ANZ RESEARCH

JUNE 2022

GLOBAL FOOD SHORTAGE LOOMS





This is not personal advice nor financial advice about any product or service. It does not take into account your financial situation or goals. Please refer to the Important Notice.

INSIDE

Economic overview	1
Dairy	3
Lamb & wool	6
Beef	8
Deer	10
Grain	11
Forestry	13
Horticulture	15
Rural property market	17

CONTRIBUTORS

Susan Kilsby Agriculture Economist Telephone: +64 21 633 469

Susan.Kilsby@anz.com

Sharon Zollner Chief Economist NZ

Telephone: +64 27 664 3554 Sharon.Zollner@anz.com

Publication date: 10 June 2022

Global food prices continue to strengthen as shortages loom for basic foods such as grains. This means there will also be a shortage of carbohydrates to feed livestock. This won't directly impact New Zealand food production systems, but it will impact our competitors who rely on grain to produce beef and milk. At the same time, the price of growing pasture has also gone up, as global fertiliser costs have soared.

The shortages of these basic feed stocks will underpin global production costs and keep production in check, but it will also erode the ability of poorer countries to import the higher-value foods that New Zealand exports.

The recent lockdowns in China have disrupted supply chains and impacted demand for some of the food products we export to China. The lockdowns are also having a significant impact on the economies of many other Asian nations. China plans to increase fiscal spending to offset some of the impacts of the lockdowns, but the direct impact of the disruptions to supply chains will be felt even harder in many other Asian nations.

The quantity of New Zealand's meat, dairy and horticultural goods available for export globally has been impacted by either detrimental weather or labour shortages.

This week He Waka Eke Noa delivered its recommendations for pricing agricultural emissions. The Government is expected to formally adopt these recommendations in December. Methane emissions pricing is expected to have a larger impact on deer, sheep and beef farms than dairy farms.

Prices at farm/orchard level relative to 10yr average

Dairy	Dairy prices have firmed again but we continue to hold our milk price forecast at \$9.30/kg MS for the current season and \$8.50/kg MS for next season.	Milk price
Sheep	Lamb returns at the farmgate level are trending up as we move into the winter months, but there are more lambs than usual left to process.	19kg lamb Low High
Beef	The easing of lockdowns in China will be welcomed by beef exporters who have been selling more product into the US at a lower price point to avoid congested ports in China.	Prime steer Low High
Forestry	Log returns have firmed a little and are trending	A-grade log

ECONOMIC OVERVIEW

FARM OPERATING COSTS HAVE ROCKETED UP

Food and energy costs are rising rapidly, a combination that is underpinning New Zealand's export earnings but also increasing the cost of operating our farms and orchards.

Our primary producers are faced with even higher cost inflation than the general public. This is eating into operating returns despite high returns for goods produced.

Supply chains remain congested, which continues to make it challenging to transport produce to international markets. There are also significant delays receiving imported products.

GLOBAL FOOD SHORTAGE LOOMING

Hunger levels are expected to intensify this year as global food crisis worsens. The combined impact of reduced harvests, the war in Ukraine severely limiting supply from this region and logistical challenges mean global grain stocks are rapidly eroding.

China holds about half of the world's grain stocks. It has been progressively increasing stockpiles in recent years as it mitigates supply risks and becomes increasingly reliant on imported food.

The food crisis has triggered additional food protectionism measures globally, such as export bans and export taxes. This is worsening supply disruptions and pushing soft commodity prices higher still. Trade restrictions have also been imposed on fertilisers by Russia and China. China limited its fertiliser exports some months back to ensure it has sufficient product on hand for its own domestic use. Fertiliser companies in New Zealand are reporting delays importing product and there are signs the supply situation could worsen. They are trying to combat these issues by buying product earlier to increase their buffer stocks. But holding additional stock comes at a cost, which will eventually need to be passed on to fertiliser users.

Fertiliser prices have lifted substantially in the past year and show no signs of letting up. The global energy crisis is underpinning the high fertiliser prices, as the production of fertiliser is very energy intensive. Gas is the main source of energy used to produce nitrogenbased fertilisers. Russia is a major supplier of gas (and also fertiliser), so while sanctions remain in place, fertiliser prices will remain inflated.

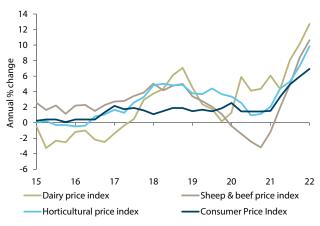
Fertiliser is just one of many costs that have increased rapidly in the past year. Inflation on-farm is running at nearly twice the general rate of inflation. Data from Q1 2022 shows the cost of operating a dairy farm increased by 12.7% y/y, while sheep & beef farm operating costs have lifted 10.7% y/y. Anecdotal evidence suggest onfarm costs have risen even further in the latest quarter. Our own Business Outlook survey shows similar themes, particularly for rural wages.

Dairy farm costs have risen by a larger degree as they are more intensive, and therefore more exposed to higher costs of labour, fuel and fertiliser than sheep and beef farms.

On sheep and beef farms it has been the high fertiliser costs (+23% y/y) that have contributed the most to onfarm inflation. Fuel costs have risen by 54%, but this is not a large cost for most sheep and beef farms. It is a major cost for arable farms, however, as is labour.



CONSUMER INFLATION VS FARM INFLATION



Source: Stats NZ, ANZ Research

These rates of inflation don't include interest rate changes. Data from Beef & Lamb NZ's economic service shows on-farm inflation is at the highest level recorded in the past 20 years, when interest payments are excluded. However, when interest payments are also considered, farm cost inflation was higher in 2008 following the Global Financial Crisis.

The average interest rates currently being paid are relatively low, but will inevitably trend higher as fixed loan rates expire, and general interest rates continue to rise.

OCR EXPECTED TO REACH 3.5%

The RBNZ is expected to continue tightening monetary policy to combat inflation. We expect inflation will peak at 7% in Q2, which is miles above the RBNZ's target range of 1-3%.

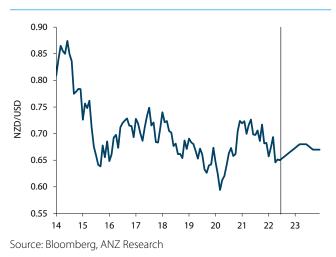
We anticipate the RBNZ will lift the OCR another 50bp in July (to 2.5%) then revert back to 25bp lifts, eventually taking the OCR to 3.5% by early next year. There are clear signs of slowing in many sectors, including housing, but the RBNZ clearly has a big job to do. But raising rates rapidly when house prices are falling is uncharted territory, and it would be very easy for the RBNZ to overdo it and cause a hard landing for the economy.

NZD REMAINS SOFT

The NZ dollar remains weak. This is supporting prices at the farmgate level, but makes imported goods such as fuel and fertiliser even more expensive.

