THINK Economic & Financial Analysis

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Commodities Outlook 2022: Keeping the faith

'Let the good times roll' was our message coming into 2021 and the commodities complex did not disappoint. In fact, markets exceeded our expectations. And 2022 looks to be another great year. While we see some prices edging lower from their current elevated levels, we expect most to remain above their long-term averages

Commodities are set to be the best performing asset class of 2021, with the Bloomberg Commodity index up around 25% YTD, although it has been up by as much as 35% over the course of the year. Recovering demand following Covid, supply chain disruptions, government policy and adverse weather have all contributed to a tightening in markets this year, which has propelled prices higher.

Going into 2022, we expect the disruptions we have seen in supply chains to improve, while the balances for several commodities will look less tight than in 2021. This should mean that prices edge lower from current levels. But importantly, we still expect them to remain above long-term averages.

There will also be a number of macro headwinds, which should limit further upside for the commodities complex. Firstly, central banks are set to tighten monetary policy over the course of 2022. Secondly, our FX team are forecasting a stronger US dollar next year. Finally, there are lingering concerns over the Chinese property market. If we see a further slowdown within this sector, it will likely put downward pressure on the complex, particularly for metals. However, the risk of this occurring is looking less likely as it appears the Chinese government is becoming a little more accommodative when it comes to policy.

Oil is set to see strong supply growth from non-OPEC nations, which coupled with a further easing in OPEC+ supply cuts should push the global oil market back into surplus. This should put a cap on prices. However, worries over OPEC capacity and the broader lack of investment in upstream production will likely also provide a floor to the market not too far below current levels.

The European gas market is likely to remain tight through winter, which will mean we'll continue to see plenty of volatility over the coming months. The end of the heating season should bring weaker prices. Seasonally, though, they will still be high given the need to replenish inventory over the injection season.

The balances for most metals also look relatively better next year, which suggest that prices will edge lower from current elevated levels. They are still, though, expected to remain above their long-term averages. Inventories are low amongst several metals, whilst sentiment around the outlook for demand in the medium term is constructive due to growing investments in green projects, which happen to be metal intensive. We are most bullish about aluminium going into next year. The aluminium market is heading into a period of structural deficits and there is no quick fix to resolve this; we should see prices trading higher.

Precious metals are likely to struggle the most over 2022. Tightening from central banks around the world, along with expectations of further USD strength should mean investment demand for gold remains poor. The only scenario where we see further upside for gold prices is if we see central banks doing a U-turn on tightening. A potential catalyst for this would be further severe waves of Covid-19.

We would expect agricultural commodity prices to ease through next year but again they'll remain above long-term averages. The wheat market has traded to multiyear highs due to weather hitting crops from a number of key producers. Assuming normal weather in 2022, wheat should see ending stocks edging higher. There is uncertainty for sugar and coffee going into next season with La Niña weather risks building in Brazil. The coffee market has already suffered from drought and frost damage. How much of an impact this will have on next season's crop will depend on precipitation over the rainy season. Given the uncertainty, coffee prices are likely to remain elevated until the market gets a better idea of how big Brazil's next crop will be.

So overall, while we see some marginal downside risks across the commodities complex in 2022, on a historical basis prices are likely to trade at elevated levels for another year. The key risk, of course, is the coronavirus pandemic. Overall, we're keeping the faith.

1. Back to surplus for oil

Oil has had a strong year as recovering demand and cautious output policy from OPEC+ have ensured inventories continued to decline through the year. Both non-OPEC and OPEC supplies are expected to grow next year pushing the market back into surplus. However, for now, the biggest downside risk remains Covid

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Non-OPEC supply set to grow

2022 is set to see strong non-OPEC supply growth which is expected to help push the global oil market back into surplus. We estimate that non-OPEC supply will grow by 2.65MMbbls/d next year, compared to an estimated 900Mbbls/d in 2021.

The bulk of this increase will be driven by the US, where we expect supply to grow by 800Mbbls/d. This would mean that US supply will average 11.9MMbbls/d next year, while finishing 2022 with production in the region of 12.3MMbbls/d, a little more than 700Mbbls/d below the record levels seen in November 2019. There are clear risks to output growth, the biggest being that it disappoints to the downside, which would leave the global market tighter.

While the US oil rig count has increased by 295 since bottoming out in August last year, at 467 it still stands at 216 below levels seen in March 2020. The pickup in drilling activity has been more measured compared to previous up cycles. We are seeing a change in behaviour from US producers where there is more focus on capital discipline and shareholder returns, while uncertainty over future policy could also be holding producers back. A lot of the recovery in US production since Covid appears to have been driven by the completion of drilled but uncompleted wells (DUCs). The DUC inventory in the US has fallen by almost 3,800 since June 2020 to a little over 5,100, which is the lowest DUC inventory since December 2014. This suggests that the US industry will be unable to rely as much on DUCs to sustain production levels. Instead, we will need to see a pick-up in new drilling.

Elsewhere, non-OPEC supply is also expected to grow, including in Canada, Brazil and Norway. The non-OPEC members of the OPEC+ deal will also see supply grow as they continue to ease supply cuts through 2022.

Slow & steady from OPEC+

OPEC+ has been consistent and cautious with its production policy since the start of the pandemic and it appears that this approach will continue into 2022. The group is increasing supply by 400Mbbls/d per month, which means that cuts should be completely unwound by the time we get to September/October next year. However, it is more complicated than that particularly with concerns over the Omicron variant. There may be hiccups along the way, which will require the group to delay their easing plans. In addition, the market is set to return to surplus over various stages in 2022 and if that puts enough downward pressure on prices, OPEC+ may decide they need to act.

"The issue of spare OPEC capacity is one key upside risk"

By the end of 2021, the group would have brought back 5.9MMbbls/d of the original 9.7MMbbls/d of supply cuts, which leaves them with 3.8MMbbls/d to bring back over 2022.

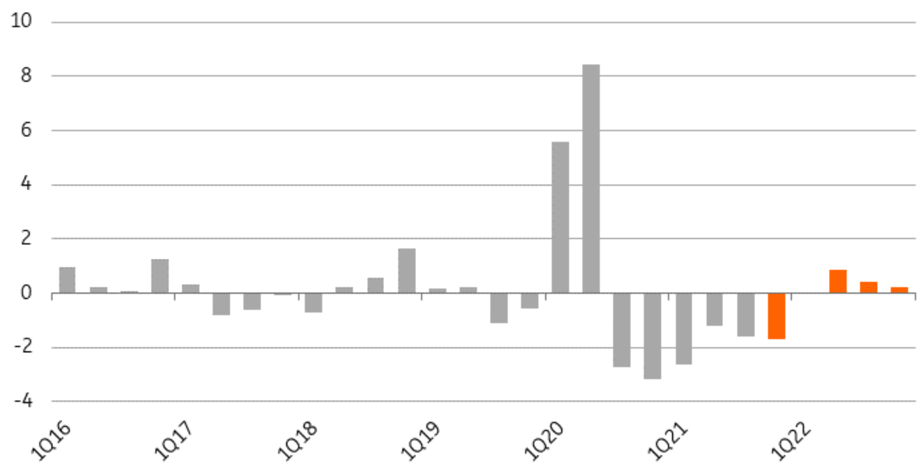
The one key upside risk for the market is the issue of spare OPEC capacity. At the moment there are a number of the smaller producers whose output is below their agreed levels, suggesting they do not have the capacity to increase output further. Therefore, while the headline number suggests that OPEC+ still has 3.8MMbbls/d to return to the market from January, in practice the amount they can bring back will likely be lower.

