

Analyst

Yang Pei Qi

Global Macro Analyst

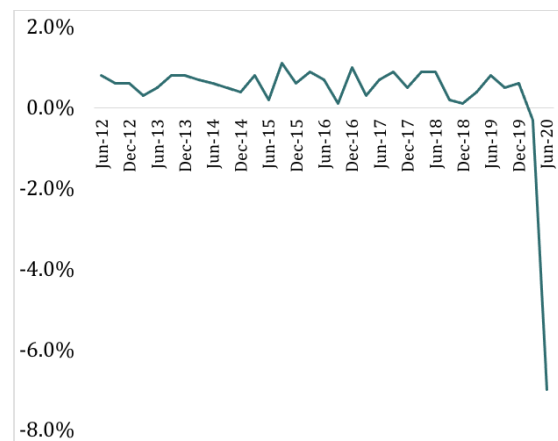
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Basic Information

Real GDP(US\$)	1392.7B
M2(US\$)	1.7T
CPI	116.2
PPI	111.7
Con. Confidence	98.81
Building Permits	15,827
Stock Index	ASX200
Currency	AUD

Chart Info

Figure 1: GDP Growth Rate



Source: Australian Bureau of Statistics

Figure 2: Positive Correlation between AUDUSD and Gold



Source: Tradingview

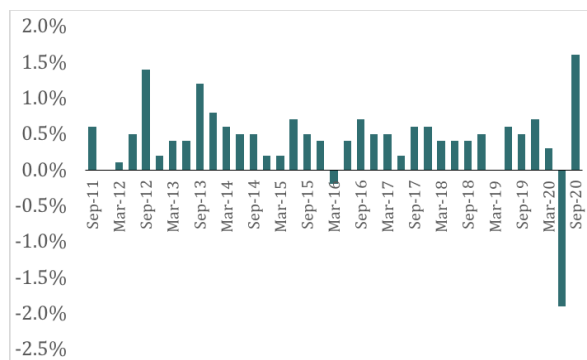
Land Down Under

- Lying between the Indian and Pacific Oceans, Australia is the world's sixth-largest country and is the second wealthiest nation in terms of median wealth per adult, right after Switzerland.
- Being an open economy, trade accounts for 45% of Australia's annual GDP and top trading partners include China, Japan, U.S., Korea and Singapore. China remains Australia's largest two-way trading partner as two-way trade surged past AUD230 billion, accounting for 26.4% of Australia's total trade. Singapore replaced India as Australia's fifth largest two-way trading partner, up from eighth in 2017-2018.
- Commodities play a huge role in export goods as Australia is the top global exporter of iron ore and coal and second largest exporter of aluminium ores, unwrought leads and zinc ores. Minerals and fuels made the greatest contribution of 50.9% to Australia's total exports, while education-related travel services grew over 15.2% to be the country's fourth largest export overall.
- At least half of total imports come from economies in Asia and personal travel services received by Australians abroad was the largest component. Other imports include raw materials and components such as refined petroleum, passenger motor vehicles, telecom equipment and parts.
- As one of the top Gold producers in the world, Australia's Gold reserves are larger than those in Russia or South Africa. The Aussie dollar thus has a positive correlation with Gold and has been a free-floating currency since 1983 (Fig. 2).

Summary of Events in the Past 6 Months

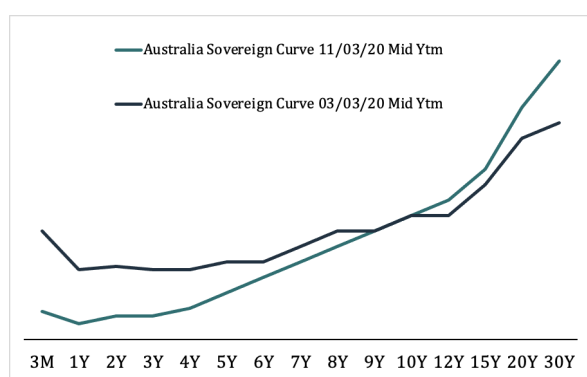
- The Reserve Bank of Australia (RBA) has cut rates from 0.25% to 0.1%, alongside the announcement of AUD100 billion bond purchase program to tackle the effects of COVID-19.
- Escalation of Australia-China tension has caused up to AUD26 billion worth of exports on the line. This includes two dozen Indian sailors stranded at a Chinese port with 170,000 tonnes of Australian coal for five months.
- Victoria state reported zero COVID-19 cases for the first week of November, implying successful containment of the second wave of outbreaks.
- Travel restrictions lifted in the state and eased with New Zealand and Singapore.
- Australia's global IPO activity sees one of its best months in October 2020 with \$712 million worth of first-time share sales.

Figure 3: Quarterly Change in Consumer Price Index (CPI)



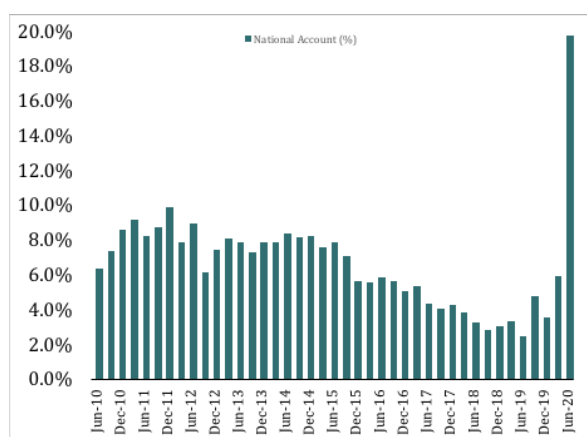
Source: Australian Bureau of Statistics

Figure 4: Bond Purchase and Lower Interest Rates Across the Yield Curve to Assist Recovery



Source: Bloomberg

Figure 5: Household Savings Ratio At All Time High



Source: Australian Bureau of Statistics

RBA's Key Measures

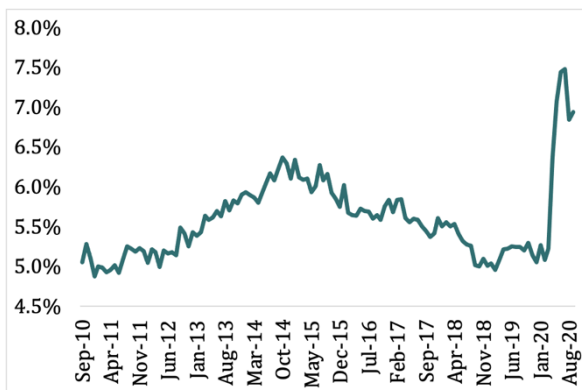
Rate Cuts

In its meeting on 3rd November 2020, the Board decided to further reduce the cash rate target, yield-curve target and bank lending facility rate to 0.1% from 0.25%, alongside its announcement of purchases of longer-dated bonds to complement its yield curve control program. These measures were announced as the Bank speedily attempts to extract the Australian economy from its first recession in almost 30 years. With the Bank's plans to buy AUD 100 billion worth of government bonds targeting maturities of around 5-10 years over the next six months (Fig. 4), RBA's balance sheet will almost triple once purchases are complete. These bonds will be bought in the secondary market and further details of the auctions would be released in weeks to come and the yield curve flattened after the announcement. In addition to the bond purchase program, the Bank is well-prepared to facilitate any additional purchase of bonds, regardless of quantity, to hit the 3-year yield target of 0.1%. The combination of the Bank's bond purchases and lower interest rates across the yield curve will improve the recovery by lowering borrowing costs, contributing to lower exchange rates and supporting asset prices and balance sheets. With major central banks injecting liquidity to contain the effects of COVID-19, we have seen a rapid ballooning of RBA's balance sheet, from around AUD 180 billion prior to the pandemic to around AUD 280 billion in 2020, in line with the Fed and Bank of England (BoE). The Board has announced that they are not expected to increase the cash rate for at least three years, but we believe that the combination of both monetary and fiscal measures will be required for some time. The bank needs to consider moving rates lower for longer as further policy easing is likely to be delivered globally and has reaffirmed that a Funding for Lending Programme (FLP), lower or even negative official cash rates remain under consideration.

Signs of Recovery

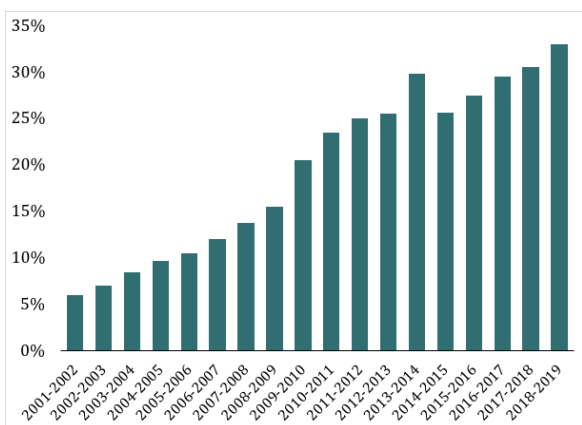
The near-term outlook for Australia looks more optimistic as compared to three months ago as recent economic data have been better than estimates. With Victoria and New South Wales reopening as community cases decline, the Bank expects GDP to grow at around 6% over the year to June 2021 and 4% in 2022. Households' savings ratio has skyrocketed to an all-time high in 46 years, standing at a

Figure 6: Unemployment Rate Peaks



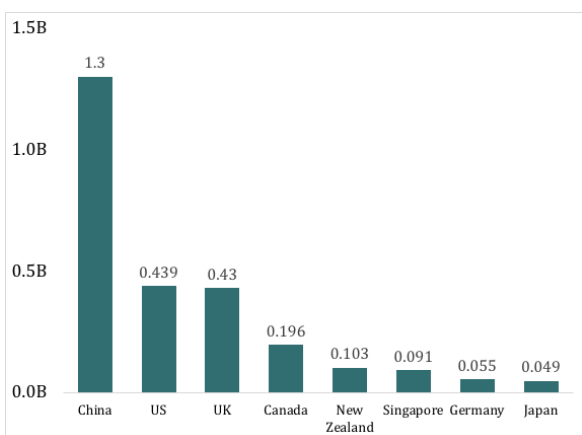
Source: Australian Bureau of Statistics

Figure 7: Australia is Increasingly Reliant on Chinese Trade



Source: Australia Department of Foreign Affairs and Trade

Figure 8: China is Australia's Top Wine Market



Source: Wine Australia

strong 19.8% in June 2020 (Fig. 5). This was due to limits on spending opportunities and strong growth in household disposable income despite a sharp fall in employment and hours worked. Hence, implying a potential speedy recovery and positive GDP growth for the land down under if Australia is able to successfully contain the virus. However, we are concerned as to when international borders may be reopened as tourism and overseas education are key contributors to the Australian economy.

Unemployment Rate & Inflation

Australia's unemployment rate remains at a 20-year high and is expected to peak at a little below 8%, as compared to the expected 10% previously (Fig. 6). At the end of 2022, the unemployment rate is forecasted to be around 6%, still slightly higher than pre-pandemic levels. With excess capacity and extended periods of high unemployment, we expect muted increases in wages and prices in the next few years. Inflation was 1.25% in the recent quarter.

The Bank has reassured Australians that addressing the high rate of unemployment is of utmost national importance. Together with their newly announced policy measures and further easing of activity post-pandemic, this would hopefully help Australia support jobs in the coming months. However, with 2 million fewer workers on JobKeeper after tightened eligibility and reduced payment rates announced at the end of September 2020 alongside uncertainty of the pandemic, economic recovery will be long and hard as there is still certainly a lot of ground to make up.

Trade War 2.0

Badly Bruised

With the global spotlight on the race for the White House, Sino-U.S. tensions are not the only one under increasing duress. While Australia's relations with China have been on thin ice since 2017, Australia's vocal push this year for an international enquiry into the origins of COVID-19 was a move that badly bruised China's pride. Even before the pandemic, Australia-China relations have had several long-running irritants. These include the decision of Australia to exclude Huawei from the 5G network rollout in 2018; China's continued incarceration of Australian pro-democracy writer Yang Hengjun; a dispute over the South China Sea as well as economic and politics resulting in foreign interference laws being passed in 2018. With China emerging as one of, if not the strongest, in the pandemic recovery, we strongly believe that this dispute would potentially hurt Australia more than China. Australia is a middle power that is heavily economically reliant (Fig. 7) on rising China but retains a strong security alliance with the U.S., which further stirs the pot of tension between Australia and China. As the world's most China-reliant developed economy, around one-third of Australian exports are shipped to China. This one-sided trade war between Beijing and Canberra has disrupted exports worth up to AUD26 billion, and counting, as commodities suffer as the biggest collateral damage. Coupled with Canberra's firm stance against Victoria's engagement in China's Belt and Road Initiative (BRI), Canberra seems intent on maximising friction with Beijing at the expense of Australian businesses and consumers.

Blacklist

The Grape Escape

China is Australia's biggest wine buyer for premium wines (Fig. 8) and has purchased AUD1.2 billion worth of wine this year, up till September. This amount is almost two and half times larger than its exports to the US and accounts for 39% of total exports, as of year ending September 2020. With China opening its doors to tariffs on Australian wine, we expect wine exports to decrease significantly over the following months. With at least 4 wine importers told to stop importing Australian wine, China may impose an anti-dumping duty of more than 200% on Australian wine, further souring relations.

Coal Country

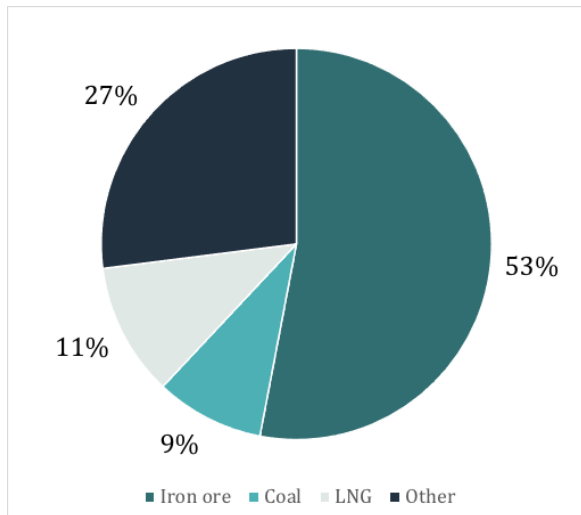
Major commodities iron ore, natural gas and coal are worth more than 60% of total exports to China (Fig. 9). With Chinese power stations and steel mills ordered to stop using Australian coal in early August this year, exports to China declined by AUD211 million and driving this decline were exports of coal, down by 41%. Export earnings from the steel-making material are forecasted to fall from AUD35 billion to AUD23 billion in the next 12 months. Coal is China's chunkiest target, with it contributing to almost 9% of Australia's total earnings from exports to China last year. However, this lags far behind the largest contributor, iron ore that is seen as more immune from this one-sided trade war as China's key sectors still require heaps of high-quality Australian ore. Together with iron ore and liquefied natural gas (LNG), iron ore triumphed AUD150 billion worth of exports in 2019 and remains untouchable in this dispute.

Other products in line include copper, cotton, sugar, barley, beef and lobster.

Place Less Eggs in the Dragon's Basket

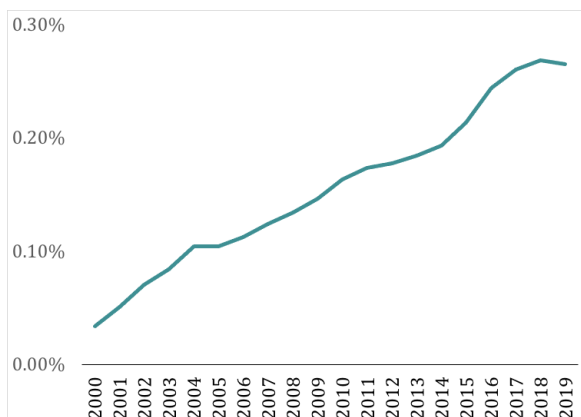
Though some of Australia's exports like iron ore may be less prone to disruption threats, China ambassadors have already warned Chinese citizens that they may no longer visit the city or choose it as the destination to educate their children. Education and tourism are potent targets given the importance of these sectors' large contribution to the Australian travel industry (Fig. 10). According to the Department of Education, China sends the most international students to Australia annually, accounting for 37.3% of 442,209 overseas students in higher education in 2019. An additional AUD38 billion worth of services exports may leave Australia vulnerable to this trade spat while it tackles its first recession in almost 30 years. China seems determined to punish Australia with a long list of imports put to a halt and with ratcheting up tensions, we see this add volatility to the stock market and impact Australia's economic growth.

Figure 9: Primary Exports to China in 2019



Source: Australia Department of Foreign Affairs and Trade

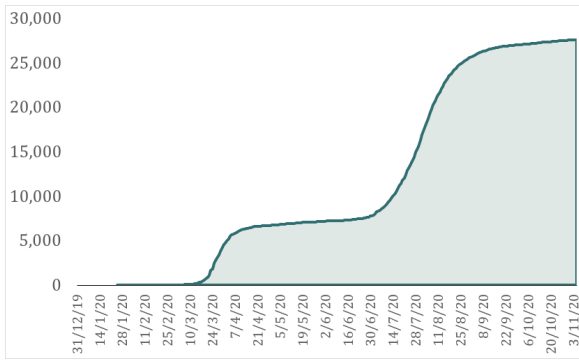
Figure 10: Growing Chinese Tourists in Australia Over the Years



Source: Australian Bureau of Statistics

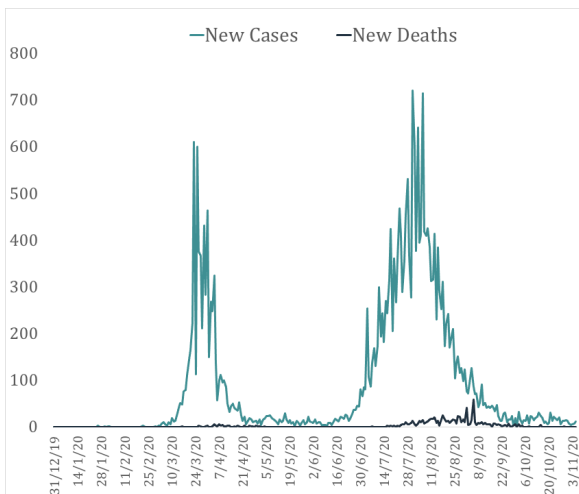
Aight, Australia!