Central banks across the globe are currently increasing rates at a similar pace, so interest rate differentials are not having a major impact on the value of our currency. High commodity prices tend to drag our currency higher but at present global risks (particularly around the outlook for China) are keeping the NZD in check. The NZD is a currency that attracts investors during periods of low risk, but when uncertainty increases investors tend to favour currencies like the USD.





So at present New Zealand exporters are benefitting from both high commodity prices and a low NZD. The normal strong correlation between the NZD/USD and global milk prices has not held for some time.

NZD/USD AND GDT PRICE INDEX



Source: GlobalDairyTrade, Bloomberg, ANZ Research

Click here to access our latest forecasts.



DAIRY PRICES FIRM AS OFFER VOLUMES FALL

Global dairy prices are now trending higher again following a softening of prices during March and April. This bodes well for farmgate milk prices as we move into the new milk production season.

Dairy markets were impacted by the lockdowns in major Chinese cities, which curtailed end-user demand, and made it logistically challenging to get goods into China and moved throughout the country. These lockdowns are now easing, although some restrictions on movements remain in place.

The economic collapse of Sri Lanka also impacted demand for NZ dairy products. In 2021, Sri Lanka purchased approximately 0.6% of NZ dairy exports by value. This may not sound like a lot, but it's still a significant amount of dairy products, and last year it outranked Algeria and Russia in terms of valuable trading partners.

Given challenging access into China and the economic problems in Sri Lanka a relatively strong autumn milk production did mean there was more product offered via Global Dairy Trade in recent months.

Dairy prices took a turn south for a few months but have more recently trended higher again. It is still apparent that global dairy production will remain subdued this year, which will be supportive of prices.

The demand situation is less clear. Some countries are still battling the health impacts of the pandemic, while other countries are focusing on reining in inflation brought about by prolonged loose monetary conditions and strong fiscal spending designed to offset the economic impact of the pandemic, as well as global shocks to the price of energy and food. We sell about 60% of our dairy products to Asian countries. China's economic growth is starting to slow, but will be supported by government initiatives. China is also still expanding its own dairy production, but the scope for this is somewhat limited by the lack of natural resources, ie access to water and land to grow feed crops, which means to expand its domestic production it needs to import feed for cows. At current commodity prices the economics of doing this stack up a little better than when prices are low, but it will always be difficult for China to produce high-quality dairy products at a low cost.

China's demand for imported dairy products is therefore only likely to wane temporarily if it finds it has excess stocks of dairy products – which could happen, given consumer demand for dairy products is likely to have eased during the recent lockdowns.

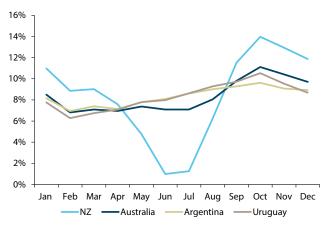
Elsewhere in Asia, demand for dairy is more likely to be impacted by slower economic growth (partially driven by the recent China lockdowns) and the impact of high global inflation for food. Many grains have become extremely expensive and are becoming increasingly hard to source. Poorer consumers are finding they are having to spend much more of their income on basic food products, which leaves less available for highervalue proteins. Dairy products are a luxury good for many consumers, so we should expect to see some reduction in demand as some consumers are priced out of the market.

SUPPLY SIDE STILL TIGHT

Milk production in the Southern Hemisphere is now at its seasonal low-point in New Zealand. Australia and the dairy-producing countries in South America tend to have a much flatter production curve than New Zealand, but there is still some seasonality to their production, which for all countries peaks in October.

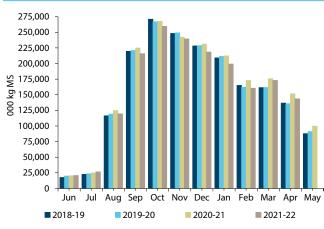


SEASONALITY OF MILK PRODUCTION FOR SELECTED COUNTRIES



Source: DCANZ, Dairy Australia, CLAL, ANZ Research

As we enter the Southern Hemisphere off-season the supply of dairy products to the global markets will tighten further. Production in New Zealand did improve in the later months of the season, and we now anticipate production for the total season will be 4% lower than last season.



NZ MILK PRODUCTION

Source: DCANZ

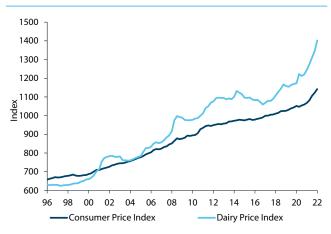
Looking ahead to the 2022-23 season we anticipate we will see some improvement in milk output compared to last. but the increase will be minor. Despite the extremely strong farmgate milk price confidence remains quite low as farmers grabble with the tsunami of legislative changes associated with improving environmental standards.

While the intent of improving standards is well understood, it is still not clear exactly how farming operations will need to evolve – and the associated costs. It is this uncertainty that continues to weigh heavily on the sector.

DAIRY FARMERS FACING INFLATED COSTS

Dairy farm-operating costs are rocketing away at present. The rate of inflation that our dairy farmers are facing has shot up.

CONSUMER PRICES INDEX VS DAIRY PRODUCER PRICES



Source: StatsNZ, ANZ Research

Interest rate costs are also on the rise. Many farmers have managed to pay down debt in recent years, which means the interest rate rises will have a lesser impact than otherwise. Average interest rates are still quite low, as those on fixed rates won't be impacted by the change until they are due to renew their loan pricing.

The costs associated with methane emissions pricing have yet to be agreed by the Government, but He Waka Eke Noa have recommended pricing commences at 11c/ kg methane emissions.

These costs will have a greater impact on the lessefficient farms, and those farms with no options to offset methane costs.

FARMGATE MILK PRICES STRONG

The farmgate milk price looks likely to remain strong for another season, but there is an even higher degree of uncertainty in the price outlook than normal.

We have taken a slightly cautious approach to pricing, given the array of global economic uncertainty at present.

For the 2022-23 season we have forecast a milk price of \$8.50/kg MS, which is close to the lower end of the \$8.25-\$9.75/kg MS forecast recently released by Fonterra.



Milk price futures have trumped even the top end of Fonterra's forecast, having recently traded as high as \$10.32/kg MS. This elevated price is likely to attract additional farmer interest in this hedging tool. It is unusual to be able to lock in such a high price during a period of heightened economic uncertainty.

For the 2021/22 season, Fonterra has maintained its 2021/22 farmgate milk price forecast of \$9.10 - \$9.50/kg MS. This is aligned with our own forecast of \$9.30/kg MS for the production season just completed.



FARMGATE PRICES TRENDING HIGHER

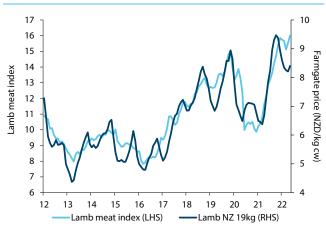
Global prices for lamb meat are holding up, which paves the way for a small lift in farmgate prices through the winter months. Lamb processing is running well behind normal due to labour issues curbing meat-processing capacity.

