Sucden Financial

Quarterly Metals Report

Q4 — October 2021

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

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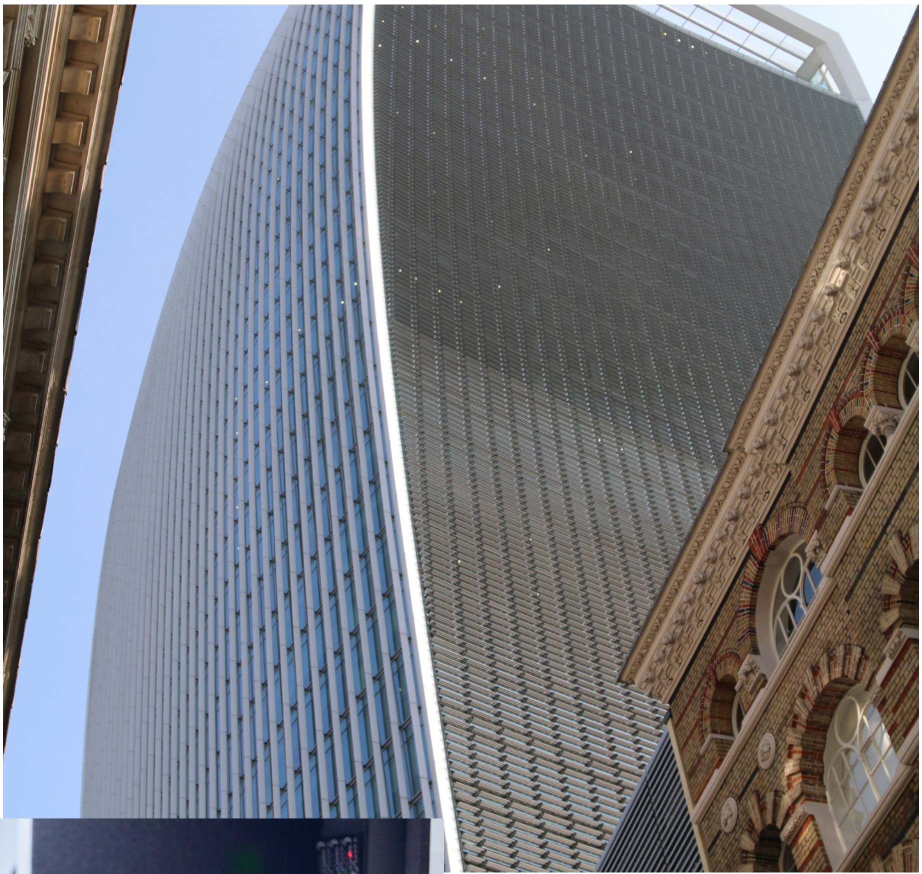

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Summary

The global macro picture is starting to present some downside risks in the near term as China's economy is set to slow further and supply-chain bottlenecks continue to cap growth. New orders and new export orders in China are contractionary, and we expect demand in Q4. Order backlogs and lead times for products will continue in Q4, limiting growth, and real consumption is weaker than it looks. Higher costs from shipping, raw materials and energy will take their toll on the consumer, and we expect end-user demand to suffer. The final piece of the jigsaw is the reduction in stimulus from central banks and how that will impact financial markets, bond yields, and the dollar has rallied while stocks corrected, but what will this trend continue?

Aluminium (Al)
China's power tariff reform will continue to impact aluminium output, which will keep SHFE prices elevated despite the softening property market. The government has subtly stepped in to support the industry, and while we expect the property sector to slow, we do not anticipate a meltdown. Western demand will remain strong in Q4 2021, but we see new order growth slow, and there is a downside risk for 2022 consumption. Expect prices to struggle towards $3,100/t unless we see further power issues and regulations, but we expect a $2,800-$3,100/t range.

Copper (Cu)
The US and Europe demand for copper is still strong, but new orders and export orders in China are contractionary. We expect economic data in China to weaken in Q4, with the ROW following suit in 2022. Central banks have become hawkish, and we expect consumer spending to falter, which is a large proportion of developed economies GDP. Higher prices have been supported by the cost curve, as demand is already softer, but backlogs of orders indicate a robust consumption outlook. Smelters in China are finishing maintenance, but we expect winter output to be largely similar. We expect copper prices to suffer in Q4 and favour selling rallies. Range $8,500/t - $9,500/t, with any spikes towards $8,200/t well bid.

Lead (Pb)
Operation rates at lead battery producers in China are falling as output in Europe is still strong, despite globally weak auto production figures. The concentrate market is tight, but we have seen some light relief from the power outages in China. Total lead production in China will consolidate, and we do not expect it to reach last year's highs. TCs are expected to remain low in the near term, but more outages would alleviate some tightness. We watch refined exports from China closely as the negative arbitrage prompts shipments to Europe and the U.S. We expect selling pressure above $2,300/t until the auto sector picks up, and we do not anticipate that in Q4 2021.

Nickel (Ni)
Nickel performed well in Q3, as supply disruptions and China's regulatory crackdown on energy-intensive industry limited output. However, prices softened in the second half of September on the back of the Evergrande crisis softening the outlook for the need for construction material. Imports in China and withdrawals from LME inventory have accelerated, confirming China's demand for materials to fill the orders with new supply. Disruptions to supply are expected to remain in place, and attention now shifts to demand to point out an outlook. Range: $17,000-19,300/t.

Tin (Sn)
We expect tin prices to stay high in Q4, despite the moderate improvement in supply. Costs have increased, but profit margins have been strong this year, but the supply-side has started to respond. Semiconductor sales are still growing but at a slower rate, and we anticipate end- user demand to decline in 2022 as higher prices and taxes impact consumers and unemployment packages are normalised. Output in China will hold steady, but domestic prices will continue to firm, and we watch the arb window and Indonesian exports to China. We expect the spreads to be tight and remain backwardated but to a lesser extent than earlier this year. Our near-term target is $40,000/t, with a downside level of $32,213/t before $30,470/t.

Zinc (Zn)
We continue to see large amounts of forward selling, which has caused the steep backwardations. Zinc production in China is expected to improve in October and November from current levels due to reduced maintenance and power restrictions. Demand is softer than it looks due to the backlog of orders, and we could see some lost demand in the auto market. China's property market will soften further, and while we expect prices to ease in the longer term, we expect prices to trade a $2,980/t and $3,200/t range, with prices falling to $2,800/t.

Iron Ore & Steel
Softer steel demand and low production will cap iron ore demand, despite the tight market. We are already seeing marginal producers having to halt production, and the decline in profit margins may reduce CAPEX of the big miners, despite some of their costs being $35/t. Higher freight and coking coal prices will support the steel market, but China's property market economic data being weaker is a downside risk. The Chinese cabinet announcing new infrastructure investment plans for the next 5-years. European prices are still high, with long lead times for products, but construction indices across the globe are also high. We favour selling the SXG 1st month future 62% Fe above $130/t, with a trading range of $130-100/t.

Gold (Au)
Investment appetite for gold has been lacklustre, pointing to lower prices during the quarter, as investors' risk on sentiment abated following the continued economic recovery worldwide and the central banks' decision to begin tapering as soon as this year. While this has capped price potential, the yellow metal remained elevated above the $1,700/oz level given continued uncertainty surrounding the outlook. Physical and central bank demand for the precious metal has picked up sharply but not enough to offset the weakness in the ETF holdings. Range: $1,690-1,830/oz.

Silver (Ag)
Weakening industrial production drove the decline in the precious metal in Q3, which has now found support at $21.42/oz. Silver ETF holdings remain high, further confirming that the weakness is coming from the industrial side. In Q4, we expect this trend to continue as supply chain disruptions and high input costs should slow industrial output, and therefore the demand for industrial-use silver. The Fed's statement to begin to taper in November has been beneficial for the precious metal as it confirmed that the economy is strong enough to survive without the government support, however, in the upcoming quarter, we are forecast to experience further contraction month-on-month. Range: $20-25/oz.

Palladium (Pd)
In Q3, palladium prices sold off, falling as much as 27% down to the support level of $1,850/oz, on-trend to come back to June 2020 lows, as material and semiconductor shortages are driving the decline in car sales. The global ETF holdings have been edging higher but remain near record lows and price decline has narrowed the palladium to platinum ratio to March 2021 lows. The continued decline in car manufacturers output is going to weigh on the economies heading into Q4 and coupled with a softer industrial outlook, we expect prices to soften into $1,760/oz, with the upper bound at $2,130/oz.

Platinum (Pt)
Industrial demand for platinum is likely to continue to soften in Q4, as the metal could continue suffering from the supply chain pressures. The price of platinum, however, was softer than palladium as diesel-engine catalytic converters lost ground to petrol-powered vehicles during the pandemic. Ultimately, car manufacturers are likely to continue to struggle, pointed out by some companies already announcing production cut this year, and, subsequently, support platinum prices in the range of $840-1,030/oz.

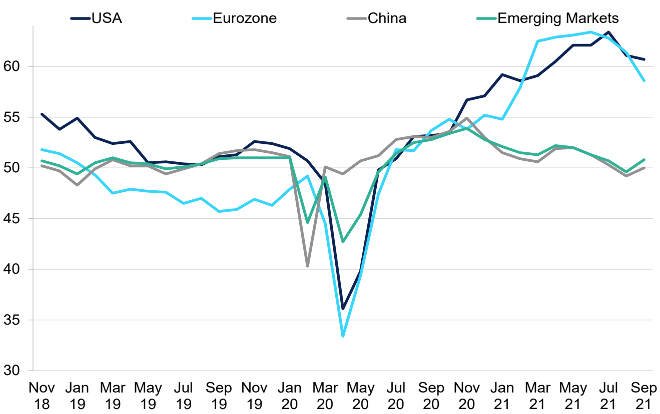
Market Overview

Global Outlook: The world economy bounced back in Q2 on the back of continued support from stimulus measures, an increasing uptake of vaccines and the reopening of economic activities in most developed nations. For 2021, global output is forecast to expand by 5.7%, according to OECD; while surpassing the pre-pandemic levels, it is a downgrade from the previous forecast in May. As we move through the upcoming quarters, the divergence between economies should become more prominent. Output and employment gaps remain in many countries, especially in emerging economies where vaccination rates remain low. Continued lockdown disruptions from the spread of delta, high input costs and softer consumer spending are likely to yield a softer gain in economic growth in the current quarter. The virus continues to present significant headwinds to recovery, and it is much harder to gauge the outlook for the last quarter of the year. We do expect inflationary pressures from both producers and consumers to moderate and central banks to enact tapering of their bond purchases, which is likely to slow the economies even further. However, this is going to be a temporary slowdown, and we expect to see a more gradual return to the pre-COVID level once the number of cases is sustainably lower. In the meantime, they are going to add a layer of uncertainty to the economic outlook for the remainder of the year.

Supply Chain Constraints: Globally, the economy expanded for the 14th straight month in August, with the composite PMI growing to 52.6; however, the rate of expansion was the slowest since January. Both manufacturing and service performance softened during the month as the number of COVID- 19 cases across the world began to spread once again, despite a higher rate of vaccinations. Global manufacturing fell to the lowest level in 14 months of 54.1, with the average supplier lead times exceeding the level last seen in June, which is also the record high. While lead times remain high, their advance has stalled, suggesting that we could see an improvement in subsequent months. Manufacturers have also reported higher inventories due to safety stock building. Suppliers are worried about supply shortages as well as higher input prices in the future, therefore buying more than is currently in demand, further exacerbating the shortages in the market.

Manufacturing PMI

Performance softened in the last couple of months, as mounting supply-side issues worsened manufacturer output.



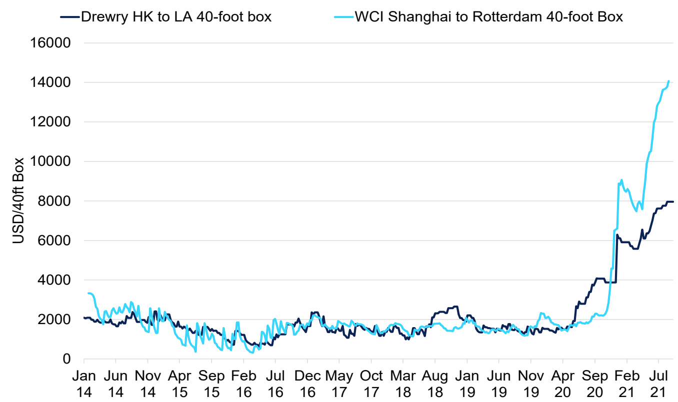
Source: Bloomberg

Europe has weathered better than others, which can be mostly explained by later emergence from the lockdown restrictions, and therefore, a lower base of growth relative to spring months. Manufacturing performance continued to outpace that of the service sector, 61.4 vs 56.3 in August, despite the supply chain disruptions, supporting another month of expansionary performance in August. In China, shipping ports and factories were disrupted by outbreaks of the Delta variant and subsequent containment measures imposed by the government as part of its zero-tolerance policy. Although global demand for manufactured products was strong, supply interruptions, shortages of transport capacity have all contributed to the decline of industry growth. Manufacturing turned contractionary, falling to 49.2 in August, a signal of deterioration in the sector.

Freight Costs: Freight rates continue to beat record highs as constrained supply meets with a continued recovery in demand. Additional limited freight capacity exacerbates this problem. Shanghai to US costs have risen sharply, it now costs more than $10k for a standard 40-foot container, up from $3k two years ago, and many producers on-route have found themselves unable to fill the ships, as they come from China already full. Freight rates from Shanghai to Los Angeles are now at $12,424, and Shanghai to New York is at $16,138, up 222% and 252% y/y, respectively. Los Angeles to Shanghai has remained marginally unchanged in the last couple of weeks but is still up by 180% y/y, at $1,404. Those that could not afford to ship their orders had to find supply elsewhere, whether in neighbouring countries or at home. However, we do expect that most of them should maintain their products in stocks, which could further aggravate the issue. Demand will remain key as supply chain disruptions are likely to be sustained until mid-2022.

Drewry Container Index for Hong Kong to Los Angeles vs Shanghai to Rotterdam Index for a 40-foot container

Freight costs continue to climb with no signs of abating.



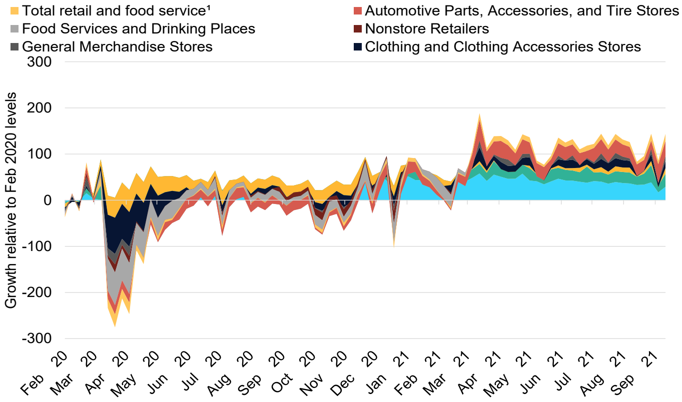
Source: Bloomberg

Oil: Oil prices have been stronger in the last couple of weeks, supported by a combination of continued growth in demand, OPEC+ as well as the storm in the Gulf of Mexico. In its meeting in July, OPEC agreed to increase crude oil production by 400,000 bl/d each month starting August until the previous production cuts are fully reversed. And while most of OPEC boosted output in August, a handful of members plus several allied producers saw a production drop. Overall OPEC+ crude supply fell by 150,000 bl/d to 41.58m bl/d in August as increases from Saudi Arabia, Iraq and Russia failed to offset losses in Nigeria, Kazakhstan and Mexico. In September, we saw another leg up as the storm in the Gulf of Mexico significantly hindered the supply outlook from the region. Indeed, globally, oil supplies fell by 540,000 bl/d in August, with most of the damages coming from the US. For September, while the region continues to come back to the market, accumulated output losses in the US should be enough to offset a large share of increase from the OPEC+. As of September 14th, 60% of the Gulf of Mexico's output is back online, with 720,000 bl/d of production is still being shut. While this impact might not last beyond September, downward revision has been to production in Europe and Asia through to the end of 2022.

US: The US economy grew at 6.6% q/q in Q2, slightly higher than Q1 performance. Retail sales jumped unexpectedly in August, as a broad gain across most categories offset the weakness at the auto dealers. The data climbed by 0.7% m/m after a 1.8% decline in July. The monthly incline has been supported by back-to-school demand; consumers shifted back to goods, the receipts for restaurants and bars stagnated, as the climbing number of COVID-19 cases deterred the willingness to go out. As of September, high-frequency credit and debit data is pointing to a spike in spending on food services and drinking places driven by a declining number of COVID cases in the country, last seen in July and May, when, surprisingly, retail sales declined month-on-month. Again, this could be explained by the strength of purchases of normal goods, such as shopping and groceries, relative to the amount spent to go out.

High-Frequency Credit Card Transaction Data

Credit card data point to an uptick in restaurant and bar services, in line with the abating number of COVID-19 cases in the country.



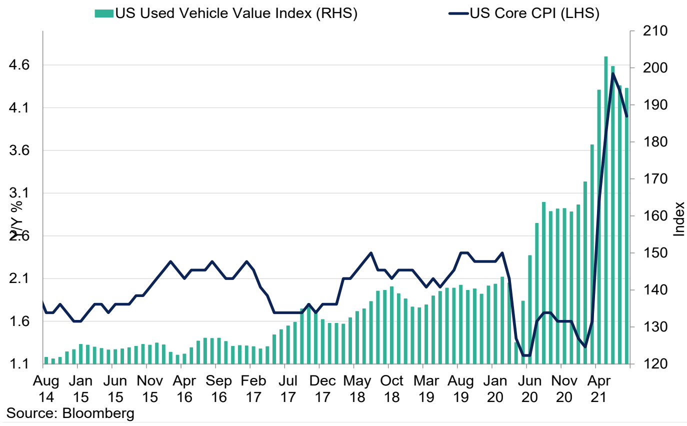
Source: US Bureau of Economic Analysis

Shortages of goods and a continued high level of inflation are likely to deter consumers from spending in the coming months. September might be marginally positive, but October and November data could see continued softening. Christmas shopping should elevate demand by the year-end but the lack of goods availability might cap the usual spending patterns around the period. As we advance, the path of retail sales is likely to be dependent on the direction of inflation, consumer confidence and supply chain bottlenecks. US consumer price growth softened in August, growing at 0.3% m/m, the smallest gain in 7 months while continuing to show strong growth of 5.3% year-on-year. While month-on-month growth seems to be abating, supply chain disruptions should continue to keep the broad measure of inflation elevated. Indeed, a Fed Reserve Bank of NY showed that inflationary expectations are to remain around 4% over the next three years, with 5.2% in the next year, which is the highest in more than a decade. We expect CPI data growth to slow but remain at high levels; however, as the cost for used cars – the main driver in recent inflation uptick – varies, we expect to see some fluctuations month-on-month.

In the September meeting, Powell said that the US central bank could begin tapering asset purchases "soon", which could come as soon as the next meeting in November and complete the programme by the middle of next year. While interest rates remained unchanged, the officials revealed that rate hikes might come sooner than expected. As for interest rate policy, Powell said that the Fed would have a more stringent test. The rate would remain unchanged until the economy reaches conditions that accommodate maximum employment and a sustainable 2% level of inflation. While inflation is likely to remain elevated above this level, it is reasonable to assume that it should slow in the coming months.

