to clients. However, other companies noted that price cuts were introduced in an effort to stimulate sales.

China Tin Imports from Myanmar and Indonesia vs Refined Imports

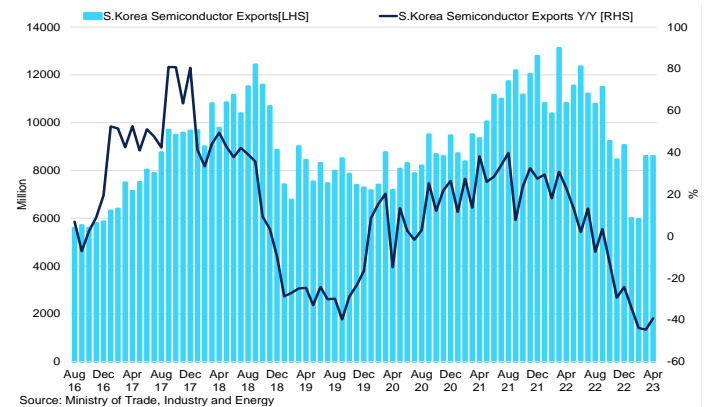
We expect to see higher imports from the key regions ahead of the shutdown of operating exports.



A similar trend is seen in the semiconductor sector, where sales in China, the Americas, and in turn, global sales have been steadily declining in USD value. After nearly a year of a drop in demand, the global semiconductor technology industry chain has been struggling with a slump in orders and price cuts. South Korean semiconductor sales have improved from February lows of 6,000m back above 8,000m; however, y/y growth remained dismal, falling by more than 40% y/y, the seventh consecutive month of negative growth. Recent surveys on business and consumer sentiment showed falling manufacturing orders and weaker household spending capacity, indicating that the demand is not set to rebound in the near term. We believe that exports of memory chips out of S. Korea will remain weak in 2023 as a result of oversupply in the global market. On the demand side, the end of the global rush for remote-working equipment, alongside slowing economic appetite in major economies, should further hurt sales of electronic devices. Such equipment is the main source of demand for memory chips and given the lower turnover of big-ticket items we have seen in recent months, the purchase of new items and upgrades will remain at low levels. We expect the global semiconductor equipment market to see a strong recovery in 2024.

South Korea Semiconductor Market

The year-on-year growth remains dismal.



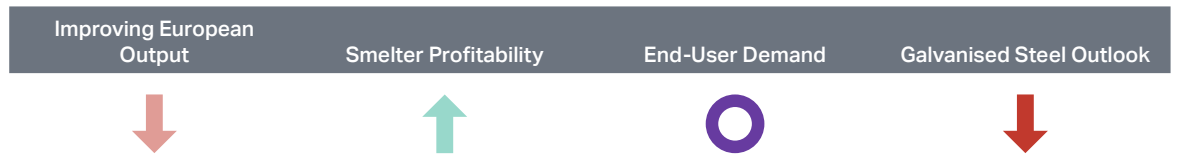
One bright spot for tin remains in the new energy sector from batteries and PVs but given the low usage of tin in these sectors, as well as the longer-term development in demand from these segments, the near-term impact on the metal is marginal. In the meantime, solar output in China has been improving rapidly, with both the absolute and y/y growth improving to 12%. For Q2’23, tin outlook is carefully balanced between fragile demand and struggling supply. Tighter supply from Myanmar and Indonesia are likely to support prices in the meantime. However, as we head into the summer months, US recessionary fears are set to come to the forefront of market focus, weighing on prices as China continues to recover.

Zinc

LME Zinc 3MO (\$)



Sentiment

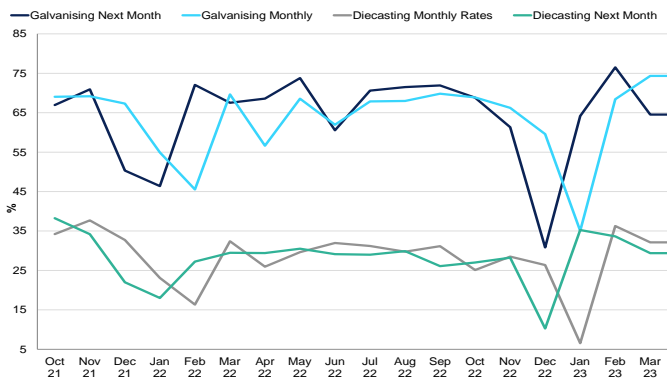


Overview: We saw zinc prices rally to the highs of \$4,500/t in 2022, driven mostly by uncertainties related to power risks in Europe as well as announced production cuts on the back of skyrocketing input costs. Despite the majority of halted supply from Europe still absent, LME zinc prices declined to the lows of \$2,800/t and \$2,600/t by the end of Q1 2023 and, subsequently, in April, driven by softening optimism out of China. Markets saw a lack of demand out of the region, especially from the stainless steel segment; the cash to 3-month spread dipped into a temporary contango at -\$14.25/t in April on the back of falling iron ore prices. Even with easing expectations from the Fed's tightening cycle and, in turn, a weaker dollar, zinc prices failed to hold up, suggesting the market focus has shifted back to fundamentals as most of the macro moves have been priced in. Overseas demand, especially in Europe diminished, resulting in a rapid decline in premiums. As a result, the zinc-to-lead cross continued to fall rapidly, down to \$547/t, given a sharper decline in demand for zinc than in lead.

Outlook: In 2022, it is estimated that European smelting production came in 13% lower y/y. Zinc saw the sharpest curtailment of capacity in Europe, at 30%, vs 25% and 20% for aluminium and steel, respectively. Zinc output in European smelters has already increased on a weekly basis given lower energy prices. Still, the demand outlook, especially from galvanised steel usage, meant that price performance between zinc and natural gas prices diverged sharply. It is worth paying attention to whether the smelters will speed up the production resumption in the coming months. The outlook for the coming year remains uncertain, particularly this upcoming winter, complicating the reopening of idled capacity in Europe. Refined supply is anticipated to be volatile in the short term. Therefore, the SHFE/LME zinc price ratio is likely to diverge slightly further, and the spread between the LME front-month and next-month contracts may be maintained in a weaker backwardation structure.

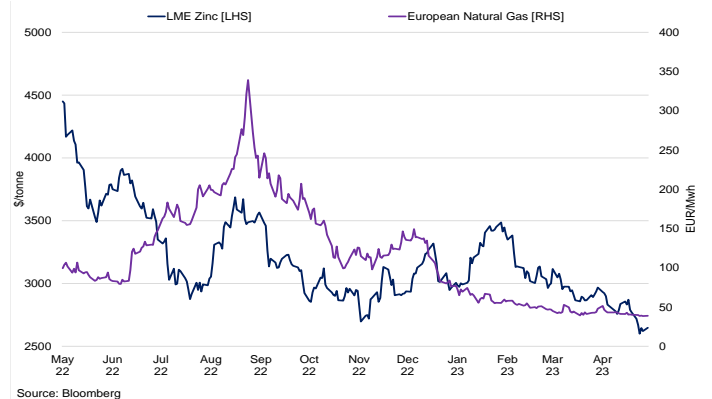
Zinc Operating Rates

Operating rates have softened slightly in March.