Lamb prices are still very strong as we head into winter. At the farmgate, prices are averaging about \$8.60/kg CW, but are trending higher on a weekly basis as we head into winter.

Farmgate prices typically trend up from this point of the season as the supply of lambs dwindles.

International prices for lamb remain very strong, buoyed by the relatively subdued NZ dollar. Lamb racks are trading at record prices, while the price of leg and forequarters are not far below the record levels attained in recent months.

FARMGATE PRICES VS INTERNATIONAL MARKET PRICES



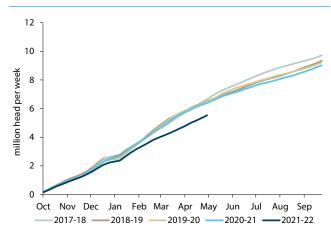
Source: AgriHQ, ANZ Research

Schedule prices took their typical seasonal dive when numbers available for processing lifted earlier in the year. But with meat processing capacity limited by labour shortages, our exporters had a little less product to sell, which helped keep international prices high.

Additional demand from restaurants has also helped keep international prices firm. The service sector in many countries is back operating as normal following the COVID-19 related disruptions over the past few years. The major exception is China, with some major cities just emerging from lockdowns. The price of the lower-value cuts China typically purchases have eased a little, but are still at good levels. There is certainly a risk that demand could ease further, and if this occurs we could see limited upside for winter schedule prices.

But current international prices are certainly at levels that can support the prices meat processors are currently offering, with some further upside potential.

LAMB PROCESSING SEASON TO DATE -NORTH ISLAND

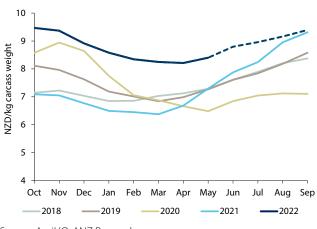


Source: MIA, ANZ Research

The number of lambs that have come forward for processing in the North Island is still tracking well behind last season. On a season-to-date basis, numbers are back about 13.5%. Official data to the end of April shows 860,000 fewer lambs killed this season in the North Island. The South Island isn't quite as far behind, at -8.3%, but across New Zealand there has been 1.5 million fewer lambs killed this season.

That means across New Zealand there are still nearly 6 million lambs to process, which means the plant throughput from May to September will need to be 30% greater than it was last season. The delays mean the lamb-processing season may overlap with the bobby calf season. This will put further pressure on capacity, as the same processing chains are used for lambs and bobby calves.

FARMGATE LAMB PRICE TREND AND FORECAST



Source: AgriHQ, ANZ Research

The delays in processing have now translated into heavy lambs being processed. Throughout April and early May, lambs processed in the North Island averaged more than 19kgs and were not far behind in the South Island. Across the season thus far, lamb weights are still lower than the same time last year, but given the size of the lambs currently being processed this differential is likely to disappear.

SHEARERS HEADING TO AUSTRALIA

The current labour shortage looks like it will push the costs of shearing up further. Shearers are flocking to Australia since the borders have reopened due to the better pay rates on offer. It is looking like shearing costs could increase as much as 15%, which is not going to help the economics of growing coarse wool.

Wool prices continue to bounce around but are yet to show signs of a sustained improvement. Prices achieved this year have tended to fluctuate between \$2.50 and \$3/ kg for wool sold in both islands, with South Island prices tending to exceed North Island prices.

Prices have been a little stronger this season than last, but prices aren't gaining any further momentum



STRONG UNDERLYING MARKET

Global beef demand is still strong, but it has been challenging getting product into some markets. The lockdowns in China have created backlogs at the ports, so exporters elected to send more beef to the US and to other Asian markets. This has put a little downward pressure on prices, but overall international returns are still very strong and the low NZD has allowed for much stronger farmgate prices than normal for this time of the season. Processing backlogs are starting to clear, but we will be well into winter before processors completely catch up.

TRADE PATTERNS SWING BACK TO THE WEST

International beef markets have become more challenging over the past couple of months. The US market is well supplied from both a domestic and international perspective, which is putting downward pressure on prices.

Meanwhile, the lockdowns in China have curbed demand from this market and added logistical challenges. China is still offering higher prices than the US, but it has been extremely difficult to get product into this market.

Now that the lockdowns are easing, so too should the congestion that is hampering moving containers off ports and throughout the country. Shipping lines that were not willing to deliver to some Chinese ports are now progressively reopening these shipping lines.

While access to China has been limited, NZ exporters have been more reliant on the US market and other Asian markets.

The US has again taken the title of the largest importer of NZ beef, but there is also plenty of product being supplied to the US from other countries, and their own domestic supply is elevated at present. Drought in the southern states of the US has resulted in a lot more beef cows being culled, and this is boosting domestic beef supplies despite dairy cow slaughter running lower than normal.

Brazil has also been supplying much more beef into the US. However, they have now filled their beef quota for the year, so the higher tariff rates will curb supply from this nation.

Beef from Brazil was previously shut out of the US due to disease concerns. Although the ban was officially lifted in early 2020, it has really only been over the past six months that large quantities of Brazilian beef have been imported by the US. This helped fill the gap in imports as less beef was available from NZ and Australia. Australia exports have been modest in the past few years and will continue to be until they rebuild their domestic herd. Meanwhile New Zealand has been directing more beef to China, as this market has tended to outperform the US in terms of prices.

Now that Brazil has exceeded its annual import quota of 65,000t, a tariff of 26.4% is applied. While some Brazilian beef is still flowing in at these higher tariff rates, it is not flowing as readily as it was earlier in the year.

The slowdown in exports from Brazil has certainly been welcomed by New Zealand exporters, who have found the US market quite competitive recently. New Zealand has become more reliant on the US market in recent months as the various lockdowns in China have made it difficult getting product into that market. However, New Zealand exporters have found it a little harder to extract premium prices for our manufacturing beef from the US market. As China reopens its major cities that have been in lockdown, we expect to see more NZ beef being redirected back to this market.

While it has been difficult to get product into China, New Zealand exporters have also diverted more meat into other Asian markets, such as Japan and South Korea.



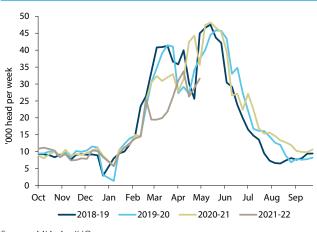
Japan tends to be a higher-value market, so this has helped offset lower prices from the US market.

COW KILL DELAYS

Locally there are still a lot more cows waiting to be processed than is normal at this time of the season. Typically the processing season drops away quickly in June, but due to reduced processing capacity earlier in the season there is still a backlog of cows to process.