Oil demand back to pre-pandemic levels

The outlook for the oil market will really depend on how demand plays out. There is clearly still plenty of uncertainty in the market and this is evident through the sell-off we have seen towards the end of this year due to the Omicron variant. Clearly, if we see countries tightening Covid related restrictions this will have an impact on demand. The most immediate at risk would-be jet fuel demand as countries enforce more onerous border restrictions. This will be a worry for the market, given that a large part of oil demand growth in 2022 is expected to be driven by a further recovery in international air travel.

Oil demand is currently estimated to grow by a little more than 3.3MMbbls/d in 2022 (compared to growth of 5.5MMbbls/d this year), which would leave oil demand averaging 99.7MMbbls/d next year. This would take demand back to basically pre-pandemic levels. However, there is plenty of uncertainty given the lingering of Covid and its multiple variants.

Quarterly global oil balance (MMbbls/d)



Source: IEA, EIA, ING Research

Back to surplus

Given the continued unwinding of OPEC+ supply cuts, along with strong non-OPEC supply growth, the global oil market could return to surplus as soon as the first quarter of next year. This should keep the market from trading back towards the recent highs we have seen in 2021. The bulk of the surplus is estimated in 2Q22, which suggests that this is where we could see some downward pressure on prices. As a result, if we are to see OPEC+ pause its supply increases it will likely occur around this period.

We expect that ICE Brent will average US$76/bbl over 2022, down from the high levels we have seen over much of the 2H21, but still well above the average levels seen since 2015. Longer-term concerns over the lack of investment in upstream oil and falling OPEC spare capacity next year (as the group eases cuts) will likely put a floor under the market.

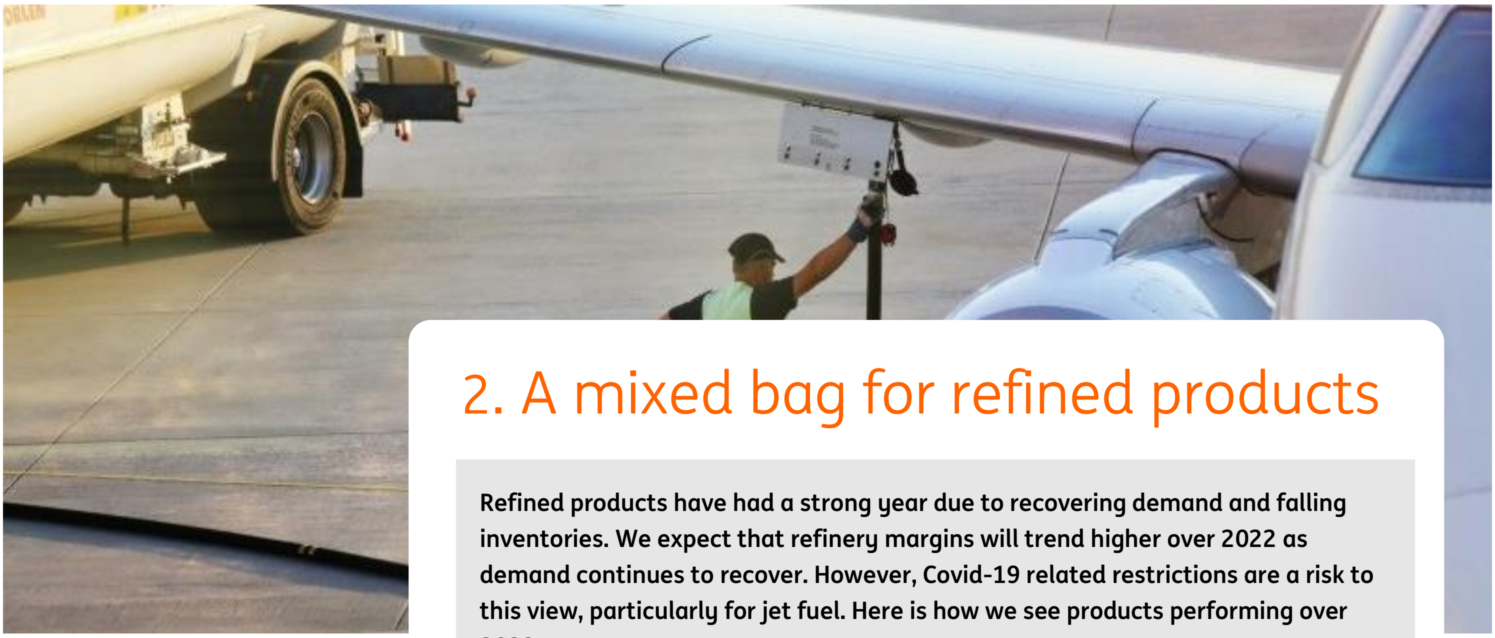
There are several risks to this view. Clearly, the largest downside risk is further Covid related restrictions going into 2022 which could hit oil demand. Already, we have seen a sizeable move lower in the market with the uncertainty over the Omicron variant.

The upside risks include falling OPEC capacity, US oil growth falling short of expectations and Iranian supply remaining flat over 2022. We currently expect that Iranian flows will trend higher through the year. However, for that to happen, we need to see a breakthrough in Iranian nuclear talks.

ING forecasts

	1Q22	2Q22	3Q22	4Q22	FY22
ICE Brent (US$/bbl)	78	74	76	75	76
NYMEX WTI (US$/bbl)	75	71	73	72	73

Source: ING Research



2. A mixed bag for refined products

Refined products have had a strong year due to recovering demand and falling inventories. We expect that refinery margins will trend higher over 2022 as demand continues to recover. However, Covid-19 related restrictions are a risk to this view, particularly for jet fuel. Here is how we see products performing over 2022

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Naphtha strength unlikely to last

The naphtha market has been strong for much of 2H21, with the prompt crack in NW Europe remaining in positive territory over the whole period. The naphtha market has been well supported by the strength that we have seen in the propane market, which in turn has been supported by the tight natural gas market.

Strong natural gas prices have meant that we would have seen some switching to LPG, which would have provided a boost to prices. The strength in the propane market meant that for large parts of the year propane has traded at a premium to naphtha, pushing those in the petrochemical industry with the flexibility to use naphtha as a feedstock. While spot propane prices have more recently moved back to a discount to naphtha, propane is still more than 90% of the naphtha price, which suggests that naphtha is still the likely preferred feedstock.

However, we would expect propane's discount to naphtha to widen as we move out of the Northern hemisphere winter, which is in line with seasonal norms. This should remove some of the support that we have seen naphtha receive in recent months.

In addition, assuming we do not see any significant demand hits due to the Omicron variant, we expect that refinery run rates will continue to trend higher over the course of 2022 in order to meet broader oil demand growth. This suggests that naphtha supply will improve next year which should see NW Europe cracks return to negative territory.

We are currently forecasting that the NW European naphtha crack will average negative US$2/bbl over 2022, compared to being basically flat this year.

Limited upside for gasoline

While we expect the gasoline market to be well supported through 2022, we believe that upside relative to middle distillates will be more limited. The bulk of the demand recovery in gasoline has already occurred this year, suggesting that demand growth will be more limited next. For example, in the US, implied gasoline demand is basically already back at pre-Covid levels, with implied demand averaging almost 9.4MMbbls/d over 2H21, this compares to around 9.48MMbbls/d over the same period in 2019.

> *"Gasoline inventories are still low in most regions"*

Gasoline inventories are still low in most regions. In the US, stocks are at a 5-year low currently, whilst in NW Europe and Singapore, inventories are below the 5-year average. This should help to put a floor under gasoline cracks. What has helped to tighten up the gasoline market this year, particularly in the US, has been several supply disruptions coupled with rebounding demand.

With peak seasonal demand now behind us, we would expect gasoline inventories to start building which should cap the gasoline crack. We currently forecast that the Eurobob crack will average around US$11/bbl in 2022, compared to an estimated US$9/bbl in 2021.

