

# Global Macro Department – Australia (UNDERWEIGHT)

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<b>Basic Information</b>	
Real GDP (US\$)	1330.9B
M2 (US\$)	1.87T
СРІ	119.7
PPI	114.9
Con. Confidence	105.7
Building Permits	15,911
Stock Index	ASX200
Currency	AUD

## Chart info

### Figure 1: GDP Quarterly Growth Rate



Source: Australian Bureau of Statistics

# Figure 2: Quarterly Change in Consumer Price Index (CPI)





- 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 43.98% of Australia's annual GDP and top trading partners include China, Japan, U.S., U.K. and Korea. China remains Australia's largest two-way trading partner as two-way trade, taking up 38.67% of Australia's export volume. Moreover, Australia's GDP is largely reliant on its Services industry, which is equivalent to 62.70% of its annual GDP.
- With regards to Australia's Export Composition, it mainly exports Iron Ore and Coal, which constitutes 58% of its total exports. Furthermore, other minerals such as Copper Ores and Gold also take up a significant proportion of Australia's total exports.
- Australia's Import Composition mainly comprise of Petroleum, Cars and Broadcasting Equipment, which are largely satisfied by its main trading partners, China and U.S.
- Australia is a member of the APEC, G20, OECD and WTO. The country has also entered into free trade agreements with ASEAN, Canada, Chile, China, South Korea, Malaysia, New Zealand, Peru, Japan, Singapore, Thailand, and the United States.

# Summary of Events in the Past 6 Months

- The Reserve Bank of Australia (RBA) bought A\$1 billion (\$746 million) of April 2024 government securities, as part of efforts in keeping yields near 0.1%. However, yield levels have since hit a peak of 0.775%, amid concerns of inflation and rising global yields
- The Australian Prudential Regulation Authority (APRA) has implemented a 2.5% increase in minimum interest-rate buffer for home loan applications, in view of the booming housing market due to ultra-low interest rates.
- The collapse of China's Evergrande, one of world's largest property developer, effectuated a global demand shock for minerals such as Iron Ore and Coal. Inevitably, Iron Ore's price plummeted drastically, affecting Australia's export sales revenue.
- The Global Energy Crisis has severely disrupted markets in the Euro area, UK and China, adversely affecting production in energyintensive industries. The crisis offers Australia, a major gas and coal exporter, a valuable opportunity.
- The Sino-Australian tensions have since escalated, largely due to the Australia-UK-US (AUKUS) trilateral security pact between the 3 countries. The pact signifies an elaborate change of strategic direction for its parties and poses a significant threat for China.

#### Figure 3: Australia 2-year bond yield (AU02Y)



Source: Investing.com

## Figure 4: Household Consumption Expenditure Quarterly Growth (%)



Source: Australian Bureau of Statistics

#### Figure 5: Household Savings Ratio



Source: Australian Bureau of Statistics

**Figure 6: Number of Building Permits Approval** 



Source: Australian Bureau of Statistics

## **Yield Control Backfired**

**RBA's Key Measures** 

During the board meeting on 2<sup>nd</sup> November, the board of the Reserve Bank of Australia (RBA) extended the date for asset purchases of AUD 4bn a week from November 2021 to at least February 2022. The move was justified by the economic slowdown that Australia had faced for the past year, as the asset purchase will aid in keeping Bond Yields and Official Cash Rates in control. Furthermore, the RBA expects a quick economic rebound as soon as lockdown restrictions are lifted, although they foresee some uncertainty revolving around the new Omicron Coronavirus variant, causing a slightly less steep rebound than experienced earlier in the year.

More importantly, the Board has also decided to maintain the cash rate at 0.10%, while discontinuing the target yield of 0.10% for the April 2024 Australian Government Bond. This move was in response to consequences of the earlier Bond Purchasing initiatives in Q3FY21, where inflationary pressure and expectations of rising interest rates led to a sharp spike in the Australia's 2-Year bond yield (Fig. 3). RBA has since reconciled and acknowledged the fact that its effectiveness as a monetary policy tool had declined as shown by the significantly higher level of swap rates of similar maturities.

The Board also remained committed to maintaining highly supportive monetary conditions to achieve a return to full employment in Australia and inflation to reside between 2% to 3% on a sustainable basis (Fig. 2). This would mean that the labour market will need to be sufficiently tight in order to generate tangible wages growth over the course of 2022. Moreover, the board also announced that there will be no near-term plans for the RBA to raise the cash rate until inflation and employment targets are met – which may lead to a weaker AUD in the near term due to lower rate differentials for investors.

#### Long Road Ahead

The near-term outlook for the Land Under seems to be more uncertain and ominous compared to previous quarters, due to less than optimistic economic data and the emergence of the Omicron Variant. As a result of the outbreaks of the Delta and Omicron variants of COVID-19 and associated lockdowns in New South Wales and Victoria State, economic activities have contracted sharply in the September quarter. The 1.9% fall in GDP during the latest quarter marks the country's 3<sup>rd</sup> steepest contraction in 6 decades.

As shown in Figure 4, household consumption had declined drastically in the September quarter in response to tighter restrictions in some states. While consumption expenditure declined, extra public spending helped keep the economy moving in the quarter, adding 0.7% points to the growth rate. The quarter also saw household savings ratio doubling to 19.8%, reflecting fewer consumption opportunities and higher income support payments (Fig. 5). However, it should be noted that the higher-than-average household savings ratio may serve to bolster future spending on final goods consumption – thereby supporting a strong rebound in the longer term.

Investment activity, particularly construction, had been adversely affected by lockdowns in the September quarter after a strong first half of the year. A significant amount of investment activities was expected to accommodate an elevated level of residential and non-residential construction activity over the forecast period. It was noted that some parts of the construction sector faced capacity constraints, with rising building costs and shortages of materials and labour, delaying project timelines. Moreover, building approvals for dwellings had also

#### Figure 7: Unemployment Rate



Source: Australian Bureau of Statistics

#### Figure 8: Consumer Price Index (CPI)



#### Source: Australian Bureau of Statistics

#### Figure 9: Australia Top 5 Exports (%)



Source: Australian DFTA

#### Figure 9: Natural Gas Prices (USD/MMbtu)



Source: Investing.com

declined from its peak in March earlier this year, indicating a general slowdown in investment activities (Fig. 6).

Furthermore, the emergence of the Omicron Variant has also sparked greater uncertainty in the markets, as policymakers are unsure of the path ahead. Nevertheless, steady increase in vaccination rates coupled with strategic policy considerations made by the board will most likely increase the possibility of living with the virus and push the economy forward.

#### **Unemployment Rate & Inflation**

Australia's unemployment rate declined sharply to hover around 5% over the past year ever since it hit its 20-year high of 7.8% in Sep 2020 (Fig. 7). Unemployment rate is forecasted to decline to around 4.5% by the end of 2022 and 4% by the end of 2023. Employment is expected to grow at a more moderate pace later in the forecasted period as output growth settled around its longer-run trend. Wages growth was positive in the past 2 quarters as remaining wage freezes and cuts implemented in 2020 were unwound and the labour market tightened. However, there remains uncertainty around how wages growth would respond to the unemployment rate being near 5% for an extended period, as there is little historical experience to draw on.

Inflation in the September quarter stood at close to 3%, and was accounted for by increases in fuel prices and home-building costs. Growth in construction costs had picked up noticeably in the quarter, reflecting rising global materials prices and strong demand for housing construction induced by domestic subsidies. Although prices of some consumer durable goods had picked up as import price pressures persisted and demand remained strong, inflation had been fairly subdued in other expenditure components. Inflation levels could likely experience great volatility over the course of the next 6 months, in the event that the Omicron variant causes economic uncertainty and a weaker economic environment.

#### **International Developments**

#### The "Grande" Collapse

On the 20<sup>th</sup> of September 2021, the markets were shocked by the announcement of the liquidity crunch of the Chinese property developer Evergrande, the second-biggest property developer in China, with liabilities over USD 300bn dollar, similar to 20% of Australia's GDP. China's growth has been one of the drivers of Australia's pre-Covid-19 streak of 30 years without recession, and China is, by far, Australia's largest export partner, accounting for almost 40% of Australian export. Although China's policymakers won't let this single company crisis turn into a systemic collapse, inevitable economic consequences still exist for Australia.

Construction of property has been a major driver of Chinese economic growth over the past decades and the collapse of Evergrande will effectuate lower demand for Australia's largest exports, Iron Ore. Firstly, Figure 9 shows that the iron ore has been increasing its share of Australia's total export value, accounting for over 20% of total export value in Q3 this year. This can be partly explained by the increase in demand from China and the high iron ore prices of the last year. So, a significant drop in iron ore prices or international demand in iron ore will have negative consequences for Australian GDP as this translates to lower export value.

Nevertheless, not all commodity prices faced the headwinds that the Iron Ore market experienced. The rise in prices of other commodities, such as natural gas could negate some of the losses generated by Iron Ore exports.

# Figure 10: Australia's top two-way trading partners



Source: Australian DFTA

### **Complementary Commodities**

While prices of metallic commodities experience downward pressures, energy prices have been surging globally over the past months (Fig. 10). Australia, as a large gas and coal exporter, can benefit from the higher prices of coal and gas (Fig. 9). Gas prices have risen sharply in past weeks and months, as Europe and China are facing energy shortages heading into winter, with the risk of serious impact on their economy. On the contrary, Australia is approaching summer instead of winter like China and Europe. This suggests that the impact on electricity bills in Australia, as a result of high gas prices, will likely be more muted. Moreover, Australia's LNG exporters can benefit from the current high demand for gas. Furthermore, LNG demand growth in Asia is expected to continue to be substantial in the years ahead, supporting gas prices into the future.

However, higher energy prices will not be beneficial to producers. There is a wide range of sectors that will suffer higher input costs such as those that produce fertilisers and ethanol. These higher input costs for producers may ripple through the supply chain, eventually leading to higher prices for consumers in Australia as well. Alongside higher input costs, supply chain complications may also increase the likelihood of sustained inflation, instead of a 'transitory' one. Although Covid-19 probably played an influential role in catalysing supply chain issues, shipping market dynamics is likely to be the main cause for supply chain issues to persist much longer. With that said, as long as Australia is able to resolve its supply chain hiccups while leveraging on the high demand for natural gas and coal, she may possibly experience a boost in its GDP and demand for their currency.

#### Time's Up!

After several delays, Australia, the UK and US signed the AUKUS trilateral security deal partnership that aims to deepen diplomatic, security, and defence cooperation in the Indo-Pacific region. The Indo-Pacific region is increasingly in the spotlight due to its strategic importance. Many of the trade routes toward Europe and US flow through the region. Therefore, the security of these trade routes is of importance to ensure the safe flow of commodities, materials, and goods towards the west. Moreover, one of the other main objectives of the pact was to support Australia in acquiring nuclear-powered submarines for the Royal Australian Navy, while denouncing the AUD 90 billion deal with France. Understandably, France was not delighted by the pact and have since recalled their ambassadors from Washington and Canberra, implying serious economic consequences.

On the tangible side of things, the cost of purchasing nuclear-powered submarines will probably be much higher for the Australian government as it not only comprises of building the actual submarines but also all other supporting technology involved in getting the submarines into operation. The total costs are unclear, but if we were to consider the cost of the deal with France, it would increase the current government budget deficit with AUD 9 billion a year for the next ten years. This increases pressure on an already depressed government budget.

In addition, although not specified in the pact, it is clear that the AUKUS trilateral security deal partnership is part of a strategy to counterbalance increasing Chinese influence in the Asia-Pacific region. Australia is clearly strengthening relations with like-minded economies in an effort to increase its economic resilience. The Sino-Australian relations had worsened last year, when China decided to ban Australian exports such as Coal, Barley and Wine. The move had negatively affected Australia's Balance of Trade as they constitute a significant proportion of Australia's export volume. As such, deliberate

moves by Australia may lead to further deterioration of the Sino-Australian relationship, resulting in adverse economic consequences. It should be noted that China is Australia's biggest trade partner (Fig. 11) and that Australia also has a significant supply chain dependency on China, for crucial components such as semi-conductors, computers, and fertilisers. The relationship between Australia and China has worsen over the course of the past year, with no signs of reconciliation in the near-term.