LME Zinc vs European Natural Gas Prices

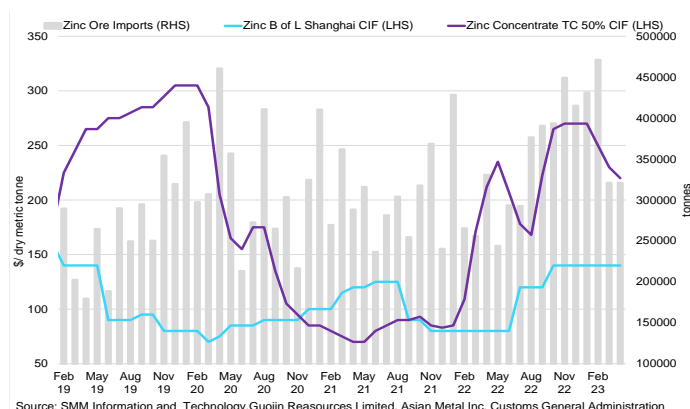
Zinc prices continued to decline despite slowing downside momentum from natural gas prices..



Overseas zinc concentrate supply was ample in Q1 2023, driving some inflows of zinc concentrate into China. According to customs data, China imported 320,858mt in March, up by 5.0% y/y but still down 30% on a month-on-month basis. YTD imports through March stood at 1.22m mt, up 28% y/y, thanks to positive performance in the first two months of the year. Imports from Australia came in lower, at 82,413mt in February, accounting for 25% of Chinese imports. Imports from Peru were 73,000mt, ranking second. Some traders lowered the imported ore TCs in anticipation of a fall in longer-term supply, especially with the Chinese mine maintenance taking place, resulting in a reduction in the profit of imported ore. Although the TCs for domestic zinc ore dropped to RMB4,930/mt in March, the high profits still encouraged domestic smelters to maintain high operating rates. SMM data showed that the domestic refined zinc output increased by 11.0% m/m and 12.3% y/y to 556,800mt. The production cuts in Yunnan contributed to most of the decline. Maintenance is mainly concentrated in Yunnan, Liaoning and Inner Mongolia, but the actual output reduction is relatively limited, and we expect to see stable smelter production out of the region. While domestic refined zinc output should have fallen slightly in April, the overall level of production remains flat on a year-on-year basis, above the 5-year average. We should continue to see continued demand for concentrate on a historical basis.

Zinc Ore Imports vs Treatment Charges vs Premiums in China

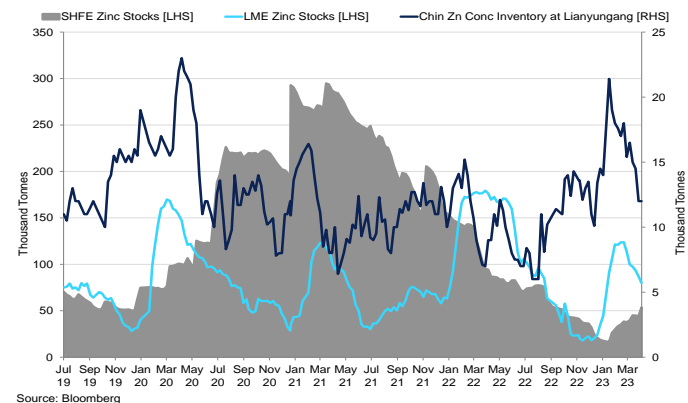
Lower imports into the region meant lower TC; premiums remained elevated.



As a result of lower imports into the region, concentrate inventory diminished rapidly, with stocks at the biggest Chinese port at Lianyungang at 11,500mt, December 2022 lows. The drawdown is set to continue but to slow, as imports are poised to improve slightly in the coming months. Smelters are expected to maintain normal production in April, while downstream buyers may slow down purchases due to high raw material inventory, given slow demand, which could potentially push up smelters' inventories. We also expect that downstream enterprises already benefitted from purchasing lead at lower price levels ahead of the Labour Day holiday. This should keep TCs slightly lower in the near term. Over the longer term, the story differs slightly. Higher TCs for zinc during recent negotiations have signalled that more supply is coming. However, the rebound will also hinge on structural issues, particularly power issues in Europe and China. This year's benchmark TC has been set at \$274/t, up from \$230/t in 2022, marking the second highest level in a decade, eclipsed only in 2020 - at \$299.75/t. The increase in the benchmark should provide an incentive for smelters to raise output this year. We are, however, cautious about this not bringing about a significant increase in smelter production, given that the high 2020 level struggled to bring higher output given the lack of momentum out of China. The higher TCs, combined with elevated domestic premiums for refined zinc, should generate an increase in higher metal production this year. Still, the level of growth might not be on par with increases in TCs. As of April, #0 zinc in Ningbo and Shanghai was quoted at RNB60-80/mt premium over SHFE. This time, smelter performance should determine the zinc price narrative, but recovery hinges on power availability in Europe and China. As a result, the market is set to remain tightly balanced in 2023, at 0.1Mt, after two years of marginal deficit, as some production comes back online.

LME vs SHFE vs Lianyungang Zinc Stocks

Zinc stocks in China for both the concentrate and final product continue to decline with lower imports into the region.



There are signs that the construction sector might have bottomed out, but we are cautious that the market remains weak, and a low base of growth is skewing the y/y numbers considerably. In Q1 2023, the average operating rate of construction machinery across China was 53.14%. This sector recovered month on month. The positive data indicated that China's infrastructure construction has improved since the beginning of the year. Fixed asset investment (ex. rural) stood at 10.73tr yuan, up 5.1% y/y but down 0.25% on a quarterly basis. Among them, fixed asset investment in the private sector stood at 5.85tr yuan, up 0.6% y/y. The orders were average as the downstream zinc alloy and galvanising enterprises in south China have recently resumed production. Coupled with falling zinc prices, enterprises remain in the wait-and-see mode. Over the coming decade, China's zinc consumption should decline as the economy pushes towards less steel-intensive industries. While future zinc demand growth is set to decline given the diminishing use of stainless steel in construction (60% of zinc demand), it will see some compensation through an increase in galvanisation rates in the automotive industry. At the same time, zinc demand is expected to benefit from the clean energy transition as a supporting commodity, but a structural shift in zinc demand in the near term is unlikely. In the meantime, demand seems lacklustre, even if construction is recovering; the recovery will be slow and continued production from the Chinese side should put slight pressure on the metal. Refined supply is anticipated to be volatile in the short term. The zinc story is one of demand, with a sharp upside risk potential given a rebound from China, particularly stainless steel. Moreover, given the narrow surplus and inventories slightly above 35-year lows, the overall supply is not enough to sustain a possible demand stock, and if it presents itself, we could see prices rally sharply.