US Used Car Value Index vs Core CPI

We saw a direct link of softer used car sales and CPI data; the recent data however pointed to a spike in car prices.



Source: Bloomberg

Europe: The combination of stimulus and rising vaccination rates have supported euro area growth in the last couple of months to the point that it is now expected to reach pre-pandemic output levels before the end of this year. GDP growth increased by 2.2% q/q in Q2 and 14.3% y/y.

Household consumption expenditure increased by 3.7% q/q, having a strong positive contribution to overall GDP growth; exports were up by 2.3% q/q. The growth is not as strong as it was in Q3 2020, where the economy lifted the first round of restrictions and pent-up savings caused consumers to unleash spending. The recovery now hinges on how Europe plans to approach the stimulus support and the approach toward containment measures if another wave appears during the winter months. The IMF forecast growth of 4.6% in 2021, subsiding to 4.3% in 2022.

In line with broader recovery, industrial production rose by 1.5% m/m in July, whereas in June, production fell by 0.1%. Non-durable and capital goods were the biggest drivers behind this growth, while durable consumer goods gains softened. Eurozone manufacturing PMI registered another month of expansionary performance of 61.4 in August, however, continued to wane relative to previous months. Limited capacity and raw materials, alongside record high freight prices, limited manufacturers' output for the second straight month after a recovery seen in June. As a result, PPI increased by 2.3% m/m in July, nearly twice the amount in June, continuing to beat record highs. Energy and intermediate goods were the biggest drivers.

Consumer prices were softer than producer, growing by 1.8% m/m, the highest level since 2018. We expect inflation to continue to grow month-on-month before softening in the latter months of the year, a similar but lagged trajectory of the US CPI growth. Regardless of the inflationary levels, it is unlikely that the ECB will alter its tightening policies, as it views the price pressures as "transitory".

As the economy continues to enjoy positive economic growth, the ECB said it would slow the pace of asset purchases, however, it specified that this should not be viewed as tapering. The purchases are to be slowed down from $95bn per month and last until March 2022. ECB's move to maintain support, albeit at a lower rate, goes in contrast with countries such as the US and the UK that stated their intent to taper. The PEPP is different from the US asset purchase programme in the sense that there is a precise amount of purchases planned. The decision to shift monetary policy likely reflects a view that the bloc no longer needs the current level of central support, that is, assuming another severe outbreak does not emerge. ECB President Lagarde stated that while the rebound is increasingly advanced, there is still more room to go before the damage that the pandemic has done can be undone.

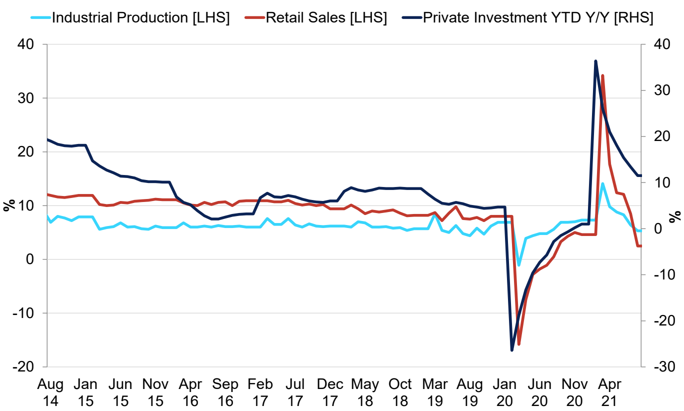
China: China is experiencing yet another wave of COVID-19, a month after the previous outbreak has been contained, with most of the cases focussed on the south-eastern province of Fujian, a major manufacturing hub for sneakers, clothing and electronic components. The strict lockdown measures bring up the question surrounding the sustainability of China's Covid Zero strategy. Indeed, the total number of confirmed cases is 65 times smaller than the peak of cases in February 2020. While the number of vaccinated people remains high, at 76% receiving at least one dose, vaccinations alone are not suficient enough to control the spread of the Delta variant, and therefore the government should continue to monitor and control the sources of outbreaks.

On the other hand, the economy is forecast to face another winter of power shortages that threaten to mute its economic recovery as a global supply crisis send the price of energy higher. China is at risk of not having enough coal and natural gas to power factories and homes despite last year's efforts to stockpile fuel. Therefore, the effort to ration electricity to some key industries could help curb demand this winter, cushioning the potential power shortfall. Authorities also said that they would speed up the accumulation of coal stockpiles.

China's economic indicators point to further weakness in August, indicating the impact the spread of the Delta cases had on the economy. August activity and spending data showed a further slowdown in economic growth, adding to existing headwinds from a withdrawal of policy support. Industrial output grew by 5.3% y/y – the lowest level since July 2020. The regulatory crackdown on energy-intensive sectors should exacerbate the industrial weakness. Home sales in the four first-tier cities continued to decline, and the Evergrande crisis is likely to exacerbate this further.

China Industrial Production vs Retail Sales vs Private Investment

We continue to see softening in the Chinese economy, and September is likely to experience contraction, given the recent COVID-19 outbreak.



Source: NBS, Bloomberg

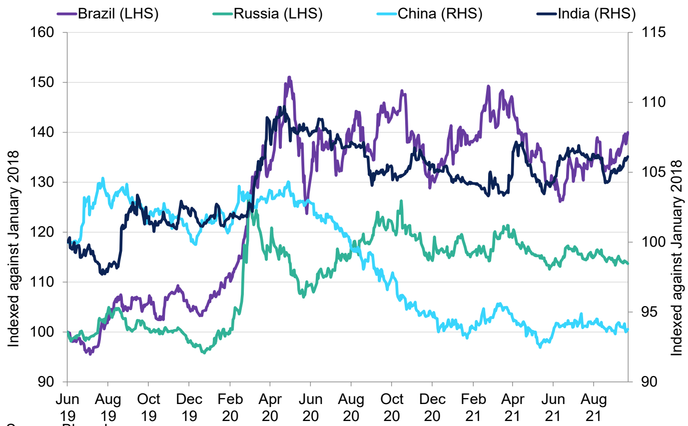
Policymakers have so far refrained from the large-scale stimulus and instead resorted to tools to increase credit supply to sectors of the economy, especially small businesses. Rising input costs, and limited industrial production, raise concerns for more support from the government. The latest signs suggest the growth will be the priority. As of its latest meeting, the People's Bank of China stood pat on its benchmark interest rates, meanwhile holding the one-year loan prime rate at 3.85% and the five-year rate at 4.65%, in line with market expectations. The Evergrande crisis has also spiked volatility in the Chinese markets, but despite the latest surge of liquidity into the financial system by the authorities, the construction outlook is to remain muted.

Emerging Markets: Recently, the Fed and the ECB have stated that they wish to begin tapering measures either this year or later, however, were clear to let the markets know that the interest rates will not be touched this year. Emerging market economies, however, some of which have not had strict lockdown measures, despite a high number of cases, have already begun hiking interest rates to combat high levels of inflation. This has been particularly for Russia, which has already hiked interest rates five times this year, boosting the rate from 4.5% to 6.75%. This comes at a time when inflation is at 6.75%, far above the central bank's target of 4% and August 2016's high.

The central banks of developed economies, such as the US and the Eurozone, see the current surge in prices as transitory and are willing to wait for a return to normal levels rather than hike interest rates now. Softer inflation data in these economies back this narrative. This is not necessarily true of emerging markets where markets are sceptical that inflation will return to a lower level. Therefore, tightening now could prevent severe capital outflows and currency depreciation.

Emerging Market Currencies

We expect the local currencies to be supported in the longer term given the softening of lockdown restrictions and interest rate hikes in some regions.

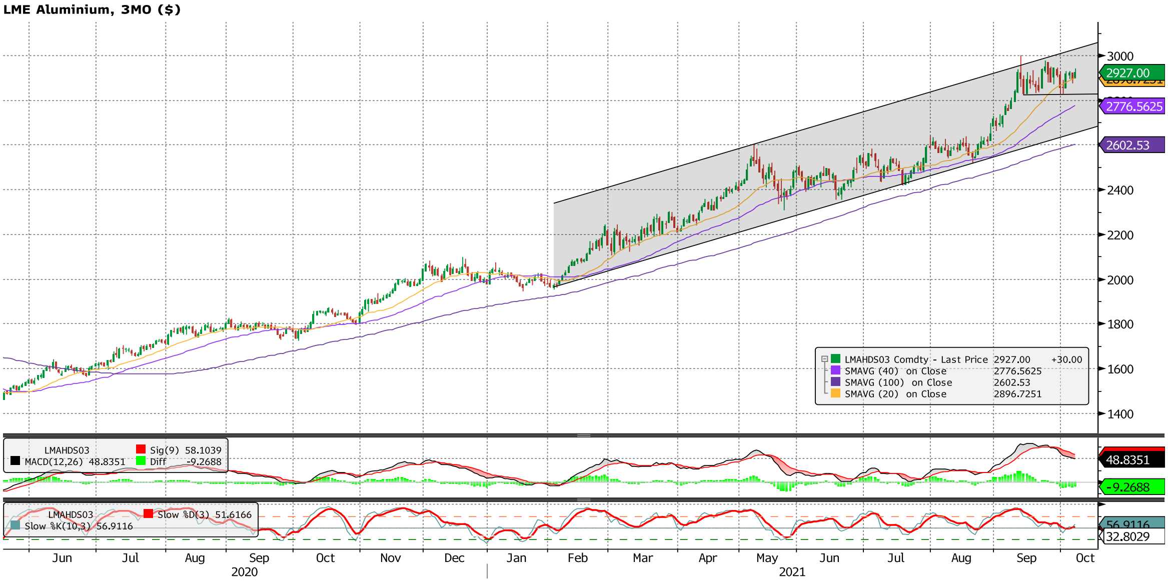


Source: Bloomberg

Another economy suffering from rising inflationary pressures in Brazil, with annual inflation coming at 9.68% in August, well above the 3.75% target. In response, it increased the benchmark from 2.0% to 6.25% in September. Brazil's economists predict a rate of 7.0% in 2021 and further hikes to 8.5% next year. Political tensions are adding another layer of uncertainty to the outlook, as the government seeks to exclude court-managed payments from the spending cap rule and help create budget room to strengthen the social programme. Overall, the real test for emerging markets will come when the big central banks, such as the Federal Reserve and the ECB, start to adjust monetary policy. The IMF has warned that this could set off a financial crisis in some emerging markets.

Aluminium

LME Aluminium 3MO ($)



Source: Bloomberg, 07.10.2021

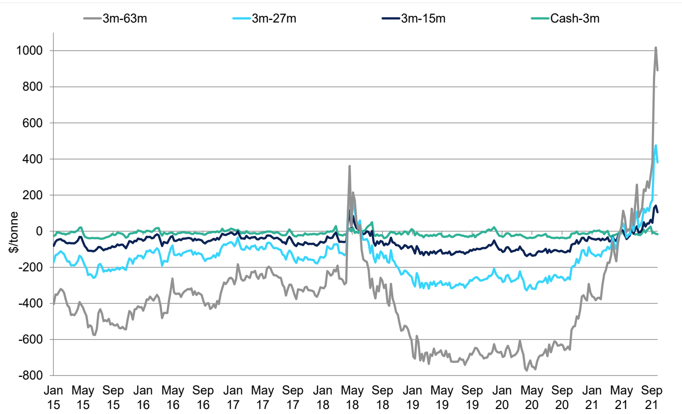
Summary

Power outages in China have shifted the domestic market balance, with over 2m tonnes of capacity impacted over the course of 2021, over 500,000 tonnes moved in September alone. Demand has been strong and while China is starting to soften, it's robust for Europe and the US, with high premiums, and new orders and lead times rising. We expect this to remain the case until 2022 before demand softens. The inventories continue to fall, and continued tightness in China may cause the arb window to open. Higher costs will support prices, but the hawkish Fed and stronger dollar will provide headwinds to the LME in the near term. Any break above $3,000/t towards $3,100/t will be short-lived.

Q3 Review: Prices rallied over the summer months, beating our upside expectations and testing appetite at $3,000/t. Due to a drought in Yunnan, supply-side restraints and emission controls have capped aluminium production, aiding the bull story. Demand is strong as lead times for products extend as offtake is not subsiding yet, causing SHFE prices to rally and now stands at RMB22,815/t, the import arbitrage on the front month stands at RMB-164.87/t. The Chinese market is in a deficit for this year, which will push local prices higher and cause the arb window to open. Aluminium prices stuttered as the Fed became more hawkish and the dollar has started to stabilise; however, aluminium has weakened to a lesser extent than other base metals due to the supply-side story.

Aluminium Calendar Spreads

Long-dated spreads are in a steep backwardation, suggesting forward selling.

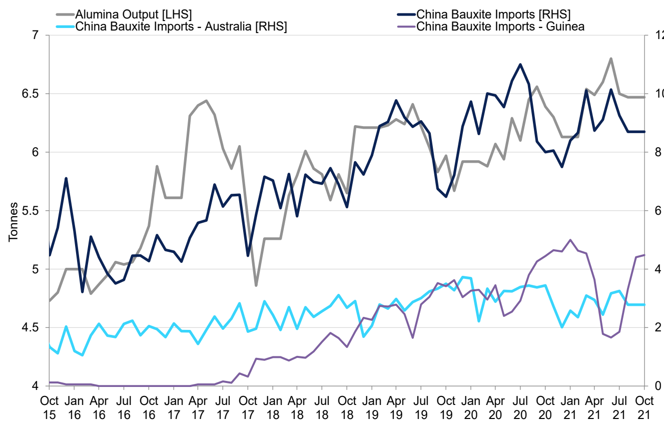


Source: Bloomberg

Outlook: Aluminium prices continue to be dictated by the power struggles in China, the lack of rain in Yunnan, which is predominately hydropower, and reduced snowmelt creating power shortages in Yunnan, Guangxi, and Guizhou, as they are all connected to the same grid. This, in conjunction with the emission controls and reduced operating rates of coal power stations, has fallen. The National Development and Reform Commission (NDRC) introduced tiered power tariffs that compound issues for large smelters. The change in power tariffs would raise the cost curve and may prompt the LME price to rise further, smelters in different regions would be impacted differently, and the key is whether or not the hydroelectric power in Yunnan is classed as a renewable energy source or included in the tariffs. The policy would see the power threshold be lowered to 13,650kWh/t but then lowered further in the coming years to 13,450kWh/t in 2023, then 13,300kWh/t in 2025. This will impact the pace at which new smelter projects come online and heavily impact aluminium production in the future.

China Alumina Output vs Total Bauxite & Australia & Guinea Imports

Guinea imports improved in recent months, and Australian shipments are stable.

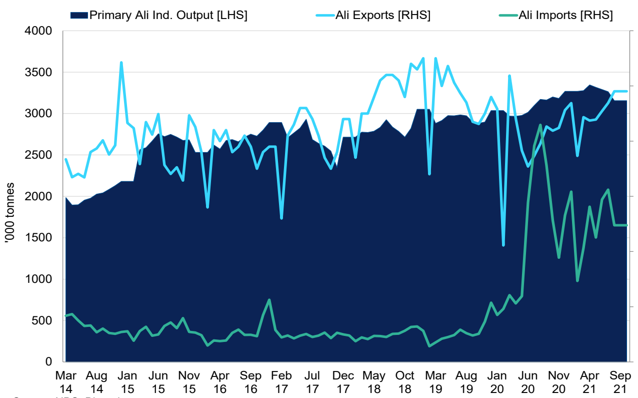


Source: Bloomberg, NBS, China Customs Data

Imports of bauxite into Australia have dropped off marginally but are still above 8.5m tonnes despite fears of curtailed shipments. Imports from Guinea were 4.36m tonnes in August, which were flat before but marginally down on June and July figures. Exports from Australia have also edged lower to 2.78m tonnes in August. The political relationship between China and Australia remains tense, and this could see imports from Australia decline, but shipments continue to flow as things stand. Australian bauxite monohydrate 52% CIF is $42/t, and this has held firm in recent weeks but is a YTD high. Australian alumina has also increased in price to $371/t, increasing input costs for importing smelters, but domestic production is still high at 6.47m tonnes in August. Higher bauxite and alumina prices, in conjunction with rising coal and power prices, have increased the cost curve for producers and, therefore, helped aid the bull run.

Primary Aluminium Output vs Exports of Unwrought & Aluminium Products

China still exports large amounts of aluminium products while still importing unwrought aluminium.

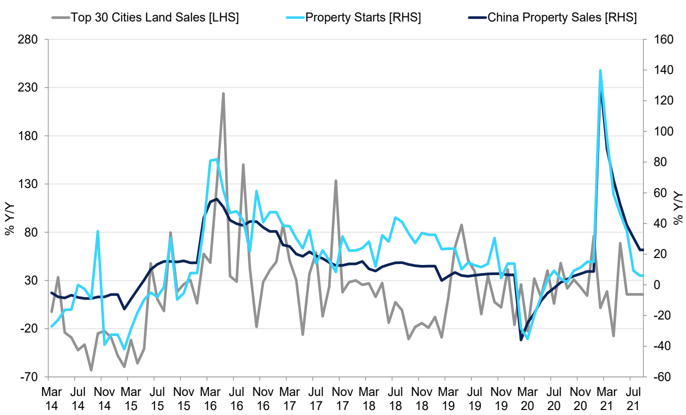


Source: NBS, Bloomberg

Output in China has declined due to power outages; according to the IAI, China's primary aluminium production fell to 3.29m tonnes in August, down from 3.327m tonnes in July. We expect aluminium production to remain on the back foot in the near term, keeping the Chinese market tight and helping support the SHFE contract. The power issues and tariffs present a significant challenge to smelters in the future, and the increase in costs of power and coal could cause some to stop producing or amend their capacity. If this happens, this will change the balance of the Chinese market. In the near term, we do not expect producers to rush back to resume operations if they don't get a guaranteed power supply. This will cause stocks to draw down further in the coming months, which may open the arb window, as we expect the LME price to suffer due to a stronger dollar and more material availability outside of China.

Chinese Property Market

The property sector is has slowed and we expect this to continue despite support from banks.



Source: Bloomberg

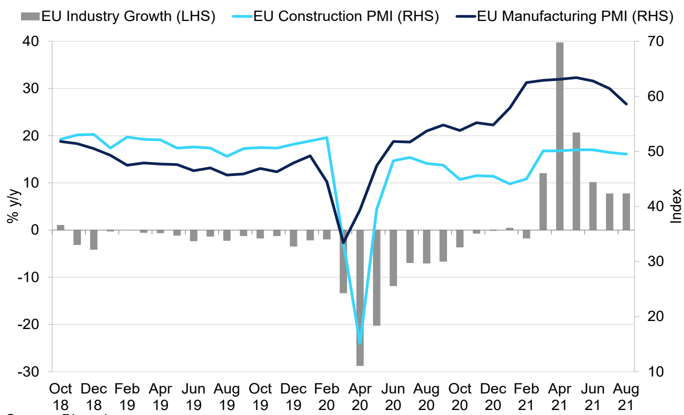
China was running at an annualised capacity rate of 38.1m tonnes in September, down from a total capacity of 43.7m tonnes. Operating rates were high and stood at 87.2%. The current dynamic of China exporting semi-finished aluminium products for the tax rebate and importing unwrought & alloy aluminium products could change. If the power restrictions continue to plague the Chinese market, the tax rebate from exporting semis could be changed as there is little sense in exporting semis but importing a finished product. Unwrought imports into China have declined in recent months from over 300,000 tonnes to 247,547 tonnes in August.