#### Figure 11: AUDUSD Daily Chart



Source: TradingView

#### **Trade Idea: Short AUDUSD**

Australia is known for being a major exporter of commodities and gases for many decades. Although the recent energy crisis in China and the EU region serves as a potential opportunity for the Australian dollar to appreciate, it is unlikely that Australia will continue to face sustained demand for natural resources once Winter passes.

Furthermore, the fact that the RBA took on a clear stance of stagnating its cash rate at 0.1% also indicates that they have no intention of raising rates in the coming quarters, which may be seen as a less attractive policy decision for many foreign investors due to lower rate differential.

In addition, there have also been strong positive USD momentum after strong data releases, including initial jobless claims falling to their lowest level since 1969. President Biden had also reappointed Powell as Fed Chair and several FOMC members argued for a faster tapering of QE (Quantitative Easing) which would increase the likelihood of rate hikes next year.

Moreover, escalating tensions between Australia and China also implies significant geopolitical instability as both countries are unable to come to any form of consensus. As such, since China is Australia's largest trade partner, this means that Australia's export volume will be largely dependent on the Chinese government's economic decisions, which does not seem too optimistic.

#### **Technicals**

As shown in Figure 12, the daily chart of the AUDUSD pair has implied significant bearish pressure, as shown by the Head-and-Shoulder and Double-Top chart pattern. Moreover, the 50- and 100-day Exponential Moving Averages (EMA) had also crossed the 200-day EMA, indicating a strong bearish bias. Although the 0.70366 level has proved to be a strong support over the past months, it seems like the bears are here for good, at least for the next 6 months.

Furthermore, it is also apparent that the AUD has failed to make new highs despite a commodity bull market. This constitutes as an alarming concern as the AUD is a commodity-backed currency. This further justifies a short position on the Aussie dollar.

#### <u>Trade</u>

Entry point will be at 0.70366, upon confirmation of the pair breaking through the support level and retesting the level. Our stop loss will be at 0.71833, which was the most recent 'higher-low'. The take profit level will be at 0.67844, which constitutes a 1.88 risk to reward ratio.

Entry: 0.70366 Take Profit: 0.67844 Stop Loss: 0.71833 Risk Reward Ratio: 1.88



# Global Macro Department – New Zealand (UNDERWEIGHT)

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Analyst

# **Basic Information**

Real GDP (US\$)	212.46B
M2 (US\$)	258.41B
CPI	1085.0
PPI	1242.0
Con. Confidence	102.7
Building Permits	4,197
Stock Index	NZ50
Currency	NZD

## Chart info

### Figure 1: GDP Quarterly Growth Rate



Source: Stats NZ

## Figure 2: Top Exports in New Zealand (%)



# **Overview of New Zealand**

- Located in the southwestern Pacific Ocean with a population of five million and an abundance of natural resources, New Zealand is known to possess high levels of well-being, government transparency, and economic freedom.
- Led by Prime Minister Jacinda Ardern, she was the world's youngest head of state when elected in 2017.
- Being an open economy, trade accounts for 26.99% of New Zealand's annual GDP and top trading partners include China, Australia, U.S., Europe Union (EU) and Japan. China remains New Zealand's largest two-way trading partner, taking up 24.93% of New Zealand's export volume. Moreover, New Zealand's GDP is largely reliant on its Services industry, which is equivalent to 71.0% of its annual GDP.
- With regards to New Zealand's Export Composition, it mainly exports dairy products (Milk, Butter and Cheese takes up 16.3% of total exports), Meat (10.4%), Wood (8.0%) and Fruits (7.1%).
- New Zealand's Import Composition mainly comprise of Mechanical machinery, Vehicles parts, Electrical machinery and Petroleum which are largely satisfied by its main trading partners, China and EU.
- New Zealand is a member of the APEC, OECD and WTO. The country has also entered into free trade agreements with ASEAN, Canada, Chile, China, South Korea, Malaysia, Australia, Peru, Japan, Singapore, Thailand and Hong Kong.

# Summary of Events in the Past 6 Months

- New Zealand experienced steady positive growth during the past quarters, with a 2.8% growth in the latest quarter (Fig. 1).
- New Zealand has also pivoted away from the idea of a Zero-Covid country and instead chose to classify Covid-19 as an endemic. The Country has also since implemented a traffic light system, as part of efforts in reducing the spread of Covid-19.
- The United Kingdom and New Zealand have struck a free trade agreement that will reduce tariffs on bulldozers, wine, buses and clothing. The FTA is expected to promote "green growth" and strengthen bilateral ties between UK and NZ
- New Zealand has ended their Monetary Policy stimulus and hiked interest rates for the first time in 7 years, in view of the economy hitting capacity constraints and rising inflation. The Official Cash Rates now stands at 0.75%.

#### Figure 3: 90-day Bank Bill Rate and OCR (%)



Source: Stats NZ

# Figure 4: Holdings of central government debt securities, Monthly Change (%)



Source: RBNZ.govt.nz Figure 5: Consumers' Confidence, Monthly



Source: Stats NZ

Figure 6: Household Consumption Expenditure Quarterly Growth (%)



#### **RBNZ's Key Measures**

#### **Rising Rates**

To maintain price stability and support maximum sustainable employment amid inflationary pressures and uncertain economic conditions, the Monetary Policy Committee of the RBNZ lifted interest rates for the second time this year. The official cash rate (OCR) has since been raised by another 25 basis points to 0.75% in the final policy meeting of the year (Fig. 3). Despite the sharp increase in OCR, the RBNZ is far from done as forecasts estimates that official cash rates and 90-day Bank Bill rates will continue to ride on an upward momentum to hit 2% by the end of 2022.

Furthermore, the RBNZ has also announced that they will be gradually slowing down the NZD60 billion LSAP programme, which involved the Reserve Bank purchasing nominal New Zealand government bonds. This means that the RBNZ will be selling these bonds, rather than letting them mature passively. Moreover, RBNZ running down its bond holdings would tighten financial conditions and could possibly substitute for OCR hikes (Fig. 4). However, bond sales would likely only have a secondary impact on rates and that the OCR remains as the main mode for adjusting monetary policies.

#### More To Be Done

The near-term outlook for New Zealand seems to be more uncertain and ominous compared to previous quarters, due to less than optimistic economic data and the emergence of the Omicron Variant. Furthermore, New Zealand has also implemented a traffic-light system for Covid-19 management, which involves varied gradings of restriction between vaccinated versus unvaccinated lines. On one hand, the system has the potential to release a lot of pent-up demand into the economy. However, the traffic-light system may also bring about greater likelihood of more occurrence of COVID-19 across the country. This may in turn waver consumers' confidence and expose the country to greater economic risks over the course of the next 6 months (Fig. 5).

As shown in Figure 6, household consumption had declined drastically in the earlier quarters, but rebounded in the latest quarter. This is likely a result of a combination of eased restrictions, positive growth in vaccination rates and a low household savings ratio of 6.26% in the latest quarter (Fig. 7). Furthermore, extra public spending helped keep the economy moving in the quarter, adding 0.3% points to the growth rate. However, it should be noted that bulk of consumption expenditure lies within the housing market, due to induced demand as a result of ultra-low interest rates (Fig. 8). As such, expectation of rate hikes in the coming months may dampen strong housing momentum and result in lower consumption expenditure.

Investment activity, particularly construction, had been adversely affected by lockdowns in the September quarter after a strong first half of the year. A significant amount of investment activities was expected to accommodate a high level of residential and non-residential construction activity over the forecast period. It was noted that some parts of the construction sector faced capacity constraints, with rising building costs and shortages of materials and labour, delaying project timelines. Moreover, building approvals for dwellings had also declined from the previous quarter, indicating a general slowdown in investment activities (Fig. 9).

With regards to trade levels, growth in goods export prices has been outstripping import prices, boosting national income. However, it is important to note that New Zealand's largest export component, the dairy industry, is a mature one and hence is more likely to stagnate

#### **Figure 7: Household Savings Ratio**



Source: Stats NZ

#### Figure 8: House Prices % change



Source: Stats NZ

#### **Figure 9: Number of Building Permits Approval**



Source: Stats NZ

#### Figure 10: Unemployment Rate & Labour Cost



rather than embark on another surge in investments. With that said, the Meat and Horticulture industry have been generating largely positive returns and is an industry that could possibly still experience another wave of investments, boosting New Zealand's National Income. Unfortunately, high freight costs, labour shortages, regulatory costs and global financial market fragilities are issues that the country will have to resolve in order to fully benefit from its export demand.

#### **Unemployment Rate & Inflation**

New Zealand's unemployment rate declined sharply to hover around 3.4% over the past quarter (Fig. 10). Firms have been successful at drawing people into the labour market from inactivity and is expected to continue to do so. However, there may also be a possibility that participation falls instead, as COVID-19 fear deters some workers in close contact service industries and longer-term aging population trends take hold. With that in mind, as long as overall employment holds it together through that, this would imply an even lower unemployment rate for subsequent quarters.

Inflation in the September quarter rose by 4.9%, as shown by the quarterly change in CPI (Fig. 11), and was accounted for by higher oil prices, rising transport costs and the impact of supply shortfalls. Moreover, the heated property market also contributed to the sharp rise in CPI. Under its dual mandate aim, the RBNZ aims to keep inflation between 1-3% and support maximum sustainable employment. However, both inflation rates and employment rates now reside in the unsustainable territory and hence it is likely that the RBNZ would opt to raise the OCR over the course of subsequent quarters.

#### **International Developments**

#### **UK - New Zealand Free Trade Agreement**

On 20th October 2021, Britain signed a trade deal with New Zealand, a key ally, as part of efforts to reduce the country's reliance on China. Trade between the UK and New Zealand is currently worth US\$3.2bn a year, and the government said that would rise as the deal would make it easier for smaller businesses to break into the New Zealand market - as well as remove barriers for advanced technological and services companies. New Zealand is heavily reliant on China for trade, with more than 30% of its exports going to Chinese markets. As such, an agreement between both countries will allow New Zealand exporters to diversify and reduce their vulnerability to geopolitical shocks, such as the trade war Australia is experiencing.

Forecast estimates that the agreement will bring about a 0.3% boost to New Zealand's GDP, mainly derived from increased export volumes from sectors such as dairy, red meat and horticulture.

#### **Ominous Omicron**

The recent arrival of the Omicron variant has shocked the markets, due to the uncertain nature of the variant. Key questions revolve around ways in which it damages human health, its transmissibility, and response to current vaccines. Prime Minister Jacinda Arden had also announced that the country will no longer be aiming for a Zero-Covid nation and instead will be inclined to transit into a system of living with the virus. With that said, New Zealand chose to adopt a firm and cautious stance towards the developing global situation, by extending its border closure for another 5 months until April 2022. However, as tourism accounts for a significant portion of New Zealand's national income, tight border controls may be undesirable for its economy.

Source: Stats NZ

# Figure 11: Consumer Price Index (CPI), quarterly change in %



Source: Stats NZ

In addition to border controls, the new traffic light system will be less restrictive compared to the previous Alert Level system, where economic activities will still be carried out without the fear of another series of lockdowns. As economic constraints become less binding, its impacts will be determined more by the underlying health of the economy and the level of demand. Hence, such a system will benefit firms and local businesses as consumption expenditure will be expected to rise alongside higher vaccination rates, satisfying pent-up demand.

Moreover, global and domestic supply conditions have been improving as shipping costs ease and labour productivity improves with lifting vaccination rates. Alongside a rise in shipping and manufacturing capacities, cost and price pressures is expected to ease further over 2022.

Figure 10: NZDUSD Daily Chart



Source: TradingView

## **Trade Idea: Short NZDUSD**

With the RBNZ raising OCR twice within the past year, the markets have been optimistic about greater increments of OCR. Ahead of the meeting in November, the markets had priced in a 35% chance of a larger 50bps increment in OCR. However, the RBNZ took on a more cautious stance and indicated that future hikes will likely be in increments of 25bps. Furthermore, the emergence of the Omicron variant has also massively reduced the risk appetite of investors, adding greater downward pressure on the currency.