Iron Ore & Steel

1st Generic SGX 62% Fe



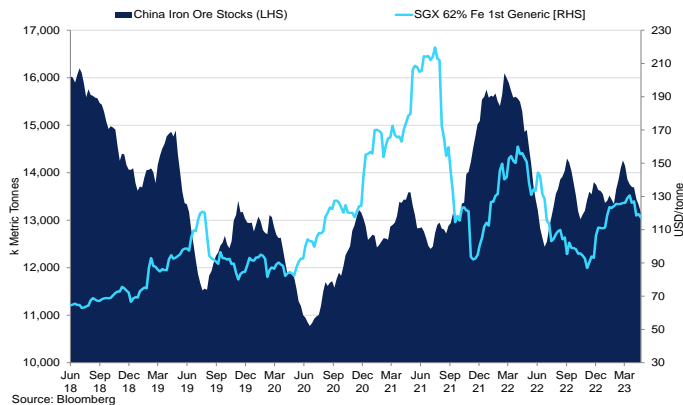
Sentiment



Overview: Steel and iron ore prices sold off as optimism around China's economy re-opening faded sharply, weighing on iron ore and steel demand. Domestic Steel rebar Shanghai and SGX 62% Fe iron ore prices weakened, falling by 6.6% and 11.5%, respectively, whereas HRC improved given the end of maintenance in North China. Given the low profit margins, stainless steel smelters were forced to cut output. This, coupled with low demand from the construction industry, weighed on prices, keeping them low at \$100/mt into April. Expectations over weaker concentrates demand weighed on local prices, but some destocking of ore took place ahead of the national holidays, pushing Steelhome iron ore port levels to 13,170k mt.

China Iron Ore Stocks vs SGX 62% Fe 1st Generic

Prices of iron ore declined despite lower ore stocks, as poor demand outlook drove the decline.

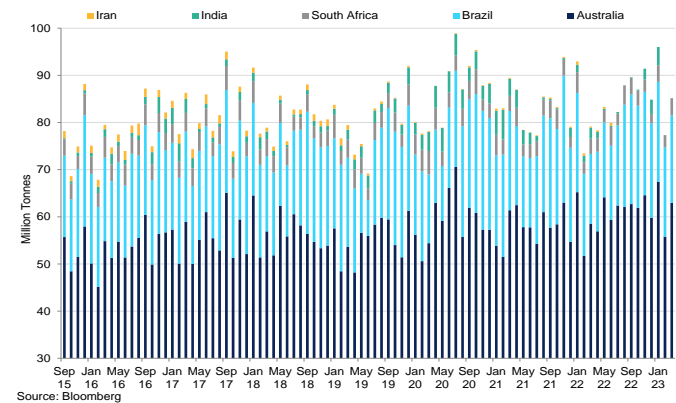


Outlook: Iron ore and concentrate imports into China totalled 100.23m mt in March 2023, up 14.8% y/y but down 31% m/m. Expectations of

deteriorating steel demand were triggered by weakening economic performance, encouraging steelmakers to book less freight. YTD imports through March were still positive, standing at 294.34m mt, a y/y growth of 9.8% given positive growth at the start of the year, when market players were still optimistic about recovery. Given lower demand speculation from stainless steel mills and poor weather conditions in Australia, we expect the April figure to have weakened sharply. Iron ore arrivals in China rose 14% y/y to 94.2m mt in March, with about 86% coming from Australia and Brazil, according to Refinitiv. Some steel mills with low inventory should restock after the holidays, bringing domestic concentrate stocks slightly lower. Still, expectations over weaker concentrates demand weighed on local prices, bringing them lower, to January lows. In general, steel mills may start to cut output for maintenance, especially after the CISA pushed for lower domestic steel output, further weakening the demand for concentrates. For Q2 2023 and beyond, there are still relatively large uncertainties in the steel market, and we expect steel prices to remain weak, pushing iron ore prices lower in the near term.

Iron Ore Imports into China

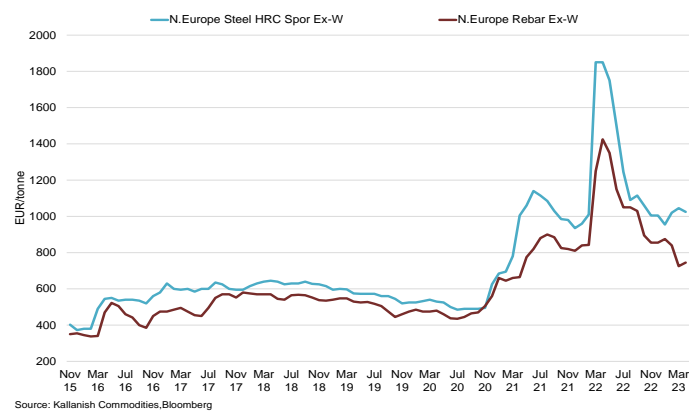
Australia and Brazil remain the key players into iron ore shipments.



According to SMM, Chinese stainless steel output totalled 2.68m mt in March, down 5.41% m/m and 11.62% YoY. The output of 200-series stainless steel fell 3.65% m/m to 871,000 mt, 300-series dropped 7.35% m/m to 1.37m mt, and 400-series declined 2.55% m/m to 439,000 mt. In April, some mills that had previously reduced output resumed normal operation, and mills in Indonesia will likely restart production on a small scale. However, the total output of stainless steel will grow only marginally, and the 300 series will benefit from that recovery the most, and profits will improve somewhat. Considering that steel demand effectively stagnated during the holiday in early May and the Fed raised interest rates, iron ore prices may face downward pressure after the holiday. Overall, the social inventory of total steel decreased in April, to 11.7m mt, according to CISA. The excess supply and slow demand recovery caused stocks of semi-finished products to swell, and stainless steel spot prices took a toll. Prices should remain weak in the short term, even as the steel inventory begins falling slowly.

Steel HRC and Rebar Prices in Europe

In line with China, rebar is seen underperforming in comparison to HRC.



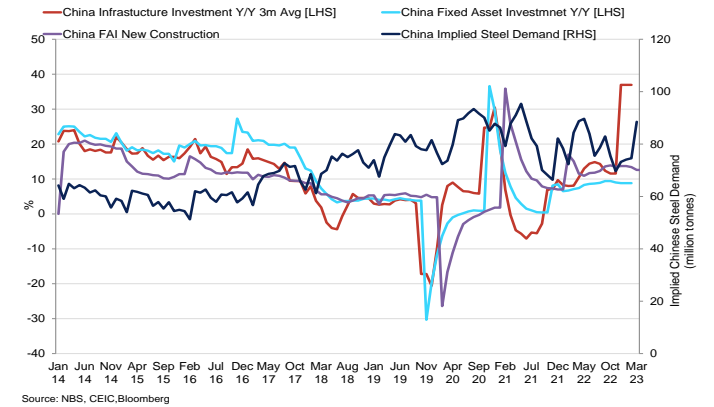
The rebar output increased only slightly, with the operating rates of EAF-based steel mills declining to 59.5%. Whereas for the BF-based steel mills, the output decreased to 430,700mt, affected by the maintenance and poor profits. In the follow-up stage, due to the low earnings of rebar, steel mills were more willing to produce steel plate instead. Overall, rebar supply is unlikely to increase sharply. As such, rebar inventory accumulation earlier this year has been slower than in the previous year. The removal of inventory started earlier but declined at a slower pace, given a lack of protracted demand. The total rebar inventory across social warehouses and steel makers in China stood at 9.93m mt as of April 20, down 17.3% y/y. As part of the cost support, coke has undergone five rounds of price cuts, with another potentially on the way. If steel mills extend output cuts, rebar inventories could diminish slightly, supporting prices. Still, in the near term, demand will hardly improve, and data showing the area of housing under construction fell further in March, which should undermine rebar demand in Q2 2023. A sustainable price recovery is likely to coincide with real estate improvement, which we see take place in H2 2023. Only when output cuts are deep enough to offset the demand deterioration, can we see prices bottom out and recover. Regarding HRC, output increased as the maintenance in China's key regions terminated. HRC output should have remained high in April, but the growth rate will slow. Although the supply of HRC has increased, the HRC stocks are expected to continue to fall with marginal recovery in downstream demand.