Middle distillates to be supported by jet recovery

The gasoil market still has further room to strengthen over 2022; this assumes that we do not see further tightening of Covid restrictions Middle distillate inventories are below the 5-year averages in the US, NW Europe and Singapore. In fact, in NW Europe and Singapore inventories are at least at a 5-year low, while in the US they are not too far off from the 5-year low.

China has been a supportive factor for the gasoil market for much of this year. 2021 is shaping up to be the second consecutive year of YoY declines in gasoil exports. Lower flows last year were understandable given Covid-19. However, the lower exports this year reflect a tighter domestic products market in China and reduced export quotas for products. The tighter market has been partly due to consumption tax changes in the domestic market which has led to a fall in light cycle oil imports into China, which is used to blend into gasoil.

The Chinese market will likely be less supportive going into 2022. Refiners in the country have ramped up output to shore up domestic supply and as a result, we will likely start to see exports of gasoil picking up as well as more product becomes available. However, whilst there is upside from the low levels seen in 2021, it's unlikely we'll see a return to export levels prior to Covid due to policy shifts.

Regardless, middle distillates should be relatively well supported through the winter, particularly given the tightness that we are seeing in other energy markets, which would lead to some switching. A continued recovery in international air travel in 2022 should provide further upside to the jet fuel market, which in turn should drag the gasoil market higher. Total global air travel is still down significantly. The latest numbers from IATA show that revenue passenger kilometres in October 2021 were still down by more than 49% from 2019 levels.

A combination of a further recovery in middle distillates' demand along with entering the new year with low inventories suggests that cracks will edge higher in 2022. We estimate that the ICE gasoil crack will average US$13/bbl next year compared to around US$8/bbl this year. Key downside risks will be Covid continuing to hold a grip on international air travel and Chinese gasoil export volumes returning to pre-Covid levels.

ING forecasts

	1Q22	2Q22	3Q22	4Q22	FY22
NWE naphtha crack (US$/bbl)	1	-2	-4	-2	-2
Eurobob crack (US$/bbl)	9	11	12	11	11
ICE Gasoil crack (US$/bbl)	12	11	14	14	13

Source: ING Research

3. European gas tightness to persist

The natural gas market has been the star performer within the commodities complex, particularly spot Asian LNG and European natural gas. Inventories in Europe are tight and are expected to tighten still further going into 2022. This suggests prices will remain well supported into early next year

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European inventories are low and falling

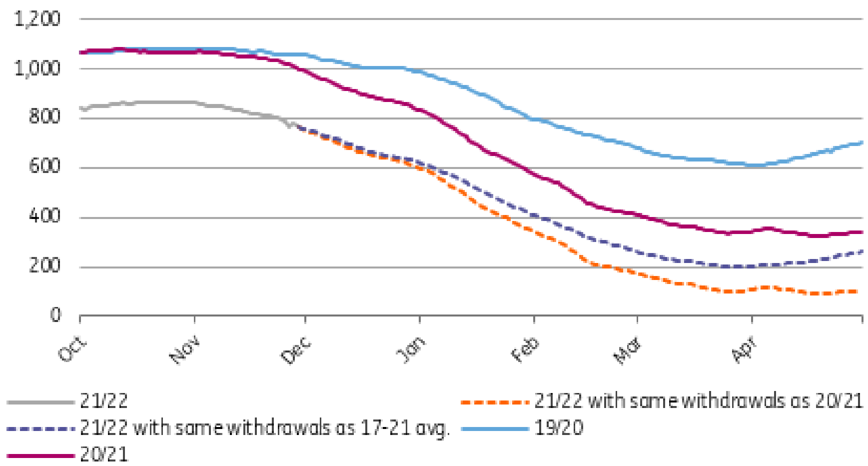
We are moving towards the peak of winter with European gas storage at its lowest levels in at least a decade for this stage of the year. It's around 65% full compared to a 5-year average of around 82% at this stage of the year. Inventories are also drawing at a quicker than usual pace, and with heating demand set to only increase, the pace of draws will also probably pick up.

If we assume a similar pace of inventory declines as we saw last year from early December all the way through to the end of March, European gas inventories would fall to below 100 TWh by the end of the heating season which would be the lowest in at least a decade. If we assume a similar pace of withdrawals as the 5-year average, the inventory situation at the end of the heating season is not as bad but it's still historically tight, with inventories hitting around 200 TWh.

The prospect of inventories falling to extremely uncomfortable levels suggests that prices will remain well supported through much of the winter. If winter is warmer and there's less demand, clearly inventories will be at much more comfortable levels.

Either way, we will likely finish the winter season with lower than usual inventories, which should mean that going into spring and summer we'll see strong demand for injections. This suggests that while prices might come off from the elevated levels seen over the winter, seasonally they will still be high for much of 2022.

European natural gas inventories (TWh)



Source: GIE, ING Research

Russian gas flows still struggling

The key issue for Europe has been reduced Russian gas flows. The market will remain sensitive to how this situation evolves over the heating season. While Russian flows to Europe have improved from the levels seen in early November, they are still well below what we normally see year-on-year.

Quick approval of Nord Stream 2 may lead to a pick-up in flows. However, we think it is unlikely that this new pipeline will offer any relief to Europe over the winter. Already, the regulatory process from the Germans has been delayed. A start-up is more likely towards the end of 1Q22, which would be near the end of the heating season. While there is capacity via Ukraine that Russia could use, they appear to be limiting how much of this additional pipeline capacity to book.

Demand destruction prospects

One would expect that the higher gas prices we are seeing would lead to some demand destruction as end users move to cheaper alternatives or simply choose to reduce operations due to high prices. We have seen this with fertilizer producers, whilst some metal processors have reduced operations due to higher electricity prices (which have been driven by the gas market). On the power generation side, it makes sense for gas-to-coal and gas-to-oil switching. Asian spot LNG is trading at an oil equivalent of a little more than US$200/bbl, whilst TTF is trading at an oil equivalent of around US$180/bbl.

In Europe, looking at the dark and spark spreads for 2022, it is more profitable to burn coal than natural gas for power generation. This is even after taking into consideration the rally in EU carbon allowances. We already saw coal demand from the European power generation sector falling 4% YoY in 3Q21.

However, given that European gas inventories are falling at a fairly quick pace, we are not seeing the demand destruction that some might expect, or think is needed.

Asian demand remains robust

The LNG market has offered little relief to Europe, with robust demand from Asia and in particular China. Spot Asian LNG has largely traded at a healthy premium to European prices. Therefore, there has been a clear incentive to send cargoes into Asia. China's LNG imports are up 23% YoY over the first 10 months of the year. China has also overtaken Japan this year to be the world's largest importer. Chinese demand has been supported by strong industrial demand along with growing demand from the power sector. China's ambitions for emissions to peak before 2030 should continue to prove supportive for LNG demand in the coming years.

Looking at the forward curve, the Asian market is at a premium to Europe all the way through 2022, with the premium being at its widest early next year. Therefore, do not expect the LNG market to solve Europe's tightness. The region will need to continue to compete against Asia for spot LNG through 2022.

Limited growth in LNG export capacity in 2022

The robust demand growth that we are seeing in Asia is coming at a time when there is limited LNG export capacity set to come online over the course of 2022. We estimate around 12mtpa of export capacity starting up over 2022 which would take total capacity to around 477mtpa. This compares to additional capacity of around 24mtpa in 2020 and 42mtpa in 2019. In fact, between 2021 and 2025 capacity is expected to grow at an annual rate of 3% vs. 8% between 2015-2020. It is only towards the end of 2025 and onwards where we see some significant capacity growth coming through from Qatar.