In addition, there have also been strong positive USD momentum after strong data releases, including initial jobless claims falling to their lowest level since 1969. President Biden had also reappointed Powell as Fed Chair, clearing some event risk, and a number of FOMC members argued for a faster tapering of QE that would increase the probability of rate hikes next year.

### <u>Technicals</u>

As shown in Figure 12, the daily chart of the NZDUSD pair has implied significant bearish pressure, as shown by a lower low (0.67472) compared to the previous low Utilising the (0.68702).Fibonacci retracement tool, we will be looking for price to experience a slight rebound to the 0.69832 region (0.500)Fibonacci retracement level) before heading down to lower levels over the next 6 months.

#### <u>Trade</u>

Our entry point will be at 0.69832, upon a bearish candle wick formation at the region. Our stop loss will be at 0.71165 (0.786 Fibonacci retracement level). The take profit level will be at 0.65642 (-0.382 Fibonacci retracement level), which constitutes a 3.18 risk to reward ratio.

Entry: 0.69832 Take Profit: 0.65642 Stop Loss: 0.71165 Risk Reward Ratio: 3.18



# Global Macro Department -Copper (OVERWEIGHT)

#### Analyst

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### **Chart info**

### Figure 1: Copper Year-To-Date Performance



Source: Tradingview

# Figure 2: Copper and U.S. GDP Percentage Change



Source: U.S. Bureau of Economic Analysis

# Figure 3: 30 Day LME Copper Warehouse Stocks Level



## 2021 Overview: Copper To The Moon?

- In March 2020, the COVID-19 pandemic triggered acute declines in metals prices, mainly due to a collapse in metals demand. Short and long-term supply were also disrupted by mine closures and a wave of capital spending cuts in the mining sector.
- Fast forward to H1 of 2021, the commodity market embarked on a bull run with strong narrative supporting the trend. The world has moved on to an endemic living with Covid, and economic output rebounded sharply with generous government spending and loose monetary policy. Meanwhile, on the supply side, Covid has brought about multiple disruptions, ranging from mine closures, port closures and the lack of workers. The modern supply chain logistics are not built to withstand such supply shocks and the effects of the disruptions are amplified and felt across all downstream industries. A fall in supply and a sharp increase in demand has supported a commodity super-cycle narrative. Most markets have roared back to life since the onset of the pandemic, with commodities being the frontrunner in the recovery. Industrial metals market fundamentals are in a very different place, with copper and iron ore prices reaching historic highs.
- Copper's broad use in industry and many different sectors of the economy, ranging from infrastructure to housing and consumer electronics, and copper has historically been a good early indicator of economic activity. When copper prices rise, economic activity soon often follows. When copper prices fall, the economy often then stagnates. With reference to Fig. 2, the GDP growth figures moved in tandem with copper's performance, with Q1 GDP Growth at 2.6% and Q2 GDP Growth at 3.2%. Economic output recovered sharply, while central banks have continued to provide an accommodative environment for growth. This sets up the world for the strongest economic growth in decades, and copper is likely to follow the trend higher.

# Summary of events in the past 6 months

- Copper came down from an all-time high of over 10,000USD/tonne as investors weighed the prospects of a slowing economic growth and tightening of accommodative monetary policies. We expect copper to trade sideways in 4Q21 as investors evaluate between the upside potential of continued easy policies and stimulus spending, and the downside potential of slowing China growth, alongside COVID disruptions mounting from new variants.
- Copper have been in short physical supply as mine closures hit supply, but demand rebounded strongly due to strong economic sentiments. With reference to Fig. 3, LME warehouses are at its

Source: Kitco

lowest inventory levels since 1970s, and the open interest in copper futures may result in a potential squeeze as inventor's rush to close or deliver the contracts amidst a supply shortage.

- Due to high demand for copper in the new energy sector, copper prices remain elevated, trading sideways near ATH. Non-new energy sectors are being priced out, as the air conditioning industry is substituting copper with cheaper alternatives like aluminium. Demand for copper will continue to increase as governments and corporations are prioritizing ESG and decarbonization.
- China's government ordered sweeping curbs on electricity usage and a rapid expansion of fuel supplies to ease an energy shortage. The power cut has led to reduced demand for copper and its byproducts. A major Chinese copper producer has been running at 80% of its 1.4 million tons of annualized copper capacity since the middle of October 2021, to avoid holding a glut of sulfuric acid, a by-product from copper smelters that's typically sold to chemical and fertilizer companies.

## **Demand from ESG goals and stimulus**

#### **Move Towards Green Infrastructure**

Because copper is a highly efficient conductor of electricity and heat, it is used in renewable energy systems to generate power from solar, hydro, thermal and wind energy across the world. ESG has been the main narrative fuelling the long-term bullish trend for copper. Fully electric-vehicles (EVs) use more than 10 times the amount of copper required by a conventional internal combustion engine (ICE) car. Demand from renewable power generation, battery storage, electric vehicles, charging stations and related grid infrastructure accounts for about a fifth of copper consumption. With governments aiming for aggressive net zero emission targets in the coming decades, the transition to sustainable energy sources will inevitably drive up the demand of copper.

However, in the short to mid-term, high input cost of raw materials may set back the progression of decarbonization. Since copper is a vital part of green infrastructure from grids to wind turbines, the recent price surge threatens to make decarbonization more costly. Copper has roughly doubled from the lows seen a year ago and had breached alltime highs twice this year. While elevated prices mean companies have an incentive to ramp up investment in mining, which would help supplies, the downside is the length of time it takes to get projects up and running. In the meantime, demand is expected to outgrow supply in the years ahead, and copper is set up nicely for a long bull run.

#### Stimulus 2.0: Infrastructure Bill

Decarbonization has been the main theme that is pushing copper higher, but demand from sustainable energy related infrastructures only account for a fifth of global copper consumption. The bulk of copper consumption comes from construction and consumer goods

#### Figure 4: Copper's forecasted deficit

#### Not Enough

Growing demand means copper supply will fall short of demand most years

Deficit Surplus



Source: Bloomberg

Figure 5: Fed's Balance Sheet Growth



Source: Board of Governors of the Federal Reserve System (US)



Source: Bloomberg

and equipment, these two industries alone account for almost half of global copper consumption. Given the huge demand for copper within the construction industry, and how major infrastructure projects have been funded by aggressive fiscal spending, demand for copper has been buoyed by artificial demand.

Fed's balance sheet doubled within 18 months, and there is more stimulus in the pipeline despite Powell's assurance of a tapering of asset purchases. Lower interest rates have also provided additional support for the real estate sector, as real estate prices surge in the US and the UK.

To add fuel to fire, the \$1 trillion infrastructure bill has just been passed, and it is sure to uplift global demand for raw materials. It is still too early to tell how the infrastructure bill would drive up demand for physical copper, but there is more potential for upside gain.

# **Copper's Supply Deficit**

## **Backwardation: Drawing On Inventories**

Keeping commodity prices elevated for a long period usually requires supply constraints, as high prices would usually alleviate price pressures as miners and producers boost output to capitalize on higher profits. The pandemic has disrupted supplies of copper, as mine closures were frequent, and capital investment in mining sector have been cut back in anticipation of economic uncertainty.

However, contrary to expectations, the economy bounced back rapidly from the pandemic, mainly due to accommodative monetary policies and aggressive fiscal spending. The result of the concoction of policies is strong economic output, a tight labour market and high demand for raw materials.

Short-term copper contracts are trading at a huge premium to futures in London Metal Exchange (LME), a sign of tightness in spot supplies. Future prices are tumbling as outlook for future demand deteriorates, while spot contracts highlight the supply shortfall, with the LME inventories falling to multi-decade low. The backwardation signals spot demand is far outpacing supply. Due to the tightness in supply, trading houses have begun to withdraw metal from LME to ship to their customers, and available stocks have reached its lowest since 1974. The bullish physical sentiment for copper may continue to intensify if demand continues to remain strong.

Furthermore, LME still has 17,300 open contracts for Nov 2021, in which the seller either must close or deliver copper to LME warehouses. With one contract size equivalent to 25 tonnes, the open interest for Nov 2021 contracts amount to 433,775 tons. This amount is 14 times more than the amount of metal available to buyers at LME warehouse network, which sets copper up for a possible squeeze when contracts have to be closed or delivered.

# **China's Real Estate Debt Deleveraging**

## Figure 7: China GDP Annual Growth Rate



Source: Trading Economics

# A Balancing Act: New COVID Variant & Chinese Real Estate Debt Deleveraging

While copper bulls are busy rejoicing, headwinds to China's growth are building due to the power crisis, real-estate deleveraging and coronavirus outbreaks. Copper and other base metals came under fresh pressure amid the concern about a slowing Chinese economy and elevated inflation. Since construction accounts for almost a third of copper consumption, the direct implication of a slowdown in the real estate sector in China is material and pervasive. Contagion can easily spread to other industries and economies as interest rates will spike if Evergrande defaults. High interest rates make it impossible for companies to roll over their debt – something they have been doing in recent times, since interest rates were low. Furthermore, the real estate sector accounts for roughly a third of China's GDP, hence any slowdown in the sector will risk derailing China from its aggressive growth targets. The contagion risk emerging from the Chinese real estate sector is a key risk that should be watched clearly.

On the other half of the globe, the detection of the new Omicron variant in US roiled the financial and commodities markets. An information vacuum around the new pathogen is creating fresh anxiety about the pandemic. Currently, the markets are especially sensitive to any new commentary that suggests the variant could be a threat to global growth, partly due to high inflation prints and policy tightening. Any setback will force central banks to choose between inflation or tight policies that will end up hurting the already weak economy.

Any deterioration of the two factors will likely tank global economic output, and cyclical raw materials like copper would likely be whipsawed in the process.

## **Figure 8: COMEX Copper Futures**



Source: TradingView

# **Trade Idea: Long Copper**

Prices of copper have been trading sideways after coming off all-time highs, partly due to weaker demand from slowing China economic growth, global electricity shortage and tightening of accommodative policies. However, fundamental supply deficits of copper still exist as shown in the LME warehouse supply level, and copper is still well positioned to trade higher as demand recovers.

Copper has seen some steep declining in recent days due to the discovery of the new Omicron variant, and investors weigh the prospect of future economic uncertainty.

However, there is strong support at 4.20, which dates to a long-term bullish trend that started since Feb 2021, hence providing a safe entry point. Stop loss is set at 4.05, breaching it would mean a clear deviation from its long-term bullish trend. There is also a symmetrical triangle that converges at 4.26, which could potentially signal a breakout of the current slump.

Keeping in mind the potential of a squeeze in prices as traders close their contracts amidst limited physical copper supply, we suggest going long on copper to capitalize on the current sideways action, and every dip above the support level is an opportunity to enter.

Entry: 4.20 Take Profit: 4.45 Stop Loss: 4.05 Risk Reward Ratio: 1.67



# Global Macro Department – Gold (OVERWEIGHT)

#### Analyst

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**Chart info** 

## Figure 1: XAUUSD – Gold Spot Price



Figure 2: United States Non-Farm Payrolls



Source: Trading Economics



# Gold: No Longer an Inflation Hedge?

- Gold is used extensively as an inflation hedge, as gold holds value simply because it lacks credit or default risk. It has been held its value since its existence and have been known as a good inflation hedge against a falling economy. Gold prices tend to go up when interest rate goes down, as gold is known to be a zero-yield instrument. However, in 2021, when real rates have been deep in negative territory, gold was underperforming even when inflation accelerated.
- New banking regulations, Basel III, came into regulation for COMEX and European banks on 28th June 2021, henceforth reclassifying gold from a Tier-3 asset into a Tier-1 asset, which makes gold as good as cash. Basel III includes a new Net Stable Funding Ratio (NSFR) requirement, which specifies that an 85% Required Stable Funding (RSF) needs to be held by banks against the financing and clearing of unallocated gold transactions. This is a big change from the pre-Basel III level of 0%, and it makes holding unallocated gold more expensive by equating it to the same level of risk as holding equities. The paper to physical ratio is estimated to be sitting at 100:1, hence a rush to close the contracts before Basel III sets in could potentially create a liquidity squeeze as traders demand delivery. It is to note that the LBMA has been granted extension until 1st Jan 2022 and the LBMA is almost 9 times the size of COMEX, and deals almost exclusively in unallocated paper gold, hence 1<sup>st</sup> Jan 2022 is a key date to watch for.