According to S&P Global, output in the global steel-using sector dropped for the seventh time in eight months during March, reversing the expansion seen in the previous survey period. That said, the decline was only slight and driven by Asia and the US. Conversely, European-based steel-using firms registered a modest increase in output that was the fastest for 13 months. Concurrently, new export orders fell at a solid pace that was the strongest since December. The reduction was broad-based across the three monitored regions, with Asia-based steel users seeing the first drop in backlogs since February 2021. Buying activity among steel users rose at a sustained, albeit softer, rate. Following the previous

report, we saw more consumer-focused spending from China, with service sector growth outperforming manufacturing.

China Infrastructure Investment

China infrastructure investment jumped sharply in March, as policymakers began to ramp up support for the sector.



Traditionally, the stimulus has been focused on infrastructure and property sectors; however, China's transition to a consumer-led economy meant that government expenditure was more focused on this area. Despite the property sector not being at the forefront of government focus, we expect construction to continue to improve in 2023, with growth accelerating in H2 2023. This is further supported by plans to increase province spending on major construction projects as the government aims to boost both sectors of the economy later in the year. Most of China's regions have announced spending plans for projects such as transport infrastructure and energy generation for 2023, adding up to more than \$1.8tr to the funding pool, up 17% y/y. Recent data shows the infrastructure sector may have already bottomed out. An index measuring construction activity jumped higher, the highest level in over a decade. But we do not expect this spending to filter through until H2 2023; demand should remain positive but lacklustre. In the US, amid a lack of available inventory, housing prices are being supported, but higher mortgage rates and diminishing propensity to consume suggest the outlook remains challenging. If the Fed pause does materialise, this could give the housing market some breathing room, and mortgage expectations should ease slightly. With that in mind, we could see marginal demand from consumers for new builds buying the dip. While this is not set to bring in a sustainable flow of consumers, this should still boost homebuilder confidence in the coming months.

With the absence of positive developments out of China, especially in the construction sector, iron ore and steel futures should drift lower. Still, markets remain cautiously optimistic, so longer-term support levels should hold before we see recovery accelerate in the latter part of the year. Hence, any positive news could exaggerate the upside moves. Our view of recovery from China remains marginal, with a greater focus on the consumer sector, especially in the current quarter. Additionally, fears of a recession in the US and Europe should weigh on overseas demand. We expect stainless steel mills restocked ahead of the holiday in May, but the overall production outlook remains muted, and only when output cuts by steel mills are deep enough, can we see prices bottom out and recover.

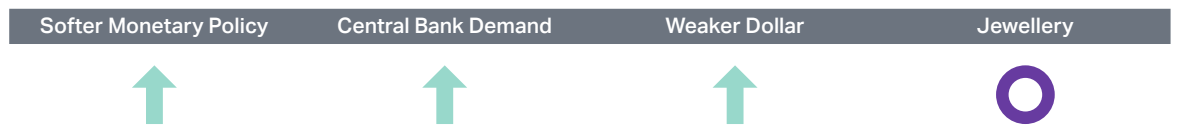
Gold

Spot Gold \$/Oz



Source: Bloomberg, 11.05.2023

Sentiment

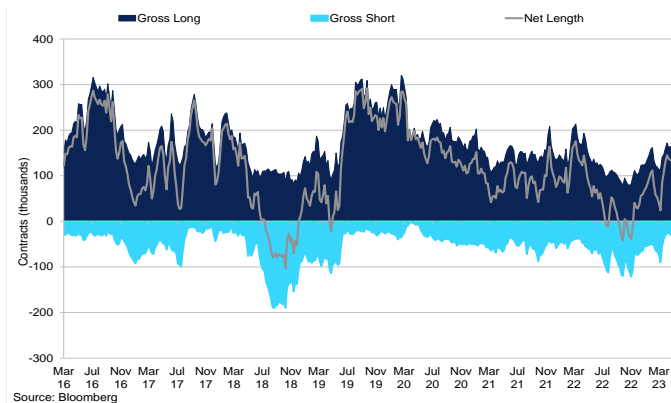


Overview: Gold gained 9% in Q1 2023, closing at \$1,969/oz on 31 March. The metal's price rose steadily from the start of January, propelled by fears of possible global recession and simmering financial tensions. In February, a sequence of stronger-than-expected US economic data and hawkish comments from the Federal Reserve changed market sentiments, leading gold to decline to the levels from the start of the year. 8 March proved to be Q1's second turning point as the collapse of SVB prompted fears of contagion across the banking sector, fuelling a gold price rally.

reaching 2,086t, primarily due to the gold price surge in Q4. Total gold supply halted two years of successive declines in 2022, lifted by modest gains in all segments.

NYMEX Managed Money Net Position

The market held a net long in gold in the first quarter of 2023.

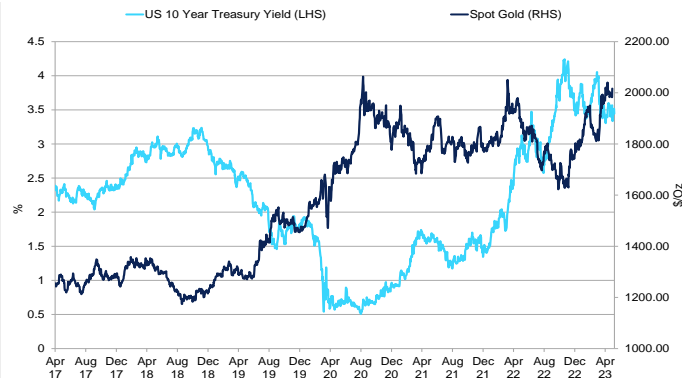


Outlook: The banking crisis increased global financial uncertainty, causing precious metals to rally. Given its safe-haven properties, gold was no exception: since the start of March, the metal surged 25% to \$2,046/oz in the second week of April. The price of gold depreciated slightly to stay at \$2,000/oz at the end of the month as markets started pricing in another 25bps interest rate hike by the Fed. In line with expectations, the 25bps interest rate hike materialised in May, with a more dovish statement from Jeremy Powell, suggesting that the central bank has ended its year-long aggressive tightening campaign. The greenback's outlook remains tilted to the downside as investors brace for a pivot in the next half of the year. With the pause of interest rate hikes priced in for this quarter's forecast, markets have begun to pay close attention to the impact this cycle has had on the real economy. As the appetite for the dollar is calming, precious metals, including gold and silver, might shine as traditional safe havens again. This, and continued financial uncertainty, should benefit gold's speculative performance. With slowing economic growth in major economic sectors of the world, the threat of recession could bring yellow metal to stay above the \$2,000 level for longer.

In 2022, cumulative demand for gold jumped 18% to 4,741t, reaching the highest levels in over a decade, driven by highest-on-record central bank purchases, strong retail investor buying and slower ETF outflows, according to the WGC. The investment portion of demand amounted to 1,107t, representing a 10% increase over the previous year, while holdings of gold ETFs fell by a smaller amount than in 2021, contributing to total investment growth. Jewellery consumption softened by 3%,

Gold Spot vs US 10yr Treasury Yield

The inverse correlation between gold and 10yr yield held in the quarter, as precious metal prices appreciated.