This season the number of cows processed from October-April was 20% lower in the South Island and 13% lower in the North Island than last season. That's about 85,000 additional cows still on farm. Processors are now starting to catch up, but they expect to be busy right through June and possible into July to clear the backlog.

NEW ZEALAND WEEKLY COW SLAUGHTER NUMBERS



Source: MIA, AgriHQ

Many parts of New Zealand experienced excellent conditions for pasture production during the autumn, and therefore carrying extra stock has fortunately not been too challenging. However, drought in the Waikato and drierthan-usual conditions in some other regions have created urgency to get stock processed.

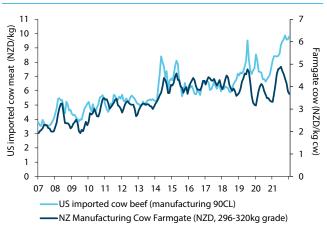
Farmers in the South Island are becoming increasingly frustrated at not being able to get cows processed, now that the cold weather is slowing pasture production. Luckily many regions have managed to produce excellent winter feed crops, which will help alleviate some of the issues.

Cows that have been sold through the sale yards have tended to be picked up by farmers who would typically offer winter grazing. Processors have enough confidence in the global markets to have offer farmers contracts to supply stock during July/August, which is when beef supply is typically at its lowest. This has stimulated demand for cull cows at the yards.

STRONG INTERNATIONAL PRICES SUPPORT SCHEDULE

Despite a wee bit of softening in international prices recently, prices are still extremely strong, with returns in local currency terms bolstered by the relatively weak NZD.

COW MEAT PRICES



Source: AgriHQ, ANZ Research

Prices processors have paid for cull cows have trended down in recent months, as is normally the case during the autumn when there is ample supply available. Logistics challenges have also meant processors have been short of cool store space, so haven't been wanting to incentivise more stock for processing. Nor have they had the labour available to run additional shifts to process more stock.

But farmgate prices have now stabilised and indeed started to trend higher, supported by strong international prices.



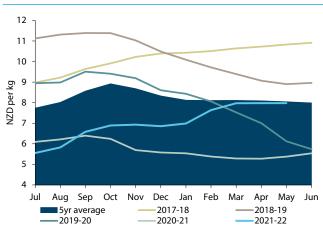
STEADY FOR NOW

Venison returns at the farmgate level have stabilised. Exporters are now looking ahead to the new chilled season to bolster farmgate prices.

Farmgate prices for venison are holding steady near \$8/kg CW for young stags. Pricing is similar across both islands and currently sits very close to the five-year average.

Prices are expected to hold relatively steady until the chilled season commences, which should increase average returns. At this time prices are likely to increase to about \$9/kg CW or more, depending on market demand.

FARMGATE VENISON (YOUNG 60KG STAG)



Source: AgriHQ

The main production season for chilled venison is around October, as this enables product to be delivered to European and US markets ahead of the Christmas demand.

Global venison markets are still in recovery mode after the COVID hit to the restaurant trade. Progress has been made in diversifying markets and trade channels, which should provide exporters with more options in the future, should demand from one market weaken. As global economic conditions tighten we may again see pressure on venison pricing.

Exporters appear relatively confident that market pricing will continue to improve, and the weaker NZD is also making it easier to deliver stronger prices at the farmgate level.

Returns for velvet continue to grow. This season, export returns for velvet are expected to be at an all-time high. A combination of increased production and higher prices has bolstered returns.

Velvet has benefitted throughout the pandemic from its perceived health benefits. A study by AgResearch supports the hypothesis that velvet can boost the immune system, but more research is required to find out why this happens. Velvet has been used for centuries in traditional Chinese medicines but there have not been a lot of formal studies to prove its health benefits.



GLOBAL GRAIN SHORTAGE

Grain is trading at record levels both internationally and in our local market. A global grain shortage has prompted the lift in pricing and high prices are expected to prevail for some time yet. Local prices are also incredibly strong but high fertiliser and fuel costs are eating into profit margins.

GRAIN PRICE SKY-HIGH

The price of locally produced grains has increased sharply in the past few months. Prices are currently closely aligned with international prices.

Milling wheat is trading at a premium to feed wheat, but the differential is not enough to encourage farmers to focus on producing the varieties favoured by flour mills, which tend to be lower yielding and more challenging to grow. With feed wheat trading at close to \$600/t, millers need to pay a higher price than the \$620-\$650/t currently on offer.

650 600 550 500 tonne 450 NZD per 1 400 350 300 250 200 150 16 19 20 22 15 17 18 21 -Milling wheat -Feed wheat Feed barley PKE

NEW ZEALAND GRAIN PRICES

Source: NZX

Therefore it looks like we may end up importing more of our milling wheat requirements this year than ever before. Australian wheat can be landed in Auckland for about NZ\$640/t (although higher-protein grades cost more), and in much larger standardised lots that are easier for mills to process than domestic supplies. There is therefore not a lot of incentive for mills to increase domestic prices further. This is particularly the case for North Island mills, as it is more costly to freight grain from Canterbury than it is from Australia.

MAIZE GRAIN HARVEST NEAR COMPLETE

Most of the maize grain grown this season has now been harvested, although recent rains have slowed the end of the harvest. Total yields are expected to be down a little this season as it was extremely wet at planting time, and a larger portion of the maize is thought to have been harvested earlier as maize silage. The relatively tight supply combined with strong international prices means there has also been a sharp lift in the maize grain price, which now sits at about \$600/t.

Demand for feed grade remains strong, buoyed by the high milk price and also strong prices for chicken and pork. Prices for locally produced feed barley and feed wheat are also nearing \$600/t, which is nearly 50% higher than a year ago.

Unfortunately for arable farmers, the price of fertiliser, fuel and labour has also risen dramatically, which has taken some of the gloss off returns. Urea prices have nearly doubled in the past year.

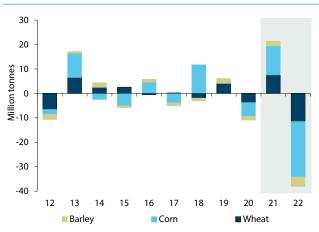
The price of PKE has also risen sharply, buoyed by supply issues and strong demand from dairy farmers as they look to take advantage of the high milk prices on offer.



HUNGER LEVELS EXPECTED TO RISE

Global grain supply is constrained due to inclement weather in some production regions, the war in Ukraine restricting supply from both Russia and Ukraine, and restrictions being placed on trade in some regions. The supply restrictions mean some African and Asian countries won't be able to secure enough grain to feed all their people.

Ukraine and Russia collectively supply about a quarter of the world's wheat, and account for most of the world's sunflower production. So the disruption from this region will certainly be noticed.