Figure 11: Total COVID-19 Cases



Source: Our World in Data

Figure 12: Daily New Cases and Deaths



Source: Our World in Data

With the Sydney Opera House reopening and the city's rugby league grand final attracting almost 40,000 spectators, Australia has almost eliminated the virus. As of 5th November 2020, Australia has recorded just over 27,600 novel COVID-19 infections and 907 deaths, far fewer than many other developed countries (Fig. 11). This is largely attributed to extensive testing, contact tracing and lockdowns.

Earlier this month, Prime Minister Scott Morrison has also agreed to purchase another 50 million doses of two more COVID-19 vaccines from Novavax as well as Pfizer and BioNTech. This deal is estimated to be worth about AUD1.5 billion. This is in addition to Australia's expenditure of AUD1.7 billion to buy 85 million vaccine doses from AstraZeneca and CSL Ltd as Canberra aims to complete a mass inoculation programme within months.

Victoria state reported its seventh consecutive day of zero locally transmitted COVID-19 cases on Friday, November 6. A full week with no COVID-19 cases comes after a three-month strict lockdown in the city of Melbourne to stall an outbreak that peaked at more than 700 new cases in a single day in early August (Fig. 12). The state remains on track to ease travel curbs to allow movement between state capital Melbourne and other parts of the state. However, Victoria Premier, Daniel Andrews, urged citizens to remain vigilant as he warned that the absence of cases in a week is not a vaccine against the virus. In its other states, New South Wales reported four new cases of locally transmitted COVID-19 cases in a day earlier this month while the other states and territories have effectively eliminated the virus.

With daily cases slowing to fewer than 10 each day, Australia has also seen it lift its travel restrictions with New Zealand and Singapore as the rest of the world continues to battle with the virus. The relaxation of regional border rules has also prompted national carriers Qantas and Virgin Australia to boost the number of flights on the Sydney-Melbourne route, one of the busiest in the world before the pandemic, with hopes to boost the Australian economy. This is heartening news for the Australian carriers as Virgin suffered AUD 71.2 billion before-tax losses prior to COVID-19, followed by administration after the government's refusal for an AUD 1.4 billion loan and Qantas slashing about 8,500 jobs due to the pandemic.

Source: TradingView

Trade Idea: Short AUDCNH

Though Australia has successfully contained the virus with daily news remaining in double digits, the rest of the world continues to battle with the pandemic with Europe and the U.S. battling second waves.

This had led to global muted demand for commodities, as seen by the distress zones that Crude and Copper are in based on their Altman Z-Scores. Since commodities contribute significantly to Australia's total exports annually, we would expect the Aussie dollar to depreciate further. We see such bearish trends to continue to persist as escalating Australia-China tensions and the RBA's dovish intent remains a potential source of underperformance for the Aussie dollar.

China, being first in and first out of the virus, has reported strong Q3 earnings in 2020 up 4.9% from a year ago. The International Monetary Fund (IMF) has also forecasted China to be the only country that would report growth at the end of 2020. In addition, favoured yield differentials have led to capital inflow. As seen in its 'dual circulation model', China's further opening its domestic trade and financial markets alongside its plans on self-sufficiency in technology will certainly boost the strength of CNH.

Coupled with an upcoming Joe Biden presidency, this has also raised investor expectations of a more predictable trade relationship between the world's two economic powerhouses. As such, we believe that CNH will continue to strengthen in the coming months against this backdrop. With China's improved balance of payments position and a likely decline in trade tension with Washington due to Biden's win, we remain optimistic of CNH supported by fundamentals of the rise of China and its competitors struggling.

Based on the currency pair, strong support seems to have been established at 4.70, as shown by the previous structure. In the near future, should the market go risk off and the support line is broken, we will enter a short position just below the previous lows set on 2nd November 2020, at 4.67. We will be taking profit at 4.49, just above the Fibonacci 0.50 level, concluding with a risk to reward ratio of 2.85.

Entry: 4.67

Take Profit: 4.49

Stop Loss: 4.73

Risk Reward Ratio: 2.85

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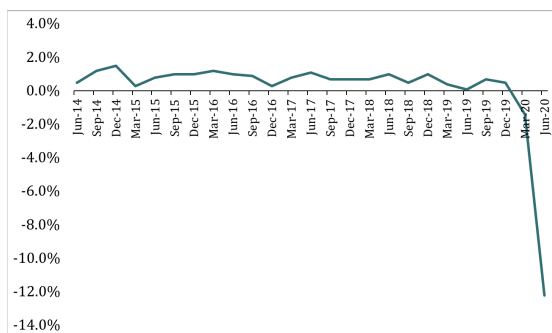
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Basic Information

Real GDP(US\$)	206.93B
M2(US\$)	150.88B
CPI	1054.0
PPI	1153.0
Con. Confidence	95.1
Building Permits	2,351,746,281
Stock Index	NZ50
Currency	NZD

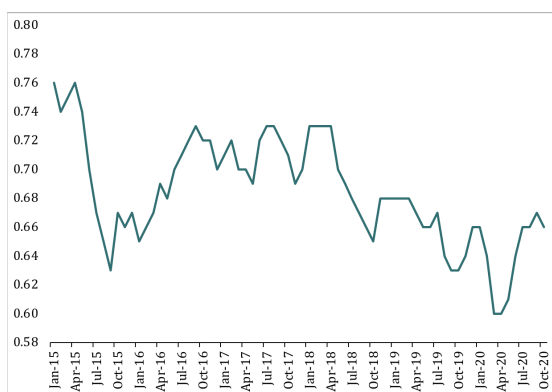
Chart Info

Figure 1: Quarterly GDP Growth Rate



Source: Stats NZ

Figure 2: NZDUSD



Source: Stats NZ

The Land of the Long White Cloud

- Population of five million and its capital city is Wellington.
- Known for high well-being and abundance of natural resources.
- Led by Prime Minister Jacinda Ardern, she was the world's youngest head of state when elected in 2017.
- Key drivers of the economy include service industries (science and tech, rental and real estate), construction and agriculture.
- Being an extremely export reliant economy, exports constitute to a third of the New Zealand economy. Key trading partners include China, Australia, U.S. and Japan.
- Top exports include concentrated milk/dairy, sheep and goat meat while they mainly import cars, crude and refined petroleum.
- Inflation rate remains well below 2% in recent years, with the most important category being housing and utilities.

Summary of Events in The Past 6 Months

- Economy suffered its most severe contraction since the Great Depression as GDP slumped 12.2% QoQ in 2Q20 (Fig. 1).
- Unemployment rate climbs to highest jobless rate since 2016. It reached 5.3% in 3Q20 as compared to 4% in the previous quarter.
- Jacinda Ardern won a landslide victory in elections to serve a second term.
- One of top few countries in the world that have successfully eradicated community transmission of COVID-19 despite a flare up of cases in August.
- NZDUSD hit highs of 0.67883 with increased risk sentiment on a divided US Congress and extension of Small Business Loan Scheme (Fig. 2).

RBNZ's Key Measures

Source: NZ Stats

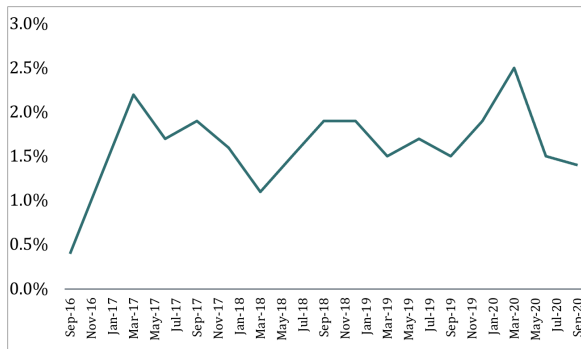
Source: Stats NZ

Source: Stats NZ

RBNZ's Key Measures

Consumer prices rose 1.4% YoY in Q3 2020, compared to 1.5% in the previous quarter (Fig. 4). This was less than economists' estimates of 1.7%, signifying that the economy is still operating well below its pre-Covid trend. Consumer prices excluding food, fuel and energy rose 1.7% YoY, slowing from 1.9% in Q2, showing signs of weaker than expected recovery. With sluggish inflation in the third quarter as fuel prices fail to recover, we believe that negative rates may come earlier than expected, as inflation undershooting its target band has a much higher risk over the medium term than the risk of it overshooting. Negative OCR combined with loans to banks can get borrowing costs lower, pushing wholesale rates negative, retail rates closer to zero and thus stimulating greater demand for debt among New Zealanders.

Figure 6: Inflation Rate



Source: Stats NZ

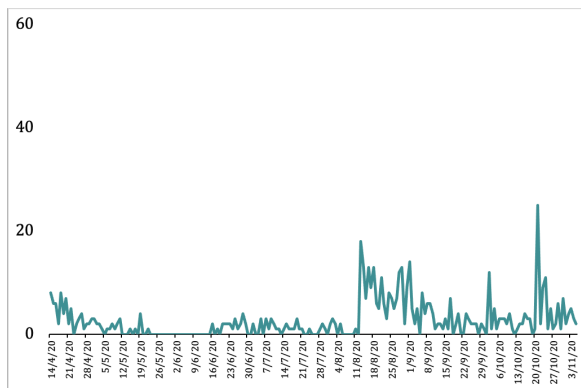
Unemployment Spike

New Zealand's jobless rate rose from 4% to 5.3% in the second quarter as companies including Air New Zealand and Warehouse Group were forced to reduce headcount in the aftermath of the recession caused by the pandemic (Fig. 5). The labour market is expected to weaken in coming months as the government wage subsidy came to an end in September.

Under its dual mandate aim, the RBNZ aims to keep inflation around the midpoint of 1-3% (Fig. 6) and support maximum sustainable employment. However, as inflation rates are expected to consistently lie below the target band of 1-3% for longer, coupled with unemployment rates predicted to rise to 8.1% this year, we believe that RBNZ will go to sub-zero OCR as early as February next year.

Jacinda-mania

Figure 7: New Zealand Eradicates COVID-19 With Low Daily New Cases



Source: Our World in Data

COVID-19? Crushed.

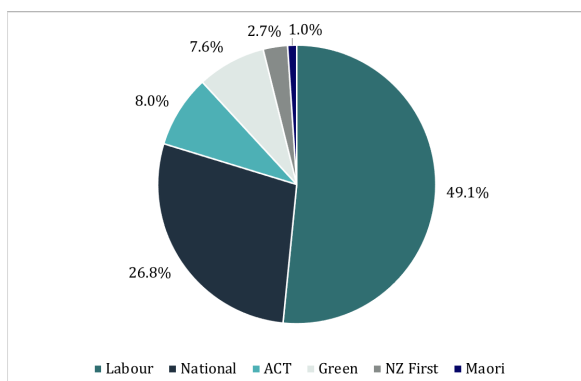
Prime Minister Jacinda Ardern's pursuit of an elimination strategy saw the country's success in crushing community transmission of COVID-19 strands as compared to countries like the United Kingdom and U.S. The country went into one of the world's most stringent lockdowns in late March, shutting down the economy at a time when there were only 102 cases. It was a political gamble but one that paid off, as the nation of five million people has a total of less than 2000 cases and recorded 25 deaths as of 5th November 2020. Despite a small flare-up of cases in August (Fig. 7), life in New Zealand is almost back to normal and Ardern's response to COVID-19 continues to be a masterclass in crisis leadership for leaders around the world.

Bright Light for Another Term

Compassionate Competence

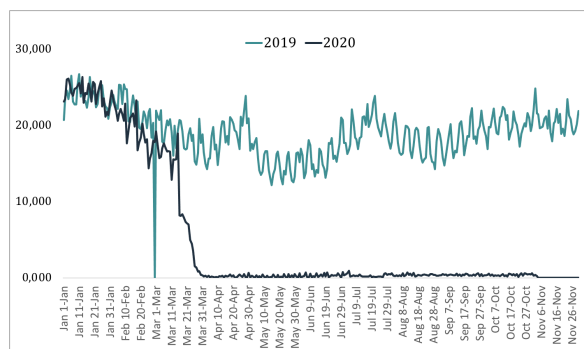
Ardern secured her second term with a historic landslide election victory with her brand of compassionate politics— 'be kind'. She beat opponent, National Party Leader, Judith Collins, as she won 49.1% of the votes after a huge swing to the left in many urban and provincial electorates (Fig. 8). Ardern's message of empathy and kindness married with skilful crisis management won the Labour Party its biggest share of the vote in more than 70 years as her party won 64 seats in the 120-seat parliament. In an age of populism and confrontation, it is clear that New Zealanders value the politics of inclusion in leadership- a stark contrast between the divisive Trump-Biden elections. During her term, she led the nation through very challenging circumstances such as the worst mass shooting in modern New Zealand history, the deadly Whakaari White Island volcanic eruption that killed 21 and most recently, the COVID-19 pandemic. Ardern's authenticity and ability to lead the nation in some of its darkest moments has thus helped her govern the first outright majority in 70 years.

Figure 8: Ardern's Historic Victory



Source: NZ Electoral Commission

Figure 9: Daily Border Arrivals



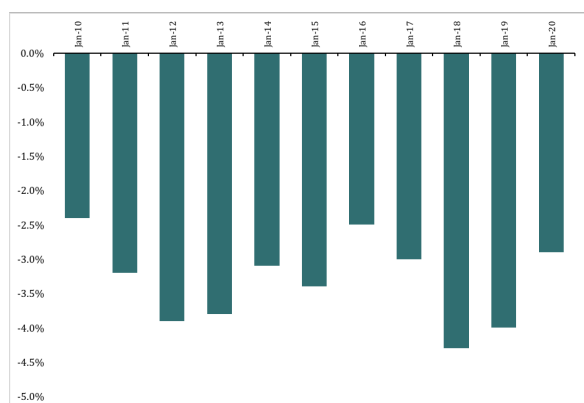
Source: Stats NZ

Party is Over, Time to Deliver

Though the pandemic gave her a stage to display her greatest strengths as a politician, Ardern has been criticised for failing to deliver the transformational promises she has made at the start of her term. She did not alleviate the widening gap between the rich and poor and her plan to build 100,000 new homes to ease the housing crisis also fell short. In the coming term, the Labour Party will impose a higher tax rate on income over NZD180,000 to raise more revenue and is pledging a massive NZD45 billion on infrastructure in the next five years to boost the economy.

The South Pacific nation is one of the top few countries in the world that have emerged early out of lockdowns, but the real pain may still lie ahead as the border remains closed to foreigners, crippling the key tourism industry (Fig. 9).

Figure 10: Current Account



Source: Stats NZ

Kiwis and Hawks

Under Ardern, New Zealand has taken a nuanced foreign-policy stance toward China and tried not to antagonise the Big Bear. Similar to Australia, China has been New Zealand's top trading partner since 2017. 23% of total goods and services exports and 16% of imports by value were with China in the year ended December 2019. Key exports include meat, dairy and logs. The difference lies in the softer rhetorical approach to China as compared to Australia's more assertive approach. With escalating Australia-China tensions, we expect Wellington's increasing challenge in balancing two contradictory objectives namely, its Pacific relationship tied to New Zealand's identity while continuing its alliance with their long-standing neighbour, Australia. At the same time, it continues to stay in line with the U.S. and its other western allies in the Five Eyes intelligence-sharing alliance. This diplomatic approach has so far helped New Zealand to avoid the souring of relations that Canberra is currently experiencing with Beijing.

However, it is important to note that New Zealand is more vulnerable than Australia if China imposed trade sanctions. Despite a free-trade agreement being signed in 2008, tourism, seafood and gold kiwifruit are at risk. In 2019, China bought 37.5% of its exports from the ocean and 32.9% of exports of the golden fruit. Ultimately, while working together is important, both New Zealand and Australia will have to listen to Pacific states if they want to advance their defence and security interests while maintaining favourable trade ties.

Trans-Tasman Travel Bubble

Bubble Popped

From 16th October 2020 onwards, New Zealanders will be able to visit only the New South Wales state and the Northern Territory in Australia without having to undergo quarantine. Though an incremental step to reopening, New Zealand is still keeping its border shut as New Zealanders who are travelling home from Australia will still have to serve their stay home notices. She has instead urged them to spend their summer holidays in New Zealand instead. This is detrimental to the economy as international tourism expenditure contributes 20.4% to New Zealand's total exports of goods and

Figure 11: Air NZ Shares Dipped Due to the Pandemic



Source: Tradingview

services. With 8.4% of the total population employed in the tourism industry, this will continue to hinder the country's economic growth.

