

Quarterly Metals Report

Q3 — July 2021

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



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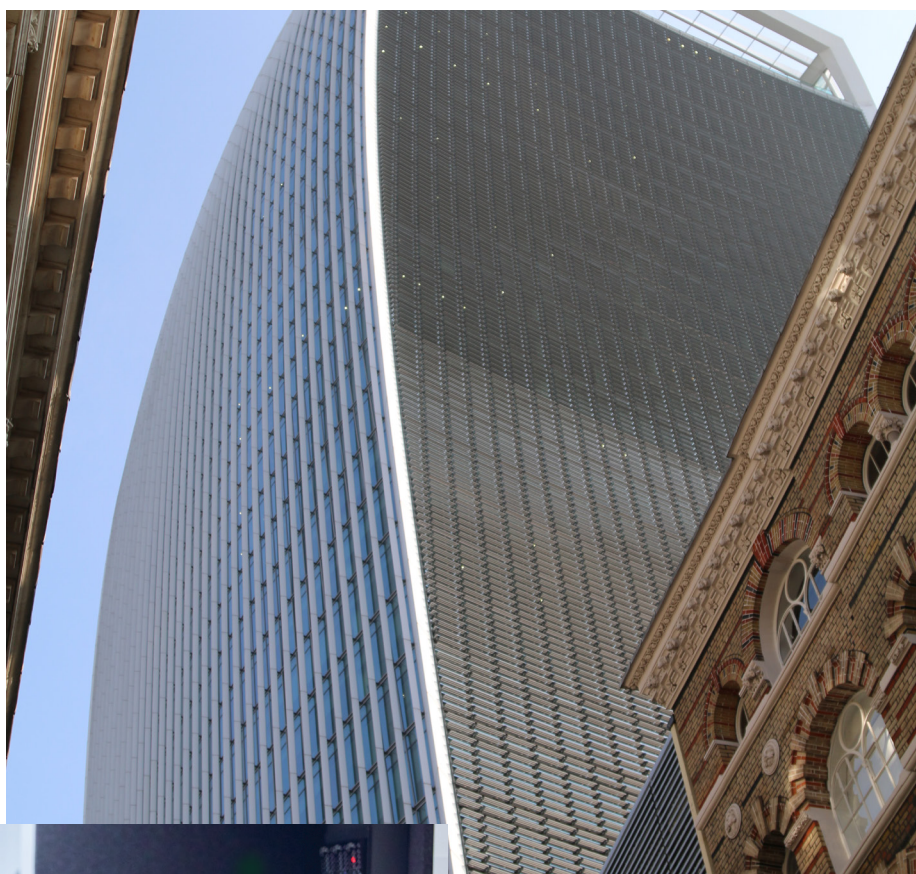
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Summary

COVID cases are rising across the globe as the delta variant spreads, this is causing some nervousness in financial markets, especially with the higher inflation rhetoric. Commodity prices have fallen since the Fed changed their tune on inflation, the dollar has stabilised which has also been a headwind to prices. The summer months are traditionally quieter for metals demand which could prompt metals to consolidate. If the delta variant continues to spread, we may see higher levels of stimulus for longer. As things stand stimulus levels are set to be tapered and this could be brought forward if inflation remains high. We expect markets to remain volatile but on lower volume through the summer months.

Aluminium (Al)

The supply-side story is intact, and this has led to bullish sentiment in the market. The funds hold a net length of 128,087 contracts, outlining sentiment. Energy restrictions in Chinese provinces are causing capacity to decline, but output of aluminium and aluminium products is strong. Bottlenecks and logistics continue to plague the demand side of the equation and long lead times are only going to get longer. We expect aluminium prices to trend higher in Q3 as the consumption is strong and the supply-side reforms continue, however, any tightening in policy from the Fed and dollar strength will cap gains. Range: \$2,350-2,630/t.

Copper (Cu)

We saw a reduction in the net long from the investment funds as traders worried about inflation remaining high in the medium term. Copper supply is recovering and smelter maintenance helped balance the concentrate market. We are seeing more blister and scrap usage in China, and premiums are improving but remain low. The dollar is stabilising which will present headwinds to copper but the longer-term trend to upside is boosted by the green economy. We expect price action to be muted in the next 6 weeks before improving in Q4 as demand returns, assuming the delta variant is controlled and the Fed don't become more hawkish. Range: \$8,950-10,000/t.

Lead (Pb)

While US and Chinese auto markets stalled in recent months, due to the supply chain disruptions, however, Europe saw a sharp pick up in sales, as lockdown restrictions were lifted. We await the Biden administration's plan to combat chip shortages in the US. From the supply side, we believe that more lead supply will come online as the number of vaccinations increase and supply chains stabilise. The concentrate market remains tight, exemplified by the low TCs; this coupled with falling LME stocks, should help support prices on the downside. We expect most trading between \$1,950/t and \$2,200/t.

Nickel (Ni)

Nickel premiums and freight rates from the Philippines to China have increased since the beginning of June as demand for this material rises. We expect imports from the Philippines to remain strong in Q3, which will alleviate some of the tightness in the market, but nickel ore stocks in China ports at multi-year lows. Chinese NPI, refined nickel and nickel sulphate will increase in the coming months, as operating rates increase due to mills and smelters recovering from maintenance. Range: \$17,353-20,000/t.

Tin (Sn)

Solder demand has been robust so far this year. The order book suggests this will continue as semiconductor sales are elevated and will grow significantly for the rest of 2021. The global supply chain of semiconductors is too concentrated in Asia and production capacity needs are inefficient and need updating. Fundamental tightness in the tin market will persist, keeping prices elevated. China's exports of refined tin have increased to alleviate ex-China tightness. We expect tin prices to trend higher in Q3 and any dips to be well bid. Range: \$30,000-35,000/t.

Zinc (Zn)

Investment funds net length is high with the LME report showing 49,059 contracts as of July 9th. The fundamental picture, while still tight due to low refined and concentrate inventories in China, is starting to improve. TCs are starting to rise, outlining the improving concentrate availability, and operating rates are also elevated. Longer-dated zinc prices are lower than cash but we still see tightness in the zinc market for Q3, even if it is typically a weaker consumption period. Range: \$2,800-3,170/t.

Iron Ore & Steel

Steel output curbs will keep capacity offline for the remainder of the year. Margins for rebar and HRC mills have reduced significantly which will also help cap output. The knock-on effect is a reduction in demand for iron ore from Australia, but steel producers don't always abide by the rules. Consumption of higher-grade lump and pellet kept prices elevated even though the spread between 62% and 65% fines narrowed marginally. Prices remain elevated but the days above \$200/t for iron ore are numbered with a softening demand outlook. Range: \$180-\$225/t.

Gold (Au)

Speculative demand has deteriorated during the quarter, however, not strong enough to offset the price gains. Indeed, inflationary pressures alongside gold's safe-haven properties supported the precious metal's prices. In the upcoming quarter, inflation and real rates will continue to drive the sentiment for gold, if inflation is temporary, then we could see this support gold prices in the medium to long term. Jewellery demand was particularly hit in Q2, driven by the biggest wave of COVID-19 infections in India. With lockdown restrictions being eased, we expect jewellery demand to recover, alongside central bank purchases, driving gold price range to \$1,650-1,900/oz.

Silver (Ag)

Silver gained momentum in Q2 2021, regardless of the setback that took place by the end of June after a surprise hawkish outlook from the Fed. As speculative demand remains lacklustre, we expect jewellery and industrial sectors to recover, supporting silver prices on the downside. From the macroeconomic side, continued growth in consumer prices and low real yields should support the precious metal as an inflation hedge. Combined with relatively low silver prices, these factors could prompt investors to add the metal to their portfolios. Range: \$23-28/oz.

Palladium (Pd)

Palladium continued to gain ground throughout the quarter, supported by the expectations of low supply in Russia. Additionally, speculative demand has been strengthening, reaching the March 2020 levels, when demand for precious metals was driven by the surge of investors towards havens to cover margin calls. Chip shortages weighed on automobile production, however, with Biden administration's new plan along with recovery seen in Europe, we expect sales to stabilise throughout the quarter. Regardless, automobile demand for the whole year is expected to weigh on the metal, with palladium now projected to move into surplus this year. Range: \$2,650-3,000/oz.

Platinum (Pt)

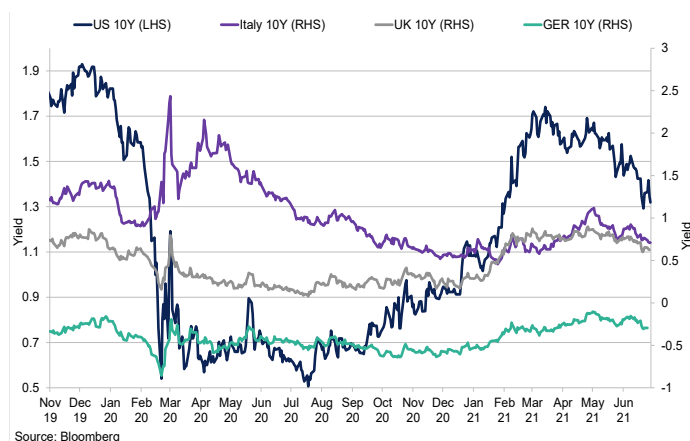
Despite some moderate gains seen in other precious metals, platinum softened during the quarter, driven by a stronger dollar and the Fed's hawkish statement in June. This confirms platinum's presence as a precious metal more so than industrial. However, we believe that those sectors that have remained dormant so far, are likely to gain pace in the second half of the year, supported by the uptake of the vaccines and subsequent reopening of the restrictions. Higher platinum loadings are expected in both China and Europe; however, demand will not be strong enough to outpace the pre-pandemic levels. Our price range: \$1,150-1,300/oz..

Market Overview

Global Outlook: Global growth accelerated in H1 2021, led by China and the US, as the vaccination rates picked up sharply and the lift of lockdown restrictions unleashed some of the pent-up demand. China, in particular, experienced a sharp rebound in manufacturing at the beginning of the year, and while we continue to see strong positive growth, it is moderating month-on-month. Commodity prices skyrocketed, driven by expectations of strong demand. Therefore, as we move through the second half of 2021, expect to see recoveries diverge, exemplified by some economies already hiking rates, while others continue to provide record levels of support. This divergence is further exemplified by the take up of the vaccine, as we see some economies struggle with the access and distribution of the jobs.

Developed Country Yields

Yields softened in Q2 2021, as continued government stimulus and Fed's statement that inflation will be transitory.



PMIs: The global manufacturing performance continues to grow at a robust rate, driven by a strong rebound in demand as the world emerges from the pandemic. However, supply-chain constraints are stalling the growth of output and new orders. As a result, the global PMI fell from 56.0 in May to 55.5 in June, attributed to supply-chain barriers that, in turn, drove up costs as freight rates rise.

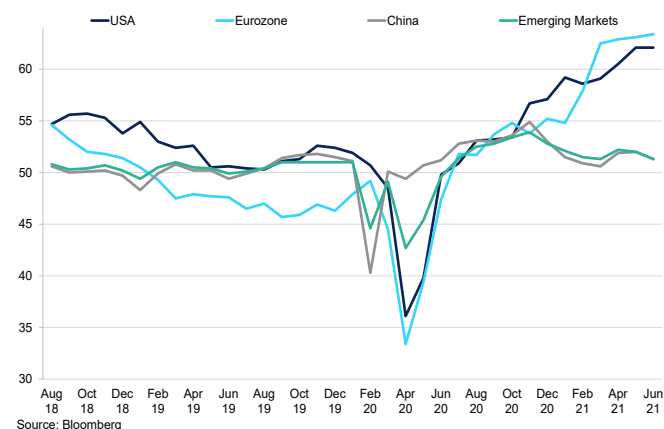
In the US, the manufacturing PMI held steady at 62.1, indicating very rapid growth in activity. Strong demand is reflected in high new and export orders, placing unusual stress on the industry. Supplier delivery times and input costs have increased to the greatest extent on record, leading to a record rise in output prices. This, alongside the supply chain disruption, is suppressing the ability of companies to fill the demand.

Meanwhile, Eurozone activity grew at a rapid pace, with the PMI for manufacturing increasing from 63.1 in May to 63.4 in June. Strong demand was driven by the easing of restrictions, increased vaccination, and continued monetary policy support. Yet, capacity and transport constraints have limited output growth and boosted input and output prices. Similarly, companies have been building safety stock to protect themselves against potential future disruptions. Once sufficient reserves are built, this effect should likewise fade.

In China, the manufacturing PMI fell from 52.0 in May to 51.3 in June. China was adversely affected by a rise in infections, resulting in shortages of labour and constraints on output and power outages in southern China. Unlike in the West, Chinese manufacturers experienced an easing of input price inflation as shortages were partly resolved.

Manufacturing PMIs

Manufacturing performance improved across the world, with Europe outpacing most of the other economies.



Oil: Oil prices surged more than 45% in the first six months of 2021, rallying toward \$80/bl for the first time in more than 18 months. Analysts attribute the oil price rally to a combination of factors, including the rollout of COVID-19 vaccines, a gradual easing of lockdown measures and massive production cuts from OPEC+.

While demand is likely to remain strong, especially with heightened demand during the summer months, it is most likely to come down to OPEC+ decision on supply outlook. In July, OPEC+ reached a compromise, with producing countries baseline for crude production being raised. Saudi Arabia will raise UAE's baseline to 3.65m b/d from April 2022. As a result of the announcement, oil prices cooled. On the downside, the risks of higher-than-expected interest rates, as well as the spread of new COVID variants, could soften the demand outlook.

According to IEA, global production should pick up in 2021, limiting oil price increases. They forecast production will increase more rapidly than consumption, ending the large global stock draws seen in the first two quarters of 2021 and limiting upward crude oil price movement. Global demand is forecast to grow by nearly 6m b/d in the next 18 months to over 101m b/d in Q4 2022, eclipsing the previous peak in 2019.

US: The second quarter was strong for US equities, as the S&P 500 reached a new all-time high in June, and this continued into July. Overall, the economic picture remained positive. Q1 GDP grew at an annualised 6.4% q/q, which was modestly lower than the consensus of 6.7%. Growth in consumption was especially strong, as pent-up demand surged to the service sector. Manufacturing activity moved from 59.7 in March to 63.9 in June.

Additionally, in late June, President Joe Biden also secured a deal on an infrastructure package worth about \$1tr over the next eight years, falling short of the initial \$2.3tr spending plan declared in March.

We expect strong economic growth in the United States through the second half of this year. Real GDP growth of around 6.4% for 2021 is forecast by the IMF that would mark the best outcome for the US economy since 1984. Stocks growth shattered expectations in the first-quarter earnings season, and we expect the results for Q2 2021 to be considerably more robust as the reopening progresses.

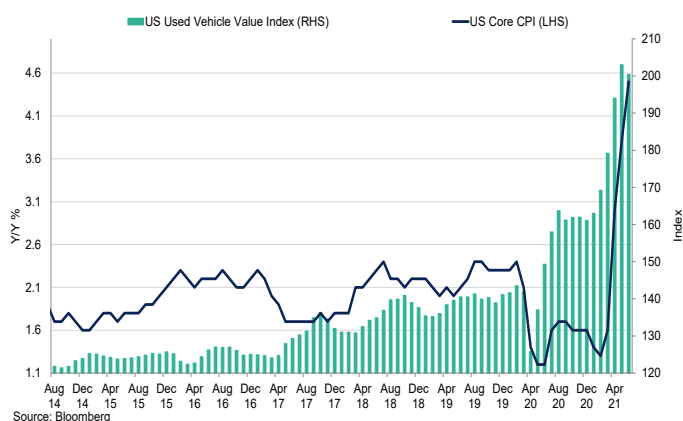
Until recently, the US Fed reserve predicted that inflation in 2021 would be 2.4% and for the first interest hike to take place in 2024. Now, that opinion has changed, and the Fed brought forward the first two projected

rate hikes to 2023, with the inflation forecast revised to 3.4%. Likewise, it expects GDP growth to jump from 6.5% to 7.0% and stated this change should be seen as a positive change, an indication that the committee sees greater economic growth than anticipated previously. It, however, expects higher vaccination rates in order to completely take the economy out of the pandemic. There were no changes to assets purchases and interest rates in the near term, however, the speculations about the tapering support have been rising.

The Fed indicated that the next change to monetary policy would only take place once the labour market tightens sufficiently to drive a greater risk of inflation. Indeed, the current unemployment level is at 5.9%, 2.4pps more than the pre-pandemic levels, and the Fed expects full employment not until the latter part of 2022. In regard to the inflationary pressures, the Fed believes that they are transitory. Indeed, as the economy reopens, some sectors, including hospitality and retail, enjoy a surge of pent-up demand from the consumers; however, the year-on-year gauge seems to be a poor representative of the growth in prices, given the substantial decline seen in the midst of the pandemic, the month-on-month estimation seems to be more reasonable as we watch the economy develop. Indeed, CPI is up 5% y/y in May and 0.9% m/m.

US Used Vehicle Value Index vs Core CPI

Core CPI surged as the economy recovers; however, sales of used cars are no longer driving the growth.



The Fed's statement to tighten the monetary policy was viewed more as a support in the view of growing inflationary risks in the meantime. And yet, the bond markets are not cooperating with that narrative. Indeed, after the Fed's statement, the 10yr US Treasury yield rallied before falling sharply back to 1.43% levels. Moreover, the breakeven rate is lower than a few weeks ago and barely budged in response to the Fed statement. The 5yr breakeven rate is even higher than the 10yr breakeven one, reflecting investor belief in higher shorter-term inflation and lower long-term one, which is what the Fed expects.

Therefore, while there is a disparity between expectations from the Fed and the general market, the investors seem to have trusted the Fed's forecasts. However, the wage debate remains, and many people are reluctant to go back to the office. The latest JOLTS report points to a historically high level of both job openings and the job openings rate, share of available jobs that are unfilled, suggesting that not only are there available vacancies for unemployed to fill but also that people are not rushing to fill these positions. Therefore, employers are under pressure to raise wages to attract potential workers.

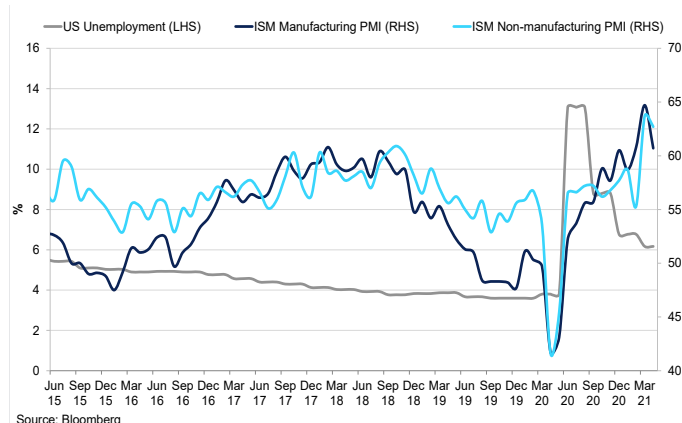
Retail sales declined by 1.3% m/m in June, by more than forecast, as the impact of stimulus money waned. In fact, retail sales have performed well so far in 2021, with the May figure 20.3% higher than at the beginning of the pandemic in February 2020. Therefore, consumers are spending more money than before the pandemic, but recent weakness outlines that the sector might have found a new plateau, outlining the diminishing impact of stimulus money. In the coming months, pent-up demand, a higher level of confidence from vaccinations, and a low number of infections will likely continue to support the industry.