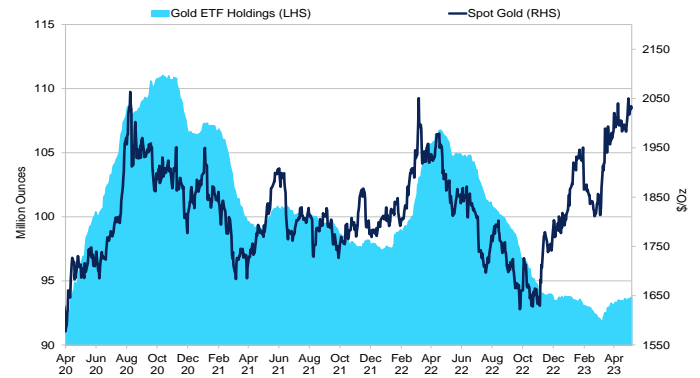


Source: Bloomberg

With the dollar continuing downward in recent months, the greenback is set to remain on the back foot compared to the highs of 105.66 we saw in March. Still, the currency could find support around the 100 level in Q2 2023, given the US economy's resilience to tighter credit conditions and souring global prospects. Growing pessimism about the US economy means we will likely see a weaker dollar and lower yields, which have a strong traditional impact on the speculative side of the metal performance. We expect the gold price to appreciate in the coming quarters as the overall uncertainty surrounding the global economy could further act as a tailwind for yellow metal's prices.

Gold vs ETF Holdings

The last months have noted an increasing divergence between ETF holdings and spot gold.

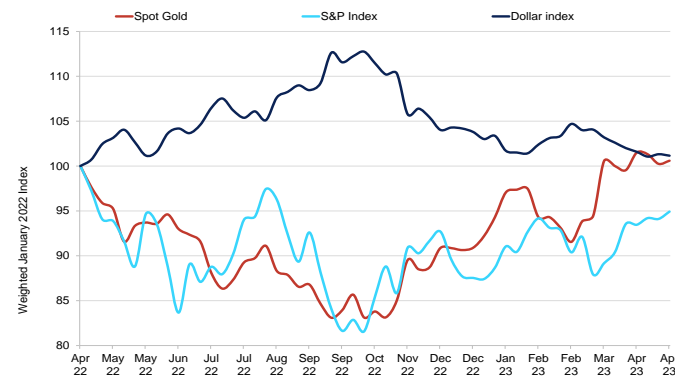


Source: Bloomberg

March and April saw an unprecedented rally in gold prices in India, reaching an all-time high of INR 62,800 for 10gm gold of 999 purity. The record-high prices in the country that accounts for more than a fifth of world demand for jewellery, bars and coins is likely to hit sales in the traditionally key demand season of the Akshaya Tritiya festival. While May might still be busy for sales because of the extended wedding season, predicted heat waves in summer could pose further headwinds for the sellers and importers. The price of gold is likely to remain elevated as central banks continue to increase their yellow metal reserves. According to World Gold Council, central banks accumulated gold at the fastest pace on record in the first two months of 2023, amounting to 125 tonnes. With global recessionary fears growing, we expect central banks to continue buying gold in Q2, which could create more upside opportunities for the precious metal.

Gold vs S&P 500 vs Dollar Index

The last year have seen a strong negative correlation between the relative value of gold and the dollar index.



Source: Bloomberg

Overall, we expect the recent momentum on the upside for gold to continue. The banking turmoil in the US and Europe is boosting the safe-haven demand for precious metals. Major economies are likely on course for a more material slowdown, reinforcing a solid case for gold. This is because investors prefer to invest in the yellow metal when the economy underperforms and during periods of financial uncertainty. Moreover, the weakening dollar and a softening stance adopted by the Fed will likely raise the price of gold further. The Fed's dovishness closer to year-end should drive real yields lower, increasing the opportunity cost of holding non-yielding bullion. On the downside, continued interest rate hikes among sticky inflation and unexpectedly high GDP growth in the US could drive prices lower.

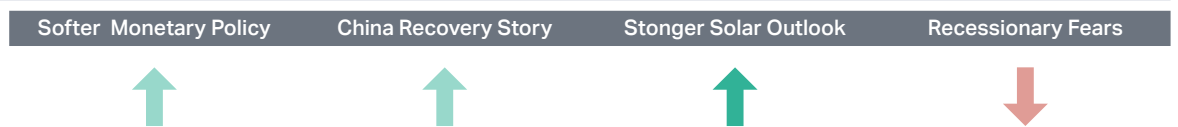
Q1 noted gold ETFs net outflow of \$1.5bn as a decline in European and Asian holdings dwarfed positive demand in North America. While March saw gold ETFs net inflow of \$1.9bn for the first time since May, it was not sufficient to revert the negative quarterly trend. Last month's inflows into physically backed gold ETFs were driven by investors flocking to less risky assets amid fears of financial contagion spreading. In Q1, North American funds saw the largest inflows, as gold ETF flows in the region matched the gold price trend. While the gold price decline led to outflows in February, significant price rises attracted inflows in January and March. The typically strong correlation between the gold price and inflows to gold ETFs did not hold in Europe as continued interest rate hikes deterred ETF investors. With a softening monetary policy stance on the horizon, we expect global demand to increase in Q2.

Silver

Spot Silver \$/Oz



Sentiment



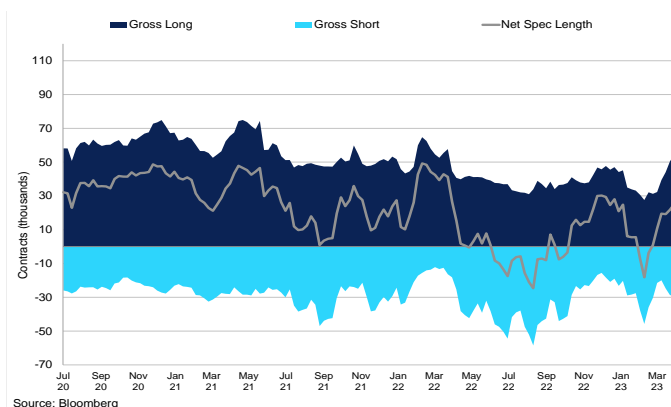
Overview: After the rally at the end of last year, silver started Q1 strongly amid market turbulence and rising recession expectations. The metal tested \$24.00/oz throughout January before declining in February, reaching a few-month-low of \$19.9141/oz on 8 March. Since then, prices have seen a surge in momentum, rallying 20% up to \$24.09/oz on 31 March. Silver came back on the rise after investors rebalanced their portfolios towards less risky assets due to fears of financial contagion caused by the collapse of SVB.

In 2022, cumulative demand for silver grew by 16% YoY and reached a new high of 1,210Moz, driven by increases in industrial use, jewellery and physical investment. Indeed, industrial investment achieved a new high of 539Moz due to the accelerated deployment of green infrastructure and the growing popularity of 5G technologies. Physical investment rose by 18% to reach a record high of 329Moz as investors rushed to precious metals amid geopolitical tensions and fears of high inflation. As for investment demand, the strength was driven mainly by buyers from India, who took advantage of lower rupee prices. The rise in demand in 2022, combined with only a 1% increase in production, led to a multi-decade-high deficit of 194Moz.