# Summary of events in the past 6 months

- Fed's criteria to tapering and rate hike depends on the progress on two fronts, employment figures and inflation. 2% Inflation targets have been met, while Fed consistently attribute the upside surprise in inflation to the transitory nature of supply chain disruptions. On the job front, it is a goldilocks scenario, where it is not too hot, not too cold.
- Fed is making "hawkish" statements with tapering of asset purchases to start in Nov 2021, and expected to end in mid of 2022, Fed fund futures are pricing in a lift off from zero and multiple rate hikes in 2022.
- Investors are investing with a risk-on mentality, with major indices breaking all-time highs even with ongoing discussions about tapering and future rate hikes. The markets have been soothed by ample forward guidance by Powell and every single dip has been seen as a buying opportunity. This mentality has made gold lose its shine, as gold is typically seen as a risk-off asset.
- Despite gold's lacklustre performance in 2021, multiple central banks have been reported adding gold to their reserves. Central banks of Singapore, India and Brazil have been reported buying gold. China has also given domestic and international banks permission to import large amounts of gold into the country, potentially helping to give gold a supporting narrative amidst weak performance.

# **Highest CPI Inflation in 30 Years**

## <u>CPI Inflation</u>

## Figure 4: United States Inflation Rate



Source: Trading Economics

## Figure 5: Global Manufacturing PMI and U.S. 5-Year Inflation Swap



Source: Bloomberg

CPI jumped 6.2% in Oct 2021 from a year ago, marking the fastest annual growth rate since 1990. The CPI rose 0.9% from Sep 2021, the largest gain in four months. The exceeding inflation reading was also due to a broad-based increase in prices, which contradicts Fed's proposition of a transitory inflation. The upside surprise is putting pressure on the Fed to end near-zero interest rates sooner to stay ahead of the curve, but a dovish Fed put upward price pressure on gold. On the day of the Oct CPI release, gold increased by \$40/oz intraday, before settling for a \$20/oz increase. Gold also saw six consecutive days of gains amidst the run-up to the inflation data release, which is one of its best performing weeks in the year.

## <u>Stagflation</u>

Inflation had already been increasing on the back of unprecedented pandemic-era stimulus and as the rollout of vaccines spurred the gradual reopening of some countries. However, shortage of manpower in logistics, high energy input costs, supply chain disruptions have brought economic output down, and brought some resemblance to the stagflation that the world saw in 1970s. Stagflation is worrying because conventional monetary policy will not work. Hiking interest rates to combat inflation will hurt economic output and more fiscal spending to boost aggregate demand will accelerate inflation. The only feasible solution is to improve infrastructure that helps increase the supply side of things, but the effects will lag as time is required to build up the infrastructure.

In the long run, gold has historically performed well during periods of high inflation. However, gold may weaken in the short term if the global narrative is strong on central banks reeling in inflation by aggressively hiking rates. We believe that the economy is showing signs of stagflation, hence raising rates will not be an effective tool. Until we observe positive real rates, we remain bullish on gold in the long term.

#### Figure 6: Fed's Balance Sheet Growth



Source: Board of Governors of the Federal Reserve System (US)

#### **Figure 7: DXY Index**



Source: TradingView

# **Thinking About Thinking of Raising Interest Rates**

#### Price action to tapering talks

Gold prices have fallen by more than \$80/oz in 24 hours as the US Federal Reserve communicated that tapering and rate hikes could start sooner than expected. As tapering would imply that the growth of money supply will slow, as well as a step closer towards further tightening, gold suffers whenever there is progression on the tapering front. Likewise, on the flipside, when the economic situation suggests a weak economy, gold rally in anticipation of more central bank stimulus. This is the current narrative that is leading the performance of gold.

Adding to gold's struggle, the dollar index (DXY) is also near its 1 year high, as traders anticipate a rate hike in Fed's fight against inflation. Gold is priced in dollars; hence a stronger dollar would mean a weaker XAUUSD price action.

Ultimately, the weaker performance of gold is expected when the taper commences. Although a taper does not constitute quantitative tightening, it can be seen as tightening of ultra-loose monetary policy, which eventually will lead to potential rate hikes. Since gold is negatively correlated to any hiking of rates, the weaker price action is explainable and expected.

## **Gold Mining Disruptions and Cost Increase**

As the pandemic resulted in mine closures, and at the same time, several other factors were also weighing on the effective production capacity. The labour market was tight, freight was pricey, energy and other inputs are pushing up costs as supply-chain snarls continue to impact every single process along the value chain. These headwinds are hitting bullion producers harder than base metal miners given gold prices are down from a year ago, unlike base metals that are breaking all-time highs.

Newmont cut its full-year guidance to 6 million ounces from 6.5 million ounces, as challenges mounted in its production of precious metals. The company also expected cost to increase to \$1120/oz versus consensus of \$1024/oz.

The tighter profit margin between spot prices and cost may disincentivize miners to invest in the precious metal mining infrastructure, further exacerbating the supply shortage.

#### Figure 8: Gold Spot/ USD



Source: TradingView

### **Trade Idea: Long Spot Gold**

Gold has seen some strong days, especially when the Fed appears extremely dovish, while coinciding with extremely high inflation prints. The 1800/oz is a huge resistance, and gold did clear that resistance after the release of the highest inflation growth rate in 30 years. However, the renomination of Powell as Fed chair, as well as his assertion of a determined Fed that will use all tools to combat inflation, saw the market pricing in multiple rate hikes in 2022, pushing gold below the 1800/oz level. Gold has yet to retest the 1800/oz level. However, at current 40-year high inflation, multiple quarter point rate hike will not be sufficient to bring down inflation. The economy is currently debt-laden, and markets are extremely leveraged, any substantial rate hike will threaten to collapse the entire house of cards. This can be observed by the inverting of yield curve as rate hikes are seen to derail future growth. Hence, we believe that the Fed will remain behind the curve and is reluctant to raise rates substantially above the rate of inflation. This is bullish for gold in the long term.

We believe that any levels below 1780/oz will provide good support to enter, as inflation have proven to be sticky, and the Fed and ECB expect inflation to remain high in 2022. Real rates have been in negative territory, and it is supportive of a bullish trend for gold. There will be volatility whenever Fed suggests of a potential rate hike in 2022. With the Omicron variant tampering with economic outlook, it is still too early to guarantee multiple rate hikes in 2022 as the Fed fund futures also reflected a pushback in the first rate lift off.

Coupled with the implementation of Basel III in the largest gold futures market, expect some volatility from now till then, as the volume of gold futures trading will dwindle rapidly.

Our view is aligned with that of major central banks - gold is a value store, and a hedge against inflation. It should take up only a small portion of a portfolio.

Entry: 1780 Take Profit: 1900



# Global Macro Department - Crude Oil (OVERWEIGHT)

#### Analyst

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#### **Chart info**

#### Figure 1: WTI & Brent Front-Month Futures



Source: TradingView



# **Overview of Crude Oil**

- In the world of commodities, crude oil no doubt takes centre-stage as it is the most actively traded, be it physical or paper crude. This is certainly expected, as the sheer importance of crude oil can be gleaned from the fact that it can be refined into a variety of essential products such as gasoline, diesel, lubricants, and many other petrochemicals that are vital for our daily living.
- Within a typical barrel of crude, approximately 42.7% is refined into gasoline, a major transportation fuel for cars. 27.4% is refined into diesel, a major fuel for industrial vehicles, while 5.8% is refined into jet fuel which is used in jet aircraft engines. The remaining crude is usually refined into other products such as fuel oil (used in machinery and ship bunkering) and petrochemicals (used to make many household products).
- The price of crude oil is primarily driven by demand-supply fundamentals. 2021 thus far has seen abrupt changes to both the supply and demand dynamics of crude oil, translating into extremely volatile oil prices which brought mayhem to the markets. These changes are further aggravated by the accelerated shift in global sentiment towards the ESG-focused agenda, which completely changed the narrative of the oil landscape.
- Based on the U.S. Energy Information Administration (EIA), the U.S. continues to be the largest producer of crude oil, producing approximately 11.30 million barrels of oil per day in 2020. This is followed by Saudi Arabia, OPEC+'s de facto leader, which produces an average of 10.82 million barrels of oil per day in 2020. Russia's production is close to that of Saudi Arabia's, having produced 10.50 million barrels of oil per day in 2020. The top three oil producing nations produce a total of 42% of global oil production.
- The U.S. remains the world's largest consumer of crude oil, with an approximate 17.2 million barrels per day of consumption in 2020. China follows closely in second place, with 14.2 million barrels per day of consumption in 2020. India is the third largest consumer of oil, with an average consumption of 4.7 million barrels per day in 2020. In 2021, it is notable that China's consumption of oil has decreased significantly due to their strict Covid-19 zero tolerance policy that has muted economic growth.
- There are many different grades of crude oil, each of which is differentiated by its unique sulphur content and American Petroleum Institute (API) gravity. The major crude benchmarks are the WTI in the U.S. and the Brent in the North Sea, with the Dubai increasing in popularity in the Middle East as well.





Source: Statistical Review of World Energy - BP

# Figure 4: Heatmap of Covid-19 Vaccination Rates



Source: Our World in Data



Source: Baker Hughes

# Summary of Events in the Past 6 Months

- Increasing vaccination rates globally has allowed nations to progress into endemic living, where borders are re-opened and economic activity is ramped up. This resulted in the extended tightness in the crude oil markets as supply is not able to play catch up with surging demand, thereby bringing oil prices to new 7-year highs where it greatly surpassed the previous \$80 resistance level.
- Nevertheless, the rapid ascent of crude prices was relatively shortlived as a new Covid-19 variant, Omicron, was discovered in November. This triggered renewed lockdown fears which resulted in crude prices tumbling.
- The recent conclusion of the COP26 climate summit has heralded a new age for the energy landscape, as commitments to net zero were reaffirmed, and nations are seemingly cosying up to the idea of transitioning away from traditional sources of energy such as fossil fuels and coal. Alas, some critiques are disappointed that under newly signed Glasgow Climate Pact, the fossil fuel industry will still be allowed to "offset" its carbon emissions and carry-on polluting. Combined with the "phasing down" change, this will see fossil fuel emissions continue in the near future.
- The Biden administration's generic harsh stance towards U.S. shale producers have resulted in the rate at which U.S. shale producers put cash from operations into drilling for oil to fall to a record low in Q3 2021, as those firms returned cash to shareholders through dividends and share buybacks. The third-quarter reinvestment rate was 46%, below the historical average of 130%. U.S. shale companies are targeting flat to 5% production growth for 2022, while private companies and oil majors combined could add up to 500,000 barrels per day (bpd) by December 2022 based on Rystad. Nevertheless, the number of active U.S. oil rigs rose by six to 467 the week of 26<sup>th</sup> November 2021 (see Fig. 5), the highest since April 2020, as crude prices have prompted some drillers to return to the wellpad.
- The recent energy crisis has had spill-over effects onto oil, boosting demand for oil and deepening the already sizable supply deficit in crude markets (see Fig. 6). The International Energy Agency (IEA) stated an additional 500,000 bpd in oil demand could arise over the coming six months due to the switch from natural gas and coal. Consequently, the IEA has raised its estimate for oil demand growth this year by 300,000 bpd to 5.5 million bpd and increased it slightly for 2022 to 3.3 million bpd.

#### Figure 6: U.S. Crude Oil Inventories





Figure 7: WTI Front-Month vs DXY



Source: TradingView

Figure 8: U.S. 2021 Y-O-Y Inflation Rate



Source: U.S. Bureau of Labour Statistics

## U.S.' Surging Fiscal Impulse and Powell's Hawkish Tilt

In November this year, President Biden signed a \$1 trillion infrastructure bill into law, a bipartisan victory that will pour billions into the nation's roads, ports and power lines. The bill is touted to better position the United Sates to compete against China and other nations vying for dominance of 21<sup>st</sup> century emerging industries. The legislation seeks to ease inflationary pressures and strengthen supply chains by making long overdue improvements in the nation's key infrastructures. Combined with Biden's overarching Build Back Better Framework, it is projected to add an average of 1.5 million jobs per year for the next 10 years, whilst growing the economy in a sustainable and equitable way.