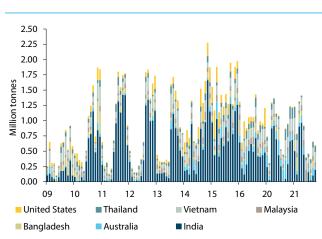


UKRAINE GRAIN PRODUCTION GROWTH

Source: USDA, Bloomberg, ANZ Research

China now holds over half of the world's grain reserves. As China has become more reliant on imported food, policy makers realised long ago that this would entail additional food security risks. Therefore in the past couple of years we have seen China purchasing high volumes of grain to build its own stocks so as to make it less vulnerable to trade disruptions. While this policy was instigated long before the pandemic, it has certainly proven to be a wise move, given the disruptions to trade in the past few years and the current global shortage of grain.

China has also limited exports of fertiliser to ensure it has sufficient supply to meet its own requirements.

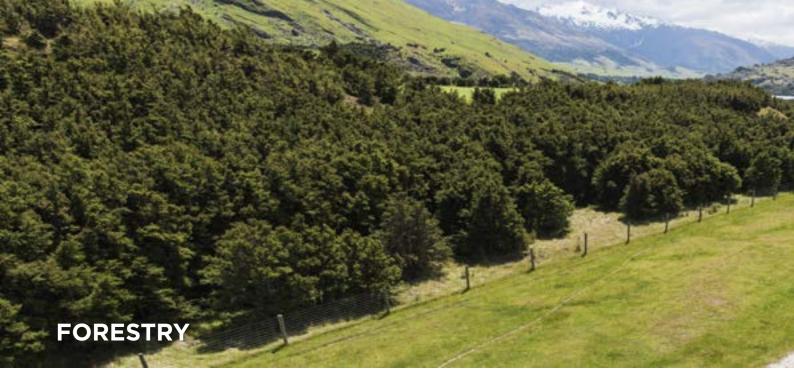


CHINA FERTILISER EXPORTS

Source: Bloomberg, ANZ Research

Similarly, many countries are restricting food exports so their local population doesn't go hungry. India is the world's largest producer of wheat but normally has little left over for export. This season more grain was expected to be available for export, but the recent heatwave has prompted the Government to ban exports to ensure they don't run out.

High fertiliser and fuel prices, combined with the global supply disruptions, are expected to keep international grain prices elevated well into 2023.



PRICES TREND DOWN AS DEMAND EASES

Wharfgate returns have eased again as demand from China is curtailed by the lockdowns. However, demand in China is expected to improve again as the movement restrictions in the major cities start to ease.

Local demand for logs and timber products remain strong. The easing of housing prices isn't impacting demand for timber just yet, but this is expected to come as the economics of building new homes and renovating get harder.

LOGS PILE UP ON CHINESE WHARVES

Demand for logs in China has been weaker than normal, but didn't completely fall away during the lockdowns. At the same time, the volume of logs imported by China lifted, so the combined impact is an increase in the volume of logs on Chinese wharves.

However, this situation is set to improve as demand for logs from end-users is expected to ramp up again as the movement restrictions ease and people are freer to move from region to region.

The total volume of logs imported into China this year is well down on normal. New Zealand's log exports were constrained by fewer trees being harvested late last year and earlier this year due to labour shortages.

But China has received fewer logs from Russia and Europe as well, the other major suppliers of logs to this market. In the past three months China has imported about 30% fewer logs than the equivalent period last year, and its lumber imports are down a little as well.

Imports of logs from all major supplying regions have fallen, but imports from New Zealand have fallen by a smaller percentage, with our supply back by 25%.

Russia is now trying to reduce its exports of logs to China in favour of processed lumber. Meanwhile, the supply of logs from Eastern Europe has slowed a little as less forests are being felled to control the spread of the invasive bark beetle. The reduction in the supply of logs has helped to balance the recent lower demand for timber for construction projects in China.

ACCESS FOR LOGS TO INDIA

Demand for logs from other Asian markets is expected to pick up a little in the coming months. India is gradually reopening its economy and this is expected to result in more demand for raw logs.

India has not purchased many logs from New Zealand recently, as it requires imported logs to be treated with methyl bromide. The use of this chemical to treat logs in New Zealand is now highly restricted. Instead, a more environmentally friendly method of fumigating logs with ethanedinitrile has now finally been approved by our Environmental Protection Authority after years of testing and debate.

However, authorities in India do not yet recognise this new method, and therefore New Zealand logs treated this way can't be shipped in bulk carriers to this market. They can be exported in containers, but as there is a shortage of containers this method of delivery currently isn't being used.

China has typically soaked up most of our logs in any case, and have tended to offer higher prices, which has limited the need to sell to India. But with demand from India expected to increase this year, it is important that the access issues are resolved as quickly as possible.

At present the log market in India is mainly being supplied by Uruguay, Argentina, Australia and the US.



WHARFGATE RETURNS

In-market prices for most export grades of logs have eased about 7% over the past month. Prices are currently about 10% lower than this time last year.

At the wharfgate level log prices have also eased, although the low NZD is absorbing some of the downward pressure on prices.

UNPRUNED A-GRADE IN-MARKET PRICE



DOMESTIC LOG MARKET

Demand for structural grade timber to build houses is still strong at present. Prices for this grade of timber are edging up and mills are still operating at high capacity to keep up with demand.

However, the rate at which homes are being completed in New Zealand is slowing due to problems sourcing building supplies. This is impacting builders' ability to complete projects and most builders have several projects on the go at any one time to try to keep staff fully utilised when delays sourcing inputs stop the build on a particular project.

This in itself is adding to the costs of construction and cash-flow challenges, as are rising labour costs, and high costs of imported goods. In addition, as interest rates increase and house prices fall, the viability of some builds will come under pressure.

Therefore demand for timber from our local housing market is expected to wane later this year.

HORTICULTURE

LABOUR ISSUES CURB HARVEST VOLUMES

Labour shortages are having a noticeable impact on harvest volumes in the apple and kiwifruit industries. Wine production has been hampered by a lack of experienced staff, which has added to issues of grape quality, making it a very challenging season to produce high-quality wines.

The labour shortage is being felt across most parts of the primary sector, but it is particularly prevalent in horticulture due to the seasonal nature of employment. Many of the usual workers have not been available due to border closures or have gained full-time employment in other industries. This means there is a lack of staff available to pick and process fruit.

APPLES: WEATHER IMPACTS HARVEST

The apple harvest this season is now expected to be considerably smaller than previously forecast. NZ Apple and Pear have revised down their expectations for the 2022 harvest by 12% to 20.3 million tray carton equivalents (TCEs).

A combination of adverse weather and a lack of pickers means 20% fewer apples will now be harvested in Gisborne, 15% fewer in Hawke's Bay – our largest applegrowing region – and 7% fewer in the Nelson region.

Excess rain has been an issue in the North Island, while the Nelson harvest was partially impacted by the hailstorm last year. The labour shortage has also meant orchardists have had to forego some of the tasks they would normally do, and leave some trees unpicked, or reduce the number of times each tree is picked.