Outlook: In May 2023, the Fed confirmed its resolution to bring inflation down to a target of 2% with a tenth consecutive interest rate hike since last year. Investors have been keeping an eye on the rate and pace of the Fed's interest rate hikes in the previous quarter due to their impact on precious metals' prices. As of May, the Fed seems to have ended its tightening campaign with the central bank's benchmark overnight interest rate at the 5.00%-5.25% range. This could create upside opportunities for silver as a more dovish stance is likely to drive the narrative for the attractiveness of the white metal. The forward guidance from the Fed triggered inflation expectations to fall in the US, and we are seeing CPI fall, but CPI Ex food and energy continue to be sticky at 5.6% in March, compared to headline CPI at 5% Y/Y. The ECB and BOE have higher inflation, and the elevated currencies can be attributed to higher rates and weaker sentiment for the USD. The US yield curve is inverted, with the 2yr at 3.79% and the 10yr at 3.38%, as of 4 May. The decline in the longer-dated yields has helped trigger a rally in precious metal prices, and markets are pricing in the first interest rate cuts in September. Investors are shifting their attention away from treasury yields and the dollar, increasing the opportunity cost of holding precious metals like silver. While price pressures in Western economies are starting to ease, the pace of easing continues to be slow. Despite headline inflation softening month after month, persistently high core CPI should support metal performance as monetary policy influence on metals fades. This, combined with the softening dollar and weaker asset valuation in the US, is likely to support silver prices as investors shift their exposure to less volatile components of the economy. Moreover, financial uncertainty stemming from the tightening of lending standards calls attention to silver's safe-haven qualities, putting upwards pressure on the price of the precious metal.

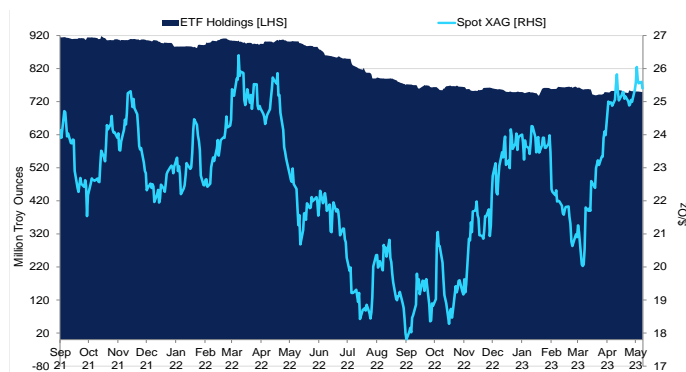
Silver Managed Money COT

The market is holding a net long in silver.



Silver Price vs ETF Holdings

ETF holdings have plummeted in recent months while appetite for silver increased.

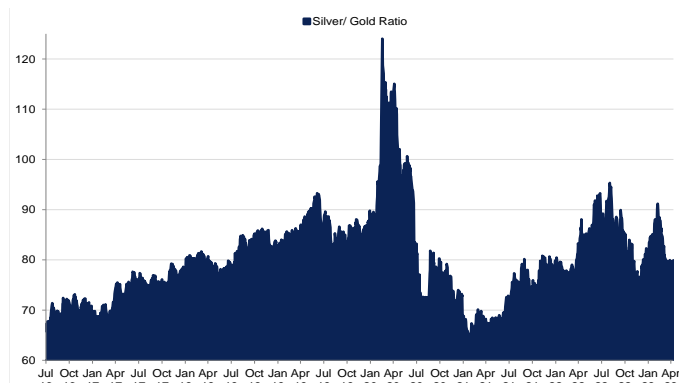


Source: Bloomberg

In Q2, silver is set to underperform gold as recessionary fears weigh on manufacturing and industrial performance. The global outlook continues to deteriorate, and with sticky inflation continuing to eat away at consumers' disposable incomes, demand for consumer goods is set to decline. Demand for other industrial uses, such as electronics and brazing could suffer from slower economic growth. As many manufacturers see diminishing demand for orders, we expect global PMI performance to soften in the next quarter. With China being the largest industrial user of silver, representing about 25% of global industrial silver use at 120Moz, the outlook for silver's industrial use depends on whether China can keep its growth momentum in the coming months.

Gold to Silver Ratio

The ratio between two metals started to narrow recently.

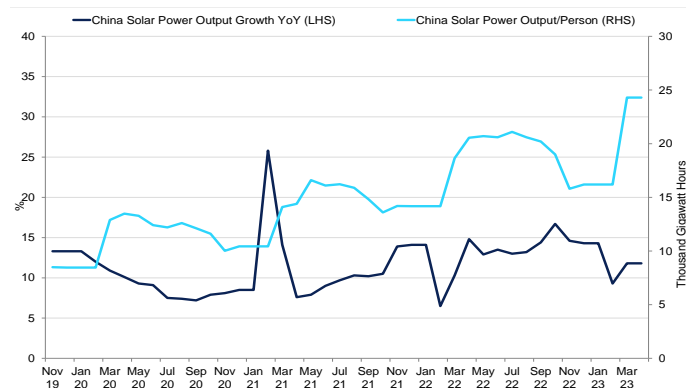


Source: Bloomberg

In line with our previous report, the outlook for photovoltaic silver demand is set to continue to grow in the coming quarters. The energy crisis following the crisis in Ukraine and the consequences of the reliance on Russian fossil fuel imports have accelerated the renewable energy transition. The International Energy Agency (IEA) forecasts that solar power is expected to surpass coal power by 2027 as growing PC efficiency makes it a cost-competitive energy source. Capacity increases of key material inputs such as polysilicon are likely to drive solar module demand further, which is bullish for silver as the sector makes up around 10% of global demand. Although recent years have registered a decrease in silver use per module due to technological improvements, its pace is still outplayed by the unprecedented demand for solar modules. Global solar PV installations are expected to increase by 53% YoY in 2023, with China maintaining its position as the largest market.

China Solar Power Output YoY Growth vs Output per Person

While year-on-year growth is positive thanks to the low base of growth in 2022, output per person is softening.



Source: Bloomberg

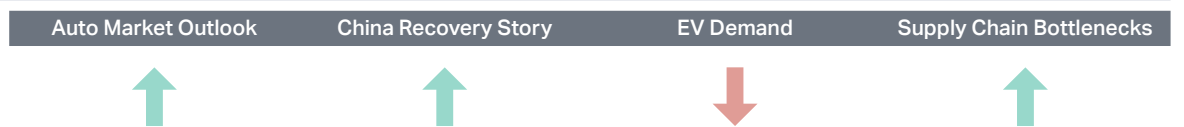
We expect the core inflation to remain sticky in the near term, and with this in mind, terminal rates from key central banks are likely to stay higher for longer, adding to slower GDP growth of major economies. We believe the markets are calling victory over recession too early as the real impact of previous hikes is still to filter through. The outlook for silver remains cautiously optimistic in Q2 2023, attributed in part to positive spillovers from gains in gold, as they both continue to benefit from macroeconomic and geopolitical uncertainties. A less hawkish stance by the Fed would boost precious metal appetite, and higher levels of economic uncertainty would help investors shift their investments to safe havens. On the downside, softer industrial demand will likely lead silver to underperform compared to its gold counterpart, especially if news from China points to less robust growth than expected. Overall, we expect a price-friendly environment for silver over the coming months, supported by a looming threat of recession and the eventual completion of the key rate hike cycles.