Demand has been strong, and the just in time supply-chain model has been severely tested. Some manufacturers and producers are scrapping this model and increase their orders. This improves demand in the near term for products, but we expect end-user consumption to weaken in the medium to long term and therefore, orders may decline going forward.

Evergrande rocked China's property market, and while this situation appears under control, the government has stepped in by instructing banks to help support property firms to prevent the market from collapsing. We have also heard of SOEs buying assets from Evergrande, and this will enable projects to be completed, support the market and help Evergrande pay the debt. Property completions in China have improved, but new starts and sales have suffered in recent months. This is due to the increased regulations on property developers in China and reduced investment in real estate as local governments have issued fewer bonds. We expect construction in China to soften further, presenting a downside risk to demand.

EU Industry Growth vs Construction PMI vs Manufacturing PMI

Product lead times are becoming detrimental to the construction industry, but manufacturing is still expanding.

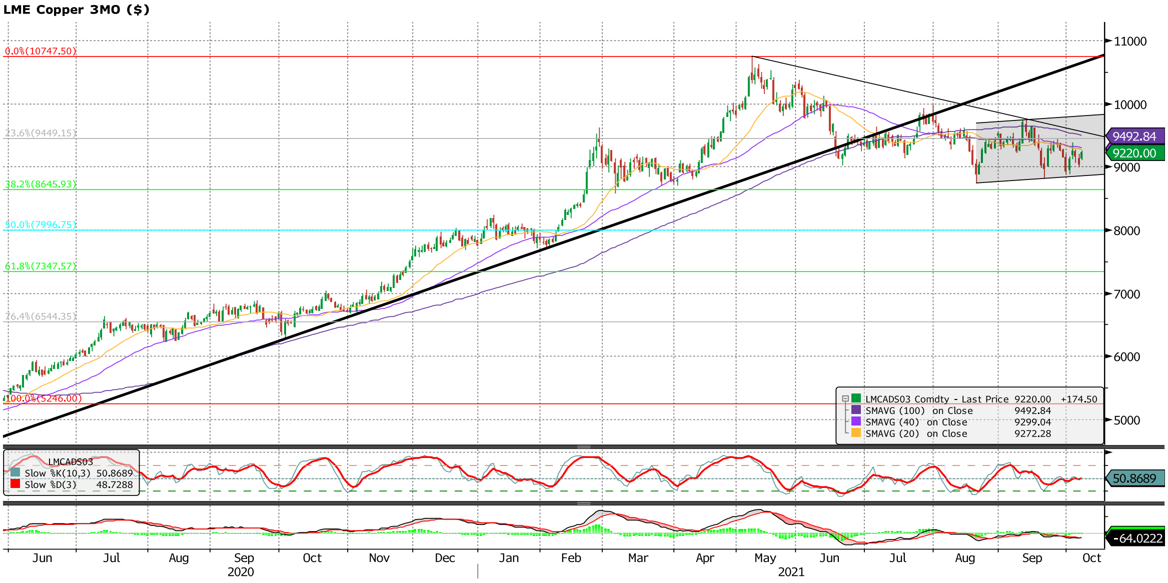


Source: Bloomberg

European aluminium consumption will be strong into year-end as orders remain high and manufacturers continue to find it hard to procure products. Manufacturing in Europe is strong, and orders continue to grow. Europe's recovery fund will help to provide structural support to the economy in the long run and boost economic growth. Operating rates of Europe's semi- producers are high to capitalise on high demand and prices, stocks of finished goods are declining, and this will cause lead times to increase if orders cannot be fulfilled in the near term. This will give the perception of more robust demand in the medium term, but we expect new orders and sales to slow. Premiums in Europe and the U.S. have been rising but stalled slightly as the spreads went into backwardation and the LME price stalled. Consumption in the U.S. is equally as strong as Europe, manufacturing is expanding, and new orders are still growing, and this should remain the case into Q1 2022. Input costs have risen, and this will be passed onto the consumer but FRPs, extrusion shipments have increased YTD, and U.S. demand for aluminium is back to pre-pandemic levels, although we expect end-user demand to suffer in 2022. The reduction in end-user consumption may be offset by rising demand from the packaging sector and autos, as companies move away from plastics and increase the aluminium content in vehicles. The average vehicle in the U.S. is larger and, therefore, will require more material.

Copper

LME Copper 3MO ($)



Source: Bloomberg, 07.10.2021

Summary

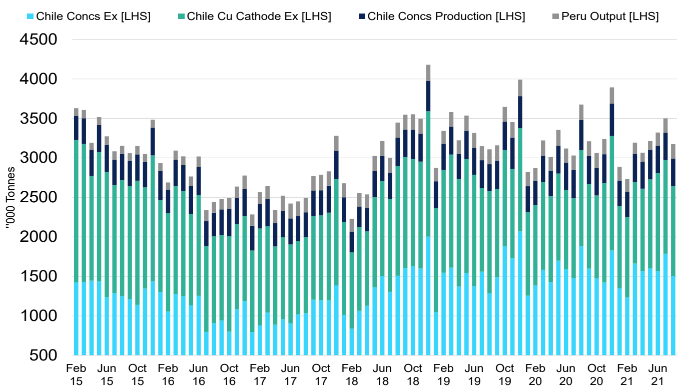
The copper scrap market is tight, and imports into China were lower in August. This was partly attributed to higher cargo prices. Mine supply is improving, and this will continue in Q4. TCs have risen because of better concentrate availability due to maintenance at smelters and power outages. Spot volumes are low, and shipping delays will be problematic, especially with increasing profitability at smelters due to high sulphuric acid prices. Input prices have increased as well. We expect data in China to weaken in Q4 and demand for copper to suffer as a result. The physical market is strong with premiums elevated, but softer consumption in Q4 could see them decline. We favour selling rallies above $9,500/t in Q4 with a target of $8,500-$8,600/t, which is a good entry point for a longer-term trade.

Q3 Review: Copper prices consolidated in Q3, prices traded within an $8,740/t and $10,000/t range, in line with our expectations in the previous metals report. Performance in the second half of Q3 was weaker as the dollar stabilised and strengthened due to the Fed becoming more hawkish.

Headline economic data in China has been softer, and global investors have become worried about the widespread impact of the Evergrande fallout. However, the government has supported the property market, limiting the downside, but consumption has slowed despite the physical market holding firm. The SRB continue to release stocks into the Chinese market to prevent raw material prices from rising, but input costs are elevated, keeping the cost curve elevated in the near term.

Chile and Peru Monthly Production

We have seen a strong recovery from Peru, but Chile output remains patchy.



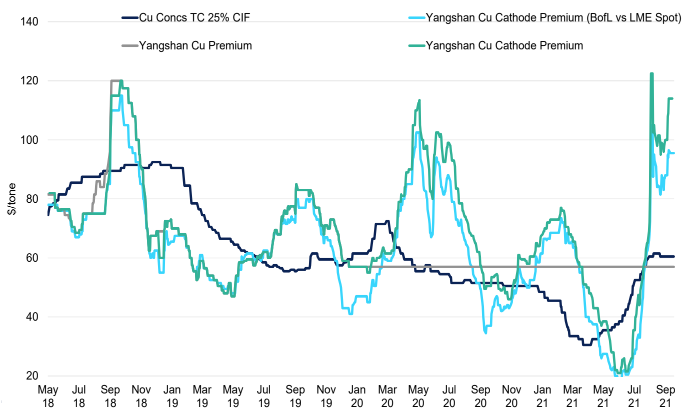
Source: Banco Central de Chile, Banco Cenrtal de Reserva del P

Outlook: Global copper mine production has increased 4.9% Y/Y in H1 2021, and Peru was significantly higher, up 14% Y/Y. Chile output was down 1.2% Y/Y during the same period, and this trend worsened in August as production decline 4.6% Y/Y due to labour strikes. Production declined to 466,928 tonnes in August, with YTD output at 3.7m tonnes. Tensions between Unions and miners have increased following the rise in prices and conditions through COVID. We have seen a breakthrough in negotiations that meant strikes were avoided. This will help improve mine output in September and the coming months. BHP's mine Cerro Colorado mine will resume production after a court suspended a water ban for 90 days. BHP can extract 54 litres a second for production. After the ban, the mine must have approval for their environmental plan. If they fail to get support for their plan, they will not extract water. This highlights the critical trend of increasing pressure on the mining industry to reduce its environmental impact. Water consumption presents a significant environmental and financial risk to the mining and manufacturing industries. We expect further pressure on the mining industry in the long run, reducing production for periods while the issues are resolved.

The SMM monthly copper concentrate index has increased to an average of $62.98/t for 22- 36% copper content CIF. The weekly copper concentrate is higher, standing at $65.3/t, as of September 30th, which is flat on the week. China's treatment charge of 98.5% min blister copper delivered with tax has been falling in recent weeks to RMB1,560/t, China's copper ore and concentrate imports held steady in August at 1.89m tonnes, flat on the previous month and higher than June's figure. The supply of concentrate has been stable in 2021, but Chile's output continues to be plagued. TCs increased in Q2, and this prompted some smelters to hold back on re-stocking. We continue to see trades for spot TCs within a $60/t and $62/t range, but volumes for Q4 are capped by limited cargo availability. Smelters with little immediate demand are looking to produce copper cathodes using a higher copper content. However, some seaborne concentrate has low purity, and some smelters are reluctant to purchase this material. TCs for blended concentrate has risen to $70/t. We have seen some trades done at this level already. The higher TCs will improve profitability for smelters as sulphuric acid prices are also high, which has strong demand has improved earning conditions, and as a result, utilisation rates will remain high.

China Copper Premiums vs Copper Concentrate TCs 25% CIF

Premiums have risen sharply as the physical market is strong, but we expect demand to soften.

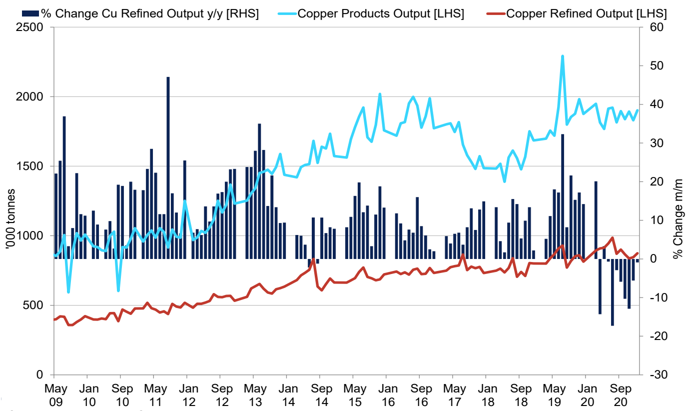


Source: AMTL, SMM

Copper cathode production has been steady in recent months; copper cathode production stands at 819,400 tonnes, up 1.3% M/M and 1.1% Y/Y. Output has been subdued because of the power curtailments and maintenance. These two issues will persist in October, particularly in Guangxi, where two large smelters will reduce production in this region. Elsewhere, the prices of semis and finished products are higher, in conjunction with higher sulphuric acid prices. However, the supply of scrap has declined and procured material may prove harder, limiting output.

China Copper Output

Output in China on average has been lower this year, but there is scope for marginal improvements in Q4.



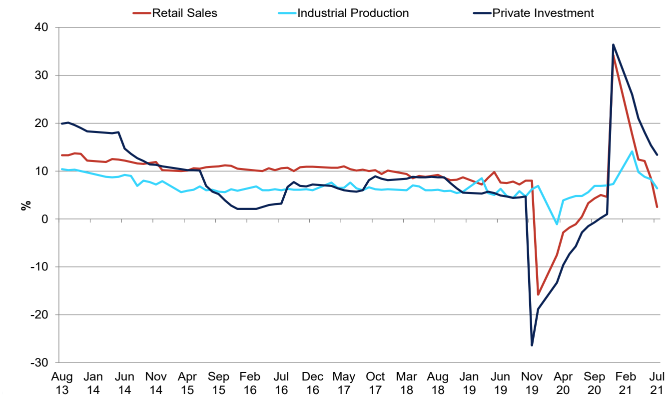
Source: Bloomberg, NBS

Domestic cathode production is expected to be higher in September, with similar levels in October. YTD output is up 10.7% Y/Y, with total production at 7.52m tonnes. Total copper products output has pushed higher, reaching 1.9m tonnes in August, and we expect output to increase in Q4 for re-stocking. Consumer inventories have been declining in China, and bonded warehouse stocks have been growing. Finished inventory for wire producers has held firm, but tube and PSS stocks have been falling. The falling domestic and exchange inventories and more substantial premiums gave the impression of robust demand. Premiums have stayed elevated, but new orders for goods in China suffered, and we see economic data slowing in Q4, just as central banks become more hawkish. However, we expect consumption to weaken in Q4 due to falling real wages in the global economy and upside price pressures from cost inputs and the supply side. Even though Christmas is around the corner, supply- chain bottlenecks, freight, and power costs could cap output for goods. Consumer spending globally will start to take a hit, and copper demand may soften as a result. In China, we have seen property completions rise significantly, which will support white good consumption in China; this will provide some support to copper consumption.

China continues to export large amounts of refined copper; this suggests a lack of product outside China but also helps fill the backlog of orders and a strong physical market. However, we expect this to soften in the coming months. New export orders have declined and are now contractionary at 46.20, with China's new orders standing 49.3. The stable and strengthening dollar will compound the near-term softness in demand due to the weaker consumer discretionary. Our base case for 2021 is that the dollar starts to firm in Q4 and in 2022. As a result, commodities and copper may come under pressure due to their inverse relationship with the dollar. We expect data from China to remain soft in the near term as the economy digests the Evergrande story, but the state has stepped in to support the wider property market. Global manufacturing will continue to be impacted by the bottlenecks and higher freight and input prices. We see consumer discretionary consumption as a downside risk to the global economy. However, we expect decarbonisation and the green economy to support prices in the long run, and if LME 3-months prices drop to $8,500/t or below, we expect firm buying from specs and traders for a longer-term trade. Premiums surged higher in Q3 as prices and inventories declined, and China's copper exports rallied, indicating robust copper demand. We expect longer-term demand for copper with prices around $8,500/t, with the Shanghai cathode at a premium with an average of RMB170/t, an improvement on the previous week ahead of China's holiday. The arb window has opened into China, and we expect this to support the market in recent sessions, despite the holiday. The open arb window will prompt buying from China once again.

China Macroeconomic Indicators

The economy is expected to slow in Q4, we look at the PBOC net injections.



Source:Bloomberg

PBOC Bank of China has injected significant funds into the economy over the last few weeks, with 600bn RMB in September, a substantial increase in the last two weeks. As a result, the all- systems financing in China has started to increase as well, while September's figure is yet to be announced, but August data shows of financing show RMB2955.8bn, this should support the economy in the medium term, but other key indicators are declining. Investment in the electric grid continued in August, with the cumulative figure reaching RMB240.9bn, up 1.2% Y/Y. We expect further investment in this area and 5G in the coming months and next year as China looks to increase the quality of its growth per the 5-year plan. Globally, there was $174bn of new investment into renewable energy, up 1.8% Y/Y. China contributed to $45.5bn for that period, the most by any region, but was down 20% Y/Y. Conversely, European investment was $35.2bn with the U.S. at $32bn. There was a decline in renewable energy projects. However, there was an increase in public market offering.

Lead

LME Lead 3MO ($)

Source: Bloomberg, 07.10.2021

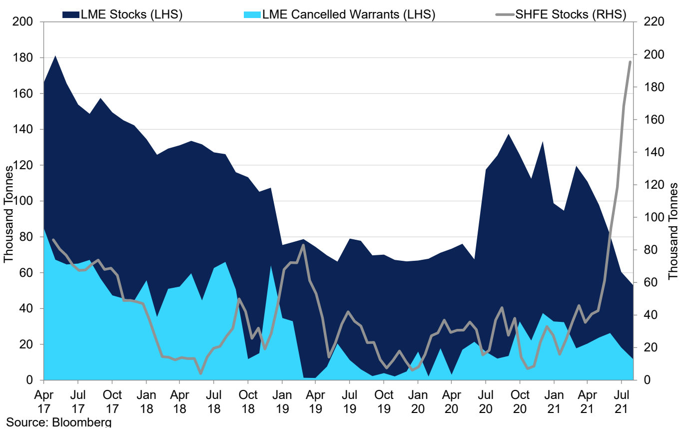
Summary

Shipping issues and a dislocated supply chain will continue to cause problems in the lead market with refined material in the wrong locations. The wide negative arbitrage has caused China's exports for refined material to skyrocket, as production in Europe struggles. The auto market is still slow, and we expect this to remain the case in the medium term. The troubles continue to come from the supply side. With secondary prices in China falling below breakeven, this may prompt lower output in the coming months. TCs are low as imported material is expensive. There is tightness in the domestic market, but high sulfuric acid prices are helping profitability. We expect SHFE inventories to plateau and LME stocks to remain on- trend. We expect rallies to be sold but upside pressure to come from the supply side.

Q3 Review: Lead prices were firmer in July, but prices failed to hold above $2,400/t; prices have declined by 11.86% since and trade at $2,135/t at writing. In August, LME price-performance was relatively benign, but we saw the cash to 3-month spread tighten into a $218.50/t backwardation. The spread is relatively neutral with a small backwardation at $11/t as of September 22nd, and backwardations are steeper as we move down the curve with the 3- month to November 2022 at $29.75/t backwardation. The fundamentals caused the backwardation as LME stocks declined, and weather in Germany caused Berzelius' primary smelter to need repairing for some time. The macro-environment has deteriorated, the Evergrande situation is a headwind, and central banks adjusting their policy to become more hawkish. End-user demand is expected to be weaker in the coming months.

SHFE vs LME Inventories

The divergence continued in recent months, but we could see SHFE stocks plateau.



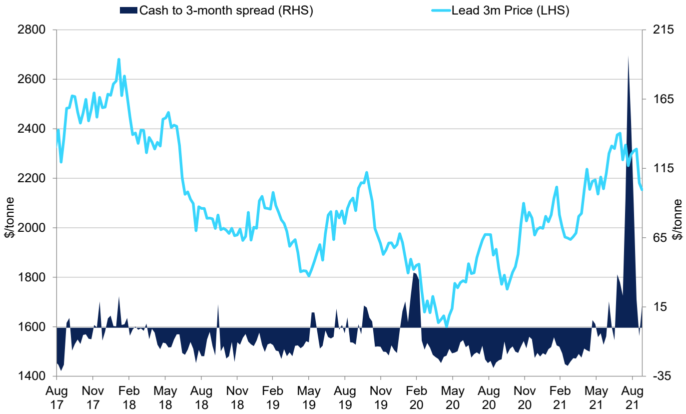
Source: Bloomberg

Outlook: The Chinese concentrate market remains tight; however, the smelter shutdowns did ease the tightness periodically. The smelter outages caused concentrate to be diverted to different locations. This is particularly prevalent for Germany's Berzelius Stolberg smelter. This concentrate is expected to be shipped to China as smelters start up again. The power restrictions in China are starting to ease, Yunnan and Guangxi have been heavily impacted, but for different reasons. Yunnan has had power issues due to the drought and its heavy reliance on hydropower. While this is more related to aluminium, the province has struggled for power. There have also been heavy restrictions on the regions due to the high levels of pollution. This caused concentrate demand to soften, especially as China imports large amounts of concentrate. China's concentrate TC 50% CIF reached $58/t as of September 24th; the imported concentrate TCs have improved at $60/t as of September 24th. Domestic TCs have been steady, with the average domestic rate at RMB1,150/t. The Inner Mongolia TC is RMB1,300/t which is the highest domestically. The low TCs are being offset by high sulphuric acid prices in China, which have reached RMB795/t as of September 2021. According to the NBS, China's sulfuric acid 98% price was at RMB1,031/t as of September 20th.