There is also ongoing pressure in post-harvest facilities, and disruption in shipping schedules mean some growers have had to make some tough decisions that have ultimately reduced harvest volumes and the volume of fruit available for export.

Global demand for export product is strong but getting the produce to market remains challenging. The Nelson regions is particularly impacted by the lack of containers available and limited sailings.

KIWIFRUIT: LESS FRUIT TO BE HARVESTED

Global market demand for kiwifruit remains strong but the industry is facing challenges getting produce picked, packed, and to market. There are also some quality issues.

The congestion at ports in mainland China due to the lockdowns means a larger portion of the early season fruit has been directed to Japan and Taiwan. Demand in these two markets and South Korea is reported to be very strong. Consumer demand within China remains robust, but the supply chains are more fragile and subject to delays both into and out of the ports.

This season's crop size has been revised down by Zespri to 172 million trays, comprising 106 million trays of SunGold and 66 million trays of Green. Compared to last season that is about 4% less fruit in total, with green volumes expected to fall by about 14%. while SunGold volumes increase about 4%.

The harvest is well on track, although hasn't been without its challenges. Zespri reports that 152 million trays have been harvested and 77 million trays shipped.

This year Zespri made available licenses to grow 350 hectare of SunGold kiwifruit and the same area of RubyRed[™]. The median prices paid for licenses for both varieties was higher than last year but the minimum price accepted was lower in both cases and there was a wide spread in the prices paid. Not all of the SunGold license area was allocated, as some bids were lower than the price the licensing panel deemed acceptable.



ZESPRI LICENSE PRICES

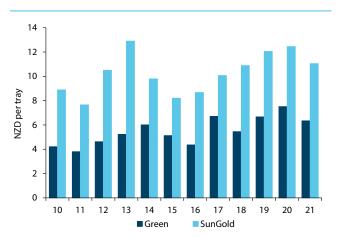
Fruit type	2022 median price	2021 median price	2022 minimum price	2021 minimum price
Sungold	\$801,000	\$550,000	\$451,950	\$525,000
Ruby Red	\$147,000	\$74,979	\$44,217	\$58,000

Source: Zespri

Zespri decided to reduce the quantity of SunGold license offered to ensure it doesn't end up over-supplying the market for this variety. It also made some changes to the license rules to spread the available license area across as many growers as possible.

In the 2021/22 season Zespri increased the revenue generated from global sales by 12% to \$4.03 billion. Sales volumes lifted 11% to 201.5 million trays. Grower returns were down on the previous season but were still the second strongest achieved and were above the previous guidance provided.

ORCHARD GATE RETURNS BY VARIETY



Source: Zespri

AVERAGE ORCHARD GATE RETURNS

Fruit type	2021/22 per tray (Final)	2021/22 per tray (Feb)	2020/21 per tray (Final)	2021/22 per ha (Final)
Green	\$6.35	\$6.25	\$7.21	\$75,722
Organic Green	\$9.74	\$9.59	\$10.53	\$67,453
Sungold	\$11.51	\$11.27	\$12.46	\$177,846
Organic Sungold	\$12.61	\$12.42	\$15.36	\$158,599
Green14	7.82	\$7.65	\$10.14	\$54,609

Source: Zespri



MORE INTEREST IN DAIRY PROPERTIES

The total number of farms trading in the past year has eased relative to the previous year, but the median price paid has increased. There is considerable demand for rural properties from non-farming interests, particularly for land suitable for horticultural and forestry.

Dairy farms are definitely turning over more quickly than they have done in the past couple of years. The median time it is taking dairy farms to change hands is now 92 days. Two years ago this number was 137 days.

At the same time, we have seen the median price per hectare for dairy properties exceed \$39,000 in both March and April. It has been seven years since median dairy land prices have been this high.

DAIRY FARM SALES (12 MONTH ROLLING AVERAGE)



Source: REINZ

No doubt the recent seasons of high milk prices, along with the outlook for high returns to continue for another season, have bolstered industry optimism. Whether or not the increased costs associated with general inflation have been factored in is debatable. Costs associated with improved environmental standards are probably also flying under the radar, particularly the costs associated with methane emissions, as these are still evolving.

Nevertheless, the economics of operating dairy farms have improved considerably in the past couple of years, which has allowed many owners to retire some debt. This now puts them in a better position to manage higher costs and/or expand their investments.

DAIRY FARM SALES



Source: REINZ

LIVESTOCK PROPERTIES

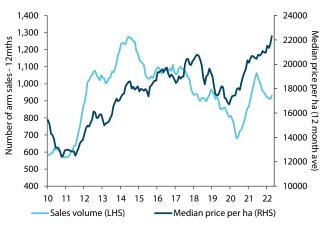
Sales of grazing properties continue to fall in number, but the prices being paid have increased. The median price for grazing farms has increased to over \$22,000/ha, an increase of about 8% in the past year.

Demand for these properties is underpinned by returns from carbon farming. In many cases returns from permanent plantings outweigh what these farms are achieving as grazing properties. This equation is only



likely to tilt further in this direction when the cost of methane emissions from ruminants is included.

LIVESTOCK FARM SALES (12 MONTH ROLLING AVERAGE)



HORTICULTURAL INTEREST STILL STRONG

Demand for horticultural properties remains strong, with prices for established kiwifruit orchards continuing to trend up. This has helped lift the median price paid for horticultural land by 80% over the past decade. Prices paid for individual blocks do vary considerably, depending on the location, crop planted, and other improvements.

Source: REINZ

FARM SALES BY FARM TYPE

Annual avera	ge/total	Past 12 months	Previous 12 months	10-Year Avg.	Chg. Y/Y	Chg. P/10yr
Dairy	Number of Sales	277	242	220	↑	^
	Median Price (\$ per ha)	39,217	34,356	34,258	↑	^
Livestock	Number of Sales	931	994	1,006	\checkmark	\checkmark
	Median Price (\$ per ha)	22,308	20,642	18,511	↑	^
Horticulture	Number of Sales	175	198	191	\checkmark	\checkmark
	Median Price (\$ per ha)	379,083	299,167	209,301	↑	1
Arable	Number of Sales	54	61	95	\checkmark	\checkmark
	Median Price (\$ per ha)	38,142	34,700	37,094	↑	↑
Forestry	Number of Sales	69	61	52	↑	1
	Median Price (\$ per ha)	12,604	10,288	7,946	↑	1
All Farms	Number of Sales	1,587	1,682	1,588	\checkmark	\checkmark
	Median Price (\$ per ha)	30,800	26,292	24,960	↑	1

Source: REINZ

IMPORTANT NOTICE

Last updated: 28 February 2022

This document (which may be in the form of text, image, video or audio) is intended for ANZ's Institutional, Markets and Private Banking clients. It should not be forwarded, copied or distributed. The opinions and research contained in this document are (a) not personal advice nor financial advice about any product or service; (b) provided for information only; and (c) intended to be general in nature and does not take into account your financial situation or goals.

