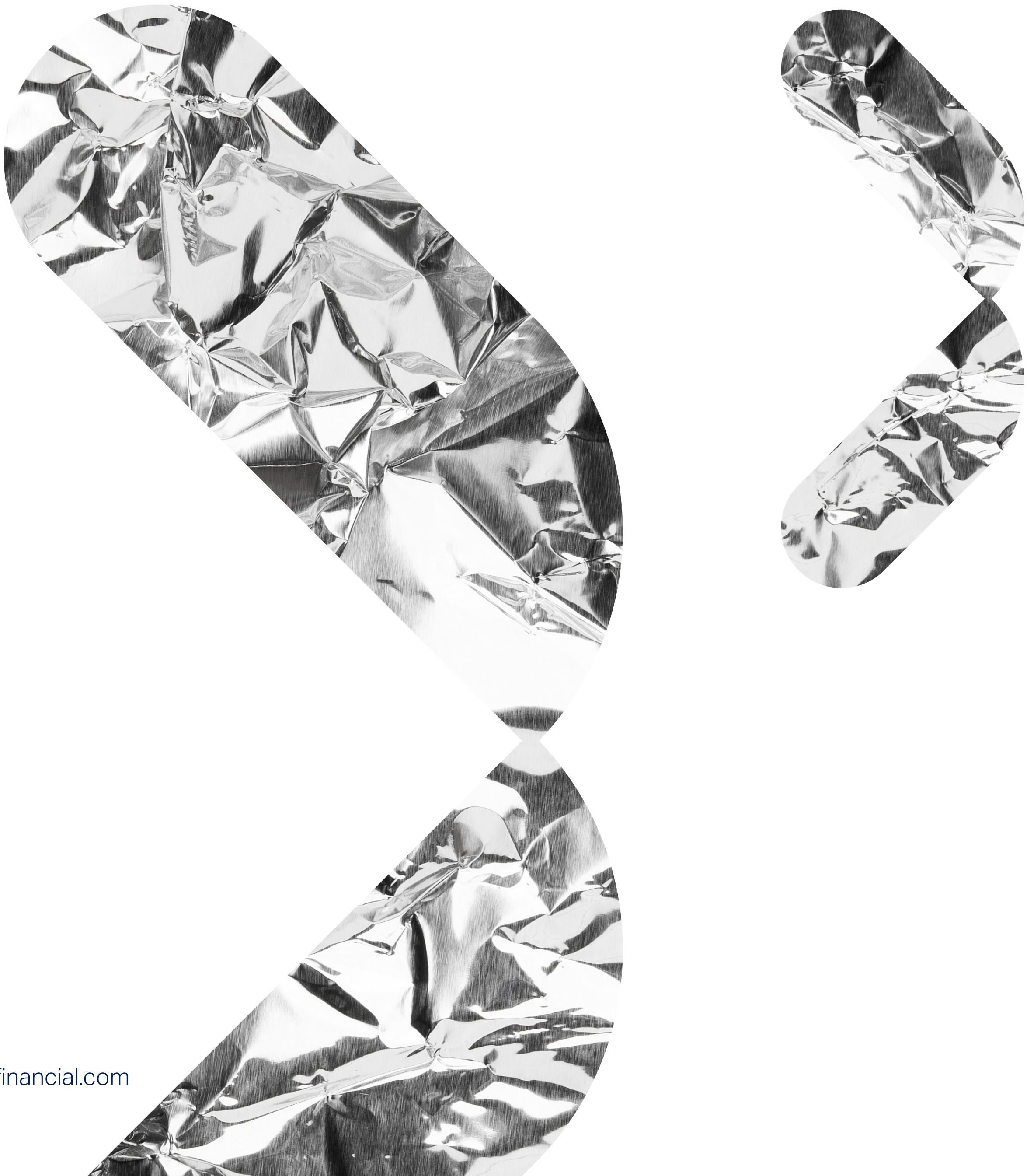
Sucden Financial

Quarterly Metals Report

Q1 — February 2022

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



sucdenfinancial.com

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
04 February 2022

Authors:

Geordie Wilkes
Head of Research

Daria Efanova
Research Analyst

Research Desk
research@sucfin.com

Press Enquiries
press@sucfin.com

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

www.sucdenfinancial.com/QMR

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 over 45 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

Equity markets are choppy due to the change of stance from the Fed, who have suggested they will stop asset purchases and raise rates three times this year. This has caused yields to rise, and the divergence in global rates is certainly significant. All major central banks are not yet on the same path, but 10yr yields in Europe have rallied, with few now negative. Inflationary pressures will remain prevalent in H1 2022, and conflict between Russia and Ukraine could worsen the situation with negative impacts on metals, energy, and grains exports. We expect the choppiness to remain prominent in the immediate term, and metals are likely to maintain key support levels due to backwardated spreads, low exchange stocks and tightness outside of China, which would be compounded if Russia invade Ukraine.

Aluminium (Al)
Aluminium prices are holding above $3,000/t, and we expect the trend to remain intact in Q1. The bullish factors of power rationing and limited primary supply tighten the market. Monetary easing in China could indicate stimulus on infrastructure, grid, and renewable energy. The low inventories in Europe compound this issue, and if we see sanctions on Russia and lower exports for gas to Europe, we expect further volatility and spikes towards $3,300/t.

Copper (Cu)
Near term tightness in the copper market is expected to remain in the near term as supply-side cost-push inflation persist, but demand-pull is weakening across the globe. This presents significant downside potential in the medium to long run, which we expect to materialise in H2 2022. Low inventories and a volatile macro environment have kept prices elevated and spreads backwardated. Open interest on the 3-month contract is low, accentuating volatility. High copper prices and premiums in China have capped Chinese demand. We expect copper to remain rangebound; spikes above $10,200/t may be short-lived due to supply-chain based unless there is a change in the fundamentals. Range: $9,100/t - $10,500/t.

Lead (Pb)
The investment funds' net position shows a mild net-long with a z-score of 1, considerably below the maximum. We see upside for lead in the near term due to energy risks from China and little product in Europe and the US. Due to high scrap and energy prices, profit margins will decline towards CNY150/t. We expect selling above $2,400/t, and the curve is backwardated; our downside target for quarter-end is $2,150/t.

Nickel (Ni)
Prices skyrocketed by the year-end, on market tightness, which was further exacerbated in mid-January, where a market squeeze pushed the metal to test the $24,000/t level. At the time of writing, it shows no signs of abating, as both the SHFE and LME markets are being squeezed. There are a number of events that could push prices once again during the quarter: the geopolitical tensions between Russia and Ukraine, and the potential export levy from Indonesia. Overall fundamental demand picture remains strong, and our range for the quarter is at $19,030-25,200/t.

Tin (Sn)
We expect prices to remain on the front foot and hold above $40,000/t and test $45,000/t, but gains will remain limited. Recycling will play a key role for tin and other base metals going forward, but collection rates need to improve. Power restrictions, Chinese New Year, and the Winter Olympics indicate a refined output from China will be capped in the near term. As a result, consumption will grow slower, but the supply chain bottlenecks and capacity restrictions for semiconductors are prevalent.

Zinc (Zn)
Zinc TCs are low and currently favour the miner. We expect TCs to improve in Q1 and 2022. High electricity and energy costs have plagued the zinc market, especially in Europe. High gas and electricity prices will keep output subdued in Q1, but we do question how much European smelters have cut production; they could cut production and benefit from selling power. We expect prices to drift lower as we move through Q1 towards $3,300/t, but if the energy outlook in Europe worsens, we could see spikes to above $3,800/t, where we favour selling the market.

Iron Ore & Steel
Steel production will remain low in key areas until after the Chinese New Year, when restrictions may ease slightly before being lifted after the Winter Olympics. Higher steel output and more robust than expected stimulus will see iron ore inventories decline from where they are now. However, we still expect end-user demand to be weak, especially in the property sector. HRC and Rebar margins are elevated, and previously we have seen mills increase output despite softer demand to realise profits. This would prompt upside to our base case for iron ore demand, but the caveat to this is environmental controls. The market has a nature of surprising to the upside, but we expect a $100-$140/t range for Q1 2022.

Gold (Au)
The precious metal was somewhat rangebound in the last quarter of the year, with the most significant upside seen during the Fed meetings, as officials began tilting their stance to a more hawkish. More recently, we have seen gold strengthen on the back of continued inflationary pressures and the fears that central banks are not doing enough to keep the price pressures down. Our overall outlook for gold is that of moderate softness. We hope to see inflation begin to soften month-on-month, given easing producing prices, and for the tightening cycle to further drive this deceleration during the year. Our range is at: $1,720-1,880/oz.

Silver (Ag)
Silver, in line with gold, saw moderate softness during the quarter, further driven by industrial weakness softening the demand outlook. While the fundamentals remain on the back foot, silver prices saw some upside in mid-January driven by a pullback in nominal yields and signs of non-abating inflation pressures. The manufacturing side remains weak, and we see stronger demand for physical silver, such as jewellery and coin. Our range is at $20.6-25.3/oz.

Palladium (Pd)
Palladium was one of the worst commodity performers last year, falling as much as 40%, as shortages of chips stalled recovery in the auto industry, driving sales globally to a halt. At the beginning of Q1, we saw the precious metal break above $2,000/oz on the back of softer dollar and yields, as well as growing geopolitical tensions between Russia and Ukraine, urging investors to flock to safe-havens. Fundamentally, the demand side remains muted, but these events could cause temporary spikes in prices, causing the metal to test resistance at $2,520/oz, the support stands at $2,020/oz.

Platinum (Pt)
Platinum softened during the quarter, in line with palladium, on the back of weak global automotive demand being stifled by shortages of chips. We did see a bounce back above $1,000/oz as investors sought the metal as an inflation hedge as well as its safe-haven properties. We do not see the auto sector recovering in H1 2022, further creating headwinds for platinum prices recovery this quarter. Our current range stands at $900-1,120/oz.

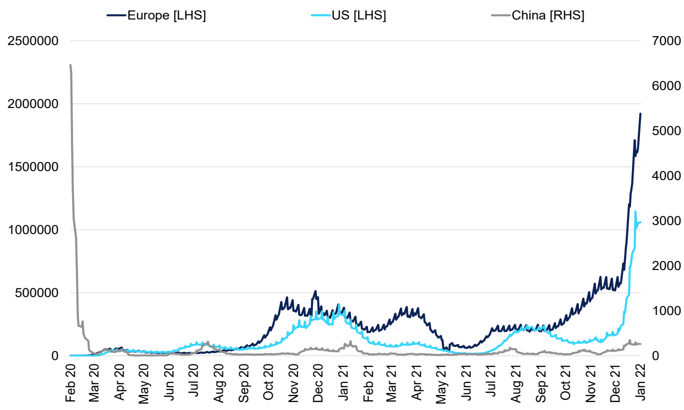
Market Overview

Global Outlook: This time last year, our outlook for 2021 was positive, given the early introduction of the vaccine regime and subsequent economic recovery. While this has been primarily true, countries faced other challenges, such as supply-side bottlenecks and high inflation, that have been carried into 2022. We expect this year to be mostly that of adjusting and rectifying, as the governments address the strategy of lockdown restrictions and ways of diminishing fiscal support while getting used to some aspects of the economy performing above targets.

As a result, we expect to see a bumpy ride as some economies struggle to reopen their service sector completely and consumers lack confidence and excess funds to drive the demand side. This divergence will be further exacerbated through vaccination availability and the possible origination of new variants. However, assuming the persistence of the virus's nature and high number of vaccinated people, i.e. more contagious but with a limited burden on the healthcare system, we would expect the governments to keep restrictions to a minimum during the subsequent waves. Even so, while not significantly impacting global demand, continued progress toward COVID-19 vaccination will be vital in resolving supply-chain bottlenecks and, in turn, unwinding elevated price pressures; however, we do not expect these numbers to drive developed economies' demand this year. Global growth is forecast to soften, and the IMF expects growth of 4.9% relative to 5.9% in 2021.

COVID-19 cases in Major Economies

Major economies are going through their worse COVID-19 outbreaks yet, driven by the spread of the omicron variant.



Source: Bloomberg

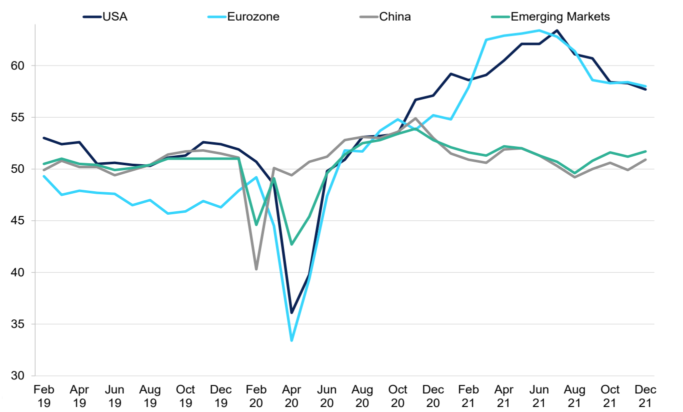
Oil: Oil futures began climbing once again in December in the face of omicron as supply constraints from OPEC+ and North America offset concerns about the impact of the COVID-19 outbreak in China. A deep freeze in Canada and the northern US disrupted production, boosting prices at a time when US stockpiles have been shrinking every week since mid-November and getting closer to 3-year lows. Other members have also struggled to produce in line with their quota: ranging from Iranian producers to Kazakhstan's oil fields being temporarily adjusted amid political unrest. A growing premium for prompt barrels suggests that supply troubles across the OPEC+ coalition -which was able to provide only part of the planned production increase - are delaying the onset of an anticipated surplus in the markets.

Still, prices face headwinds as China locks down some cities to try and stem the spread of its second-worst Covid-19 outbreak. As a result, IHS Markit lowered its projection for China's total oil demand in the first quarter of 2022 by 420,000 b/d due to restrictions on mobility. In addition, renewed lockdown measures, the impact of national holidays, the Olympics, and Congress meetings are likely to limit mobility in Q1, further dampening demand. As a result, Saudi Arabia cut oil prices for buyers in Asia, signalling that extra supply from OPEC+ could loosen the market amid the rapid spread of coronavirus.

Manufacturing PMIs: European PMI data showed further easing in the supply chain crisis as average lead times grew by the smallest amount since February. The index fell from 58.4 to 58.0 in December, the lowest reading in 10 months. Producers saw alleviating input and, in turn, output price pressures, but not enough to come down from historic highs. Output, however, continued to disappoint and remained unchanged month-on-month, which is also near 2-year lows.

PMI performance for Major Economies

China and other emerging markets saw a marginal recovery in manufacturing in December, meanwhile developed economies continue to weaken.



Source: Bloomberg

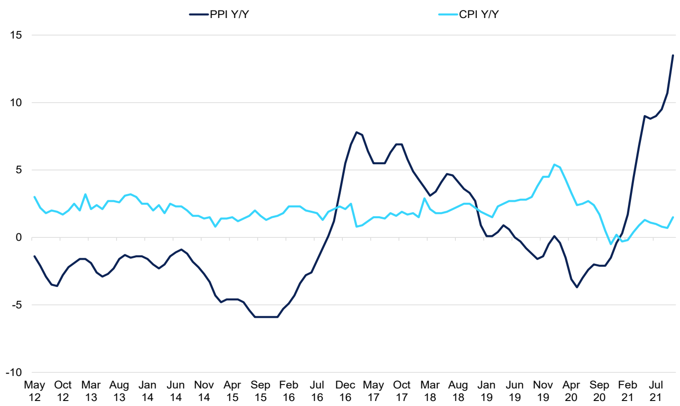
US manufacturing sector performance gained at a more modest pace month-on-month in December, posting 57.7 down from 58.3 in November amid subdued output and new orders growth. This is the fifth consecutive month of softening growth, and the reading is now at the lows not seen since December 2020. At the same time, manufacturers recorded the softest climb in new orders for a year and softening vendor performance amid severe material shortages. Input pressures, however, persisted and longer lead times for input lead to another increase in backlogs, pushing up the cost burdens. Demand is forecast to slow further as consumers become more hesitant to place an order before working through their existing stock first.

Manufacturing conditions across China improved slightly by the year-end, with PMI growing to 50.9 from 49.9, expansionary reading and the strongest since June. Firms signalled the strongest increase in output for a year amid a renewed uptick in total sales. However, foreign demand remained lacklustre, with export orders broadly stagnant. Improved demand prompted a fresh rise in purchasing activity, but backlogs rose again amid a further drop in staffing levels. Supplier performance meanwhile deteriorated at a softer pace, and inflationary pressures weakened as input costs rose at the weaker rate in 19 months.

US: The US economy grew by 2.3% in Q3 and is expected to nearly triple to 6.0% in Q4, despite the spike in COVID-19 cases closer to year-end. The country has experienced the strongest wave of infections thus far, reaching 1m a day in the first week of January, however, we saw fewer restrictions across the states - a sign of government unwillingness to stall economic recovery due to the virus. Inflation continued to accelerate, with the November figure growing by 6.8% y/y, the highest since 1982. We saw that in the service sector efforts to pass greater costs to clients were amplified by soaring wage bills and increased transportation fees, as it drove cost inflation up to a series high. The opposite was true for manufacturing, where a lack of demand prevented producers from shifting the costs downstream. The sharpest spike was seen in auto-related categories, stemming from a global shortage of semiconductors. Indeed, most of the increases in inflation have come from goods, not services, which will further confirm the supply chain importance.

CPI vs PPI y/y

We saw month-on-month softness in PPI, which should alleviate some pressures from CPI performance in the coming months.