This suggests that the LNG market should stay in a relatively healthy state through 2022. However, the clear risk to this view is a demand hit due to renewed Covid-related lockdowns or restrictions.

ING forecasts

	1Q22	2Q22	3Q22	4Q22	FY22
TTF (EUR/Mwh)	70	45	35	38	47
NBP (GBp/therm)	175	112	87	95	117
Henry Hub (US$/MMBtu)	4.8	3.6	3.8	4.2	4.1

Source: ING Research

4. Aluminium to slip into a deeper deficit

Slower growth in primary aluminium production and strong consumption suggest the aluminium market will see a larger deficit over 2022. This deficit, coupled with steadily declining inventories mean prices should trade higher

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The second-best performer in 2021

Aluminium prices have continued to rise over 2021 and it's the second-best performer amongst LME base metals after tin. As we noted earlier this year, the aluminium market is entering into a new era with prices steadily grinding higher as the market continues to tighten, despite China having released stocks from its state reserves. In October, LME 3M prices surged, breaking above the US$3,200/t mark as supply was caught in a perfect stormv with the energy crisis in China and Europe.

Question marks around primary supply growth

Primary aluminium's supply-side developments are key here. They're dominated by significant disruptions due to China's 'dual-control' mandate of energy intensity and total energy consumption. Lately, power shortages from China and Europe have led to lower than expected supply growth.

As the world's largest primary aluminium producer and the key growth contributor over the last decade, Chinese primary production fell short of expectations by more than 1.2Mt. We expected growth to be close to 8% YoY but the final figure came in at just above 3%. At the peak, more than 3.8Mt of capacity was impacted and 80% was due to the dual-control mandate.

We assume the power issues that affected a large part of China during the last quarter of 2021 will continue into early 2022. And Chinese 'green' policies are detrimental to the timing and scale of restarts and whether those uncommitted projects will actually be given the go-ahead.

> *"Aluminium smelters saw a double-whammy due to both the power crunch and the dual-control mandate"*

Another uncertainty centres around Yunnan, which has emerged as China's largest primary aluminium production hub. Power shortages emerged in the region earlier this year (before the widespread power crunch in 4Q21) due to low water reservoirs, and aluminium smelters saw a double-whammy due to both the power crunch and the dual-control mandate. For 2022, we only expect very moderate growth in production with restarts and ramp-ups only likely in the latter part of the year. Over the medium term, secondary supply will need to pick up the pace to fill the gap. There have been quite a few projects announced recently, but the supply of secondary aluminium is inelastic and it will take some time to see any significant volume.

As such, additional primary supply growth is heavily reliant on the rest of the world. However, access to cheap and clean power supplies remains a key factor determining the sustained supply growth from existing projects and new supply in the future. The power crisis in Europe is expected to lead to primary production falls for the third year in a row. The latest developments regarding an Icelandic energy supplier cutting power to aluminium smelters highlights the fragility of the situation. Within the announced restarts and new projects in the medium term, we expect very limited capacity to come online in 2022.

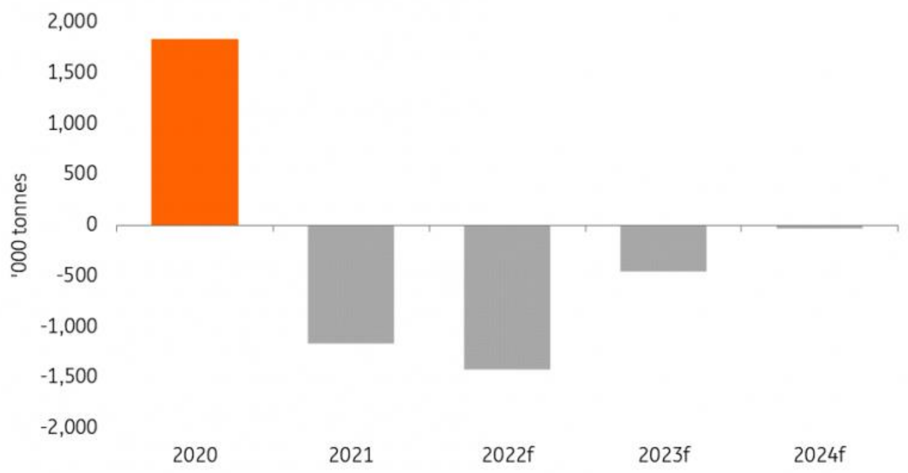
Consumption continues to power on with a hint of 'green'

Aluminium consumption continued to recover strongly in 2021, underpinned by large stimulus packages. This is in spite of many supply chain constraints. In addition, we're seeing more aluminium consumption from green-related areas such as solar energy and the 'lightweighting' of autos. We expect aluminium to continue to benefit from this global energy transition-related area in the future (Electric vehicles to drive metals demand higher).

Semiconductor shortages have had a widespread impact on automakers. Nevertheless, aluminium's heavier use in some premium end vehicles has been less impacted as automakers prioritise this part of the car segment. ING economists expect the semiconductor shortage to let up in 2022, but only gradually. Hence, we expect this aluminium consumption to rebound next year. We also expect strong construction demand to continue to power on from North America and Europe, although strong consumer demand from the US may cool a little as the economy pivots from goods to services, weighing on Chinese exports of aluminium goods and semis.

We think China's total primary aluminium consumption growth will cool in 2022 to 0.5% YoY. Incremental consumption will be heavily reliant on the country's domestic market. Despite great concerns around the Chinese property sector, we expect late-stage property construction to turn more supportive to aluminium consumption. As we also discussed in the iron ore section, we do not expect a reversal of government policy, rather some fine-tuning supportive measures to drive pipeline projects to completion.

Primary aluminium market balance



Source: IAI, ING Research

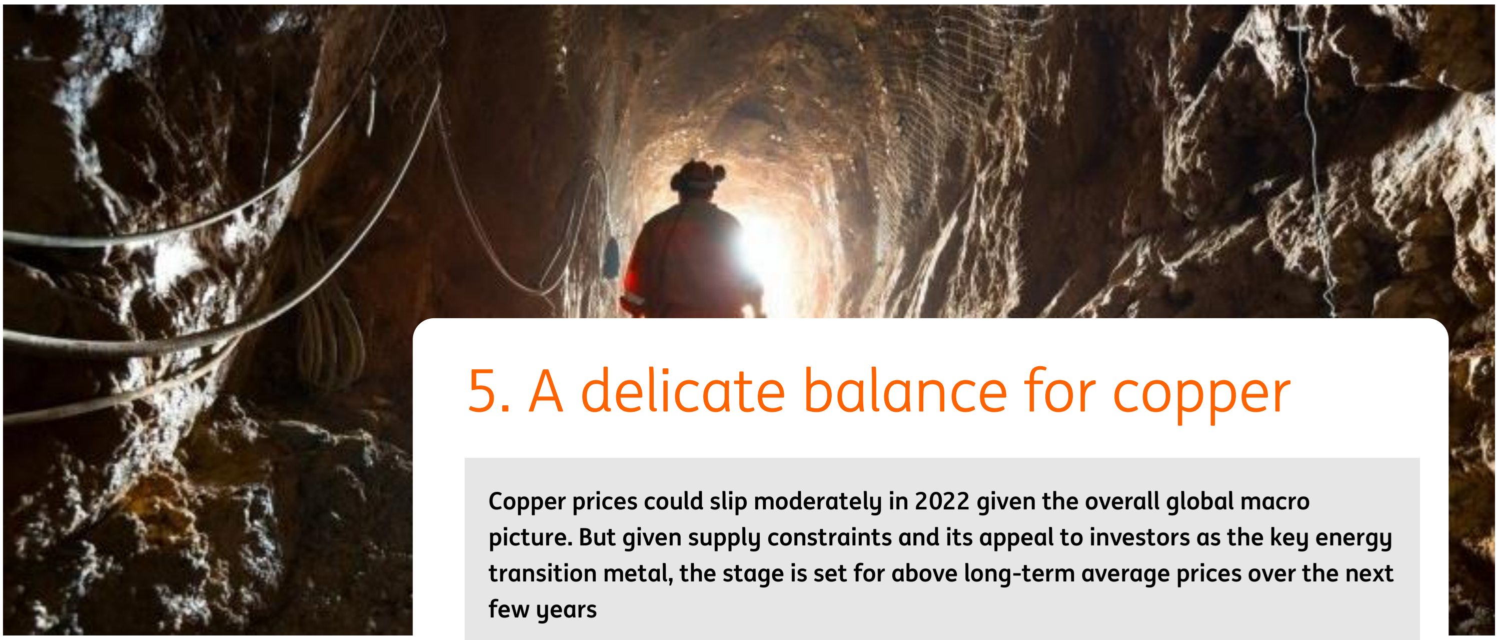
Prices expected to recover some lost ground