The shipping issues across the globe are having a significant impact on the global commodities market. This is also particularly prevalent in the lead market, particularly in Peru, where some concentrate is being shipped in 20ft containers rather than 40ft boxes due to container shortages. Concentrate in warehouses has been rising due to the shipping delays and reduced containers sizes. We expect shipping issues to continue into 2022, and while large trades will not be impacted too much, smaller tonnages will be impacted due to the higher prices. It may not make economic sense to ship material, causing a reduction in imported concentrate into Europe and China, tightening the market.

Cash to 3-month spread vs LME 3-month Price

Prices suffered despite the steep backwardation, and we could see this continue.



Source: Bloomberg

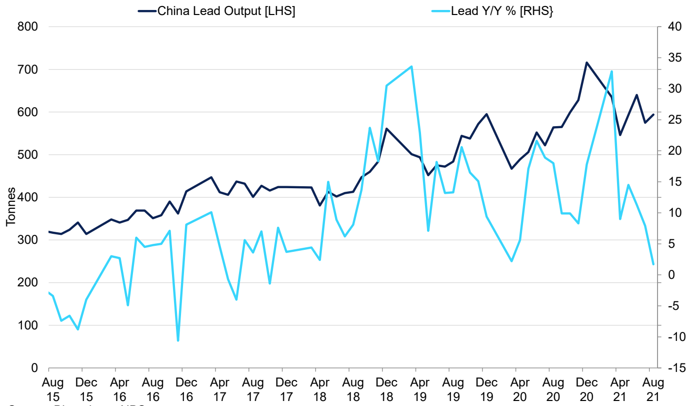
Lead output in China held relatively steady, around 594,000/t for August, with cumulative production up around 5.4% through the first eight months of the year. The cumulative output of lead for 2021 stands at 4.7m tonnes through the eight months of the year. Power restrictions in Chinese provinces have curtailed production in China this year, but these restrictions are declining, even though there is some maintenance at smelters in the coming months. We expect primary production to edge higher in the near term, with output for primary lead reaching 270,000 tonnes. Secondary output has been much more robust in China, gaining 11.12% M/M in August at 407,900 tonnes. Cumulative secondary lead in China has increased 69.97% from last year and refined secondary lead production was 394,900 tonnes. Output has risen 61.31% through August. The higher exchange prices have prompted better secondary output, with new capacity being built at Inner Mongolia Jinfan, Henan Yongxu, and Ningxia UBS. The monthly output for secondary lead beat expectations. We have seen record highs and production. Prices have fallen below breakeven, and scrap prices have risen, and this, in conjunction with emission restrictions, will cap output, which will prevent significant production growth in September and October. However, phase 1 of Anhui Huabo production is entering the preparation stage according to SMM, and this has a capacity of 120,000 tonnes. We expect lead output to be down year-on-year in Q4 as production broke 700,000 tonnes in China in December last year. Concentration tightness and power outages may prevent production from reaching those levels.

The arbitrage for lead has been negative, and this has continued to widen, increasing the cost of imported concentrate and refined material. The increase in the cost of lead concentrate will impact profitability, but SHFE prices have struggled to rally as much as LME prices. This is partly due to Shanghai inventories being considerably higher than LME inventories and continuing to diverge. LME stocks have fallen from 134,000 tonnes to 52,500 tonnes as of September 27th. SHFE stocks have been rising and stand at 205,691 tonnes, up from 45,863 tonnes.

Social inventories in China are 216,000 tonnes as of September 27th. The fall of secondary prices below breakeven, higher scrap prices and production outages may trigger growth in SHFE stocks to slower. Lead consumption may not be strong enough in the near term to consume SHFE stocks and new primary production. We may see new primary output go straight to industry. The lead premium for Shanghai bonded warehouses has stayed low in recent months at $130/t, the bill of lading premium remains steady at $130/t. However, China's refined lead exports have surged higher, reaching 4,468 tonnes in August. This is considerably higher than July when exports were 241 tonnes and can be attributed to the reduced output in Germany as a result of the floods, the wide negative arbitrage for China import, and the tight refined market. We could see exports remain high in the near term, as there is limited spot material in Europe. Premiums are firm in Europe and the U.S., as demand for refined material is strong and spot material availability is low. Scrap prices are low in the U.S. as supply is sufficient for secondary production.

China Lead Output vs Y/Y Growth

Y/Y growth figures have declined heavily as production suffers due to restrictions and below B/E secondary prices.

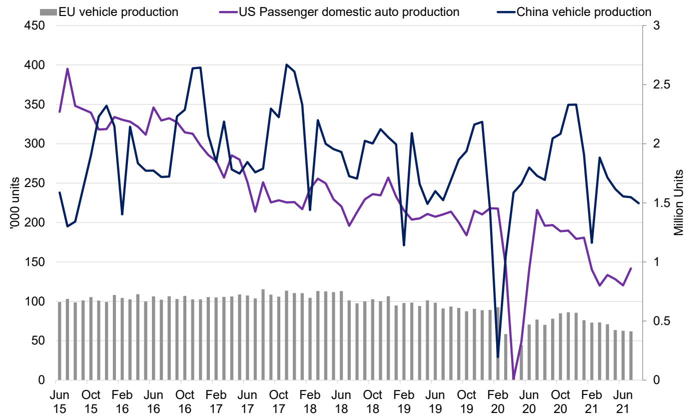


Source: Bloomberg, NBS

Global automobile production is low due to the chip and semiconductor shortage, and the chips for autos, which are a low margin product. In July, commercial vehicles in China declined by 30% due to the National VI emissions standards expiring. Demand for batteries in August was flat, and we expect this to continue. China's passenger vehicle production was 1.548m tonnes, considerably lower than 1.883m units in March. The trend continues to see production decline as shortage starts to take hold in China. There is no quick fix for the chip and semiconductor shortage.

EU vs the US vs China Vehicle Production

Output is down globally and there is no real quick fix in the short term.

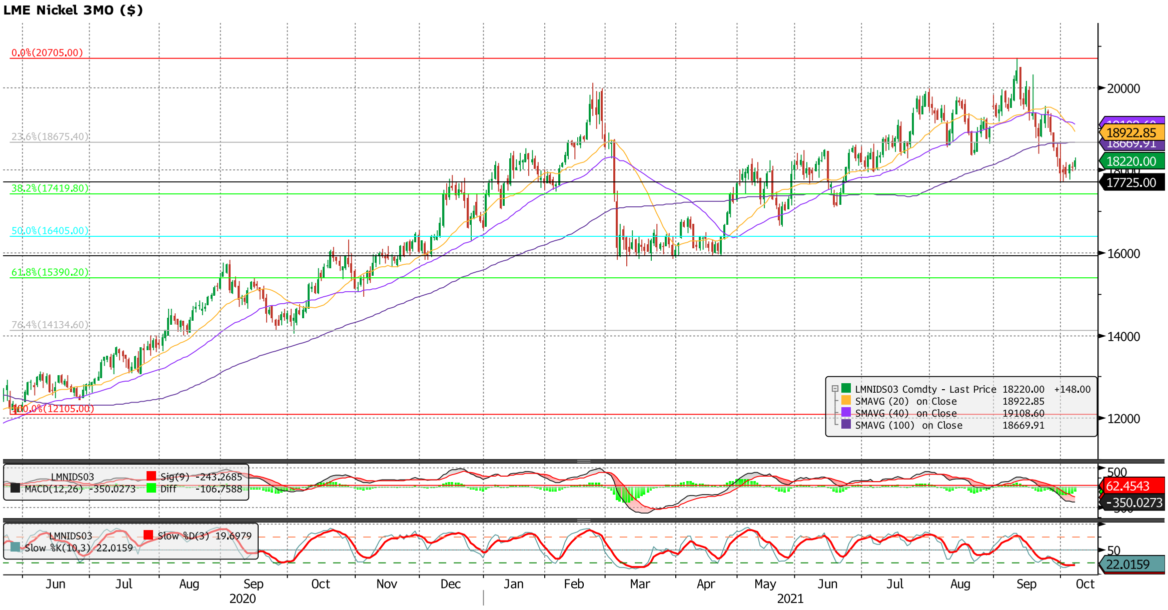


Source: Bureau of Economic Analysis, CAIN, Eurostat

Interestingly, the U.S. output of passenger vehicles increased to 1.407m units, according to the Bureau of Economic Analysis, up from 1.2m units in July. Earnings for companies are considerably down in 2021. Still, we have seen reports of car manufacturers produce vehicles without the chips and semiconductors and then put them into the units once they have been shipped. This will keep demand prompt demand for lead, but only limited, and vehicles sitting idle is not suitable for the batteries. European production of passenger vehicles is low at 619,000 tonnes, German auto production orders have been increasing in recent months to 52.5, but business expectations are still low. Limited refined material in Europe is creating tightness in the market, not exponential demand.

Nickel

LME Nickel 3MO ($)



Source: Bloomberg, 07.10.2021

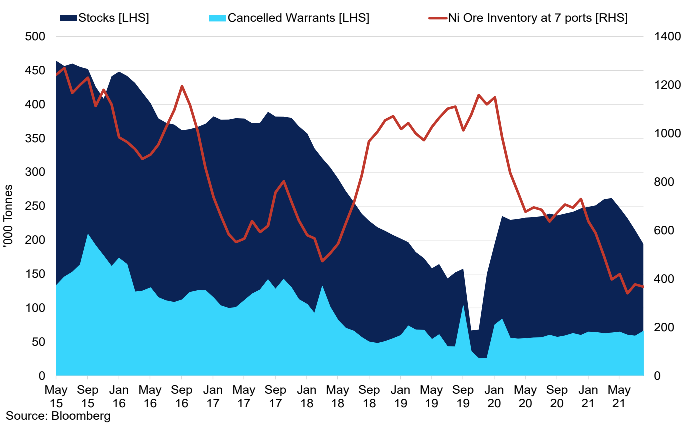
Summary

Chinese NPI strengthened in recent months, and with the inventories running low, we expect this trend to keep intact. Chinese nickel ore imports are booming as the economy is trying to fill the gap in the physical market, however, exports from Russia have now stalled, driven in part by the reintroduction of export duties for the second half of the year. As a result of the electricity curtailment policy in China, stainless steel production has been seen softening in August and this is likely to persist into the next quarter. We expect nickel prices to remain elevated in Q4, due to limited supply to demand.

Q3 Review: Nickel prices skyrocketed in Q3 alongside other major base metals, as continued supply disruptions and China's crackdown on energy-intensive industry limited output. Continued growth in demand further pushed the need to access materials, exacerbating price pressures. Prices averaged $19,200/t in Q3 2021, a less prominent market gain than seen in Q2, but a continuation of the trend that began in May. Nickel prices dropped in the latter half of September on concerns that China's Evergrande crisis may reduce the country's demand for industrial metals.

LME Nickel Inventory vs Nickel Ore Inventory at 7 Major Ports

Stocks continued to decline, as cancelled warrants rose to the levels last seen in February 2020.



Source: Bloomberg

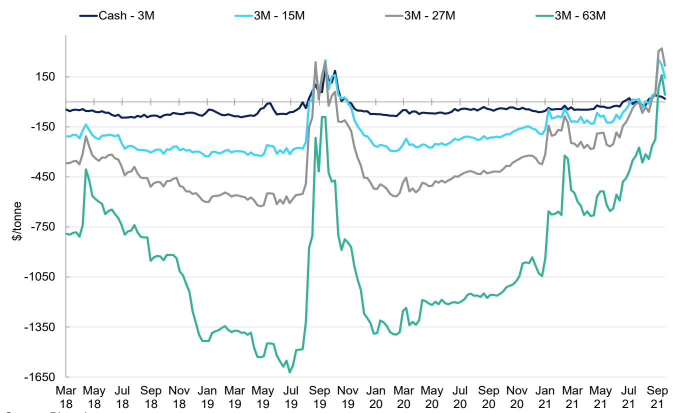
Data points to significant pressures in China's physical market, as SHFE inventories continued to decline, reaching the lows of 5,965t deliverable. Likewise, the nickel ore inventory at the seven major Chinese ports has continued to fall despite the recent uptick seen in July. As a result of the short physical supply, the country had to dip into the LME to access the metal from elsewhere. Cancelled warrants on the LME confirmed this, increasing to levels last seen in February 2020, supporting the outlook of higher demand. Lower overall stocks point to continued increase in demand and China's struggle to fill the orders with new supply. The long-term trend of declining levels can be explained by China running low on inventory that was front-loaded before the ban on ore from Indonesia. Nickel ore Philippines 1.5% CIF port price into China has skyrocketed to record highs of $90/mt, as a combination of high global freight costs but also increased demand from China for nickel ore, which is only accessible by the Philippines.

Outlook: The LME cash to 3-month has flipped into backwardation, further highlighting a sharp spike in demand, as registered inventory was leaving the warehouses to head into China, where the contract is also strongly backwardated. This has last taken place in July when Tangshan Stainless said it would switch from refined nickel output to an EV cathode chemistry, undermining the presumption of a shortfall in battery quality material. The SHFE contract has outperformed the LME, surpassing February 2020 highs. Premiums are low since the physical market is weak, i.e. China is running low on refined nickel, and coupled with high metal prices, producers cannot afford to buy nickel plus premium to their locations. Re Jinchuan Ni Shanghai Premium is still low and has struggled to break above CNY1,500/t. Likewise, Grade 1 Nickel Premium Shanghai remains near the lows of CNY1,110/t.

To help fill the gap in physical supply, total refined nickel imports into China rose by 48% y/y in the first 6 months: and July's imports of 22,500t being the strongest monthly volumes since August 2019. China imported matte, intermediate, refined and then only ore/concentrates, which highlights the need for immediate availability of metal. Supply should continue to recover along with the longer-term trend, however, not fast enough to keep up with the need for material in China. The subsequent imports rise in line with the yearly seasonality, but August and September are expected to be the peaks for this year.

Nickel Calendar Spread

Spreads flipped in backwardation, a clear sign of physical supply shortage.

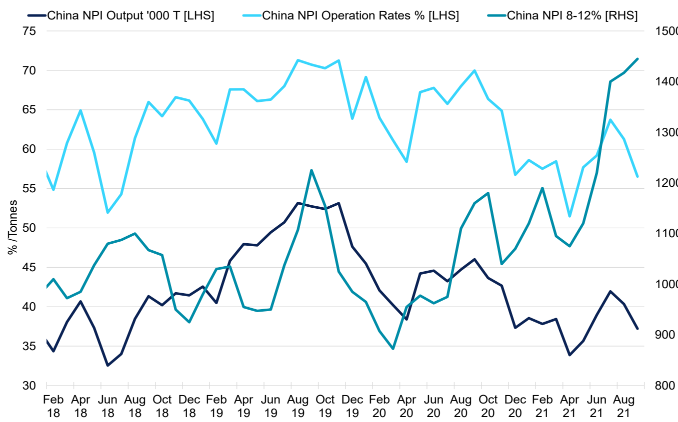


Source: Bloomberg

In September, Indonesia's Investment Minister stated that the country is exploring the possibility of imposing an export tax on nickel products with less than 70% nickel content, to drive the expansion of its domestic processing industry. Indonesia is keen to keep a full supply chain for nickel, from extracting ore to producing batteries and assembling EVs internally. As of now, nickel content in exported products is at 30-40%, such as NPI and ferronickel, which means a large majority of its current production will be taxed upon export. Indeed, if implemented, it could affect the big majority of Indonesia's ferronickel exports to China, which could push prices even higher.

Chinese NPI Output vs China 8-12% NPI Price

Operating rates continued to decline as smelters cut down on production after the Chinese crackdown on energy-intensive industries.



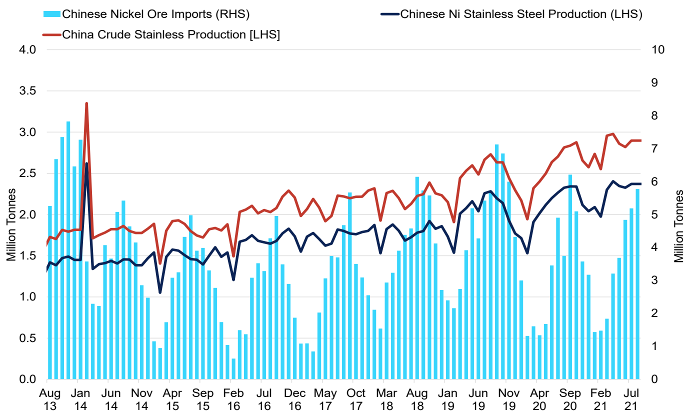
Source: Bloomberg, SMM

As a result of the electricity curtailment policy in China in the last couple of months, the local output of stainless steel declined to 2.82m mt in August, down 3.53% m/m while still up 2.2% y/y. Restrictions strengthened in September, and the region required that the local output should not exceed 70% of the average monthly output in H1 2021. Therefore, nickel-based stainless steel output is expected to decline during the month. In the longer term, the total output of stainless steel is expected to remain low as the production restrictions will extend at least until November. As of September, China NPI operation rates have also been declining, now at April lows of 56.52%. The overall operating rate is estimated to be at 84% in September, in line with the CNY holidays.

On top of the 3.5% increase in mineral extraction tax that has already affected Nornickel's H1 output, the Russian government has also announced a temporary reintroduction of export duties on nickel and copper in H2 2021, which has already kept exports low. Imports of Russian nickel into China have collapsed to 14,300t from 30,600t during the same period last year. As of H1 2021, the sales volume of refined nickel produced from the Russian feed decreased by 11%, following the suspension of mining operations at some of their mines caused by the inflow of groundwater, however, is seen recovering in production closer to year- end.

Chinese Nickel Ore Imports vs Stainless Steel Production

Stainless steel production boomed in the summer months - August and September should be peak months.