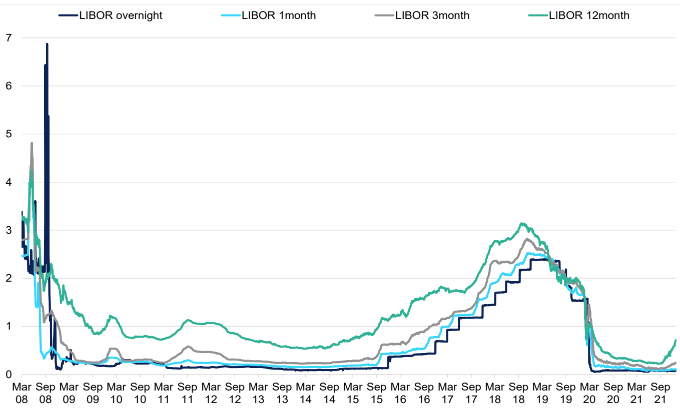


Source: National Bureau of Statistics

Fed officials were also unanimous in expecting they would need to begin raising rates in March, marking a shift from the previous round of forecasts in September, which showed that officials are divided in their opinions. At the same time, elevated inflation continues to eat away at people's salaries as real wage growth continues to decline month on month. The latest reading showed a decline of 1.9% y/y, the lows not seen since this summer. The Fed's latest statement confirmed that the liquidity and low borrowing costs might be removed quicker than expected. The January minutes pointed to officials' increased preference for a path of rate hikes and a shrinking of the bank's $8.8tr balance sheet.

LIBOR overnight, 1m, 3m, 12m

Rates are edging higher as markets are pricing in multiple rate hikes in 2022.



Source: ICE Benchmark Administration

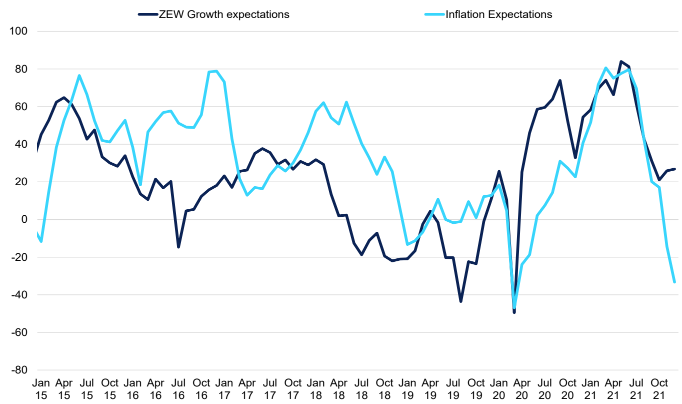
Robust household income alongside accumulated savings from government support leave the consumers in a position of strength this year. However, we do expect overall demand to be soft as we begin the year, driven by the delays coming from the supply side. The biggest incremental drag next year comes from fiscal policy. Elevated wage inflation and exceptionally strong labour demand are the key risks to this forecast. Fiscal policy risk is still high as the Build Back Better bill passes the House, and the mid-term elections could significantly sway further support for the economy. Even if President Biden's Build Back Better full infrastructure package is passed, its per-year stimulus impact pales in comparison to the COVID-19 rescue bills in 2020 and 2021. Overall, the IMF expects the economy to grow by 5.2% y/y in 2022; down from 6.0% in 2021.

The service sector remained strong in December, as the flow of new orders picked up at the fastest pace in five months. The sector should have benefitted from the overall growth in December, as manufacturing suffered another month of softening performance from lack of material and labour shortages. However, despite these headwinds, business confidence strengthened to the highest level in more than a year as markets remain hopeful that labour and supply chain disruptions will ease throughout the year. As of now, we expect to see the service sector performance fluctuate in line with the lockdown restrictions imposed by the economies. The government's response to these outbreaks will be key, as the length of the lockdown restrictions will be driving the service industry as well as the overall sentiment.

Eurozone: The Eurozone economy finished last quarter on the back foot, as the number of omicron cases spread across the bloc, beating record highs. This, in fact, has led to a renewal of restrictions and heightened uncertainty about the duration of the pandemic, especially as the number of vaccinated is already high. Despite these headwinds in the near term, we expect the momentum to pick up throughout the year and accelerate in Q2 2022, and relaxation of lockdown restrictions alongside easing of supply chain bottlenecks should provide support. Additionally, the ECB lack of hawkishness relative to the US should cushion the economy for longer as it keeps some of the pandemic support package intact. According to the European Commission, the current heightened pricing pressures are projected to be primarily transitory due to the post-pandemic reopening and ensuing economic adjustment. After peaking at 2.4% in 2021, inflation in the eurozone is expected to fall to 2.2% in 2022, as energy prices begin to level out in the second half of next year and the supply-demand imbalance is resolved. Inflation is coming down but will settle into multi-year highs.

ZEW Growth and Inflation Expectations

Inflation expectations expected to soften over the course of this year, hopes of fast recovery from omicron have recently pushed growth expectations higher.



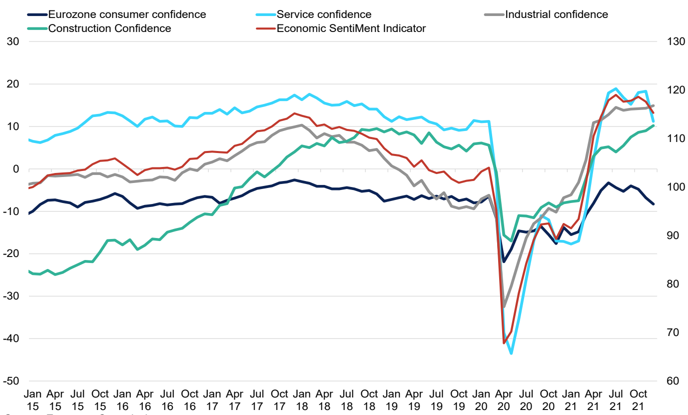
Source: ZEW Zentrum fuer Europaeische

Another major component of expected heightened inflation is energy. We saw benchmark European gas futures rise to a record high in December, causing natural demand among industries to drop the most since the beginning of the pandemic, as factories shut down or possibly not resuming operations. Among major producers, Alcoa halted its aluminium production in Spain for two years, and Trafigura's Nystar is stated it would reserve its zinc smelting production in France. We saw prices ease from record highs closer to year-end as the risk of energy shortage diminished given warmer and milder weather. European gas is still 35% higher month-on-month, but this is the first significant decline we have seen in months. In January, we saw a short spike in prices as Russia kept a tight grip on shipments, maintaining the pressure on buyers across the region, but this is now calming down once again. Despite the fall in February forward price, longer-term contracts are still rising. The German year-ahead power price is up over 10% this week, suggesting the cost of supplying the continent is set to stay high for longer.

Overall, business surveys show broad-based gains across countries and sectors, and fiscal policy looks set to provide ongoing growth support as the EU recovery fund disbursements pick up. This is putting ECB under significant pressure to its PEPP in 2022, bringing into question to what degree do they have to taper, especially relative to the Fed. This question will be key, and the scale of the pullback will need to depend on a multitude of factors. One of the major headwinds to this is current instability in Italy and how much it can handle having support taken away.

Eurozone Confidence Factors

We see overall softness in service sector recovery, as construction and industry are expected to recover driven by supply chain bottlenecks easing.

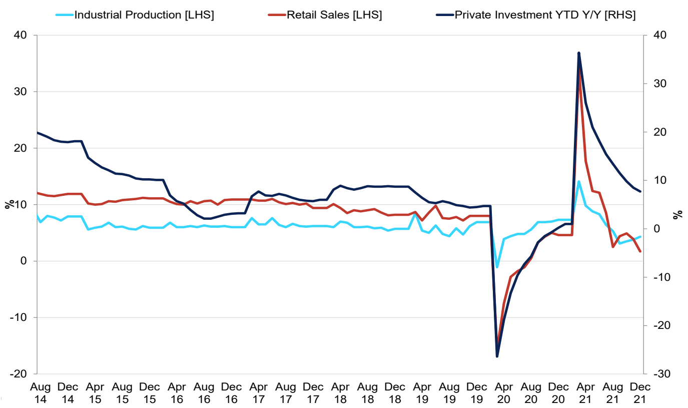


Source: European Commission

China: The Chinese economy grew by 4.9% y/y in Q3, in line with growth we have seen in Q3 2020, but down from pre-pandemic levels. Exports remain the only source of positive during the last quarter, partly attributed to a global pandemic-related demand shift to goods and omicron possibly delaying a rotation back to services. China's exports are forecast to have jumped by 20.1% in December, benefiting from some last-minute Christmas shopping demand. Meanwhile, according to Bloomberg, China's imports are also forecast to grow, up by 37.8%, fuelled mostly through increased domestic demand ahead of the Lunar New Year. The longer-term outlook, however, is less certain, with global demand for Chinese goods fading as its competitors gain strength. Exporters are also faced with historically high input costs, fading labour and freight cost, with PPI forecast to rise over 10% y/y, and it should be slower than November's 12.9% rise due to lower coal prices.

China's Industrial Production, Retail Sales, Private Investment

While industrial production is seen recovery, domestic-driven performance is likely to further weaken given the recent omicron outbreak.



Source: National Bureau of Statistics

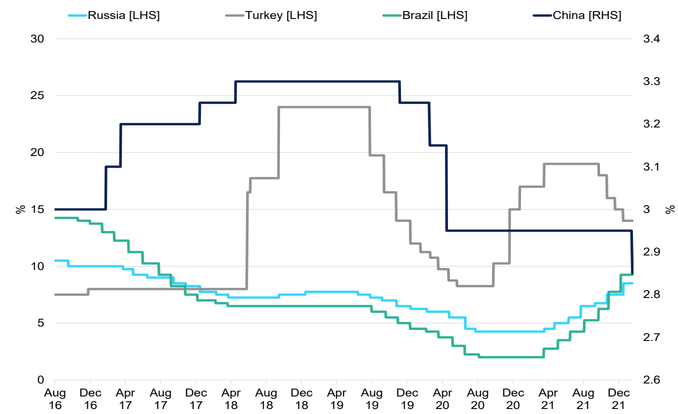
The supply side is doing relative well, highlighted by encouraging manufacturing PMI figures in December, as it edged up higher to 50.9. Delivery times are improving. Demand-side, however, is showing pockets of weakness, foreign demand remained lacklustre, with export orders broadly stagnant, posting some concerns in the near term. Additionally, pricing pressures have eased, which should aid profitability in the short term, giving policymakers more room to introduce supporting measures. Regional outbreaks pose downside risks and disruptions for the manufacturing and service sector ahead of the Chinese New Year. The service sector outlook is muted, given the zero-covid policy. China is most likely to reopen the economy in H2 2022.

Policy signalling from the government, not acting confidently as of yet. China's monetary policy is further diverging from other major economies, and we saw a dovish stance from the government as means of accommodating slowing growth. China cut the reserve requirement ratio for the banks and, more recently, has reduced borrowing costs from 3.85% to 3.7% in two separate instalments. This highlights China's willingness to deviate from the rest of the world as means of supporting the economy. We believe that fiscal policy would be the primary tool since last year's spending was weaker than expected. Additionally, fiscal deposit data showed to be higher than usual, meaning there is still a lot of unused treasury cash sitting in the bank account waiting to be unleashed. However, these policies will take time, as it takes on average, around six months for stimulus to reach all layers of the economy. As of now, local governments have 1.46tr yuan of special bond quota that they will use in Q1, providing them with even more spending power. Though economic growth is forecast to slow year-on-year, near-term momentum is expected to pick up, helped by a more supportive fiscal outlook.

Emerging Markets: Rate hikes have already taken place in many developing economies, however, it is not enough to preserve the strength of local currencies, and we expect emerging market economies to remain under pressure this year. As a result, the divergence between economies mentioned in the previous report is likely to further widen into the first quarter of the year. Multiple interest rate hikes are scheduled to take place by central banks this year, and the policymakers' firm stance on hawkish outlook despite the spread of new variants supports the consumer sentiment and overall belief that the economies are on track for a recovery in 2022. While we are hopeful that the beginning of the recovery is on the way, the virus will continue to drive the short-term trajectory of this recovery throughout the year, especially for the economies that have seen a low uptake of the vaccine.

Emerging Market Key Rates Performance

We saw many emerging countries begin hiking interest rates last year as means of curbing inflationary pressures..



Source: The People's Bank of China, The Central Bank of Russia, Central Bank of Turkey, Banco Central do Brasil

Inflation has become a global concern – now amplified by energy price shocks – and inflation expectations have increased. Overall, monetary policy responses are becoming more divergent, with ECB interest rates still likely to be on hold through 2023 while emerging market banks have already begun to hike. Indeed, both Russia and Brazil have already hiked the rates 7 times last year up to 8.5% and 9.25%, respectively. As a result, we expect dollar growth in 2022. This coupled with weaker Chinese growth could weigh on commodity prices, adding to emerging market growth challenges from domestic monetary policy tightening.

More so, we are likely to see heightened geopolitical tensions, with Russia taking the spotlight at the start of Q1 2022. The country tightened production and export into Germany, which sources 90% of its gas needs from Russia, as it benefited from high prices in the last eight months. As a result, we saw partial or complete shutdowns of production in major producing hubs to cut down on costs, driving the most recent softness in industrial performance. To make matters more complex, Russia has stationed troops outside of the Ukrainian border, putting significant pressure on major economies to introduce sanctions if it invades. While not significant, this could have a ripple effect on commodities markets.

Aluminium

LME Aluminium 3MO ($)

Source: Bloomberg, 20.01.2022

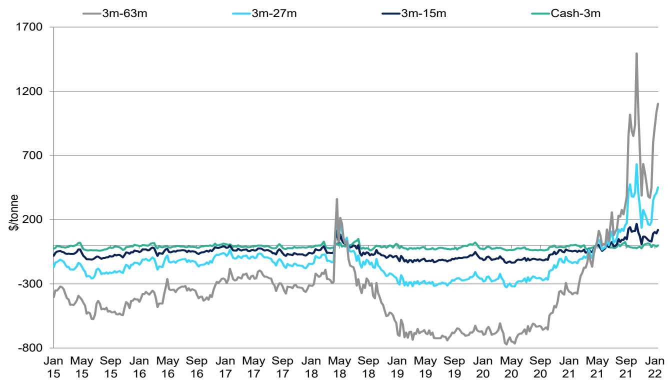
Summary

Aluminium prices will remain on-trend in the near term, and through Q1, the supply side is constrained by power rationing and a rise in cancelled warrants. The low inventories in Europe compound this issue, and if we see sanctions on Russia and lower exports for gas to Europe, we expect further volatility and spikes towards $3,300/t. China has increased aluminium exports, which may help ease some issues in Europe, but the supply chain remains congested. High voltage grids in China are favourable to aluminium, but the property sector is a downside risk. Monetary easing from China has boosted metals consumption hopes, but we look to all-systems financing data and infrastructure spend for more indication of physical demand.

Q4 Review: Aluminium prices on the LME were marginally lower in Q4, but volatility saw prices test $2,510/t and $3,200/t; 3-month prices have pushed back above $3,000/t at the time of writing. SHFE prices declined in Q4 by 10.9%; we have seen futures edge higher in the first few weeks of the year. Inventories continue to fall sharply, as tightness causes spreads to remain tight at $6.5/t backwardated. Total inventories are declining, with LME stocks at 878,750 as of January 19th, on-warrant stocks stand at 474,675 tonnes, with cancelled warrants at 404,075. European stock levels stand at 31,500 with only 12,525 tonnes on warrant. Geopolitical tensions between Russia and the U.S. could compound tightness in the market, but Chinese aluminium exports have increased to ease supply tightness in Europe.

Aluminium Calendar Spreads

Spreads outline the tightness in the market in the near and medium-term.



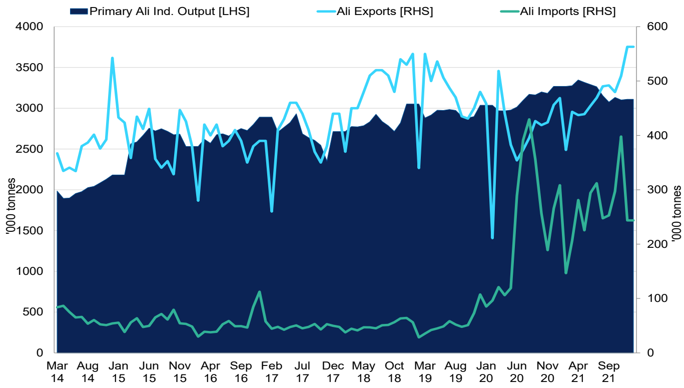
Source: Bloomberg

Outlook: Aluminium production in China has declined as per the energy restrictions; November output was 3.16m tonnes, down from 3.27m tonnes. Output in China was down further in December to 3.11m tonnes, and we expect the power rationing to continue in the near term to maintain the blue skies initiative. The disinvestment from coal in China and robust demand is expected to keep consumption of coal high in the near term, and therefore prices remain high. Due to power restrictions, the output will remain subdued in the near term. Reduced investment into coal and the higher benchmark price in 2022 will keep costs high as coal capacity is taken offline, but usage remains high. Indeed, in 2020, coal usage in China was 72.5% for metallurgical alumina refining, with consumption at 505,957TJ, for primary aluminium smelting power consumption was 80.5% coal at 390,241GWh, with Hydro at 72,231GWh, according to the IAI. According to Antaike, carbon dioxide emissions generated by the aluminium segment, including refining, smelting, and recycling, contributed to 75% of total emissions by the non-ferrous metal industry. China's aim to cut aluminium emissions by 5% by 2025 will likely see more hydropower which in 2020 comprised 14.9% of the power mix. The majority of these cuts will come from large producers as they have the capital to reduce emissions such as electrolytic flue ga purification and desulphurization, denitration, and dust removal. We expect hydropower in Yunnan to increase in the coming years. We expect mild growth in capacity in 2022, but this depends on power rationing; if hydropower can improve in 2022 compared to 2021, this capacity will be better utilised.