Sudden Financial — Quarterly Metals Report

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

US Labour Market vs Non- and Manufacturing Performance

Unemployment continues to fall as more people are being hired.



Moreover, most of the decline came in from automotive sales, which fell 3.7% m/m, which was mostly due to the semiconductor shortage. We also noticed a replacement of durable to non-durable purchases, as consumers were more comfortable incurring larger purchases. This confirms the increase in consumer confidence we have seen so far this quarter.

Europe: Europe's vaccine rollout has gathered pace and continued relaxations of lockdown restrictions along with travel relaxation are more likely to follow. The EU's recovery fund should help continue to support member states, and we expect a much stronger growth performance in Q2 than in the first three months of the year. The region's post-lockdown recovery is likely to be strong, and GDP should bounce back by around 4.4% this year following last year's near 6.6% decline, according to the IMF. The presence of new variants poses a threat to sustained economic recovery throughout the year, however, with 50% of Europe now vaccinated, we expect the number of hospitalisations and death rates to be low, putting less pressure on the healthcare system. As a result, EU member states began to reopen their economies, which should particularly benefit the service sectors.

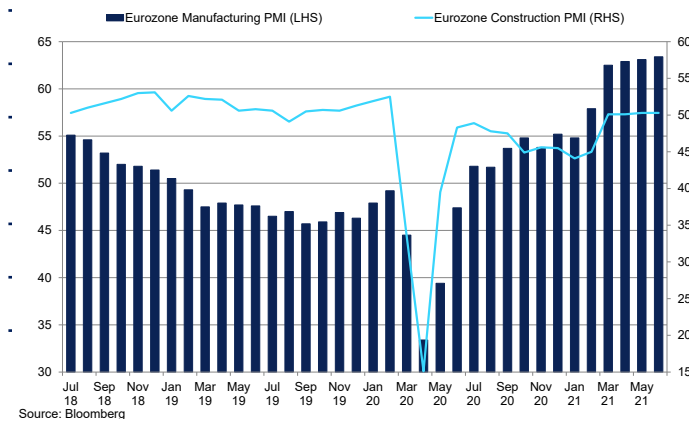
Economic data pointed to a strong rebound in activity in Q2, with the latest composite PMI reading at 59.2, the highest since June 2006. The reopening of industries has supported this, and survey results, as well as tracking mobility, suggest a rebound in consumption is underway and is set to strengthen in the coming months. There is also evidence supporting the rebound in tourism activity, which should also benefit from the introduction of digital vaccine passports. Europe's private sector economy has expanded sharply in June, with the Markit composite index picking up to 59.5, the fastest level in 15 years.

However, supply chain disruptions and higher producer price pressures continue to persist. Regardless, the bloc's indices have been mixed, showing buoyancy across the board. Confidence in the economic outlook reached the highest level since the data was first recorded in 2012, highlighting the outlook that, while higher costs persist, the manufacturers are confident about those pressures easing throughout the second half of the year.

From the monetary policy side, the ECB does not want markets to price in for Europe what they are going to be pricing for the US, either in terms of the end of quantitative easing or interest rate rises. This sentiment that Europe is behind the US in terms of recovery has been supported by President Lagarde who stressed that the eurozone and the US economies are in different situations. Indeed, weekly bond-buying under the \$1.55bn pandemic emergency programme accelerated to the fastest pace since the height of the pandemic. This means the ECB believes that more support is needed for the economy before monetary policy easing. The ECB might not be ready to face higher global interest rates, exemplified by increased bond purchases in March to soften the yields.

Eurozone Manufacturing and Composite PMI

Manufacturing performance continues to grow, albeit at a slower rate than at the beginning of the year, as growth is shifting to the service sector.

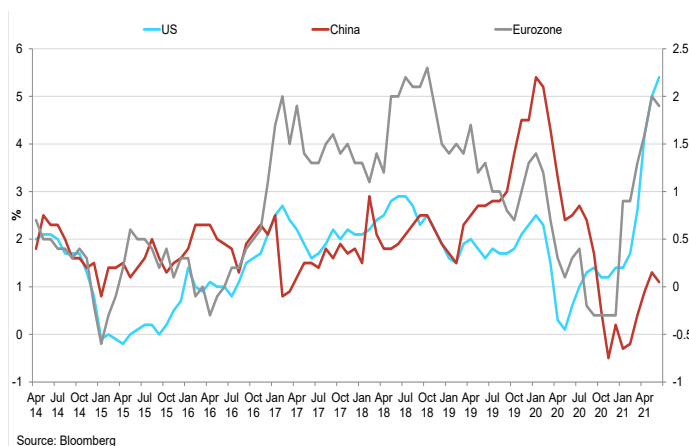


China: The Chinese economy continued to grow in Q2 with strong performance indices, however, fall short of expectations. Retail sales were up 12.4% y/y in May, the slowest rate of increase since December. The month-on-month growth of 0.81% is, however, in line with the 4-month average, which means that the industry continues to recover at a consistent pace throughout the year. However, since May 2020, the economy was set on a path to recovery, the growth in 2021 has stalled, and we expect this trend to continue in the coming months. Likewise, from the industry side, industrial production grew by 8.8% y/y in May, the lowest since December 2020. The month-on-month performance has been deteriorating, with the April and May index at the lowest level since February 2020, which is likely have been the result of supply chain issues that slowed manufacturers' performance as well as a shortage of semiconductors for the automotive sector. In fact, automobile production was down 0.4% y/y in May.

The factory gate prices, also known as producer prices, increased by 8.8% y/y in June, down from the May level after a government crackdown on commodity prices took place. Annual rates stayed relatively high and underlined continued strains on the economy.

US, EU, and China's CPI

Chinese CPI remains well below the ones seen in the US and Europe due to slower growth in economic performance.



These high levels reflect the fact that strong domestic and foreign demand fuelled increases in global commodity prices, leading to higher producer prices. Indeed, while producer prices in China continue to rise, consumer price increases remain modest, which means the prices have not yet been passed down. China's CPI was up 1.1% y/y in June; however, down 0.4% m/m.

Chinese stock markets have struggled over the last couple of months, in part due to increasing regulation on technology companies. The sources

that powered China's recovery, strong exports, property investment and industrial production, remained solid in the first quarter of the year but showed a moderation in Q2 2021. As a result, economists believe that headline GDP growth will slow to 8.0% from 18.3% in the previous quarter. This is largely driven by the strong base growth in the second quarter of 2020.

The PBoC's surprise cut in lenders' reserve required ratio has rocked the markets, left investors speculating on what further steps are coming to bolster the economy. However, the government explains this cut as part of its liquidity operations. The RRR cut should free up around \$154bn of liquidity to support interbank liquidity and capital markets as means of repaying matured loans. We believe that debates about the shift in monetary and fiscal policy will continue as the economy sees its growth moderate.

Emerging Markets: The pace of global recovery is varied, but with vaccinations trending higher and the subsequent lift of lockdown restrictions, we expect a stronger recovery in emerging markets in H2 2021. In Q2, MSCI EM gained ground, climbing by 5.2%, driven by Latin American performance. This growth, while positive, is below expectations. A stronger US dollar also weighed on performance in June, while a more hawkish outlook from the Fed and growing concerns over rising inflation further weakened sentiment. The countries that responded swiftly to the initial outbreak have already been open for several quarters. However, India endured the biggest outbreak of COVID-19 cases that overwhelmed the country's healthcare system and slowed economic growth in the second quarter of the year.

According to IMF, emerging market economies are set to enjoy considerable economic growth of 6.7%, even as they are forecast to have deeper scars than developed economies. Though vaccination rates started to trend up in emerging markets, the rollout in the first half of the year was slower than expected. One of the reasons behind this is that little manufacturing occurred in those countries that struggled to access vaccine supply from overseas. Additionally, rising commodity prices are presenting a headwind to EM, as most of the countries are net importers. On the other hand, as developed economies recover, it is likely that some of that growth will move in emerging markets. Indeed, forecasts for gross fixed capital formation are forecast to be much higher in 2021 in both developed and developing worlds.

India was one of the worst-hit economies in Q2, as it endured the second wave of COVID-19 and subsequent lockdowns restricted economic activity. Regardless, according to the IMF, India's real GDP is forecast to grow by 12.5% in 2021 and 6.9% in 2022, as states are easing restrictions to reopen the economy. The overall economic effect is likely to be less pronounced than during the previous wave, which saw the economy fall by 8.0% in 2020, thanks to a more localised lockdown approach. However, access and distribution of vaccines are likely to determine the sustainability of the recovery. To combat this, the government announced a strategy to centralise vaccine deployment in order to boost vaccinations, which if successful, could really boost economic recovery.

Aluminium

LME Aluminium 3MO (\$)



Summary

The supply-side story is intact, and this has led to bullish sentiment in the market. The funds hold a net length of 128,087 contracts, outlining sentiment. Alumina and bauxite prices are also high aiding the microeconomic tailwinds for aluminium. Energy restrictions in Chinese provinces are causing capacity to decline, but output of aluminium and aluminium products are strong. Bottlenecks and logistics continue to plague the demand side of the equation and long lead times are only going to get longer. Construction and manufacturing input costs are rising and are being passed onto the consumer. We expect aluminium prices to trend higher in Q3 as the consumption is strong and the supply-side reforms continue, however any tightening in policy from the Fed and dollar strength will cap gains.

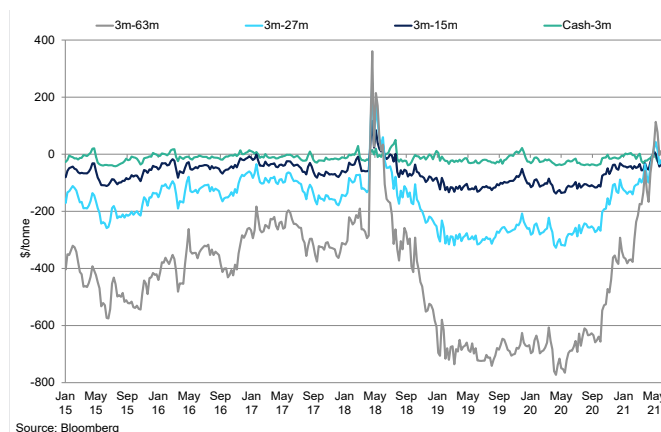
Q1 Recap: Aluminium performed well in Q2 as the supply-side story of decarbonising production drove activity. LME prices gained 13.9% and closed the quarter at \$2,523.5/t. Sentiment was slightly softer following the move by the SRB to release inventories into the market, but the longer-term supply outlook has prevailed, and prices are just off the highs. Higher coal and bauxite prices will contribute to higher costs for alumina and in turn increase prices. Yunnan was heavily impacted due to the drought which reduced aluminium output. SHFE deliverable stocks have declined due to the tightness in aluminium and also the traditional seasonal outflows. LME inventories are falling, down 25.1% since the peak in March, and down 16.9% to 1.472m tonnes. 1m tonnes is still being held in Malaysia, with Port Klang holding 873,150 tonnes. SHFE 1st generic contract gained 9.6% in Q2 but softened after the testing appetite above CNY20,000/t, prices trade at CNY19,340/t. The spot import arbitrage is closed at the moment at CNY-189.4/t.

Outlook: Aluminium prices have been supported by a number of factors, particularly impacting the supply side. Microeconomic factors have also been at play such as higher bauxite, coal, and shipping costs. Australian bauxite monohydrate 52% CIF has been rising, and stands at \$41.50/t as of July 13th, with bauxite lumps from Guinea at \$47/t, the latter up from \$45/t in March. Imports into China have consolidated above 9m tonnes a month, Australian shipments have fallen from the March high of 3.09m tonnes and stand at 2.44m tonnes as of May 2021. Bauxite exports from Guinea stand at 5.22m tonnes, availability is good and total imports into China stand at 9.11m tonnes, which is marginally higher than April's figure at 8.7m tonnes. Bauxite prices in China have been constant in recent months, prices of (6.0≤Al/Si<7.0) bauxite in Shanxi was CNY540/t as of 14 July, with the same product in Henan at CNY520/t. Prices of (6.5≤Al/Si<7.5) bauxite in Guizhou are lower at CNY370/t. Local prices in China are at the same level as in our last report but seaborne bauxite prices are rising. According to the NBS, alumina production has reached

6.6m tonnes, up from 6.49m tonnes the previous month. Production on a year-on-year basis has been strong, up 11.2% in May and 7% y/y in April. The IAI have slightly different data and suggest that May output was 6.5m tonnes. Customs data shows that imports of alumina are falling, with May's figure at 145,194 tonnes, April's figure was 235,085 tonnes. They continue to fall suggesting that availability in China is good, Australian alumina prices stand at \$285.8/t but the yuan is strong and the arb window opened prompting stronger demand from Chinese traders. Domestic prices have been rising suggesting strong demand, alumina 98.5% EXW stood at CNY2,475/t, the average price in China stands at CNY2,489/t, with prices at Shanxi are CNY2,510/t compared to Guangxi CNY2,430/t. Strong demand for alumina will be capped by the consistent supply outlook.

Aluminium Calendar Spreads

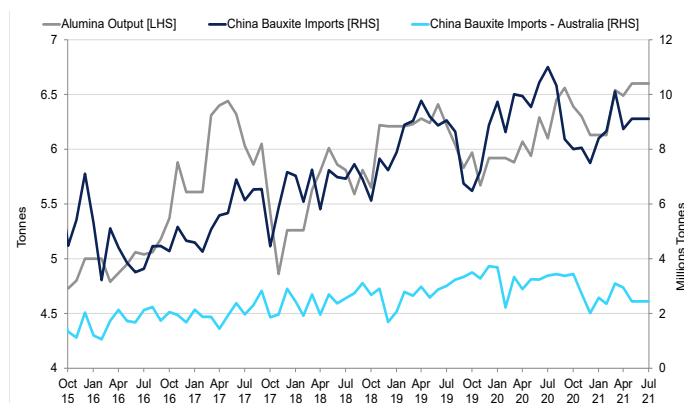
Calendar spreads have tightened as demand rebounds and supply side is reformed.



Primary aluminium output has softened slightly, with output at 3.29m tonnes in June, this is a moderate decline from April's figure of 3.346m tonnes. Production has reached 19.64m tonnes as of the end of June, this was approximately 2m tonnes above 17.889m tonnes for the same period last year. As things stand output in China is expected to reach 39m tonnes if production remains at the same level for the remainder for H2 2021. Output of aluminium products in China has stayed elevated at 5.43m tonnes in May 2021. This is approaching the recent high in 2017 when production reached 5.8m tonnes in June. Aluminium production outside of China was 2.43m tonnes in May, up 3% y/y according to the IAI. Shandong have tightened their approvals for new projects, they issued a notice for new projects with high emissions and energy consumption. The statement says new coal-fired power plants, and smelters should not be more than 2/3rds higher than the old-projects. Provinces are looking to cut carbon emissions in line with China's net zero plan. This is leading to a reduction in output from provinces in China, this should keep SHFE prices elevated as China's market remains tighter. Output in the US was softer due to maintenance, but the longer-term trend could change in the US following the report on how fragile the US is to global supply chains. The report commissioned outlined that changes need to be made and the 232 actions did not have the desired effect. Not changing the tariffs would prompt the administration to align itself close to the Trump administration and may alienate allies and other major economies.

China Alumina Output vs Total Bauxite Imports & Australia Bauxite Imports

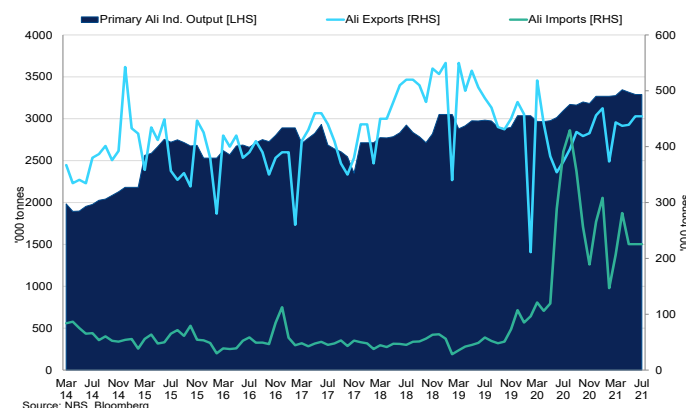
Bauxite imports are high as availability is good, and alumina output is still high.



Demand for aluminium remains robust, order books have been filling across major consuming regions as construction, manufacturing, and industry restarts and grows. Food and beverage packaging have been strong. The European economy has been re-opening and demand for materials strengthening, lead times have increased for extrusions and FRPs with some producers moving into Q1 2022, backlogs of orders will only get worse. This will be a significant headwind to business confidence in the medium to longer term but in aluminium consumption terms, this is positive. We also expect large amounts of restocking at year end which will keep consumption robust in the medium to long term. Input costs have been rising as producer price inflation indices show, the billet market is tight and higher premiums will be passed on. Global PMIs and construction data is showing signs of maintaining strong growth. US and EU manufacturing PMIs are above 60 while China and the grouped emerging market index are softening towards 50. This shows the trend within the global economy. Fears of China slowing are getting louder however, we expect this to be the transition away from the COVID-19 stimulus led economy towards more normal levels of liquidity. The situation will be watched closely as consumption remains reliant on China.

Primary Aluminium Output vs Exports of Unwrought & Aluminium Products

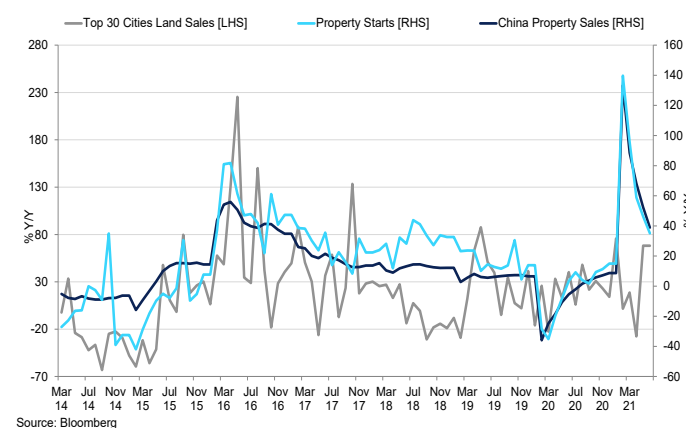
Production in China is still high despite shutdowns and emission restrictions.



The microeconomic factors continue to suggest higher consumer prices as manufacturers increase prices to cover raw material and labour costs. With employment schemes coming to an end, workers will be more incentivised to enter the workplace. Housing starts in the US are still improving but permits have started to fall due to higher cost, but lumber prices have fallen, and this may kick start permits once again. US demand of FRPs grew 13.7% through to the end of May on a year-on-year basis, we expect year-on-year growth to remain high in the near term as consumption levels for the US sustain their rally. The auto sector across the globe continues to struggle because of the shortage in chips and semiconductors. There is no short-term fix for this, as mentioned in our tin section. Year-on-year production is higher but still remain below pre-pandemic levels, the bottlenecks are curtailing aluminium demand, and this will continue in the near term. Once these clear, we expect a swift recovery in consumption.

Chinese Property Market

Year-on-year growth is falling for the Chinese property market, but construction elsewhere is also expansionary.