Travel Bubble Should Have Stayed a Thought Bubble

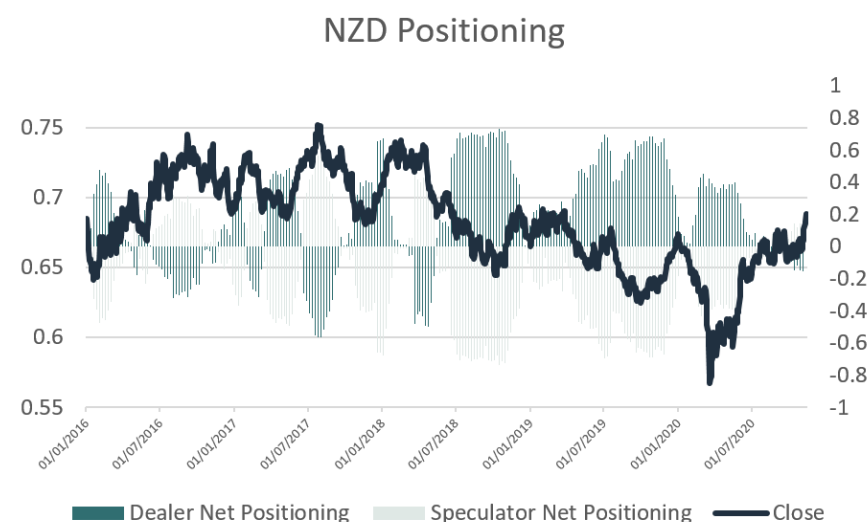
Shortly after a day of easing travel restrictions, the fledgling travel bubble hit an early snag after 17 passengers who flew into Sydney caught connecting flights to Melbourne and Perth in an apparent breach of the rules. The quarantine-free travel corridor only covers two areas and has fallen far short of the bubble initially envisaged by Mr Morrison.

Figure 11: NZDUSD Weekly vs NZ-US 10 Year Spread



Source: Tradingview

Figure 12: NZDUSD Positioning



Source: CoT

Figure 13: New Zealand 10 Year Yields



Source: TradingView

Trade Idea: Long NZDUSD

While it appears that the RBNZ has increased the odds of a negative interest rate, we believe that the FLP is seen as a step nearer towards negative OCR, spurring economic growth before diving into sub-zero rates next year. In addition, the country pulled off a moonshot that remains the envy of most other nations as it eliminated the virus. This is a milestone for the New Zealand as most economic activity can resume at near to full capacity while the rest of the world continues to struggle with the virus.

However, the spike in unemployment rates this year continues to serve as a downside risk to the economic outlook in the coming months. The RBNZ also remarked that the pandemic and associated travel restrictions could have a significant long-term impact on the New Zealand economy given that border restrictions will likely remain in the near term due to fresh lockdowns in Europe, the UK and U.S.

From a technical point of view, we believe the market has already priced in the dovish stance of RBNZ as NZDUSD surge mirrored the surge in the 10-year yields (Fig. 12). Speculative net long positioning in NZD futures also seems to suggest this (Fig. 13). Furthermore, NZDUSD closed off the week above the historical weekly resistance of 0.69 (See Fig. 11).

Given the current upside momentum, the market could reach 0.7200 by the end of the year. The rollout of COVID-19 vaccines yet coupled with the new COVID-19 variant could slow down the global economy recovery and may cause minor pullbacks, but to an uptrend which remains intact for NZDUSD.

Entry: 0.669

Take Profit: 0.703

Stop Loss: 0.654

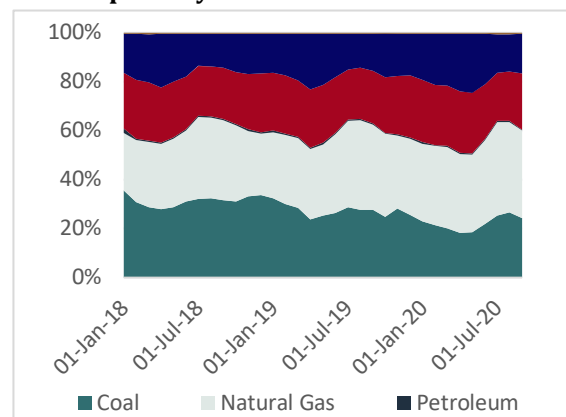
Risk Reward Ratio: 2.27

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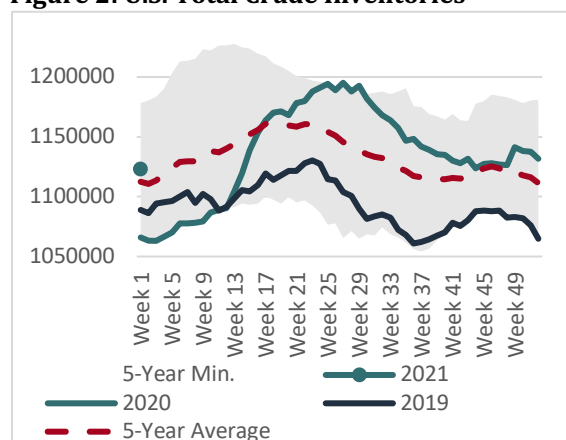
Chart info

Figure 1: Electric Power Sector Energy Consumption by Source



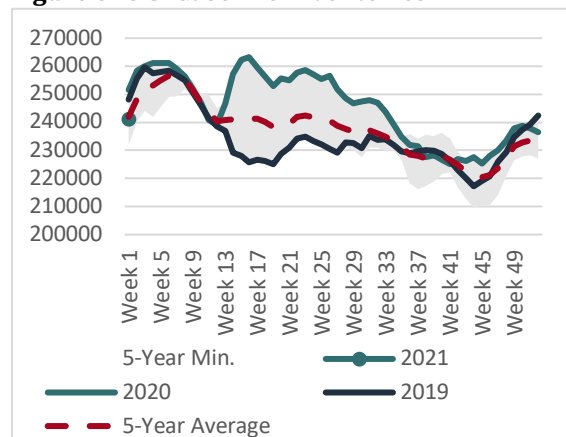
Source: EIA

Figure 2: U.S. Total Crude Inventories



Source: EIA

Figure 3: U.S. Gasoline Inventories



Source: EIA

Figure 4: U.S. Distillates Inventories

Overview of Oil and Gas

Crude Oil

- Crude oil is arguably the most important economic commodity in the world given its prevalence in activities that keep the global economy running.
- Crude oil can be refined into a variety of petroleum products, with the most prominent being gasoline, distillate fuel (diesel) and jet fuel. The transportation (gasoline) and industrial (diesel and feedstock) sector continue to be the largest consumer of crude oil making up approximately 94% of U.S. petroleum end-use consumption.
- The U.S. is also the largest consumer of crude (20.2%) with China coming in a distant second (13.7%).
- In 2019, the U.S., Russia and Saudi Arabia were the world's largest crude oil producers, producing to the tune of between 9 and 12 million barrels per day. Iraq and Canada come in 4th and 5th place producing around 4 to 5 million barrels per day.
- Crude oil is primarily priced to two benchmarks: Brent and West Texas Intermediate.

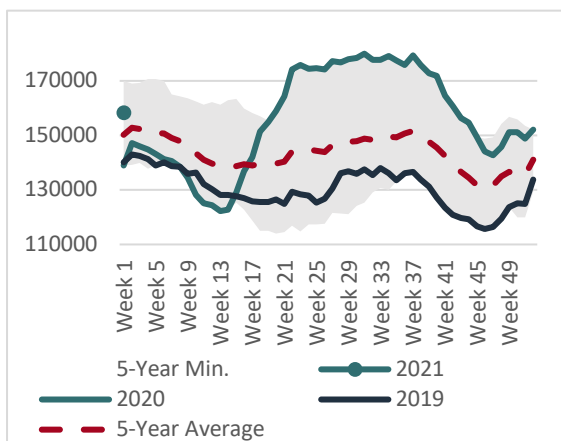
Natural Gas

- Natural gas is the third most important source of energy after oil and coal, with its use expected to overtake coal in the second spot by 2030.
- Majority of natural gas is used by the electric power and industrial sector, with the residential sector increasing consumption during the winter season for heating.
- In the U.S., natural gas has overtaken coal's market share in the electric power sector owing to a narrowing price gap between natural gas and coal as well as its lower greenhouse gas intensity. (see Fig. 1) The second largest sector is within industrial usage. Natural gas is used as raw material to produce fertilizer, chemicals, and hydrogen. Residential usage includes domestic cooking and heating and demand is highly seasonal, increasing during winter months and decreasing during summer months.
- The main point of distribution for natural gas is Henry Hub in Erath, Louisiana, where prices there are the dominant global reference price for natural gas.

Summary of events in the past 6 months

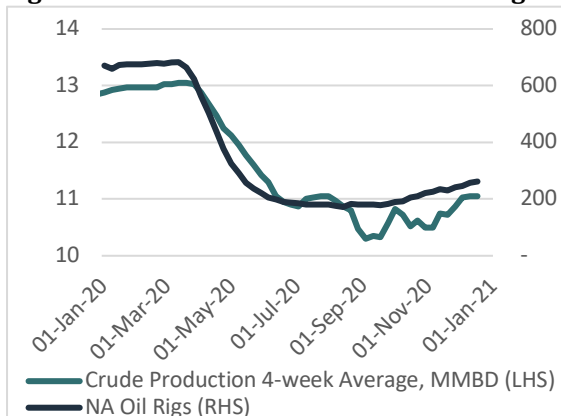
Crude Oil

- Since we last left off at the end of June, Brent and WTI prices have been trading in a relatively tight range between \$35/bbl and \$45/bbl before breaking out to the upside in late November with encouraging news of the rollouts of vaccines globally as well as the



Source: EIA

Figure 5: U.S. Crude Production and Oil Rigs



Source: EIA

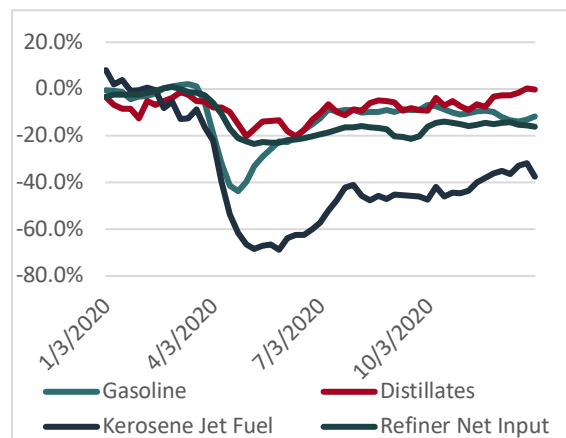
passing of large fiscal bills for multiple countries. This follows the harrowing escape from the sub-\$30/bbl abyss in April where U.S. inventories far exceeded the 5-year range (see Fig. 2).

- Crude price volatility saw a marked increase from September when the market was jawboned by impasses in fiscal negotiations in the U.S. and Europe which tempered the optimistic post-COVID-19 demand outlook. That quickly subsided as the market eventually priced in the eventuality of massive fiscal stimulus bills and the announcement and distribution of vaccines.
- On the supply side, aside from a gradual build up in comparative inventories in the last few weeks of 2020, crude stocks in the U.S. have declined significantly, remaining around 10 million barrels above the 5-year weekly average. (see Fig. 2). The supply overhang for refined products has cooled off decently for gasoline (see Fig. 3) but distillates continue to show some oversupply with 10 million barrels of inventories above the 5-year weekly average (see Fig. 4). Production volumes have started recovering alongside the increase in oil rigs (see Fig. 5) though production levels still remain about 2 million barrels a day below pre-COVID-19 levels.
- On the demand side (see Fig. 6), jet fuel and gasoline naturally bore the brunt of global lockdowns as road and air traffic ground to a halt. Demand has recovered strongly since the bottoms set in April with distillates showing the strongest gains with year-over-year demand just down slightly. It's important to note however that gasoline demand has been slipping for the past few months on the back of a resurgence in cases in the U.S. (see Fig. 7) and surging hospitalizations (see Fig. 8) that have caused lockdowns across the U.S..
- Six months ago, Brent and WTI's futures curves (see Fig. 9 and Fig. 10) were in steep 600-800 basis point 12-month contangos. Since then, the curves have flipped to a steepening backwardated curve, indicating expectations of a pickup in demand and tightening of supply.

Natural Gas

- Going into 2020, natural gas had already been suffering from a supply overhang, with working gas stocks at their highest mid-winter level since 2017. At the end of H1 2020, Henry Hub natural gas spot prices hit record lows due to a mild winter early in the year and depressed demand later on with the pandemic, hitting a 25-year low.
- The month of August saw a flurry of rig shut ins, most notably in the gulf, in preparation for Hurricane Laura, pushing the spot price from a low of 1.5 to a high of 2.6, only to collapse back down when demand for natural gas to LNG export facilities was shown to not have recovered yet at nearly half of what it was before the hurricane.
- Prices subsequently recovered and then surged as the demand outlook for natural gas improved as expectations of high exports to Mexico were priced in.
- On the supply side, natural gas inventories continue to hover near 5-year highs in light of a milder than expected winter.
- The U.S. National Weather Service's Climate Prediction Centre is projecting a modestly warm winter throughout most parts of the U.S. for the next 3 months (see Fig. 11) which will not be ideal when natural gas storage levels are modestly high (260 bcf above 5-year weekly average) (see Fig. 12).

Figure 6: U.S. Oil Consumption by End-Product and Refinery Inputs, Y-o-Y change



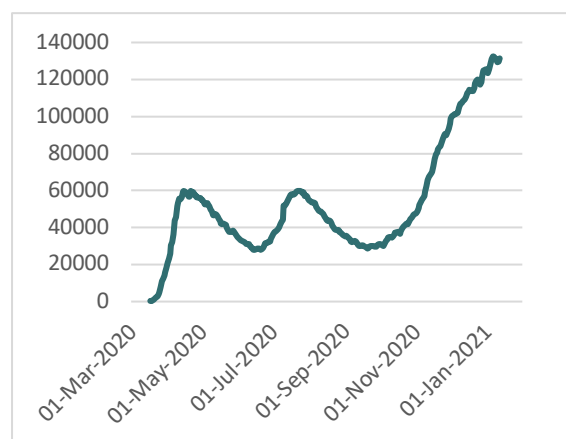
Source: EIA

Figure 7: U.S. Active COVID-19 Cases Week-over-Week (%)



Source: COVID-19 Tracking Project

Figure 8: U.S. Current Hospitalizations



Source: COVID-19 Tracking Project

Fiscal Flood and De-Dollarization

As countries such as China and Russia continue their efforts to reduce their dependency on the USD for energy trade (e.g. Power of Siberia pipeline, Petro Yuan), not only will the demand for U.S. treasuries by foreign institutions come under pressure, so will the demand for USD for energy trade as well.

14 July 2020: RMB-based energy trade grows

- BP and Mercuria were reported to be the first global traders to make physical delivery since the Shanghai International Energy Exchange (INE) opened in 2018. BP was reported to have delivered 3 million barrels of Iraqi oil.
- The INE has been China's answer to the dominance of the USD in global energy trade (See Fig. 13). All contracts traded on the exchange are quoted in Yuan, thereby allowing China to circumvent the need to use U.S. Dollars for energy transactions, thereby lowering their vulnerability and reliance on the USD for their resource imports. RMB-based energy trade is a key component for geopolitical chess pieces of China's conquest for dual hegemony.
- Another development to watch is whether OBOR countries will settle and trade in yuan. China using the yuan to source commodities from these OBOR countries, which act as export markets, could create some form of a mercantilist trading system reminiscent of the European colonial times.

As the U.S. budget deficit fell to its deepest in its recorded history, foreign institutions are clearly not in any hurry to buy U.S. federal debt, with most new supplies being bought up by the Federal Reserve (see Fig. 14).

This is structurally bearish for the U.S. dollar as the Federal Reserve must act as the buyer of last resort of U.S. treasuries to fund the deficit. As energy transactions are primarily priced in U.S. dollars, oil prices and the dollar's strength have high inverse correlation (see Fig. 15).

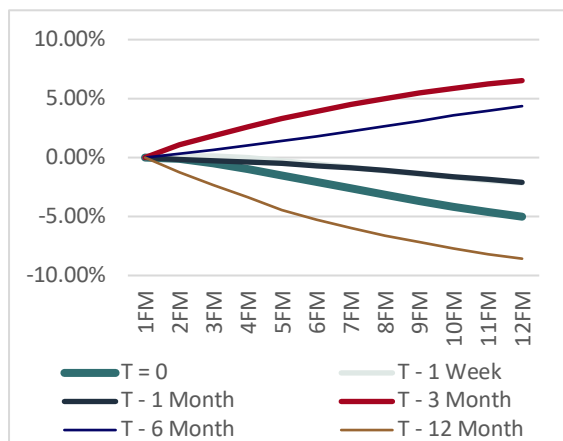
Over the medium term, crude also follows emerging markets (BRICs) growth (see Fig. 16). In a nutshell, as goes the global business cycle, so goes the energy cycle.

With vaccinations rolling out across the globe, massive fiscal programs being approved and the U.S. with no choice but to debase their currency to fund their own fiscal measures, the intermediate economic outlook for emerging economies, crude demand and oil prices have a lot to look forward to.