Source: Bloomberg

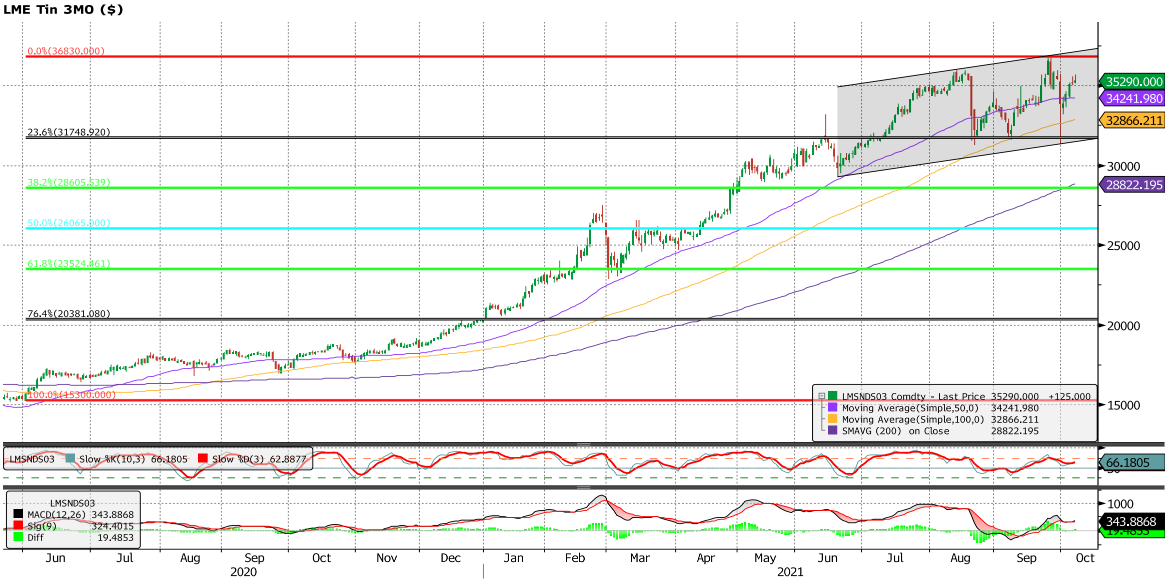
The company expects primary nickel demand to increase 15% y/y in 2021 and 11% y/y in 2022, driven by stainless steel production in China and Indonesia, sustaining demand growth in the EV sector and a moderate recovery in other industries. The ongoing ramp-up of projects in Indonesia and recovery of Class 1 nickel production should offset the reduction of NPI output in China, which is driven by the shortage of ore supply and drawdown of domestic ore stocks this year. Overall, the market deficit is forecast to sustain in 2021 but turn into a surplus in 2022 on the back of a ramp-up of the Indonesian NPI and HPAL capacities.

Additionally, the spreading wave of automotive cutbacks adds pressure to the expectation of a fall in stainless and nickel demand in Q4. Although metal consumption in autos remained high through H1 2021, many of the vehicles are still awaiting semiconductor chips and are not ready for sale. According to LMC Automotive, US sales are forecast to remain below 17m this year, with 1.5m units impacted by chip shortages. With cancelled warrants at a maximum, car companies are having to cut back production while they work off the remaining stocks. With some projections showing chip supply not matching demand until H2 2022, the impact could extend until well into H1 2022. As consumer goods and autos are two of the key consumer segments boosting stainless steel demand this year, such a decline in demand would undermine the final demand for this year.

Some macroeconomic risks lie ahead: continued COVID-19 outbreaks, power restrictions and weakening stainless prices could scale back stainless production, and metals demand from the auto segment should fall back as the ongoing chip shortage is forcing carmakers to cut back output. Manufacturing performance has been seen slowing, and demand for stainless steel is also likely to ease. Indeed, China's August activity and spending data showed a further slowdown in economic growth, adding to existing headwinds from a withdrawal of policy support. The regulatory crackdown on energy-intensive sectors should exacerbate the industrial weakness. If those cuts extend to the carmakers, then the demand for nickel should also decrease. The macroeconomic outlook points to a decelerating industrial production and exports over the next three months, while domestic demand stays flat. The market tightness that developed because of the restrictions on production should ease; however, in the meantime, prices are still forecast to be supported from the downside.

Tin

LME Tin 3MO ($)



Source: Bloomberg, 07.10.2021

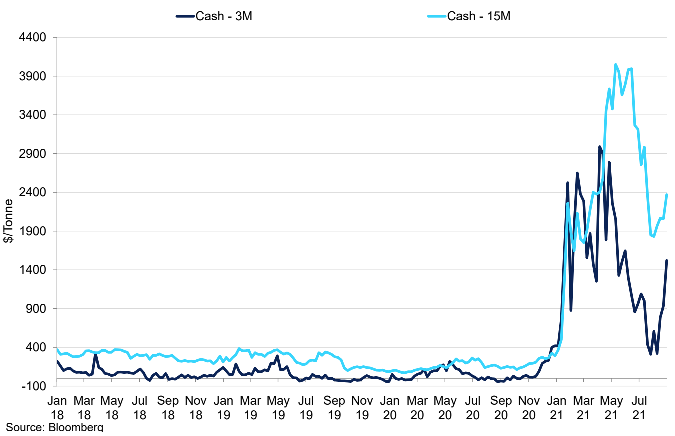
Summary

Tin prices are expected to remain on-trend even though the reduced funds' position means increasing their long exposure. The net position has been declining, and the risk-reward on the upside has diminished. Demand for solder is expected to be strong in Q4 due to Black Friday, Christmas and new product releases; however, while still improving, semiconductor sales are growing slower. Prices in China have performed better than the LME, which could prompt the arb window to open. Production of tin is expected to hold strong now that maintenance has been completed, but power issues in Guangxi are gapping production gains. There is still a supply gap, and this could remain the case in the long run. Even though long-term supply is expected to increase, it is coming from high ESG risk locations, and new tin consumption trends will mature.

Q3 Review: Tin prices maintained their bullish momentum in Q3, with the LME 3-month price breaking $35,000/t; however, gains in Q3 were more muted during the summer months than H1 2021. Spreads widened in Q3, with the cash- 3month spread falling to $935/t as of September 20th. Cash -15month declined to $1,965/t on the same day, down from over $3,000/t on July 9th.

Calendar Spreads

Tin spreads have declined in recent months but remain in steep backwardation for the long- dated spreads.



Source: Bloomberg

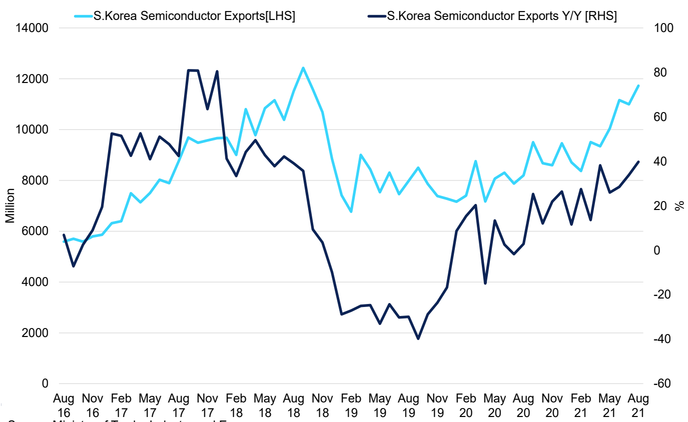
The macro risks are mounting with prices on the LME pulling back from their highs, but tin is still on the front foot. The supply side has improved marginally but not enough to offset the continued solder demand. Demand for tin has been strong from solder, chemicals and tinplate; however, the new trends such as EVs, energy storage and generation are also strong despite the softer auto numbers. We continue to hear reports of car makers producing the vehicles but not putting in the computing chips and semiconductors; these units will sit idle with distributors until they are fitted with the relevant chips.

Outlook: Solder comprised 49% of tin consumption in 2020, the second-largest segment is chemicals, they represent about 150,000 and 50,000 tonnes. The solder is used for electronics and computers, and consumption will likely increase in the long run as the globe continues to rely on data-driven industries and transitions towards low carbon alternatives. Tin is used in EV batteries, electronics, adoption of 5G, and energy storage. These trends continue to develop; while other metals, in theory, can replace tin, it is currently the preferred option and is incredibly effective. There are also some limits to substitution, especially in the EU, for instance, there are restrictions on the lead content in electronic goods. New regulation in the EU for 2030 will reduce lead content further. Indeed, we have seen a reduction in the tin content in solder due to high prices, but according to MIT, tin may have the most to gain in the long run. While high prices will likely cause a response in supply in the medium to long run, there could still be a supply gap.

As mentioned in our previous tin outlooks, the consumption of semiconductors has remained robust. Sales increased in June by 29.2% Y/Y and up 8.3% Q/Q in Q2. According to the World Semiconductor Trade Statistics, semiconductor sales were up to $44.5bn in June and reached $45.4bn in July. The month-on-month percentage gains are declining as the industry makes marginal gains and runs capacity with chip production at record highs. While a large proportion of global semiconductors are produced in Asia, the global share of the industry is dominated by the U.S. However, the Chinese government supports the sector, and 22,800 new semiconductor companies were created in 2020. The U.S. is also looking to increase domestic production following the new bills passed by Congress to increase investment and production. As mentioned, the long-term demand for tin is robust, but the industry is running at capacity in the near term, so tin consumption depends on the supply chain bottlenecks and order backlogs. The decline in the exchange inventories outlines the demand for refined tin.

S.Korea Semiconductor Exports

Exports have continued to climb as producers work at capacity.

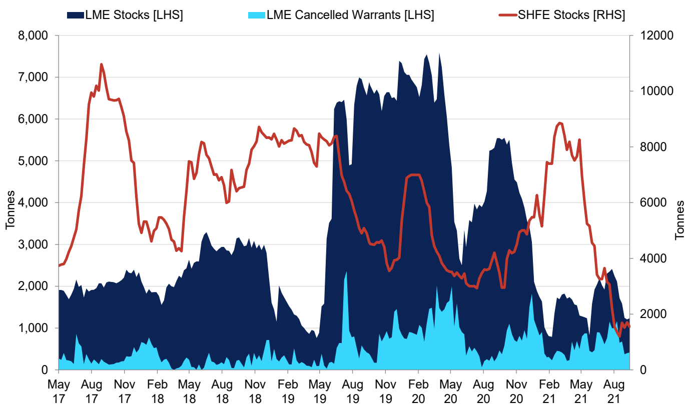


Source: Ministry of Trade, Industry and Energy

As mentioned before, with Christmas and Black Friday approaching, sales will increase, which could prompt a significant backlog of orders and shipping issues. The electronic, robotics and computing sector will remain the largest consumers in the near term. However, we expect consumers disposable income to decline in 2022 due to inflationary pressure and increased tax to pay. As a result, end-user demand may soften from the recent highs.

LME vs SHFE Exchange Inventories

Stocks have declined as consumption is robust, but supply has lagged.

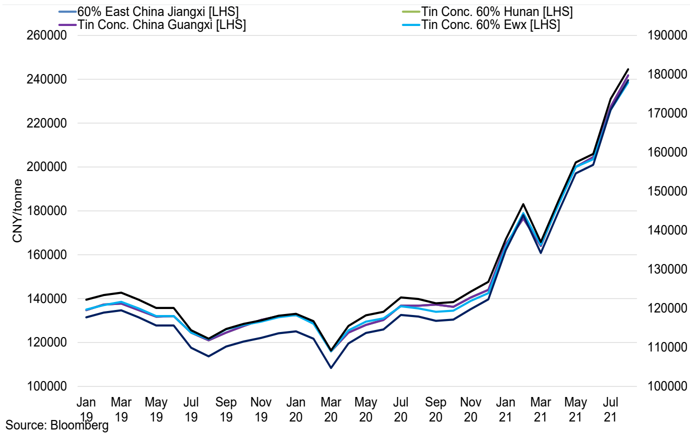


Source: Bloomberg

We expect consumption to hold steady in Q4 2021, with increased consumer demand for electronics and computers due to Christmas, Black Friday, and new technology releases. Exchange inventories are perilously low; LME inventories stand at 1,205 tonnes, with SHFE deliverable stocks at 1,702 tonnes. The decline in 2021 has been significant for exchange material, and the lack of new material and supply caused substantial tightness in the market. Cash – to 3month and 15month spreads have been a consistent backwardation in 2021. The cash – 15month spread has remained tighter and stands at $2,065/t at the time of writing, with cash to 3s at $935/t. There have been few deliveries into the backwardation, exemplifying how tight the market is for tin. The European tin premium has softened at writing and indicator of some let-up in the physical market. China has been exporting material despite the domestic tightness. In July, shipments reached 2,276 tonnes, up 31% M/M. We do not expect month- on-month export gains to be so strong in the coming months, but shipments will be elevated. The import arbitrage window into China is not open, and at the time of writing, tin spot stands at RMB1,444/t. Even though fundamental tightness in China has prevailed, the dollar has continued to strengthen, reducing the yuan's purchasing power amid the Evergrande fallout.To increase liquidity in China, we expect that dollars to be sold in favour of the yuan. SHFE tin prices have continued their rally, and the front-month stands at RMB259,840/t as of September 17th. Performance has been strong than the LME, and if the currency also strengthens, we could see the arb window get closer to being open.

China Tin Concentrate Prices vs Concentrate in Warehouse

Tin concentrate prices have risen across all regions in China.

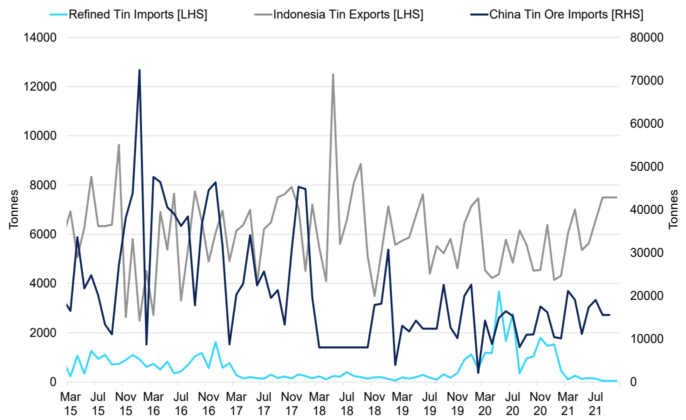


Source: Bloomberg

Output of tin improved in August, up 20.63% M/M, output was 13,660 tonnes and returned to June levels. The rise in output was primarily due to production in Yunnan resuming after the maintenance. Tin ore supply improved in China, improving capacity utilisation at smelters and operation rates. We do not expect smelter output to increase significantly in September, and Guangi continues to be plagued by power restrictions, and production in this region will remain low in the near term. However, an upside to production in the medium term looks likely, but power and emission restrictions are becoming more stringent. Profit margins have improved due to high tin prices, especially Yunnan Tin, which could lead to more investment in capacity in the medium to long runs, like Malaysia Smelting's increased capacity in Port Klang. Afrin Mining has increased their production guidelines for concentrate, with 60-70% tin. We expect them to continue to beat targets as they feel the benefits of improved plant utilisation and processing, the tin recovery rate has improved to 65%. The higher price environment could trigger further investment into the Uis project, and the scalability may trigger significant gains in production. In recent months, Indonesian exports have been stronger, reaching 7,497 tonnes in August, up from 6,560 tonnes the previous month. However, China only imported 20 tonnes of tin from Indonesia in August.

China Refined Tin Imports vs Indonesia Tin Exports vs China Tin Ore Imports

Indonesian exports remain high but exports from China have also been strong.

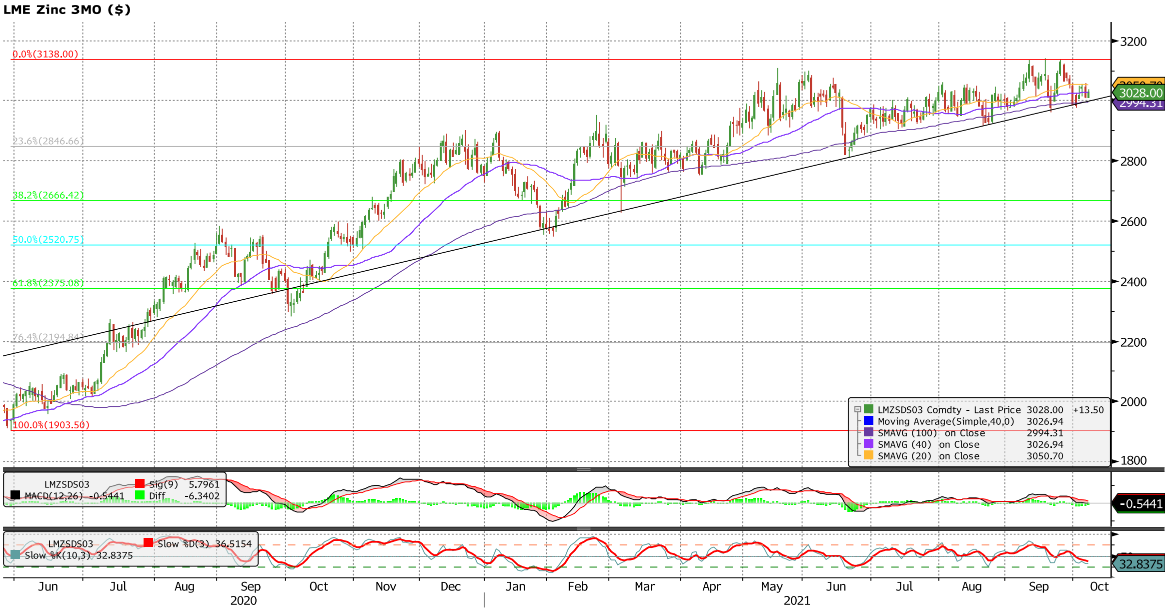


Source: NBS

Price action has been more muted with gains more marginal; in keeping with this, funds have reduced their net long for tin. The current z-score is 0.499, which is below the 4-week average. This was a far cry from the maximum z-score of 2.3. We expect the price action to remain on the front foot in the near term but gains more marginal as the supply chain continues to be fragmented. The correlation between the investment funds and the LME price has declined and is negative, but the commercial undertaking correlation has turned positive but is not statistically significant. The tin market remains tight, but output in China is improving, and if Guangxi's power issues are resolved, more production will come online, helping to alleviate some of the absolute pressure.

Zinc

LME Zinc 3MO ($)



Source: Bloomberg, 07.10.2021

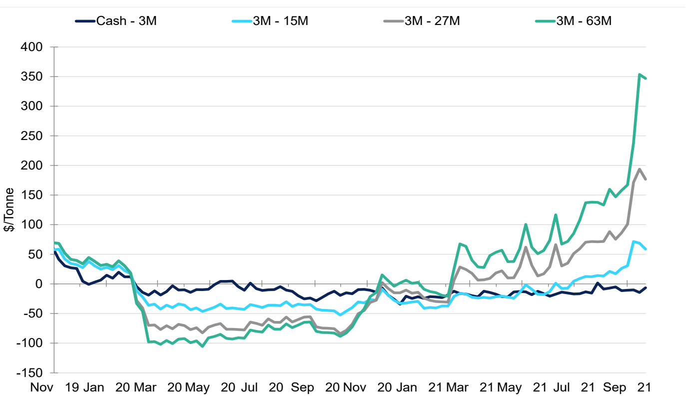
Summary

TCs in China are still low, but profitability for smelters has improved due to the free zinc allocation and high exchange prices. Availability of zinc concentrate in China improved due to maintenance and power outages; but both are coming to an end or reducing, which will prompt a more robust demand for zinc concentrate. Imports of zinc ore and concentrate are down YTD, and China's domestic production has continued to improve. With smelters coming back online, we believe refined zinc production will strengthen in the coming months, but demand is robust due to the backlog of orders. China's property sector is weakening, and this presents a downside risk to zinc. Price gains have become more limited, but significant amounts of forward selling suggest weaker prices.

Q3 Review: Zinc prices remained on-trend, with the LME 3-month contract gaining a foothold above $3,000/t. The cash to 3-month spread has remained in contango for the majority of Q3, suggesting that we could see prices fall in the coming month. We continued to see the SRB release stocks into the market, but this has had little impact on reducing prices. However, SHFE gains have been limited, up 3% over the quarter, compared to the LME, causing the arbitrage to be negative. Like other metals, zinc has been impacted by the supply-chain bottlenecks and higher shipping prices. Higher prices have no doubt been pushed by costs, with demand lagging. The bottlenecks give the impression that demand is more robust than it is; however, we expect the end-user to suffer significantly in the coming 12-18 months.