Copper

LME Copper 3MO (\$)



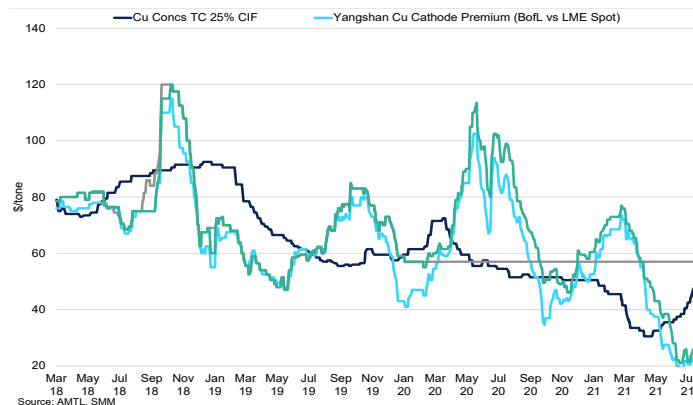
Summary

We saw a reduction in the net long from the investment funds as traders worried about inflation remaining high in the medium term. We do expect high inflation but do believe it will be transitional. The longer-term fragility of the global economy and prospect of higher taxes, tighter monetary policy and lower stimulus levels will dampen inflation in the longer run. Copper supply is recovering, and smelter maintenance helped balance the concentrate market. We are seeing more blister and scrap usage in China, and premiums are improving but remain low. The dollar is stabilising which will present headwinds to copper but the longer-term trend to upside is boosted by the green economy. We expect price action to be muted in the next 6 weeks before improving in Q4 as demand returns, assuming the delta variant is controlled and the Fed don't become more hawkish.

Q1 Recap: Copper prices started Q2 on the front foot, gaining over \$1,500/t in a month, prices gained 22% to reach \$10,747.50/t but failed to maintain this momentum as inflation fears took centre stage and the Fed stated that inflation may remain overshoot their target for longer than expected. The dollar started to stabilise, and investors believed the Fed would bring forward their timeline for raising rates. This was not the case, but Fed officials are talking of tapering asset purchases in the coming months. China's SRB announced that they will release 20,000 tonnes of copper cathodes to semis manufacturers in early July. TCs have firmed in Q2 as the market the supply improves, TCs closed Q2 at \$41.50/t, up from \$30.50/t. Manufacturing PMIs are expansionary but US and Europe are going from strength to strength, whereas China and the grouped emerging market PMIs are moderating.

Cu TCs 25% CIF vs Yangshan Premiums

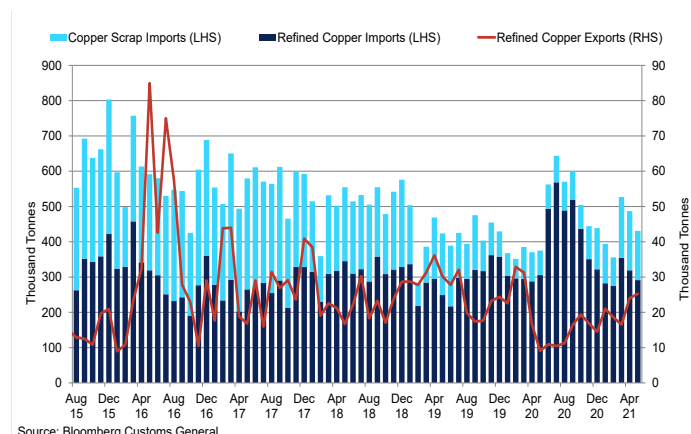
Premiums are starting to improve, showing market efficiency as flat price sold off.



Outlook: TCs in China increased in Q2 as maintenance at smelters prompted some of the tightness in the concentrate market to ease. Smelter maintenance is on the decline now and output will start to recover in the coming months, however we do not expect the concentrate market to tighten to the same extent as earlier in the year. Supply is improving and will continue to do so for the remainder of 2021, due to new projects and mines increasing production following COVID shutdowns. The new variants and low vaccination rates at origin will provide headwinds to production. We have already seen problems in South Africa for other metals, however, it does seem that the global shift will be to live with the virus, but this is only possible once a core percentage of the population is vaccinated. As a result, we expect TCs to trend higher. Demand from smelters in the near term could prompt TCs to consolidate but we expect them to push to the high 40s as the balance of power shifts back to the smelters. June was a quiet month for buying from smelters due to maintenance, but we are seeing more orders for July and August. Some deals for Q3 have been done at \$55/t, higher costs for smelters may cause them to cut back on production. Antofagasta reached an agreement for a long-term contract of copper concentrate with Chinese smelters took four rounds of negotiation. Codelco have reported that output at their mines were down 0.5% y/y in April to 132,700 with output at Escondida declining by 16.5% y/y to 85,700, but Collahuasi output increased to 57,000 in April. In May we saw Codelco's production increase by 5.8% y/y to 152,500 tonnes. Collahuasi output was down 3.7% to 57,900 tonnes, however production at Escondida reached 84,800 tonnes up 9.2%. While the year-on-year figures are volatile, the underlying output is becoming more constant this will prompt the concentrate market to loosen, but we expect restocking as well in H2 2021. Production in Peru has also improved, reaching 181,000 tonnes in June, we continue to watch vaccination rates in Peru closely for any indication of lower mine output in 2H 2021.

China Scrap & Refined Copper Imports & Exports

Refined exports are rising showing strengthening RoW demand.



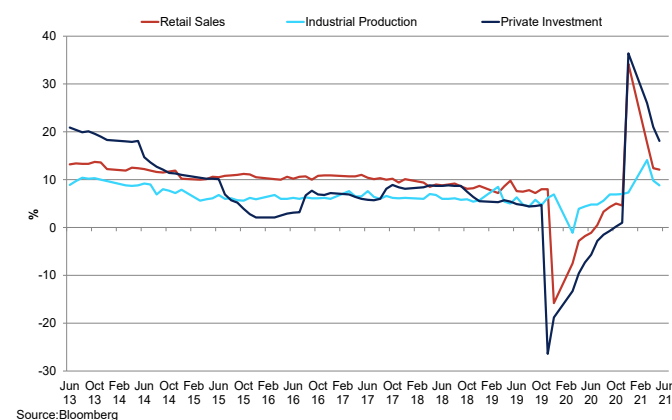
However, according to China customs data imports of ore and concentrate have declined to 1,671,000 tonnes in June, this was down from 1.9m tonnes in May. This is significantly lower than March shipments which surpassed 2m tonnes, this can partly be attributed to maintenance at smelters and a move to other materials instead concentrate. Wood Mackenzie reported more smelters are looking at blister and scrap, this could cap imports of concentrate in the longer run. Smelter maintenance in Q3 will be less prominent and therefore we expect demand for scrap, concentrate, and blister. Blister imports declined in May by 6.6% to 74,000 tonnes but this was up 22.7% y/y, and imports for the first five months of 2021 are up 22.5% y/y to 420,000 tonnes. RCs for imported blister have edged higher to a range of \$180-\$200/t, demand for blister from smelters is expected to improve. Refined copper production was lower in May due to smelter maintenance at 866,000 tonnes, down from 901,000 tonnes in June. As smelters are coming back online, we expect to see more refined copper produced in China. Copper refined products output was 1.838m tonnes in May, again we could see this fall in June before rising for Q3. Imports of refined copper declined in May to 291,378 tonnes, down from 319,135 tonnes in April. Imports of unwrought copper and copper products have also weakened somewhat in recent months, to 428,000 tonnes in June, down from 445,725 tonnes in May. Seasonality suggests imports usually decline for this period and then start to rise for Q4 and we expect this year to be no different.

Export data suggests stronger demand for copper products with shipments reaching 79,040 tonnes in May, refined exports have also been rising and stood at 25,255 tonnes in May. This is further evidence that the rest of the world economy has been waking up and we expect shipments to increase to pre-pandemic levels in the coming months. Chinese premiums are rising, suggesting strengthening demand from the physical market, our last report we saw the physical market was quiet due to not affording the high prices. This caused premiums to fall, however now prices are weaker we are seeing more physical flow and premiums are starting to rise. The copper cathode premium stood at \$34/t, as of July 15th, up from \$22/t in June. The Yangshan copper warehouse warrant premium showed signs of recovery in July, reaching \$35.5/t on July 16th, the premium bottomed out at \$21/t in June, Shanghai bill of lading premium stands at \$27/t. Consumption of copper is low in the summer months but we expect demand to improve in Q4 2021 but we expect premiums to increase as buyers make the most of the dip in

prices. .

China Macro Indicators

Year-on-year growth figures are falling, and we expect policy in China to remain accommodative.

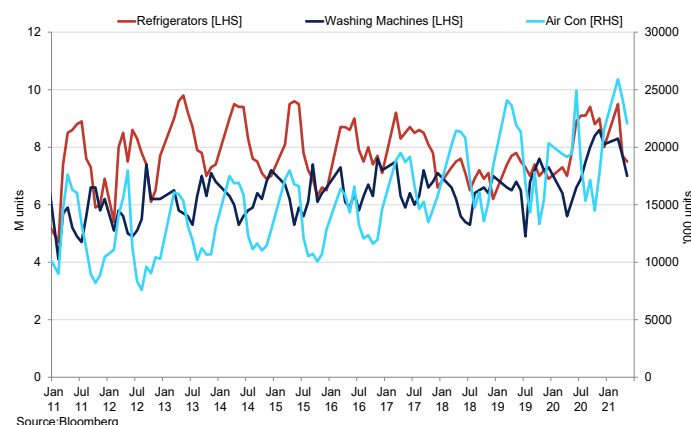


All-system financing data, private investment, industrial production and retail sales are all moderating on a year-on-year basis which is expected due to the low base of last year. We expect growth figures to normalise but this does not necessarily mean weaker demand. China's PBOC have cut the RRR ratio, and we look at the liquidity levels in the market. Household appliances such as washing machines, air conditioners, and refrigerator sales are being driven by Europe and the U.S., refrigerator sales are up 35.9% y/y for the 1st 5-months of 2021. High material costs and freight rates will start to drag on demand for household goods in the medium term, especially as employment schemes start to taper unemployment will rise and higher costs will be compounded. The risks to the global recovery are prominent and the delta variant has caused the Asian economy to stutter, however vaccination rates are high in Europe and the US which is helping to protect the population and the economy. This presents a downside risk to the demand story in the near term but could prolong stimulus, supporting demand in the longer run.

Nervousness surrounding inflation and the Fed's monetary policy has prompted some caution in the market and funds liquidated their positions. This was a mix of going into the summer months and the dollar starting to stabilise. Q4 will see a resumption for copper demand as we move into the restocking period ahead of year end. .

Household Appliances

Improved sales in Europe and the US have boosted output, but micro factors could cause sales to slow in Q4.



Lead

LME Lead 3MO (\$)



Summary

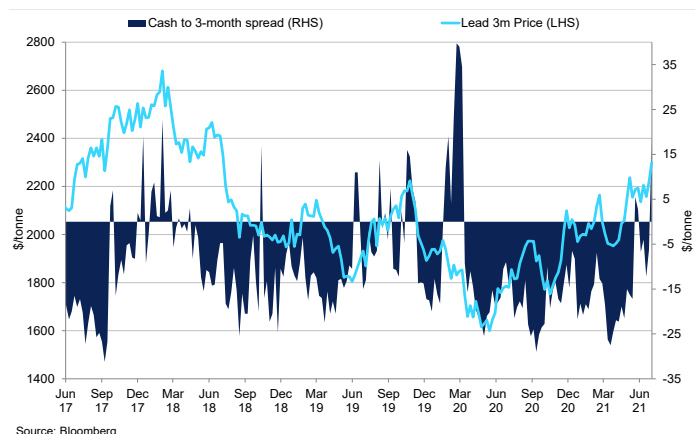
Lead has found greater strength throughout the quarter than other metals in the complex, driven by the rumours of a force majeure declaration at a major primary refinery. Those rumours did not materialise, however, despite a stronger dollar along with the Fed's hawkish shift, lead managed to resist negative pressures, reaching July 2018 levels. The concentrate market remains tight, highlighted by low TCs. This, coupled with falling LME stocks, should help continue to support prices on the downside. Chip shortages weighed on US battery production, however, with the Biden administration's plan to address shortages of critical products, we should see these pressures ease later in the year.

Q1 Recap: Lead has been surging higher, despite recent softness seen in other base metals, closing the quarter at \$2,330/t, the level last seen in July 2018, when the US introduced a round of tariffs on Chinese commodities. In June, lead was the best price-performer; however, this is more likely driven by relative value deterioration seen in other metals than lead's strength. Indeed, Q2 started reasonably positively for base metals. Sentiment turned a little more bullish from further signs of economic improvement from manufacturing performance in China, the Eurozone and the US, indicating expansion. There was a small setback in June when comments from the US treasury pointed to a more hawkish monetary policy outlook plus a strengthening dollar pushed down on base metal prices. Lead prices, however, managed to resist negative pressure from the news and continued to gain ground into July, supported by an outbreak of rumours regarding a potential force majeure declaration at a major primary refinery.

Lead weathered some moderate storms better than other base metals, such as the Chinese state reversing stock-dumping and new Russia export taxes. Even the stronger dollar failed to bring lead prices down. Chinese authorities moved to dampen bullish sentiment and reduce prices by building the expectation that the State Reserves Bureau (SRB) would dump copper, aluminium and zinc stocks onto the market. Confirmation of this weighed on the whole base metals complex and pulled all prices lower as a pack. This effect was less marked for lead and it soon emerged as the best-performing base metal this past quarter.

Lead Spot vs Cash to 3-month Spread

Prices continued to gain ground throughout the quarter, pushing the spread into contango.



Outlook: LME refined lead stocks continued their steady downward trend, which first started in mid-March. Since then, stocks have reached the lowest level of 68.1kt, last seen in July 2020. The total removed during the quarter equated to 38.6kt - a 32% reduction. Cancelled warrants increased significantly in June, up 10% to 26.3kt - around 32% of the total LME stocks. The reason behind this is the quality of material left behind is below the one required by battery makers. Conversely, SHFE stocks in China have been going in the opposite direction. With soft demand, adequately high prices and plentiful scrap supply, production has exceeded consumption. At 118.6kt, these have now reached an eight-year high. Only in the last week of June stocks have stabilised as several primary smelters, returning after maintenance shutdowns, aimed prices competitively at battery makers to trigger buying.

China Lead Off-exchange Inventory

Shadow inventory picked up sharply in recent months, in line with the sharp rise in SHFE stocks.



In the meantime, the concentrate market stays tight, emphasised by declining TCs – now down to \$25-40/t from \$40-55/t a month before. This, coupled with falling LME stock levels, helped support lead prices. In 2021, lead TCs have collapsed, as refiners struggled to secure concentrate supply as miners' recovery lagged the industrial recovery. Indeed, global mining output reached 4,284kt in 2020. Last year, smelter's TCs surged to a 10yr high of \$180/t based on the expectations of a surge in mine production, that unfortunately failed to materialise due to COVID-19 lockdown measures being imposed on miners in Peru and Mexico. As a result, this year's benchmark of contract terms has almost halved, in line with zinc. Despite low TCs, unlike copper smelters in China, lead smelters have not resorted to plant closures yet. They are hoping concentrate supply will improve as vaccination rates increase.

The Chinese lead market is awaiting the outcomes from tight concentrate supply, as consumers are unwilling to buy more than dictated by immediate demand, causing refined lead stocks continue to swell. Capacity utilisation at battery plants had been falling for most of June. High lead prices should be able to incentivise mine producers to restart production. With many northern Chinese mines only starting to emerge from winter hibernation, local smelters are evidently still scrambling to secure top-up material.

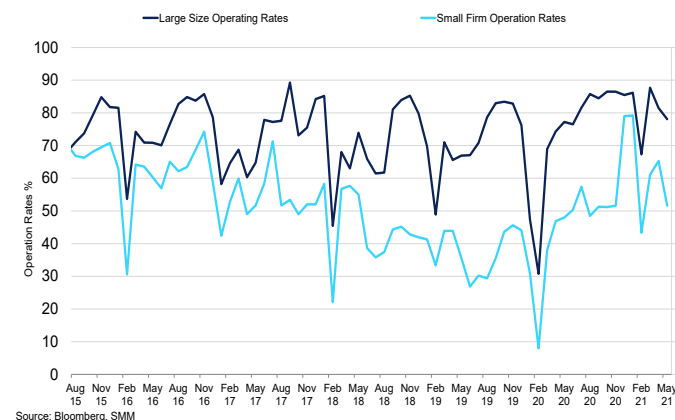
We believe that more lead supply will come online as the number of vaccinations increase and supply chains stabilise. Improved mine supply should come this year, as it is forecast to reach 4,423kt, and with it, treatment charges should rise as concentrate availability improves. However, in the medium term, limited mine supply will continue to support lead prices. According to WoodMac, global refined production rose by 12,579kt in 2020, and estimates a supply of 13,002kt in 2021.

Small and large size companies have experienced lower operating rates in recent months, as they remained in the off-peak season, and companies schedule the production based on the sales. The consumption usually shifts from the off-peak season to the peak season in July, but the lead-acid battery companies have not yet seen the sign of consumption rebound. This, coupled with the rising raw material prices, made companies cautious in production.

ILZSD reported a supply-demand surplus of 172kt in 2020 and expects another year of a surplus of 96kt, which will count as the third consecutive year of oversupply, however, much narrower than in previous years. In 2020, lead production, both mined and refined demand fell much harder, unsurprisingly given the metal's exposure to the automotive sector. China's net imports of refined lead have been falling, with 2020 level at 17,000t, down from 102,000t in 2018.

Large and Small Firm Operating Rates

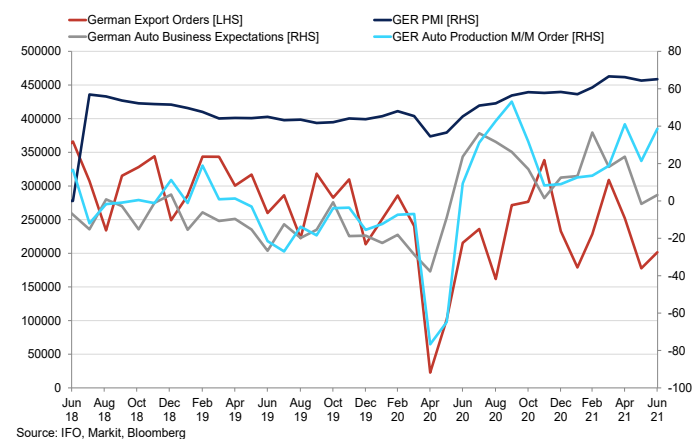
Operating rates fell in recent months, as they remained in the off-peak season.



The US has been hit with severe supply shortages, as supply-chain bottlenecks fuelled shortages across the globe, struggling to chase the demand of the recovering economy. A lack of semiconductor chips in particular, is slowing activity in the automotive and tech sectors. To combat this issue, the Biden administration has put out a plan of action to heal pandemic-affected supply chains and address shortages of critical products. President Biden announced that he would form a task force to address shortages of semiconductors, pharmaceuticals, critical minerals and batteries. They will be in charge of tracking supply and demand disruptions as they emerge and share information between the government and private entities to curb risks. The US will also look to shift its supply-chain priorities away from competitors and toward global allies. WoodMac expects demand for lead replacement car batteries to rise by 5.9% from 2020 to 6.5m tonnes in 2021, back to the pre-pandemic levels.

Germany Auto Market and Manufacturing PMI

Germany's economic performance has been improving thanks to reopening restrictions across the bloc.