Global Green Movement

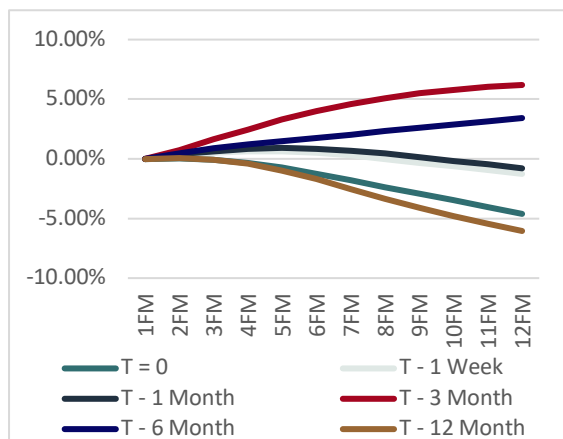
As is the case with the global monetary system, global energy markets face enormous change with both the EU and supranational organisations, such as UNCTAD, the UN's conference on trade and development, pushing a policy of dropping carbon fuels for green alternatives. Furthermore, the original agreement whereby Saudi Arabia agreed to sell its oil for dollars, giving U.S. banks control over monetary surpluses from all OPEC's oil sales, is no longer appropriate because the energy world has radically changed since that deal was struck in 1973.

Figure 9: Brent Futures Curve



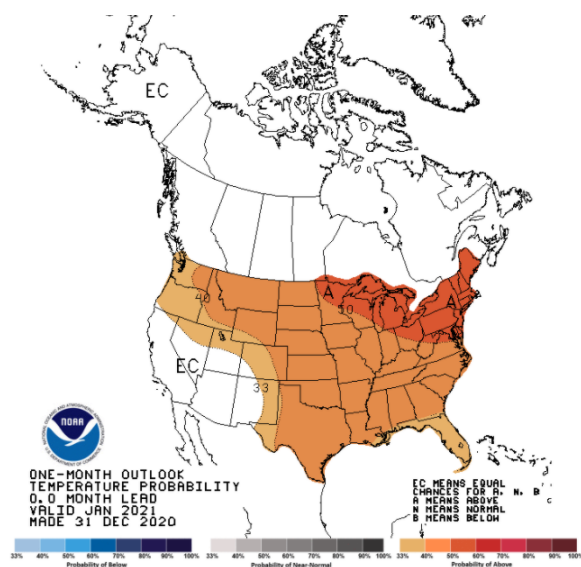
Source: ICE

Figure 10: WTI Futures Curve



Source: CME

Figure 11: U.S. 3-Month Temperature Outlook



Source: National Weather Service

The EU sees U.S. leadership failing while the Russian beast to its east is getting stronger. The lessons of Russia wielding power over Ukraine by cutting off energy supplies have been noted: energy security is a long-term threat to the EU and Russia is on the verge of controlling Middle Eastern supplies as well. Furthermore, the lessons of China's economic successes through non-democratic government control will also have been noted as something for European states to emulate.

The EU's response to the energy threat from Russia has been to adopt a radical green agenda without reservation. Despite about 98% of transport and logistics being delivered by diesel and gasoline, some member states in the EU are banning the sales of internal combustion engines as motive power from as soon as 2030.

This accelerated path to zero emissions will require massive investment. Clearly this is being viewed as economically stimulative at a time of declining optimism over the general economic outlook. These views are articulated in UNCTAD's Trade and Development Report 2019, Financing a Global Green Deal. The authors argue that internationally coordinated action between governments pursuing reflationary monetary and fiscal policies, while restricting international capital flows, will generate economic growth and capture the resources to finance the investment.

Along with the renewed monetary policies, the green initiative will be the narrative that underpins the need for unlimited fiscal spending to aid manufacturing and growth. And the continent that is leading the charge in this theme is Europe. They have been the most progressive about carbon emissions, taxes and credits. The U.S. and Japan have or are in the process of implementing new green-themed policies as well, with eye-watering price tags.

COVID-19's crisis has been an interesting development for the EU because it provided the opportunity for the Franco-German push for an unprecedented fiscal bill, a USD\$ 572 billion Green Deal.

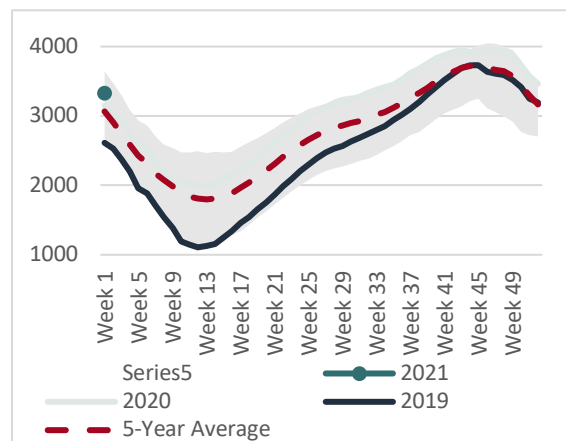
Ultimately, the global green movement is another form of narrative engineering by the political elite to indoctrinate Main Street with the climate change narrative in order to gain the full support of the population to take on more debt, to print more money for the so-called greater good of mankind.

A key beneficiary for this theme is natural gas, the go-to "cleanest" fossil fuel to replace the heavily polluting coal for electricity generation. Furthermore, as policy makers push to electrify their vehicle fleets, expect the transport sector's demand for gasoline to gradually shift to electricity, which in turn will be increasingly powered by natural gas, renewable energy and possibly nuclear energy.

Correspondingly, we will see stricter environmental regulations from policy makers which will significantly affect oil and gas exploration activities.

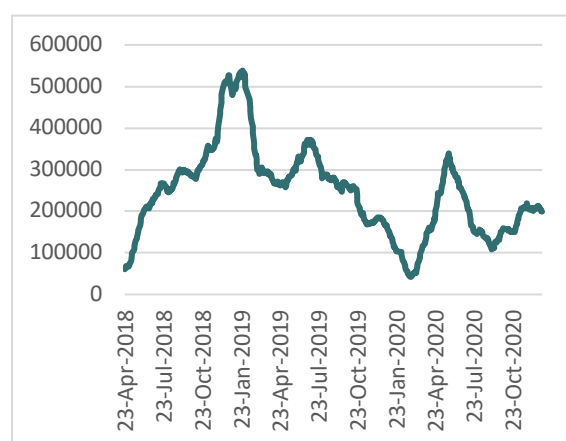
On October 7, 2020, JPMorgan Chase, the largest lender in reserve-based lending space, said it will shift its financing portfolio away from fossil fuels after facing years of pressure from shareholders and environmental activists. The U.S. bank called for its clients in the oil and gas, electric power and automotive sectors to reduce emissions by

Figure 12: U.S. Natural Gas Inventories



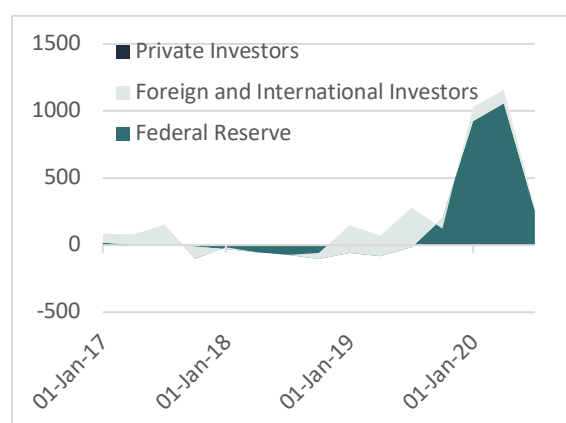
Source: EIA

Figure 13: Shanghai International Energy Exchange Rolling-1-Month Contract Volume



Source: Shanghai International Energy Exchange

Figure 14: U.S. Federal Debt Ownership (in billions), Quarterly Change



Source: Federal Reserve Economic Data

2030 and vowed to cut its exposure to companies that do not align their operations with the Paris climate accord.

JPM is the largest lender for U.S. shale RBL facilities with an exposure of \$250+ billion to oil and gas. It remains uncertain as to what extent it intends to reduce its exposure to oil and gas financing, but this will mean that the lead syndicate will have to be replaced by another bank for some new financing going forward.

For carbon-intensive energy companies, this will be bad news. Should they be unable to secure financing from a bank other than JPM, they will be forced to pay down debt via other financing methods or the straight up approach of free cash flow. This may mean bare minimum capex and all free cash flow going into debt.

To add on this, an estimated USD 500 billion of capital has been destroyed in U.S. Shale and with production and rig growth still tepid, it remains clear that investors are in no hurry to fund new wells.

U.S.-based oil producers will likely face increasing tighter criteria for financing, thereby restricting their ability to explore for more oil.

Furthermore, with the U.S. President-Elect Joe Biden coming in with bans of leasing federal lands for oil and gas exploration. Approximately 25% of U.S. oil production comes from federal lands and 26% of U.S. oil reserves are located on federal lands.

With exploration opportunities set to decrease over time and funding to become increasingly difficult for oil producers, the industry will find it increasingly harder to break out of its long-running trend of under-investment. (see Fig. 17)

In other words, the global economy is set out on a path of an explosion in demand for oil and gas at a time when supply will become increasingly constrained by environmental regulations and industry-wide underinvestment.

Thucydides Trap: East vs. West

Though it seems like Biden has secured the presidency, we believe that the U.S.' political stance toward China will not change that drastically in a post-Trump era.

The COVID-19 pandemic exposed the vulnerability of Just-In-Time inventory models when economic lockdowns shut down factories in key manufacturing hubs like China. In the aftermath, we have seen the U.S. pivot to strengthen their relationship with key allies that will allow them to be able to counter the Chinese, most notably India (to counter the Chinese) and Poland (to counter the Russians).

We expect more supply chains to move out of China in the name of supply chain security and diversification but in all truthfulness, to suppress China's rise as the eastern hegemonic power.

3rd August 2020: Foxconn, Wistron and Pegatron to boost smartphone manufacturing in India

3rd August 2020: Samsung decides to close PC plant in China

U.S. Dollar Currency Index - 1D - TVC

90.303 0.000 90.303

USD USD

100 90 80 70 60 50 40 30 20 10 0 -10 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -140

CL21, INMEX 52.84

Check Correlation -0.908

2015 2016 2017 2018 2019 2020 2021

1.000 0.500 0.000 -0.500 -1.000

Figure 16: BRICs GDP y-o-y Growth vs. Brent 12 Month Futures

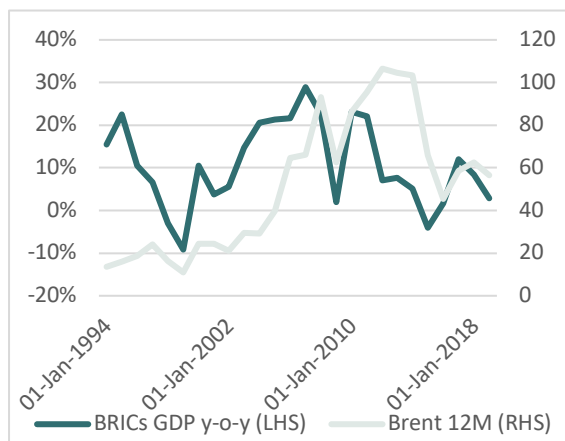
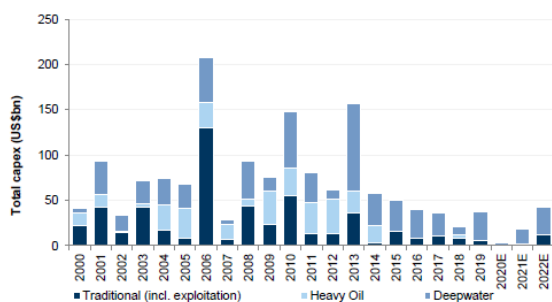


Figure 17: Top Projects CAPEX Sanctioned in Oil by Year, Split by Win Zone

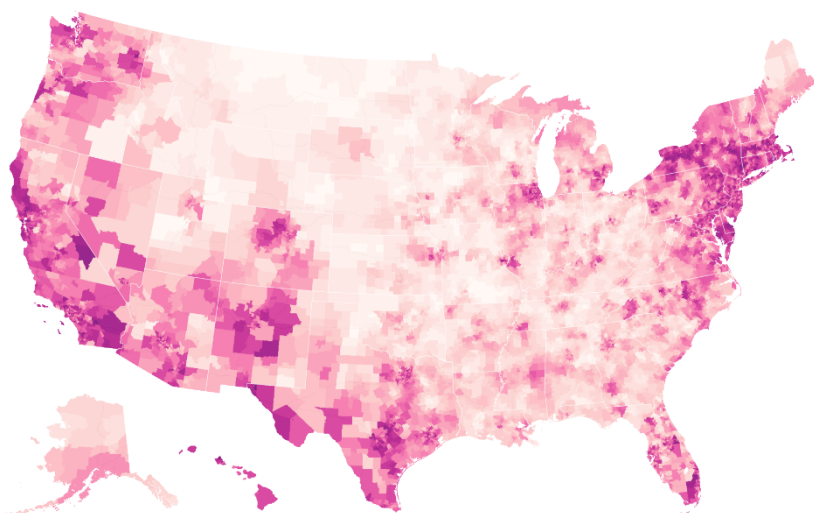


Source: Goldman Sachs Global Investment Research

29th July 2020: India bans 59 Chinese apps including TikTok, WeChat, Helo.

A by-product of all this shifting in global supply chains will be the need to update energy, manufacturing and logistics infrastructure, all of which are bullish for not just oil and gas, but commodities in general. Also, in the process of the disintegration of the world order, expect commodity volatility to move higher into a new paradigm. When central banks are suppressing rates and FX volatility, expect that energy to move somewhere else.

Figure 18: Detailed Map of Who is Wearing Masks in the U.S.



Source: New York Times

Figure 17: March-June 2021 WTI Crude Oil Time-Spread



Source: TradingView

Figure 18: Crude Oil WTI Futures and DXY

Short Term Trade Idea: Short March-June 2021 Time Spreads

Over the past few weeks, we continued to see COVID-19 active cases compounded at high single digits in the U.S. (See Fig. 7) Markets are looking past the continued surge in active cases in Europe and the U.S. with the hopes that the ongoing vaccine distribution will bring the global economy back to life.

The greatest danger for the U.S. going is that vaccine distribution is starting at the onset of winter. The ongoing vaccine distribution may give people a false sense of security, at a season where most people will be concentrated indoors for the warmth, increasing the risks of infections.

Couple this with the appalling proportion of Americans that actually wear masks (see Fig. 18), it remains to be seen what proportion of the population will take the vaccine given the public perception that the trials were rushed. There is a possibility that with vaccine acceptance at levels below those needed for herd immunity, COVID-19 cases will continue to surge at a time when hospitalizations are breaking new highs as well (see Fig. 8).

President-Elect Joe Biden promised to address the virus scientifically, thereby giving rise to the possibility of extended lockdowns.

Therefore, we are hypothesising that U.S. COVID-19 infections will continue to soar into the winter, prompting lockdowns across the U.S. as Biden proceeds with his presidency.

With inventories still not yet in the clear with some supply overhang remaining, we believe a short-term reversal may happen in shorter-term time spreads as optimism surrounding supply drawdowns fade.

Trade

To express this view, we recommend a time-spread trade on WTI Crude Oil futures, by shorting the March 2021 contract and longing the June 2021 contract, entering the pair position when the time-spread falls below 0.40.

Entry: \$0.38



Source: Investing.com

Figure 19: Commitment of Trader's Report



Source: freecotdata.com

Stop loss: \$0.50

Target 1: \$0.00 (Secure half of profits here)

Target 2: -\$0.20

Risk-reward at target 2: 4 - 1

Technicals

As mentioned earlier, crude prices are inversely correlated to dollar strength.

Both WTI futures and the DXY are now challenging key resistance and support levels of 50 and 90 respectively and while WTI Crude spot prices have rocketed higher, the consensus short dollar trade seems to be on shaky ground at the moment. (See Fig. 18)

As shown in Fig. 17, time-spreads are highly correlated to the WTI Crude Oil spot prices. Therefore, should we see a sell-off in spot prices, we can expect the current backwardation in the futures curve to diminish or even flip.

Commitment of Traders' report (see Fig. 19) for 18 December showed positioning in WTI contracts to net long for both speculators, producers and users, ripe conditions for systematic unwinding of positions should the price cascade down.

Catalysts

Continued surge in COVID-19 cases in the U.S. and more importantly, public rejection for vaccines.

Trade Idea: Long NGZ2022/ NGZ2023

Figure 20: NGZ2022-NGZ2023



Source: TradingView

As a result of the global green movement that we've elaborated on earlier, we expect demand for natural gas to start trending up. We believe December 2022 is a reasonable timeframe for us to see the first effects of green policies being implemented.

In the event of lockdowns as elaborated on earlier, we expect natural gas demand to stay resilient in light of work-from-home and virtual schooling conditions, thereby giving more downside padding to shorter-term contracts relative to longer-term contracts.