With the infrastructure bill signed into action, this bodes well for the US economy in the medium to longer term. Not only will jobs be created, investment in critical infrastructure will also boost the productive capacity of the Americans. A stronger economy will translate to greater demand for oil as industrial activity and transport activity is boosted. Assuming supply remains as expected, there will be an increasing supply tightness, resulting in upward pressure on oil prices.

Having been elected again to the chair position of the Federal Reserve, Jerome Powell recently surprised market players by tweaking his tone on inflation. All along a strong proponent of the transitory narrative, Powell has now said that it's "probably a good time to retire the word transitory", acknowledging that inflation remains sticky (see Fig. 8) and is of concern to the Fed. In the wake of such high core inflation rates in the U.S., a number of Fed governors are starting to call for an early end to the tapering process, indicating their openness to accelerated rate hikes. This hawkish tilt of the Fed has resulted in spikes in FX volatility. With fed fund futures now pricing in around two rate hikes by end-2022, the USD will remain biddish. If the \$DXY can hold above 96.07, the Greenback will have had six consecutive weeks of advancements, the longest stretch since 2014. This will in turn put pressure on oil prices.

## **Omicron - A Blessing in Disguise?**

Brent fell an astonishing 11.7% last Friday (26<sup>th</sup> November 2021) – the single biggest daily loss since the oil price war in March 2020. The Omicron variant, return of traders from Thanksgiving and the approaching weekend contrived to send oil to its lowest since September. News that the U.S. released its biggest ever stockpile from its Strategic Petroleum Reserve (SPR) just the week before further added to downward pressures on oil prices.

The genetic profile of the Omicron variant suggests that it has increased transmissibility and that it might evade immune protection. This implies previously approved vaccines such as Pfizer and Moderna might be rendered useless. Based on the CEOs of Moderna and Pfizer, it would take months to develop and ship a vaccine that specifically targets the omicron variant. In the meantime, several nations around the globe have re-imposed strict border control measures in a bid to stem the spread of the Omicron variant. Tighter Covid-19 measures do not bode well for oil demand as jet fuel, gasoline and diesel usage will fall. It is perceived that we are just at the starting point of this new

# Figure 9: Global Oil Demand Forecast by Product



Figure 10: Change in Oil Price vs Change in Market Share of Supply



Source: J.P. Morgan

obstacle, and Omicron cases are only going to increase exponentially from here on out. This means that oil demand remains at risk.

Nevertheless, scientists say that this new mutation may in fact be a blessing in disguise, and humanity's best chance to put an end to this devasting pandemic. The virus, with 32 mutations on the spike protein alone (twice as many as Delta), may have been optimised to infect and not kill. This is akin to the common flu, which does not bring about life-threatening symptoms. Should the hypothesis turn out true, Omicron will be our gateway to endemic living, and this will be structurally bullish for oil demand as air travel and mobility will gradually improve back to pre-covid levels.

# Heralding a New Age - The Demise of Shale?

The U.S. shale sector has been hit extremely hard by the Covid-19 pandemic, as low oil prices at the start of the pandemic saw a severe fall in the profits of shale companies. The resultant financial crisis triggered company bankruptcies and production shut-ins. Major shale companies are now scaling back conventional, more expensive oil projects as they shift strategy to include plans for the energy transition. The shale companies' pivot to a lower-carbon operating environment may also be hastened by governments directing economic stimulus packages to climate-friendly investments.

Nevertheless, U.S. shale producers' decision this year to resist pumping more oil even as prices surge beyond breakeven levels could be nearing an end. Several major oil companies, including BP Plc, Chevron Corp and Exxon Mobil Corp, are planning to increase output or shale spending in 2022, undercutting OPEC's tight supply management that has pushed crude oil prices above \$80 per barrel in the past month (not taking into account the effects of Omicron). As can be seen in Fig. 5 above, the number of North American rotary rig counts have been steadily increasing after the sharp drop during the highs of the pandemic in early 2020. The planned uptick in shale will come from larger companies and particularly from the Permian Basin, the top U.S. shale field. Permian output is approximately 4.89 million bpd in November 2021, just below the peak 4.91 million bpd of March 2020 before the pandemic hit.

While the short to medium term outlook for shale production looks bullish due to attractive oil prices, the shale industry is by-and-large consolidating and is now taking a more conservative approach to investment. The slowdown in U.S. shale production growth in the longer term will clear the way for OPEC+ to fill much of the supply gap as it taps into its spare capacity. The call for OPEC crude will only increase in the years to come as nations face under-supply due to reduced CAPEX. This sets the stage for the producer group to recover its market share (see Fig. 10) which it forfeited previously in its bid to rebalance supplies when demand plummeted in the wake of the pandemic in 2020.

# The SPR Debacle - OPEC+ Versus the World

In a bid to address soaring inflation and record gasoline prices of approximately 3.35/gal (see Fig. 11), the Biden administration announced on  $23^{rd}$  November 2021 that the U.S. would release 50 million barrels of oil from the Strategic Petroleum Reserve (SPR) by early next year alongside releases from other major oil-consuming





Figure 12: OPEC+ Spare Production Capacity



nations such as India, China, Japan, South Korea and the UK. Of the 50 million barrels, 32 million barrels will be an exchange over the next several months, releasing oil that will eventually return to the SPR in the years ahead. 18 million barrels will be an acceleration into the next several months of a sale of oil that Congress had previously authorised.

Drawing down on SPR reserves has never been a common strategy for the U.S. government. It is only tapped upon in times of dire needs, with the most recent drawing down happening in 2011 during the Libyan crisis. The fact that the Biden administration tapped on their SPR reserves to quell surging gasoline prices goes a long way to show how much high energy prices have been a thorn in the bush for the administration. However, the release from the reserve is primarily sour crude, which are high in sulphur content. This type of crude has fallen out of favour with U.S. refiners as they require additional processing and will likely be exported out to Asian refiners in India or China.

Based on Goldman Sachs, the coordinated release could add about 70 to 80 million barrels of crude supply, smaller than the more than 100 million barrels the market has been pricing in. Oil prices were hence largely steady even after news of the SPR release came out. Brent crude settled down 6 cents at \$82.25 a barrel, while WTI futures were down 11 cents at \$78.39 as of 24<sup>th</sup> November. As is evident, we feel the SPR release is largely symbolic at best. The eventual effect on gasoline prices will be muted, if any.

By coordinating the SPR release, Biden initially risked having it backfire by OPEC+ delaying their slated 400,000 bpd addition to global supplies in January 2022. Thankfully, OPEC+ stuck to prior plans to increase production in January, but left the door open for immediate adjustments if required moving forward. This new narrative towards increased sensitivity to changes in the oil markets is worth noting, as it highlights OPEC+'s resilience to commit to a stable energy market. While it can be posited that OPEC+ is being accommodative to users at the present moment, we foresee the producer group staying accommodative to producers in the longer run, in order to achieve their main aim of maximising profits for the group.

## **Energy Transition - Has Oil Demand Peaked?**

It is heartening that the world's largest economies are aligning behind a collective effort for the energy transition. The US officially re-joined the Paris Agreement in mid-February after a four-year hiatus, while China's President Xi announced last year a goal of carbon neutrality before 2060, and a target peak of CO2 emissions before 2030. Executive orders in the U.S. have also been signed to halt the construction of the Keystone XL pipeline and to temporarily ban oil and gas leasing on federal land. Nevertheless, current government policies and industry plans reveal that energy transition initiatives will only have a marginal impact on oil demand over the next six years.

IEA's latest forecast posits oil demand peaking in 2025, years earlier than previously expected. But moving forward, the issue with matching rising demand without turning back to fossil fuel remains. While international pledges to decrease investment in oil and gas are aligned with plans to achieve net-zero emissions by 2050, investments in renewable energy must be tripled to close the gap between expected supply and demand. Today's pledges cover less than 20% in emissions

Figure 13: Global Emissions by Scenario, 2000-2050



Source: IEA

reductions needed to close the gap to keep the 1.5 Degree Celsius path within reach. To reach net-zero emissions by 2050, governments will have to spend north of \$30 trillion. Any amount below that will guarantee failure to reach our net-zero emissions goals by 2050 (see Fig. 13).

# **Overall Outlook for Oil - Cautious Optimism**

Much has happened this year to tip the demand-supply balance in the oil markets. On the demand side, we have increased appetites for oil coming from the reopening of economies as we move towards endemic living. On the supply side, things remain tight as OPEC+ rebuffed calls for increased oil supply and U.S. shale producers remain relatively less sensitive to oil prices. While major oil consuming nations have worked together to release oil from strategic reserves in a bid to calm markets, the effect is akin to a drop in the ocean. As we head towards 2022, oil will remain in a structural supply deficit in the near term, hence reinforcing our bullish views for its price. Nevertheless, the key downside risk to the price of oil is the Omicron variant, and it will be crucial for one to be kept cognisant about the developments on this front.

#### Figure 14: WTI Front-Month Futures (NYM \$/bbl)



Source: TradingView

### Figure 15: Combined Quotas and Production for Angola and Nigeria



Source: Refinitiv

#### Figure 16: Weekly U.S. Shale Production



# **Trade Idea: Long WTI Futures**

Oil was down hard last week as traders mulled the impacts of the Omicron variant and the strengthening dollar (brought about by a flock to safety and the Fed's hawkish pivot). Nevertheless, we are optimistic that oil prices have bottomed out for now. As time passes, the masses will realise how the Omicron variant will be a blessing in disguise, due to its genetic nature which causes less severe symptoms.

The supply for crude oil will remain tight in the near term, as countries within OPEC+ such as Angola and Nigeria constantly produce at a level below its quota (see Fig. 15), while shale production remains muted due to capital discipline (see Fig. 16). With the energy transition gaining traction, the demand for crude oil will only increase to cater to the needs of CAPEX investment for clean energy. As such, oil will remain in a structural deficit as we head into 2022, reinforcing our bullish view on oil prices.

Nevertheless, a key risk to the downside still exists. We are only at the beginning phase of the Omicron episode. It is forecasted that the number of Omicron cases will increase exponentially in the days to come. This might trigger fear mongering amongst nation states, and enhanced lockdown measures might be imposed, cutting air travel and internal mobility in the process.

Taking into account the aforementioned narratives, we seek to enter a long WTI front-month futures trade at a price level of \$71.73, taking profit at \$76.76 before the key Fibonacci retracement level of 61.8% is hit. The stop-loss will be at \$68.38, giving us a conservative risk-reward ratio of 1.50. The stochastic RSI has been below 20 in recent days, indicating oversold levels. This provides a good opportunity to enter a long trade.

Entry: 71.73 Take Profit: 76.76 Stop Loss: 68.38 Risk Reward Ratio: 1.50

Source: EIA



# Global Macro Department - Natural Gas (OVERWEIGHT)

#### Analyst

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#### **Chart info**

#### Figure 1: Henry Hub Gas Front-Month Futures



Source: TradingView

#### **Figure 2: Dutch TTF Gas Front-Month Futures**



Source: TradingView

## Figure 3: JKM Gas Front-Month Futures



Source: TradingView

### **Overview of Sector**

- Natural gas is one of the three most significant fossil fuels used to produce energy along with oil and gas. Due to it being the cleanest source of energy out of the 3 main fossil fuels, OECD and developed economies have generally made efforts to use it over oil and coal. It is viewed as a "transition fuel" to help bridge the transition away from fossil fuels to cleaner and renewable energy.
- The most significant consumers of natural gas today are the U.S., Russia, China, and Iran, which make up more than 55% of the world's share. The most significant producers are the U.S., Russia, Iran and Qatar.
- Natural gas can be subdivided into types based on their number of carbon chains. Methane gas (C1) is the main type of natural gas being burnt for energy due to higher energy released per unit mass burnt and will be the type of gas analysed in this report. It is also used for production of fertilisers. Methane is known as liquefied natural gas (LNG) when liquefied, and gaseous methane needs to be converted to LNG to transport across sea. Natural gas with a higher number of carbon chains is called natural gas liquids (NGLs), and are used in production of chemicals like plastics, aerosols and refrigerants.
- The most important gas benchmarks are the Henry Hub benchmark for the U.S., Dutch Transfer Title Facility (TTF) benchmark for Europe, and the Japan-Korea Marker (JKM) benchmark for Asia. The three major markets are largely independent with different demand and supply factors affecting them separately, but are interconnected in the sense where arbitrage can be possible between lower and higher priced markets after taking into account all costs like shipping.