Likewise, vehicle production has been falling in China, partly due to the enduring semiconductor shortage. May's combined production of passenger and commercial vehicles output was down 8.7% m/m and 6.7% y/y respectively. Lower-priced cars did see a small month-on-month increase but a small year-on-year fall (+3.9% and -2.0%, respectively). Europe, however, has seen a rebound in car sales. In Germany, the bloc's biggest economy, auto production and export orders recovered in recent months, supported by the lifting of the lockdown restrictions. Likewise, German PMI is gaining ground but at a slower pace than the bloc's average, at 64.1 in June, marginally lower from 66.6 seen in March this year.

Nickel

LME Nickel 3MO (\$)



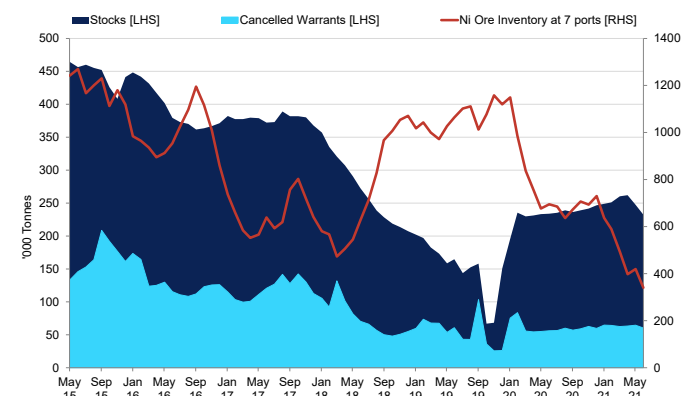
Summary

Nickel premiums and freight rates from the Philippines to China have increased since the beginning of June as demand for this material rises. We expect imports from the Philippines to remain strong, which will alleviate some of the tightness in the market, but nickel ore stocks in China ports at multi-year lows. Stainless capacity in Indonesia is expected to continue to rise despite anti-dumping duties their product. Chinese NPI, refined nickel and nickel sulphate will increase in the coming months, as operating rates increase due to mills and smelters recovering from maintenance. Stainless mills are looking at carbon steel which could provide headwinds to nickel, but we expect prices to trend higher in Q3.

Q1 Recap: Nickel prices gained ground in Q2 2021, however performance failed to reach the top-end of our upside target of \$20,029/t. Prices gained 12.6% in the three months to the end of June. The fundamentals remain supportive for prices, US premiums are on the rise due to the Vale Sudbury strike and customers are seeking alternative suppliers. As a result of the strong fundamentals, nickel prices have remained supported despite the dollar stability and most of the other base metals starting struggle amidst the higher inflation outlook. LME and SHFE stocks have started to weaken in recent weeks which has helped to support LME prices. The EV rhetoric is going from strength to strength and we expect this to continue in the near term, despite the chip and semiconductor shortage.

LME Nickel Inventory s vs Ni Ore Inventory at 7 major Ports China

Ni ore inventory is at multi-year lows but imports from the Philippines are improving.



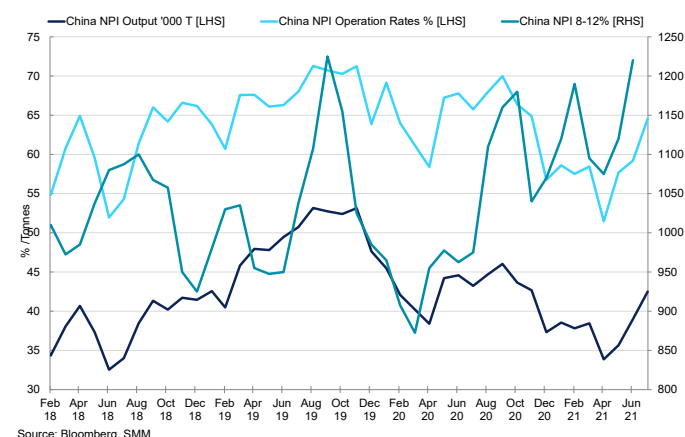
Outlook: According to Wood Mackenzie, refined nickel production will increase by 8.3% in 2021 to 2.78m tonnes. This growth will continue in 2022 and 2023 at 8.3% and 5.6%, respectively. Output in Indonesia continues to rise as new plants are completed, the PT Smelter Nickel finished building a HPAL plant but has not started commercial production. This plant will use step temperature acid leach which has lower capital requirements and waste production than HPAL. Capacity gains in Indonesia have been profound and will continue to be so in the near term, however the Ministry of Energy and Mineral Resources have indicated that they may restrict smelting capacity for new NPI and Nickel Sulphate. They want to promote production of higher value products, such as stainless steel and nickel sulphate. This would increase the royalty revenues for the government, it is worth noting that there is purely a discussion at this time and will not impact the current increase in capacity pipeline. The Energy and Mineral Resources Ministry in Indonesia have also indicated that they will not approve new coal-fired power plants, this does not include plants that are already under construction which is a large considerable amount of capacity. Indonesia are looking to increase their renewable energy production, although under the current definition biomass and gasified coal are regarded as renewable energy.

NPI production in Indonesia is now greater than China, and year-on-year is expected to be up by 30%. COVID-19 cases are rising in Indonesia, the increase in capacity could be capped by further lockdowns and lack of workers. The ore export ban from Indonesia continues to restrict nickel availability in China. Investment into Indonesia from China has been strong; however, this is a longer-term trend and will not help Chinese producers increase production in 2021. Demand from China and high prices will boost profitability for nickel producers such as Norilsk Nickel, Vale, Glencore and Anglo American. China's nickel imports increased in May to 3.68m tonnes, of which 3.506m tonnes were from the Philippines. The Philippines are increasing exports to China which should help to alleviate some of the tightness in Q3, but Q1 output was low due to the

monsoon season. The Filipino President Duterte has lifted a ban on new mines to increase revenue, this helps to reduce the stress of the long-term nickel supply outlook but will have no impact on supply in the near term.

Chinese NPI Output Vs China 8-12% NPI Price

Operating rates, and NPI output have improved and will continue in Q3.

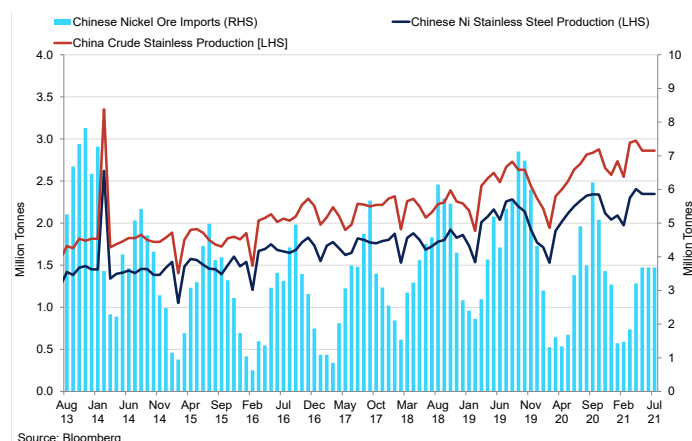


Operation rates at Chinese NPI producers has started to increase, this can be attributed to the increase in ore supply in recent months from the Philippines. As of July, rates reached 64.5%, up from 51.48% in April. With imports expected to improve in the coming months we expect operation rates to increase as new production lines start, and demand is robust. This could cause Chinese NPI production to edge higher back towards 50,000 tonnes, a vast improvement from output in April when production was 33,860 tonnes. July output expected to reach 42,500 tonnes in nickel content, up 9.27% m/m in nickel content, with high-grade NPI output is expected to reach 34,300 tonnes in July due to more capacity, and approximately 8,000 tonnes of nickel content.

The maximum output we saw last year was in August at 46,000 tonnes and this will be a target for producers. However, nickel ore inventories at the top 7 ports in the UK are hovering around multi-year lows at 3.574mwm as of 9 July, down from 11.49mwm at the beginning of 2020. Refined nickel output in China improved as well in June by 1.833m tonnes, up 14.75%, to 14.3m tonnes in June. Operating rates stood at 65%, Gansu smelter restarted after maintenance and according to SMM increased their production plan. Jilin smelter hit full capacity in June which helped to improve output, but according to SMM production is expected to decline slightly as the Gansu smelter reduces production slightly.

Chinese Nickel Ore Imports vs Stainless Steel Production

Imports from Philippines accounted for all but 100,000 tonnes of China's imports in May.

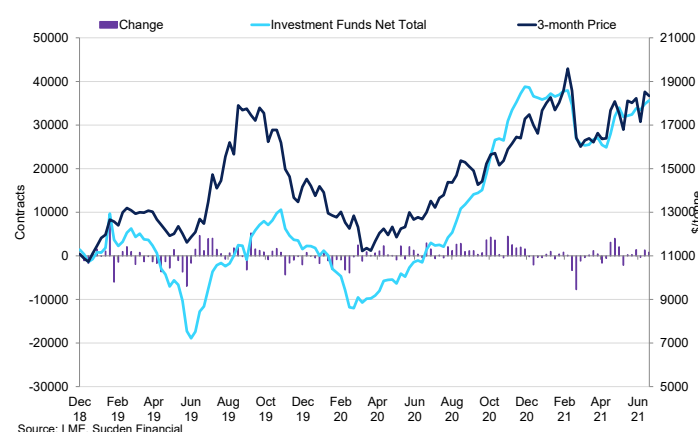


From a demand perspective stainless steel production was 2.85m tonnes in June, down 1.86% m/m. Production was up 11.62% in June, the decline on the month was attributed to plants switching away from 200 and 400 series steel. 200 series steel declined by 820,000 tonnes and 400 series declined by 506,400 tonnes, with 300 series up to a record high of 1.52m tonnes. We expect production to increase in July, as plants recover from maintenance, 300 series is expected to rise 120,000 tonnes, with 200 series at 105,000 tonnes, according to SMM. Some capacity in China has switched to carbon steel due to a higher profitability. Stainless demand is set to rise this year, but with new capacity being added even though anti-dumping duties have been placed on Indonesian products in recent years. This is exemplified by members of the EU adopting the European Commission's proposal to extend safeguards for 3 years. As a result, HRC and CRC stainless products from China, Taiwan and Indonesia are penalised. We have seen an increase in imports into Europe from Taiwan, but a decline from China in recent months. Total imports have started to increase back towards Q3 2020 levels of 300,000 tonnes but are low on a historical level. This is boosting European output but as with all other markets, supply-chain constraints and strong end-user demand have prompted lead times to increase.

Production of nickel sulphate for batteries has been increasing, up 10.5% in June to 23,600 tonnes of metal content, output was up 139.23% y/y. Battery grade nickel sulphate was 100,100 tonnes in June, according to SMM the amount of nickel sulphate produced from refined nickel accounted for 47% total output. We could see more nickel briquette capacity in July, and we expect to see nickel sulphate production increase in July. We are seeing more investment in battery capacity especially in Europe as new gigafactories are brought online. However, there is an issue for Europe that these gigafactories are still vulnerable to the global supply chains. We need to see more refined capacity built in the Europe, instead of all products being refined in China and then shipped to gigafactories in Europe.

Investment Funds Total vs Change vs 3-month Price

Investment funds continue to hold a large net long for nickel.



The investment funds have increased their exposure with the z-score standing at 1.711, above the 4-week average of 1.601. The maximum z-score is 1.90 and the recent position shows that funds favour the upside for nickel. The correlation between the change in LME prices and the weekly change in the funds position stands at 0.716, this is statistically significant. The funds hold 35,635 contracts as of July 9th, this is the second week in a row that the funds have increased their exposure in recent weeks. The commercial undertaking firms have increased their exposure to 35,639 contracts and this suggests an increase in hedging activities. The recent high for commercial undertaking firms' net position is 38,728 contracts in December 2020. the global sales, Europe represented 42%, whereas the US was significantly behind the curve at 2.4%.

Tin

LME Tin 3MO (\$)



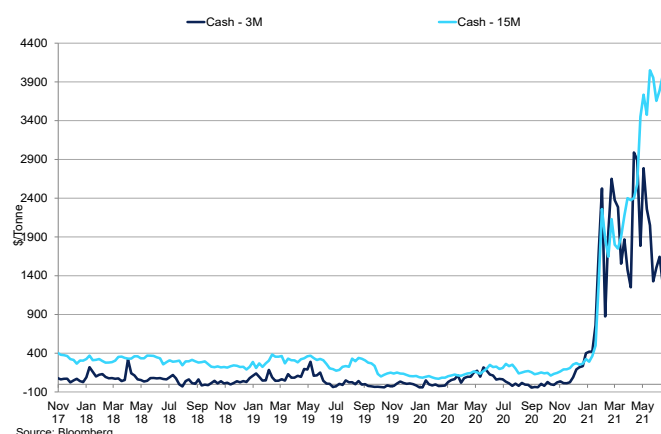
Summary

Solder demand has been robust so far this year. The order book suggests this will continue as semiconductor sales are elevated and will grow significantly for the rest of 2021. The global supply chain of semiconductors is too concentrated in Asia and production capacity needs are inefficient and need updating. Fundamental tightness in the tin market will persist, keeping prices elevated. The cash to 3-month spread is in a steep backwardation but has weakened in recent weeks but the cash to 15-month spread has tightened further helping to confirm the long-term tightness. China's exports of refined tin have increased to alleviate ex-China tightness. We need to see more from the supply side, and higher prices will incentivise this. We expect tin prices to trend higher in Q3 and any dips to be well bid.

Q1 Recap: Tin carried its bullish momentum into Q2 2021, as prices gained 23.93% and closed \$31,255/t. SHFE gained 22.9% and closed at RMB214,000/t, and prices rallied further since the start of Q3 despite bullish sentiment in base metals softening. Inflationary pressure across the global economy prompted central banks to discuss whether they should taper their asset purchases. This has triggered the US dollar to stabilise, providing headwinds to the commodities spectrum. LME inventories have started to fall, after rising from 755 tonnes on 1 June to 2,240 tonnes on 23 June, the decline in SHFE stocks is more pronounced with inventories falling 57.8% in Q2 to 3,418 tonnes.

Calendar Spreads

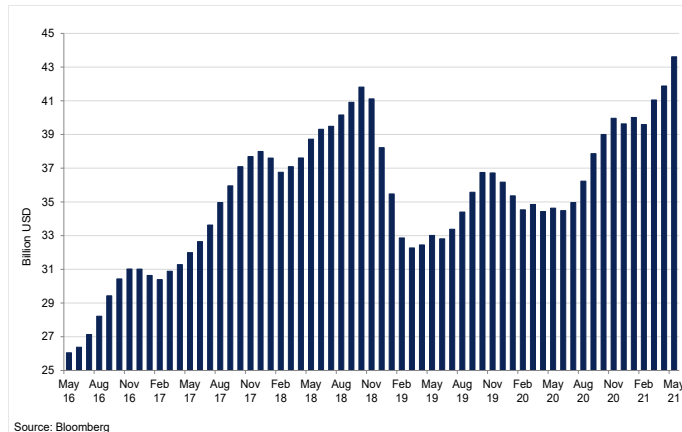
Cash to 3-month spreads have weakened but longer dated spreads are still tightening.



Outlook: Global sales of semiconductors have unsurprisingly continued in an upward trajectory in May and June. Month on month sales figures for April saw sales grow 1.9%, and 21.7% y/y with a total of \$41bn. For May data was even stronger up 4.1% m/m and 26.2% y/y to \$43.6bn. The market shipped more units on a moving 3-month basis than any other period in its history, this outlines robust demand for tin which is used for solder within these products. Year-on-year sales increased in Europe by 31.2%, 30.9% in Asia Pacific, 26.1% in China, 20.9%, and 20.4% in Americas and Japan respectively. However, the Americas and China showed the strongest month-on-month sales in May at 5.9% and 5.4%, respectively. Monthly sales have recovered back to 2019 levels before the fall out with the US and China, we expect further growth in H2 2021 with the SIA indication that global sales will reach \$527.2bn in 2021, up 19.7% y/y, and a further 8.8% in 2022. The US senate passed legislation called the U.S. Innovation and Competition Act (USICA), this includes \$52bn to fund semiconductor manufacturing. The White House also released a report out strengthening the countries supply-chains of critical products, 75% of the globe's semiconductors come from China or East Asia. The fire in Japan this year was an example of the threat to the global supply chain, this is compounded by the fact that 92% of the most advanced capacity is in Taiwan with 8% in South Korea. While more investment is needed in the semiconductor industry, this will take time but there is a considerable amount of old inefficient capacity around the globe. The current shortage has no quick fix and we expect demand for solder to be at capacity for the remainder of 2021, hindering other sectors such as autos, consumer electronics and computing. As of Q1 2021, TSM have a 56% share of the semiconductor industry and Apple was 25.4% of their revenue.

Global Semiconductor Sales

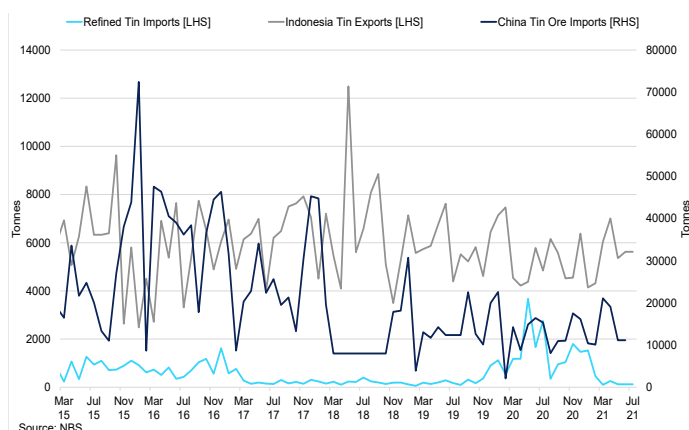
Sales continue to go from strength to strength following the pandemic.



The tin market continues to be tight and there is little chance of this changing in the near term. The steep backwardations exemplify the tightness in the market, cash to 3-month spreads are still around \$1,200/t, however the cash to 15-month spread is steeper and stood at \$3,900/t back as of June 2021. This outlines the longer-term deficits, and as the cash-3-month spread has weakened, the cash to 15-month spread has tightened further, physical premiums are at record highs. We do expect much change in the fundamental in the medium-term, the fundamentals outside of China are a lot tighter but exports from China are helping to alleviate some tightness. Global inventories have been depleted in the last 18-months, exchange stocks are low and SHFE inventories are stand at 3,258 tonnes, down from 8,853 in March. LME inventories have edged higher but remain historically low. The order books for tin related products are strong, even though Q3 is traditionally quiet but as we move into Q4 and employment schemes are cut, and unemployment rises we could see consumer demand for electronics become more subdued. However, the supply shortage is profound and tin prices are unlikely to perform a complete reversal. Sentiment in the metals market has been weaker since China said they would reduce inventories and the Fed have highlighted inflation could remain higher than they first previously expected. Tin was not impacted by this, exemplifying bullish sentiment in the market.

China Tin Imports vs Indonesia Exports vs China ore imports

Indonesia exports are improving but we need to see more from Myanmar.