Stop Order Entry: 0.051

Stop Loss: -0.012

Take Profit: 0.272 (-27.2% Fibonacci Retracement Level)

Risk-Reward: 3.66

Analyst

Koh Guo Feng

Global Macro Analyst

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Chart info

Figure 1: Newcastle Coal Futures – Front Month



Source: TradingView

Figure 2: API2 Rotterdam Coal Futures - Front Month



Source: TradingView

Overview of Coal

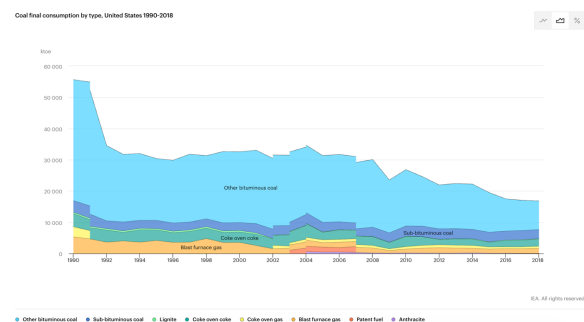
- The coal industry can be largely subdivided into two sections — the first is thermal coal, used mainly in electricity generation, and the second is metallurgical (or met/coking) coal, used primarily in steel production. The differences in these two types of coal lie in their compositions, with met coal containing more carbon and less ash and moisture than thermal coal. Met coal can be further divided into different grades, such as hard coking, semi-soft, and PCI (pulverized coal injection).
- Coal, being a fossil fuel, is in the process of being phased out as an energy source by OECD countries in the name of environmental sustainability and meeting climate goals. In its place are competing sources of energy such as natural gas, nuclear energy, and renewables such as solar, wind, and geothermal energy.
- Today, consumption and production of coal is largely concentrated in developing Asian economies, most notably China and India. China on its own produces and consumes more than half of the world's coal annually. In terms of imports and exports, the largest importers are, unsurprisingly, China and India, followed by other Asian economies such as Japan, South Korea, and South East and South Asia as a whole, while the largest exporters are Indonesia (for thermal coal), Australia and Russia, with Mongolia, Columbia, South Africa, Canada, and the U.S. in the mix as well.

Demand and Supply Shocks due to COVID-19

- The lockdown imposed as a result of the COVID-19 pandemic had large impacts on both thermal and met coal. With a contraction in seaborne trade, lower power consumption, and slowdowns in the steel industry, spot prices of both thermal and met coal continued to fall, reaching new lows. Low coal prices and restrictions due to the pandemic has resulted in production cuts in various countries as well, most notably in Indonesia, U.S., and Columbia.

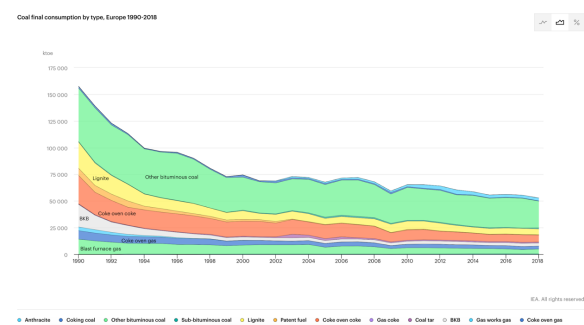
After bottoming out around the middle of the year, the spot prices of coal stabilized, with indices breaking above their multi-year descending trendlines. The last two months of the year saw the price of coal rise rapidly, as demand for coal from reopening Asian economies such as China was unable to be matched by pandemic-hit producers; this was further aggravated by the La Niña weather pattern, expected to last into 2021, that brought about cold, rainy weather that hampers production while stimulating demand for electricity through winter.

Figure 3: Coal Consumption by type (U.S., 1990-2018)



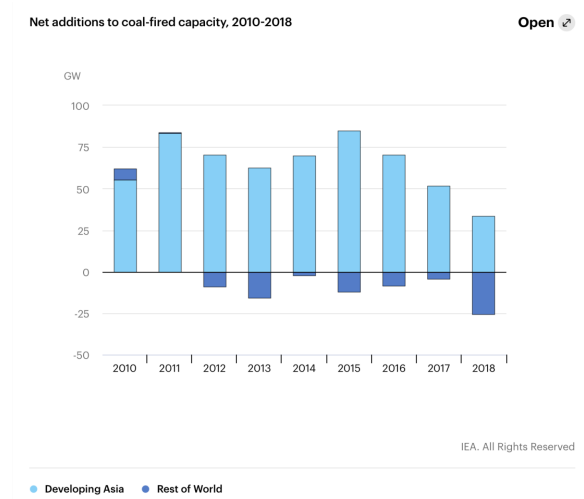
Source: IEA

Figure 4: Coal Consumption by type (Europe, 1990-2018)



Source: IEA

Figure 5: Net Additions to Coal-Fired Capacity (2010-2018)



Source: IEA

Emergence of ESG

The increasing focus placed on environmental sustainability and climate change, as well as the rise of renewable energy in recent years has been a massive headwind for the coal industry, with the Intergovernmental Panel on Climate Change suggesting electricity generation from coal to be reduced to almost zero by 2040 globally, with a 90% reduction by 2030 in OECD countries.

Coal consumption in the U.S. and Europe, among others, have fallen significantly over the last three decades (Fig. 3 & 4). Other developed economies such as Japan and South Korea have also pledged to shift their energy mix towards cleaner and more sustainable sources such as gas, nuclear, and renewables. On this front, there has been substantial efforts made by governments such as that in Japan and Germany in 'mothballing', or suspending, coal plants (generally older and less-efficient sites) in a push to reduce reliance on coal power and move towards renewables.

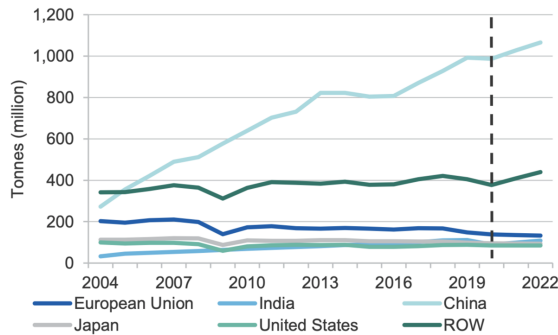
Falling renewable energy prices are putting pressure on coal profitability. The Carbon Tracker Initiative estimates long term operating costs for coal power plants will go up and surpass the declining PV and Wind costs in China by 2022 and in Europe, even faster, due to increasing CO2 prices.

On the other hand, the push for ESG has resulted in an expanding list of lenders and investors (such as pension and equity funds) withdrawing financing from coal projects. While this spells pain for the industry in the short term, the sorely insufficient capital expenditure within the industry (which has been greatly exacerbated by uncertainty in energy demand due to COVID-19) can lead to a severe deficit in coal, and a subsequent rise in prices in the coming years. This dynamic is starting to play out, with producers cutting back on marginal projects and focusing instead on those with the highest profits, with miners such as Glencore recently announcing its intentions to close its Newlands coal mine in the Bowen Basin. Australia's coal exploration expenditure has also fell 6% from the same period last year.

Asia Remains Coal-Powered

Developing Asian economies such as China, India, and Southeast Asian countries remain reliant on coal for their energy needs. Where the rest of the world have been cutting back on coal-fired capacity since 2012, developing Asian economies have instead seen large capacity increases every year (Fig. 5).

Figure 6: Steel Production by Region



Source: World Steel Association, Bloomberg, Resources and Energy Quarterly

The China Story

One cannot look at the global coal industry without mentioning China, which single-handedly consumes 55% and 59% of the world's thermal and coking coal, respectively, every year.

Carbon Neutral Plans

In September, Chinese president Xi Jinping told the UN general assembly that China would achieve carbon neutrality by 2060, with emissions peaking by 2030. While this is very bearish for the coal industry in the long term, we can expect to see the sector remaining relevant, and even grow, within the next decade.

Increasing Coal-Generation Capacity

China's pipeline of coal-generating plants remains substantial, with the government recently accelerating the approval and construction of over 100GW of coal generation capacity. There is currently over 1,000GW of operational coal-fired power generation capacity, and state planning bodies have recommended lifting the cap from 1,100GW to between 1,200 and 1,400GW.

Growing Steel Industry - Coking Up A Storm

Demand for high-grade coking coal, used mainly as an input in steel production, is closely related to the steel industry, particularly in China, which produces 56% of the world's steel.

As China's steel industry returns to normalcy post-COVID-19, it is the only country whose steel production has reached levels higher than before the pandemic. The Chinese steel industry has only grown over the past few decades (Fig. 6), and is expected to continue this trend, with the country ramping up infrastructure spending after the pandemic as it looks to achieve its goals set out in their Five-Year Plan, as well as the Made in China 2025 plan.

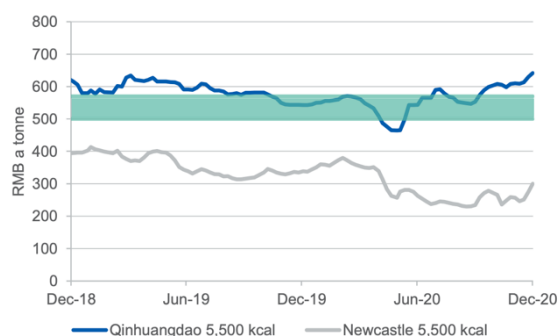
Met coal imports are expected to rise to 78 million tons in 2021. With China's limited reserves and production capacity of met coal, particularly of high-quality grades, China is expected to remain reliant on imports in the short to medium term.

Aussie-China Tensions

The growing political rift between China and Australia has started to encroach on economic ties between both countries, with China imposing tariffs and bans on imports from Australia - coal being one of them. Cargos have been held up and ships turned away at several ports, who reportedly had received verbal instructions from officials to restrict any imports of Australian coal. It is unclear when, or if, these import restrictions will be lifted, but such measures are likely to be temporary, as a measure to keep to China's unofficial coal import quotas.

Intervention in Domestic Coal Markets

Figure 7: China's Domestic Coal Price



Notes: The 'green zone' is a price band from 500-570RMB. Qinhuangdao (QHD) prices are a key benchmark for coal prices in northeastern China. The Newcastle benchmark series (traded in USD) is converted to RMB at 18 November 2020 exchange rate. Note that the Newcastle series excludes freight costs which typically add around US\$10/t or 66 RMB.

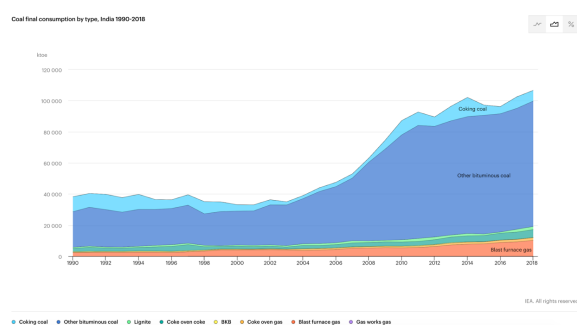
Source: Bloomberg, Resources and Energy Quarterly

China has actively sought to manage coal import levels in the past few years as competitive import prices threaten the profitability of domestic producers, with the aim to keep the price of Qinhuangdao 5500kcal within the 'green zone' of 500-570 RMB/tonne (Fig. 7), significantly above imported prices. One goal in the Made in China 2025 plan is to raise the domestic content of core components and materials to 40 percent by 2020 and 70 percent by 2025. This might signal further restrictions on imports in order to facilitate growth of the domestic industry. As such, Chinese policy regarding imports and trade will have a significant impact on the seaborne coal market moving forward.

The growth in China's coal consumption will likely outweigh the global narrative of carbon-neutrality, at least in the short to medium term ahead, although this will likely be increasingly contained domestically, rather than reflected in seaborne markets – more so for thermal coal than for met coal.

The Rise of India

Figure 8: Coal Consumption by Type (India)



Source: IEA

India plays an increasing role in the coal narrative in its push for rapid growth and development, especially within the last decade (Fig. 8) and currently are the world's second largest consumer and importer of coal.

Coal to Fuel India's Growth

Cheap energy sources remain the preference for developing nations, and India is no exception, with coal-fired plants generating 72% of its electricity. Reports such as BP Energy Outlook 2019, and a 2017 paper by NITI Aayog, an Indian policy think-tank, estimate coal's share of Indian energy production to be around 44-48% by 2040, only slightly lower than the current 56%, even after taking into account its ambitious targets in renewable energy.

Infrastructure and Steel

Energy aside, demand for coking coal in India is expected to pick up, with increased infrastructure spending on areas such as roads and railways providing tailwinds for steel production. According to the Indian Steel Association, the country's steel demand is forecast to grow by over 7% in both FY20 and FY21. India is the world's second largest steel producer, after China, and relies heavily on coking coal imports, mainly from Australia. There is some likelihood of a shift in imports towards Russian coal, with both countries signing a memorandum of understanding on energy cooperation that specifically includes coking coal; year-to-date imports of coking coal from Russia have more than doubled compared to the same period in 2019. However, Australian coal imports are likely to fulfil the bulk of Indian demand in the near future, accounting for 69.2% of India's coking coal imports so far this year, compared to the 2.2% of Russian coal.

Indian met coal imports are forecast to fall by 18 million tons in 2020 to 40 million tonnes, a result of excess supply due to COVID-19. Import volumes are expected to recover after 2020, with India's plans to increase crude steel production capacity from 142 million tonnes to 300 million tonnes per year over the next decade. Similar to China, India also has limited domestic reserves of met coal, and thus will be reliant on imports in the short to medium term.

Thermal Coal as an Energy Source

Supply Glut in Natural Gas

The supply glut of natural gas and its resulting low prices in recent years has been a significant headwind for thermal coal demand. However, with the oversupply situation improving as demand picks up, and LNG prices heading higher in recent months (Fig. 9) and projected to increase into 2021 (as oil, and consequently LNG production falls), coal demand and consumption are looking to pick back up from the current cycle lows as it remains the cheapest source of energy.

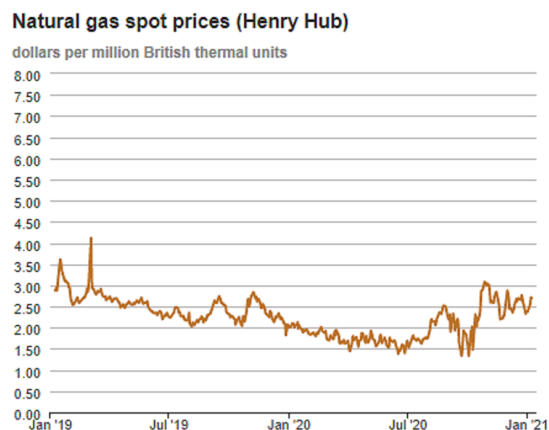
Import Volumes Set to Decline

Import volumes for the top thermal coal importers are set to move lower in the coming years.

China's imports should see a slight fall in the next few years, with domestic production increasing faster than consumption. With China's recent restructurings of its coal industry and the introduction of larger, more efficient mine capacity, we will likely see growth in domestic production. This is also supported by infrastructure improvements, including the 60 million tonne per annum Haoji railway commissioned in October 2019, which serve to better connect domestic supplies with demand centres. Coupled with the government's commitment to protecting the local coal industry through import restrictions and higher domestic coal prices, we can expect China to gradually cut back on import volume.

In India, production from state-owned Coal India, accounting for 80% of the country's coal output, reached a monthly record in March, and coal stocks at mines and downstream facilities hit record highs in April. Facing such a situation of excess supply, the Indian government has directed state-owned generation companies to turn to domestic coal rather than imports. Such record high inventories will take time to run down, adversely impacting India's imports of thermal coal in the short term, especially as domestic production showed little signs of slowing down even through COVID-19 lockdowns.

Figure 9: Natural gas spot prices



Source: EIA, Natural Gas Intelligence

Japan, South Korea, and Taiwan are also expected to reduce imports of thermal coal as these countries are ramping up transitions to other energy sources. Japan is shifting its energy mix towards nuclear and renewables, while South Korea and Taiwan are headed towards renewables and gas. Under South Korea's energy plan, no new coal-fired power will be added, aside from those already under construction, and coal's 36% share of power generation in 2034 will be cut to 15% under a new draft. Likewise, Taiwan's current energy plan has coal's share of power generation falling from 46% at present to 27% in 2025.

Overall Outlook for Coal - One Last Puff

Coal production is being cut back at a faster rate than demand is falling, with China and India still having a strong reliance on coal for energy and industrial use. Following this, the next few years looks to be a period of potential undersupply for coal, giving coal prices perhaps its last chance at a bull run before alternative energy sources take over.

As for seaborne markets, the outlook for met coal exports looks to be more positive compared to thermal coal, as the two largest consumers (China and India) look to cut down on thermal coal imports and rely more on domestic production. With both countries' present production capacity of met coal falling significantly short of projected demand growth in the short to mid-term, we can expect higher demand - and in turn, prices - for met coal from exporting countries.

Figure 23: API2 Rotterdam Coal Futures (ATW1!) - Front Month Contract



Source: TradingView

Trade Idea: Short API2 Front Month Contract

Following our outlook for coal, we believe the next 1-2 years will be a period where the supply of coal will fall relative to its demand, resulting in a rally in coal prices.

However, we feel the recent rally in coal futures seems overstretched and stems from immediate-term demand-supply imbalances. The price for the API2 front month contracts is still currently in an uptrend but is approaching a significant multi-year support level at 72.20. Given the velocity of the uptrend (reflected in the strong overbought signal in the RSI), keeping watch for a reversal candlestick pattern in the coming days around that zone can provide an opportunity to enter a short position as price mean-reverts. A bearish MACD crossover will serve to support this move.

Assuming an entry at 69.75, we will set our stop-loss at 74.78, above the zone of resistance; breaking through this level likely suggests a stronger and more prolonged than expected deficit in coal, thus invalidating our trade. Our take-profit level will be at 59.13, at the 38.2% Fibonacci retracement level, which also coincides with prior resistance levels while staying above the current ascending trendline (in red), in line with our bullish medium-term outlook for coal.