According to the IAI, alumina production in China was 6.40m tonnes in December 2021, and this was marginally higher than the previous month. However, SMM data suggests that production was higher at 6.59m tonnes, and the metallurgical-grade alumina stands at 6.36m tonnes. Assuming this is correct, daily output was 205,3000 tonnes, up 4.33% M/M and 10.68% Y/Y. Total output for 2021 stands at 72.16m tonnes, and the winter policy has limited alumina production. North and South-West China refineries have kept output high, with Longzhou and Guangxi running near full capacity in December.

Primary Aluminium Output vs Exports of Unwrought & Aluminium Products

Exports of aluminium from China have surged higher as inventories draw and material in Europe is scarce.



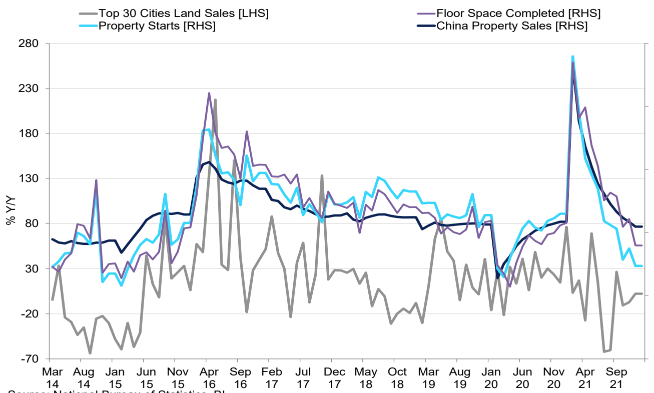
Source: NBS, Bloomberg

Total capacity for alumina stands at 74.92m tonnes, installed capacity stands at 89.6m tonnes; however, the blue skies initiative will cap production in January, which may prompt production to fall to 6.1m tonnes in January according to SMM. Alumina imports into China stood at 255,243 tonnes as of December 2021, and this was an increase from November at 157,891 tonnes. Alumina prices have fallen with the Platts 1st Alumina FOB contract to $356.05/t if production is lower in China for January and February. This could trigger further losses for Platts contract. In 2021, we saw a large increase in imports during July when alumina FOB prices were low. A resumption in aluminium production after the Winter Olympics could prompt a propensity to import alumina if prices are below $300/t. Imports of bauxite have declined due to weaker arrivals from Guinea and Australia; bauxite Guinea lumps CIF stand at $55/t, indicative of lower imports and approximately $10 below last year's high. Despite alumina prices edging lower, coal prices could squeeze margins due to the higher benchmark in 2022, although prices are currently within a rational range and high electricity prices.

However, we saw profitability increase in the first week of January due to a moderate decline in prebaked anode prices, helping profit to rise to RMB362/t. Electricity prices represented a larger proportion of aluminium producers' costs to 38%, according to SMM, in-house generation facilities in Shandong fell to 0.42-0.49yuan/KWh for those who had in-house power. Thermal power costs in southwest China were higher 0.55-0.65 yuan/KWh in December, the weighted average electricity price stood at 0.51yuan/KWh in December.

Chinese Property Market

Weakness looks likely to continue despite the monetary easing, capping aluminium consumption.

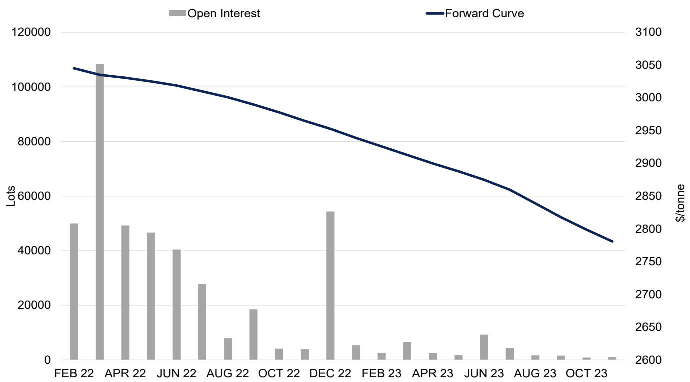


Source: National Bureau of Statistics, BI

We expect a deficit in China and RoW; we could see a shortage of 115,000 tonnes in 2022. The main risk to our base case is Chinese demand and reduced power rationing in China after the blue skies initiative. The property sector struggles in China will undoubtedly be a dampener on aluminium demand. Indeed, we see consumption of extrusions weakening in China due to the crackdown on the property sector. In recent months, infrastructure investment and aggregate all systems financing have weakened as they look to reduce debt levels and transition to a consumer-led economy. The PBOC have cut the key borrowing rates, interest rates and risk reserve ratios to stimulate the economy and get consumers and companies to spend and invest. The relationship between strong GDP, and by association high emissions, and the environment, the decoupling of the two is possible, but you need a strong consumer-led economy and investment in green energy projects. At this time, we expect investment to be focused on infrastructure, renewable energy, the high voltage grid, and clean smelting capacity. The 501bn yuan that is due to be invested in the electrical grid this year will likely benefit aluminium over copper. The high voltage lines will increase China's green power penetration in the megacities. Investment in the grid will continue and is needed to achieve the national power market.

LME Forward Curve vs Open Interest

The forward curve shows persistent tightness in the near term, due to the supply-side changes in China.



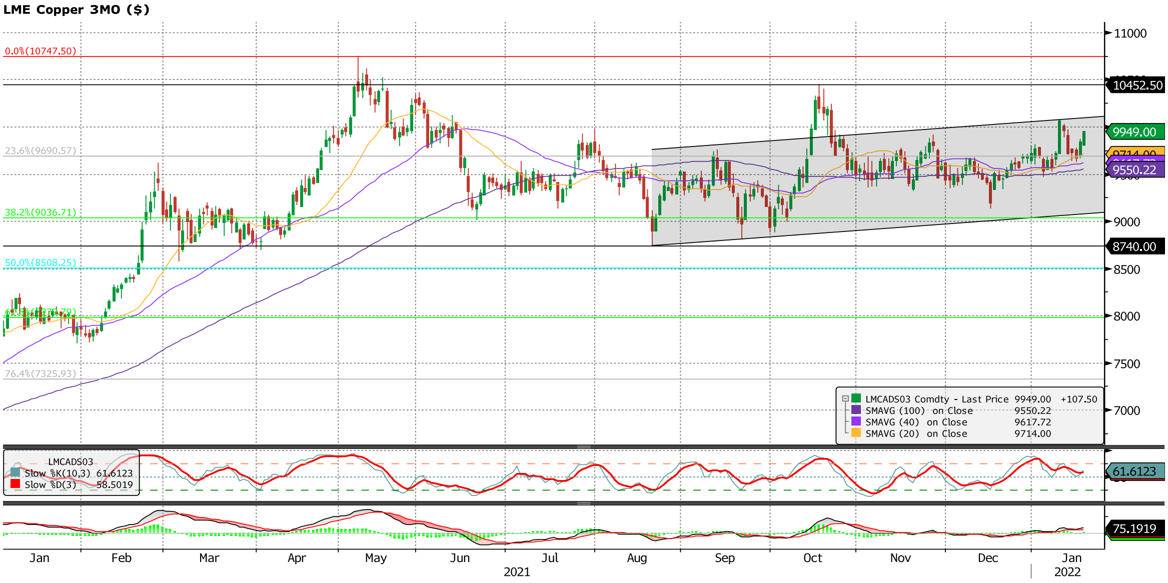
Source: Bloomberg

The forward curve is backwardated, and December 2022 vs December 2023 spread is at $240/t back at the time of writing; the 3-month to December 2023 spread stands at $312/t back. The tight market and the drawdown in inventories and higher premiums exemplify this. Tensions with Russia and Ukraine continue to escalate, and if we see a war between the two and sanctions on Russia, we expect aluminium prices to rally as this will worsen the deficit in Europe, causing the price to rise further. We haven't yet quantified the impact of sanctions on an already tight fundamental market, but we would expect significant volatility. This would also impact other base metals such as zinc and lead, which use gas. China is increasing exports for aluminium and aluminium products. In December 2021, they stood at 562,970 tonnes, up from 509,320 tonnes the month prior. Exports to Europe will likely stay elevated due to weaker demand internally. Aluminium wheel exports have weakened in recent months, 25.29%M/M in November to 67,300 tonnes, but are up 2.92% Y/Y. These figures are suppressed by silicon and magnesium prices. The U.S., Japan, Korea, Mexico, and Thailand were the top importers of aluminium wheels.

We have previously highlighted the upside for aluminium demand in the auto market due to the push for lighter vehicles and increased fuel efficiency. For example, the Audi A8 uses aluminium body-in-white, which weighs 247kg as opposed to the 441kg steel alternative. The aluminium alternative triggered weight savings on the engine and total savings of 239kg. Due to weaker demand from the auto sectors, we expect aluminium body and white production to remain soft in Q1. This presents a downside to aluminium production, but China's lack of magnesium production compounds the issue. Despite the softer demand outlook, aluminium will remain tight with further draws in stocks with cancelled warrants rising at the time of writing they have broken above 400,000 tonnes, the free stock is 452,325 tonnes, but European warehouse inventories are low, keeping the flat price elevated and spreads backwardated, we expect geopolitical tensions to add to the volatility.

Copper

LME Copper 3MO ($)



Source: Bloomberg, 20.01.2022

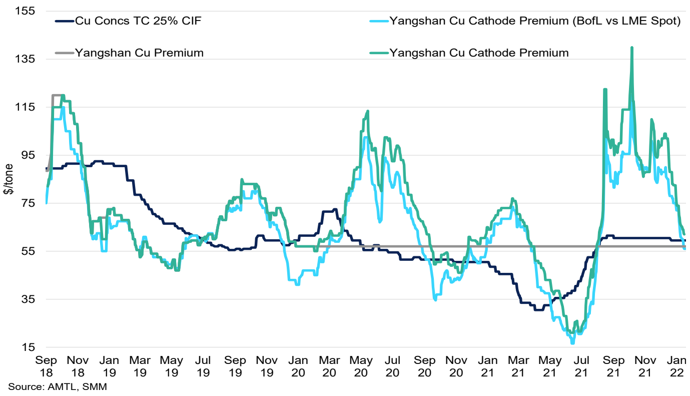
Summary

Near-term tightness continues to be highlighted by the backwardation in the cash to 3-month spread, tom-next is in contango once again, but we expect the backwardation to persist in the near term. Impact on copper production in China due to power rationing is limited, and while we expect cathode output in January and February to remain high, the supply chain is still backlogged, and we don't expect this to clear in Q1. Supply of concentrate will improve, and benchmark TCs have been set at $65/t with term contracts $5 lower; spot demand may be more subdued. Consumption will wane in 2022, and the supply side cost-push pressure will also subside, but the LME and COMEX June 2022 contracts are at a premium, suggesting tight markets at least until then.

Q4 Review: Copper prices gained 8% in Q4 2021, closing at $9,548/t. We saw prices spike to $10,452.50/t, but the real activity was in the spreads, with Tom-Next and cash to 3-month spreads moving to $175/t and $1,103/t back in October, as inventory in Europe declined sharply, and on-warrant stocks fell to 14,150 tonnes. LME inventories now stand at 97,575 tonnes, with on-warrant inventory at 73,375 tonnes. SHFE inventories have been steady for some time, consolidating below 50,000 tonnes. This presents upside bias to copper prices as stocks are low; however, we do expect the weakness in demand to cap gains, with the supply of copper remaining strong. The green economy and EVs will constantly be provided as evidence for higher prices in the long run, but short-term patterns indicate that it remains a micro-economic factor of higher input prices and shipping delays which dictate copper prices.

Copper Concentrate TC 25% CIF vs Yangshan Copper Premiums

Premiums declined sharply in recent months, benchmark; TCs are set at $65/t.



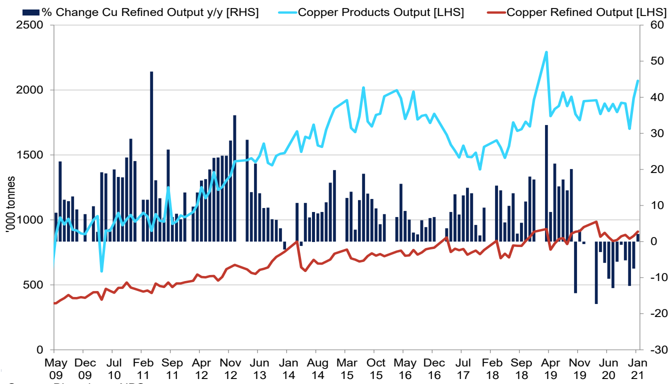
Source: AMTL, SMM

Outlook: Copper TCs have edged higher in recent weeks, with the benchmark rate for 2022 standing at $65/t, medium-sized smelters have increased tonnages, with some having fixed their tonnages for the whole year through term contracts. This may reduce spot transactions, and fluctuations in the immediate term, evidenced by only 16 spot trades in December 2021, and this trend could continue for 2022. The sellers found to benefit from fixing longer-term contracts when Chinese smelters are bullish on TCs, and term contracts have been concluded around $60/t for clean copper concentrate. Power rationing capped output in Yunnan and Guangxi, while maintenance at other smelters, kept inventories high. Copper concentrate and mine supply have been resilient in 2021, mine supply was 21.3m tonnes, and we expect this to continue in 2022 to 22.4m tonnes. A downside risk to supply is the need for maintenance at mines and smelters, as this was differed to maximise output during the pandemic. Production levels may drop as work is carried out.

Higher prices have not yet incentivised new production, despite prices being considerably above cost curves. The major miners' cash costs, ex royalties, are mostly below $4,000/t of payable metal. However, higher royalties from Peru and Chile will increase costs for miners, in addition to labour and input costs. BHP successfully negotiated with unions, and the result was a large bonus and soft loans to workers; Codelco's profits are needed for state support and the social programme, meaning they are less flexible on wages. This could increase the chance of strikes. In the near term, we expect ramp-ups in production from Grasberg, Chuquicamata UG, Cobre Panama, and Kamoto, a cumulative 2.8m tonnes. According to MineSpans, more capacity from QB2, Kamoa Phase I, El Teniente, Spence Sulphides, and You Tolgoi in the coming years will total 1.7m tonnes. Following these projects, there is little tonnage expected to come online. Indeed, Chile is writing a new constitution that will likely increase royalties on mining and higher environmental standards to reduce water risk and the impact on the environment. Peru is considering something similar, which will delay projects in two key regions. The global push to reduce the environmental impact of mining will certainly delay projects and may accentuate a supply gap towards the end of the decade. Indeed, Antofagasta has indicated that water shortages could impact production in 2022; they expect production to range between 660,000-690,000 tonnes of copper.

China Copper Refined Output vs Copper Products

Copper product output has increased and we expect production to remain at current levels in the near term.

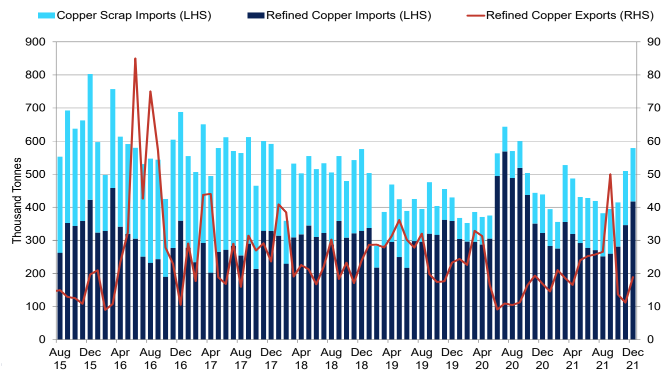


Source: Bloomberg, NBS

In China, copper cathode production was up 5.38% in December to 870,300 tonnes, up 0.97% Y/Y. Maintenance during December caused production to be flat, and spot concentrate demand was weaker, as mentioned above, helping to ease the tightness in the blister market. However, this tightness will persist in 2022 due to the supply chain fragilities, although we expect this to ease in H2 2022, keeping the blister market tight in the coming months. Blister copper RCs averaged CNY986.9/t as of January 14th, for imported blister CIF, domestic RCs are CNY1,400/t. In January, we expect production to remain high as copper production has not been impacted heavily by the power rationing and Winter Olympics. North China is the region that is most likely to be affected, but the SHFE/LME price ratio is expected to promote output for copper; the ratio stands at 7.19, and the import arbitrage is closed. Scrap prices have fallen sharply for the price at the beginning of the year, prices of 8mm rod with the national standard in Jiangxi, Henan, and Hebei were CNY69,300/t, 69,350/t, and 69,550/t, respectively. All are at a discount to SHFE and a range of CNY800/t and CNY 1,000/t. The discount is more now than at the end of 2021 when it tightened to CNY200/t discount.

China Scrap & Refined Copper Imports/Exports

Refined copper imports have increased and exports hover around multi-year lows.



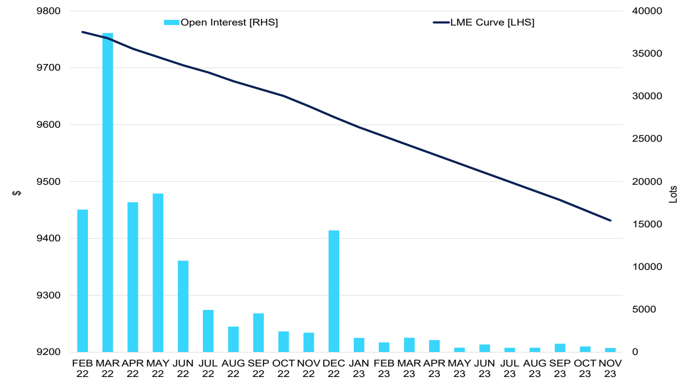
Source: Bloomberg,Customs General

Domestic stocks of raw materials for PSS, wire, and smelting & refining inventory in China have all fallen in recent months; however, finished product stocks have consolidated. The estimated domestic inventory has been declining and stood at 1.81m tonnes as of December 31st 2021. The most significant decline has been in copper bonded warehouse inventory which was 1.645m tonnes as of December 31st, 2021, down from 4.3m tonnes in June 2021, but we have seen marginal increases in recent weeks in Shanghai, at 197,000 tonnes, and Guangdong at 27,500 tonnes. China exports of unwrought copper and copper products are considerably off the high of 2021 but have been rising, and the same is true of refined copper exports.