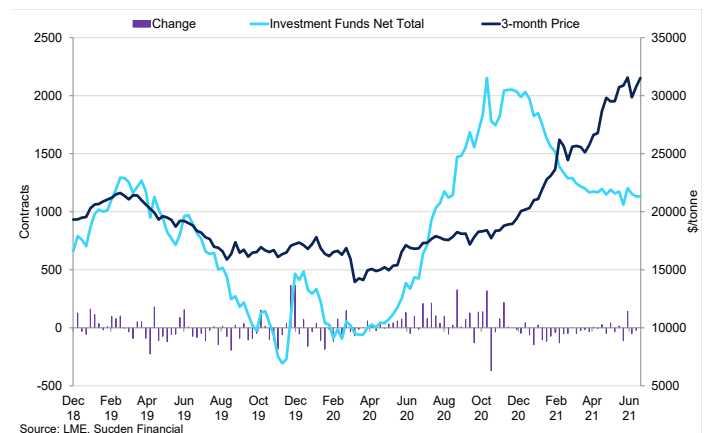
China's refined tin imports are negligible, Indonesian exports are high and stand at 5,622 tonnes in July, but this was down from April's figure of 7,007 tonnes. However, the trend is still on the up. Tin ore imports have also fallen since March when they reached 21,115 tonnes and now stand at 11,159 tonnes in June. This is attributed to the decline in arrivals for Myanmar, the grade of imports from Myanmar averages around 25%, as COVID-19 restrictions reduce workers available for mining and processing and therefore reduce output. The reduction in imports from

Myanmar, is not conducive to the fundamental picture, but because Yunnan smelters are traditionally the recipients of this material and the majority of these smelters were offline in May due to power issues, there was little impact. However, they are now back online and if Myanmar shipments remain low in the medium term the market will become tighter. Yunnan tin recently accepted material from Renison mine in Australia and the reduction in Myanmar shipments. Their main smelter is currently down for maintenance until August 4th, the combination of lower ore imports and smelter maintenance will keep the refined market tight in the immediate term, and the call on inventory will remain profound. It is not inconceivable that companies have stockpiled tin in preparation for even lower inventories and higher prices.

Staying on the theme of supply, Alphamin Resources which according to the ITA produces 4% of the world's tin-in-concentrate, missed their production guidance by 11% as they produced 2,412 tonnes in Q2 2021. Company reports indicate that there was a lower-than-expected feed grade, with mining grades falling to 3.2% from 3.8%. They are preparing to increase waste management and development; the material can be blended with higher grade ore to prevent volatile grades. According to the ITA, output has been constant since the end of June, and the tin contained has been increased by 5% in these first weeks. Drilling at Mpama started, 29 holes have been announced and the others will be announced in two batches. We expect Alphamin's ore content to increase in the coming months, this will marginally help the industry.

Investment Funds Total vs Change vs 3-month Price

Funds reduce their long exposure to tin despite the trend remaining intact.



The commitment of traders' funds net position has held around 1,130 contracts long. We have seen a consistent decline in the net position in recent weeks, with the funds long position standing at 1,231 contracts as of July 2nd. In July, there is one large position which is 20-29% and in September there is one position in the 30-39% banding. The commercial positioning has also declined significantly in recent months, the net commercial undertakings position stands at -1,884 contracts having fallen from -3,158 contracts at the end of April. We expect prices will remain strong in the near term and this could see producers increase their short position. The current Z-score for the investment funds position is 0.5773 and this is back below the upper quartile range, this is a far cry from the maximum, but on the same level as the 4-week average. Tin has bucked the trend in base metals after the Fed highlighted that they are concerned about inflation, and China released state inventories of metals. This is attributed to the fundamental tightness in the tin market, which will continue keeping prices elevated.

Zinc

LME Zinc 3MO (\$)



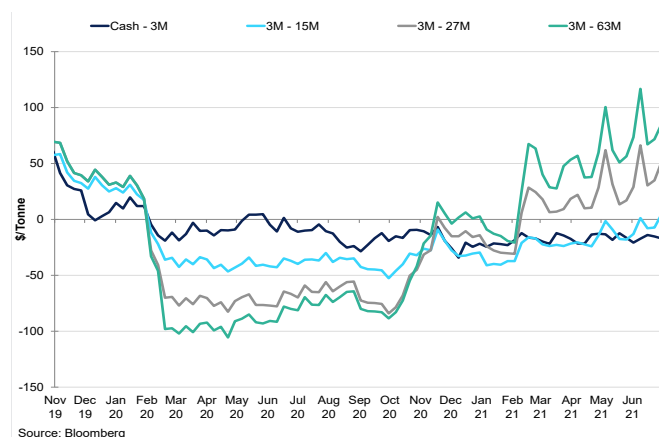
Summary

Investment funds net length is high with the LME report showing 49,059 contracts as of July 9th. The fundamental picture, while still tight due to low refined and concentrate inventories in China, is starting to improve. This could present some downward pressure to prices in Q4 2021 and into 2022, especially with demand growth expected to moderate as stimulus is tapered and the prospect of higher tax in the longer run. TCs are starting to rise, outlining the improving concentrate availability, and operating rates are also elevated. Longer dated zinc prices are lower than cash but we still see tightness in the zinc market for Q3, even if it is typically a weaker consumption period.

Q1 Recap: Zinc prices gained ground in Q2, up 6.14% to close at \$2,974.5/t. Prices failed above \$3,108.50/t, when they were up 10.9% to the middle of May. Vaccination rates in major economies increased significantly as we moved through Q2, however emerging market countries are behind the curve, this is due to supply chain and logistic issues and citizens not wanting the vaccine, this increases the probability of new variants. Zinc prices are still high, despite China's State Reserve Bureau saying they will release 30,000 tonnes of zinc stocks in the coming months and the dollar starting to stabilise as central banks become more worried about inflation. China's shanghai zinc bill of lading premium is \$125/t as of 15 July.

Zinc Calendar Spreads

Longer dated spreads are backwardated but near term near-term dates remain in contango.

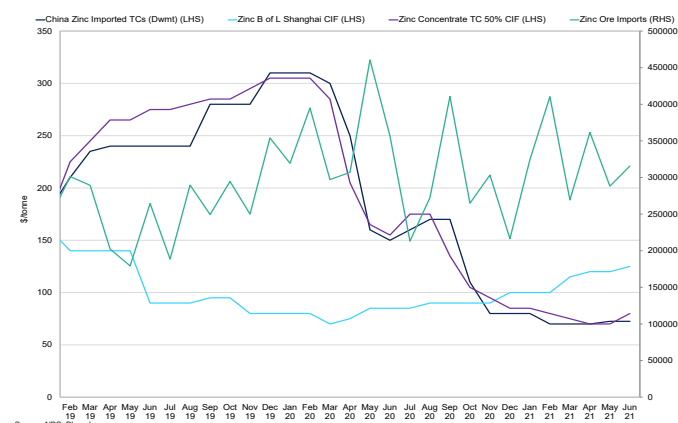


Outlook: According to SMM, zinc output has maintained strong levels, with May and April output in China at 527,000 tonnes and 544,000 tonnes, respectively, up 1.2% y/y and 3.4% y/y respectively. In June, refined output was marginally lower on a month-on-month basis at 508,000 tonnes, bringing output for H1 2021 to 3.01m tonnes, up 4.51% y/y, according to SMM. Zinc ore imports are rising and reached 315,675 tonnes gross weight, which is around 150,000 tonnes of zinc. Australia and South Africa contributed the most in May, with Australia at 51,000 tonnes. Wood Mackenzie are forecasting imports into China this year will be 1,840,000 tonnes, marginally below the record we saw last year which was 1,865,000 tonnes. Imports of concentrate into China were up 1.65mwt for the first five months of 2021, down 9.4% y/y. Treatment charges in China have started to improve representing the increase in concentrate availability, Lianyungang stocks have started to increase and stood at 110,000 tonnes as of 13 July. Domestic production of zinc concentrate is up 15.1% for January to April, an increase of 122,000 tonnes. Domestic treatment charges stand at CNY4,150/t, up CNY150/t to 1 July. Imported TCs are also rising and stood at \$80/t as of 1 July, with the imported zinc concentrate TC 50% CIF slightly higher at \$83/t as of 13 July. Smelter profitability is still low, but we expect TCs to trend higher in the H2 2021 improving output and profitability. June was the fourth straight month imported TCs have been more profitable than domestic TCs.

Operating rates for China concentrate producers is 68.7% across all producers, with large producers running at 73.4%, but medium and small producers running at 26.4% and 13.7%. This represents low profitability, but with refined operating rates higher at 81.3% and the 1-month forward rate suggests operating rates will increase in to 84.9%. This helps to confirm the sentiment of increasing profitability, concentrate availability and in turn higher refined production. As a result, we expect Chinese production to reach a similar level this year. Mine supply is set to improve this year and overtake 2019 levels, with Wood Mackenzie forecasting mine production at 13,141m tonnes.

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

TCs are starting to rally as availability improves, this will continue.



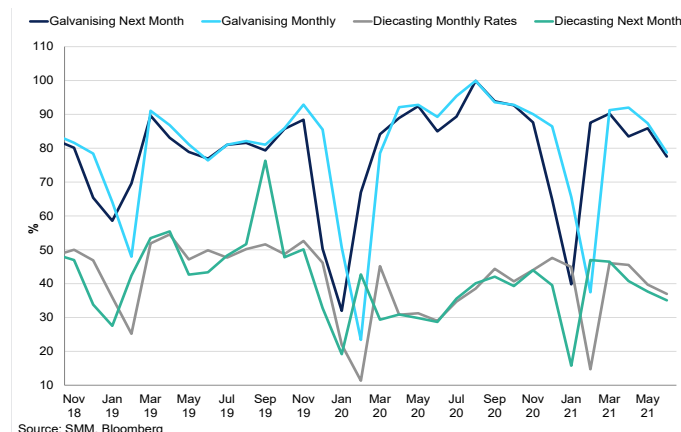
Tightness in China is exemplified by the decline in SHFE stocks which now stand at 33,116 tonnes as of 13 July. We also partly attribute this to the seasonal decline in material but the SRB have indicated they will release 30,000 tonnes of material into the market. This will alleviate some of the tightness in the market. With ore imports and inventories improving in China, output of refined material will be robust this year.

Smelters are resuming production after maintenance and July and August output will be higher than June. China's customs data indicates that imports of refined zinc are rising, reaching 57,468 tonnes in May, up from 40,739 tonnes in April. With the output of refined material up year-on-year, refined imports rising, and the SRB material we expect inventories to start to rise. Traditionally, inventories start to rise in January and February and some product may be held until this point to not suppress prices too much, and social inventories are also low at 108,000 tonnes. However, the cut in RRR from the central bank suggests that demand in China is starting to wane and therefore consumption of zinc could be softer. Demand in the summer months is lower but Q4 consumption will be strong. Shanghai bill of lading CIF stands at \$125/t, with the warrant premium at \$135/t, up from \$125/t at the end of Q1 2021. This does suggest that demand in the physical market is still strong, as zinc prices are still elevated and premiums are at a YTD high.

The current forward curve shows the market in contango out to 15-months from cash, before flipping to a backwardation. We expect zinc prices to remain elevated in the near term before softening in 2022. The tightness in the near term is attributed to low profitability for smelters but we continue to see trends that prices could start to soften as supply catches up.

Zinc Operation Rates

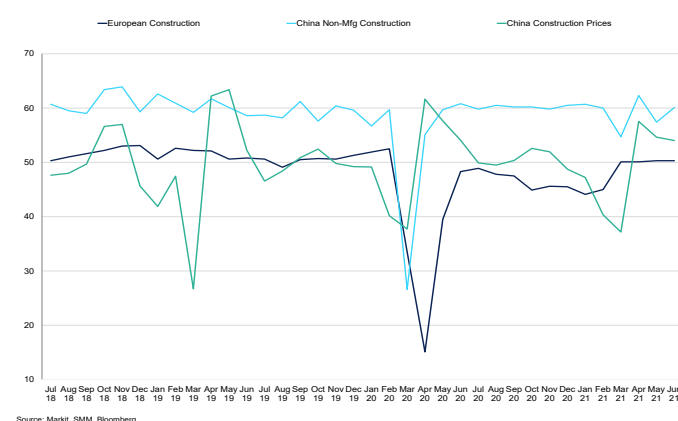
Galvanizers operating rates are falling but inventory levels are low.



On the demand side, operating rates at galvanizers are still high as they look to profit from high prices, rates were at 87.4% for May but weakened back to 85.9% in June. Galvanizers days of inventory were 8.1 in May, marginally higher than the previous month at 7.7. China hot-dipped galvanized steel prices stand at CNY6,670/t as of July 9th, with the import price to Shanghai at \$1,310/t. European prices have also continued to grow in recent reaching, €1,335/t as of July 9th. Gains are becoming less pronounced, but European construction PMIs are still expansionary at 50.3. Construction spending was 2.2% m/m in April but output is near pre-pandemic levels, Euroconstruct indicate construction volumes will grow 3.8% in 2021 and 3% in 2022. The auto sector is weaker due to the chip shortage with production at major companies such as VW, JLR and Mercedes all cut, order books for sheet is high due to the strong manufacturing sector.

European Construction vs China Construction Prices vs Non-Mfg Construction

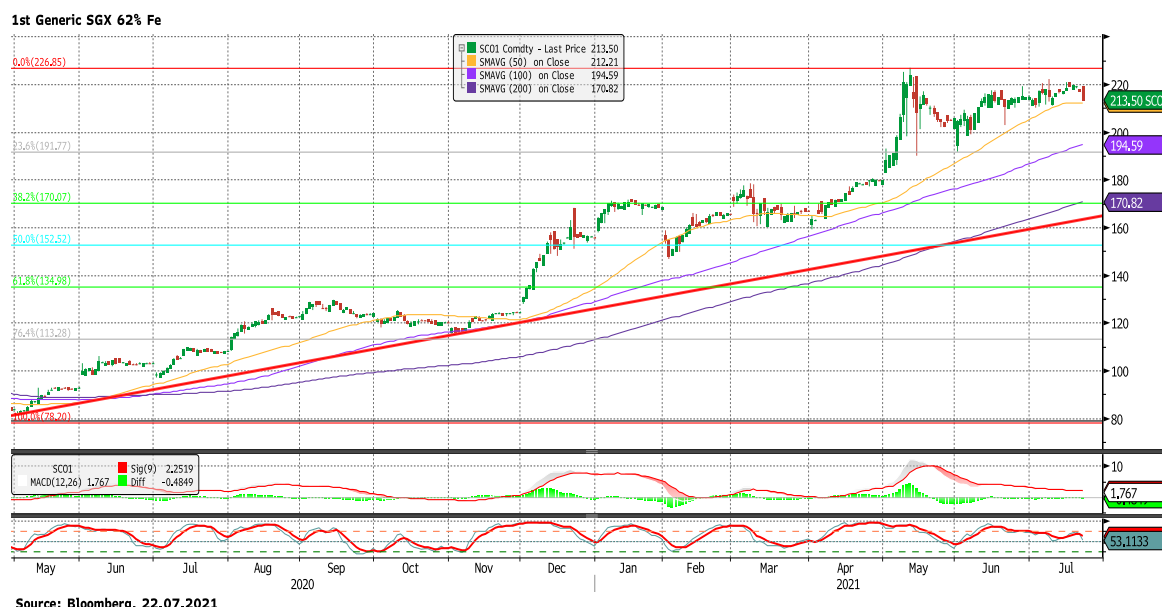
Prices are still elevated and activity in the construction sector is still expansionary.



Similarly, China non-manufacturing construction is expansionary at 60.1 but Chinese construction prices have started to contract, which could suggest further softness in prices in the near term. Metallic sheet output was 5.64m tonnes in April according to NBS, up 0.6% m/m and 14.2% y/y, on an annualised level production will reach 61m tonnes, down from 64m tonnes in 2020. Crude steel output has been strong so far in 2021, but we expect some capacity in major areas to remain offline for the rest of 2021. China's economic growth is forecast to be 8% for GDP on a year-on-year basis but the YTD year-on-year growth is due to be 12.5%, with retail sales and industrial production expected to be strong, but last year's figures were weak and the absolute numbers are key. The PBOC have cut the RRR and this indicates the economy is starting to slow, in turn demand for raw materials in the construction sector has softened. If we see the PBOC start injecting money into the open market, and the all-system financing start to improve this is strong indication that construction could increase. However, China continues to transition the economy away from industry towards more quality growth. In the US, the construction spending is falling, down -0.3% m/m in May. Previous losses in construction spending have been attributed to higher input prices, and we agree with this, however lumber is favoured for residential construction in the US and lumber prices have fallen in recent months.

Iron Ore & Steel

1st Generic SGX 62% Fe



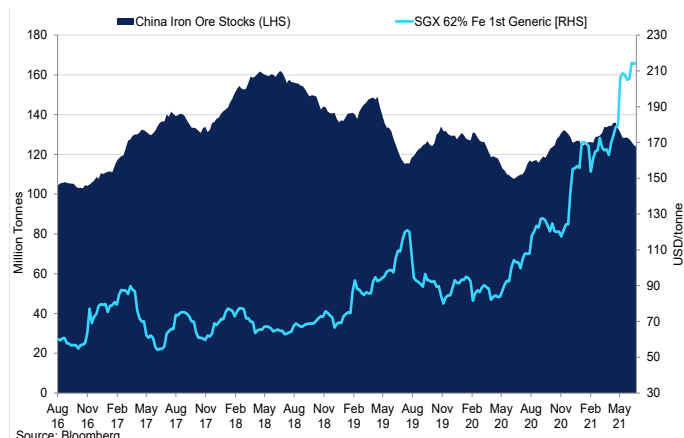
Summary

Steel output curbs will keep capacity offline for the remainder of the year. Margins for rebar and HRC mills have reduced significantly which will also help cap output. The knock-on effect is a reduction in demand for iron ore from Australia, but steel producers don't always abide by the rules. Consumption of higher-grade lump and pellet kept prices elevated even though the spread between 62% and 65% fines narrowed marginally. Chinese data is softening as expected on a year-on-year basis as their economy was strengthening a year ago thanks to stimulus, in the first week of July we have seen a net withdrawal of CNY20bn per day, and lower all-system financing. This indicates a tightening of policy which may lead to a reduction in steel and iron ore demand in the coming months. Prices remain elevated but the days above \$200/t for iron ore are numbered with a softening demand outlook.

Q1 Recap: Our base case was for SGX 1st Generic 62% Fe contract, was a range of \$212-\$240/t and the average price for Q2 was \$197/t, and prices closed the quarter at \$214.55/t. While demand for iron ore in China has been robust, data is starting to soften however, and the crackdown on the steel industry has helped prices from pushing higher still. China's State Council also investigated state owned enterprises' offshore positions, and audited firms to combat squeezed profit margins. The combination of the two suggest investor interest in iron ore and steel prices have cooled somewhat. This has capped prices in the near term and prevent the price or iron ore pushing higher. Ore supply is set to improve on a year-on-year basis this year, but demand has been strong in recent months. However, there are signs that data in China is starting to weaken and this could dampen sentiment.

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

Iron ore prices have continued to firm due to strong demand from China but capacity restrictions in 2H 2021 may cap gains.