Entry: 69.75

Take Profit: 59.13

Stop Loss: 74.78

Risk Reward Ratio: 2.11

Analyst

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Chart info

Figure 1: XAUUSD – Gold Spot Price



Source: TradingView

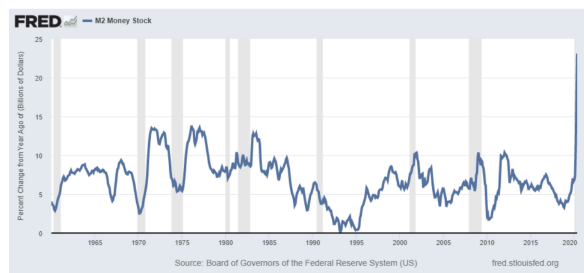
Overview of Gold

- Gold is a precious metal that has, throughout history, been used and regarded as a currency and store of value.
- Today, demand for gold comes in four main forms: jewellery (which generally makes up around half of annual demand), investment products (mostly by ETFs and central banks), physical coins and bars, and in technology use (which accounts for less than 10% of demand).
- For investors, gold is often used as insurance or protection against uncertainty, be it financial, political, or social. As a zero-yield asset, gold's performance relies strongly on real interest rates; the opportunity cost of holding gold compared to a relatively risk-free sovereign bond is large in high-interest rate environments.
- The supply of gold is relatively stable, as all the gold ever discovered and mined still exists and can always be recycled back into its pure form. New production of gold comes from gold mines, with the top producers of gold being China, Russia, and Australia, followed by the U.S. and Canada. Many Latin American and South African countries contribute significantly to gold production as well.

Summary/Recap of events in the past 6 months

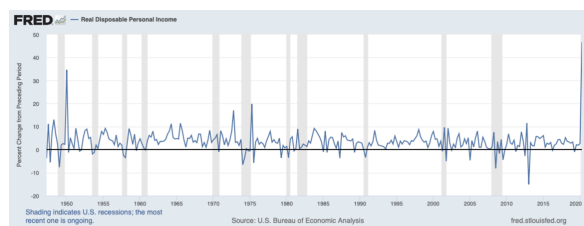
- Gold prices have been in a clear uptrend since 2019 as interest rates fell across the world. After the liquidity event of March 2020, which saw gold prices correct to US\$1,400/oz, prices have since skyrocketed to a high of over US\$2,000/oz in early August, on the back of massive stimulus packages, falling real rates, and a weakening dollar. Since then, gold has been consolidating, as both treasuries and the dollar traded range-bound. U.S. elections and positive vaccine news early on in November restored a semblance of certainty and stability in the economy, which likely prompted a shift in capital away from gold as a safe asset into risk-on assets such as equities, furthering gold's correction.

Figure 2: M2 Money Stock



Source: St. Louis FRED, Board of Governors of the Federal Reserve System (U.S.)

Figure 3: Real Disposable Personal Incomes



Source: St. Louis FRED, U.S. Bureau of Economic Analysis

Figure 4: 10-Year Treasury Inflation-Indexed Security, Constant Maturity



Source: St. Louis FRED, Board of Governors of the Federal Reserve System (U.S.)

Figure 5: USD Gold Price & Real 10-Year U.S. Treasury Yield



Source: Bloomberg (2020)

Source: Resources and Energy Quarterly, Bloomberg

Return to Secular Inflation

The COVID-19 pandemic has greatly accelerated the shift in policies of major economies towards a strongly fiscal-dominated regime, with massive stimulus packages unveiled globally. With Modern Monetary Theory (MMT) looming just over the horizon, we can expect policy decisions in the foreseeable future to adopt it as a framework - which means increasing government borrowing and spending, and a further debasement of fiat currency.

Deflationary pressures from globalisation over the past two decades also look to wane as we head towards an increasingly bipolar world.

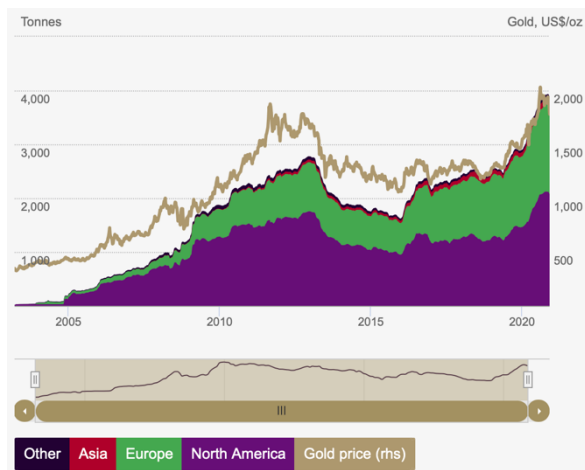
Different from Last Time

In the wake of the Great Financial Crisis, governments and central banks around the world similarly responded with fiscal stimulus and quantitative easing, which prompted fears of inflation as well. However, these fears were not realized, and governments are instead fighting deflationary pressures over the last few years. This time, however, looks to be different. The first distinguishing factor is the rate of fiscal expansion. Looking post-GFC, \$11 trillion was lost in U.S. net-worth, mostly from the fall in housing and stock prices which took several years to recover to former highs. The Federal Reserve's balance sheet at the time rose by \$3.6 trillion over a 6-year period. In 2020, it rose by \$3 trillion in just 3 months, and major indexes have already rebounded close to or past their highs; the ECB and BOJ have also seen their balance sheets bloating significantly. Consider also that much of the stimulus this time is directed at consumers and small businesses in the real economy, whereas it was previously mainly used to recapitalize banks (which did not boost the velocity of money in the real economy, as lending rates were depressed) - this is evident in the sharp increase in both M2 money stock (Fig. 1) and real personal incomes (Fig. 2) this year. With the sudden and massive injection of money into the real economy, the case for inflation is very much stronger this time. Looking forward, the worsening of the COVID-19 situation globally is putting on increasing pressure for more fiscal stimulus in the short run. The increasingly overt monetization of rising indebtedness as well as a Democrat U.S. president in Joe Biden that has been pushing for much more government spending in areas such as infrastructure and green energy (which also increases employment and economic productivity) leads us to expect fiscal dominance to be a mainstay of the economy for years to come.

Negative Real Rates

The current environment has interest rates at near-zero or negative levels. In the U.S., the Fed has adopted an accommodative stance towards interest rate policy, propelling the theme of "lower-for-longer" rates, effectively pinning short term interest rates at current levels. They have also expressed the possibility of further increasing asset purchases or shifting them further along the yield curve if need be, signalling their commitment to maintaining the current low-rate environment. Other central banks have also affirmed this position, with the Reserve Bank of Australia continuing to cut rates as recently as November

Figure 6: Major Gold ETFs' Gold Holdings



Source: Bloomberg, Company Filings, ICE Benchmark Administration, World Gold Council

Figure 7: Central Bank Gold Holdings

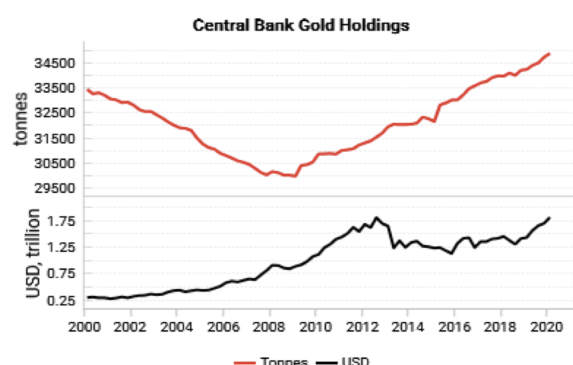
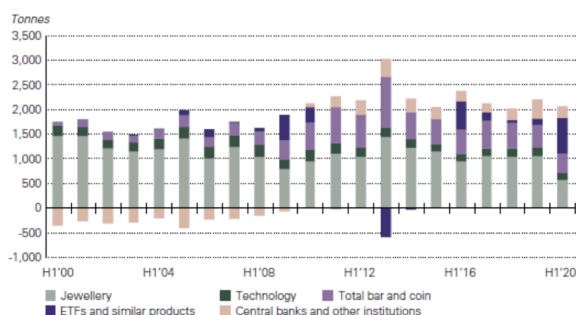


Figure 8: Gold Demand Breakdown



Source: Metals Focus, Refinitiv GFMS, World Gold Council

Coupled with the global reflationary trend, real interest rates are likely to head deeper into negative territory as inflationary expectations continue to rise. This creates more tailwinds for gold as a zero-yield asset; where the opportunity cost of holding gold in high interest rate environments had led to its unpopularity as an asset class, this aspect has now turned into a strength in a world faced with negative rates.

Given the strong negative correlation between real rates and gold price (Fig. 4), we can expect gold prices to rise as real rates continue to fall - given the one-two-punch of the Federal Reserve's stance on pinning interest rates at current low levels, as well as rising inflation expectations.

Increasing Institutional Interest

In an environment fraught with uncertainty, fiat currency debasement, and low opportunity cost in holding gold, investors are increasingly looking to the yellow metal to protect their portfolios. 2020 saw a record-breaking inflow of funds into gold-backed ETFs, whose level of gold holdings have far eclipsed the highs of 2011 (Fig. 5). New players are entering the market as well, with pension funds such as the Ohio Police and Fire Pension fund recently allocating 5% of its asset allocation to gold. These pension funds (as well as insurance companies), typically having high bond ratios, may have to recalibrate their investment strategies in the current and likely-persisting low and negative rate environment. With over US\$46 trillion held in pension funds globally (for reference, total investments in above-ground gold is only US\$4.6 trillion), the newfound interest of this investor class in gold could massively increase demand in time to come.

This interest is not limited to financial institutions - central banks around the world have been net buyers of gold ever since the Great Financial Crisis (Fig. 6). With recent events exacerbating inflation risks, and geopolitical tensions arising, central banks, especially countries like China and Russia, are looking to diversify their reserves away from U.S. dollar assets. Countries facing strong currency devaluation such as Turkey have been especially large buyers of gold, and with the global shift towards fiat debasement, central banks are likely to increase gold reserves in the years to come.

While the rate of gold buying may slow down due to its relatively high price, central banks are still expected to be net buyers of gold for the next few years, down 4.9% in 2021 and 2022 to 364 tonnes in 2022.

Suppressed Consumer Demand

While overall gold demand for H1'20 has not changed significantly from previous years, the composition of demand has changed considerably. Demand in the first half was driven mainly by ETFs as investors began to see the need for the metal in their portfolios. However, this was offset by a fall in demand in physical gold for jewellery due to lockdowns (Fig. 7). With the macroeconomic environment being friendly for gold and consumer demand likely to normalize, demand for gold looks to remain strong in the coming years.

Supply factors

COVID-19 Supply Disruptions

COVID-19 restrictions imposed by governments that disrupt transportation and labour flows have hiked costs at certain operations, reducing gold-mine supply; as much as eight million ounces (7 percent of global mine supply) of annualized gold production are at risk from these disruptions, resulting in some 1-3% increase in unit costs.

Lead Time of New Supply

In the longer term, the high spot price of gold relative to current costs is likely to incentivize new exploration and mining of newly-economic areas - this increased inflow of capital, as well as acceleration of capital projects will likely increase supply. However, new mines can take up to 5 years before gold is produced. With expenditure in gold exploration compressed since 2011's gold bust (Fig. 8), we do not expect any sudden surges of supply to meet new demand.

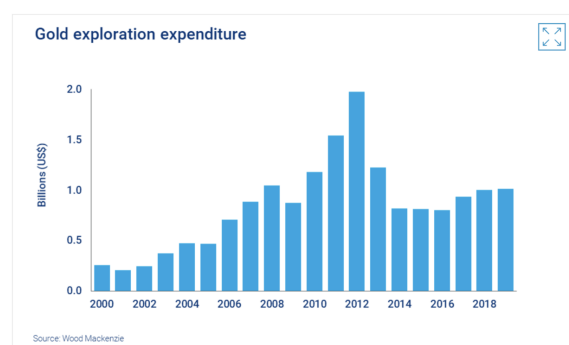
Difficulty of Discovery

Taking a step back, gold discovery has also slowed down significantly over the past decade, despite much higher industry spend on gold exploration. In the past 3 decades, almost two-thirds of total spending on exploration was in the past decade, but only discovered slightly more than 10% of the total gold ounces (216 MOZ in 41 discoveries over the past decade, compared with 1.7 BOZ in 222 discoveries in the preceding 20 years) (Fig. 9). With gold production in new mines expected to decrease from 2022, according to S&P Global, as well as the dearth of discoveries, the mid-term outlook for gold supply looks to likely be overwhelmed by demand for the metal.

Technological improvements

One area to keep an eye out for will be technological innovations in the sector that serve to reduce costs of operations or ease the discovery process. On the operations side, the use of technology such as artificial intelligence, automation, blockchain, etc. in areas such as stochastic geological modelling, autonomous trucks and drillers, optimized mine logistics and scheduling, predictive maintenance strategies, and yield optimization at processing plants can significantly reduce all-in sustaining costs and increase efficiency. Innovations in organic discovery through advanced analytics of drill logs, geological models, and unstructured map analysis, as well as high-res resistivity surveys, advancements in biogeochemistry and hydrochemistry use to discover deeper and underwater deposits, etc. which have been adopted by some miners can speed up the exploration process or increase discovered ounces of gold. Currently, Barclays Plc estimates that innovation could add 10% of incremental supply growth through 2025; cost per ounce may come down 4%. This area can potentially disrupt current methods of operations and exploration, resulting in a positive supply shock in the mid to long term.

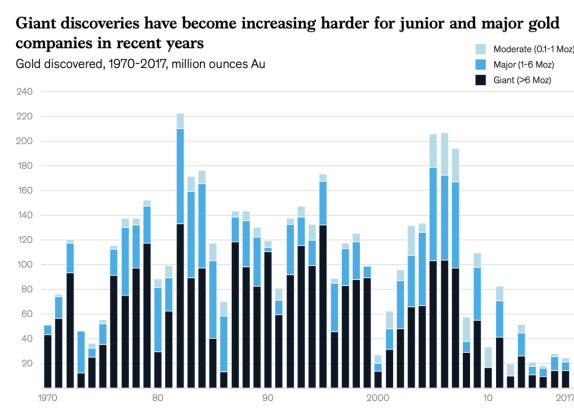
Figure 9: Gold Exploration Expenditure



The above chart represents gold exploration figures reported in annual reports from Agnico Eagle, AngloGold Ashanti, Barrick, Goldcorp, Gold Fields, Kinross, Newcrest, Newmont, Polyus, and Sibanye.

Source: Wood Mackenzie

Figure 10: Gold Discovered (1970-2017)



Source: McKinsey, S&P Global Market Intelligence

Overall Outlook for Gold

Investment demand for gold is picking up quickly as a double-whammy of inflation risks and unattractive fixed income alternatives draw investor capital towards the metal. With consumer demand normalizing, and the relatively small market cap of the gold market, demand for gold and related products is poised to grow over the next few years.

Supply-side factors are favourable for gold prices as well, with declining production and a lack of new discoveries; it is unlikely that producers will be able to ramp up supply at a rate fast enough to cater to the influx of demand.

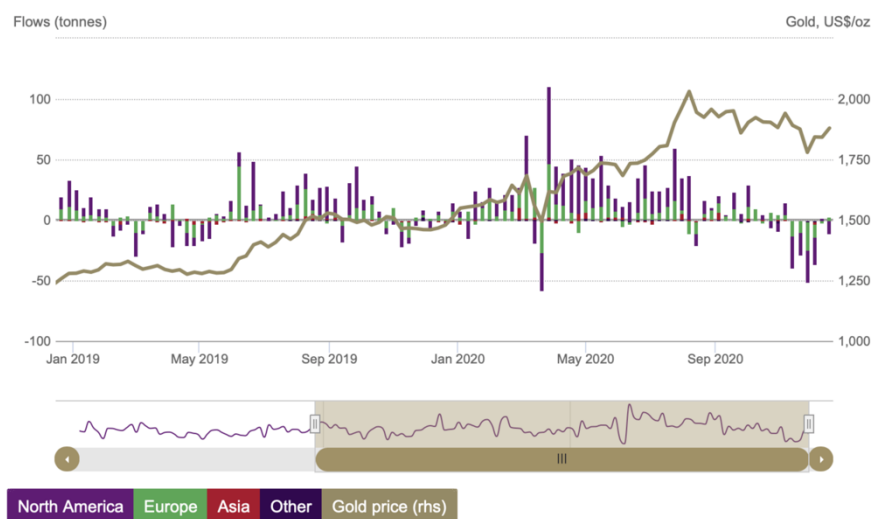
As such, we remain firmly bullish on gold in the short to medium term.

Figure 11: XAUUSD Daily Chart



Source: Tradingview

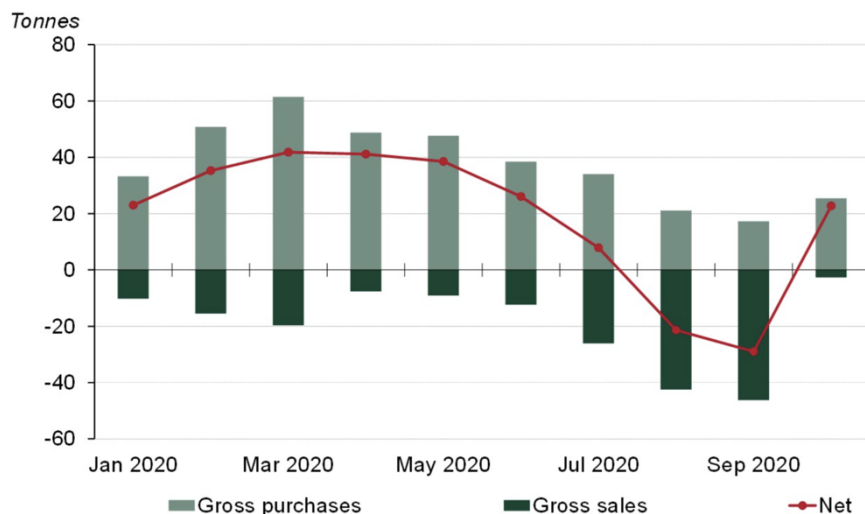
Figure 12: Gold ETF Net Flows (Weekly)



Source: World Gold Council

Figure 13: Central Banks' Gold Purchases

Central banks resumed net gold purchases in October



Source: IMF IFS, Respective central banks, World Gold Council

Trade Idea: Long Gold Spot

We believe that the correction of the past few months in gold prices stem from short-term factors such as a stall in stimulus talks in the U.S. and capital outflow from gold funds into equities due to risk-on sentiment. Central banks have also been net sellers of gold in August and September. All these have resulted in a mean regression that we think will be overshadowed by the prevailing macroeconomic trends of fiscal dominance and falling real rates. Gold prices have since begun to pick up from early December, breaking through and successfully retesting a descending trendline as well its 50-day moving average, with a MACD crossover earlier in the month supporting this move as well. Fundamentally, we can see that net outflows from gold ETFs have peaked and looks to reverse course back into positive territory. Central banks have also once again returned to being net buyers of gold in October. With these factors in mind, we believe this bodes well for a prolonged bull trend in gold.