Palladium

Spot Palladium \$/Oz



Sentiment



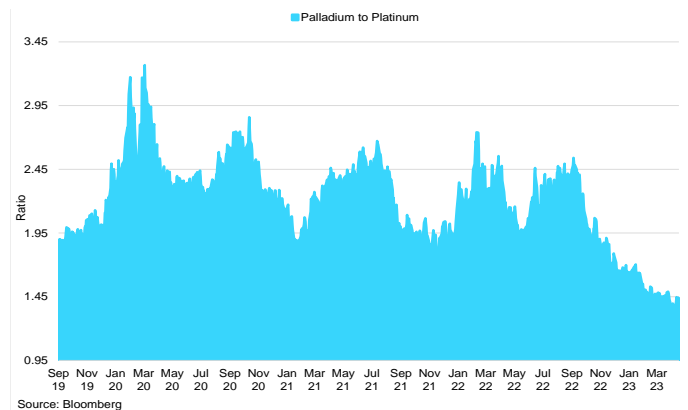
Overview: The price of palladium continues to diverge from other precious metals. Palladium lost ground in the first quarter of 2023, falling to a \$1,336/oz low in March, the lowest level since June 2019. Palladium price started 2023 at \$1,789/oz, and as of May 5th was trading at \$1,457/oz, pointing to a 19% decrease since the start of the year. The metal's price surge in 2022, when palladium's price reached \$2,021/oz, led automakers to replace it with cheaper platinum, causing the price to deteriorate in recent months. As Russia accounts for around 40% of palladium production, the heightened uncertainty stemming from the continued conflict in Ukraine further encourages automakers to decrease their reliance on the metal.

Outlook: Thanks to easing supply chain disruptions and increase availability of semiconductors, vehicle production in major economies is set to improve in the next months. The automobile sector is a key source of demand for palladium, amounting to 85%. In Q1, new-vehicle inventory was up approximately 70% YoY, at the highest level since summer 2021. Easing auto supply conditions have helped to ease the market tightness in recent months. As increased inventory is providing shoppers with better choices and shorter waiting time, consumer demand remains strong in major economies. In US, Q1 performed better than initially expected, with new-vehicle sales volume growing by 5.7% YoY. Tightening credit conditions and threat of an impending recession have not discouraged consumers from purchasing new vehicles. According to Cox Automotive, sales volumes were up by 8.6% in March, with 1.366 million units sold. In Europe, passenger car sales were robust in March, recording a 28.7% increase and surpassing more than a million units. Hybrid cars and battery electric cars noted significant increases in the market share. The main drivers of palladium demand are sales of petrol vehicles and emissions regulations, which continue to evolve. While petrol and diesel vehicles still account for more than half of EU car sales, the growing demand for EV cars, which do not require palladium in production, are putting downward pressure on the price of the metal. In China, car sales in the first three months of 2023 were down 1.4% YoY but April noted a 54.5% increase compared to a year earlier when Covid lockdowns disrupted production and sales. While vehicle production in

major economies is increasing, demand for palladium is expected to fall by 400,000oz in 2023, as EV are gaining market share and automakers are substituting some palladium for cheaper platinum in combustion engine vehicles. The longer-term outlook for palladium is cloudy, but Q2 should see prices recover from current lows as activity is picking up in the automobile market, especially if China's growth momentum continues.

Palladium to Platinum Ratio

Palladium's relative performance deteriorated compared to platinum.



From the supply side, as Russia and South Africa dominate worldwide palladium production, amounting to 80% of the global output, operating risks stemming from the war in Ukraine and energy issues faced by South Africa could lead to possible short-term upward moves in palladium prices. Norlisk Nickel, the world's largest producer saw its earning falling by 17%YoY in 2022 as the company faced problems importing equipment and transporting goods abroad. Due to sanctions-related operating challenges in Russia and electricity supply shortages in South Africa, global palladium mine output is expected to fall, leading to a 0.3 million oz deficit in 2023.

Platinum

Spot Platinum \$/Oz



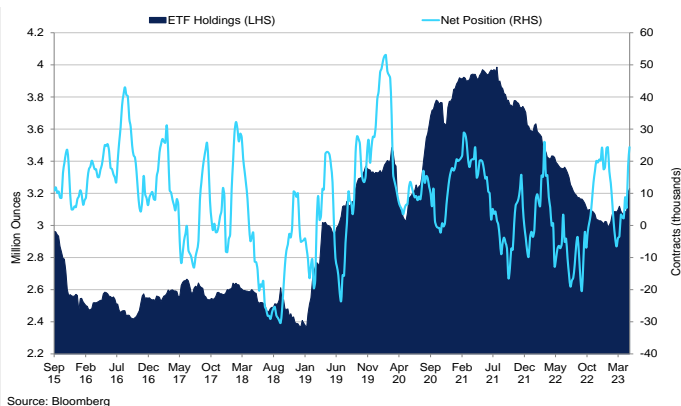
Sentiment



Overview: Platinum prices rallied during the quarter, testing the \$1,134/oz high in April. Softer dollar and power issues from South Africa offset the minor gains from the semiconductor space, pushing the metal to test March 2022 highs. The COT speculative positioning saw longs more than double to 41,109 by the end of April, and All Known ETF Holdings exceeded the 3.2moz level for the first time since July last year as investors bought into the rally. Given further weakness coming out of South Africa, the rand suffered significantly, being one of the worst-performing EM currencies this quarter. The rally stalled slightly but remains historically elevated, suggesting continued pressures on the upside.

Platinum ETF Holdings vs Net Length

Indicators jumped higher in April as investors tried to benefit from the price rally.



Outlook: Given South Africa's 75% contribution to global platinum production, continued issues surrounding the power rationing and logistical constraints are weighing heavily on overall economic performance and mining output from the region. The severity of load-shedding was unparalleled in 2022, and the situation is unlikely to

improve significantly this year. The severity is set to increase during the South African winter in the coming months, starting from June. Load-shedding resulted in the build-up of unrefined platinum last year, and this could lead to a loss of ~250koz of platinum production this year, struggling to hit the 4.1moz level. Already, Q1 financial results among major PGM miners pointed to load-shedding impacting refined output to some degree. In April, Eskom moved the nation back to Stage 6 load-shedding; while still off the highs of Stage 8 level, the peak demand reached 30.7GW, resulting in 7GW of excess demand. This is undermining the expansion projects that were supported to come online in time for winter months. If power availability remains poor, refined supply could fall short of the forecasts. Although the global economic outlook is relatively muted this year, production cuts could prop up prices and add to price volatility.

Meanwhile, from the demand side, global demand for autocatalysts is forecast to grow by 14% to a six-year high of 3.2moz. Light-vehicle production is recovering, and the wider use of gasoline converters should utilise more platinum instead of palladium. Passenger vehicle sales improved across the board, with the biggest producers posting positive month-on-month growth. US passenger vehicle sales increased to 295,257 units, up 23% m/m and 11% y/y, as dealer inventories replenished through higher production volumes. Still, those gains are being muted by elevated prices and rising financing costs. According to the data in the latest CPI report, even with big-ticket items seeing the sharpest correction in prices amongst the goods, absolute costs remain high enough. This, coupled with a diminishing propensity to purchase from consumers, should weigh on prices further. BEVs comprised nearly 14% of the total figure, whereas plug-in hybrids reduced slightly to 7.2%.