Higher inflation and waning real wages will weigh on end-user demand from a macro perspective. For consumer lead economies such as the U.S. and Europe, this presents a downside to copper demand. While manufacturing PMIs are still expansionary and construction, copper demand will continue to wane in line with the supply-chain bottlenecks. Durable goods for consumer electronics equipment and applications are still high, and we expect this to weaken from the highs. In China, the PBOC has cut rates in recent weeks, and we expect more easing to come. The government could aid the economy through stimulus into the infrastructure and communications, such as railways, 5G, and green economy. The news of stronger grid investment will boost copper demand, but the high voltage lines are more aluminium intensive. All system financing will be critical, and we will watch this data point closely. The low inventories will continue to provide volatility to the market. The forward curve shows a tight market in the near term but is backwardated, as forward prices are at a discount. Open interest on the LME is at a multi-year low at 242,297 as of January 24th, 2022, with the long-term average at 313,670 contracts. The low liquidity accentuates volatility in the market, and the 90-day volatility stands at 24.4%.

LME Forward Curve vs Open Interest

The forward curve highlights tightness in the near term.



Source: Bloomberg

Premiums in China have fallen sharply, outlining weak demand, and traders did not want to purchase copper during the decline as they would have been out of pocket immediately. Therefore, they decided to wait, and the low exchange inventories continue to cause volatility, and the backwardations outline the tight market. However, supply-chain bottlenecks are easing but will not be cleared in Q1 or Q2 as record backlogs still plague the world's biggest ports. This is causing the backwardations and the large amounts of LME inventory withdrawn in Europe. To think there is only that much product left in Europe or the world is naive, and we would expect this material to be held off-warrant. COMEX inventories are rising due to the premium over the LME, and we expect excess material to be shipped to the U.S., not Europe. COMEX material is mostly old and of poor quality, but new material will be geared towards infrastructure spending. In recent weeks, high SHFE prices have caused domestic consumption and restocking to weaken. As a result, spot premiums are expected to weaken due to high SHFE prices and weak demand, and this could see spot premiums fall towards CNY150/t.

Lead

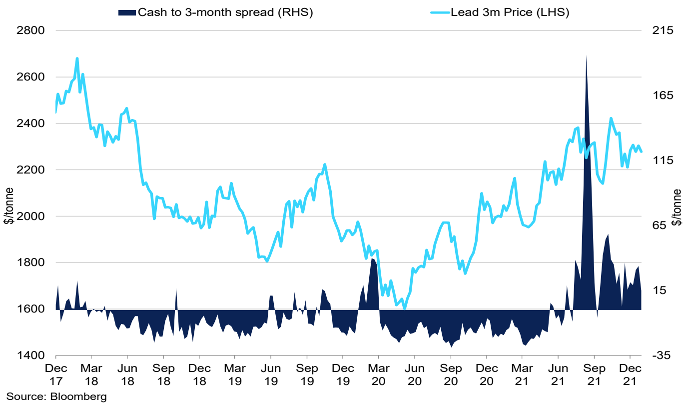
LME Lead 3MO ($)

Summary **The import arbitrage for lead is shut, and the tightness is in Europe and the US anyway. The forward curve is backwardated, suggesting that the tightness is expected to linger for Q1 2022. Premiums in the US and Europe will remain high as little product is available in these destinations. Cash is likely to remain bid in the near term, and we watch profitability levels for primary and secondary lead in China with TCs low and prices for secondary lead high. Exports from China will attempt to rebalance Europe and the US, and demand will be capped by weaker auto demand in Q1.**

Q4 Review: LME prices for lead rallied in Q4 as tightness across all base metals due to dislocated supply chains caused steep backwardations. Lead was no different, while we attribute some strength to lead being pulled higher by the other metals. LME inventories have steadied since October and stand at 54,500 tonnes; on warrants, stocks are high at 46,950 tonnes and cancelled warrants hold around 7,000 tonnes. Lead consumption was weaker in 2021 as a lack of semiconductors plagued the auto industry. The cash – 3month spread remains backwards at $15.85/t back, the daily flows from LME warehouses are minimal, following withdrawals most days in December, we have seen limited flows in January.

LME 3-month Price vs Cash to 3-month

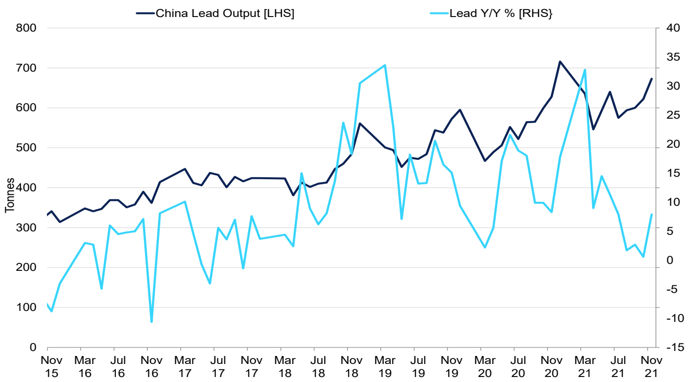
The backwardation has weakened in recent months after reaching a steep backwardation in August.



Outlook: SHFE prices have been equally volatile, trading a wide range in Q4, but we saw steady declines of SHFE deliverable stocks, which are 89,149 as of January 7th, having fallen from over 200,000 tonnes in August 2021. Chinese lead output improved towards the end of 2021, but as we forecast, monthly output failed to reach the highs of last year; cumulative production was higher in the first 11 months of 2021 than the whole of 2020 at 6.624m. November production reached 673,000 tonnes of lead, and we expect production to break towards 720,000 tonnes as smelters attempted to reach their production targets for 20212. According to SMM, primary lead production was 269,700 tonnes, with secondary lead at 369,700 tonnes. For the year, primary lead production reached 0.88%, a survey by SMM indicated production capacity was 5.48m tonnes. We expect primary lead production to be flat in January, due to maintenance and reduced activity because of CNY. While travelling is expected to be limited and assuming COVID does not spread viciously across major producing regions, disruptions should be limited. In our opinion, production will range between 265,000 and 280,000 for primary lead before declining towards 255,000 in February due to CNY. Secondary lead production reached 369,700 tonnes in December, according to SMM. Secondary refined lead was 334,500 tonnes; according to SMM, annual output in 2021 secondary lead output increased 47.48% in 2021 compared to 2020. This is part of a broader trend of China focusing on recycled metal capacity. We anticipate secondary lead capacity to be flat to lower in January due to bad weather, CNY and maintenance.

China Lead Output vs Y/Y Growth

We expect lead production to be flat in January and February, but margins for secondary output could soften.



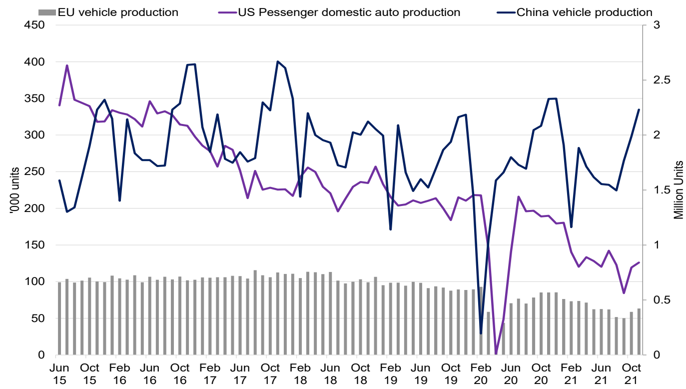
Source: Bloomberg, NBS

In recent months, operating rates for primary refined lead have firmed as output in Q4 2021 increased. Small firms' secondary operating rates were weaker due to energy costs, but the large and medium firms maintained high production levels. The operating rates for smaller firms have been heavily impacted by higher input prices and low processing fees for primary lead. While prices of by-products such as sulphuric acid helped offset earnings for lead smelters in 2021, prices declined sharply in Q4. The factory posted the sulfuric acid spot price at CNY646.67/t, down from CNY900/t in October; the NBS price for sulfuric acid is lower at CNY532/t. Now smelters must deal with lower processing fees and sulphuric acid prices; however, sulfuric acid prices were double in January 2021. Silver prices have failed to improve sufficiently with prices down in 2021; the issue is compounded because lead smelters are predominantly privately owned. We expect CNY to cause output for secondary lead to be flat to lower, but as we advance, high prices for lead-acid battery scrap will limit profit margins and, as a result, production. The primary lead supply is expected to remain stable, but the secondary and lead-acid battery plants could reduce output. The restocking demand for secondary lead smelters is greater than primary smelters, and smelters will not want to restock at these higher prices when end-user demand is less than certain. We expect the profits of secondary smelters to decline towards CNY150/t. Secondary refined lead prices across China average CNY14,725/t with prices in Hebei including tax at CNY15,000/t.

Lead-acid operating rates have been robust in recent months and reached 80.68 in November before falling marginally in December. Higher SHFE prices will keep primary lead production elevated in the near term, but the low TCs for lead concentrate, falling sulphuric acid, and silver prices will impact profitability. In our opinion, the preference for higher grade silver-lead concentrate will prevail; this was exemplified by the high silver TC dropping below the low silver-lead concentrate. This trade is on the anticipation that silver prices will rally, something they wouldn't haven't been able to do despite the inflationary environment. However, in our view, this will continue to diverge. Imported lead concentrate TCs stood at $85/dry tonne as of January 1st, according to SMM. Domestic concentrate TCs stand at CNY 1,150/t, but TCs in Inner Mongolia are higher at CNY1,300/t. Peruvian lead production oscillated in the same range and production for November is 22,756 tonnes. We saw lead exports decline in Q4, but January has witnessed large amounts of exports to China in previous years. Still, social inventories are falling with lead ingots stocks at 93,300 tonnes according to SMM, as of January 4th, we expect these to draw further in the run-up to Chinese New Year. China's Shanghai bonded warehouse premium, and the Shanghai bill of lading premium has been flat for a while at $130/t, suggesting limited physical demand.

European vs United States vs China Auto Production

Production remained weak in recent months but China managed to increase production in the closing months of 2021.

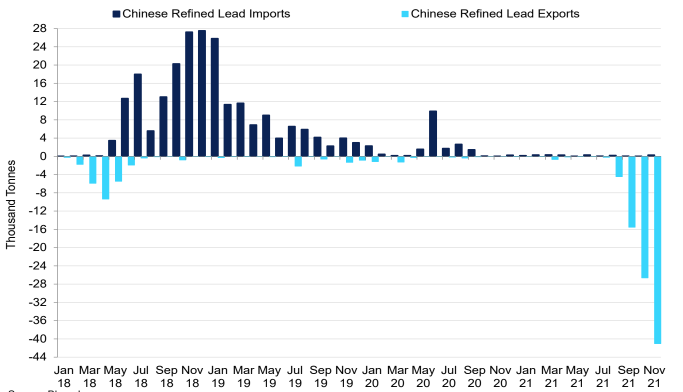


Source: Bureau of Economic Analysis, CAIN, Eurostat

EU and US auto production remained on the backfoot in Q4 2021. Conversely, China witnessed a sharp rise back above 2m units, and cumulative passenger vehicle production reached 18.87m in China through the first 11-months of 2021. Total vehicle production at 26.08m units was higher on a year-on-year basis at 3.4%. Sales of autos in China increased year-on-year by 3.8%. However, they remain below 2019 levels at 27m units. We expect China has a larger number of semiconductors and chips in inventory, and some manufacturers are producing vehicles but leaving out the chips and some electrics. Still, the chip shortage will remain prevalent until H2 2022, and any inventory left will be small. Still, semiconductors and chips for autos also have low-profit margins and producers favour electronics. German auto production started to improve on a month-on-month basis in Q4 2021, but business expectations remain low as the semiconductor situation squeezes output. So far, the winter in Europe and the US has been relatively mild, limiting demand for replacement batteries and reducing the availability of secondary material. Lead consumption is likely to remain weaker in the near term due to the auto market, but the physical market is still tight due to the supply chain bottlenecks. Labour shortages in the US have capped economic growth and productive capacity in the US. For Q1, we expect these trends to persist. The cash to 3-month spread is backwardated at $14.25/t; the high premiums in the lead market outline the dislocated supply. European and US premiums are high, and LME cash is bid. The closure hit European production in Germany, but exports from China outline the tightness ex-China. Exports of refined lead have surged, increasing from 563 tonnes in July to 41,517 tonnes in November. The inflows into LME warehouses in Europe have been low. The tightness in the market suggests this will go straight to industry.

China Refined Lead Imports vs Refined Lead Exports

Exports surged higher in recent months to try fill the tightness in Europe and U.S.



Source: Bloomberg

Nickel

LME Nickel 3MO ($)

Summary

Nickel continued to rally in the last quarter of the year, driven in large by market tightness. Indeed, continued lacklustre performance in China, shortage of material, and supply chain bottleneck created tough supply conditions. In the meantime, the demand side, driven by stainless steel and electric vehicles, prevailed. The stocks are likely to edge higher as the country stockpiles ahead of the Lunar New Year and the Olympic games, but we imagine the increase will be marginal, and most of the imports will go straight to the economy to fill the supply gap.

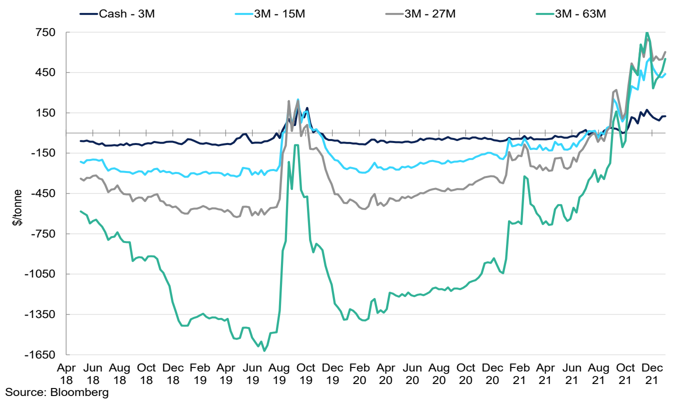
Q4 Review: LME nickel strengthened once again in Q4; after finding support of $18,000/t in September, the market rallied by 15% to close the quarter at around $20,760/t. The 3-month rolling contract shot up in the first few weeks of January, taking out the 2011 highs of $22,745/t on a combination of strong fundamental demand from the EVs and continued tightness from the supply side, and a possibility of export levy from Indonesia. SHFE prices adopted a similar trend, growing by 9.38% over the final quarter to close at CNY152,970/mt. Similar to London prices, SHFE shot up to CNY165,500/mt in January's first couple of weeks. LME inventory continued to decline, but the outflows have stalled somewhat, and the stocks are now at 99,364, November 2019 levels.

Cancelled warrants fell back to the long-term average despite a spike seen in November. Prices have been increasing due to a shortage of material, reduced production from China, and supply chain bottlenecks creating a tight market. China's economic data was slowing in Q3, with GDP at 4.9%, industrial production at 3.9% y/y in November, and fixed assets at 5.2%, all below the 2020 average. This outlines relative weakness to Q2, and, as the number of omicron cases is growing, and zero-covid policy is still in place, meaning many producing regions are now under strict lockdown measures. This outlines our view that demand for ore into China should weaken. This, coupled with the Lunar New Year and Winter Olympics, is likely to stall production in Q1

Outlook: Nickel ore inventory in Chinese ports has started to pick up, increasing by 86,000wmt w/w to 8.67m wmt as of January 7; this is the first incline since mid-November. Port stocks across 7 major Chinese ports have also started to edge higher in recent weeks, rising to 3.95m wmt, the first weekly incline since the end of October. However, the arrivals at ports were low as the nickel ore exports from the Philippines slowed down in the rainy season. Historically, the stocks are still at multi-year lows due to low production from China and, more recently, end-of-year maintenance, leading to less demand for nickel ore. According to China's customs data, imports from the Philippines, the largest exporter into China, stood at 3.34m mt, down 17% m/m but still up 12% y/y. Imports from Indonesia stood at 321,000 mt, a fall of 7.3% m/m and 26% y/y. For Q1, we expect to see stocks build ahead of the holidays, and we are likely to see imports increase m/m in Q1. However, whatever stock increase we might see will either sit in the inventory or go straight to the domestic economy.

Nickel Calendar Spreads

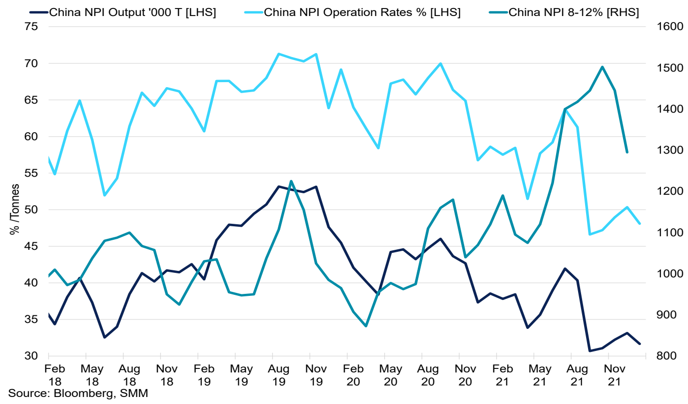
The rally in the metal has been robust given the tightness in the market, and cash to 3-month remaining in backwardation is a clear testament to this tightness.