This document may be restricted by law in certain jurisdictions. Persons who receive this document must inform themselves about and observe all relevant restrictions.

Disclaimer for all jurisdictions: This document is prepared and distributed in your country/region by either: Australia and New Zealand Banking Group Limited (ABN11 005 357 522) (ANZ); or its relevant subsidiary or branch (each, an Affiliate), as appropriate or as set out below.

This document is distributed on the basis that it is only for the information of the specified recipient or permitted user of the relevant website (recipients).

This document is solely for informational purposes and nothing contained within is intended to be an invitation, solicitation or offer by ANZ to sell, or buy, receive or provide any product or service, or to participate in a particular trading strategy.

Distribution of this document to you is only as may be permissible by the laws of your jurisdiction, and is not directed to or intended for distribution or use by recipients resident or located in jurisdictions where its use or distribution would be contrary to those laws or regulations, or in jurisdictions where ANZ would be subject to additional licensing or registration requirements. Further, the products and services mentioned in this document may not be available in all countries.

ANZ in no way provides any financial, legal, taxation or investment advice to you in connection with any product or service discussed in this document. Before making any investment decision, recipients should seek independent financial, legal, tax and other relevant advice having regard to their particular circumstances.

Whilst care has been taken in the preparation of this document and the information contained within is believed to be accurate, ANZ does not represent or warrant the accuracy or completeness of the information Further, ANZ does not accept any responsibility to inform you of any matter that subsequently comes to its notice, which may affect the accuracy of the information in this document.

Preparation of this document and the opinions expressed in it may involve material elements of subjective judgement and analysis. Unless specifically stated otherwise: they are current on the date of this document and are subject to change without notice; and, all price information is indicative only. Any opinions expressed in this document are subject to change at any time without notice.

ANZ does not guarantee the performance of any product mentioned in this document. All investments entail a risk and may result in both profits and losses. Past performance is not necessarily an indicator of future performance. The products and services described in this document may not be suitable for all investors, and transacting in these products or services may be considered risky.

ANZ expressly disclaims any responsibility and shall not be liable for any loss, damage, claim, liability, proceedings, cost or expense (Liability) arising directly or indirectly and whether in tort (including negligence), contract, equity or otherwise out of or in connection with this document to the extent permissible under relevant law. Please note, the contents of this document have not been reviewed by any regulatory body or authority in any jurisdiction.

ANZ and its Affiliates may have an interest in the subject matter of this document. They may receive fees from customers for dealing in the products or services described in this document, and their staff and introducers of business may share in such fees or remuneration that may be influenced by total sales, at all times received and/or apportioned in accordance with local regulatory requirements. Further, they or their customers may have or have had interests or long or short positions in the products or services described in this document, and may at any time make purchases and/or sales in them as principal or agent, as well as act (or have acted) as a market maker in such products. This document is published in accordance with ANZ's policies on conflicts of interest and ANZ maintains appropriate information barriers to control the flow of information between businesses within it and its Affiliates.

Your ANZ point of contact can assist with any questions about this document including for further information on these disclosures of interest.

Country/region specific information: Unless stated otherwise, this document is distributed by Australia and New Zealand Banking Group Limited (ANZ).

Australia. ANZ holds an Australian Financial Services licence no. 234527. For a copy of ANZ's Financial Services Guide please click here or request from your ANZ point of contact.

Brazil. This document is distributed on a cross border basis and only following request by the recipient.

Brunei, India, Japan, Kuwait, Malaysia, Switzerland, Taiwan. This document is distributed in each of these jurisdictions by ANZ on a cross-border basis.

Cambodia. The information contained in this document is confidential and is provided solely for your use upon your request. This does not constitute or form part of an offer or solicitation of any offer to engage services, nor should it or any part of it form the basis of, or be relied in any connection with, any contract or commitment whatsoever. ANZ does not have a licence to undertake banking operations or securities business or similar business, in Cambodia. By requesting financial services from ANZ, you agree, represent and warrant that you are engaging our services wholly outside of Cambodia and subject to the laws of the contract governing the terms of our engagement.

Chile. You understand and agree that ANZ Banking Group Limited is not regulated by Chilean Authorities and that the provision of this document is not subject to any Chilean supervision and is not guaranteed by any regulatory or governmental agency in Chile.

Fiji. For Fiji regulatory purposes, this document and any views and recommendations are not to be deemed as investment advice. Fiji investors must seek licensed professional advice should they wish to make any investment in relation to this document.

Hong Kong. This document is issued or distributed in Hong Kong by the Hong Kong branch of ANZ, which is registered at the Hong Kong Monetary Authority to conduct Type 1 (dealing in securities), Type 4 (advising on securities) and Type 6 (advising on corporate finance) regulated activities. The contents of this document have not been reviewed by any regulatory authority in Hong Kong.

India. If this document is received in India, only you (the specified recipient) may print it provided that before doing so, you specify on it your name and place of printing.

Macau. Click here to read the disclaimer for all jurisdictions in Mandarin. 澳门. 点击此处阅读所有司法管辖区的免责声明的中文版

Myanmar. This document is intended to be general and part of ANZ's customer service and marketing activities when implementing its functions as a licensed bank. This document is not Securities Investment Advice (as that term is defined in the Myanmar Securities Transaction Law 2013).

New Zealand. This material is for information purposes only and is not financial advice about any product or service. We recommend seeking financial advice about your financial situation and goals before acquiring or disposing of (or not acquiring or disposing of) a financial product.

Oman. ANZ neither has a registered business presence nor a representative office in Oman and does not undertake banking business or provide financial services in Oman. Consequently ANZ is not regulated by either the Central Bank of Oman or Oman's Capital Market Authority. The information contained in this document is for discussion purposes only and neither constitutes an offer of securities in Oman as contemplated by the Commercial Companies Law of Oman (Royal Decree 4/74) or the Capital Market Law of Oman (Royal Decree 80/98), nor does it constitute an offer to sell, or the solicitation of any offer to buy non-Omani securities in Oman as contemplated by Article 139 of the Executive Regulations to the Capital Market Law (issued vide CMA Decision 1/2009). ANZ does not solicit business in Oman and the only circumstances in which ANZ sends information or material describing financial products or financial services to recipients in Oman, is where such information or material has been requested from ANZ and the recipient understands, acknowledges and agrees that this document has not been approved by the CBO, the CMA or any other regulatory body or authority in Oman. ANZ does not market, offer, sell or distribute any financial or investment products or services in Oman and no subscription to any securities, products or financial services may or will be consummated within Oman. Nothing contained in this document is intended to constitute Omani investment, legal, tax, accounting or other professional advice.