Entering the trade at the current price, the stoploss will be set at 1787.34, below the 200-day moving average as well as a consolidation zone in July before its run up. The first take profit level will be at 2067.61, near its August highs. It is recommended to split the position into two, with the first having a take profit level at 2057.81, near its August highs, in order to lock in gains, while allowing the other to ride the bull and participate in further upside.

Entry: 1878.68

Take Profit: 2067.61/no TP

Stop Loss: 1787.34

Risk Reward Ratio: 2.04

Analyst

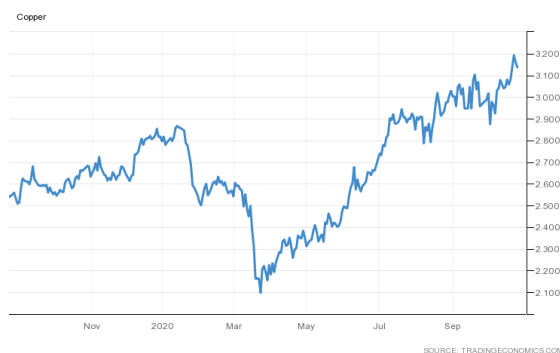
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Chart info

Figure 1: Copper Prices from October 2019 to October 2020



Source: Trading Economics

Figure 2: Rise in Copper/Gold Price Ratio



Source: Long Term Trends

Doctor Copper

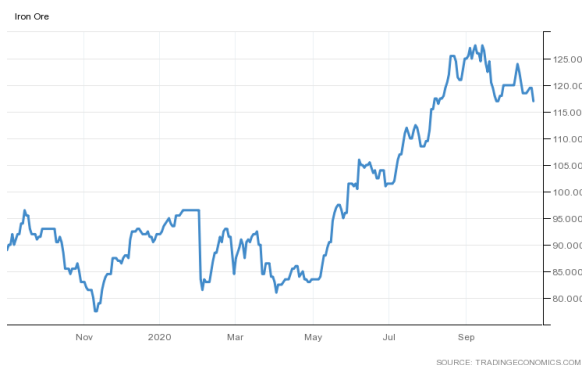
- Humans have used copper for more than 10,000 years. Its earliest applications included coins and ornaments. Today, copper has many other important uses, and it is often considered as a commodity that moves closely in parallel with the global market. Chile, Australia, Peru, Mexico, and the United States have the largest copper deposits in the world. Together, these five countries sit on roughly 65% of the world's copper deposits.
- Copper moves around the world in a variety of forms such as copper ore, raw copper, refined copper, and copper wire. Chile and Peru are the largest exporters of copper ore, while manufacturing bases like China and Japan are the largest consumers of copper ore.
- Copper's reputation as a barometer for the global economy comes from its broad range of end-uses — such as in construction, power generation and transmission, factory equipment, electronics and in consumer products such as cars and consumer appliances. Since copper is used in large quantities all over the world, the price of copper is largely influenced by the health of the global economy. A rising market price signals strong economic health, while a decline in market price will suggest the opposite.
- The price of copper is primarily driven by the availability of substitutes, the global supply and demand ratio, and emerging markets such as China and India, where copper is much sought after for industrialisation.
- Copper prices traded around \$3 per pound, with a 26-month high reached on September 18th. This is possibly supported by growing demand from copper's top consumer country, China, and a decline in copper production worldwide. Chinese manufacturing activity in September maintained its recovery momentum in the wake of the COVID-19 pandemic as China's official National Bureau of Statistics PMI pointed to the fastest pace of increase in economic activity since March this year. Coupled with the reduction in copper production due to the COVID-19 pandemic, the macro-economic trends in demand and supply for copper has backed up the growth in copper prices since April. Recent figures showed copper production in Chile fell 5.5% from a year earlier in September.
- The copper/gold ratio is used as a "growth-to-fear proxy". When it falls, growth tends to be low and fear tends to be high. When it rises, it indicates the opposite. Copper producers tend to make money when global growth is strong and gold producers tend to make money in periods with high levels of fear because it is often treated by investors as a safe haven. As

seen, the copper/gold ratio has been rising steadily in recent months, showing a gradually strengthening economy.

The Next Ph.D. in Economics?

- The primary use of iron ore is in the production of iron. Iron ore is an essential component used to make steel which is widely used for infrastructure and other construction projects. Hence, iron ore remains to be one of the most important base metals in the global economy. Almost 98% of mined iron ore is used in steel making. About 50 countries mine iron ore, with Australia and Brazil, dominating the market share for exports. Though China is the top 3 iron ore producer, the world's largest manufacturing country, is also the top importer, buying up 63% of the global trade, owing to its large steel making industry that accounts for more than 56% of the world's total steel production. Japan was the second largest importer in 2019, purchasing 8.3% of global trade, followed by South Korea at 5.1%.
- Since iron, just like copper, has a widespread usage in the economy but is mainly used for infrastructure and industrial purposes in the form of steel, movement in the steel markets has a significant impact on any movement in the iron markets. New stimulus measures by the Chinese government to increase its spending on infrastructure projects will lead to an increased demand for raw materials like iron ore and copper. China's iron ore port stocks, inventory levels, steel production and imports have been on rapid rise. This has caused spot prices of iron ore to increase as well.
- The second biggest commodity after crude oil in both weight and value, iron ore, could potentially take on a role as a global economic proxy indicator to rival copper. Given iron ore's intimate linkage to the Chinese stimulus and infrastructure developments, industrial and economic cycles, investors deem that it could be on par or even better than copper as a global economic macro proxy going forward. Given that China may become the main engine of global growth especially this year, where the Chinese economy is probably doing the best globally, iron ore may become the proxy for its growth. It comes as no surprise that iron ore would then be known as the next Ph.D. in Economics, reflecting the Chinese macroeconomics.
- Today, iron ore prices are currently trading around \$120 per tonne. Iron ore prices have hit multi-year highs. The significant bullish trend since May is supported by growing demands from top consumer China and concerns over the supply of iron ore. Ever since April, iron ore prices have been largely supported by the recovery of the Chinese consumer market as restrictions in Chinese provinces were lifted, with Wuhan province where COVID-19 first emerged last year, being the first out of the woods.
- A one-month low of \$117 per tonne was reached on September 25th. This was due to worries about supply

Figure 3: Prices of Iron Ore from October 2019 to October 2020



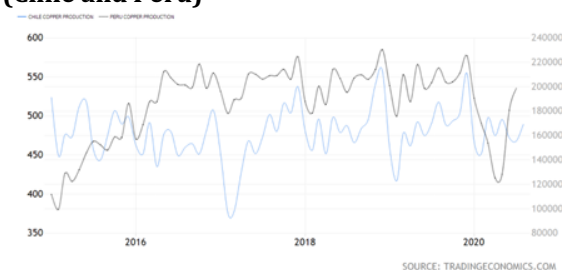
Source: Trading Economics

disruptions that resurfaced after a coronavirus outbreak on an iron ore bulk carrier at Australia's Port Hedland.

Summary/ Recap of events in the past 6 months

- Copper production reached 87.6 kilo tonnes in 3Q20, higher than the last quarter, probably due to the successful resumption of Voisey's Bay operations. A stronger performance is expected in 4Q20 at South Atlantic operations with the reduction of COVID-19 related impacts on operations.
- Brazil industrial production rose for the fifth straight month in September, posting the longest streak of gains since 2012, as billions of dollars in fiscal stimulus spurred broad-based consumer demand. The Brazilian government also insists that during the remainder of President Jair Bolsonaro's term, which ends in 2022, a major list of infrastructure projects will be offered to investors, despite the negative effects of the health crisis on global investor sentiment.
- Northern Australia and Brazil are set to experience a La Nina weather event in the coming rainy season from December to April. Supply for iron is expected to be strong and will pick up further in the October-December quarter. In Australia, Q4 exports are usually the second-highest quarter of the year as producers try to ship out as much as possible ahead of the rain while those that run to calendar financial years will look to maximise revenues, particularly when prices are high.
- BHP-chartered iron ore bulk carrier, Vega Dream, had an outbreak of COVID-19 on board in late September when it arrived at Port Hedland following positive cases from Patricia Oldendorff bulk carrier. As a result, Australian mining companies have agreed not to use Manila-based ship crew, raising investors' worries of supply disruptions.

Figure 4: Drop in Copper Outputs in 2020 (Chile and Peru)



Source: Trading Economics

Risks of Widening Copper Supply Disruptions

Due to the COVID-19 pandemic, production of copper has been disrupted as producers implement mine production cuts, resulting in a global reduction in copper output levels. New exploration activities have also halted in most countries. With most copper mining and exploration drilling programmes suspended in response to the outbreak of the coronavirus due to workplace safety and travel restrictions, output levels have decreased as the production of copper has come to a standstill.

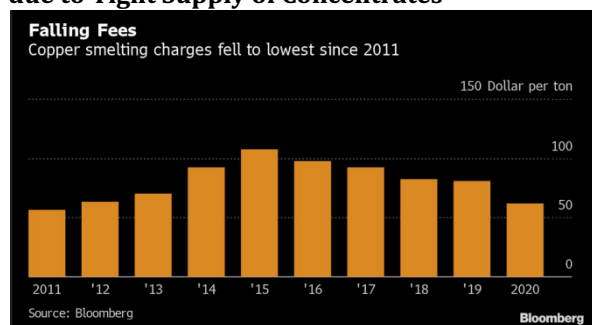
The spread of the coronavirus in South America has resulted in copper mine operators shutting down over 600,000 tonnes of production, which is around 3% to 4% of global consumer supply, to contain the spread among workers and local communities. The world's two largest copper producers, Chile, and Peru continue to face severe COVID-19 outbreaks. In Peru, copper output fell by 42% in May while Chile's state-run miner Codelco has temporarily closed its largest smelter and refinery and suspended construction at its flagship mine. Mines in Chile have largely continued to operate during the pandemic as the government has declared the sector as part of the essential services. However, to reduce the risk of infection, companies have halted non-essential activities, including exploration and development, allowing them to reduce the number of workers onsite by around 30%.

Figure 5: Copper Hit a 2-year High due to Continued Deficit of Copper Concentrates



Source: Bloomberg

Figure 6: Lowest Processing Fees in 9 Years due to Tight Supply of Concentrates



Source: Bloomberg

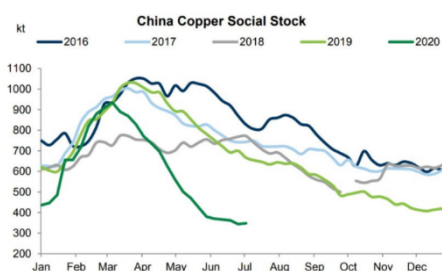
Figure 7: China Caixin Manufacturing PMI from October 2019 to October 2020



Source: Trading Economics

Figure 8: China's Declining Copper Social Stock due to Higher Demand

Exhibit 16: Chinese copper social stock has declined to a five year low due to higher demand



Source: Goldman Sachs Global Investment Research

Estimates showed that these precautionary health measures implemented will reduce Chile's copper production by 200,000 metric tons this year from the 5.787 million metric tons in 2019.

Furthermore, workers at Chile's state mining company, Codelco, had threatened action over job conditions row earlier in September this year. Complaints over coronavirus prevention measures and the pricing of insurance have caused heightened tensions between unions and the Chilean company. On 19th October 2020, Lundin Mining Corp. also expressed its plans to suspend operations at a mine in Chile with a second union strike after failing to reach a wage accord. The prospect of further strike action in Chile and copper mine disruptions which are likely to hit record levels in 2020, will risk slowdowns and copper outputs at the world's biggest copper producer.

On the other hand, Peru, the second largest copper miner, is also taking longer than expected to ramp up mines after a two-month lockdown due to the spread of the coronavirus. Quellaveco, a copper mine in Peru, one of the world's biggest copper mines under development, has also been put on hold. The 180,000 tonnes project, which was estimated to cost \$5.3 billion, was due to commence operations by 2022.

Presently, the copper market is already tight. According to the International Copper Study Group, mine output is expected to drop for a second consecutive year in 2020. Decreases in copper's global supply caused by pandemic-related shutdowns, as well as fears for further supply disruptions as likelihood of mining suspensions over wages and coronavirus cases increase worldwide, will continue to drive prices of copper higher in the foreseeable term.

China's Demand Red-Hot

A powerful 'V-shaped' recovery in China, the world's largest manufacturing country, and opening of economies in many other countries have resulted in steeply drawing metal inventories. China's September Purchasing Managers' Index (PMI) which indicated a significant rise in the country's manufacturing activity has also suggested that the economy is now entering a period of above-trend growth, which is good news for the prices of copper, iron and other commodities, particularly industrial metals. Three-month copper futures on the London Metal Exchange (LME) jumped as much as 1.2% to \$6748 a tonne, its highest since mid-2018, on solid China PMI.

China's Raging Appetite, South America's Falling Supply

Together with an anticipated global re-opening and constrained supply amid social-distancing enforcement at operations in many copper factories around the world, the rising demands and pressures for copper have eased the tightness in copper prices over the last few months since the pandemic. We anticipate prices of copper to continue rising in the coming months as inventory data from the LME continues to show signs of demands pickup.

Commodities Super Cycle 2.0

China's switch to renewable energy systems has been a key demand driver and is likely to continue going forward. Copper is the best non-precious metal conductor of electricity due to the lack of resistance it offers. This property makes it an important component in energy-efficient generators and renewable energy systems, with solar and wind energy installations using larger volumes of copper than conventional thermal power generators. Evidently, there has been and will continue to have a spike in demand for copper as projects are brought forward following the news from China's Energy Administration that subsidies for new offshore and onshore wind farm

projects ends sometime later in 2021. China has subsidized clean power plants for years by turning to renewables to cut its reliance on coal and fight against pollution but is shifting towards a more market-driven approach to rein in its large subsidy bills that resulted from the green investment boom. This essentially means putting renewable power on a path to compete with existing coal and gas-fired generation. However, in spite of China's subsidised clean energy projects' "coming-of-age", renewable energy has become such an attractive and viable energy source that we see sustained demand for renewables poised for long-term growth. Companies are putting into practice ESG standards which are compensated by their investors and governments are setting mandatory consumption targets. The path of energy transition will continue to accelerate substantial investments in clean energy technologies over the next few years. This will lay the foundation for a sustained growth in copper prices in 2021 and beyond.

Innovative Disruption: 5G and AI

Interestingly, but not surprisingly, the Chinese government has a new twist to its traditional five-year infrastructure-based stimulus package unveiled in October this year, with the focus on 5G, data centres, AI, the industrial internet and EV charging infrastructure. This will accelerate the construction of the data and communications needed to support smart manufacturing and smart cities, with internet-enabled transport and energy networks. On top of Beijing's Made in China 2025 initiative, the pivot to disruptive technologies will have a huge potential to change how and when energy is generated. Infrastructurally, the adoption of these technologies will ultimately have wide-reaching implications for copper, further supporting its demand.

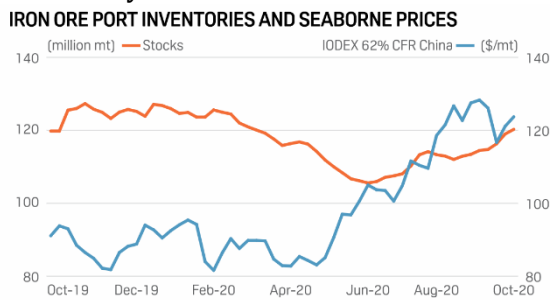
China's Rising Iron Ore Port Stocks

Iron ore port stocks in China mounted in the last week of September and into early October as trading wound down during China's Golden Week holidays and seaborne supply is expected to be strong in the fourth quarter. According to CEIC Data, China's iron ore inventories climbed to 120 million metric tonnes in the first week of October, up around 4 million metric tonnes from a fortnight earlier. It was the highest level since early March when iron ore prices were below \$90 per metric tonne.

However, Chinese finished steel prices and margins have rebounded strongly since the holiday, which will help to support iron ore prices. Domestic hot-rolled coil margins were \$38.62 per metric tonne and domestic rebar margins were \$33.10 per metric tonne on October 13, the highest level for both since the first week of September. While the reported restrictions on China importing metallurgical and thermal coal from Australia are not likely to impact iron ore imports, the news may cause some jitters among buyers and encourage them to buy from port stocks.