In late October, aluminium prices slipped from US$3,100s/t as the market saw disruptions peak and Chinese coal prices fall after strong government intervention in the market. However, primary aluminium supply continues to lag behind consumption which suggests that the market will continue to tighten, and as a result support prices. Cost inflation is another issue despite falling coal prices. We expect the aluminium market to slip into a deeper deficit of around 1.5Mt in 2022 and prices to recover their lost ground.

ING forecasts

	1Q22	2Q22	3Q22	4Q22	FY22
LME Aluminium (US$/t)	2,850	2,950	2,900	2,910	2,900

Source: ING Research



5. A delicate balance for copper

Copper prices could slip moderately in 2022 given the overall global macro picture. But given supply constraints and its appeal to investors as the key energy transition metal, the stage is set for above long-term average prices over the next few years

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Record high prices riding macro tailwinds

After touching a record high in early May of US$10,460/tonne, copper prices largely fluctuated above US$9,000/tonne, with annual average prices set to be around US$9,300/tonne in 2021, comfortably above its long-term average level. Macro tailwinds, micro positivity and investors' enthusiasm towards the key 'green' metal have contributed to the mantra of 'buying the dip' in the copper market.

Mine supply improve on a wave of projects

Despite many concerns over long-term copper supply due to a lack of investment over the last decade, this year's mine supply has surprised to the upside as planned projects come online. The previously anticipated high disruption rate has not caused meaningful production losses. This is on course to register a 3.3% year-on-year growth and should maintain a medium-to-high level over the next two years amid a wave of projects that are just beginning. However, there is a bigger issue in the logistics sector due to high freight rates and delays. While many expect the situation to improve throughout 2022, the new Omicron variant makes the outlook murky.

Similarly, refined production grew strongly by 4.8% YoY this year, driven by restarts at major smelters. The power crunch has had a more limited impact on smelter production than other energy-intensive metals. Refined supply is set to remain high over the next few years, driven by the expansion of some Chinese players such as Daye and some new projects in Indonesia and India.

Non-refined copper supply plays an increasingly important role

The supply of scrap and other unrefined copper such as blister and anode are becoming increasingly important and often have big effects on the refined market balances on the regional market. Policy shifts compounded by supply chain disruptions constantly impact these markets. As China tightened its standards on imported scrap together with a firm concentrate market, imports of blister/anode remained above trend during 2020 and 2021, although total imports of blister/anode come to 920kt for the full-year 2021 on an annualised basis, compared to just above 1 million tonnes from the previous year. This is likely due to bottlenecks in the shipping market.

> *"Regional policies could throw a curveball to scrap supply in certain markets"*

As for scrap, there has been a robust recovery so far this year after supply chains were hit by the pandemic in 2020. Higher prices have revitalised scrap flows amid recovering manufacturing activities post-pandemic. In the longer run, both scrap generation and recycling are set to grow from key regions following their respective green targets, which in theory would replace some demand for primary copper. Nevertheless, regional policies could throw a curveball to scrap supply in certain markets, most importantly to China.

It is estimated that the world scrap supply chain will continue to evolve and become more fragmented. This follows the rejig in Chinese scrap import policies in recent years. The European Union had proposed export restrictions on scrap. Following Beijing's move to tighten import scrap standards, Malaysia plans to lift its standards, thus quitting the role as a bridge in processing low-grade scrap and further exports to China. Other countries may take on the role, but such business is not deemed to be long-lasting due to both environmental and political concerns. Should these regional policies become enacted, they could potentially leave a supply gap.

'Green' demand contributes to the majority of the growth

On the demand side, the red metal is undergoing a shift in demand engines, with green demand contributing to more marginal growth in the overall usage. World primary copper use is poised to register strong growth of 6.5% YoY in 2021 on a lower base from last year. However, overall growth is expected to moderate slightly into 2022, whilst the green-related sectors such as electric vehicles and renewables would contribute almost half of the incremental usage next year.

However, the China property sector remains a big question mark as to whether there would be a soft landing following the Evergrande crisis and the indebtedness of some other property developers. For almost two decades, China's property sector growth and the nation's urbanisation have been the perennial engine of growth for copper demand, representing almost a quarter of the nation's total demand. In the medium term, we expect copper to continue to benefit from late-stage construction along with a recovery in property completions.

Prices to moderate but remain above long-term average

Looking ahead, supply chain bottlenecks with their effects on copper supply to the China market may not go away easily in 2022, especially given the spread of the Omicron variant. This is partially mirrored in the rise in longer-term cathode premiums that major suppliers offered to Chinese buyers for next year. In such cases, regional market imbalances will prompt import arbitrage.

The tailwinds from the macro front could turn into some headwinds as we move into 2022, which could take some wind out of copper's sails. This would include a stronger dollar and higher real rate along the US Federal Reserve's tightening cycle. Nevertheless, the low visible inventories may shield it from sharp price correction. While we anticipate that prices will slip moderately in 2022 from highs this year, the supply constraints over the long term and its appeal to investors as a key green metal are setting the stage for above long-term average prices over the next few years.

6. A matter of class in the nickel market

The primary nickel market could swing back to surplus in 2022, but a structural deficit in the Class 1 market may remain sticky. This, compounded with low exchange inventories, suggests that elevated prices may be here to stay

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A stunning market recovery after Covid-19 rattles supply

Prices recover on supply and demand dislocation

The nickel market has rebounded strongly from its March/April lows as supply growth has been weaker-than-expected while demand has picked up. Prices (LME 3M) tentatively broke out above US$20,000/t in 4Q21 with the continuous drawdown in reportable inventories after the market unexpectedly slipped into deficit. This is particularly the case for the Class 1 market, which is witnessing a structural deficit.

Massive supply disruptions lead to slower supply growth

Expectations of strong supply growth were misplaced chiefly due to significant disruptions. Over the second half of the year, there has been a significant number of unexpected disturbances in ex-NPI (nickel pig iron) operations that have resulted in more than 100kt of supply losses. Major producers, including Vale and Norilsk, both reported lower production. Meanwhile, Vale also lowered its production guidance for the coming years following the disruptions and license issues at Onca Puma. From 3Q21, high energy costs have put some operations at risk, and a 7ktpa ferronickel producer based in Kosovo halted production due to high power prices.

"Expectations of strong supply growth were misplaced"

In addition, the expected strong growth in Indonesian NPI and HPAL (high-pressure acid leach) supply has fallen short of expectations due to Covid-related travel restrictions and power issues. In China, a contraction in NPI production was largely expected as Indonesia has banned its high-grade ore exports. Supply has been further hit by power rationing in major NPI production regions. This is reflected in NPI prices, which have surged to record highs in the onshore market.