In October, China imported 299,000mt of NPI and ferronickel, down by 2.4% m/m but 10% up y/y. The cumulative imports from January to October were 3.1m mt. The total nickel content of imported NPI and ferronickel stood at 46,000 mt, a decrease of 2.42% month-on-month but 15.26% year-on-year. The imports of NPI were approximately 250,000 mt in October, a decrease of 2.7% month-on-month. And the imports of ferronickel stood at approximately 49,900 mt, an increase of 4.51% month-on-month. Domestic NPI output increased by 2.83% m/m to 33,100mt in nickel content in December. This is still 11.21% lower than the same time last year. The output of high-grade nickel increased to 27,700mt, while low-grade NPI declined by 3% m/m. The production varied greatly by region, and the cold weather has stalled production in many regions. In Q1, we expect the picture to change somewhat.

Chinese NPI Output Vs China 8-12% NPI Price

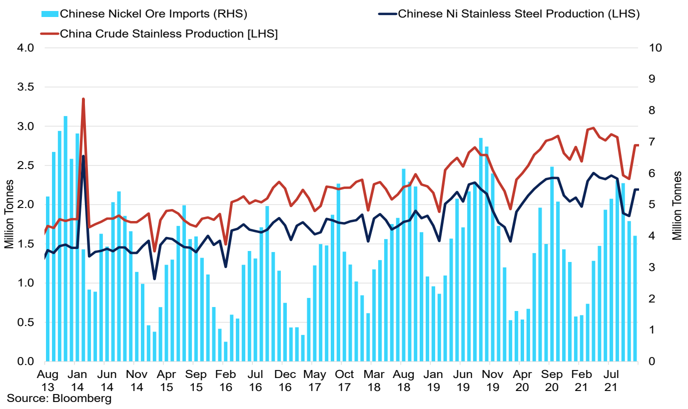
NPI output likely to recover on improving prices, increasing profits for producers.



A recovery in the Chinese stainless-steel market caused the domestic NPI prices to rebound by the end of the year, while the ferronickel discount increased. Increased downstream stainless-steel price, amid low supply, cheered the markets. With NPI prices rising once again, we expect to see production return to some plants that decided to carry out maintenance to control costs when NPI prices dropped below the cost of production levels in Q4 2021. However, whatever supply we might see come back to life on the back of this will not be enough to supply all the existing demand.

Chinese Nickel Ore Imports vs Stainless Steel Production

Imports are likely to pick up in January ahead of the Lunar New Year holidays.



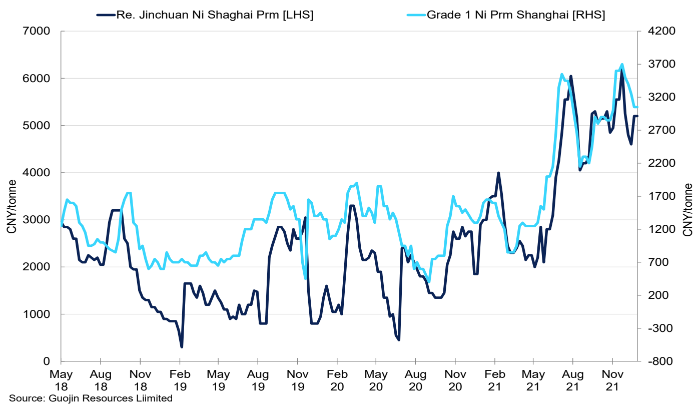
In 2021, total output of stainless steel was 32.2m mt, up 8% y/y. Among that, the biggest increases came from 300- and 400-series stainless steel, with output increasing by 10.2% y/y and 16.5% y/y to 16.3m mt and 6.33m mt, respectively. According to SMM, the outlook for 2022 is forecast to yield 33.25m mt, with 300-series once again being the biggest driver, growing by 6% y/y. However, in the meantime, output is likely to be further restricted by the Lunar New Year holiday and Beijing Winter Olympics in early February.

Indonesia has played a crucial role as a bulk materials supplier in global markets. The country pledged to eventually stop exports of commodities such as bauxite and copper ore shipments to become the hub for EV production with a monopoly on raw material access. In January, Indonesia stated that it is studying a progressive levy on exports of NPI and ferronickel that could be imposed as soon as this year. Nickel prices surged to decade highs as a result. This could pose significant risks for stainless steel manufacturers, as they rely heavily on the supply of ferronickel from Indonesia. Indeed, China gets about 84% of its imports from Indonesia. Overall, the impact of COVID-19 in 2020 and supply chain disruptions in 2021 halted the launch of significantly expanded NPI production capacity in Indonesia, resulting in a market deficit in 2021. If this increased capacity can be brought online, it would aid supply growth significantly this year. This would significantly benefit the stainless steel manufacturers, which rely on the metal for their own production, and EV battery markers, despite the fact they require higher-grade nickel, for which the outlook is less certain. All eyes are now on Indonesia and whether the country can ramp up capacity to meet the strong demand for nickel in 2022. Production is likely to remain muted until the end of the holiday season, and we expect the second quarter to ramp up production. Elsewhere, in Q3, Nornickel's output increased by 55% q/q to 52kt, on the back of recovery of the Taimyrsky mine after flooding, however, this was not enough to offset the YTD losses, yielding a production of 130kt, down 23% y/y.

Ships that are looking to avoid COVID-19 affected areas are making their way to Shanghai, causing rising congestion at the world's biggest container port. Those diversions are adding to the supply market that is already being strained from global bottlenecks. Additionally, the strict testing of staff in ports and quarantine is likely to go ahead into the Lunar New Year holidays and the Olympic games to control the spread of the virus.

Nickel Premiums

Premiums continued to climb as the arbitrage window into China opened.

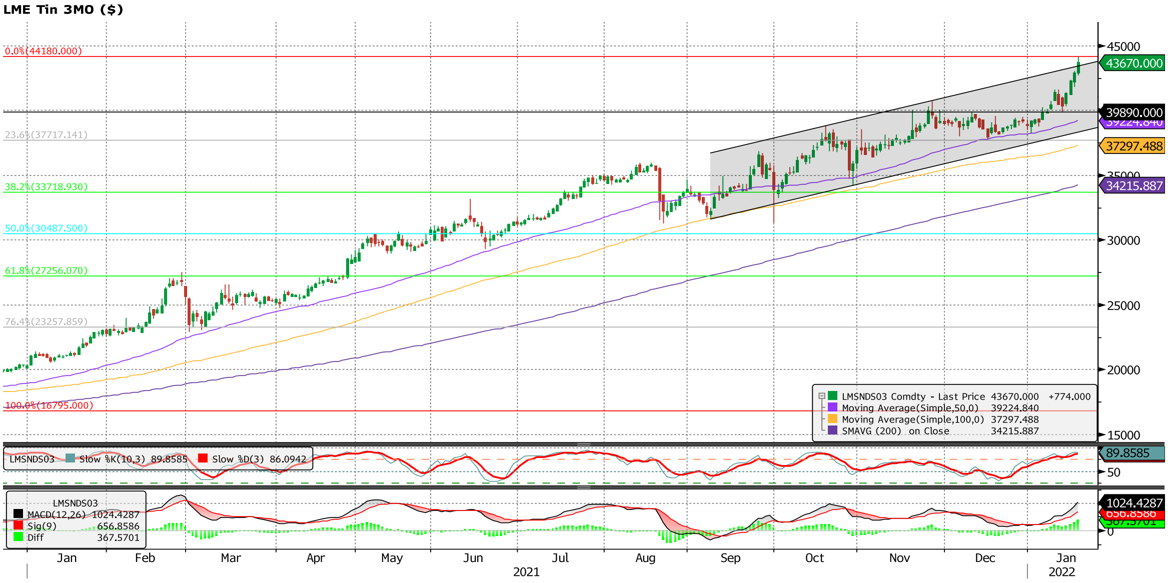


Although not the biggest driver in nickel's performance in recent months, demand for nickel from EVs and batteries has supported the fundamentals, as the overall passenger vehicle industry continued to deteriorate given the chip supply problem. EV sales experienced a record performance this year. Production of NEVs in China was up by 120% in December 2021 up to 518,000, yielding the total last year to 3.545m, a 159.5% growth in comparison to 2020. PHEVs grew by 162.4% y/y to 59,800 but saw the first monthly decline of 4.7%. BEV, however, continue to attribute 80% to overall NEV sales. China is now on track to cut NEV subsidy by 30% in 2022 and withdraw support altogether by the end of this year, as part of its plan enacted in 2020. Regardless, the demand outlook for sales is strong and is likely to benefit demand for nickel in 2022, with battery-grade Class 1 nickel to experience a major demand boost from the green transition.

Overall, our outlook for nickel is on the upside, the fundamentals for demand from the EV and stainless steel remain strong, and supply tightness is likely to persist as China aims to limit production ahead of the Lunar New Year and the Olympics this quarter. More so, the stocks are likely to edge higher as the country stockpiles ahead of these events, but we imagine the increase will be marginal, and most of the imports will go straight to the economy to fill the supply gap. Chinese economic slowdown due to covid spread poses significant headwinds to not only the demand picture but also supply as cargo ships are already struggling to import into the regions under strict lockdown measures. We expect China to come back to production stronger than expected in Q2, helping to ease some of the market tightness. The major risk event lies in Indonesia, where an export levy on ferronickel and NPI could significantly deteriorate China's already depleted storage and force producers to pay the premium to keep production flowing.

Tin

LME Tin 3MO ($)



Source: Bloomberg, 20.01.2022

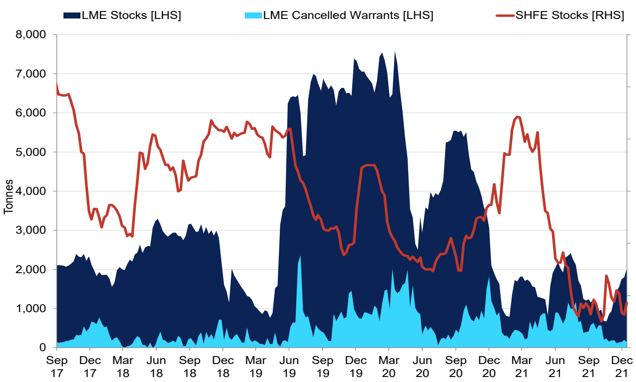
Summary

Tin supply is starting to improve, but in the immediate term flows into China will be subdued because of COVID. At the time of writing, the export ban from Indonesia will cause further tightness in the raw materials market for tin. Semiconductor demand is still strong, but its growth is slowing. New capacity is expected to come online in H2 2022 but as mentioned a lot of the new expenditure is not in products with large backlogs. The rising exchange inventories have put pressure on the spreads, but the 3-month price remains high but the risk reward, while positive, is limited. Power restrictions, Chinese New Year, and the Winter Olympics indicate refined output from China will be capped in the near term. We expect prices to remain on the front foot and spike above $40,000/t with and test $44,000/t, but gains will remain limited.

Q4 Review: Tin prices continued to push higher in Q4 as fundamentals remain tight, with the 3-month price reaching our near-term upside target of $40,000/t. The question is now will prices remain in our range or push towards our medium to long term downside target? The cash to 3-month spread remains in backwardation, the trend has seen the backwardation decline and stands at $465/t at the time of writing. This indicates an easing of the tightness in the market and the rising stocks in LME warehouses reached 2,070 tonnes, and on-warrant stocks stand at 1,925 tonnes. SHFE deliverable stocks remain low and stand at 1,723, the rising inventories has clearly helped put pressure on the spreads, but will the 3-month price start to weaken in-line with spreads? Consumption was robust in Q4 due to Christmas demand; we see the growth in the semiconductor industry slowing in 2022 but the shortage will remain a prominent theme for H1 2022.

LME vs SHFE Stocks

LME inventories are rising whereas SHFE deliverable stocks are falling.



Source: Bloomberg

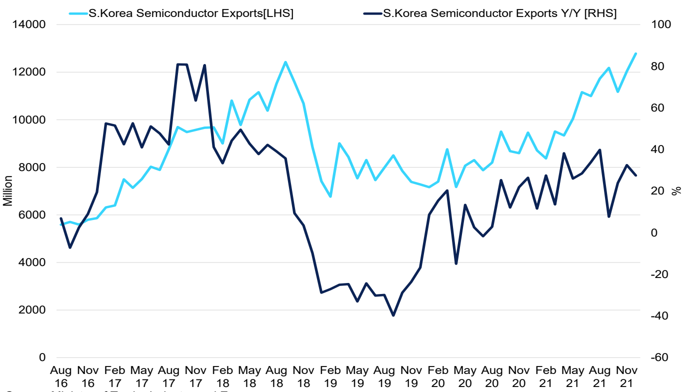
Outlook: Refined tin consumption continues to grow at a steady clip; however, the growth rate will slow in 2022 as higher prices impact consumer demand but also the backlog is slowly filled. Consumer demand across the global economy has been expanding but at a slower rate, the main consumer of refined tin is solder, and it is important to look at consumer electronic orders and computing orders. In the U.S., durable goods, new orders for electrical equipment and applications increased to $7,521m as of November 2021, and this is expected to remain high in December due to Christmas sales. We expect consumer spending to suffer in 2022 as commodity prices are high and monetary policy remains very accommodative. New orders for electrical equipment appliances reached record highs in October at $13,454m, with November $13,312m. This outlines the strength of the market and how the bottlenecks appeared, the supply chain is easing, outlined by the ISM business supplier index, as deliveries declined to the lowest level in 12 months at 64.9 in December. New orders for computers and electronic products, while volatile, are rising and this will keep demand for solder, through semiconductors and chips, steady. TSM have already reached capacity sales for the year, and the fire in Europe will likely weaken output in the near term and could elongate the tightness in the market. The ITA have indicated that manufacturing of electronics accounts for 80% of solder use, while growth in semiconductor sales will slow in 2022, we expect to see demand from solar panels, and EVs to rise considerably. Rising tin consumption from the decarbonisation of the global economy will help to offset the softness in consumer demand for electronics in 2022. The ITA have indicated that solder use has been flat due to the miniaturisation of electronic goods, and in our opinion, this will be matched by the rise in tin usage from green technologies.

According to the World Semiconductor Market, sales increased 25.6% in 2021, estimates suggest high single digit growth for 2022. The Semiconductor Industry Association data for November showed that sales increased 23.5% Y/Y to $49.7bn, the cumulative annual total of semiconductors sold reached 1.05trn which is a record level. The growth in 2021 meant the market reached $553bn, the growth in 2022 of 8%

would bring the market size to $601bn. We saw double digit growth in most sectors expect optoelectronics, but the majority of global regions saw double digit growth on a year-on-year level, but China declined on a month-on-month basis, by 0.2%. Weakness in the Chinese economy may prompt further declines in months to come as the government cracks down on Chinese technology firms. However, manufacturing for semiconductors is centralised in Asia, 54% of total global semiconductor foundry revenues came from Taiwan in 2020, for Chip Taiwan and South Korea produce just over 80% of processor chips and 70% of memory chips. To rectify this, semiconductor CAPEX in the industry has been estimated by IC Insights at $152bn, a rise of 34% Y/Y. However, the majority of this expenditure is in Foundry whereas the sector with the largest backlog of orders receives little CAPEX. Flash/Non-Volatile products represent 18% of total capital spending, DRAM/SRAM represents 16%, MPU/MCU 15% but logic and analog/other only make up 8% and 7%, respectively. This suggests some industries will continue to see bottlenecks. This year, new capacity will come online in H2 2022 which should reduce the backlogs, whether we see demand increase over and above the bottlenecks is yet to be seen.

S. Korea Semiconductor Exports

Y/Y growth in exports remains steady but producers are nearing full capacity and this could cause Y/Y growth to soften.



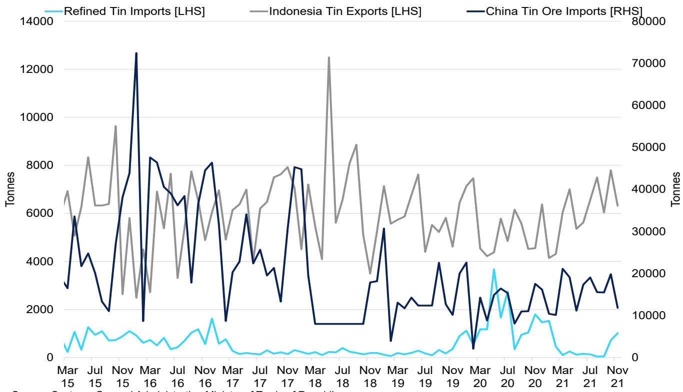
Source: Ministry of Trade, Industry and Energy

Supply of refined tin in China edged higher in December 5.41% M/M, despite the increase in production output in Yunnan declined in December, with Geiju output also suspended due to restrictions to reduce air pollution. The restrictions will be in place until after the Winter Olympics with Yunnan smelters on holiday, the tightness in the tin market has eased, outlined by the rise in inventories and weaker backwardation. Guangxi output has been steady despite the reduction material availability because of the reduced imports from Myanmar. Guangxi smelters managed to source tin ore from third parties which enabled them to be increase output, smelters in this region also increased as environmental restrictions subsided. The outlook for January shows weak demand for ore as smelters in Yunnan and some in Guangxi have reduced output due to holidays and tighter raw material supply. This is expected to reduce output 700 tonnes, Jiangxi production will decline as well. As a result, we expect Chinese output to decline in January to 12,200 tonnes. We expect production in the regions impacted by the holiday to resume in February, with the regions impacted by the Winter Olympics improving in mid-March. Concentrate prices are still high, with tin concentrate 60% for Guangxi, Jiangxi, and Hunan all reached a new high in December 2021 at CNY280,500/t. Tin concentrate in Myanmar 20% in warehouses is equally high at CNY204,600/t. Tin concentrate prices are expected to stay high as a result of the decline in imports from Myanmar, premiums for tin ingot are high at CNY8,000, tin ingot grade 1 99.9% is at CNY305,750/t. The Omicron variant, while contagious, is milder than previous variants, and as a result, Malaysian Smelting Corporation will ramp up production helping to ease fears of further tightness in the tin market

Alphamin resources reported strong output in Q4 at 3,000 tonnes, a significant rise from 10%, sales for Q4 were 3,056 tonnes. The company reported improved grades, as they highlighted in their Q3 report, they mixed this material with waste. This is their preferred strategy going forward in an attempt to keep the grade consistent. In 2022 production estimates for Alphamin are 12,000 tonnes of tin-concentrate, they are not expecting higher grade tin in the near term so improvements will come from the Fine Tin Recovery plant. The ITA outline that the FTR plant increased tin production by 5% initially, but we await further results in January 2022.

