

MARCH 2017

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OUT ON A LIMB

FEATURE ARTICLE: FORESTRY – THE CASE FOR MORE INVESTMENT

The forestry sector is currently experiencing a period of strong returns. Many of the drivers look like they could extend for a number of years. Yet despite this positive outlook, the overall plantation area has declined 5% over the last 10 years, leading to concerns about the long-term supply of wood beyond 2030 and restricting investment further along the supply chain. Recent returns should encourage replanting. In addition to being competitive with drystock farming, forestry is a solid diversification strategy and can also help farmers meet new environmental regulations.

THE MONTH IN REVIEW

Dry conditions developed in parts of the country during the summer months. However, heavy rainfall in mid-February/early March helped relieve many North Island areas. Dairy production conditions have improved. Meat and fibre production has been tight across nearly all classes, but some autumn catch-up is expected. The 2017 kiwifruit and grape crops will be smaller than last year, but a high quality and record-sized pipfruit crop is expected.

RURAL PROPERTY MARKET

The rural property market has continued to see robust turnover and prices. Healthy turnover activity has been broad-based across most land types. In particular there has been good turnover and prices for finishing, arable, horticulture, sub-division blocks (i.e. close to urban areas) and lifestyle blocks.

KEY COMMODITIES AND FINANCIAL MARKET VARIABLES

The cyclical upswing in global soft commodities has continued. Much of the improvement has been driven by supply corrections (due to weather and earlier low returns) helping to balance out market fundamentals. An increase in Chinese imports for nearly all New Zealand products has been influential too. A strengthening USD is starting to impact emerging market purchasing power, but the relative movement with the NZD will determine the farm-gate impact.

BORROWING STRATEGY

The borrowing curve has steepened a touch and we expect this trend to continue. Thus time is of the essence, as it is unlikely to get cheaper to fix for longer terms in the foreseeable future; and remaining on floating will start to become more expensive from next year onward when we expect OCR increases.

ECONOMIC BACKDROP

The economy is expanding briskly, but growth is set to moderate over 2017. Key factors driving this softening include capacity bottlenecks and a winding down in credit growth. A moderation is required to ensure no build-up in nasty imbalances that would require purging.

EDUCATION CORNER: NEW ZEALAND'S CHANGING TRADE PATTERNS

China is now New Zealand's largest goods export destination having accelerated its purchasing of a broad suite of our products since 2008. Traditional markets such as Australia, US, UK, Japan and South Korea are still prominent, but are all losing market share to other destinations. The likes of Singapore, Taiwan, Indonesia and Thailand are increasing the range and value of products they import. This pushing them up the rankings and into the top 10 destinations.

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SUMMARY

The forestry sector is currently experiencing a period of strong returns fuelled by a combination of steady Chinese demand, further restrictions in export markets on the harvesting of native forests, low shipping costs, a local market building boom and a supportive NZD/USD relative to in-market prices.

Many of these trends look like they could extend for a number of years, supporting demand for forestry products and returns. In addition, with radiata pine being very versatile, there are a range of new applications emerging in the likes of housing fit-outs, wood remanufacturing, furniture end-uses and cellulose fibre that could open up new opportunities.

Yet despite this positive outlook, the overall plantation area has declined 5% over the last 10 years. Such levels of deforestation are leading many industry participants to worry about the long-term supply of wood beyond 2030. This is restricting investment further along the supply chain in new wood-processing facilities that produce higher-margin products.

Recent returns should encourage replanting. Using prices received over the last 12 months suggests forests that are good-to-excellent in quality/yield and located within 200 kilometres of a port and/or mill would have shown an average pre-tax real rate of return (excluding carbon revenue) of 6.3%, with a range from 4.4% to 7.9%. If you include carbon revenue the average pre-tax real rate of return lifts to 9.9%, with a range of 8.3% to 11.25%. In addition to being competitive with drystock farming, forestry is a solid diversification strategy and can also help farmers meet new environmental regulations coming into force.

INTRODUCTION

The forestry sector is an important part of New Zealand's economic and environmental landscape. In economic terms it generates around \$5bn of annual gross income, or 3% of GDP each year. It is one of New Zealand's largest export earners, bringing in \$5.3bn worth of foreign earnings each year (11% of total 2016 exports).