People's Republic of China (PRC). This document may be distributed by either ANZ or Australia and New Zealand Bank (China). Company Limited (ANZ China). Recipients must comply with all applicable laws and regulations of PRC, including any prohibitions on speculative transactions and CNY/CNH arbitrage trading. If this document is distributed by ANZ or an Affiliate (other than ANZ China), the following statement and the text below is applicable: No action has been taken by ANZ or any affiliate which would permit a public offering of any products or services of such an entity or distribution or re-distribution of this document in the PRC. Accordingly, the products and services of such entities are not being offered or sold within the PRC by means of this document or any other document. This document may not be distributed, re-distributed or published in the PRC, except under circumstances that will result in compliance with any applicable laws and regulations. If and when the material accompanying this document relates to the products and/or services of ANZ China, the following statement and the text below is applicable: This document is distributed by ANZ China in the Mainland of the PRC.

Peru. The information contained in this document has not been, and will not be, registered with or approved by the Peruvian Superintendency of the Securities Market (Superintendencia del Mercado de Valores, SMV) or the Lima Stock Exchange (Bolsa de Valores de Lima, BVL) or under the Peruvian Securities Market Law (Legislative Decree 6 861), and will not be subject to Peruvian laws applicable to public offerings in Peru. To the extent this information refers to any securities or interests, it should be noted the securities or interests may not be offered or sold in Peru, except if (i) such securities or interests were previously registered with the Peruvian Superintendency of the Securities Market, or (ii) such offering is considered a private offering in Peru under the securities laws and regulation of Peru.

Qatar. This document has not been, and will not be:

- lodged or registered with, or reviewed or approved by, the Qatar Central Bank (QCB), the Qatar Financial Centre (QFC) Authority, QFC Regulatory Authority or any other authority in the State of Qatar (Qatar); or
- authorised or licensed for distribution in Qatar, and the information contained in this document does not, and is not intended to, constitute a public offer or other invitation in respect of securities in Qatar or the QFC.
- The financial products or services described in this document have not been, and will not be:
- registered with the QCB, QFC Authority, QFC Regulatory Authority or any other governmental authority in Qatar; or
- authorised or licensed for offering, marketing, issue or sale, directly or indirectly, in Qatar.

Accordingly, the financial products or services described in this document are not being, and will not be, offered, issued or sold in Qatar, and this document is not being, and will not be, distributed in Qatar. The offering, marketing, issue and sale of the financial products or services described in this document and distribution of this document is being made in, and is subject to the laws, regulations and rules of, jurisdictions outside of Qatar and the QFC. Recipients of this document must abide by this restriction and not distribute this document in breach of this restriction. This document is being sent/issued to a limited number of institutional and/or sophisticated investors (i) upon their request and confirmation that they understand the statements above; and (ii) on the condition that it will not be provided to any person other than the original recipient, and is not for general circulation and may not be reproduced or used for any other purpose.

Singapore. This document is distributed in Singapore by ANZ solely for the information of "accredited investors", "expert investors" or (as the case may be) "institutional investors" (each term as defined in the Securities and Futures Act Cap. 289 of Singapore). ANZ is licensed in Singapore under the Banking Act Cap. 19 of Singapore and is exempted from holding a financial adviser's licence under Section 23(1)(a) of the Financial Advisers Act Cap. 100 of Singapore. In respect of any matters arising from, or in connection with, the distribution of this document in Singapore, please speak to your usual ANZ contact in Singapore.

United Arab Emirates (UAE). This document is distributed in the UAE or the Dubai International Financial Centre (DIFC) (as applicable) by ANZ. This document does not, and is not intended to constitute: (a) an offer of securities anywhere in the UAE; (b) the carrying on or engagement in banking, financial and/or investment consultation business in the UAE under the rules and regulations made by the Central Bank of the UAE, the Emirates Securities and Commodities Authority or the UAE Ministry of Economy; (c) an offer of securities within the meaning of the Dubai International Financial Centre Markets Law (DIFCML) No. 12 of 2004; and (d) a financial promotion, as defined under the DIFCML No. 1 of 200. ANZ DIFC Branch is regulated by the Dubai Financial Services Authority (DFSA). ANZ DIFC Branch is regulated by the Dubai Financial Services Authority (DFSA). The financial products or services described in this document are only available to persons who qualify as "Professional Clients" or "Market Counterparty" in accordance with the provisions of the DFSA rules.

United Kingdom. This document is distributed in the United Kingdom by Australia and New Zealand Banking Group Limited (ANZ) solely for the information of persons who would come within the Financial Conduct Authority (FCA) definition of "eligible counterparty" or "professional client". It is not intended for and must not be distributed to any person who would come within the FCA definition of "retail client". Nothing here excludes or restricts any duty or liability to a customer which ANZ may have under the UK Financial Services and Markets Act 2000 or under the regulatory system as defined in the Rules of the Prudential Regulation Authority (PRA) and the FCA. ANZ considers this document to constitute an Acceptable Minor Non-Monetary Benefits (AMNMB) under the relevant inducement rules of the FCA. ANZ is authorised in the United Kingdom by the PRA and is subject to regulation by the FCA and limited regulation by the PRA. Details about the extent of our regulation by the PRA are available from us on request.

United States. Except where this is a FX-related document, this document is distributed in the United States by ANZ Securities, Inc. (ANZ SI) which is a member of the Financial Regulatory Authority (FINRA) (www.finra.org) and registered with the SEC. ANZSI's address is 277 Park Avenue, 31st Floor, New York, NY 10172, USA (Tel: +1 212 801 9160 Fax: +1 212 801 9163). ANZSI accepts responsibility for its content. Information on any securities referred to in this document may be obtained from ANZSI upon request. This document or material is intended for institutional use only – not retail. If you are an institutional customer wishing to effect transactions in any securities referred to in this document you must contact ANZSI, not its affiliates. ANZSI is authorised as a broker-dealer only for institutional customers, not for US Persons (as "US person" is defined in Regulation S under the US Securities Act of 1933, as amended) who are individuals. If you have registered to use our website or have otherwise received this document and are a US Person who is an individual: to avoid loss, you should cease to use our website by unsubscribing or should notify the sender and you should not act on the contents of this document in any way. Non-U.S. analysts may not be associated persons of ANZSI and therefore may not be subject to FINRA Rule 2242 restrictions on communications with the subject company, public appearances and trading securities held by the analysts. Where this is a FX-related document, it is distributed in the United States by ANZ's New York Branch, which is also located at 277 Park Avenue, 31st Floor, New York, NY 10172, USA (Tel: +1 212 801 916 0 Fax: +1 212 801 9163).

Vietnam. This document is distributed in Vietnam by ANZ or ANZ Bank (Vietnam) Limited, a subsidiary of ANZ.

This document has been prepared by ANZ Bank New Zealand Limited, Level 10, 171 Featherston Street, Wellington 6011, New Zealand, Ph 64-4-382 1992, e-mail nzeconomics@anz.com, http://www.anz.co.nz