Tin Refined Imports vs Indonesian Exports vs China Tin imports vs China Tin Ore imports Myanmar

Indonesian imports have stayed elevated, but this will change if a ban is introduced. Myanmar imports into China also weakened.

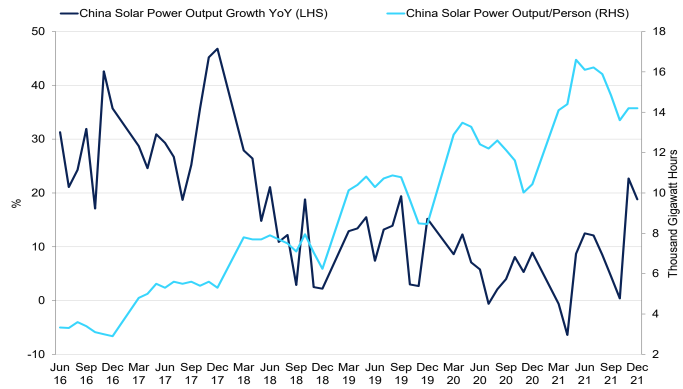


Source: Customs General Administration Ministry of Trade of Republic

The Omicron variant has caused imports of tin ore to decline in November 2021 to 7,184 tonnes. We expect December figures to be equally low, the decline in imports may not impact refined production in China significantly due maintenance, holidays and environmental restrictions, however, we continue to see lower imports from Myanmar and Indonesia which will impact production as inventories are low. We have seen refined tin imports into China increase, with imports reaching 1,016 tonnes. This can be attributed to the opening of the arbitrage window which on spot stands at CNY17,246.19/t with SN2201 at CNY6,561.09/t.

China Solar Power Output

Solar power output per person has weakened but output growth Y/Y has surged higher in recent months.



Source: Bloomberg

Tightness in the tin market looks set to prevail, while demand growth in the solder market may slow due to the semiconductor sector. Stronger demand from the green economy will continue to gather steam but remains a small in comparison, Y/Y growth for China's solar power output was at 22.7% in November 2021 but the output per person was marginally down 14.2K GwH. Exchange stocks are rising, which is easing pressure in the refined market. Cancelled warrants are low, but the cash to 3-month spread is still backwardated but weaker to $361/t back as of January 11th. This suggests sentiment is still very bullish, the current z-score for the investment funds tin net long is 2.16, marginally lower than 2.205. In a similar vein to our previous report, we expect to remain on the front foot. Gains will be more limited in Q1 2022, and the risk reward is capped, and the skew is starting to change to the downside.

Zinc

LME Zinc 3MO ($)

LME Zinc 3MO ($)

Source: Bloomberg, 20.01.2022

Summary

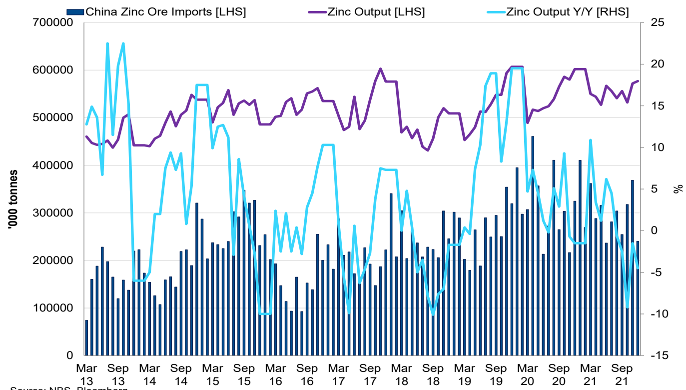
Zinc TCs are low and favour the miner currently; we expect TCs to improve in Q1 and 2022. High electricity and energy costs have plagued the zinc market, especially in Europe. High gas and electricity prices will keep output subdued in Q1, but we question how much they have cut production; European smelters could also cut production and benefit from selling power. Premiums in Europe are high but more modest in China. We expect demand to be softer in Q1 as industrial activity is capped in China. Downside risk to demand is the Chinese economy. We expect prices to drift lower as we move through Q1 towards $3,300/t, but if the energy outlook in Europe worsens, we could see spikes to above $3,800/t, where we favour selling the market.

Q4 Review: Zinc prices were very volatile in Q4 as key suppliers in Europe indicated they would have to cut production due to high energy costs, Trafigura indicated that Nystar would reduce capacity, and Glencore also indicated the same thing. This compounded the tightness in the market and the already dislocated supply chain. Prices surged towards $4,000/t in October, with 90-day volatility reaching 28. Performance was more subdued for the remainder of the quarter, closing at $3,534/t, volatility continued higher with 90-day vol at 30 as of December 31st. The cash to 3-month spread is still backwardated but is significantly weaker than the $130/t back we witnessed in November. SHFE zinc prices performed similarly, but bullish sentiment has firmed so far in 2022. The import arbitrage is firmly shut, and the lack of material in European warehouses would make it tricky to import material.

Outlook: Zinc output from Peru has declined in October to 103,261 tonnes, down from 110,491 tonnes the month prior. We see mild additions to the supply side in the next 3 years, with 600,000 tonnes coming from existing mines. In the immediate term, labour shortages and prioritization of concentrate production, even though prices are currently high, CAPEX reduction due to COVID may delay ramp-ups in the near term. According to the USGS, the highest reserve grade is in the U.S. at 10.9%, with Australia at 7.1%. China continues to have the most reserves, but the grade is relatively low at 3.8%; China also holds the majority of zinc smelting capacity, this will not change in the near term. We expect restarts and ramp-ups from Vedanta to see approximately 1.8m tonnes of new capacity, which is split between South Africa and India. The concentration of production from the top 5 producers has declined from 30% to 26% in recent years. As China consists of 36% of the refined output globally, this leaves the market vulnerable to Beijing's power rationing, labour shortage, and environmental standards. Smelting capacity continues to be hit by power rationing and high energy prices, and we saw zinc concentrate producers in China decline into year-end to 68.4% as of December 31st. The rates for concentrate producers declined for January to 44.9%.

Zinc Output vs Zinc Output Y/Y vs China Ore Imports

Total zinc output for 2021 was flat in China but the tightness is certainly in Europe, which will continue.



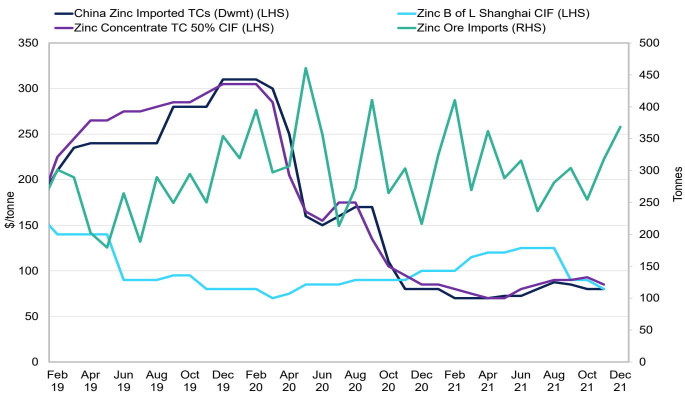
Source: NBS, Bloomberg

Zinc output in China was 513,300 tonnes in December 2021, down 7.26% Y/Y. Cumulative output according to SMM was 6.09m tonnes for 2021, a decline of 0.29% Y/Y; SMM outlined that production declined in Shaanxi, Guangxi, Gansu, and Yunnan causing a lower figure in December than first anticipated. We expect production to be flat in China in January due to continued maintenance but there are higher operating rates in Gansu, however, smelters will be closed due to CNY suggest a net flat output. New smelting capacity will edge higher in 2022 with new capacity in China, but in the immediate term, existing capacity in Europe remains under threat. Refined zinc operating rates declined to 81.98 in December 2021 and is projected to be flat to marginally higher in January to 82.10. We expect smaller producers to be hardest hit by the higher energy costs. Secondary zinc output is expected to be decline slightly due to

CNY; however, there are significant questions over secondary zinc production due to the environmental impact of secondary output. The Waelz kiln process used to produce secondary zinc is more carbon-intensive than concentrate production, and with high coal prices, there is a question mark over secondary output. EAF dust processing capacity is dependent on electricity and consumables prices.

China Imported TCs vs Bill of Lading Shanghai CIF vs Concentrate TC 50% CIF

TCs and premiums in China are low which are squeezing smelter profit margins, particularly smaller smelters. We expect TCs to rise from current levels.

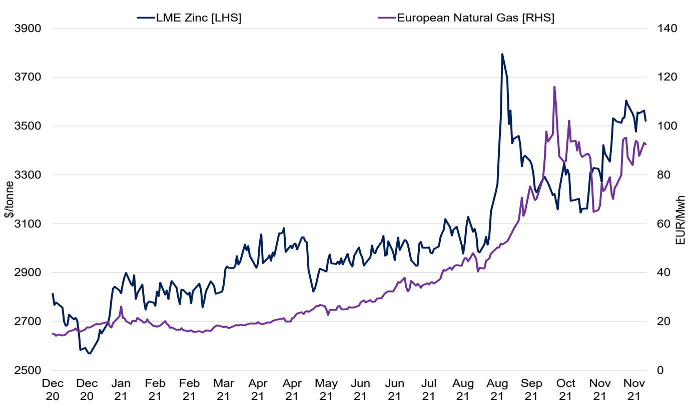


Source: SMM Information and Technology,Guojin Reasources Limited, Asian Metal Inc, Customs General Administration

Zinc treatment charges declined, improving profitability for miners, but we expect TCs in China to push higher in the coming months as availability improves. TC and free metal revenues are 17-25% lower than last year, theoretically as energy prices rise. We expect profitability to grow in 2022 due to higher exchange prices and TCs. Imported TCs 50% CIF stand at $84/t, with imported zinc concentrate at $80/t. Domestic TCs are highest in Hunan, where they traded RMB4,100/t as of January 7th, with Inner Mongolia also high at RMB4,000/t. Zinc concentrate balance for 2022 is forecast to be balanced, but the longer-term trend of lower grades and higher impurities complicates the recovery process and limits capacity; in addition to the trend towards ultrafine concentrate, both pose threats to smelters. Zinc prices have rallied due to major smelters in Europe announcing production cuts; Trafigura and Glencore have indicated that the situation will be monitored. Trafigura cut output during peak times by 50%, Glencore will continue to monitor the situation across its European smelters.

LME Zinc Price vs EU Natural Gas Price

Another spike in energy prices and further reduction in exports from Russia will likely cause a spike in zinc prices.



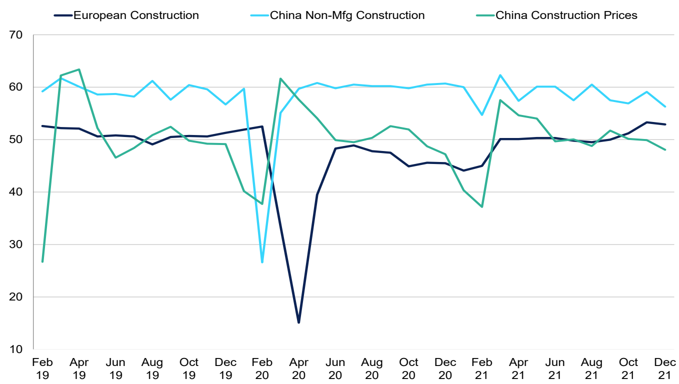
Source: Bloomberg

Gas exports from Russia are low, which keeps prices elevated, but it is currently a mild winter that will help consumption. Electricity and gas prices in Europe continue to strengthen, with ICE Dutch TTF Natural Gas prices trade at €81.00/Mwh at time of writing. The tightness in zinc is firmly in Europe; there are 1,400 tonnes of material in LME warehouses in Europe. Premiums will stay high as a result; however, we also doubt the extent to which they have reduced production. Invisible stocks are rising with the product going straight to industry. Indeed, the high energy, electricity, zinc and sulphuric acid prices could mean that smelters cut output, sell excess power on the spot market, and benefit from higher prices across all fronts. We anticipate tightness in Europe to continue, especially with CNY keeping output flat. Supply chain bottlenecks are easing, and we expect shipping costs to start to ease in 2H 2022; gas and electricity prices should start to normalize in Europe in March; however, labour costs are expected to remain higher.

In China, it was not just supply that got impacted, but demand also suffered due to the reduction in steel output. While concentrated around Beijing, the blue skies initiative expects steel production to be capped in Q1, as a result, limited zinc consumption from a galvanizing perspective. Galvanizing comprises around 60% of zinc demand, die casting stands at 14% with brass semis and casting also at 14%. The weaker investment from China's government in infrastructure in 2021 hit demand and the semiconductor situation with the auto market; however, we did see Y/Y auto production and sales rise, 2020 was a low base. We expect further growth in this market in 2022, mostly coming from 2H 2022. Our base case is for zinc consumption to rise in 2022; however, we expect Q1 and potentially Q2 to be softer. The downside risks are the Chinese economy and a longer semiconductor shortage; however, recent moves from the PBOC indicate a willingness to stimulate the economy, and China's propensity to spend is a longer-term trend. While their 5-year plan wants to transition towards a consumer-led economy with higher quality growth, consumers in China remain unwilling to spend, retail sales in China grew 1.7% Y/Y in December. Infrastructure investment has been growing at a slower pace in recent months, but steel is needed for the green economy, which continues to boost the longer-term outlook for zinc. Construction PMIs and non-manufacturing data are still expansive, with European construction PMIs at 52.9 and China non-manufacturing construction at 56.3, but the construction prices index is contractionary. Higher prices will cap end-user demand in 2022, and high inflation has started to take effect, outlined by retail sales and consumer spending across major economies. This will certainly impact galvanized steel products, and higher European steel prices evidence the inflationary environment for prices.

European Construction vs China non-Manufacturing Construction vs China Construction Prices

Construction indices are started to edge lower, and we expect this to be due to higher prices.



Source: Markit, SMM, Bloomberg

Iron Ore & Steel

1st Generic SGX 62% Fe

Source: Bloomberg, 20.01.2022

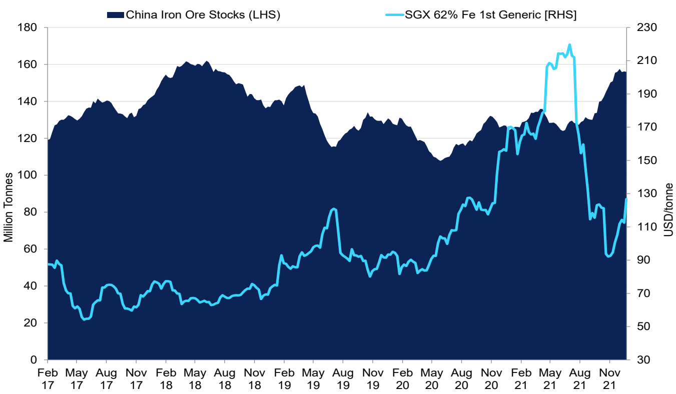
Summary

Rising iron ore stocks in China, with finished steel inventory seasonally low, indicates that steel production will rise in the coming months, not until after CNY or the Winter Olympics. Emission controls are still firmly in place, but we expect steel output to rebound in March. End-user consumption for steel is weak in the near term will with little investment in traditional steel-intensive industries. We have seen the seaborne iron ore premium edge higher, indicating better demand, but prices are still comparatively low. Iron ore fundamentals suggest prices are overextended on the upside now; in our opinion, the government will stabilise the economy through tax cuts, monetary easing and investment before the Chinese New Year. Scrap utilisation will improve once again in 2022.

Q4 Recap: Iron ore futures declined in Q4 as demand continued to waver due to steel production curbs. The SGX 1st generic contract closed 2021 at $112.5/t, and futures ended the year down nearly 30%. Prices were down 50% from the year's high to December 31st; China's hot-rolled coil prices declined in the final quarter of 2021 as China's economy continued to soften. Rebar prices followed the same trend with the 1st generic future declined 23% in the closing few months 2021. We saw sales of steel decline in December, which is not surprising, but construction data shows continued weakness and the recent decision to demolish 39 Evergrande buildings could set a precedent for the property sector in the coming 12 months. However, we expect stimulus to increase to support the economy, but the details of this are released in March after the party Congress. According to Steel Home, iron ore inventories surged higher in H2 2021 to 156.2m tonnes on December 31st, exemplifying the weak consumption outlook.

SGX 62% Fe 1st Generic vs SteelHome Iron ore stocks

Inventories have been rising in unison with prices, this can be attributed to a boost in demand from stimulus and higher coal prices.