Zinc Calendar Spreads

The steep backwardation between 3-month and longer-dated spreads shows strong forward selling.

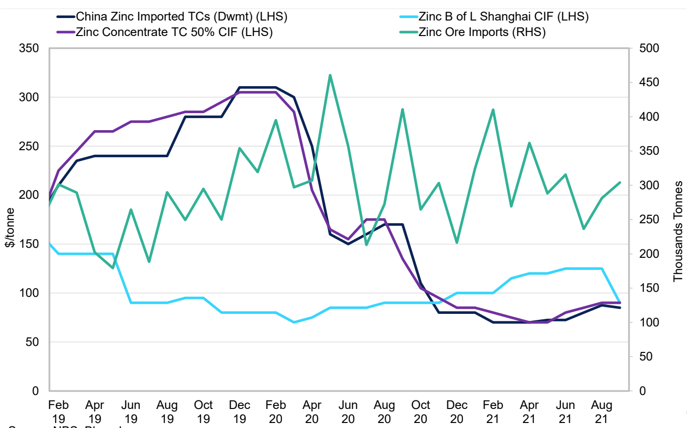


Source: Bloomberg

Outlook: The zinc concentrate market has been relatively quiet in China over the last few months. This is in the anticipation that demand during Q4 will be stronger. With mine production continuing to respond and smelter demand set to hold steady during the winter months, concentrate availability will improve. Following re-stocking, we expect TCs to edge higher. Imported zinc concentrate is an average of $80/t, with the domestic TC at RMB4,150/t, down RMB100/t, the China zinc treatment charge stands at 50% CIF. This is an increase from June when the charge was $70/t, representing an increase in availability.

China Imported TCs vs B of L Shanghai CIF vs Concentrate TC 50% CIF

Bill of Lading Shanghai CIF has started to improve but imported TCs are still low, despite modest improvement.



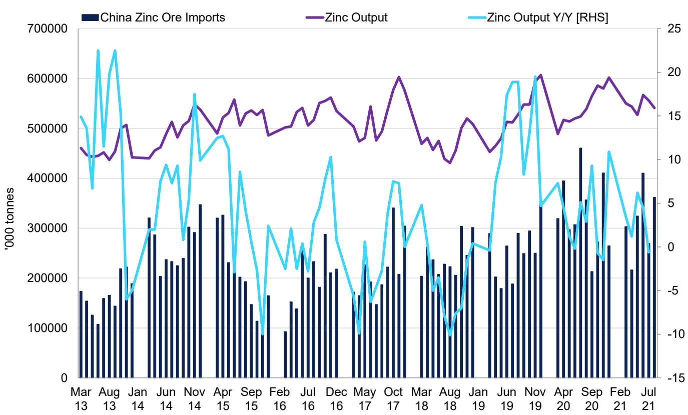
Source: NBS, Bloomberg

China's zinc concentrate production has increased in recent months and stands at 342,800 tonnes in September 2021. Mine production in China has increased in 2021 to 4.7m tonnes, from 4.2m tonnes in 2021. Despite the negative arbitrage and moderately weaker currency, zinc ore's import into China has been higher in recent months. August imports reached 304,023 tonnes compared with 281,205 tonnes in July. 120,063 tonnes were imported from Australia. This was the highest amount since December 2020 but is still low and helps to confirm the trend of lower trade between Australia and China. Year to date imports are lower than 2020 at 10.64m tonnes compared to 11.2m tonnes in 2020. The operating rates of zinc concentrate producers have improved in recent months to 54.36%. However, larger producers are considerably higher on the month at 78%.

Operating rates for refined zinc producers have increased to 83.97% for the next month. However, large producers are marginally higher at 95.80%. TCs are low, but the high exchange price will help profitability due to free zinc, using a domestic TC at RMB4,150/t and converting to an 85% paid basis and free zinc. Wood Mackenzie reports smelter income at $308/t concentrate up from $299/t previous. In August, domestic output stands at 508,900 tonnes, down 1.22% M/M and 0.04% Y/Y. Cumulative output through the first 8-months of the year reached 4.042m tonnes according to SMM, a year-on-year rise of 4.47%, with alloy output at 75,500 tonnes in August. While operating rates are high, production has been heavily impacted by the power outages. Power and emission controls will continue, which will keep output capped. However, the power restrictions in Yunnan and Henan have been reduced, boosting production in September. As we look ahead to October, production will be stronger still with smelters in Gansu and Inner Mongolia. We expect production to edge higher in September and further still in October and November, putting pressure on Chinese prices as availability increases. In Europe. Neustar has reduced output at their Netherlands smelter due to higher power prices.

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

Output has declined Y/Y due to power outages and maintenance.



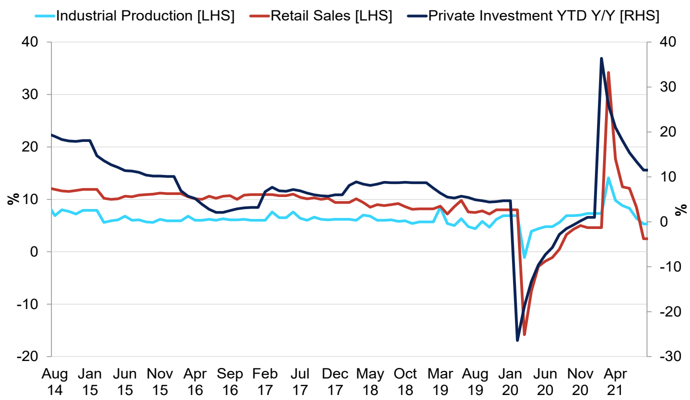
Source: NBS, Bloomberg

The zinc warehouse warrant has been trading at $135/t as of September 28th, the bill of lading premium stands at $125/t, and spot premiums in Europe, Asia and the U.S. have allied with European premiums hitting new highs earlier in September. This is likely aided by the decision by Neustar to cut production. The shipping issues give the impression that demand is stronger than it is. The backlog of orders prompts a constant consumption of zinc for galvanised steel. The prices of zinc alloys are mixed, Zamak 3, which is commonly used in die- casting, has been rising, and processing fees are stronger in the week of September 24th.

Zamak 3 processing fees are RMB700/t in Guangdong, and fees are slightly lower at RMB650/t. The price of Zamak 3 and Zamak 5 zinc alloy softened to RMB23,430/t and RMB23,430/t, respectively, as of September 2021. Zamak 5 has a higher copper content, but the fall in prices suggests reduced demand for die-casting, the operating rates for zinc die- casting producers have edged higher to 38.1%. Die-casting demand could increase as we move into Q4, but they remain at low levels. Galvanisers operating rates stand at 81.8%. This has declined from highs of 91% in April this year. Prices for hot-dipped galvanised spot prices in China have consolidated at RMB6,770/t, as of September 24th, compared to the European price, which has started to fall €1,280/t. Pent up demand will be hard for manufacturers to deliver on due to lack of product, and the end-user may reduce consumption as their disposable income declines.

China Industrial Production vs Retail Sales vs Private Investment YTD Y/Y

Economic data is expected to continue to slow in the coming months.



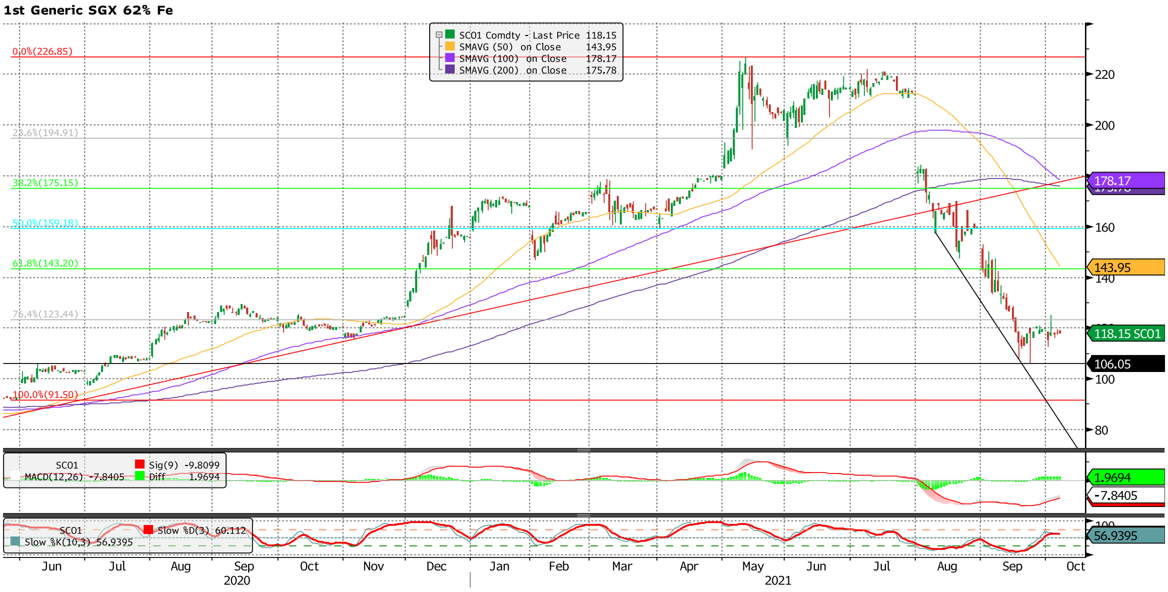
Source: NBS, Bloomberg

Infrastructure investment has slowed in China, with only railway projects approved by the government. This is the first investment since January in China, according to data. The railways use hot-rolled steel, with is often galvanised; this will prompt demand in Q1 2022. Investment in real estate has also suffered, and we expect this to remain the case following the fallout from Evergrande. We expect the property sector to continue to struggle, following the new property development rules and the knock-on effect from Evergrande. Local governments issued RMB1.35trn new bonds through to July, and this will drag on material demand. Property completions have risen, which will prompt demand for household appliances, but new starts have declined, and this will cap steel consumption in the coming months. China non-manufacturing construction pushed back to 60.1, showing strong growth as the European construction index contracted. In Europe, the auto sector has seen new vehicle registrations increase to pre-pandemic levels, but production continues to wane. Steel prices have edged lower but remain high, and we expect this to remain the case despite the cutback in automobile production. We expect microchip production to improve, but this will not be felt in the auto market until 2022. This presents an upside to demand zinc in Europe in 2022, but only if manufacturers can clear the backlog of orders and mills can produce steel.

Investment funds hold a significant net long position for zinc, with the current Z-score 1.944. This is a new maximum and above the 4-week average of 1.699. With the LME price elevated and 3-month to long-dated spreads in steep backwardation, e.g., 3-month to 63-month spread stands at $350/t back at the time of writing. The correlation between the weekly change in the 3-month LME price and the weekly change in funds net position is still a statistically significant positive relationship at 0.69. The commercial undertaking total position has declined as we see more producers selling at current levels. We have not seen them cover their shorts. With the long-dated spreads in backwardation, we could see further commercial selling in the coming months before prices start to soften as supply responds.

Iron Ore & Steel

1st Generic SGX 62% Fe



Source: Bloomberg, 07.10.2021

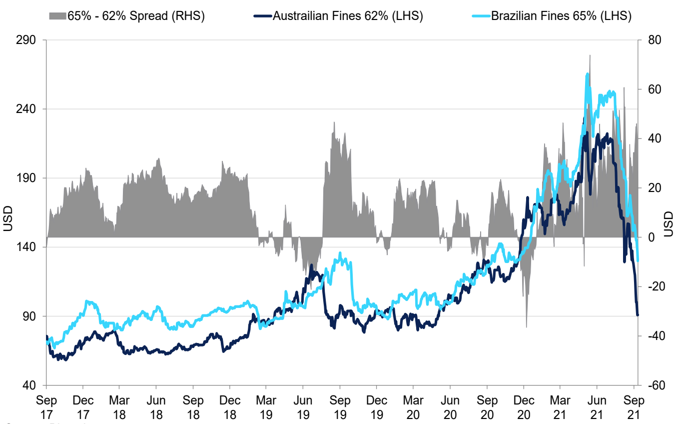
Summary

Iron ore prices have fallen sharply, quicker than we expected, as demand from China has declined. Evergrande caused shock waves across the Chinese economy and the globe. While we expected the state to step in, this provides an example of why they increased regulations on the property development sector. Iron ore imports into China have edged marginally higher but still lower Y/Y on average. Input costs for steel are still high, with coking coal prices now a higher proportion of the budget than iron ore. This will keep prices elevated, as well as softer production. However, finished steel inventories in China are high, ahead of re-stocking over the winter. We could see iron ore prices correct to the upside in the near term, as the situation regarding Evergrande and China's property market becomes clearer, but then we favour selling this rally.

Q3 Review: In our last report, we outlined that the time for prices to be above $200/t were numbered; we did not expect the downside move to be so aggressive. The November future has fallen to $105/t as of September 22nd; the first generic SGX future stands at $117.4/t, a sharp decline from when prices traded $220/t in July. Chinese demand has suffered, and the curtailment of steel capacity in conjunction with the crackdown on speculators in China, not to mention the fallout from the Evergrande situation. The impact on the property market has been significant, and we expect uncertainty to continue in the coming months. A slowdown in China will cause ripple effects across the global economy. With macro headwinds already mounting, this is not something the market will want to contend with end-user consumption likely to suffer in the next 12-18 months as food and energy prices rise.

Australia 62% Fe CFR N.China vs Brazilian 65% Fe CFR N.China

The spreads remain wide, despite the sell-off in prices.

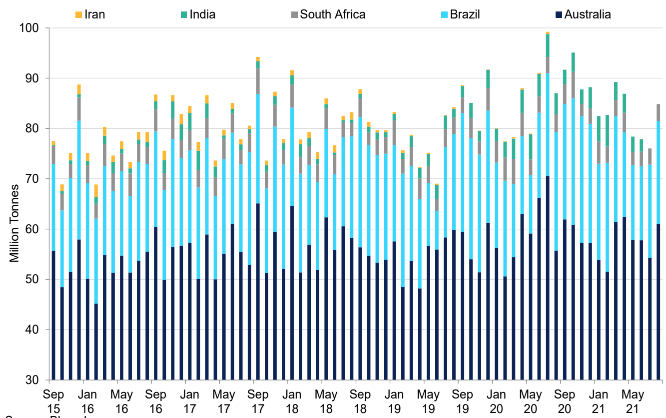


Source: Bloomberg

Outlook: The decline in iron ore prices has been significant, triggered by the slowdown in the property market, and more recently, Evergrande fears. The decline in prices decimated profit margins of major and minor producers; this has caused share prices for BHP, Rio Tinto, Vale and Fortescue to come under pressure. There have been significant revisions of marginal producer's production targets, and in Australia Venture Minerals, have suspended output.

Top 5 China Iron Ore Imports

Imports improved from Brazil and Australia in August but are down on average Y/Y.



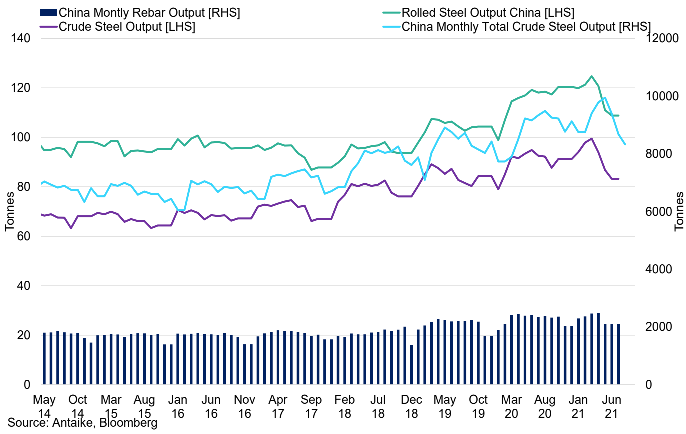
Source: Bloomberg

GWR provided a material update and has halted production at C4 for 30 days; they operated at an audited cost of $88.20/wmt from April to June. Profit margins were strong, and they have all but gone now. Total output declines are 10m tonnes per annum in the near term, and 110m tonnes p.a. in the medium term, in Australia alone. Major iron ore producers could revise their production targets for 2022 due to the softer data from China. In recent weeks we have seen exports of iron ore from Australia pick up, however in the longer run, we expect Australia exports of iron ore to suffer.

Chinese imports of iron ore have been declining in recent months, in August total imports were 97.492m, up from 88.506m which was lower than June's figure of 89.417m tonnes. Imports were highest in February this year at 102.109m tonnes, this is compared to 2020's highest figure of 112m tonnes. Through the first 8-months of this year, total imports into China have averaged 89.79m tonnes compared to 97.806m tonnes. Imports of Brazilian iron ore has improved in recent months; after shipments bottomed out in May at 14.69m tonnes, exports to China reached 20.472m tonnes. There has been a significant decline in exports to China from Brazil in May and June in the last three years. Shipments have previously peaked in Q4 ahead of stockpiling by Chinese firms. Steel output has been cut significantly this year. The fears surrounding Evergrande have caused prices to fall as investors fear China's property sector, which consumes about 1/3rd of China's iron ore. At the time of writing, iron ore prices have rallied, with the SGX 1st generic 62% Fe contract back above $100/t as Evergrande stocks rallied. Even though China cracked down on speculators, we still expect this to be prevalent in the market and accentuate the decline in prices.

China Monthly Steel and Steel Products Output

Production declined significantly in recent months as key provinces cut back output.

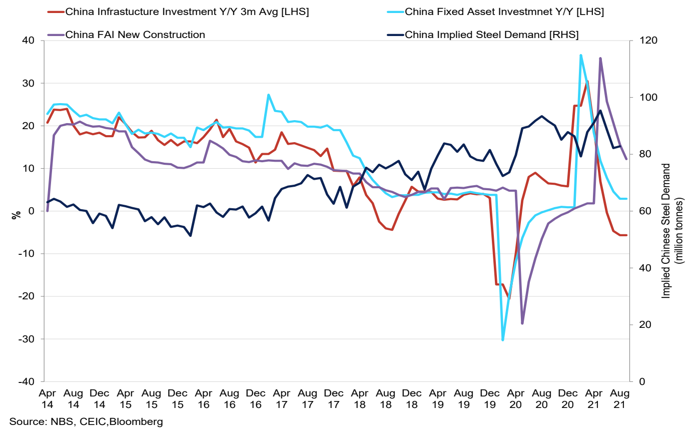


Seaborne prices have declined in tandem with domestic prices but input costs for steel have risen rapidly this year. Coking coal prices have surged this year, and mills across the globe have indicated that coking prices are taking up more of their budget and is now more expensive than iron ore. European mills suggest that the cost of the component has risen 60%, and the same goes for some end-users in India. The Australia coking coal October future is currently priced at $384.33/t, an increase of 145.2% YTD, coking coal in China have gained 86%, with the January future at RMB2,981/t, as of September 22nd. The rise of domestic prices has caused seaborne prices to be more attractive, especially for the mills on the east coast. Mills would save on transportation costs compared to shipping from other provinces. Coking coal imports into China YTD have averaged 3.812m tonnes, compared to 5.89m tonnes in 2020. This could be attributed to the decline in coal imports from Australia, as China has looked to the U.S., Canada and Russia. China's coking coal import price from Canada has rallied 123.1% YTD to $253/t as of August 31st. In the last few months, the decline in iron ore prices has seen a divergence between coking coal prices and improved margins for steel products, with $110/m for domestic HRC and $85/t for rebar.