Although a short-term correction after the recent rally took place, our overall outlook remains on the upside. With automotive supply recovering thanks to the easing in supply chains, the risk of mined supply from South Africa should underpin our view of a tight market throughout the year. The price could still have some upside, particularly if the power supply situation worsens in the next couple of months.

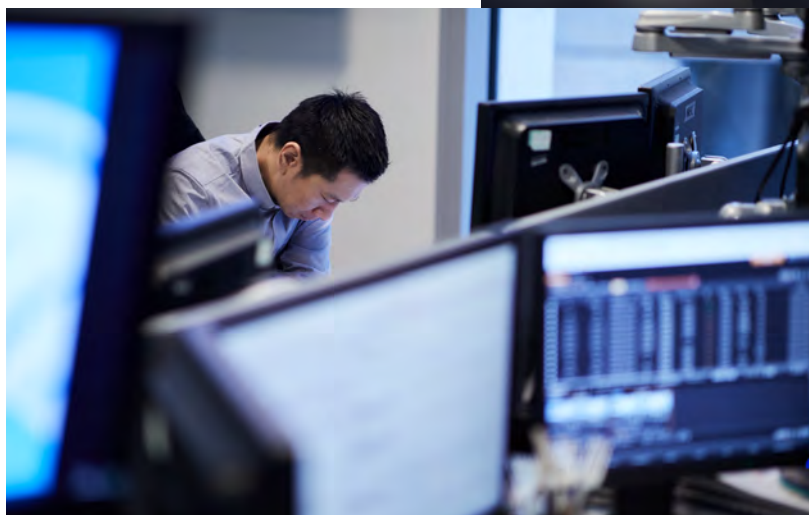
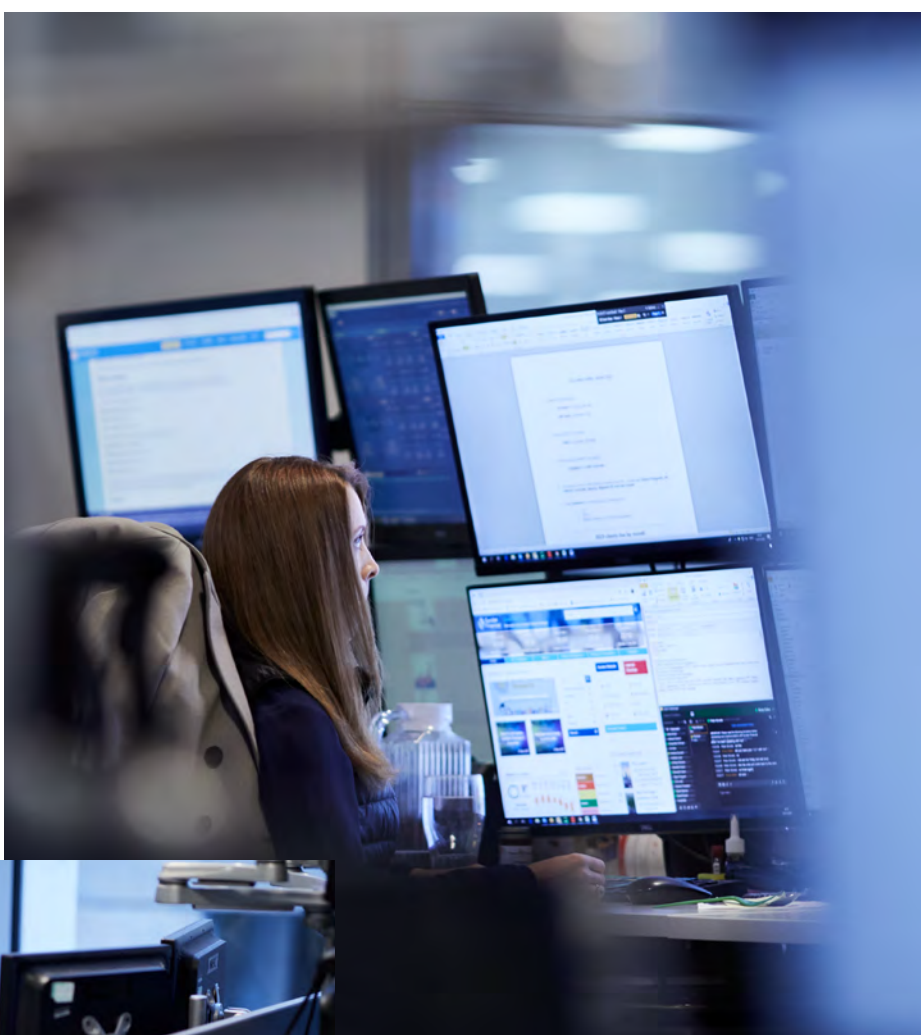
Sucden Financial — Multi-asset expertise


We offer multiple trading and technology solutions, engineering opportunities across FX, fixed income and commodities.

Sucden Financial's experienced and knowledgeable teams are central to our success, drawing on their expertise to exploit ever-changing markets, technology and trading environments, to keep our clients ahead. We are open minded, constantly evolving and adapting to tackle today's and tomorrow's opportunities.

Stability and strength

We appreciate how important it is to feel secure in your trading requirements. We are proud of our long-term financial stability and substantial balance sheet of over USD150m.





Disclaimer: The material in this report has been issued in the United Kingdom by Sucden Financial Limited ("Sucden") which is incorporated in England and Wales with company number 01095841. Sucden's registered office is: Plantation Place South, 60 Great Tower Street, London, EC3R 5AZ. Sucden is authorised and regulated by the Financial Conduct Authority.

Sucden Financial Limited is authorised and regulated by the Financial Conduct Authority.

This is a marketing communication. Forecasts are not a reliable indicator of future performance. The information in this report is provided solely for informational purposes and should not be regarded as a recommendation to buy, sell or otherwise deal in any particular investment. Please be aware that, where any views have been expressed in this report, the author of this report may have had many, varied views over the past 12 months, including contrary views. A large number of views are being generated at all times and these may change quickly. Any valuations or underlying assumptions made are solely based upon the author's market knowledge and experience. Please contact the author should you require a copy of any previous reports for comparative purposes. Furthermore, the information in this report has not been prepared in accordance with legal requirements designed to promote the independence of investment research. All information in this report is obtained from sources believed to be reliable and we make no representation as to its completeness or accuracy. This report is not subject to any prohibition on dealing ahead of the dissemination of investment research. Accordingly, the information may have been acted upon by us for our own purposes and has not been procured for the exclusive benefit of customers. Sucden Financial believes that the information contained within this report is already in the public domain. Private customers should not invest in these products unless they are satisfied that the products are suitable for them and they have sought professional advice. Please visit our website to view our full risk warnings and disclaimers: www.sucdenfinancial.com.

United Kingdom

Sucden Financial Limited
Plantation Place South
60 Great Tower Street
London
EC3R 5AZ

Tel: +44 (0)20 3207 5000
Email: info@sucfin.com

Hong Kong

Sucden Financial (HK) Limited
Unit 1001, 10/F
Li Po Chun Chambers
189 Des Voeux Road Central
Hong Kong

Tel: +852 3665 6000
Email: hk@sucfin.com

USA

Sucden Futures Inc.
156 West 56th Street
12th Floor
New York, NY 10019

Tel: +1 212 859 0296
ny@sucfin.com

www.sucdenfinancial.com/QMR