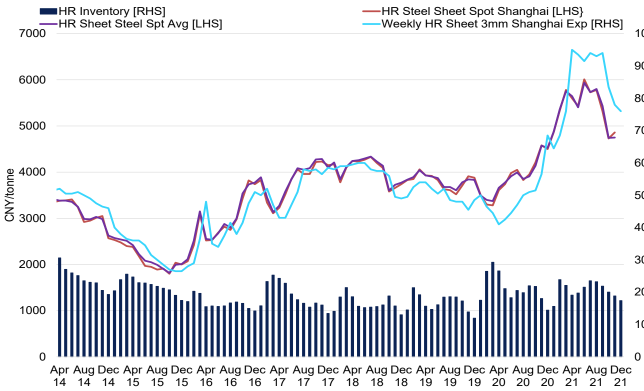
Source: Bloomberg

Outlook: The rally in iron prices in recent weeks is speculative, while liquidity is traditionally lower over the Christmas period; this is outlined by CME data that shows open interest was 2,396 as of January 4th. Volumes were thin during December, but we expect more activity for a brief period in January before Chinese New Year. The rally in iron ore prices has seen import spot price index 62% CFR fine into Qingdao at $112.65/t as of December. We saw usage of iron ore soften into year-end. We expect this to remain the case in the near term and into the Winter Olympics for most regions; this will cause mill stocks and port stocks to stay high. A vast majority of mills in North China have reduced their purchases of imported fines. We have also seen coke coal prices increase in recent months and the correlation between coking coal and iron ore at 0.57 between May 2020 and January 2022. As a result, we expect tightness in the coal markets to translate into higher iron ore prices as traders have an eye focused on energy markets and the trauma they caused in 2021. Coking coal is a key input in the steel process; higher coal and iron ore prices will reduce margins when consumption may be hit due to a softer property market.

Customs data suggests that iron ore imports into China increased by the end of 2021. Total imports in November reached 104.95m tonnes, with 63.01m tonnes from Australia, the highest level since September 2020 when imports from Australia alone were 108.54m tonnes. The rise in imports outlines that steel production will increase in the coming months. In recent weeks, we have seen port inventories stay elevated after reaching 157.50m tonnes on December 17th. The higher imports and stocks have been more profound due to the weaker steel production in December; according to Mysteel, December output declined to 2.36m tonnes a day across their survey. Production peaked in the middle of 2021 with levels just shy of 3.10 tonnes a day. This meant that despite the production cuts and environmental curbs, China produced 946.4m tonnes of crude steel in the first 11 months of 2021. A 2.6% decline on the previous, not much lower when you consider the capacity that was taken offline, and we expect total output for 2021 to be 3% down on the year.

HR Steel Inventory vs Steel Sheet Spot Shanghai vs Weekly HR 3mm Shanghai Export Price

HR inventory has declined but prices have also softened.



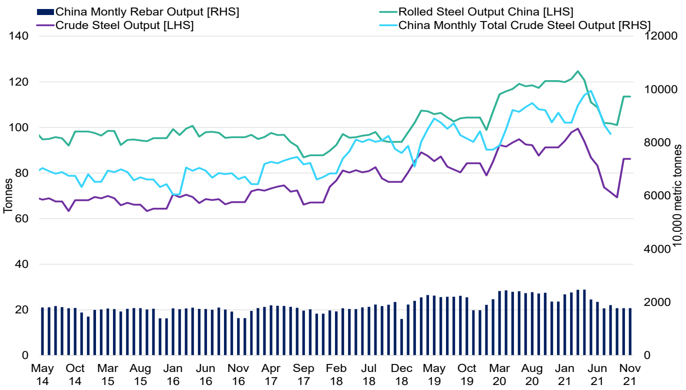
Source: Antaike, Bloomberg

Crude steel output per day is likely to remain below 2.5m/d tonnes in January and February. This will keep iron ore stocks high but following the Winter Olympics, steel production will likely rocket back to 2.60-2.80m tonnes a day. Finished steel inventories are low, with rebar inventory down 20% Y/Y in the first week of January, HRC down 10.57% Y/Y, and end-user demand has been weak. Mysteel outline that steel consumption during October was down 28% at 175,957t/d compared to the threshold at 200,000 t/d. We expect social inventories to increase in the coming weeks as seasonal restocking occurs. The average trading for wire rod, rebar, and bar-in-coil was also down for H2 2021. While this is historical data, the trend is important, end-user consumption was weak, however as we move into Q2 2022, we expect the Party Congress and Beijing to outline the key stimulus measures for the year, which will boost iron ore and steel demand.

Coal prices have been pushed higher as Indonesia indicated that they would ban coal exports. Indonesia is focused on meeting domestic demand during the winter months, and while the ban was focused on thermal coal, prices of coking coal have rallied. At the time of writing, there is suspicion that the ban will be lifted, with some domestic traders waiting to hear if the ban is lifted, high caloric coal which is not used for local generators. Indonesia's coal capacity is expected to reach 635m tonnes in 2022, more than three times their domestic demand. Indonesian regulations indicate that at least 25% of local miners' production is shipped domestically with a price cap of $70/t. Miners did not fulfil their requirements recently, and the ban could be a way in which to ensure these conditions are met in the near term. Rising coal prices in the term could give rise to iron ore and steel. As a result, however, China's coal output will continue to rise in 2022; Inner Mongolia production will rise after new approvals increase due to the power issues that plagued last year. The rise in prices in recent weeks, winter demand, and Indonesia's ban will likely see coal miners increase production. Demand for the steel industry will increase in the coming months.

China Monthly Steel and Steel Products Output

Output is low and this is likely to remain the case through to March

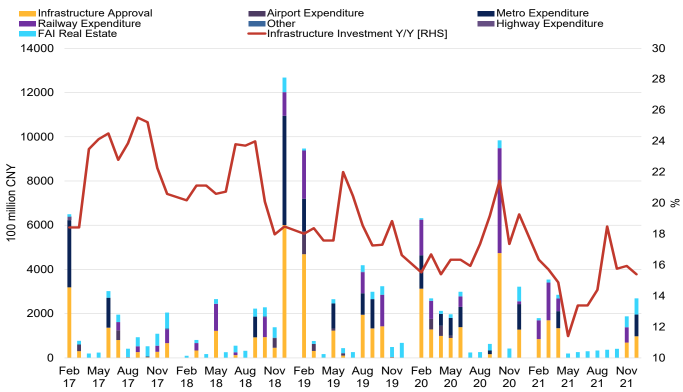


Source: Antaike Information Development, National Bureau of Statistics

Premiums for seaborne 65% pellet to Qingdao and 62.5% lump to Qingdao have improved marginally in recent sessions, indicating demand for seaborne iron ore has strengthened. The 62.5% lump premiums have increased more than 65% pellet, the Platts SGX lump premium has increased to $0.2525/t as of January 6th, a long way off the high of 2021 which saw the premium peak at $0.7/t, but the movement shows a marginal improvement in demand. The seaborne 62.5% lump premium to Qingdao has also shown signs of revival but as mentioned, remain considerably below last year's levels, however the 2020 and 2019 highs were at $0.30/t and $0.40/t, respectively. Steel companies and blast furnaces are increasing production in January. As many as 30 blast furnaces are expected to resume production. We expected more but environmental restrictions ahead of the Winter Olympics has meant that steel output in Beijing, Tianjin, Hebei, and surrounding areas should reduce production by no less than 30% of last year's production between January 1st and March 15th, 2022. Restrictions will ease after CNY, but with social inventories and on-plant stocks low, we expect output to remain subdued until after CNY. China's infrastructure investment, FAI, all-systems financing have all been weak in recent months, and on top of that, the property market nearly collapsed. This will cap steel demand in 2022, but we expect consumption growth in machinery, shipbuilding, and infrastructure but construction and container to decline. Renewable energy investment is expected to be robust, and as a result, steel demand in this area will grow. Preliminary estimates for China's crude steel consumption in 2022 suggest a decline of 0.5-1% for the 12 months. However, steel scrap usage in 2021 reached 230m tonnes; according to Mysteel, between January and November, steel scrap demand reached 204m tonnes, up 2.9%. We expect more steel scrap usage in 2023, and this will rise as China continues to reduce emissions with scrap utilisation an obvious way to do that.

Chinese Infrastructure Investment

The reduction in investment across different sectors has capped steel demand..



Source: Bloomberg Economics

Gold

Spot Gold $/Oz

Source: Bloomberg, 20.01.2022

Summary

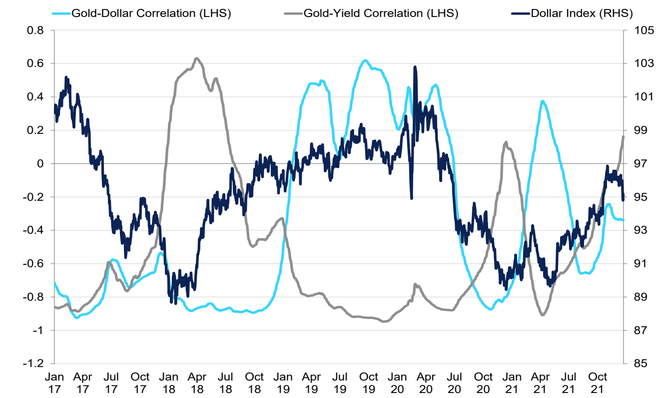
Gold was range-bound during the quarter, with the biggest fluctuations seem on the back of monetary policy outlook statements form major central banks, most notably the US. Indeed, the correlation between gold and the dollar deteriorated, as it strengthened with the US Treasury yields, a clear indicator that the policymakers' actions this year will be the driving force behind major economic performance, and, in turn, gold. We expect physical demand to remain strong ahead of the Lunar New Year coming from China, whereas speculative demand should remain on the back foot, with major downside pressures coming from strengthening nominal yields.

Q4 Review: Gold fluctuated throughout the quarter, gaining only 3.8%, remaining within our forecasted range. The most noticeable spikes took place after the Fed meetings, where the officials' tone was more hawkish, but interest rate hikes were not on the table for early 2022. The November jump was further exacerbated when the ECB's surprised markets by keeping the rates on hold. A few days later, we saw US inflation print 6.5% y/y, the first marked increase in more than two decades. A combination of these factors drove the precious metal to peak at $1,860/oz during the quarter. Indeed, we saw the 10yr US Treasury yield and gold correlation intensify as the correlation with the dollar waned from -0.7 to -0.5 during the quarter. This convergence began taking place in the first couple of weeks in January, around the same time as the Fed began to make concrete statements, suggesting markets place greater importance on policy statements rather than overall economic performance. Overall, in Q4, the marginal gold gain came against a backdrop of weaker equities and commodities, lower yields, and US dollar strength. While the news about the spread of a more contagious variant globally supported gold as a safe haven, it was not the main driving force.

ETF holdings and net positioning on COMEX echoed price performance. The former grew by 9.8% to 0.978m. In December; gold ETFs experienced net outflows of 6.4t, consistent with monthly outflows during much of H2 2021. North American outflows of 22t outweighed inflows into Europe and Asia, which gained a combined 16t during the month. North American outflows once again stemmed from larger US funds, likely triggered by the Fed indicating its intent for multiple interest rate hikes in 2022 while planning to scale back asset purchases early in the year. On the other hand, inflows into Europe continued despite the BOE's decision to raise interest rates. The net length rose by 390% to 164,000 in the September-November period, the highest level since September 2020, when gold prices were at their record highs. That shows that while prices might not be at their peak, the demand for the precious metal in the face of postponed rate hikes was ample. We saw this reverse by the end of the month as markets reacted to Powell's renomination, cutting their positions to 75,500.

The Dollar vs Nominal yield- vs Dollar-Gold Correlation

The nominal yields-gold correlation strength in recent months confirms monetary policy's outlook as key driver in precious metal's strength.

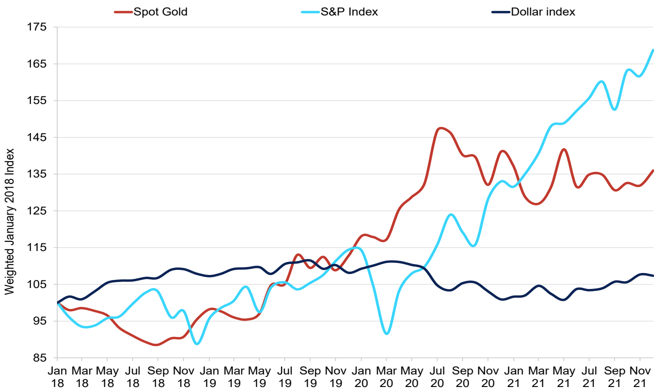


Source: Bloomberg, Sucden Financial

Outlook: In Q1, many economies continue to experience the largest wave of COVID-19 yet, with many parts of Europe seeing higher cases and restrictions re-imposed. While we do not expect COVID-19 to be the driving force in gold trajectory, it certainly compounds the pressure, as the risks from the pandemic have not yet vanished. We expect it to play a smaller part in market sentiment and, in turn, policymaking decisions, assuming the persistence of the virus's nature, i.e., more contagious but with a limited burden on the healthcare system. Indeed, the market outlook for 2022 does not seem to flag COVID-19 as a risk over the course of the year. However, this will heavily depend on the number of vaccinations in a country, as we saw another jump in deaths in the US, mostly driven by the unvaccinated people. Easing of current waves globally and removal of restrictions this quarter may give policymakers reason to proceed with the rate hikes earlier this year. We now expect subsequent Fed meetings to have a similar albeit limited impact on gold, as markets are now forecasting the first hike to take place as soon as March.

Gold vs S&P 500 vs Dollar Index

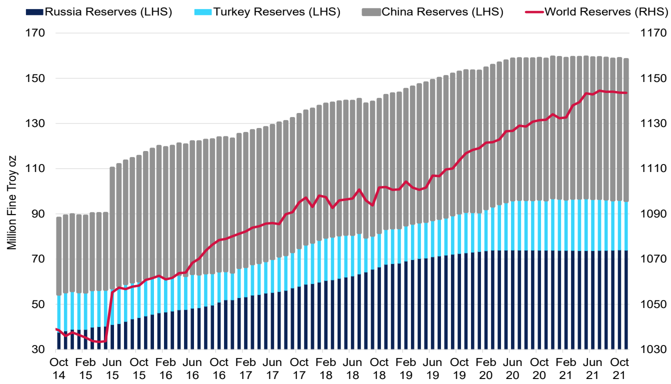
The stocks continued to advance further exceeding the dollar and gold as safe havens.



Source: Bloomberg

Central Banks' Gold Reserves

Reserves stalled in recent months, with the biggest outflows coming from Russia and Turkey.



Source: Bloomberg

With the 10yr yields now edging close to 1.8%, gold has softened, and we saw the correlation between the two weaken again back down in the first couple of weeks in January. The increase in the 10yr breakeven inflation rate was the predominant force for gold, pushing real yields lower. Breakeven inflation rose to 2005 highs of 2.7% and is now marginally lower at 2.6%. This pushed the TIPS down to -1.17%. Gold remains heavily influenced by the investors' focus on the path of inflation and the central banks, especially the Fed's, reaction to it. The dollar sold off, and US assets have lost their appeal; this is likely to persist until the Fed starts their cycle and given clarification on the projected path for 2022, providing some tailwinds to gold.

Likewise, the strength of the recovery in consumer demand for physical metal will be key and will depend on overall economic recovery in key markets as well as the trajectory and volatility of gold metal's price. Although weakening month-on-month, we expect continued support from the central bank side as gold remains a key component of reserves. The global official gold reserves declined for the first time since January 2021, falling by 21.5t in November, as a sizeable sale from Uzbekistan tipped the scale in what could have been a flat month. Turkey and Russia were among the biggest sellers. Despite the swing into net sales in November, central banks remain on course to be healthy net purchasers for 2021.

Wholesale demand in China remained elevated in November as the seasonally strong Q4 for gold consumption unfolded through a lower inventory and robust demand. Gold withdrawals from the Shanghai Gold Exchange in November rose m/m, and October's gold imports reached the highest since December 2019. In contrast, local ETFs saw the first monthly outflows since May, possibly due to the profit taking and a stable equity market. More recently, China began to ease monetary policy conditions to ease the slowing economic growth. The government cut RRR by 0.5% in December and lowered the one-year loan prime rate to 5bps, with the latter being the first cut taken place in nearly two years. As a result, with the markets pricing-in further softening, we are likely to see government yields decline. With rising inflationary measures, the real yields are likely to fall even further, giving an upside boost for speculative demand for gold from China. This is further likely to be supported through an increase in physical demand for gold ahead of the Lunar New Year. Additionally, the divergence between China and other key regions' monetary policy stances might accelerate the CNY's depreciation, and in turn, Chinese demand for gold as an alternative to local currency. And with prices still at 2011 highs, retailers should see profit margins elevated.

In India, retail demand remained robust in November, supported by festival and wedding purchases. Official imports declined MoM due to a higher gold price and ample stocks, and the local market flipped back to discount during the month. Demand remains supported by weddings scheduled in the first half of the month but faces challenges from domestic gold price volatility and concerns around the Omicron variant. Retail demand may further weaken as the month progresses, with the end of year holidays and fewer wedding dates.

Overall, we expect to see moderate softness through Q1, especially closer to quarter-end, given the forecasted US rate hike in March. Omicron threats should further subside in the meantime, removing the cushion that supported gold prices by the end of last year, further adding to precious metal's softness. Regionally, we do anticipate stronger physical and speculative demand coming in from China as we approach the Lunar New Year, and the central bank's dovishness should further drive the real yields lower this year, diverging the premium between spot gold and local prices. The focus this quarter will be on inflation and subsequent government response to combat it. High nominal yields in the US and continued uptake of cryptocurrencies should further take away some of the funds that investors were putting into gold last year.