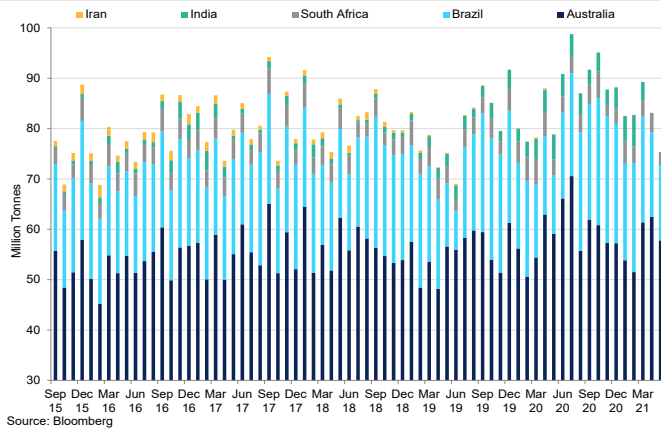


Outlook: Exports of iron ore were strong in May; most producers saw a month-on-month improvement, but shipments were softer on the year. Rio Tinto shipped 26.4m tonnes from Port Dampier and Cape Lambert in May, up 8.8% m/m but down 4.7% y/y, exports through the first 5 months of the year are 128.66m tonnes, down 2.4% y/y. At this rate Rio will miss their sales target of 325-340m tonnes for 2021. BHP's shipments were also up 5.7% in May, down 0.9% y/y to 25.51m tonnes. Through to the end of May exports reached 116.68m tonnes, down 3%, but they achieved 95% of their target between July 2020 and May 2021 reached 276-286m tonnes. At the current rate, Vale will miss their sales target by 65-85m tonnes for the full year of 2021, judging by the export rate for January to May. Shipments were up 14.8% m/m and 22.7% y/y in May.

What does this mean for prices, and the market? If all major miners miss their sales guidance, we expect prices to remain elevated in H2 2021. The shipping market has presented headwinds to the raw materials market, due to availability, but also rates are elevated. The Baltic Capesize Index reached 3,349, down from 5,404 in April, outlining that demand is softer from China and we agree with that, but the trend is still higher on the year. Exports to China from Australia reached 57.8m tonnes in May/June being the final month of Australia's financial year this could prompt higher exports to profit from high prices. Brazil shipped 14.9m tonnes to China in May which was higher than May 2020 when 11.62m tonnes were shipped. For the last 2 years, May and June have seen the weakest exports from Brazil. In the week to 6 July we saw arrivals at Chinese ports reach 13.61m tonnes, up 730,000 tonnes previous week, and down 2.18m tonnes compared to 2020. A similar trend this year would improve the supply of premium seaborne iron ore. Higher quality pellets and lumps remain at a premium due to the reduced energy consumption in the steelmaking process.

Top 5 China Iron Ore Imports

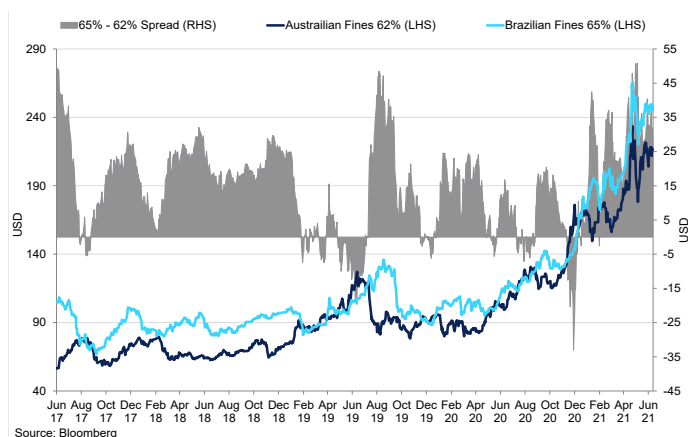
Capacity restrictions could reduce demand for seaborne iron ore in 2H 2021.



Crude steel output has been strong despite furnaces from major steel mill provinces being shut. Production of crude steel in May was 99.45m tonnes, according to NBS data while rolled steel output was 124.69m tonnes in May. June output will be lower, and we expect July output to weaken further. This is due to significantly weaker margins for rebar and HRC, with rebar margins negative in the final weeks of June. High iron ore prices and coking coal prices, in conjunction with weaker finished steel products reduced margins. While we expect demand to soften in the coming months and inventories to rise, rebar prices have firmed marginally in recent weeks while coking coal prices for September delivery is slightly softer, improving margins. Weaker margins have eroded EAF steelmakers margins with Mysteel indicating yields of \$5.1/t or CNY33/t, down from CNY40/t the previous week. Data from the China Electricity Council outlines that power demand peaked in May when crude steel output reached 99.45m tonnes, and will decrease in June and July. We hear reports that capacity will stay offline in H2 2021, Tangshan mills are expected to run at 70% capacity. However, they did not play ball for H1 2021, if they do run at a lower capacity this would present downside to iron ore demand, and in turn imports from Australia as tensions remain elevated between the two countries.

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

Premium products remain elevated but the spread between them has narrowed slightly.



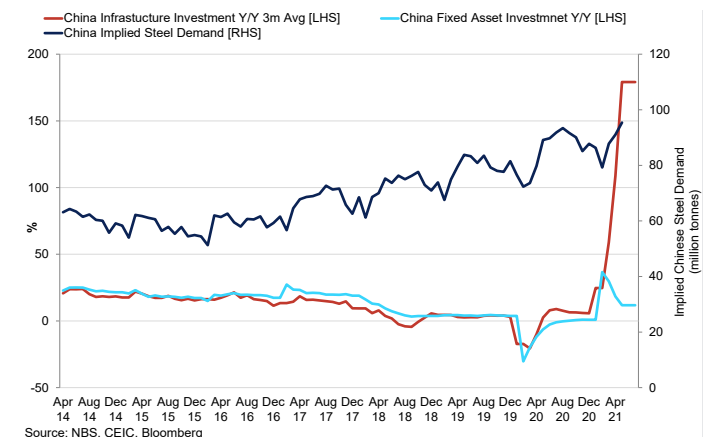
Iron ore inventories have started to soften since April, but a large proportion of this material is low in quality and helps to explain why strong import figures will prevail. Even with data from China slightly softer, the PBOC open market net injection data shows that in July, we have seen a net withdrawal of RMB20bn daily, indicating that they are starting to tighten their policy and this is a trend that we continue to watch. All system financing in China has been falling, and this indicates less demand for resources. We run on the basis of a 6-month delay from an increase in financing and cash injection to demand for raw materials. The

reduction in stimulus growth could lead to softer demand for iron ore from China in H2 2021, all system financing was RMB1,920bn in May, marginally higher than RMB1,850bn the previous month but still lower than March's RMB3,370bn. However, in the first weeks of July spot sales of steel for construction increased by 54%, with wire rod, rebar, and bar-in-coil causing prices to firm. Infrastructure investment in China has been robust but the y/y 3-month average figure is distorted due to the weakness we saw last year from COVID-19. The infrastructure investment figures see 179.13% rises y/y but fixed asset investment is starting to plateau with May and June data at 11.8% y/y. Steel prices are rangebound, despite spot sales for steel products for construction improving, China's non-manufacturing PMI construction is at 60.1 for June, fixed asset investments for new construction at 15.6% in May, significantly down from February's figure at 35.9%.

European construction confidence continues to trend higher as order books fill up as the economy opens, the Markit construction PMI is expansionary at 50.3. Prices of finished steel in Europe are high, with the 1st generic North European HRC steel at €1,178/t, plate spot, CRC ex-works spot, and rebar spot have all rallied in 2021, 82.4% to €1,140/t, 46.6% to €825/t, and 82.7% to €1,325/t. respectively. This adds significant price pressure to construction and manufacturing firms in Europe, which are likely to be passed onto the consumer the medium to long term. The steel PMI in China declined in June to 45.1, as domestic steel demand eases and supply remains constant. If demand continues to fall, and output softens we expect steel to prices to soften, especially with Tangshan mills resuming production, according to Mysteel, with mill utilisation levels reaching 81.01% in the week to 2 July 2021. .

China Investment vs Implied Steel Demand

Implied demand is still rising but y/y economic data will start to moderate as growth rates lower.



Gold

Spot Gold \$/Oz



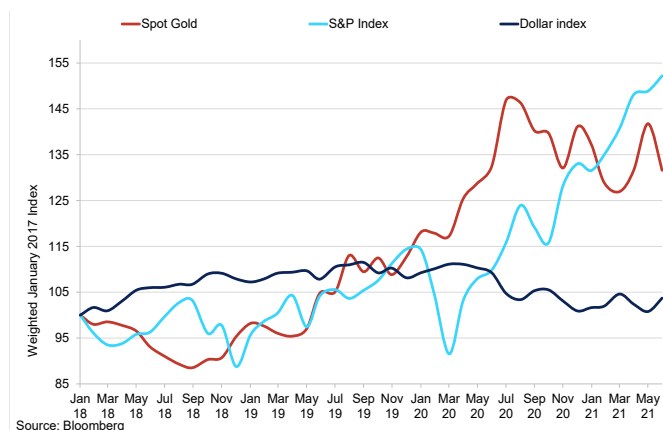
Summary

Gold prices gained momentum in Q2 2021, supported by ongoing inflationary fears. Gold-backed ETFs were more upbeat in May before falling back to April levels in June after the Fed signalled that it would raise interest rates earlier than expected. From the jewellery side, Chinese wedding-related demand supported purchases of gold, while India suffered the worst outbreak of COVID-19 cases. Real rates continue to fall as inflation expectations continue to increase, however, if the pressures are temporary, then we could see this support gold prices throughout the quarter as an inflation hedge.

Q1 Recap: Gold prices gathered momentum in the first half of the quarter, gaining as much as 14%, driven by continued fears of overinflation, a weaker dollar and lower real rates. Gold ended June at \$1,740/oz, representing an 8.60% m/m decline, the same level seen this time last year. Gold prices, in line with silver, sold off in mid-June due to a change in the Fed's sentiment to a more hawkish outlook. This is a significant reversal in gold's recent trend, returning a total growth of almost 4% over Q2, and 7% YTD. Gold also underperformed in most key currencies, which weakened against the US dollar.

Gold Spot vs S&P 500 vs the Dollar

Gold prices softened in June on the back of the Fed's hawkish statement, meanwhile stocks continue to beat record highs.



Gold was also influenced by growing investor sentiment as the global economy started to recover from the impact of the pandemic. Overall, gold's performance was driven primarily by higher inflationary expectations, which explains gains we have seen so far in July.

Additionally, there have been strong responses from governments to aid economic recovery in the form of monetary and fiscal policies. Some central banks are still pledging to add more support to the economy, which continues to provide liquidity for the precious metal.

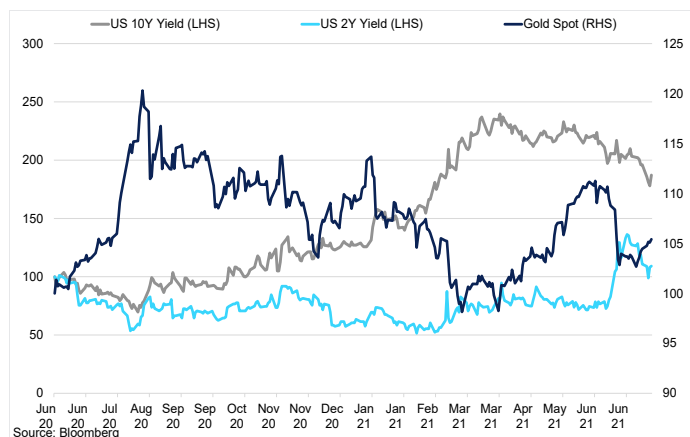
Outlook: Monetary policy remains ultra-loose in the Eurozone, as the ECB confirmed it would maintain its low interest rates and continue with the asset purchases. As the Eurozone's inflation only reached 2% in May, the ECB can justify this stance. We believe that even if the Fed decides to start tapering the bond-buying, investors might not rush to assume a similar strategy from Europe, as it confirmed that it is willing to accept inflation at higher levels for longer. Therefore, while precious metals might gain ground on higher inflation in the meantime, higher central bank tolerance towards those levels might deter investors from pricing in higher interest rates, and therefore, lower gold prices. Central banks are conscious of the market response to any changes in the monetary policy rhetoric and will most likely remain cautious in regard to the speed at which they begin asset purchase tapering or hike interest rates. A drastic change in sentiment could result in large market swings and impair economic recovery.

Indeed, inflation has become a key concern for the markets. However, while inflationary pressures have been on the rise, there are debates as to whether the increase in prices will be temporary or more sustained. During times of persistent inflation, performance tends to be more positive. Indeed, gold's return tends to exceed 15% in years when CPI is higher than 3%. Likewise, gold is highly correlated to other inflation metrics, such as money supply, which has been on the rise, and this could later result in inflation bubbles and potential market volatility. The key will be whether inflation remains transitory or takes more of a sustained effect, for which markets might not be fully prepared. We are of the belief that inflation will be temporary as the economy is exposed to a surge of pent-up demand for the service industry as well as tourism. However, given the developed economies can sustain recovery without reimposing lockdown restrictions, demand is likely to be strong, yet

soften, putting less pressure on prices.

10yr and 2yr US Yields vs Gold Spot

Gold continues to be supported as an inflation hedge, meanwhile bond yields soften from the belief of lower interest rates for longer..

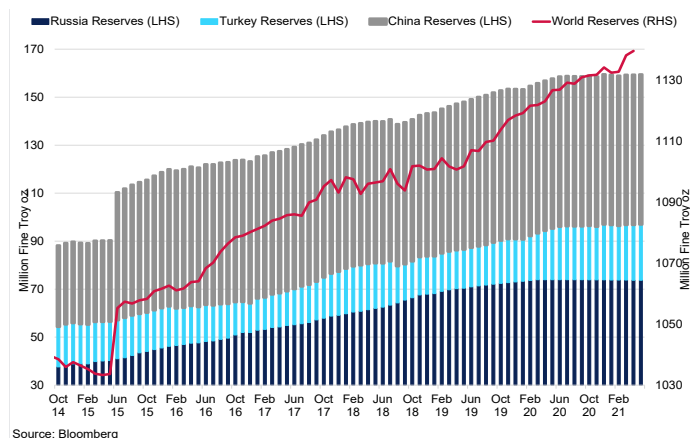


On the other side of the argument, we have seen a strong economic recovery across the world, with economies lifting lockdown restrictions. As a result, more risk-on approach in the markets has been adopted and see that gold might step in as downside protection and diversification, something we have seen before during a growing stock market. The price growth is nowhere near strong as when gold is sought after as a safe haven, however, this demand can provide some downside protection for prices as we continue to see further recovery. The S&P 500 to gold spot ratio has been rising since July 2020, with the pause seen during May, suggesting there is room for gold to outperform stocks in the longer term. Indeed, the index reached the 2.42 levels by the end of June, in line with September 2018 highs.

This also applies to central banks that have steadily increased their allocation to gold so far in 2021. Central banks continue to show interest in gold, with demand showing a net 69.4t added to global holdings in April. Thailand and Turkey were the biggest purchasers, with the latter increasing its reserves for the first time since October. Russia emerged as a net seller, as it continues with its intention to pause its gold-buying programme in April 2020, which led to a drop in the overall pace of gold purchasing during the year. Central banks are expected to remain net buyers in 2021, albeit more muted than pre-COVID years.

Central Banks Gold Reserves

Global reserves picked up sharply despite the usual buyers remaining on the back foot.

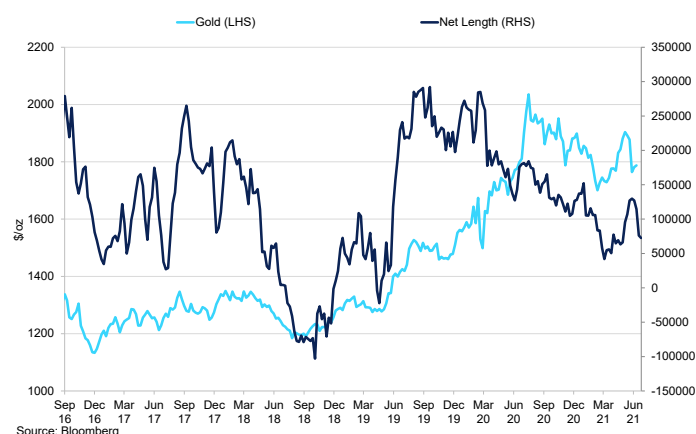


Sentiment towards gold has improved temporarily as gold ETFs recorded a considerable net monthly inflow of 1.756moz in May for the first time since September. This change in sentiment comes against a backdrop of investor worries over inflation, and lower real yields. However, as of June,

we saw interest correct once again, with the biggest drawdown seen after the surprise Fed statement. The level now stands at 1.00moz. At the same time, both longs and shorts have increased their speculative position in recent weeks, as markets come back to gold to add back to their investment portfolios. Net long positioning on COMEX and gold ETF flows should continue to be useful indices to watch to help gauge sentiment, particularly in relation to inflation and market view on the monetary policy outlook.

Gold Spot vs CFTC Managed Money Net Length

Speculative demand continues to soften despite gold finding some ground in July, driven by inflationary pressures and continued global uncertainty.



Retail demand in India has been severely hampered by the lockdowns introduced in Q2 in response to the surge in COVID-19 cases. In May, the consumer confidence index fell to an all-time low of 48.5. Now, with the biggest COVID-19 wave mostly underway, we have seen reopening in the country, but reports say that demand remains subdued, and dealers have been forced to offer discounts on domestic prices. Gold imports stood at 11.4t in May, down significantly from 110t seen in April, owing to weak demand and restrictions on international flights. Pent-up wedding demand was expected to lift demand this year, but subsequent postponement and then cancellation of wedding celebrations dampened that outlook. Indeed, before the recent restrictions, consumer demand for gold increased by 37% y/y to 140t in Q1 2021 but was still below the long-term average. On average, Indian demand accounted for 700t of gold annually, and with the results of the pandemic, it fell to 446.4t in 2020, according to WGC, and now with the strongest wave of restrictions seen yet, heightened demand in 2021 seems unlikely.

In China, continued government support through sales promotions and a seasonal uptick in demand point to higher sales in the latter part of 2021. Holiday- and wedding-related sales booms helped support consumer demand in Q2, supported by lower local rates and expectations of rising prices in the future. China imported 111t of gold in April, 73t higher m/m and 106t higher y/y, the highest level since January 2020. Rising gold demand and lower local supply have led to a greater need for gold imports. But imports have remained below the 2019 average due to strict COVID-19 related border control measures.

The policy tightening debate across the world, fears of inflation, and whether it will be transitory or not, continues to underpin market uncertainty, which is supportive for gold. Expectations about the direction of the monetary policy as well as future inflation data will be key metrics in the coming months. For now, it seems that accommodative policies will remain in place regardless of the inflation spikes, creating support for gold investment.

Silver

Spot Silver \$/Oz



Summary

Silver, in line with gold, has gained momentum in Q2, with the biggest setback taking place at the end of the quarter, following an unanticipated shift in the US Federal Reserve monetary policy stance. As of July, the precious metal struggled to break above the \$27/oz level, highlighted by the diminishing speculative interest. We expect recovery industrial sector to support silver prices from the downside, meanwhile heightened inflationary expectations give rise to silver as an inflation hedge. Combined with relatively low silver prices, these factors could prompt investors to add the metal to their portfolios. However, just as the spread of the variants might be beneficial for demand for silver as a safe haven, it may also limit uptake in silver jewellery in key markets.