## Summary of events in the past 6 months

- Natural gas prices have experienced upward price pressures since June to hit record prices in more than a decade, but price pressures have eased slightly since the start of November. Similar to oil and coal, developments in the energy crisis have been most significant in moving gas markets over the past 6 months and will continue to be such until winter ends in March next year.
- Inventory levels had dipped to dangerously low levels worldwide, causing energy suppliers to fold from price pressures and threatening blackouts. The underlying factor which is applicable globally is the swifter than expected increase from energy demand from the swift reopening this year fueled by Covid-19 vaccines. This happened in tandem with reduced capex in fossil fuels like gas over the past years in the hopes of reducing greenhouse emissions especially in developed countries.

# Figure 4: Gas Consumption by Regions from 1965 to 2020 (in billion cubic metres)

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Source: BP Statistical Review of World Energy 2021

- Other contributing factors include harsh winters in Europe in early 2021 increasing heating demand, calmer winds reducing production of wind power in Europe, the warmest summer on record in the U.S. increasing air-conditioning demand in 2021, as well as reduced flow of gas to Europe from Russia (allegedly to pressure approval of the Nord Stream 2).
- Henry Hub natural gas futures reached levels as high as 6.466 USD before price pressures started to ease on warmer than expected winter leading to lowered demand for heating which allowed U.S. gas inventory to increase back to levels only 2% lower than the 5-year average, as compared to the 6% gap back in October. Refinitiv projected 321 heating degree days (HDD) instead of the 30-year average of 366 which indicates lower than expected demand for heating. As of 3rd December 2021, the Henry Hub natural gas futures are trading at 4.132 USD, back at levels last seen in August 2021. While price pressures have eased in the U.S. with Europe and Asia still reeling from high prices, benefits to U.S. gas producers are limited by how export and liquefaction in the U.S. are already running at near full capacity now.
- The situation might not be as optimistic for Europe, as the Dutch TTF benchmark continues to experience price pressures with underlying causes for shortages in Europe not being resolved. The harshest of the winter has yet to come, and price spikes and low inventory levels are already threatening reduced factory production and blackouts which are ways to reduce energy demand. On the supply side, shortages were exacerbated by wind droughts, gas being diverted to Asian countries like China with high demand, as well as Russia being reluctant to increase gas supplies without Nord Stream 2 approval.
- For Asia, prices have been rising throughout most of the year and hit record highs at the worst of the energy crisis. China is the most significant consumer of natural gas in Asia given its huge energy demand, and price pressures have been easing slightly recently with increased production and consumption of coal after rolling back restrictions. Energy suppliers are switching to cheaper coal as a fuel substitute at the same time which also eases price pressures
- Other significant events which potentially affect natural gas markets include the discovery of the Omicron Covid-19 variant, and the conclusion of the recent United Nations Climate Change Conference (COP26), which will be discussed in detail in the next section.



Figure 5: EU Gas Storage Levels (in TWh)

## Figure 6: Map of Europe Showing Wind Speed Anomalies



Source: FT, Steven Bernard

# **Europe's Persistent Energy Crisis**

Made up of many OECD countries, Europe relies heavily on natural gas to power its economies and is a significant consumer of natural gas. The Dutch TTF benchmark is one of the most important natural benchmarks in the world with many contracts priced globally based on it. The energy crisis has been playing out in Europe since the second half of the year, and while TTF benchmark prices have fallen from their record highs the crisis is far from over with the harshest of winter yet to come. Many underlying causes are unable to be resolved in the short term which indicates that the crisis will remain severe or even deteriorate at least until this winter ends.

Firstly, the weather is not likely to be in Europe's favour. Wind power and hydroelectricity production have been lowered due to calmer than usual wind, leading to decreased energy production from these sources. Vortex is a weather modelling group which has data showing wind strengths falling as much as 15% over this year in certain European regions. Analysts have commented that high dependence on these renewable sources of energy leaves Europe vulnerable to natural climate variability, and they are feeling the worst-case scenario from it right now. In the UK, wind is currently only providing 7% of its energy makeup, far lower than the 25% average across 2020. Europe will also not likely have the U.S.' fortune of a warmer winter to ease price pressures on natural gas, with winters expected to be harsh and the La Niña phenomenon possibly making winters harsher.

Russia, by far the most significant supplier of natural gas to Europe at 43.4% of Europe's total natural gas imports in 2020 has also been unwilling to significantly increase gas suppliers to ease the crisis, without approval of the Nord Stream 2 pipeline. In fact, approval of the pipeline had been suspended by Germany on 16th November, a move which caused a drastic 17.81% hike in TTF futures contracts on the day itself. Now that the U.S. is threatening sanctions on Russia over the Ukraine situation, there will likely be even more resistance against Nord Stream 2's approval owing to geopolitics. Even without the suspension, approval was expected to take months and would have only been completed after the harshest of the winter had passed which will not help in alleviating the energy crisis this winter.

It is not helping that Asian markets, especially East Asian ones like China, Korea and Japan, with demand rebounding aggressively during their recovery from the pandemic, have been gas-hungry and competing fiercely with Europe for the much needed fuel. China is by far the most significant consumer of natural gas in Asia and has ordered state-owned energy companies to take action "at any cost" to ensure steady gas supply for the winter.

Overall, none of the contributing factors above will likely be resolved easily over the coming months as winter becomes harsher. Europe has pulled back on investments in fossil fuel for years to reduce greenhouse emissions, instead depending on renewables like wind with high variability. There is also overreliance on external producers like Russia which might not always be reliable in times of crisis, and overconfidence that spot prices will always remain manageable. These will inevitably cause Europe to continue to struggle with the crisis as we go deeper into the winter.

Source: GIE AGSI

## Figure 7: Projections of Asian Natural Gas Consumption and Production



Source: U.S. EIA

Figure 8: U.S. 2021 Natural Gas Inventories (in bcf)





# Asia's Long Term Gas Crunch

Shortages in natural gas are not confined to Europe alone but are similarly experienced by the gas-hungry Asia with demand rebounding quickly from pandemic. The difference with Asia is that many of its economies are developing ones and in the process of switching from the much more pollutive coal to gas as a transition fuel bridging between pollutive fossil fuels and cleaner and renewable energy. This means that gas demand will continue to increase in the coming decades, with forecasts by Wood Mackenzie indicating it might nearly double by 2050. As such, the shortages might not be confined to this winter alone and more might happen in the coming years without proper investment in domestic production weaning off dependence on imported LNG which exposes Asian markets to high volatility. Europe, on the other hand, is past the transition from coal to natural gas and in the process of phasing out all fossil fuels as far as possible to reduce emissions.

Natural gas demand has rebounded in Asia and is expected to rise by 7% this year, led by China which singlehandedly accounts for 73% of the net growth in demand and is the largest consumer of natural gas in Asia. In 2022, Wood Mackenzie expects demand to rise by a significant 5%. Yet, happening at the same time with increasing oil demand is the gradually declining gas production in Asia, with the exception of China. In China, natural gas production has been rising under government orders, but even so the growth in production has been slower than growth in gas demand. Natural gas production in 2021 increased by 9.4% according to Xinhua news agency, compared to a 10% increase in demand as mentioned by a PetrolChina official.

The above are factors possibly leading to future and longer-term gas shortages in Asia. The gas shortage will not likely abate in the short term as well, with continued recovery from the pandemic and winters expected to be harsher than usual. The La Niña phenomenon forms when equatorial trade winds bring colder and deeper waters from the bottom of the sea, creating below-typical temperatures for the northern hemisphere. This will likely worsen Asia's current energy crisis and gas shortages until this winter ends.

# **Rising U.S. Inventory Levels**

The U.S. is arguably facing a different fate from Europe and Asia. Inventories had dipped to dangerously low levels previously with factors like Hurricane Laura severely impacting gas production, while also having experienced the hottest summer on record this year increasing demand for air-conditioning. Now, however, the good fortune of warmer weather is alleviating its gas shortages. This has caused Henry Hub gas futures to come down significantly from its October highs back to levels last seen in August 2021. The "Widowmaker" spread, which measures the difference between March and April futures and represents the markets' anticipation of how tight supplies will be at the end of winter, has widened at the height of the crisis but quickly tightened with new expectations of higher inventory levels by the end of winter in March after warmer weather forecasts. This is in stark contrast with the situation happening in the two other major gas markets, Asia and Europe. However, new opportunities of arbitrage trade between the U.S. and the other two markets have been deemed to be limited, given that

# Figure 9: Henry Hub "Widowmaker" Natural Gas Spread



Source: TradingView



### Figure 10: Daily Confirmed Covid-19 Cases in South Africa (7 Day Moving Average)

Source: Our World in Data

# Figure 11: Share of all Sequenced Cases in South Africa Accounted by Each Variant



Source: Financial Times

# Figure 12: Fossil Fuel Support and Investment from Major Economies

liquefaction and export capacities are already at record highs and maximum levels to take advantage of the differentials in price.

Benefitting from a shale gas boom increasing production capacity, increasing demand for natural gas in the rest of the world, as well as increasing export capacity with new LNG export projects like liquefied trains the U.S. is on a trajectory to become the world's largest LNG exporter next year, exceeding the capacity of current LNG export leaders Australia and Qatar.

In the short run, it can be expected that there will be more bearish pressures on Henry Hub gas futures benchmarks even as we enter winter, given that gas inventories are quickly back to typical levels again with shortages resolved from decreased demand for heating.

# The Omicron Variant

A new variant of Covid-19 was announced by South Africa on 24th November 2021. It is currently estimated to make up 90% of all new cases within it, displacing even the extremely infectious Delta variant and fuelling South Africa's latest infection wave. After an emergency meeting two days later, the World Health Organisation (WHO) named it the Omicron variant and deemed it to be a "variant of concern" given its high number of mutations, high potential to be more transmissible and high potential to evade existing immunity or vaccines. This has upended financial markets all around the world in fears of further slowing economic growth which reduces energy demand. Fresh border restrictions and domestic restrictions are already being imposed by governments around the world to slow the spread of the potentially more dangerous variant.

Volatility for commodity markets like gas will be high in the coming weeks as we wait for more details of the Omicron variant in the coming weeks. While natural gas prices have generally dipped since the announcement, movements after the announcement seem to be more affected by supply and demand factors amid the energy crisis. If the Omicron variant is deemed by experts to be significantly more dangerous than Delta currently is in the coming weeks, we can expect bearish developments for fossil fuel markets, with investors expecting energy demand to fall from increased restrictions and border controls to manage the variant.

However, preliminary studies do indicate that this new variant might in fact be a blessing in disguise. Though the WHO has determined the risk posed to the world to be high, preliminary studies from scientists in various countries like South Africa and Japan show that the Omicron variant is less deadly. There is also consensus among experts that vaccines are still likely to protect against severe illness especially with booster shots. Should this turn out to be true, the Omicron variant might even hasten the end of the pandemic which can lead to swifter increases in energy demand.

Though fossil fuel markets are pricing in uncertainty and possibly reduced global demand with selloffs, markets could go either way in the coming weeks depending on what news is being released regarding the Omicron variant, which will ultimately affect expectations of global energy demand. We will be watching updates on the variant closely to determine impacts on gas markets. Estimates for 81 countries, 2010-2020



Source: BBC, OECD, IEA

### **The Global Green Movement**

The global green movement is another macro theme which will affect coal and gas markets greatly especially in the long term. Evidence for anthropogenic global warming became increasingly convincing through the 20th century, and countries, especially developed ones, have been attempting to phase out pollutive fossil fuels, especially the most pollutive coal, in favour of cleaner sources of energy. Natural gas is generally used more widely than coal and oil in developed countries with its less pollutive nature. It is widely regarded as a transition fuel to bridge transition towards cleaner and more renewable energy. However, developed countries are generally in the phase of phasing out gas in favour of cleaner and renewable energy like wind power in Europe, to reduce emissions even further and meet climate pledges. Developing countries on the other hand are generally in the process of transitioning from cheaper coal to the less pollutive gas.