Silver

Spot Silver $/Oz

Spot Silver $/Oz

Source: Bloomberg, 20.01.2022

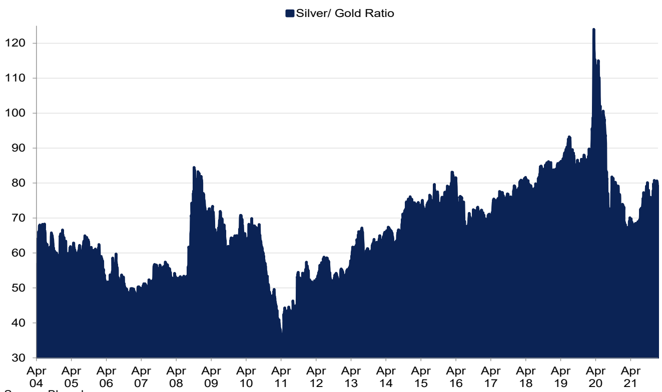
Summary

Silver, in line with gold, remained within the broad range last quarter, closing marginally higher at the year-end. We saw significant rallied at times when the Fed's statements became more hawkish, driving nominal yields higher. More recently, another multi-year high inflation release for December further drove the growth in silver prices, as the markets are pricing in more interest rate hikes this year. However, the industrial fundamentals remain weak, with manufacturing performance from major producing regions on the back foot, and now contractionary, as demand fades but pricing pressures remain strong, softening our outlook for silver into Q1 2022.

Q4 Review: As forecast in our previous report, silver was broadly range-bound during the quarter, finding support at $22/oz before closing marginally higher at the year-end. In line with gold, the major fluctuations have been driven by the policymakers statements this year, as well as rising pricing pressures and omicron outbreaks globally. The most notable jump took place in the first week of November when the Fed intensified its hawkish tilt for the first time last year. In January, however, we see a different response from silver after the Fed's heightened tone of urgency for monetary policy tightening. What is different this time around? We saw yields decline after the statements in the last two meetings after Jerome Powell stated that the hike in interest rates would not occur until all bond purchases are tapered down. This does not seem to be the case anymore, and the markets are pricing in higher interest rates sooner, with a 10yr US Treasury yield now at 1.8%.

Gold to Silver Ratio

The ratio has improved marginally in the last quarter, as the decline in gold was softer than in silver.



Source: Bloomberg

Overall in 2021, according to the Silver Institute, silver disappointed with a negative return of 13%, despite all key areas of demand performing at historic highs, with a cumulative figure at 1,019Moz, exceeding a billion ounces for the first time since 2015. Physical investment rose by 32% y/y to reach 64Moz, a six-year high. Industrial demand achieved a new high of 524Moz, with a 13% rise to more than 110Moz seen in PV alone. We expect this improvement took place as most of the pandemic projects finished completion after production accelerated throughout the year. As for investment demand, the strength is being driven by buyers from the US and India. While supply conditions improved relative to 2020, the institute forecasts a supply deficit for 2022.

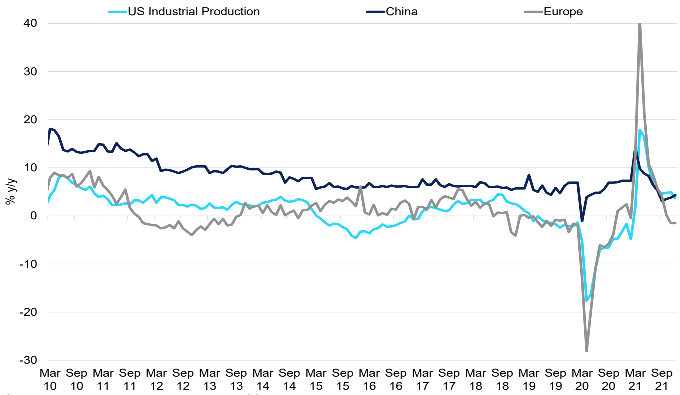
Outlook: We expect the markets to remain focussed on inflation performance and, in turn, monetary policy response in Q1. Chairman Powell hinted that the Fed may start tapering sooner than previously thought. In this context, market participants will likely continue to anticipate the Fed's intentions as new economic indicators are released. Moreover, the ECB and BoE both have a policy outlook that is already seen diverging: the ECB seems committed to its accommodative stance, while the latter has already begun to tighten. These decisions will likely remain one of the key drivers for silver. One of the biggest threats this year would be a rising US dollar index in anticipation of monetary tightening, but a stronger dollar will not be enough to offset the strength in inflation rates.

Additionally, silver underperformed gold in H2 2021 as supply chain disruptions weighed on manufacturing and industrial performance. PMI performance is further softening in the US and Europe, and we expect this to be the case in Q1 2021. Notably, many manufacturers saw diminishing demand for orders as customers waited for the previous purchases to go through the backlog, using the existing stock for the time being. Indeed, as we move through 2022, supply bottlenecks should ease, and the silver market will tend to benefit more against a macro backdrop as its safe-haven properties diminish. For 2022, the Silver

Institute expects the fundamentals for silver to improve. They also expect silver demand to increase by 13% to 110moz, led by green economy initiatives. In the meantime, however, demand for silver as an industrial metal is likely to underperform in Q1.

Major Economies Industrial Production

Industrial production continued to soften on the back of rising supply chain pressures, and omicron spread.



Source: Federal Reserve, National Bureau of Statistics, Eurostat

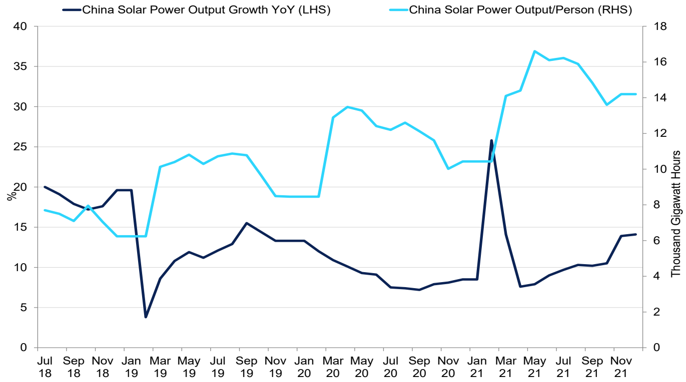
At the same time, while the Fed's firmness about the planned hikes is scheduled in 2022, these changes are likely to create a short-term source of volatility, as investors will face volatile periods of recovery as well as the change of rhetoric from the central banks. The Fed doubled the pace of tapering, meaning it will stop adding to its bond portfolio in March, but the speed and scale of interest rate hikes could be a waiting game with investors anticipating the changes ahead of the meetings throughout the year. It is also not clear at what level of inflation the Fed will decide to change its stance regarding the timing of monetary policy outlook, creating another layer of volatility to the next year's outlook.

On the other hand, silver has benefited from a noticeable improvement in demand in India over the last couple of months. Accelerating economic momentum, easing lockdown restrictions, and comparatively weaker silver prices supported the jewellery uptake. This, along with the festive and wedding season, has helped silver demand recover domestically. India's demand for gold and silver should continue improving, primarily driven by strong economic growth, relatively stable precious metals prices, and pent-up demand.

The US installed 5.4GW of solar power in Q3, a record high, but escalating supply chain constraints and costs across all market segments should depress installations by 25% over the next 12 months, according to SEIA. YTD, the US installed of 15.7GW- on pace to exceed 20GW in 2021, which would surpass the record in 2019. The Build Back Batter act should be a major market stimulant for this industry, establishing long-term certainty of continued growth. If the agreement is fully secured, silver could see this demand being priced in already this year. The plan includes $555bn in clean energy funding over ten years, and the House version includes extensions and changes to clean energy tax credits, and extension of those could result in an additional 43.5GW of solar capacity from 2022 to 2026, most of which would come from utility solar. However, more tax credits will be necessary to help achieve Biden's goals of an 80% clean grid by 2030 and US economy-wide net-zero carbon by 2050.

China Solar Power Market

Solar output continued to improve in 2021, driven by the restart of the delayed 2020 projects. .



Source: Bloomberg

Supply chain issues are likely to have contributed to a slowdown in Q4. Additionally, the industry's overreliance on component imports from Asia further exacerbated the supply issue. Only about 20% of modules used in projects are manufactured in the US, so developers now must pay three to four times the shipping costs to get panels from Asia. Congestion in major US hubs, with weeks of waiting to unload cargo builds up further queues. Once unloaded, shipping containers are sitting in nearby holding areas, sometimes for additional weeks due to railroad congestion and shortages of trucking equipment and workers. This slowdown in handling is causing bottlenecks throughout the US logistics chain.

Given the mixed picture the factors paint, we expect silver prices to plateau in Q1 before gathering steam later on in the year, as inflation abates and manufacturing performance improves. Silver is facing a multitude of opposing factors, but we see risks skewed on the downside in Q1 before a subsequent recovery on healthier fundamentals later on in the year.

Palladium

Spot Palladium $/Oz

Spot Palladium $/Oz

Source: Bloomberg, 20.01.2022

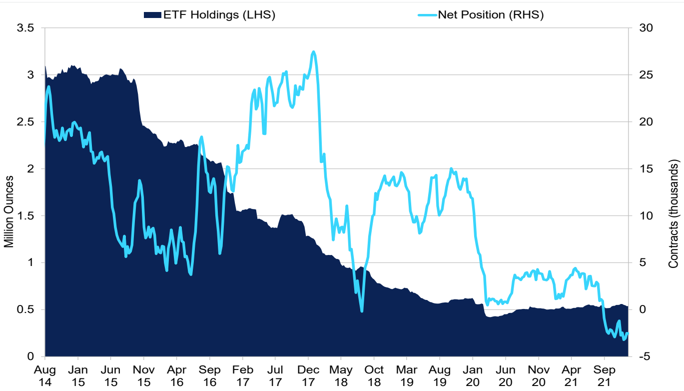
Summary

Palladium was one of the worst performers in the commodity markets last year, falling as much as 40%, as shortages of chips stalled recovery in the auto industry, driving sales globally to a halt. At the same time, we saw consumers shift to second-hand vehicles, as car dealerships saw newly-imported vehicles going straight to consumers, further adding to the unavailability in the market. We are likely to see a recovery in demand closer to the end of this year, and therefore, in the meantime, the fundamentals for the metal to remain weak in Q1 2022.

Q4 Review: The precious metal was one of the worst performers last year, falling as much as 40% to March 2020 lows of $1,540/oz. After surging to record highs of $3,000/oz in May, on the back of rebounding industrial demand, the metal closed Q4 at $1,900/oz, unchanged quarter-on-quarter. Indeed, the metal that is used in autocatalysts saw a plunge in demand, as prevailing supply chain bottlenecks coupled with chip shortages resulted in diminishing auto sales globally. As a result, both petrol and diesel cars declined in line, falling by 40% in Germany in the last six months. Palladium ETF holdings have remained elevated in Q4 and even increased to February 2020 highs. The decline in palladium prices was further exacerbated by technological advances that made it easier to use a cheaper platinum option in the converters. Even with the ratio at multi-year lows, we do not expect to cause the switch back to palladium, as the outlook for both metals is on the brighter side this year, which is likely to push the metal's price back to the pre-sell-off period..

Palladium ETF Holdings vs Net Position

The net position has been short since September and has remained low given the weak demand backdrop.



Source: Bloomberg

Outlook: The prospects for next year seem to look a bit brighter as chip shortages ease and subsequent demand for autos come back. China is bound to replenish its stock after a year of extremely low imports in 2021, likely pushing H2 2022 into a deficit, driving prices up later in the year. A rebound in auto supply should support the palladium market in 2022. In the meantime, markets have been short palladium since September, and while we expect this weakness to decelerate, the near term headwinds prevail, likely to keep palladium prices subdued during the quarter.

It has been a mixed performance for many car manufacturers. Rolls Royce's boss stated that its sales figures were the best in its 117-year history thanks to being protected from the global chip shortage by BMW. According to their statement, the company allocated all the chips for building cars to fulfil demand worldwide. On the other hand, others have begun to adapt, with some releasing vehicles without non-critical parts that contain chips, such as touchscreens or parking assistance. Second-hand car sales are likely to see further uptake in the meantime. However, this issue is likely to persist in the meantime, especially in Q1 2022, muting palladium demand as an industrial metal.

South Africa is estimated to have produced 2.7Moz in 2021, however, global output has been negatively impacted by Nornickel's production losses of 400koz, enough to offset the release of work-in-progress materials in South Africa of 240koz, according to a company statement. In the long term, Nornickel has major projects to help add output in the next five years, but in the near term, the palladium price is likely to remain subdued while the semiconductor chip shortage holds back car production.

Platinum

Spot Platinum
$/Oz

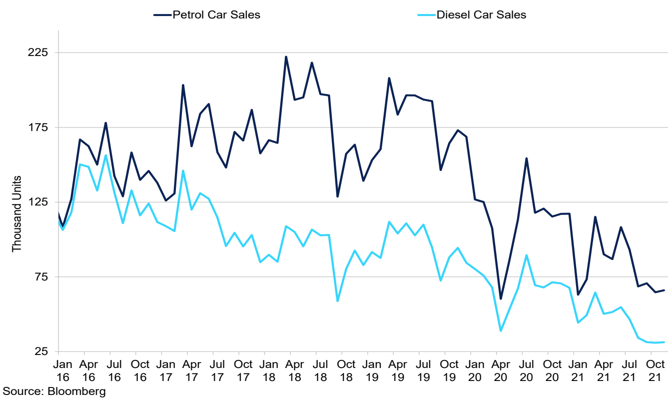
Summary

Platinum weakened during the quarter, on the back of weak demand from the automotive sector, as the sector continues to struggle with the chip shortage. To adapt, many companies began to release models without non-critical parts that utilise chips, such as satellite navigation. Others have rationed their loadings, prioritising selling more premium models. These pressures are likely to persist for the majority of 2022, acting as a further headwind to platinum prices. At the same time, we should continue to see further recovery from the supply side, as South Africa recovers from the latest wave of omicron as well as the release of the built-up inventory last year.

Q4 Review: Platinum softened during the quarter, falling as much as 8.5% to find support at $900/oz. The metal's prices have since edged higher but struggled to break above $1,000/oz at the time of writing. ETF holdings, however, weakened substantially, falling to 2.481m, levels not seen since August 2019. According to WPIC, demand for platinum has been forecasted at 7.3Moz for 2021, with 2.7Moz consumed by the automotive sector. The semiconductor shortage is now estimated to have impacted global light-vehicle production by 9.6 m units in 2021, according to LMC Automotive. This loss in vehicle production would amount to around 1.4Moz of PGMs, 1.1Moz of which is attributed to palladium. Platinum has been slightly less hit than the other metals, as some of the higher-margin luxury cars, where diesel has a slightly larger share of the mix, have been prioritised by premium automakers for the available chips, is only expected to have lost 230koz.

Automobile Market Performance

Both petrol and diesel performance converged, as sales continued to decline, especially at the end of 2021.



Outlook: Soft automotive demand, fuelled by the shortage in semiconductors, is likely to keep the lid on PGM prices through the first half of 2022, as worries over uptake in catalytic converters continue to mount. Sales in China rose by 3.8% y/y in 2021, after monthly sales of 2.79m vehicle in December brought a yearly total to 26.28m, according to CAAM. This is the first yearly jump since 2017, boosted partly by a jump of 150% in NEV sales. Regardless, December monthly performance continued to deteriorate, falling by 1.6% y/y, the eighth consecutive monthly drop. Likewise, US light vehicle sales declined by 24.6% y/y to 1.22m in the same time period, and inventory at dealerships is expected to have closed below 1m vehicles for the fifth consecutive month. Sales each month are dictated by the number of vehicles delivered to dealerships rather than reflecting actual demand. The disruption is not expected to improve much before H2 2022.

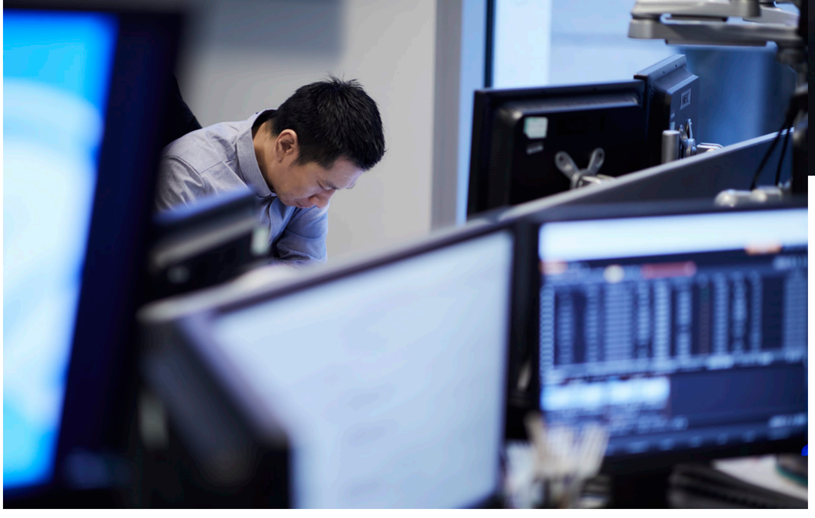
However, as we move through the year, production and sales are expected to improve as issues such as chip shortage and high prices of raw materials ease. Palladium is expected to be boosted by increasing use in heavy-duty vehicles and some substitution of palladium in gasoline vehicles. The global platinum market should see a much larger surplus this year than it previously forecasted and another big oversupply, the WPIC stated. The platinum market would be oversupplied by 769koz in 2021, the most since its data began in 2013, and 637koz this year. Supply from South Africa had increased as inventory that built up during a smelter outage was processed faster than expected. For 2022, the supply conditions should continue to improve, and most of the demand will likely come from automakers rather than speculative and jewellery demand.

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.



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

Russia
Sucden Financial Limited
Sucden Financial (Russia)
Representative Office
Orlikov per. 3 'B'
Moscow 107139

Tel: +7 495 796 96 40
Email: russia@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