As a result, the primary nickel supply is set to grow by 5.6% year-on-year in 2021, much lower than expected at the start of the year. For 2022, our base case calls for supply growth to come back on track. This is estimated to surge by more than 15% YoY chiefly driven by the Indonesian NPI sector. However, if the latest Omicron variant leads to increased disruptions, this strong growth in supply may be delayed. Further downside risks to supply may come from ex-NPI supply and delays to HPAL projects.

A burning issue in the Class 1 market

The bottlenecks in supplying suitable feedstocks to meet rapid demand growth continue to be a key issue. Earlier this year, Chinese Tsingshan announced plans to convert NPI into nickel matte which can be further processed into sulphate. The market plunged in response to this news as this was supposed to ease the tightness in this part of the market.

However, though technically viable on a commercial scale, this route requires NPI, matte and sulphate to be constantly profitable. As for the more traditional route (i.e. hydrometallurgical), the supply of mixed hydroxide precipitate (MHP) has grown fast after the commissioning of China Lygend Mining's hydrometallurgical project in Indonesia and First Quantum's reinvigorated Ravensthorpe project in Australia.

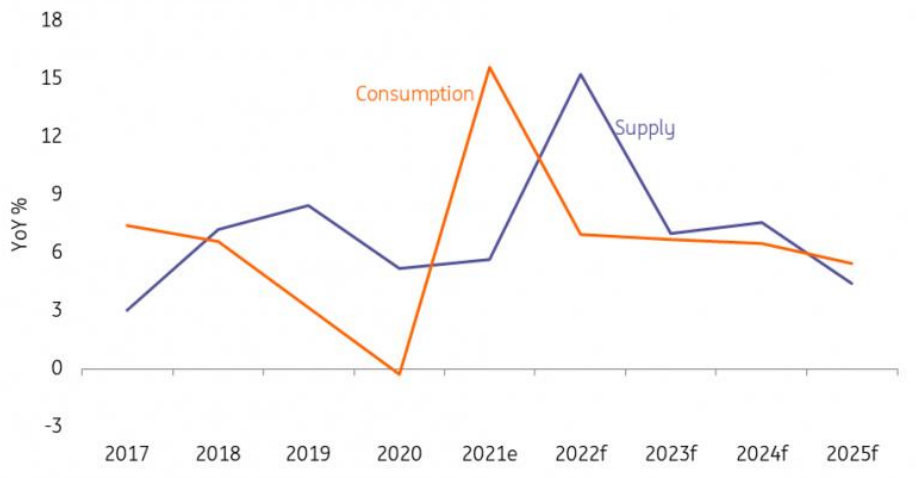
The timing and scale of delivery are important in the supply of raw materials to produce battery-grade nickel. This is often a swing factor that jolts the market. Based on current timelines, we expect the battery-grade nickel market to remain in deficit, albeit narrower, over 2022. This is partly because of displacement pressure from lithium-iron-phosphate (LFP) chemistry particular in the China market at the lower end of the vehicle segment.

Stronger consumption underpinned by twin-engines of growth

The twin-engines that have underpinned nickel consumption growth have beaten expectations, with battery and stainless steel usage surprising to the upside. Global stainless steel production is on track to rise 14% YoY this year, with Indonesian production almost doubling, and all major regions seeing double-digit growth. The nickel-rich type, i.e. the 300-series, representing almost 60%, is estimated to rise 20% YoY driven by 8% YoY growth from the world's largest producer, China.

Despite still being smaller than stainless steel, nickel consumption in the batteries sector is estimated to grow by 75% YoY in 2021. The sector’s share relative to overall primary nickel consumption has doubled from around 4% pre-pandemic to 8% this year and is set to expand to 10% in 2022. This is driven by the rapid penetration of electric vehicles. In the first 10 months of 2021, total new energy vehicle (NEVs) sales grew by 177% YoY, according to the China Association of Automobile Manufacturers(CAAM).

World primary nickel supply and demand growth



Source: S&P Global, ING Research

Cautiously optimistic before structural tightness eases

The dislocation in supply and demand led to the overall primary nickel market flipping into a deficit in 2021, but the situation is forecast to improve over the course of 2022, weighing on the market. Nevertheless, before any major signs of improvement have been felt, the structural tightness in the battery nickel market remains a burning issue and is becoming a major force supporting the market. In particular, a key battery material, nickel sulphate, fell into a big deficit as chemical prices skyrocketed to record highs during 4Q21, and remained elevated thereafter, which may continue to support the inventory drawdown in nickel briquettes (a majority type of LME nickel inventory). Hence, we are cautiously optimistic for 2022.

	1Q22	2Q22	3Q22	4Q22	FY22
LME Nickel (US$/t)	19,800	19,500	18,500	18,200	19,00

Source: ING Research

7. Gold markets are looking exhausted

With the Fed ready for policy rate lift-off and global liquidity conditions gradually tightening, headwinds from rising US real yields may result in a bearish tilt to gold's medium-term outlook, rather than a complete reversal of the long-term uptrend

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Gold is on course to register its first annual decline in three years. Rising inflation pressure, along with a patient US Fed saw gold break above US$1,900/oz in May. There have been some erratic responses to high inflation numbers but sharp pullbacks have often followed these, particularly after the June dot plot from the FOMC meeting revealed growing support for rate hikes. Since then, the market has been stuck between rising inflation pressures and mounting fears of the Fed's hawkish pivot. The failure of the market to attract sustained investment inflows mean that multiple attempts to break higher proved to be short-lived.

A number of factors, including labour shortages and high energy prices, have pushed US inflation to a 30-year high. However, the breakeven curves remained inverted with most of the pressure in the front-end of the curve. This seems to be telling us that markets believe in the Fed's transitory narrative on inflation, and it has the credibility to fight against it. This could be partly why gold has failed to benefit much despite the pick-up in inflation. Moreover, despite gold's perceived attribute as an inflation hedge, the relationship between the two is better examined over a much longer time period. The short term, however, is not so coherent. In addition, with a robust underlying economy and equity market valuations, investors would prefer to put their money elsewhere to chase higher returns.

> *"Investors prefer to put their money elsewhere to chase higher returns"*

Physical demand for the yellow metal has recovered significantly with the return of a broadly positive Shanghai premium and stronger imports from China and India. While we continue to expect central bank flows and commercial physical buying of any dips that could cushion prices, these flows tend to be counter-cyclical to price performance, with investment flows the dominant driver. For the full year, investment in exchange-traded funds (ETFs) is set to see the first net selling since 2015. Except for some moderate inflows in the second quarter, the first quarter saw net outflows of 200tonnes, 58 tonnes during the third quarter and another 20 tonnes during the last quarter based on the most recent data, which takes full-year net outflows to over 274 tonnes. This perhaps highlights the market's inability to follow a consistent inflation narrative regarding how recently elevated inflation will play out and how the Fed will react to it while the labour market remains some way short of full employment.

In the short term, gold still trades at a premium over fair value versus TIPS due to broadening US inflationary pressure and perhaps incorporating some risk premium from the uncertainties around the Omicron variant and geopolitical risks in eastern Europe. Looking ahead, our macro team sees the risk of the Fed concluding its QE tapering program in the first quarter of 2022 with at least two rate hikes in the second half of next year.

Like the Fed, we believe inflation will gradually slow through 2022 while nominal Treasury yields should rise as US monetary policy and global liquidity conditions gradually tighten. This should result in real yields starting to rise, and as a result, weigh on gold prices. However, the ultimate goal would be to get to a zero real rate in the 10yr, but it may not be until 2023 and beyond before that happens. This, compounded with some lingering risks on the virus front, may still offer some support to gold in the next few months. Overall, we are of a directional bearish view towards gold for the medium-term, rather than a complete reversal of the long term uptrend.