Q1 Recap: Silver closed marginally above the level it began the quarter at. In particular, after a stable pick up of prices in April and May, we saw a sharp selloff in mid-June following an unanticipated shift in the US Federal Reserve monetary policy stance. As of July, silver has failed to break above \$27/oz. The gold-to-silver price ratio has been on the rise and is about to reach the level last seen in March, suggesting silver still has more room to grow. From the downside, silver prices have been largely supported by robust industrial demand.

positive for silver. Nevertheless, the Fed's comments unsettled the market and silver, with its history of more volatile price movements than gold, fell further. The price has been underperforming gold for several weeks, highlighted by the ETF holdings falling by more than gold since June. Global holdings now stand at 918moz, lower than the peak of 1,007moz recorded in February but still high by historical standards. If inflation concerns lift the gold price over the medium term, then silver should benefit too.

Gold to Silver Ratio

The ratio softened to the lowest level since summer 2014, suggesting silver still has more room for growth.



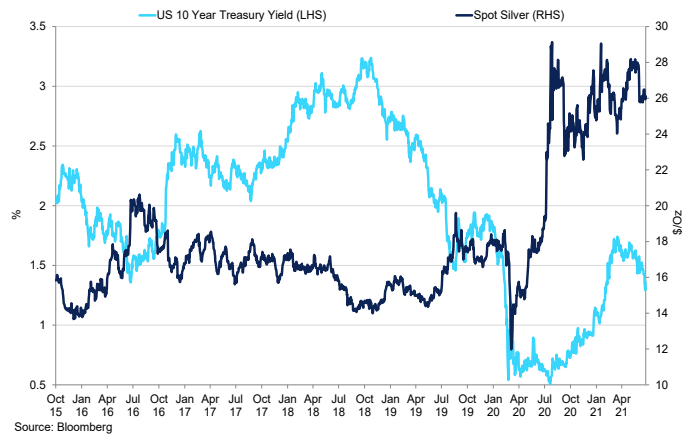
Silver followed gold lower in June on expectations of tighter US monetary policy. This, however, has been short-lasting as the current ultra-loose monetary regime along with the low interest rate environment is likely to remain unchanged for now despite rising inflation, which is

Outlook: In line with gold, rising inflation is highlighting silver's appeal as a precious metal. The huge amount of fiscal and monetary stimulus pumped into the advanced economies led to a much faster economic recovery than was anticipated, and expectations of faster inflation risen sharply. In May, US CPI increased by 5% y/y, the largest growth since August 2008. However, the bond market remains sceptical that rising inflation is anything more than transitory, as the Fed has claimed since bond yields have actually slipped lower over the last few weeks. This is good for silver as it means that the real yield is becoming more negative, and it becomes a more attractive investment. 10yr US Treasuries yields and US 10yr breakeven rates have been fluctuating recently, reflecting the continued unease over economic recovery and inflation, although they remain higher year-to-date. The decline in yields helped decrease the opportunity cost of holding the silver, especially considering its sensitivity to rates that we have seen more recently. The precious metal's direction is likely to continue to be driven by two competing forces. On the one hand, a loose monetary policy should keep the opportunity cost of holding the metal low. On the other hand, higher inflationary pressures would eventually lead to tightening monetary policy, lessening silver's appeal than other yield-earning assets.

The current ultra-loose monetary regime and low interest rate environment will remain unchanged for now despite rising inflation, which is positive for silver. Nevertheless, the Fed's comments unsettled the market and silver, with its history of more dramatic price movements than gold, fell further

Spot Silver vs 10yr US Treasury Yield

Silver continues to be supported through the combination of industrial and safe-haven properties.

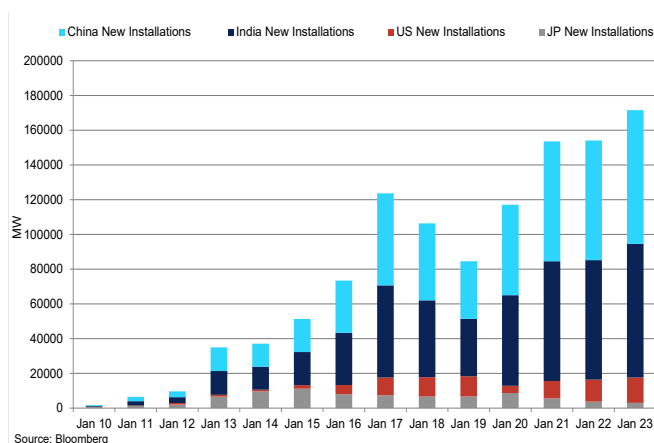


Therefore, the fundamentals for precious metals remains strong, and while summer usually tends to be the quieter month for precious metals, current price levels provide attractive entry points for silver. Overall, interest rates are likely to continue to remain a key driver for silver in the medium to long term. Yet, the negative impact that higher rates will likely be offset by continued inflationary pressures, as well as the breakdown of the new variants across the world. Combined with relatively low silver prices, these factors could prompt investors to add the metal to their portfolios. However, just as the spread of the variants might be beneficial for demand for silver as a safe haven, it may also limit uptake in silver jewellery in key markets.

More broadly, silver prices were further supported by the ongoing recovery in industrial activity and some supply disruptions. According to The Silver Institute, the global solar PV industry accounted for over 10% of physical silver demand in 2020, at 101moz, and is estimated to consume a further 150moz in 2021. However, raw material prices used in PV are surging higher, weighing on installations, and therefore, silver demand. Indeed, higher raw material prices are estimated to increase installation costs by 20% in 2021, effectively reversing two years of declining costs. Consequently, module-makers are lowering capacity utilisation and cutting output. Compounding this issue is also a steep jump in Chinese shipping rates this year. Chinese companies account for 60% of the global capacity supply chain, and high freight costs and long lead times are weighing on downstream demand. Higher module prices could delay marginal projects and slow installations this year. Projects with tight margins, or those that do not qualify for subsidies, are most likely to struggle. At the start of the year, the industry consensus was a forecast of 150GW of solar capacity in 2021, but this will likely change.

Solar PV Forecast

Most of the backlog from 2020 is likely to be pushed to this year to keep up with recovering demand, before stabilising in 2022.

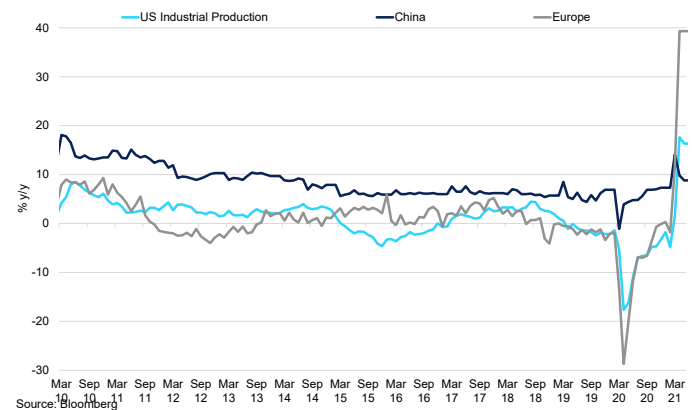


According to the Silver Institute, global silver demand will rise to 1,025moz in 2021, the highest in eight years, as the industry continues to recover. The pandemic triggered investors to stockpile silver in 2020, which, like gold, is seen as a safe haven. The trend is likely to continue, with bars and coins likely to reach 6-year highs of 257moz in 2021. However, the share of silver demand in industrial uses is likely to rise this year, with demand forecast to rise by 9% y/y to a 4-year high of 510moz. With mine production of over 860moz in 2021, the market will likely be slightly oversupplied (excluding investment) for the sixth consecutive year. However, if ETFs pick up the slack, this could support silver prices on the downside.

We believe there is still upside potential for silver's performance during the second half of this year based on continued recovery in industrial performance alongside raised inflationary levels. However, this is unlikely to come without challenges. Interest rates as key drivers and silver's performance could be heavily influenced by the change in interest rates and the success of inoculation campaigns, as a further rise in interest rates could continue to create headwinds for silver. This is consistent with silver's historical behaviour in periods when monetary policy becomes tighter, often resulting in price pullbacks.

US, China, and Europe Industrial Production

We have seen a sharp resurgence in production in the US and Europe, as the economies reopened their economies.



Palladium

Spot Palladium \$/Oz



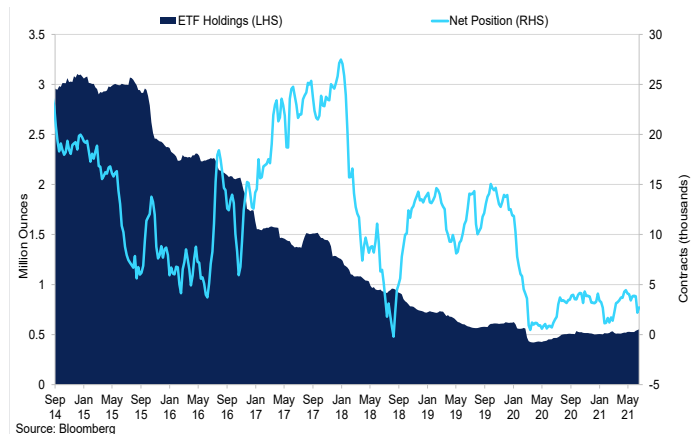
Summary

Lower supply continued to support palladium prices through the quarter, gaining as much as 8.2%, despite the correction seen in June due to the Fed's hawkish statement. Speculative demand has been gaining ground, reaching as high as March 2020 levels, when there was a surge for safe-haven assets during the peak of the pandemic. Chip shortages weighed on automobile production, and are expected to continue, yet at a diminishing rate, as factories begin to increase their stock level to ensure plentiful supply. Regardless of the softer supply this year, the impact on the auto demand is meant to offset that, leading to a surplus this year.

Q1 Recap: Palladium prices gained ground in Q2 2021, despite the price correction seen in June, closing the quarter just under \$2,800/oz, supported by the beliefs of lower production from Russia. And while net positioning has remained broadly unchanged, ETF inflows have been growing, with all known holdings reaching March 2020 levels, suggesting heightened speculative interest for the metal. However, the sell-off in June has nearly wiped out all the gains following the announcement of Nor Nickel's mine flooding.

Palladium ETF vs Net Position

Palladium ETF holdings have been gaining ground, reaching March 2020 levels.



In the US, chip shortages continue to weigh on automakers. Many companies have announced further cuts to their vehicle production due to the ongoing semiconductor chip shortage. According to AutoForecast Solutions, 4m units of losses have been forecast globally already this year, although some of this is likely to be recouped in the second half of the year, thanks to the introduction of the plan set out by the Biden

administration. However, if the shortages prevail into Q3, the recovery in vehicle output is expected to be pushed into 2022 and maybe even later.

Outlook: Global palladium automotive demand is forecast to be reduced by more than 250koz this year owing to the impact of the chip shortage on vehicle production. Consumption is predicted to be particularly hard hit owing to the dominance of gasoline light vehicles in the areas worst affected by production cuts. A loss of more than 250koz of palladium automotive demand could reduce the estimated market deficit by almost a fifth.

We have, therefore, seen a decline in vehicle sales. US car sales reached 0.31m units in June, yielding a seasonally adjusted annual rate of 15.36m, down from 18.51m from the previous month. This is 5.79% higher y/y, and a 11% decline compared to June 2019, below the pre-pandemic levels. However, the lack of vehicle availability is starting to weigh on sales, as new-vehicle inventory in May was around 43% of 2020 levels as vehicle stocks declined. April-May is typically a period where we see inventories rise, but the squeeze on supply is now expected to continue for the rest of the year, possibly into 2022.

Meanwhile, South Africa's PGM mining industry currently remains operational, despite the country raising the alert to the second-highest level in July. During the national 3-week lockdown in March-April 2020, mines were forced to close, and daily refined platinum production fell to a record low of 2koz. The 2020 PGM output declined by around 15% y/y, although this was partly due to the impact of smelter outages unrelated to the pandemic. We believe it is unlikely that the government will impose another lockdown on the mining industry. As a result of reduced automotive demand, the palladium market is projected to move into surplus this year. This is a significant change from the view at the start of the year when a deficit of around 900koz was expected.

Platinum

Spot Platinum \$/Oz



Summary

Platinum prices softened during the quarter, driven by a stronger dollar and the Fed's hawkish tone. Automotive demand has increased as tighter vehicle emission standards in China and Europe require higher platinum use in autocatalytic converters, while jewellery is continuing to recover. Regardless, overall platinum demand this year is forecast to be only marginally higher than pre-COVID levels. Once platinum requirements for industrial end-users have been secured this year, purchasing momentum is likely to slow.

Q1 Recap: As economic activity steps up, assisted by large-scale government stimulus funding, investors are recognising an increased need for commodities, including industrial metals, and are acting on the upside this brings to the investment case for platinum. So far this quarter, investors have increased their holdings in ETFs by 21,570 to 3.96moz. Regardless, platinum prices softened throughout the quarter, falling by 11% down to \$1,075/oz, with the biggest correction seen by the end of June, as the dollar gained ground after the US Federal Reserve struck a hawkish tone on monetary strategy. This confirms platinum's presence as a precious metal more so than industrial. Resistance at \$1,110/oz has held so far, so the price may continue to trade sideways to lower in the short term.

Outlook: Platinum prices have been buoyed by a recovery in jewellery and industrial demand, tighter vehicle emission standards, and supply disruptions. Platinum demand in industrial applications and jewellery demand has strengthened amid the recovery in global economic activity. Automotive demand has increased as tighter vehicle emission standards in China and Europe require higher platinum use in autocatalytic converters, while supply disruptions due to flooding at two mines in Russia also supported prices.

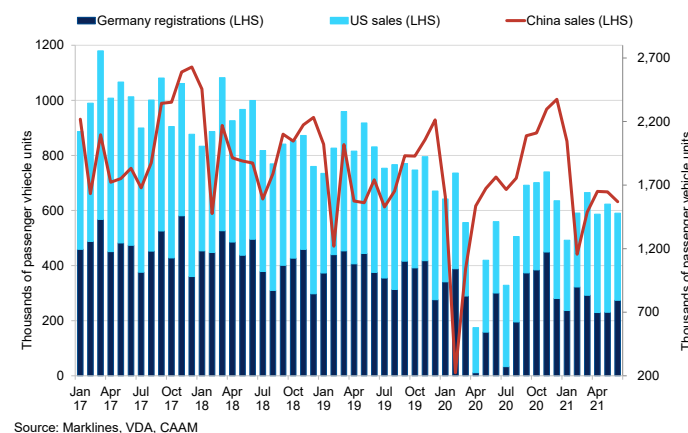
WPIC estimates platinum industrial demand will account for almost 40% of total demand in 2021. As economic activity driving platinum's industrial uses recovers, forecasts indicate that it will rebound by 25% y/y to 2.4moz, which is also 13% higher than in 2019. Most of the new industrial projects that have been postponed in 2020 are likely to be added to this year's pipelines, resulting in a major increase in demand this year. Globally, demand for platinum in the chemical and petroleum sectors is expected to recover well this year, rising by 11% and 65%, respectively, after the pandemic-related curtailment of activity in 2020.

China's platinum jewellery market remains below pre-pandemic levels. According to Platinum Guild International, the volume of China's platinum fabrication in Q1 2021 increased by 65% y/y from the low base seen in

2020 but is still only 73% of the levels seen in the same period of 2019. A narrowing price gap between gold and platinum, combined with strong demand for gold during the Chinese New Year, reduced platinum's appeal in the first three months of the year. Demand is expected to rebound modestly in 2021, up by 10% y/y, but the lacklustre state of the market in China means it is unlikely to reach 2019 levels in the near term.

Germany, US and Chinese Passenger Car Market

Sales have been weakening in recent months, apart from Germany, due to the chip shortages worldwide.



Despite this, overall platinum demand this year is forecast to be only marginally higher than pre-COVID levels. Once again, the industrial market surplus is expected to be almost 1moz, which leaves a great deal of metal for investment demand to absorb. Once platinum requirements for industrial end-users have been secured this year, purchasing momentum is likely to slow.

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Global

Global Manufacturing PMI

Source: Bloomberg

Date	USA (Markit)	China (Caixin)	Eurozone (Markit)	Japan (Nikkei)	Emerging Markets
Feb-2018	55.30	51.60	58.60	54.10	51.90
Mar-2018	55.60	51.00	56.60	53.10	51.30
Apr-2018	56.50	51.10	56.20	53.80	51.30
May-2018	56.40	51.10	55.50	52.80	51.10
Jun-2018	55.40	51.00	54.90	53.00	51.20
Jul-2018	55.30	50.80	55.10	52.30	51.00
Aug-2018	54.70	50.60	54.60	52.50	50.80
Sep-2018	55.60	50.00	53.20	52.50	50.30
Oct-2018	55.70	50.10	52.00	52.90	50.50
Nov-2018	55.30	50.20	51.80	52.20	50.80
Dec-2018	53.80	49.70	51.40	52.60	50.30
Jan-2019	54.90	48.30	50.50	50.30	49.50
Feb-2019	53.00	49.90	49.30	48.90	50.60
Mar-2019	52.40	50.80	47.50	49.20	51.00
Apr-2019	52.60	50.20	47.90	50.20	50.50
May-2019	50.50	50.20	47.70	49.80	50.40
Jun-2019	50.60	49.40	47.60	49.30	49.90
Jul-2019	50.40	49.90	46.50	49.40	50.10
Aug-2019	50.30	50.40	47.00	49.30	50.40
Sep-2019	51.10	51.40	45.70	48.90	51.00
Oct-2019	51.30	51.70	45.90	48.40	51.00
Nov-2019	52.60	51.80	46.90	48.90	51.10
Dec-2019	52.40	51.50	46.30	48.40	51.00
Jan-2020	51.90	51.10	47.90	48.80	51.00
Feb-2020	50.70	40.30	49.20	47.80	44.60
Mar-2020	48.50	50.10	44.50	44.80	49.00
Apr-2020	36.10	49.40	33.40	41.90	42.70
May-2020	39.80	50.70	39.40	38.40	45.40
Jun-2020	49.80	51.20	47.40	40.10	49.60
Jul-2020	50.90	52.80	51.80	45.20	51.40
Aug-2020	53.10	53.10	51.70	47.20	52.50
Sep-2020	53.20	53.00	53.70	47.70	52.80
Oct-2020	53.40	53.60	54.80	48.70	53.40
Nov-2020	56.70	54.90	53.80	49.00	53.90
Dec-2020	57.10	53.00	55.20	50.00	52.80
Jan-2021	59.20	51.50	54.80	49.80	52.10
Feb-2021	58.60	50.90	57.90	51.40	51.50
Mar-2021	59.10	50.60	62.50	52.70	51.30
Apr-2021	60.60	51.90	63.30	53.60	52.20
May-2021	62.10	52.00	61.30	53.00	52.00
Jun-2021	62.10	51.30	61.40	52.40	51.30

Aluminium

Price Forecasts and China Quarterly Supply/Demand Balance (kt)