The most notable development to the green movement of the past 6 months would be the UN Climate Change Conference (COP26) which saw a number of countries making historic pledges to limit investment in or the use of fossil fuels. The most major agreements and pledges relevant to gas markets made during the conference are:

- Agreements between 20 countries to stop new investments in overseas fossil fuels by the end of 2022. The 20 countries include some largest funders of overseas fossil fuel projects like Canada, the U.S. and the UK.
- Net zero pledges by Vietnam and India by 2050 and 2070 respectively

Other than the above pledges made at the COP26 conference, other significant pledges made by countries in the past months in support of the global green movement include:

- China's pledge to stop new fossil fuel investments overseas, and to increase non-fossil energy use to 80% by 2060
- Australia's pledge to reach net zero emissions by 2050

Overall, the recent pledges made might not necessarily lead to much worse long-term bearish trends for gas given how climate pledges relevant to gas here are not particularly drastic and not necessarily unexpected by markets. In fact, many critics are disappointed that pledges are not as ambitious as what they hoped it would be to limit increases in global temperatures to below 1.5 degrees. Developments like these have likely been priced in with the global green movement having already started years ago. Much more drastic pledges against the use of gas might be needed to move markets, but this will unlikely be occurring in the near future given how economic development and affordable energy is politically important to governments too, and reduction of the less pollutive gas is of much lower priority in environmental policies, as compared to oil and coal which is more urgent.

# Figure 13: Dutch TTF - Henry Hub Natural Gas Futures (TTF1! - NG1!) Front Month Contract



Source: TradingView



## Figure 14: EU Gas Storage Levels (in TWh)





## Figure 15: U.S. 2021 Natural Gas Inventories (in bcf)

Source: U.S. EIA

# Trade Idea: Long TTF Front Month Contract, Short NG Front Month Contract

The energy crisis in Europe is still severe right now with underlying issues causing the shortages in natural gas not being able to be resolved through any easy means soon, as mentioned in the previous section. At the same time, the harshest of the winter is about to hit Europe with lower than usual temperatures expected in many places increasing demand for heating. Price pressures will be placed onto European natural gas futures in the coming months before winter ends in March, which can be the fundamental basis for us to take a long trade on the TTF front month contract.

On the other hand, natural gas inventory levels continue to increase in the U.S. with warmer than expected weather decreasing energy demand. There is no indication that this trend will reverse and there will likely be continued downward pressure on Henry Hub futures prices even as the U.S. enters deeper into winter.

With bullish price pressures on Dutch TTF gas futures contracts and bearish price pressures on the Henry Hub ones we can take a long position on the TTF front month contract while taking a short position on the NG front month contract at the same time. It is likely that the spread between the two contracts will widen as the gas shortage worsens in Europe while it abates in the U.S.

Normally, the widening spread would have led to arbitrage where cheaper gas from the U.S. can be liquefied into LNG to be transported to Europe for sale, which would typically reduce the differentials between the two contracts back to typical values. However, liquefaction and export capacity in the U.S. is already at maximum right now and cannot be increased further even if the incentive to do so increases with an increasing spread between the two gas market contracts. This would ensure that any increasing spread between the two contracts can be sustained, at least until winter is over.

However, risks in this trade might lie in U.S. weather suddenly becoming unfavourable again contrary to weather forecasts. Sudden unexpected cold weather can increase energy demand, while extreme weather might disrupt natural gas production like the previous Hurricane Laura. This will place upwards price pressures on the Henry Hub gas futures contracts which causes our trade to fail. The trade will also

#### Figure 16: U.S. Monthly LNG Exports (in MMcf)



Source: U.S. EIA

not work well in the unlikely event that one or more of Europe's underlying factors for the energy crisis gets resolve, such as Russia suddenly agreeing to increase supplies of gas to Europe.

Technically, there is an ascending channel pattern with both the lower and upper trendlines both being tested more than 3 times. This represents a bullish pattern and together with conclusions from the previous fundamental analysis we can tell the spread between the two contracts will likely be widened.

The spread seems to be meeting some resistance after hitting the 1.00 Fibonacci retracement level of 127.475. The trade mentioned above can be entered if the spread continues to decrease and reaches the 95.455 level, which is when it hits the lower line of the ascending channel. The stop loss level can be set at 79.860 which is a support level tested multiple times previously, while the take profit level can be the 1.00 Fibonacci retracement level of 127.475, which is also a possible resistance level as it was tested 2 times previously. This gives a risk-reward ratio of 2.05.

Entry: 95.455 Take Profit: 127.475 Stop Loss: 79.769 Risk-Reward Ratio: 2.05



# Global Macro Department - Coal (UNDERWEIGHT)

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#### **Chart info**

#### Figure 1: Newcastle Coal Futures - Front Month



#### Source: TradingView

### Figure 2: Rotterdam Coal Futures - Front Month



Source: TradingView

## **Overview of Sector**

- Coal is among the oldest fossil fuels to be used as a source of heat and energy. Despite its significance in powering economies throughout history till today, it is increasingly being phased out as a source of energy especially in OECD countries because of its highly pollutive nature. Instead, cleaner or more renewable energy like nuclear, solar, wind, geothermal, and hydroelectricity are being favoured. Oil and gas are two other fossil fuels which are also significant substitutes to coal, while being cleaner at the same time. These substitutes for coal affect coal markets greatly.
- China (50.5% of world's demand in 2020) and India (11.3%) are the most major consumers of coal by a huge margin, with the U.S. and Europe also contributing greatly to coal demand despite coal not contributing to the majority of their energy share. On the supply side, China (50.7% of world's production in 2020), Indonesia (8.7%), India (7.9%), Australia (7.8%) and the U.S. (6.7%) are the most significant producers.
- Coal can generally be classified into either thermal or metallurgical (met/coking) coal. Thermal coal is used for electricity generation, while met coal is used for production of steel or other metals. Met coal typically contains more carbon, less moisture, less ash than thermal coal, and can be further subdivided based on different grades like hard coking, semi-hard coking, semi-soft, as well as pulverised coal for injection (PCI).
- The most important global coal benchmarks are the Newcastle coal futures benchmark (common benchmark for coal in Asia) and Rotterdam coal futures (common benchmark for coal in Europe). The Newcastle coal futures benchmark measures prices of high-quality thermal coal in Australia which is often shipped to Asian countries using coal heavily. The Rotterdam coal futures measures coal prices traded in the Rotterdam Exchange in the Netherlands and is the primary price reference for coal in Europe.

# Summary of events in the past 6 months

- Developments in the recent energy crisis have been the most significant in moving coal markets over the past 6 months and will continue to be so until this winter ends. Newcastle coal futures rose from \$118.9 per tonne since the start of June and rose rapidly till it reached a record high of \$269.5 on 5th October. Other major coal benchmarks like the Rotterdam and Richard's Bay coal futures have been following the same trend as well.
- The most important factor contributing to the energy crisis would be the swifter than expected increase in energy demand from the swift reopening this year fueled by effective vaccines developed at record speeds. This happened together with

# Figure 3: Coal Consumption by Regions over Time (in Exajoules)



Source: BP Statistical Review of World Energy 2021

reduced capex in fossil fuels in general (especially the extremely pollutive coal) over the past years due to the green movement.

- Other contributing factors include harsh winters in Europe in early 2021 increasing heating demand, calmer winds reducing production of wind power in Europe, the warmest summer on record in the U.S. increasing air-conditioning demand, heavy floods in China, as well as floods in Indonesia disrupting coal production.
- At the peak of the crisis, inventory storage levels had dipped to dangerously low levels, suppliers had folded from losses in many places around the world due to price controls restricting extent of price hikes despite severe shortages, and blackouts had happened in many cities like in Europe or China which were otherwise typically energy secure.
- However, it seems as though the worst of the energy crisis has passed, with prices of coal having fallen from record highs in recent years. This can be attributed to countries managing to increase fossil fuel production to better meet energy demands.
- Other significant events include the emergence of the new Omicron Covid-19 Variant, and recent developments in the global green movement like the agreement made by 197 countries to "phase down" coal at the United Nations Climate Change Conference (COP26).

Figure 4: Percentage of World's Energy Powered by Various Sources Including Coal





Figure 5: Zhengzhou Commodity Exchange Thermal Coal Future Prices (in Yuan)





## Figure 6: Daily Coal Production in China



*Source: China's National Bureau of Statistics, Reuters* 

# **The Comeback of Coal**

As mentioned in the summary, a swifter than expected vaccinefuelled reopening together with reduced capex in the fossil fuel industry led to a severe energy crisis in the second half of the year. While countries are generally encouraged or even pressured to cut down on usage of coal and impose environmental policies restricting the use of it, the recent energy crisis has prompted governments to fall back on the use of the highly polluting fossil fuel at least temporarily to alleviate severe energy shortages. There has even been rolling back of restrictions on production or consumption of the highly pollutive coal in some countries, like China or Indonesia. Even developed countries like the U.S. and Europe have fallen back on coal with coal consumption increasing for the first time in many years despite many years of weaning themselves off coal gradually. Overall, this has caused the world's share of energy powered by coal to increase from 20% in 2020 to 24% in 2021 as seen from Fig. 4.

## **China's Coal Crunch**

China is by far the world's largest producer and consumer of coal and developments there have the greatest potential to move coal markets. A significant 56% of China's energy is powered by coal. In addition to factors like its swift reopening and reduced investments in coal mentioned previously in the summary, other factors specific to China leading to coal shortages include large scale mine closures from safety concerns, as well as unofficial bans of coal from Australia because of geopolitical disputes. Prices of thermal coal on the Zhengzhou Commodity Exchange (ZCE) spiked to a record of more than 1800 yuan before coming down to trade at levels near 675 yuan after interventions from the government. Utilities firms had been suffering from huge losses due to usage of expensive coal as fuel, since they have been forced to continue supplying electricity to the market despite price ceilings.

High conviction to alleviate energy shortages could be inferred from officials' statements to make "use of all necessary means" to curb the energy crisis, including rolling back environmental regulations to allow more production of coal. Some of the many measures taken include approving increased production at coal mines, ordering local governments to ensure production even on holidays, allowing prices to increase by 20% against government benchmarks, and asking the ZCE to pay attention to market fluctuations to crack down on speculative trading. Coal supply levels have since risen back to levels higher than 150 million tonnes, sufficient to ensure power supplies over winter. The ZCE futures price of around 700 yuan is now more acceptable despite still being higher than the typical range of around 600 yuan.

Significantly, Chinese officials seemed to have adopted the view that coal power plants are being phased out too impulsively which exacerbated the energy crisis, and that current policies need to be "adjusted". It was suggested that more gas be used as a bridging fuel in the transition to cleaner energy, and coal plants be maintained as backup power sources instead of total dismantling. It can be expected that China will be even more ready to fall back on coal powered electricity in the future should energy shortage occur again.

#### Figure 7: India's Coal Stocks



Source: India's Ministry of Coal, Centre for Research on Energy and Clean Air

Figure 8: India's Total Energy Demand



Source: India's Central Electricity Authority, Centre for Research on Energy and Clean Air

## Figure 9: India's Past and Projected Energy Demand and Composition



Source: Brookings India

# India's Coal Shortage

Despite consuming and producing significantly less coal than China, India is still the second largest consumer and producer of coal in the world with great potential to move coal markets. It is heavily reliant on coal with 70% of the country's energy demand powered by it.

In the second half of the year, India's energy demand rebounded quickly following recovery from a devastating Covid-19 wave which was when the highly infectious Delta variant was discovered for the first time. Like in many countries, there was a quicker than expected rebound in energy demand (as seen in Fig. 8 from May 2021 onwards) which was not anticipated by power companies. Energy suppliers had reduced their inventories during the time when the Delta wave swept across India and triggered lockdowns, leading to a shortage of coal when they are unable to ramp up production after the Delta wave subsided. Other factors contributing to the coal shortage in India include heavy rains during the monsoon season disrupting supply chains of coal and increases in natural gas prices leading to many switching to coal.