ING forecasts

	1Q22	2Q22	3Q22	4Q22	FY22
Gold ore (US$/t)	1,750	1,730	1,700	1,700	1,720

Source: ING Research

8. Iron ore market to continue rebalancing

Iron ore demand has bone the brunt of deep cuts in the Chinese steel sector. However, with supply continuing to improve, the seaborne iron ore market is set to continue to rebalance itself over the medium term

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A year of two halves in the iron ore market

It's been a year of two halves for the iron ore market. The first half was red hot, the second bitterly cold. In May, prices soared to an all-time high of US$233/tonne and remained elevated thereafter before plunging into a bear market around the end of July. Prices more than halved towards November.

Supply improvement continues despite some supply chain issues

The supply in the seaborne market continues improving, broadly in line with expectations. This is largely due to Brazil, where Vale has been able to see some production growth this year. However, the weak market of low-quality ores prompted Vale to trim the upper bound of its full-year guidance range by 15Mt to the latest range of 315-320Mt for 2021 and issued a lower projection for 2022 to 320-335Mt. Nevertheless, Brazil still contributes to the main incremental supply additions this year, and it's expected to be the key driver to seaborne market growth in the medium term. Shipments from the world's largest seaborne exporter, Australia, struggled during 2Q21 and most of 3Q21 due to weather-related disruptions and extended maintenance works. Still, there are signs that exports have improved during the final quarter of 2021, a trend that is expected to continue through next year.

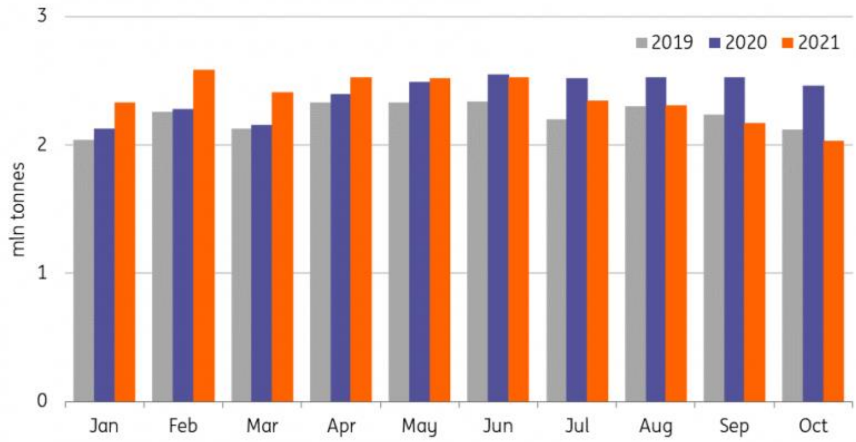
The supply of non-traditional iron ore fell this year as market conditions changed. A strong rebound in India's steel sector led to higher demand for its own iron ore. Export demand for India's low-grade fines fell sharply faced with high freight costs and steep discounts of lower-grade ores from the main consumer, China. Skyrocketing coking coal prices in China have put strong pressure on certain quality types such as lump and low-grade fines, as steelmakers diverge away from these relatively higher fuel rate products. As such, demand for high-grade fines and pellets remains elevated, which is also because of the pressure of production cuts on Chinese steel. As a result, stronger high-grade fines and pellet prices have prompted a supply response. It is expected that the supply of these products will see an improvement in the medium term.

Consumption plunges amid China's aggressive steel cuts

Demand developments have prompted extraordinary market volatility. A downward spiral kicked off with a slew of strong policy enforcements on steel production cuts, as the whole sector in China is very momentum-driven. Iron ore demand fell sharply with mills from multiple regions required to cut production to fulfil the mandate on flat growth in line with the state's decarbonisation goals and extended curbs in the top production hub of Tangshan city for 'Olympic Blue'. In 2H21, various steel cuts in China are estimated to lead to around 50Mt losses in crude steel and further result in a fall of hot metal production. Hence, during the period, iron ore consumption fell sharply by around 35Mt. The aggressive steel cuts in 2H21 and weaker iron ore consumption have led to growing inventories of imported ore at Chinese ports. Overall, Chinese iron ore imports are estimated to fall by by more than 3% YoY in 2021.

Lower steel production has failed to lift steel mill margins which had turned negative in 4Q21 due to weaker demand from the downstream property sector and slower activity from others due to frequent power shortages. More importantly, the weakening China property sector and construction new-starts have come under significant pressure, with major property developers struggling in the government-led deleveraging campaign.

Daily hot metal production in China



Source: China NBS, ING Research

China's policy continues to play a key role

The Chinese property sector has clearly been a major concern amid the debt crisis out of some property developers. However, our economists think activity here is not all doom and gloom as property investment growth is still 1.1 percentage points faster than headline fixed-asset investment (FAI) growth; there will also be a focus on those pipeline projects to bring them to completion.

At the end of 2021, a number of fine-tuning measures targeting the sector combined with credit easing sparked optimism about China's policy becoming more supportive. Iron ore prices started to rise together with steel prices, pre-emptively riding the China property curve and expectations of a round of easing. This was followed by an official announcement from the PBoC on a RRR cut on 6 December, a move that is expected to support fixed-asset investment in infrastructure, transportation and telecommunications and spur economic growth. So the 'stability priority' will provide some support to demand but it doesn't mean we're returning to the old regime where property was turbo-charged. Policies will be fine-tuned to avoid systemic contagion but we don't expect a significant reversal in the Chinese property sector.

Average prices to decline from 2021 levels

The China policy landscape at the macro-level, including moves towards decarbonisation, remains a cap over the medium-term demand outlook for iron ore. As such, China’s steel production is unlikely to return to the 1H21 level. Nevertheless, we expect the seaborn market to remain in deficit through 2023. In addition, the fine-tuning supportive measures in the short term should act to cushion the markets. On average, we expect prices to slide to US$100/t over 2022, with the main upside risks still being potential supply chain disruptions in light of the Omicron variant.

ING forecasts

	1Q22	2Q22	3Q22	4Q22	FY22
Iron ore (US$/oz)	110	100	90	95	100

Source: ING Research

9. Wheat tightness to ease

CBOT wheat has traded to the highest levels since 2012 as expectations for 2021/22 global ending stocks have been consistently lowered through the year. However, supply should improve going into the next season which should see prices edge lower from current levels

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2021/22 sees a tightening in the wheat balance

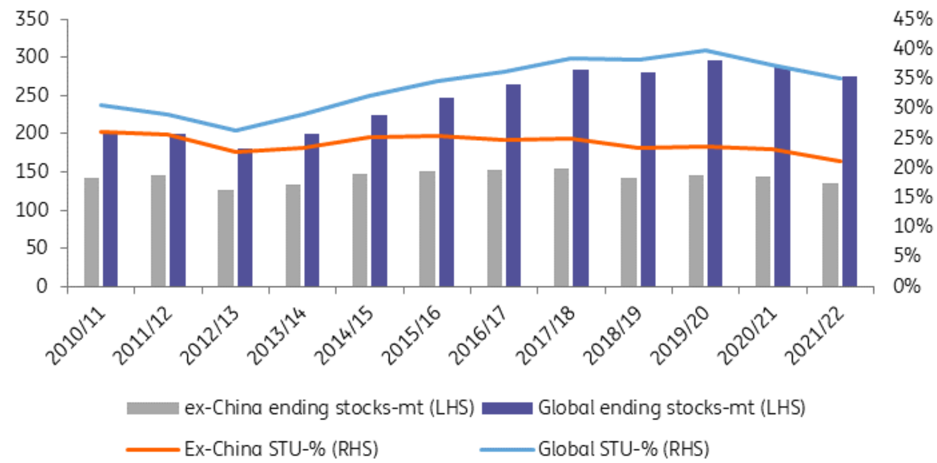
Ending stocks in the current 2021/22 marketing year are set to decline for the second consecutive season. The United States Department of Agriculture currently estimates that stocks will end the current marketing year at 275.8mt, which would be the lowest level since 2016/17 and would be a decline of close to 20mt from the record levels of 2019/20. The numbers look even more constructive when you take into consideration consumption growth over the years. The stocks-to-use (STU) ratio for 2021/22 is estimated at 35%, which is the lowest since 2015/16.