Source: Wood Mackenzie

Year	Quarter	Production	Consumption	Balance	Stocks Days Cons	SHFE Cash Price \$/tonne
2018	Q1	8965	7467	1498	103	2247
	Q2	9087	9192	-104	83	2271
	Q3	9193	9328	-135	82	2112
	Q4	9134	10046	-913	67	2003
	Total/Average	36379	36033	346	71	2154
2019	Q1	8808	7586	1222	98	2002
	Q2	8958	9353	-395	76	2055
	Q3	8887	9482	-595	70	2005
	Q4	8809	10196	-1387	53	1992
	Total/Average	35462	36616	-1154	55	2014
2020	Q1	8850	7664	1186	79	1909
	Q2	8902	9593	-691	57	1821
	Q3	9425	9854	-429	53	2100
	Q4	9774	10458	-684	43	2360
	Total/Average	36950	37568	-618	68	2044
2021	Q1	9569	8117	1452	94	2506
	Q2	9741	10052	-311	74	2873
	Q3	10043	10239	-196	72	
	Q4	10176	10968	-792	60	
	Total/Average	39529	39376	153	70	
2022	Q1	10099	8458	1642	97	
	Q2	10311	10475	-163	78	
	Q3	10485	10669	-185	76	
	Q4	10502	11429	-927	63	
	Total/Average	41398	41031	367	67	
2023	Q1	10406	8771	1636	94	
	Q2	10531	10884	-353	74	
	Q3	10696	11100	-404	70	
	Q4	10771	11869	-1097	57	
	Total/Average	42404	42624	-220	64	

Aluminium Forecasts

Source: Wood Mackenzie

Global (Mt)	2018	%	2019	%	2020	%	2021	%	2022	%	2023	%
Alumina Production (SGA)	121.6	-0.3%	123.1	1.2%	125.5	2.0%	134.1	6.8%	139.4	3.9%	142.4	2.2%
Aluminium Production	64.0	1.3%	63.4	-0.9%	65.0	2.5%	69.1	6.3%	72.2	4.5%	73.9	2.3%
Consumption	65.0	3.0%	65.4	0.6%	64.0	-2.1%	67.9	6.2%	70.9	4.5%	73.3	3.4%
Metal Market Balance	-1.0		-1.9		1.0		1.2		1.3		0.6	
Stock Days of Consumption	91.5		80.1		87.6		88.9		91.8		91.7	
Alumina Market Balance	-1.9		0.7		0.2		1.0		0.3		0.3	
Stock Days of Requirement	44.7		47.3		46.9		46.6		45.5		45.2	
Prices												
Cash Aluminium (\$/t)	2110		1791		1702		2267		2175		2106	
(c/lb)	96		81		77		103		99		96	
Spot Alumina (\$/t)	474		332		270		294		300		300	

Price Forecasts and World Quarterly Supply/Demand Balance (kt)

Source: Wood Mackenzie

Year	Quarter	Production	Consumption	Balance	Stocks Days Cons	LME Cash Price \$/tonne
2018	Q1	15777	14642	1135	113	2158
	Q2	15958	16699	-741	96	2259
	Q3	16159	16580	-421	96	2055
	Q4	16094	17035	-941	88	1967
	Total/Average	63987	64956	-969	92	2110
2019	Q1	15669	14727	942	105	1859
	Q2	15904	16814	-910	87	1792
	Q3	15941	16688	-747	84	1761
	Q4	15900	17128	-1229	75	1754
	Total/Average	63413	65357	-1945	80	1791
2020	Q1	15852	14267	1585	101	1689
	Q2	15809	15932	-123	89	1494
	Q3	16401	16720	-319	83	1706
	Q4	16926	17061	-134	81	1918
	Total/Average	64988	63979	1008	88	1702
2021	Q1	16687	15218	1469	100	2092
	Q2	17081	17274	-193	87	2398
	Q3	17574	17483	91	86	2317
	Q4	17759	17939	-181	83	2260
	Total/Average	69101	67915	1186	89	2267
2022	Q1	17658	15901	1758	104	2250
	Q2	17994	18044	-49	91	2200
	Q3	18279	18261	18	90	2150
	Q4	18313	18735	-422	86	2100
	Total/Average	72244	70941	1304	92	2175
2023	Q1	18158	16422	1736	107	2150
	Q2	18376	18591	-215	94	2125
	Q3	18640	18929	-289	91	2100
	Q4	18749	19400	-650	85	2050
	Total/Average	73923	73341	582	92	2106

Copper

Copper Forecasts

Source: Wood Mackenzie

Global (kt)	2020	%	2021	%	2022	%	2023	%
Total Mine Production	20959	0.0	21147	0.9	22484	6.3	23725	5.5
Total Smelter Production	20231	3.0	20479	1.2	21740	6.2	22630	4.1
Refined Production	23866	1.4	23919	0.2	25273	5.7	26259	3.9
Consumption	23528	-0.6	24201	2.9	24954	3.1	25655	2.8
Concentrate Stock Change	-488		50		200		450	
Metal Market Balance	338		-282		319		604	
Metal Stocks - Days of Cons	69		63		66		72	
Prices								
Cash LME Price (\$/t)	6181		9338		8575		7450	
(c/lb)	280		424		389		338	
Contract TC/RCs (c/lb excl pp) for 30% Cu Conc	16		15		17		20	
Contract Blister Europe (\$/t)	128		145		170		185	

Copper Concentrate Market TC/RCs

Source: Wood Mackenzie

	Asia Term Contracts (Benchmark)			Far East Spot Market (CIF Asia) Miner Selling Terms to Merchants						
	2019	2020	2021	2018	2019	2020	2021	2021		
	Ave	Ave	Ave	Ave	Ave	Ave	Q2	Apr	May	Jun
T/C (\$/tonne Conc.)	80.80	62.00	59.50	76	52	44	27	12	20	32
R/C (c/lb Cu)	8.08	6.20	5.95	7.6	5.2	4.4	2.7	1.2	2.0	3.2
PP (c/lb Cu)										
Combined (c/lb) +	23.35	17.92	17.20	22.0	15.1	12.6	7.8	3.5	5.8	9.2
Combined (c/lb) #	20.72	15.90	15.26	19.5	13.4	11.2	6.9	3.1	5.1	8.2
				Chinese smelter buying terms (CIF basis)						
				2018	2019	2020	2021	2021		
				Ave	Ave	Ave	Q2	Apr	May	June
T/C (\$/tonne Conc.)				85	65	55	39	30	36	40
R/C (c/lb Cu)				8.5	6.5	5.5	3.9	3.0	3.6	4.0
PP (c/lb Cu)										
Combined (c/lb) +				24.6	18.7	15.8	11.3	8.7	10.4	11.6
Combined (c/lb) #				21.8	16.6	14.1	10.0	7.7	9.2	10.3
+ For a 25% copper concentrate										
# For a 30% copper concentrate										

Price Forecasts & Quarterly Supply/Demand Balance

Source: Wood Mackenzie

Year	Quarter	Refined Production	Refined Consumption	Balance	Metal Stocks Days of Cons	Cash Price \$/tonne	c/lb
2020	Q1	5077	735	75	5636	256	256
	Q2	5923	-49	74	5356	243	243
	Q3	6214	-241	71	6519	296	296
	Q4	6314	-107	69	7166	325	325
	Total/Avg	23528	338	69	6181	280	280
2021	Q1	5260	622	76	8504	386	386
	Q2	6053	-89	75	9700	440	424
	Q3	6390	-356	70	9650	438	417
	Q4	6497	-459	63	9500	431	408
	Total/Avg	24201	-282	63	9338	424	409
2022	Q1	5454	852	73	9100	413	386
	Q2	6183	125	75	8700	395	381
	Q3	6581	-261	71	8400	381	372
	Q4	6736	-397	66	8100	367	363
	Total/Avg	24954	319	66	8575	389	375
2023	Q1	5623	941	77	7800	354	354
	Q2	6295	269	81	7600	345	345
	Q3	6759	-194	78	7400	336	336
	Q4	6978	-413	72	7000	318	318
	Total/Avg	25655	604	72	7450	338	338

Lead

Global Quarterly Supply/Demand Balance And Price Forecasts

Source: Wood Mackenzie

		Refined Prod'n	Cons'n	Balance	Stock Days	\$/tonne	c/lb
2020	Q1	2944	2647	297	54	1847	84
	Q2	3134	3106	29	47	1670	76
	Q3	3207	3339	-132	40	1876	85
	Q4	3294	3355	-61	38	1903	86
	Total/Avg	12579	12447	133	42	1824	83
2021	Q1	3062	2962	100	47	2020	92
	Q2	3259	3328	-69	40	2121	96
	Q3	3337	3290	46	41	2060	93
	Q4	3426	3421	4	40	2020	92
	Total/Avg	13083	13002	81	42	2055	93
2022	Q1	3141	3040	100	48	1995	90
	Q2	3344	3422	-77	40	1975	90
	Q3	3424	3385	39	42	1950	88
	Q4	3513	3520	-7	40	1985	90
	Total/Avg	13422	13367	55	43	1976	90
2023	Q1	3214	3095	119	49	2010	91
	Q2	3423	3487	-63	42	1995	90
	Q3	3502	3451	52	44	1990	90
	Q4	3593	3588	4	42	2020	92
	Total/Avg	13732	13621	111	45	2004	91

Lead Forecasts

Source: Wood Mackenzie

Global (kt)	2020	%	2021	%	2022	%	2023	%
Mine production	4288	-7.8	4404	2.7	4535	3.0	4512	-0.5
Refined production	12582	-3.0	13052	3.7	13347	2.3	13557	1.6
Consumption	12454	-3.4	12940	3.9	13295	2.7	13487	1.4
Concentrate balance	-134		-60		18		10	
In days of requirement	35		30		31		32	
Refined market balance	128		112		52		70	
In days of requirement	43		45		45		46	
Prices								
Cash LME Price (\$/t)	1824		1980		1981		2004	
(c/lb)	82.7		89.8		89.9		90.9	
Realised TCs (\$/t conc)	180		140		154		157	

Nickel

Global Nickel Quarterly Supply/Demand Balance - (kt)

Source: Wood Mackenzie

		Refined Supplies	Refined Consumption	Balance	Cash Price \$/tonne	c/lb	Stocks kt	Days of Cons
2020	Q1	638	542	96	12720	577	1399	232
	Q2	644	574	70	12197	553	1469	233
	Q3	646	638	8	14231	646	1477	213
	Q4	642	644	-2	15941	723	1475	211
	Total/Avg	2569	2398	171	13772	625		
2021	Q1	664	657	6	17625	799	1481	203
	Q2	694	713	-20	17347	787	1462	186
	Q3	694	700	-5	17563	797	1456	191
	Q4	703	704	0	16682	757	1456	190
	Total/Avg	2755	2774	-19	17304	785		
2022	Q1	732	698	34	17049	773	1490	192
	Q2	749	739	10	17857	810	1500	185
	Q3	751	742	8	16902	767	1508	187
	Q4	755	758	-2	16314	740	1506	183
	Total/Avg	2987	2937	50	17031	773		
2023	Q1	802	727	75	15322	695	1581	196
	Q2	805	762	43	15829	718	1624	194
	Q3	796	772	24	15322	695	1648	196
	Q4	792	784	8	15719	713	1656	194
	Total/Avg	3195	3045	150	15548	705		

Nickel Forecasts

Source: Wood Mackenzie

Global (kt)		2209		2021		2022		2023	
Mine Production	2654	4.9%	2848	7.3%	3218	13.0%	3464	7.6%	
Smelter Production	2541	6.0%	2698	6.2%	2911	7.9%	3078	5.7%	
Refined Production	2569	5.5%	2755	7.2%	2987	8.4%	3195	7.0%	
Consumption	2398	-0.9%	2774	15.7%	2937	5.9%	3045	3.7%	

Market Balance	171	-19	50	150
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Cash LME price				
(\$/t - Current)	13772	17304	17031	15548
(c/lb - Current)	625	785	773	705

Tin

ICDX & LME Tin Price

Source: LME, ICDX

	ICDX	LME Cash	LME premium to ICDX
02-Jan-18	20100	20112	12
01-Feb-18	21820	21550	-270
01-Mar-18	21800	21755	-45
02-Apr-18	21100	21252	152
01-May-18	21375	21340	-35
01-Jun-18	20800	20795	-5
02-Jul-18	19850	19825	-25
01-Aug-18	20100	19925	-175
03-Sep-18	19200	18895	-305
01-Oct-18	19150	18970	-180
01-Nov-18	19180	19115	-65
03-Dec-18	18690	18871	181
02-Jan-19	19525	19508	-17
01-Feb-19	20750	20985	235
01-Mar-19	21790	21710	-80
04-Apr-19	21515	21524	9
02-May-19	19685	19639	-46
03-Jun-19	18770	19350	580
01-Jul-19	18840	18890	50
02-Aug-19	17280	16971	-309
02-Sep-19	15775	16812	1037
01-Oct-19	16030	16228	198
04-Nov-19	16515	16398	-117
04-Dec-19	16750	16772	22
03-Jan-20	17120	16801	-319
04-Feb-20	16250	16337	87
03-Mar-20	16225	16741	516
01-Apr-20	14225	14411	186
04-May-20	14980	15193	213
02-Jun-20	15640	16160	520
01-Jul-20	16825	16857	32
04-Aug-20	17750	17767	17
01-Sep-20	17830	18205	375
01-Oct-20	17380	17254	-126
02-Nov-20	17915	17769	-146
01-Dec-20	19315	18897	-418
07-Jan-21	21880	21310	-570
01-Feb-21	24140	24158	18
01-Mar-21	27780	23739	-4041
01-Apr-21	27760	26678	-1082
03-May-21	32950	28990	-3960
01-Jun-21	33895	30723	-3172
01-Jul-21	34150	31294	-2856

Zinc

Price Forecasts and World Quarterly Supply/Demand Balance

Source: Wood Mackenzie

		Refined Supplies	Refined Consumption	Balance	Metal Stocks Days of Cons	Cash \$/tonne	Price c/lb
2020	Q1	3354	3260	94	44	2128	96.5
	Q2	3295	2873	422	63	1961	89.0
	Q3	3441	3426	15	54	2335	105.9
	Q4	3644	3634	10	51	2628	119.2
	Total/Avg	13734	13194	540	51	2267	102.8
2021	Q1	3476	3419	57	55	2748	124.6
	Q2	3433	3495	-62	53	2842	128.9
	Q3	3472	3440	32	54	2850	129.3
	Q4	3544	3460	83	56	2900	131.5
	Total/Avg	13925	13814	111	56	2835	128.6
2022	Q1	3480	3498	-19	55	2900	131.5
	Q2	3581	3576	5	54	2900	131.5
	Q3	3583	3520	63	57	2900	131.5
	Q4	3648	3541	108	59	2900	131.5
	Total/Avg	14292	14135	157	59	2900	131.5
2023	Q1	3653	3578	75	60	2800	127.0
	Q2	3640	3657	-18	59	2750	124.7
	Q3	3601	3599	1	60	2650	120.2
	Q4	3654	3621	33	60	2650	120.2
	Total/Avg	14547	14455	92	60	2713	123.0

Price Forecasts and World Quarterly Supply/Demand Balance

Source: Wood Mackenzie

Global (kt)	2020	%	2021	%	2022	%	2023	%
Mine Production	12478	-3.1	13141	5.3	13571	3.3	13926	2.6
Refined Production	13734	2.5	13925	1.4	14292	2.6	14547	1.8
Consumption	13194	-4.6	13814	4.7	14135	2.3	14455	2.3
Concentrate Market Balance	-448		216		348		505	
Metal Market Balance	540		111		157		92	
Prices								
Cash LME Price (\$/t)	2267		2835		2900		2713	
(c/lb)	103		129		132		123	
Realised TCs (\$/t concentrate)	300		159		226		266	

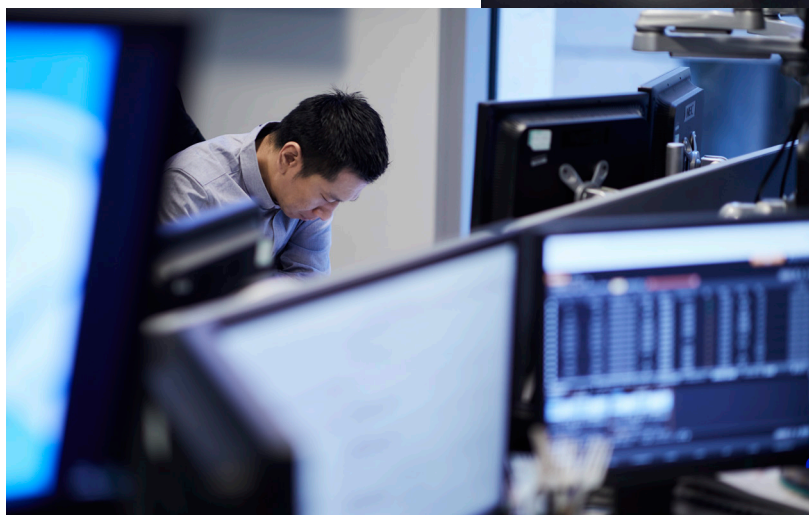
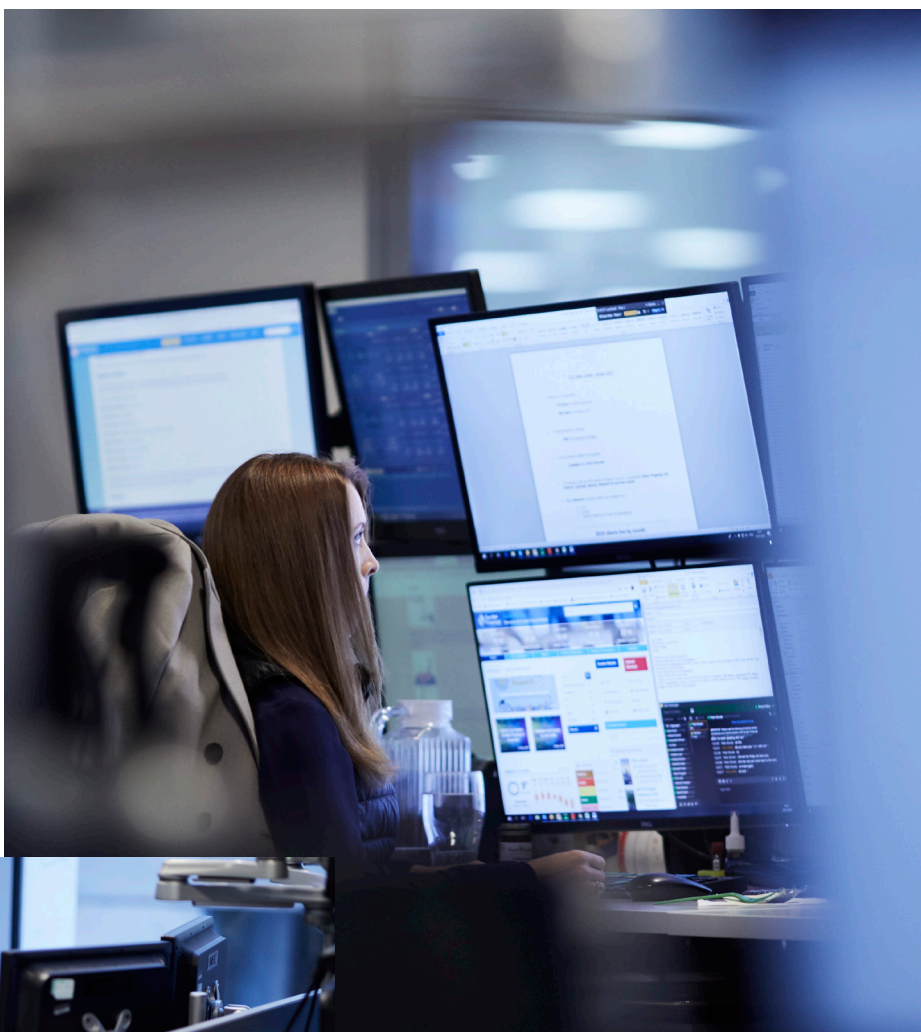
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