However, just like China, the severe coal shortage seems to have abated with greatly increased production over the past few months after authorities pushed state-backed miners to increase coal production urgently. The state-owned Coal India, the largest coal company in India, commented that there is not likely to be any coal shortage in India until March 2022. Average coal inventories at Indian power plants now have stock lasting 9 days, up from 3 days at the peak of the crisis and the government has declared that there is no longer any shortage. Furthermore, a slowing demand growth in November (2.2% as compared with the expected 4.1% increase) has helped with alleviating the previous shortage as well. With production of coal ramped up effectively, we can expect India to remain energy secure in the short term even as winter comes in full force, which means prices of coal will continue to ease in India.

In the longer term, we can expect the coal industry in India to continue growing with difficulties in weaning itself off it as an emerging economy. Looking at projected trends by Brookings Institution India (now Centre for Social and Economic Progress), while the percentage of energy powered by coal might decrease over the years energy production in absolute terms will still increase. India's energy requirements are still far from peaking, and coal is still the cheapest and most convenient method to meet increases in power demand in subsequent years which the government will not give up too quickly easily.

# **Other Countries**

The same scenarios have been playing out in various other countries where severe shortages in energy have resulted in a fall back on coal or rolling back of environmental regulations. Indonesia, the world's second largest exporter of coal behind Australia, has approved 625 million tonnes of coal production this year, up from 525 million the previous year in hopes of capitalising on the spiking coal prices. Even developed countries like the U.S. or European countries have seen a return to coal, propelled by the energy crisis. The UK is now powering 3% of its energy demand with coal up from 0%, while the U.S. is experiencing an increase in coal-fuelled electricity generation this year, the first since 2014.

Figure 10: Coal Consumption of OECD and non-OECD countries up till 2020 (in Exajoules)



Source: BP Statistical review of World Energy 2021

Figure 11: Daily Confirmed Covid-19 Cases in South Africa (7 Day Moving Average)



Source: Our World in Data

## Will this be short-lived?

While coal demand and prices have seen a spectacular comeback this year, the fallback on the pollutive coal is not likely to persist into the longer term after winter has ended this year for developed economies. Its surging demand and prices are more likely to be a symptom of the current energy crisis instead of a long-term trend, given countries' environmental goals and increasing price competitiveness of cleaner alternatives like renewable energy or shale gas in the U.S. The International Energy Agency (IEA) notes that coal usage has declined in advanced economies over many years with any increases in usage being driven by developing economies, and this trend will likely continue after the crisis is over.

As for developing economies especially in Asia where coal powers economies significantly and usage of it continues to grow, it remains to be seen whether this trend will reverse like for developed ones. As discussed earlier, China is reconsidering its "impulsive" closures of coal factories, while Indian officials expressed unwillingness to sacrifice economic growth through weaning themselves off coal. Coal remains king for Asian countries with its reliability, convenience and cheap prices contributed by readily available supply from Australia and Indonesia which are the world's two greatest exporters of coal. This is in addition to high costs which are associated with switching to cleaner energy like natural gas or renewables.

# The Omicron Variant

The new Omicron variant first announced by South Africa is currently estimated to make up 90% of all new cases within it, displacing even the extremely infectious Delta variant and fuelling South Africa's latest infection wave. After an emergency meeting two days later, the World Health Organisation (WHO) named it the Omicron variant and deemed it to be a "variant of concern" given its high number of mutations. It also has high potential to be more transmissible and to evade existing immunity or vaccines. This has upended financial markets all around the world in fears of further slowing economic growth from fresh border restrictions and lockdowns being imposed by governments to slow the spread of the potentially more dangerous variant.

Volatility for commodity markets like coal might ensue should the new variant turn out to be more dangerous than current ones. Coal prices remained steady despite it, with investors more focused on shorter term demand and supply factors. However, if the Omicron variant is deemed to be significantly more dangerous than Delta currently is, we can expect bearish developments for fossil fuel markets in the longer term, with investors expecting energy demand to fall from increased restrictions and border controls to manage the variant.

However, preliminary studies do indicate that this new variant might in fact be a blessing in disguise. Though the WHO has determined the Figure 12: Share of all Sequenced Cases in South Africa Accounted by Each Variant



Source: Financial Times

risk posed to the world to be high, preliminary studies from scientists in various countries like South Africa and Japan show that the Omicron variant is less deadly, with a large majority only suffering from mild illness. There is also consensus among experts that vaccines are still likely to protect against severe illness especially with booster shots, even as the heavily mutated Omicron variant is likely better at evading vaccines and immunity from past Covid-19 infections. Should this turn out to be true, the Omicron variant might even hasten the end of the pandemic which can lead to swifter increases in energy demand.

We will be watching updates on the variant closely to determine impacts on coal markets. Coal markets could go either way in the coming weeks depending on what news is being released regarding the Omicron variant, which will ultimately affect expectations of global energy demand.

# Figure 13: Fossil Fuel Support and Investment from Major Economies





# Source: OECD and IEA

## **Figure 14: Countries Committing to Net-zero**



Source: Energy and Climate Intelligence Unit

# The Global Green Movement

The global green movement is another macro theme which will affect coal markets greatly, especially in the long term. For countries concerned with emissions, phasing out coal will be their top priority given it is the most pollutive fossil fuel out of the three main ones. Owing to the green movement, usage of coal in developed economies has been decreasing quickly over the past decades to reduce pollution with mostly developing economies like China and India still relying on coal for most of their energy, prioritising economic development instead since coal power comes at lower cost to them.

## **Historic Pledges**

The most notable development to the green movement of the past 6 months would be the UN Climate Change Conference (COP26) which saw a number of countries making historic pledges to limit investment in or the use of fossil fuels. The most major agreements and pledges relevant to coal markets made during the conference are:

- Agreements between 20 countries to stop new investments in overseas fossil fuels by the end of 2022. The 20 countries include some largest funders of overseas fossil fuel projects like Canada, the U.S. and the UK.
- Agreements between 197 countries to "phase down" coal usage to reduce significant emissions from coal making up 40% of global emissions. This is historic as it is the first time that a fossil fuel has been named in an international climate agreement.
- Net zero pledges by Vietnam and India by 2050 and 2070 respectively, both which are both significant polluters and users of coal

Other than the above pledges made at the COP26 conference, other significant pledges made by countries in the past months in support of the global green movement include:

Figure 15: Map Showing Countries' Progress in Meeting Paris Accord's Previous Goals



Source: Climate Action Tracker

Figure 16: Infographic Showing Insufficient Progress in Meeting Paris Accord's Goals



Source: MSCI

- China's pledge to stop new fossil fuel investments overseas, and to increase non-fossil energy use to 80% by 2060
- Australia's pledge to reach net zero emissions by 2050

If followed through, these additional agreements and pledges to reduce fossil fuel usage can indeed lead to hastened bearish developments in the long term with reduced demand as well as investment in relevant infrastructure. In addition to each country's own "phasing down" of coal, pledges to halt overseas fossil investment can halt growth in coal demand greatly, especially when the industry is still gaining strength in Asia's developing economies supported by investments by countries like China.

# **Empty Promises?**

However, the conviction of countries to consistently follow through with their pledges and hit targets might be questionable. This is considering their willingness to fall back on the extremely pollutive coal to alleviate the ongoing energy crisis, as well as how previous pledges like the one made at the Paris Climate Accord have mostly not been kept.

Many countries like China, India and even developed countries like the U.S. or EU have been more than willing to increase production and consumption of coal to keep energy prices at what is deemed at reasonable levels. Given gas' extremely high prices during the energy crisis, many were quickly switching to more pollutive coal as a substitute as well. Notably, China, the greatest contributor to global greenhouse gas emissions, commented that impulsive coal plant closures should no longer be pursued, and energy security needs to be taken into account alongside environmental conservation. The quick fallback to the most pollutive fossil fuel and quick easing of environmental policies cast doubt on countries' conviction to truly follow through with their pledges in the long term. If governments are already unwilling or unable to have citizens and corporations accept higher energy prices amid a pandemic and energy crisis where there can be a "scapegoat" for the inconveniences, it might be even difficult for them to accept the likely higher price tag which comes with green and renewable energy when the pandemic is over and when the energy crisis has abated completely.

Overall, the recent pledges made might not necessarily lead to much worse than expected long-term bearish trends for coal given indications it might be unlikely for countries, especially developing ones which are more focused on economic growth, to wean themselves off fossil fuel at the pace promised. Ultimately, pledges are politically encouraged but not legally binding, and countries have shown to often still put self-interests like economic development before global environment concerns with many pledges from previous climate summits not met.

## **Limited Short-term Impacts**

Within the shorter term of 6 months or less, it is unlikely that the COP26 will have significant impacts on coal markets, with demand and supply factors like the development of the energy crisis or new findings of the Omicron variant being more significant in moving markets. Some agreements like the one to halt overseas fossil fuel investments by 2022 do not start immediately, while others like the

phasing down of coal likely will take longer periods of time to materialise. The increasing restrictions against usage of fossil fuels pledged in the COP26 are likely not unexpected by investors and likely already priced into coal markets given that the global green movement is already ongoing for many years.

# Figure 17: Newcastle Coal Futures (NCF1!) - Front Month Contract



Source: TradingView

# Figure 18: Zhengzhou Commodity Exchange Thermal Coal Futures



Source: MacroMicro, Zhengzhou Commodity Exchange

# Trade Idea: Short NCF Front Month Contract

Numerous countries in Asia, especially India and China, have been continuing to ramp up production of coal aggressively to bring supply levels up and to relieve prices to more palatable levels. Both countries' coal inventories are now at secure levels and will likely continue to increase with production levels currently at high levels to cope with the energy crisis. China's production has exceeded the state's target of 12 million tonnes a day while India's production is nearly 2 million tonnes a day.

Both countries' imports are still at high levels currently, but it can be expected that increasing domestic supply over the coming months will weaken prices in Asian coal markets, including Newcastle thermal coal, when they start to rely less on imports after inventories levels increase. Even though China has an unofficial ban on importing Australian coal, its easing coal shortage will still exert downward pressures on Newcastle thermal coal when it reduces imports from other countries like Russia or Indonesia. Reducing prices of Russian or Indonesian coal due to reduced demand from China will exert downward pressure on Australia's as well since they are substitutes. Many Asian countries like Japan import from all 3 major coal exporters serving Asia.

We can observe that coal futures prices on the ZCE have already returned to levels similar to that of December 2020 at around 700 yuan due to the increase in supply. On the other hand, prices of Newcastle Coal Futures which is an Asian coal benchmark is still very elevated at around 165 USD as compared to average prices of around 80 USD in December 2020. There is possible fundamental room for Newcastle Coal Futures prices, a common benchmark for coal shipped to Asian countries, to continue to lose strength in a similar manner as coal futures on exchanges the ZCE because of easing coal shortages in major Asian importers like China.

The possibility of a badly worsening energy crisis leading to exports from major suppliers to Asia like Australia, Indonesia or Russia no longer having sufficient coal is a risk to this trading strategy. While China and India now have sufficient inventory and will no longer contribute to price pressures on Newcastle Coal futures, they are not significant exporters of coal and might not be able to export enough to ease price pressures. This is especially if other major coal

users like Taiwan, Japan, and Korea face sudden shortages and need to increase imports from Australia urgently. It might happen should events like a harsh La Niña phenomenon causing extremely low temperatures occur which increases energy demand.

Technically, the current price chart resembles a descending triangle which is a bearish pattern, with both the descending and lower trendline being tested at least thrice. We can enter a short trade should prices increase to hit the descending trendline at 162.16 USD which is a likely resistance level tested 3 times previously. The stop loss level will be at the 0.236 Fibonacci retracement level of 170.11 USD, while the level to take profit will be at 146.38 USD which is the price level of the lower trendline. This represents a risk-reward ratio of 1.98.

Entry: 162.16 Take Profit: 170.11 Stop Loss: 146.38 Risk Reward Ratio: 1.98

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