Expectations for supply have fallen over the marketing year, with global output for 2021/22 forecast at a little more than 775mt compared to a forecast earlier in the year of almost 789mt. This has been driven by poorer harvests from Russia, Canada and the US. Global supply in 2021/22 is estimated to be up only 0.1% YoY, whilst global consumption is estimated to grow by 1.4% YoY to a little more than 785mt

Looking at the ex-China balance suggests an even tighter market. The STU ratio excluding China is estimated to stand at just 21% at the end of 2021/22, which would be the lowest level in at least a decade.

It is this tighter than initially expected market which has helped push prices to multi-year highs.

Global wheat ending stocks



Source: USDA, ING Research

2022/23 supply prospects look better

The higher price environment seen this year should provide plenty of incentives for farmers to increase plantings for 2022/23. That and an improvement in yields in some regions mean we expect global wheat output will grow over 2022/23, which should see prices trending lower over the course of next year.

In the **United States**, USDA estimates that total US wheat plantings will increase by almost 5% YoY, to total 49m acres in 2022/23. If seen, this would be the largest area allocated to wheat since 2016/17, when a little over 50m acres of wheat were planted. In addition, one would expect to see a recovery in yields next season, following the dismal performance of spring wheat this year. Assuming yields are in-line with the 5-year average we could see a wheat harvest almost 380m bushels (10.3mt) larger than 2021/22 and exceeds 2b bushels for the first time since 2016/17. A crop of this magnitude would also see US ending stocks in 2022/23 edging higher once again.

For the European Union, the area for total wheat is expected to remain largely unchanged YoY. Conditions for winter crops have been mostly favourable for planting, emergence and **European Union** development. The EU is estimated to have produced 137.9mt of wheat in the current marketing year. If we assume little changes and that yields (which have been above average this year) revert to more normal levels, we could see a crop of around 132mt in 2022/23

Russia is also expected to see planted area largely unchanged from last year. There is some risk that it comes in slightly lower due to low soil moisture during the planting period. However, assuming unchanged area along with a recovery in yields, we think Russian wheat output could increase from an estimated 74.5mt this season to somewhere in the region of 78-79mt in 2022/23.

Ukraine is set to see an increase in area for its 2022 winter wheat crop. Farmers are expected to plant 6.68m hectares of winter wheat, which would be up from around 6.1m hectares last year. Despite an increase in area, without a repeat performance of the excellent yields seen this year, output from Ukraine in 2022/23 will likely fall YoY. Assuming yields are in line with the 5-year average, Ukraine could see a wheat harvest of more than 31mt, down from an estimated record crop of 33mt this season. While lower YoY, it would still be the second-largest wheat harvest from Ukraine.

Canada, which has had a poor crop this season due to drought, should see somewhat of a recovery. Persistent dry weather means we are unlikely to see a full recovery. Planted area is expected to increase in the region of 8% YoY, while a partial recovery in yields could see output increase from around 21mt in 2021/22 to somewhere in the region of 25-26mt in 2022/23. However, this is still some distance below the 35mt harvested in 2020/21.

ING forecasts

	1Q22	2Q22	3Q22	4Q22	FY22
CBOT wheat (USc/bu)	720	700	670	650	690

Source: ING Research

10. Coffee volatility to linger

Coffee has had an explosive year due to the impact of drought and frost on the Brazilian crop. Supply chain bottlenecks have also helped push the market higher. There is plenty of uncertainty for the 2022 outlook; much will depend on rainfall over the Brazilian rainy season

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Brazilian woes

The old song may claim 'there's an awful lot of coffee in Brazil', but there's not so much this year. Adverse weather across the country has had an impact on several crops including corn and sugar. However, the impact on Arabica coffee has been significant, and that's pushed prices to the highest levels since 2011.

Brazil has battled not only with frost this year, but also drought. There are concerns that large areas of coffee trees were damaged which will have an impact on production next season. Similarly, drought is also expected to weigh on the forthcoming harvest, although how much will depend on precipitation levels over the rainy season.

The Brazilian 2021/22 coffee crop is complete and the latest estimate from the country's agricultural agency, Conab, is that production over the season totalled 46.88m bags (60kg bags), down 25.7% year-on-year. Dry weather weighed on the crop, while it was also the lower-yielding year of the biennial cycle.

"There is plenty of uncertainty over the impact of both drought and frost"

For the 2022/23 season, while it will be the higher-yielding season, there is plenty of uncertainty over the impact of both drought and frost. There are estimates suggesting that as much as 12m bags of coffee could be lost in Brazil next season due to the conditions. However, in more recent months, growing regions have seen higher than usual rainfall. This was particularly the case in October. However, Brazil will need to see continued goof rainfall in the coming months to ease concerns. The issue is that US forecasters see a 90% chance of La Niña conditions over the Northern Hemisphere winter and 50% through into spring. Generally, dry weather in Brazil is associated with a La Niña event. A lot of the strength we have seen in the market more recently reflects these weather concerns.

Multi-year high coffee prices along with the weakness in the Brazilian real means that farmers in the country are seeing the highest prices in local currency terms on record. However, many of them would have sold forward and so are unable to take full advantage of the higher spot prices. There have been reports of some farmers defaulting or wanting to renegotiate given the higher prices. The high price environment also means that we could see increased plantings for coffee. However, given that these take several years to develop, any increase there will not be felt for a few years.

Logistics should improve

Like many other markets, coffee has been affected by supply chain issues. Covid-19 restrictions have contributed to supply issues, while a lack of containers has pushed freight rates higher. This has seen exchange inventories dropping from around 2.2m bags in the middle of this year to around 1.6m bags currently, further supporting prices.

However, as we go into 2022, we expect supply chain issues to gradually improve which should put less upward pressure on the coffee market. The key risk remains further strict restrictions in key growing regions should see another hard wave of the coronavirus.

2021/22 global coffee deficit

The International Coffee Organisation estimates that the global coffee market saw a surplus of 1.97m bags in the 2020/21 season (October 2020- September 2021).

Consumption is estimated to have grown by 1.9% YoY to 167.7m bags and this is after having fallen by 1.8% in the previous season. The fall in consumption last season was due to Covid-19 related lockdowns and the growth we have seen this year takes consumption back to pre-Covid-19 levels. While we still wait for what Omicron will throw at us, if most economies continue easing emergency restrictions, then demand is likely to continue growing in 2021/22. Despite the smaller Brazilian harvest this season, global production during the 2020/21 coffee year still edged higher by 0.4% YoY to 169.6m bags.

For the 2021/22 coffee year, demand is expected to outstrip supply. This will be driven by a combination of further growth in demand, along with a Brazilian crop weighed down by frost and possibly drought. However, much will depend on precipitation in the coming months. There are some who are forecasting a deficit of as much as 7m bags. The expectation of a deficit in 2021/22 and the uncertainty on how big this deficit could be suggest that prices should remain well supported.

ING forecasts

	1Q22	2Q22	3Q22	4Q22	FY22
Ice Arabica Coffee (USc/bu)	215	195	185	175	195

Source: ING Research

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