Chinese output of steel has fallen sharply in recent months, and this comes after crude steel output significantly increased Y/Y in H1 2021. This led the National Development and Reform Commission to issue energy consumption dual controls in Qinghai, Ningxia, Guangxi, Guangdong, Fujian, Xinjiang, Yunnan, Shaanxi, and Jiangsu, which all had higher output in H1 2021. NBS data suggests that from January to July, Guangxi crude steel output was 22.96m tonnes, up 22.95% Y/Y, and this province will have to reduce their output by another 20%. Crude steel output from major steel plants cannot exceed 70% of the monthly average of H1 2021, and the same goes for power consumption. Guangxi average daily output is forecast to average 77,100 tonnes, 32,100 tonnes lower than H1 2021. In Guangdong, the August inspection caused output to be suspended, and crude steel production will be 16,600 tonnes lower in August to December than in January to July, according to SMM, totalling 84,300 tonnes. A similar theme remains for Jiangsu, where daily production declined by 64,000 tonnes and will fall by another 35,800 tonnes to 315,400 tonnes for the remainder of the year. The Iron and Steel Association reported that China produced 20.45m tonnes of crude steel,19.34m tonnes of steel in H1 2021. Crude output was down 13.2% Y/Y in August, and rolled steel was down 10.10% Y/Y in the same month. The decline in steel output going into year-end will mean reduce iron ore demand, and as a result, the lower production rates during winter will not be far off current levels.

China Investment vs Implied Steel Demand

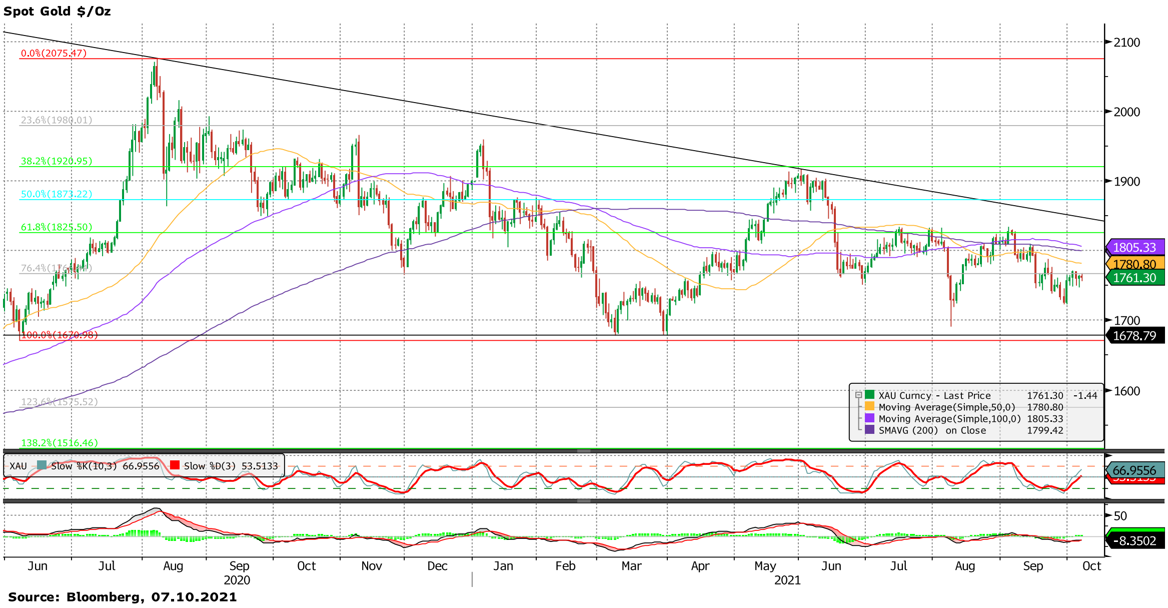
New construction investment is still positive Y/Y but all have declined with infrastructure investment now negative.



The PBOC has started to inject more liquidity into the market; net cash injections were CNY110bn for the last two days. We saw CNY90bn and CNY100bn net injections the previous week. This is in line with Evergrande situation. At the time of writing, the state has not stepped in, but we expect this to happen, helping calm the global investors. The property and steel sectors contribute massively to GDP. Still, in our view, the government will keep restrictions tight on the property sector even if they step in to support Evergrande. Implied steel demand has continued to weaken in China as fixed asset investment, and infrastructure investment also suffered, the latter now declining on a year-on-year basis. China's non-manufacturing construction PMI was 60.5 in August. We may see the index weaken in the coming months, even though FAI on new construction growth in China is 9.6% Y/Y in August. Steel prices have remained elevated due to the high input costs we referenced earlier and labour shortages and freight. The freight rates of key shipping routes for iron ore have also risen significantly. The China Steel PMI Price index has declined and is now contractionary at 47.81 for August, and we expect a similar reading for September. Reduced demand for steel in China will cause prices to edge lower; however, costs are high, creating a floor. If margins are completely eroded, we expect to see more output suspended and finished stocks decline. The export ban on steel in China has kept European steel prices elevated; while they have not continued to rise, they have consolidated at higher levels.

Gold

Spot Gold $/Oz



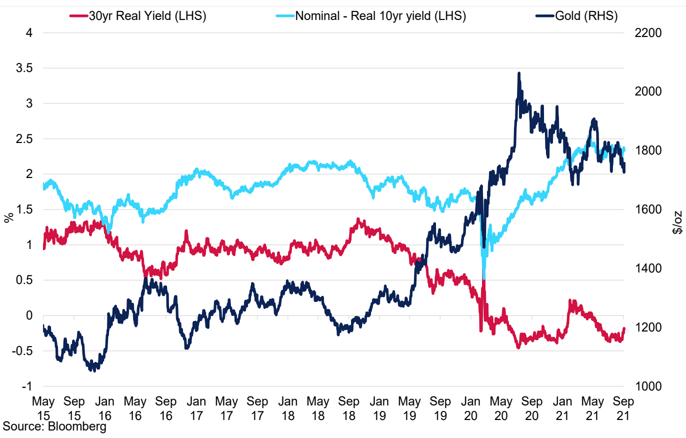
Summary

Relative to 2020 the picture has changed, and gold's investment demand has shifted somewhat to the precious metal as a gauge of monetary policy outlook. This could be explained by a heightened correlation with the difference of nominal and real rates, a useful inflation gauge. While physical demand remains strong given the recent restocking by both Chinese and Indian retailers, softer international prices and supply chain disruptions should make it more difficult to import precious metal into the economies. Investment demand remains lacklustre, and while central bank purchases accelerated, it is not enough to offset weak ETF performance. We expect gold prices to remain near the lower ranges.

Q3 Review: Gold remained broadly unchanged, as the metal saw large fluctuations which offset each other. The precious metal slid to a 4-month low of $1,719/oz in August amid concerns that the Fed hike could come in earlier than expected. This was driven in part by better-than-expected jobs report that week, which showed that companies hired the most workers in nearly a year in July, alongside persistent inflationary pressures. The speculative positioning continued to decline, falling to 51,013, the lowest level since March 2021, which is the June 2019 low, causing a decline in prices. Likewise, all known ETFs remained broadly unchanged, closing the quarter at just under 100m ounces, around the April lows. The traditional haven has lost 8% this year as central banks plot a course toward cutting the unprecedented monetary stimulus that was rolled out to rescue economies from the impact of the pandemic.

Gold vs 30yr Real Yield vs 10yr Real-Nominal Yield

Gold moved in line with the inflation gauge in the past couple of months, as the Fed's tapering decision drove market sentiment.



Gold demand as a safe haven subsided as investors attention shifted to changes in monetary policy outlook, and therefore, one of its major composites, inflation. This is clearly shown by the reduced correlation between the price of the precious metal, and the risks present in the markets; correlation has fallen sharply in September. Gold-dollar correlation has picked up sharply, to -0.5, the levels last seen in December 2019. Likewise, gold seemed to have traced nominal-real 10yr yield, an inflation gauge, closely in the last couple of months.

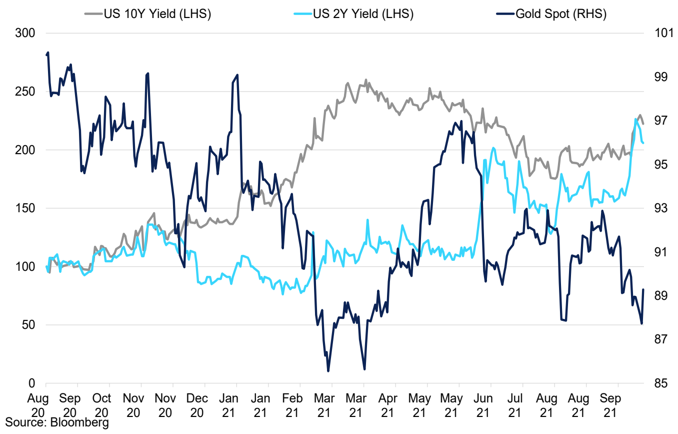
Outlook: We believe that after the Fed's statement, tapering could begin as soon as the next meeting in November. Inflationary and labour data readings might lose their importance in driving investor sentiment surrounding the monetary policy outlook. While inflation remains elevated, recent CPI data pointed to some easing in the market. The labour market continues to recover, albeit at a slower rate than expected.

Producer inflation, however, continues to present some problems for the economy, as continued supply chain bottlenecks are rising input costs that are being passed down to consumers, which is likely to prevail into 2022, despite a softer level seen month-on-month. Sustained high levels of inflation could lower buying power and deter consumer spending in the upcoming months. This, coupled with a reduced level of government support, may lead to a higher savings rate. Indeed, according to the US Bureau of Economic Analysis, personal savings rates have already picked up higher in July, the first incline since February.

Real government bond yields hit all-time lows in early August, which is usually a positive for gold as its opportunity cost improves. Despite the strong correlation over recent years, we have seen the gold price lag, which was likely a product of a more stable dollar. If real rates hold below -1% for longer, we could expect gold prices to remain supported. As a result, we believe gold should maintain its value given a historically high level of inflation. However, as we see softening in the month-on-month prices and continued recovery in the labour market, gold's value could fall, and precious metal's trajectory is set to follow monetary policy statements.

Gold vs 10yr and 2yr Yield

The longer-dated yields fell relative to the shorter-term ones, as the markets expected a more aggressive move from the Fed during the September meeting.

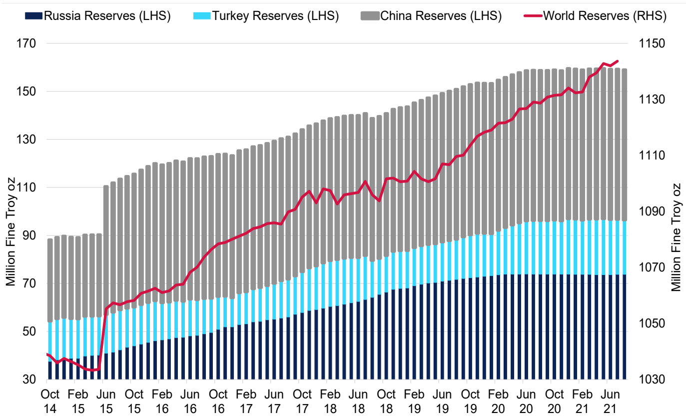


Source: Bloomberg

Central banks increased their gold purchases in Q2, with H1 2021 prompting a 39% increase above the 5-year average. Thailand, Turkey, and Brazil were notable buyers. Purchasing in the first few months of the year was characterised by several large strategic purchases each month, but activity in July appears to suggest a return to a more modest buying and selling pattern. Gross purchases were both significantly lower in July than June, at 34.4 tonnes, down from 63.1tonnes. Central banks are expected to remain net buyers for the remainder of the year, but at the current rate this is unlikely to provide enough support to offset weaker consumer demand in 2021.

Central Bank Purchases

Central banks continued to buy at a faster pace in recent months, with China's purchases growing after months of stagnation.



Source: Bloomberg

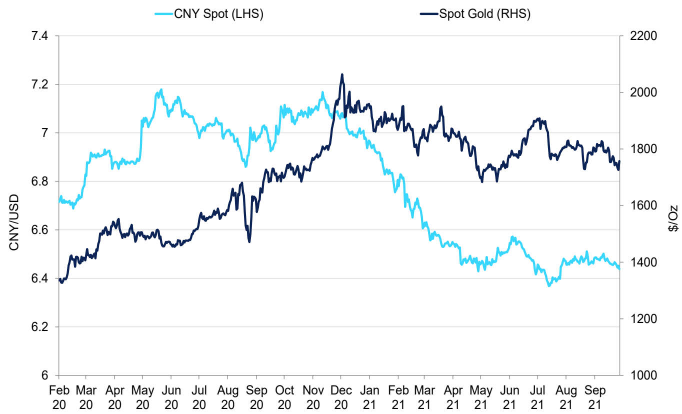
The SGE physical contract continued to decline, suggesting weaker physical gold demand. The flood in China and outbreaks of COVID-19 in key regions also weighed on demand. In June, the local gold price spread became negative as the difference in Chinese and western markets' risk appetite increased, with the expectation of more stringent regulations, and recent sharp rises in gold imports. As a result of trading at a premium, China's net gold imports via Hong Kong jumped nearly 42% in June to 30.887t after a slump in May. In July, the net imports dropped by 29% to 22.056t, as gold's spread flipped back. The resurgence of COVID-19 regulations alongside supply chain disruptions is likely to restrict the imports of gold in August and September. China imports could be volatile, but physical premiums have recovered.

Inflows into Chinese gold ETFs continued in August, increasing by 0.8t in the month to 72t, the second-highest in history. In September, the mounting Evergrande crisis propped investment demand even further. Physical demand also rose, reaching 296t, up 38% m/m and 14% y/y.

Gold retail sales in China increased by 45% from January to August, the strongest year-on- year increase in that period. Moving into the last quarter, sales are expected to rise further with a higher number of weddings and other celebrations. According to the World Gold Council, there has been a surge in popularity for chunky, traditional gold products this year, which can drive premiums of more than 20% over conventional gold. Previously, a lack of connection to gold was considered to be a major barrier for young Chinese consumers, but this appears to be lifting. On a year-on-year basis, Chinese gold jewellery demand is expected to record strong growth, albeit from the low base of 2020 of 413.8t, but is also on track to reach or even exceed 2019 levels of 638t.

Gold Spot vs CNY

CNY edged lower in September on the back of the Evergrande crisis, pushing the gold higher as safe-haven demand spiked.

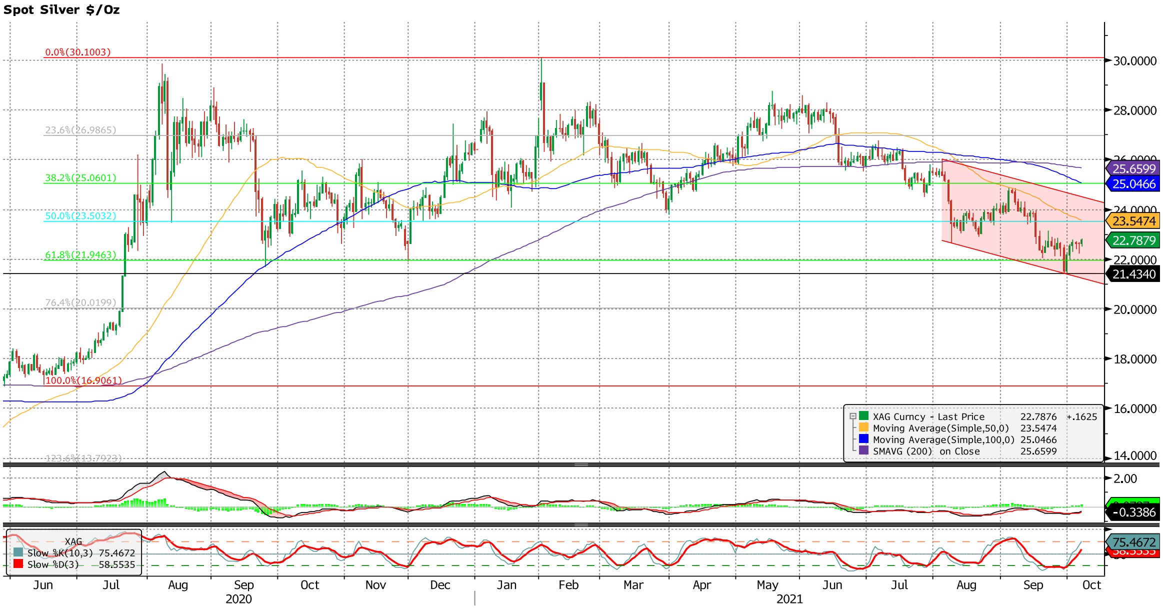


Source: Bloomberg

Indian demand remained moderately strong in the first half of July, despite lockdown restriction, supported by wedding purchases. The local market flipped into a premium, led by the recovery in retail demand and some retailers restocking in expectation of a higher gold price later in Q2. Retail demand strengthened further in August. Imports remained healthy during the same month, following a revival in July. For Q4, imports should be supported by jewellery retailers restocking ahead of festivals and weddings and the boost in manufacturing activity. On the other hand, gold jewellers may have difficulty fulfilling orders over the upcoming festival season owing to the implementation of new mandatory hallmarking standards. From September, jewellers will be fined for selling non-hallmarked goods. A supply bottleneck is a threat to India's recovery in consumer gold demand this year, which was one of the hardest-hit markets in 2020, down 35% y/y to 446.4t and was badly affected by a second wave of COVID cases and subsequent lockdowns this year. Full-year demand is not expected to return even close to pre-pandemic levels this year.

Silver

Spot Silver
$/Oz



Source: Bloomberg, 07.10.2021

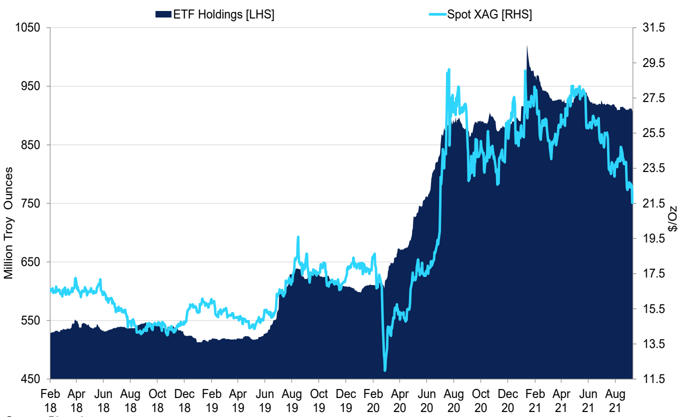
Summary

Silver prices fell during the quarter, as the industrial component of its demand outweighed its safe-haven properties. Weakening industrial production, supply chain disruptions, and elevated raw material costs have significantly limited the production side potential, and therefore the demand for industrial-use silver. The metal saw some respite after the Fed's decision to taper as soon as November, an indication that the economy is strong enough to survive with less support from the government. While this is coupled with lower COVID-19 case numbers in the US and the EU, containment measures in China and a regulatory crackdown on production is likely to significantly stall recovery.

Q3 Review: Silver prices fared worse than gold in Q3 2021 after it struggled to recover from the sell-off at the beginning of August, falling by 12% during the quarter. The silver ETF holdings remain high at 0.922m, unchanged quarter-on-quarter, further confirming that the weakness is coming from the industrial side. Silver prices rallied at the start of September, approaching monthly highs, however, but failed to hold on to those gains and slipped back. The net managed money position confirmed this, by edging higher to 17,912 in mid-September, before coming down lower. China's solar output continued its year-on-year recovery, but edged lower in the power output per person, suggesting that growth mostly comes from the low base of growth in 2020.