Supply for iron is expected to be strong and will pick up further in the October-December quarter. Following our report from last semester on the deadly tailings dam burst at Vale Brumadinho complex, exports from Vale have since recovered after its operations were disrupted by severe weather and coronavirus restrictions earlier in the year. Despite this, demand from China will be likely to grow stronger. According to China customs, China imported more than 100 million metric tonnes of iron ore for the fourth consecutive month in September, reaching 108.5 million metric tonnes. S&P Global Platts also sees crude steel output up 4% - 5% on year in 2020. Ongoing robust steel production in China will draw down iron ore inventories, particularly if the steel market recovery is sustainable.

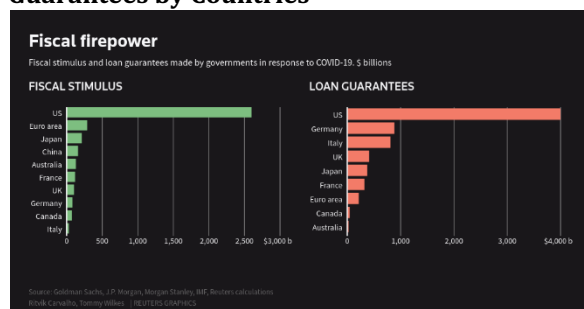
Figure 9: Rising Iron Ore Port Stocks and Spot Price of Physical Iron Ore in China



Source: S&P Global Platts, CEIC

Source: S&P Global Platts, CEIC

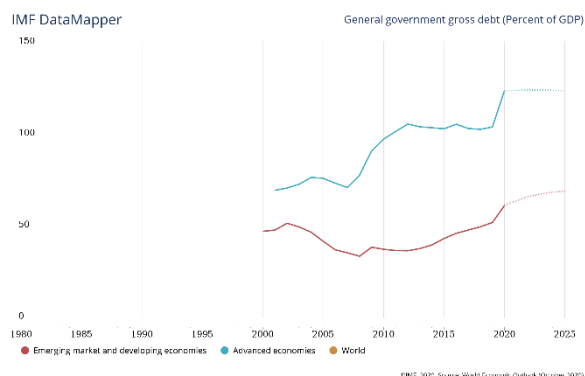
Figure 10: COVID-19 Fiscal Stimulus and Loan Guarantees by Countries



Source: Goldman Sachs, J.P. Morgan, Morgan Stanley, IMF, Reuters calculations

Source: Reuters

Figure 11: Increase in General Government Gross Debt as a Percent of their GDP



Source: International Monetary Fund

The bulls have also been firmly in control of the copper and iron trade as investors who are positioning for a recovery remain optimistic about the market. A note of caution, however, will be that a lot of the bullishness also comes from a variety of global fiscal packages aimed at shoring up countries hammered by the coronavirus. For instance, the United States' non-farm payrolls number continues to be very strong possibly due to the country's three stimulus packages that masks the ills of the country's economic recovery and gives investors more hope on subsequent stimulus packages to boost the economy. While these stimulus packages from countries have helped prop up economies at the moment, governments around the world are facing issues around when to wean businesses and individuals off the support delivered to offset the financial impacts of the pandemic. With huge generous stimulus packages also comes the problem of mounting central government debt. The sheer volume of fiscal stimulus raised potential alarm bells of deeper economic issues further out as sovereign debt balloons. There is concern over how these debts could impact the economy down the road, which may affect investors' confidence in the market in the longer term.

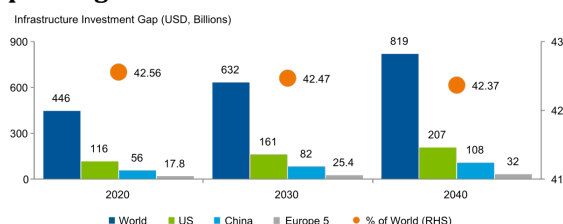
The Bottom Line – Bulletproof Iron Ore?

As China's diplomatic row with Australia just keeps getting worse and relations descend into a morass of sanctions and mutual recriminations, iron ore trade seems untouchable. China has few alternatives as it seeks to stimulate its economy post COVID-19 through infrastructure investment, with Australia accounting for more than half of iron ore shipments globally. According to Goldman Sachs Group Inc., if Beijing were to try to purchase solely from non-Australian producers, at best it could get 56% of the volumes it typically imports. The inelasticity of global supply and the fact that China's annual import requirement far exceeds the seaborne supply of other nations means that China is likely to remain reliant on Australian iron ore for the foreseeable future.

While China has been trying to give itself greater flexibility by buying ore carriers that improve the economics of long-distance shipping from Brazil and purchasing Guinea mines, ongoing production problems after an accident at a Vale SA mine also mean that Brazil is unlikely to be back at full output before the end of 2022 and the output potential of the latter has been heavily questioned.

As of the first week of December, prices of iron ore surged to a seven-year high and traded above \$140 Aussie dollar a ton on strong steel demand from China's steel mills. Elevated iron ore prices are supporting Australia's production and investments, and has helped drive Australia's economy even as barley, wine and coal exports are targeted. Hence, action against iron ore remains unlikely given Beijing's insatiable demand for the base metal.

Figure 12: Rising Global Need on Infrastructure Spending

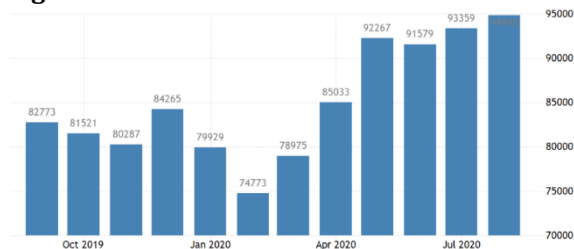


Source: Global Infrastructure Hub

Infrastructural Boom

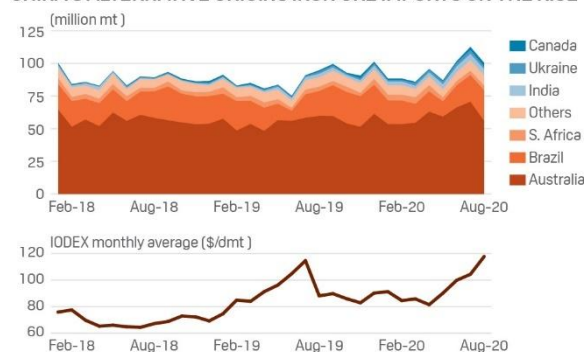
There has been a rise in global need for infrastructure spending over the past few years and this trend is likely to exacerbate within decades to come as emerging markets present the need for their fastest demand for infrastructural growth. In the near future, post the COVID-19 shock, fiscal intervention by governments globally through infrastructure stimulus will also increase. As far as one can tell, infrastructure spending, a classic Keynesian economic model to reignite the country's economic engine post lockdown, has been identified as a form of stimulus (over the long term) for various global economies as governments pump in money to keep people employed and improve the future productive capacity of the country. Hence, we observe a re-emphasis on infrastructural boom as countries re-open and the theme is likely to be even more relevant post-COVID.

Figure 13: China's Steel Production



Source: World Steel Association

Figure 14: China's Iron Ore Imports on the Rise
CHINA'S ALTERNATIVE ORIGINS IRON ORE IMPORTS ON THE RISE



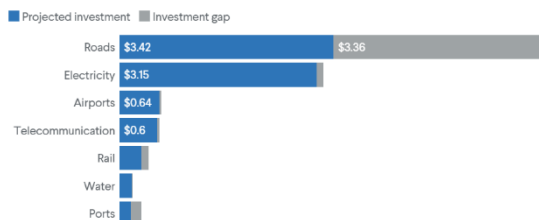
Source: S&P Global Platts, China Customs Statistics

Source: S&P Global Platts, China Customs Statistics

Figure 15: Infrastructure Investment Gaps in United States by 2040

U.S. Infrastructure Investment Gaps by 2040

Projected public and private infrastructure spending by sector, 2016–2040 (trillions of 2015 dollars)



Notes: Investment gap is the difference between projected investment and the investment required to match the best-performing peer countries, accounting for differences in country characteristics. Projected investment assumes the United States continues to invest at current levels and accounts for economic and population growth.

Source: Global Infrastructure Hub.

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Source: Council on Foreign Relations

Asia & China

In May 2020, China's local governments have outlined plans for new infrastructure projects to offset the economic impact of the COVID-19 pandemic and cultivate new growth drivers for the country that is set to be on the road to economic recovery. The stimulus package aimed directly at infrastructure spending amounted to over USD 667 billion, larger than the USD 564 billion package, authorities released in December 2008 to combat the fall-out from the subprime crisis. Driven by supportive fiscal policies, China's yearly infrastructure investment growth rate is expected to reach around 10% in 2020. Demand in China will be supported by the government's commitment to invest in copper-intensive "new infrastructure", including 5G networks, ultra-high voltage power grids and electric vehicle charging stations as well as auto and home appliance subsidy plans. While some many posit that the demand for industrial and manufacturing metals may dwindle down for countries like China where large-scale infrastructure investment has met diminishing marginal returns, we believe that the focus of these investments are likely to be on technology, such as big data centres, artificial intelligence and the industrial market, that gives them a competitive edge. The graph of an increasing China's steel production indicates that economic recovery has picked up its pace after the pandemic. China's factory activity maintained its recovery momentum and demand for steel is only going to grow.

In Asia, infrastructural booms are also likely to be the first tool in government armoury to get their economies moving again. For an instance, in terms of infrastructure expenditure, India is adding on top of her pre-COVID commitment to increase its spending. Even before the COVID-19 pandemic, India has promised \$1.5 trillion of infrastructure spending over five years. This includes the expansion of their energy, road, and railway networks. This investment is likely to accelerate and expand across other countries in the region over the coming years, especially for high growth developing economies like Myanmar and Vietnam.

United States & Europe

For Western economies, the focus is likely to be on repairing their countries ailing infrastructure and large-scale transport projects like rebuilding and repairing the road and bridge network, refurbishing and other vital infrastructure that has been found wanting during the present crisis.

In the United States, Trump has also called upon Congress to pass legislation that generates at least \$1 trillion in infrastructure investment, which calls for over USD 810 billion to be released to rural broadbands, 5G cell services, highways and transit over a decade. Democrats have also introduced a competing USD 2 trillion energy transition bill in June 2020 which includes investments in roads, bridges, and public transit. It seems like even after the November 3 election, with enough political will, a boost in infrastructure spending in the US is not a matter of "if" and more an issue of timing and magnitude.

EU has also unveiled green recovery funds – €225 billion dedicated to clean energy transition over the next three years earlier in July this year.

Hence, we anticipate that demands for copper and iron will continue to rise in the near future as the metals stand to benefit the most greatly from this infrastructure splurge given that it is an essential ingredient in almost all infrastructure investments.

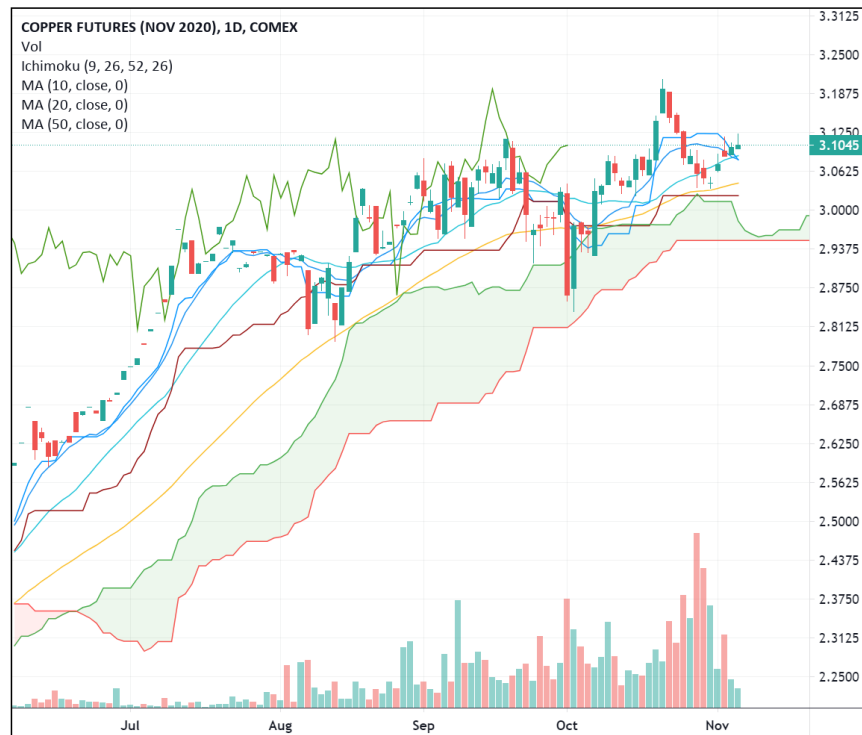
In a nutshell, while copper and iron prices have crashed early this year amid growing panic over the impact of the coronavirus with three-

month copper futures traded at \$4371 per metric tonne on the London Metal Exchange in March, we have seen prices of copper and iron rise steadily since April. The steep drop earlier this year was attributed to macro-economic factors and concerns that stemmed from the coronavirus pandemic as demands for the base metals plunged due to the force shutdown of economies and strict safe-distancing measures in manufacturing factories around many parts of the world. However, as lockdown measures loosen and economies reopen, we have gradually begun to see an increase in the global demand for copper and iron.

Looking into the near future, we expect the path to a rebalanced copper and iron ore markets to be steady and heavily reliant on stimulus measures. There is certainly a bright outlook for the base metals. Copper and iron ore prices will remain bullish as we expect a massive tailwind on the demand side and believe that demand for base metals will be restored. This restoration will be a resultant of the gradual opening of economies and increased appetite from the United States, China, and other developing countries, stimulated by government fiscal packages that are aimed at infrastructure and transportation spending.

Figure 16: XCUUSD Daily Chart

COMEX:HGX2020, D 3.1045 ▲ +0.0035 (+0.11%) O: 3.0980 H: 3.1230 L: 3.0980 C: 3.1045



Source: CME Group

Trade Idea: Long Copper

Prices of copper have risen in recent months as data from countries unanimously showed a steady economic recovery. As more countries emerge from their lockdowns, we expect demand to grow at the rate at which national economies can rebound. Although there will be a presence of increased copper supply in the global economy as copper mines resume operations and maximise operating capacity, the supply effect will be overshadowed by the strengthening demand from countries like China. Moreover, with operational difficulties as a result of safe-distancing measures and protests in bigger mining companies, it is expected that mines will reopen in a cautious and gradual manner and we will not see production attain capacity levels before the pandemic. Hence, we foresee a tighter market where increased supply might not be able to match the bullish demand for the red metal.

Technically, we expect copper futures to trade higher as copper has been in an ascending channel though it has been struggling to break above the weekly upper limit. A bullish hammer pattern in October shows that although there is selling pressure, at the end of the day, the buying pressure was stronger, and it drove prices of copper up instead. As such, it seems like a reversal is what the market is heading towards.

Looking at the daily chart to support our view currently, there is a three outside up pattern – where a bullish engulfing pattern occurs in the first two candles and the third candlestick is confirmation of the bullish trend reversal - at the end of October which indicates a bullish reversal to the bearish trend since mid-October. Hence, it suggests that there is a strong upward momentum in prices, and it is very likely that traders can still potentially anticipate an uptrend as the market builds strength on the long white candlestick.

Therefore, we suggest going long on copper at the dips as we foresee the bullish demand for copper to support prices and set our take profit at the October 21 high price of 3.19.

Entry: 3.05

Take Profit: 3.19

Stop Loss: 2.95

Risk Reward Ratio: 1.40

Figure 17: 62% Iron Ore Futures Daily Chart

COMEX:TIOX2020, D 116.92 ▲ +0.08 (+0.07%) O: 116.65 H: 116.92 L: 116.65 C: 116.92



Source: CME Group

Trade Idea: Long Iron Ore

Like copper, stimulatory measures in China and other countries have played the pivotal role in reviving economic activity and, with that, the demand for iron. Iron ore prices have hit multi-year highs. We believe this bull trend is likely to continue. Strong gains in the prices of iron ore come after Beijing pumped hundreds of billions of dollars of fiscal stimulus into its economy to help it bounce back from the pandemic. Much of this stimulus package would go into infrastructure. As demand soars on global infrastructure investments, we expect the prices of the commodity to continue with its upward trend in the near term.

Looking at the daily chart to support our view currently, there are indicators suggesting taking a long position in iron ore futures. Prices are trading above the 20-SMA, 50-SMA and 100-SMA, with all these moving averages pointing upwards. Prices are also trading above the Ichimoku Cloud, suggesting that prices will remain in a strong uptrend.

With China's demand for iron ore as one of the determinant drivers for the commodity's prices, heightened diplomatic tensions between China and Australia will be a very relevant theme for the iron market as Australia iron ore exports to China makes up the largest China's alternative origins of iron ore imports. Amidst the furor, we posit that iron ore will be left out of bounds in China's trade war with Australia for now. This is because while China has ramped up pressure on Australia, it has been careful to attack trade items it can secure elsewhere and what it cannot readily replace is Australian's iron ore. More recently, China steel maker Sinosteel has even increased Australian iron ore stake after merging with Baowu Steel. Hence, we believe the lucrative iron ore trade will likely remain unimpeded though it may affect investors' confidence. Given that Australia still holds the power in the iron ore trade and China's growing appetite for the industrial metal, prices of iron ore are expected to be inflated.

As such, we suggest going long on iron ore at the dips as we foresee the bullish demand for iron ore to support prices and set our take profit at the October 12 high price of 119.54.

Entry: 116.92

Take Profit: 119.54

Stop Loss: 115.00

Risk Reward Ratio: 1.36

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