Silver vs ETF Holdings

ETF holdings softened marginally in the last quarter but remain near record highs.



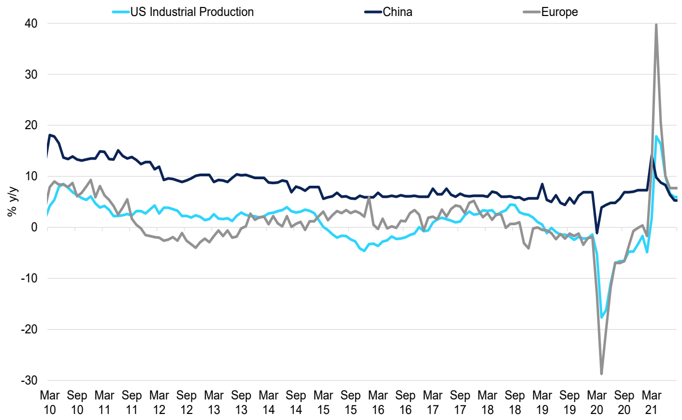
Source: Bloomberg

Outlook: Expansionary economic performance in the US and China held up global industrial demand for the metal, and the recent softness in the number of delta cases worldwide might give economies respite in regard to lockdown restrictions. However, we should continue to see this moderate month-on-month. China's industrial production and manufacturing PMI are at 5.3% y/y and 49.2 in August, respectively, which are now both at their summer 2020 lows. The higher cost of materials coupled with supply chain issues and flooding in key manufacturing regions are all expected to weigh on output. While China has begun to sell its own stocks to alleviate some raw metal pressures, the industry is not likely to feel these effects soon. Overall, the economy is estimated to grow at 8.1% in 2021 vs 2.3% in 2020 but growing domestic and external weakness in the later months of the year is likely to weigh on the potential growth for this year. China's credit provision has also slowed, which suggests a further slowdown in infrastructure and plant investment for silver. From the industry perspective, which represents the majority of silver demand, supply is not likely to stabilise until mid to late 2022, and therefore demand will remain crucial in driving the price of the precious metal in the last quarter of the year.

As a precious metal, silver might face upside pressures from the same factors, increasing its demand as a safe haven. Likewise, high measures of CPI in the US could further support the metal's use as an inflation hedge. It seems that at the moment, there are more upside pressures for silver, possibly decreasing the divergence with gold. Silver's attraction might increase if Congress passes more than $4bn in additional spending for its infrastructure project, which is likely to weaken the dollar, but this seems to be unlikely to be passed at such high levels. Semiconductor problems should continue to restrict electronic demand for silver this year. In addition, the chip shortages suffered by the automotive industry and some other electronics markets imply that while higher electronic demand of around 315moz is expected this year, the recovery has not been as strong as initially predicted.

China vs the US vs Europe Industrial Production

Further weakness is seen in major economies, with China experiencing the lowest year-on- year growth.

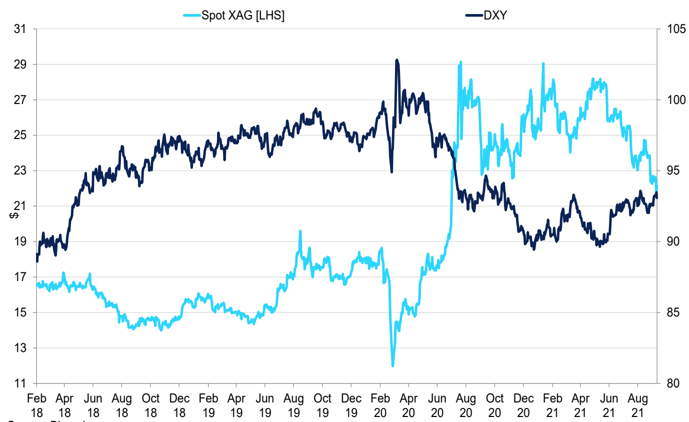


Source: Bloomberg

Silver prices gained ground as the dollar softened after the Federal Reserve's September meeting indicated policymakers' views to begin tapering support for the economy as soon as its next meeting. The Fed has repeatedly said that interest rate hikes are unlikely until tapering is complete, but after the latest signals of tapering in the next two months, there are concerns that rates could be increased sooner than expected, which is negative for silver.

Silver Spot vs DXY

Silver and the dollar continued to move in opposite directions throughout the quarter.



Source: Bloomberg

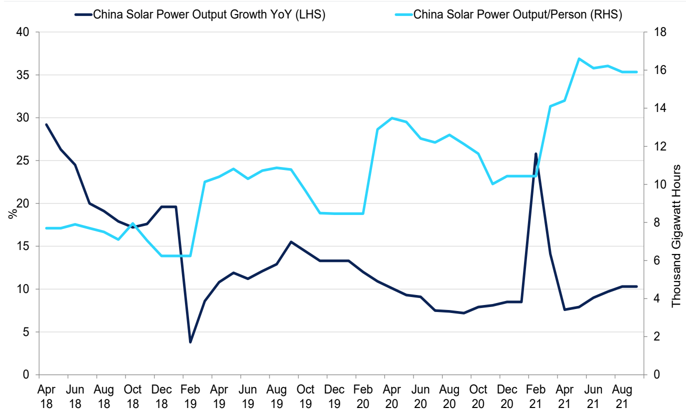
From the supply side, mine production is rebounding, given the shutdowns experienced last year. Primary silver producers are on track to lift output by 8% this year. However, industrial recycling is also likely to soften with falling prices in the market discouraging secondary production.

The global solar PV industry accounted for 10% of physical demand last year at 101moz and is currently estimated to consume a further 105moz this year. However, the rise in prices of other raw materials used in PV modules is seeing the cost of solar panels surge, which could weigh on installations and, therefore, silver demand this year. High prices of other materials are adding further pressure to manufacturers' margins. Therefore, module makers are lowering capacity utilisation and reducing output. Higher module prices could delay projects and, therefore, slow installations this year.

Additionally, WTO rejected China's claims against the US relating to safeguarding measures that the Trump administration imposed on solar panels imported from Chinese manufacturers. The case dates back to 2018 when Trump announced four years of import caps and tariffs on solar panels in response to a trade suit filed in April 2017 by a bankrupt US solar manufacturer that argued it had been harmed by a wave of cheap imports, mostly from Asia.

China Solar Power Output y/y Growth vs Output per Person

While year-on-year growth is positive thanks to the low base of growth in 2020, output per person is seen declining.



Source: Bloomberg

In the longer term, solar PV is likely to support silver prices, with Biden's clean electricity goal by 2035, as part of his Infrastructure Deal, which includes the extension of tax credits for clean energy. There's further uncertainty in markets over the outlook for President Joe Biden's $4 trillion economic agenda, as well as the need to raise or suspend the US debt ceiling. Furthermore, in order to achieve Biden's goal, the solar industry, which is already one of the fastest-growing renewable energy sources in the US, needs to grow 3-4 times faster than the current rate. According to the Silver Institute, global PV silver demand is forecast to reach a record high of 105moz in 2021.

According to the Silver Institute, industrial demand for silver came in at 486.8moz in 2020; that amount is projected to rise 8% in 2021 to reach 524moz, with exchange-traded product inflows anticipated to hit 150moz. However, a surplus in the industry is expected this year — total silver demand for 2021 is forecast at 1,033moz, 15% higher than last year's 896.1moz, providing further downside pressures in the near term.

Palladium

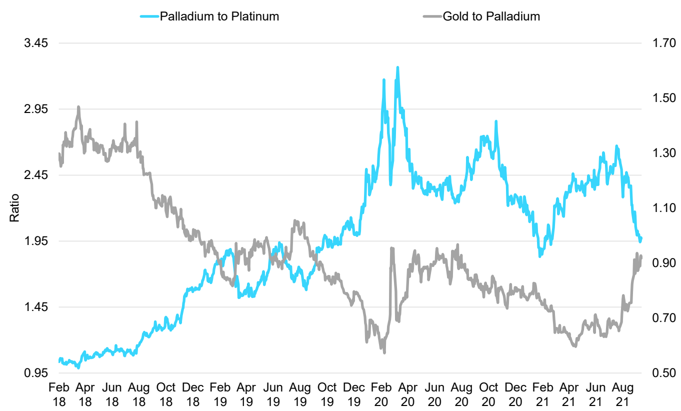
Spot Palladium $/Oz

Summary Palladium suffered the worst fall amongst the precious metals group, falling as much as 27%, due to the shortage of semiconductor chips and other raw materials stalling car output. Investment demand has been marginally positive, but not enough to support prices in the past quarters. The outlook will largely depend on the car sector, which should weaken in the last quarter, and while newly introduced regulations should help support demand, overall demand is likely to decline significantly, therefore keeping the price action subdued.

Q3 Review: : Palladium slumped to its lowest since June 2020 amid continued concerns that a global chip shortage at automakers is slowing demand growth from car catalytic converters, which are the biggest users of the emission-curbing metal. Parts shortages have driven up input costs and have restrained production. While palladium ETFs have been seen edging higher in the last couple of months, the overall level remains near record lows of 0.533m and is not enough to sustain higher prices soon. While platinum has also been seen weaker prices in the last couple of months, the losses in palladium have been stronger, pushing the palladium to platinum ratio down to March 2021 lows.

Palladium to Platinum vs Gold to Palladium Ratios

The sell-off has been the strongest compared to other precious metals during the past quarter.



Source: Bloomberg

Outlook: Non-commercial palladium futures have become net short for the first time in 18 years and have now fallen to record lows of -1,727 on September 14th. The last time positions reached near-zero levels were in February this year and March 2020, which in both instances preceded a steep rally in price. Seasonal trends suggest the palladium price should strengthen in Q4, outlined by the five-year average at 10% q/q, but ongoing supply chain issues in the automotive industry and announcements of further vehicle production cuts could keep the price on its current trajectory. The fundamental outlook is for a deficit in the palladium market this year, and while this should be consistent with stronger prices, there is significant downside risk from weakness in the auto market, which is expected to persist for the remainder of 2021 and into 2022.

US car sales fell to 13.06m in August, the lowest level since June 2020 as it, in line with other economies, suffered the shortage of semiconductors this year. Ongoing supply chain concerns are forecast to continue into 2022, meaning that car manufacturers should struggle not only to increase but to maintain their inventory levels this year, and therefore palladium demand. According to LMC Automotive, levels are forecast to remain below 17m this year, with 1.5m units impacts by ship shortages. Ford scaled back production, with bigger vehicles, the ones that require a bigger share of palladium in their converters, being most affected. The impact of the chip shortage on vehicle production is currently estimated to account for around 500koz of lost palladium demand this year.

From the supply side, Sibanye-Stillwater has issued a revision to its 2021 production forecast from US PGM operations to 620-650koz, down by 6-10% due to safety-related stoppages. However, the disruption that took place in the first half of the year was partially offset by steady year-on-year growth in recycling volumes as well as increasing output from other projects. The global output is likely to decrease, in large due to Nornickel's production; however, with lower demand from the auto market, the palladium market is expected to remain in deficit in 2021.

Platinum

Spot Platinum $/Oz

Summary

Platinum prices fell sharply, as continued issues surrounding semiconductor shortages and now supply chain disruptions are lowering the output for car manufacturers. Many large companies have already announced cuts to their production this year, further confirming these pressures are going to last into next year. The most recent weakness in September has been driven by a decline in ETF holdings. The supply side should add further downside pressures, as mining is seen resuming, driving platinum prices lower in the upcoming quarter.

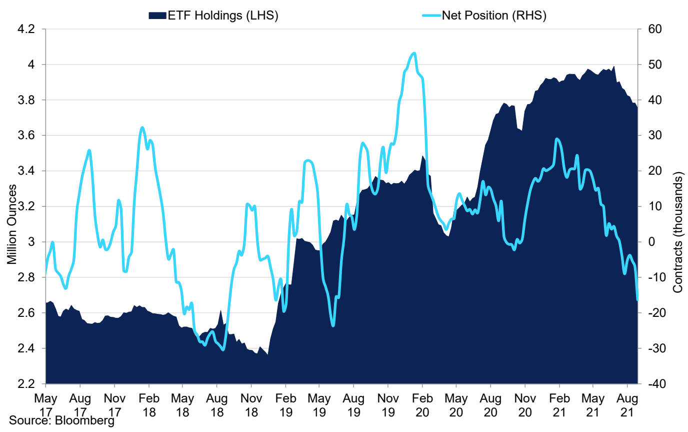
Q3 Review: Platinum prices continued to decline in Q3, falling as much as 7%, down to $900/oz, the lowest since November 2020. This was driven by a combination of the outbreak of delta cases clouding the outlook for demand, semiconductor shortages curbing auto production, and the Fed's decision to begin pulling back support, in September. Investment demand also waned, with ETFs falling to 3.780m in mid-September, which is the lowest level since May 2020. We have, however, seen a spike in the metal prices in the week ending September 24th, indicating by a massive purchase of metal through the ETFs; total holdings increased by 5% on the day, erasing nearly two months of consistent losses.

Outlook: Total platinum transactions via the SGE increased by 70% y/y to 17.0t in Q2 2021, a new quarterly high. Customs data showed that net platinum imports into China also increased by 68% y/y to 32.6t. However, the retail sales volume of platinum jewellery contracted by 15% y/y. The stocking of heavier pieces of premium gold by retailers resulted in reduced allocation to platinum goods in stores, and the lower gold price has weakened platinum's cost average. The disconnect between the trade and sales data could be attributed to increased demand for industrial use rather than for jewellery. Indeed, while platinum demand for jewellery in China is supposed to grow by 16% y/y in 2021, it should continue its downward trajectory, given the attractiveness of other metals such as gold. Industrial demand for platinum is forecast to reach a record level of 800koz in 2021.

US used car prices, one of the biggest drivers of inflation for the past year, have picked up once again in September after temporary softness seen in summer months. The Manheim US Used Vehicle Value Index rose by 3.6% m/m in the first half of September, the first monthly increase since May. The new supply of cars remains short, urging consumers to purchase used vehicles, driving prices higher. Carmakers have said that the production of new vehicles this autumn will continue to be constrained by semiconductor shortages. The recent surge could be explained by dealerships having to restock, which have seen improved supply. Low supply for new vehicles implies lower output from car manufacturers, therefore, lowering the demand for components of the autocatalyst for the next six months or more.

Platinum Spot vs ETF Holdings

The most recent weakness in platinum prices has been supported by investment demand, on the belief that semiconductor shortages will dampen industrial demand for the metal.



From the supply side, South Africa is increasing its PGM production. Refined production from Implats grew by 16% y/y to 3.27moz in H1 2021, including 1,516.6koz of platinum. While the growth is mostly supported by the low base in 2020, operations were negatively affected this year, dampening the potential for this year's production. Global platinum supply is forecast to return comfortably to pre-pandemic levels in the calendar year 2021, increasing by 24% year- on-year to 6.1moz.

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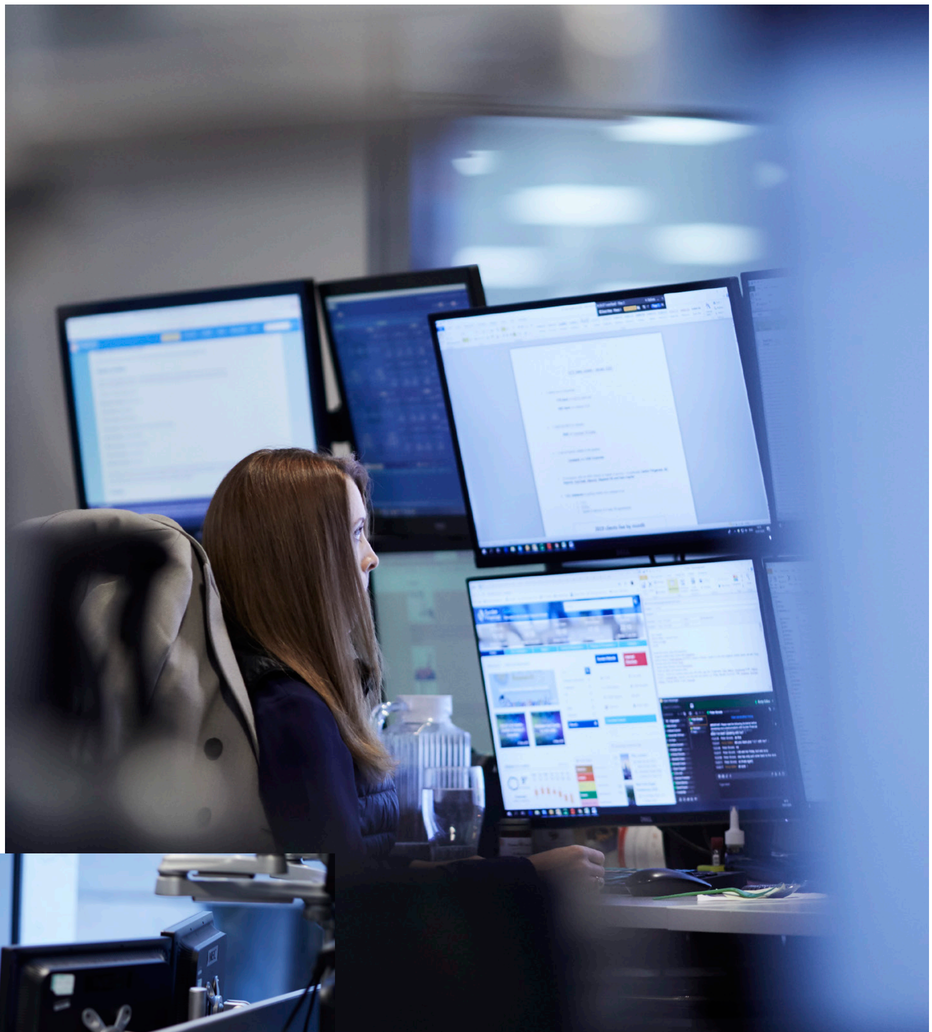

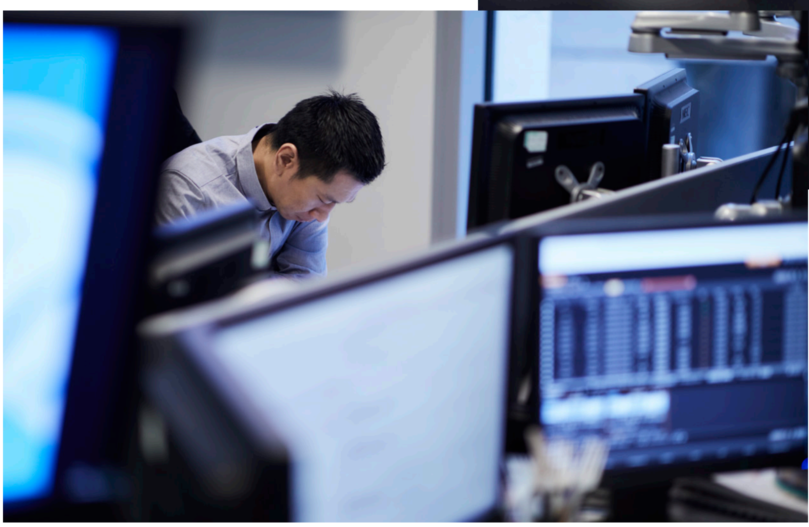

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