Forestry is seen as an important contributor to New Zealand's Paris Climate Change commitment to reduce the country's net greenhouse gases by 30% below 2005 levels by 2030. It also contributes to erosion control on some of New Zealand's steeper landscapes and can be used to improve water quality in catchments – albeit the harvesting phase carries a heightened risk of sedimentation occurring.

Over the past year the forestry sector has seen some of its best returns in at least 20 years.

This has been driven primarily by a combination of steady Chinese demand, further restrictions in export markets on the harvesting of native forests, low shipping costs, a domestic building boom, and a supportive NZD/USD relative to in-market prices.

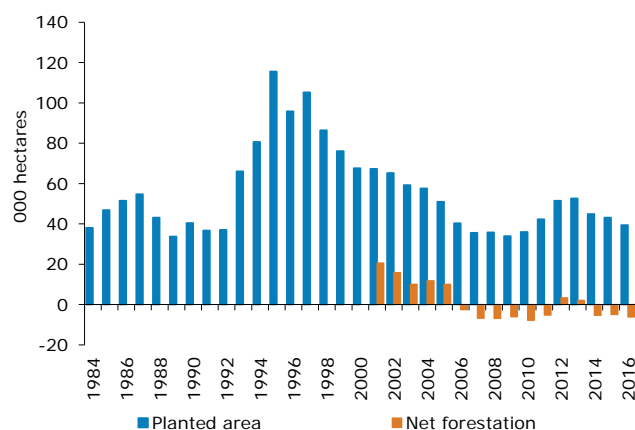
Despite this, forestry seems to remain an unloved investment class amongst many land-owners.

This is reflected in the low level of new planting in recent years. Indeed, the statistics show the sector's land footprint has broadly been in a state of decline over the last 10 years or so. There are two main surveys (Statistics New Zealand Agricultural Production Survey and the Ministry for Primary Industries National Exotic Forest Description survey) that measure trends in the planted area and harvesting rates. Both show net deforestation over the last 10 years, with an annual decline of 4,200 hectares under the Agricultural Production survey and a larger decline of 9,600 hectares under the National Exotic Forest Description (NEFD) survey.

In aggregate, the surveys show approximately a 5% decline in the area of forestry over this period.

The NEFD shows the planted forest area peaked in 2003 at 1,827,000 hectares and has declined 6.7% to 1,705,000 hectares in 2016. Some of this area has been converted into pasture land for livestock grazing (i.e. Central Plateau) and some remains unused (either covered in weeds or reverting to a natural state).

FIGURE 1. CHANGE IN FORESTRY AREA



Source: ANZ, Statistics NZ

Such levels of deforestation are leading many industry participants to worry about the long-term supply of wood beyond 2030. This is restricting investment further along the supply chain in new wood-processing facilities that produce higher-margin products (such as panels, laminated products, glulam beams, mouldings, furniture etc) and other important supply-chain functions.

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With the upcoming harvest of the so-called “wall of wood” (i.e. the spike in forestry planting that occurred in the mid-90s that is due to be harvested) over the next 10 years or so we thought it would be useful to examine the case for re-planting and new investment in forestry on other marginal areas of land. This involves taking a look at the key end-market prospects and current returns from forestry, as well as key sensitivities.

HIGH-LEVEL VIEW OF INDUSTRY STRUCTURE

Before looking at the investment case for forestry it’s useful to understand the sector’s broad structure and the main end markets. A tree can be turned into many different end products, from structural timber for buildings through to paper; it’s the sum of all the returns from these products, minus processing, harvesting and other supply costs, that determine the net revenue received by forestry owners.

The below graphics show the typical yield of different raw materials produced from a tree under two different silviculture regimes: ‘direct sawlog’, and ‘structural’. The two regimes yield differing quantities of raw materials, which is a factor in determining the end use of the tree and by association the returns received.

Across the radiata pine stands in New Zealand, which account for 90% of planted species, 44% of the area has been pruned without production thinning, 13% pruned with production thinning, 40% unpruned without production thinning, and 3% unpruned with production thinning.

To understand the movement of raw material from the plantation through to end market, figure 4 shows the flow of wood within New Zealand. The quantities produced are the annual average volumes for the last five years on a roundwood equivalent basis (m³).

FIGURE 2. TYPICAL LOG OUT-TURN – DIRECT SAWLOG REGIME

Pruned and thinned. Final crop stocking 228 stems per hectare

	Length	Volume	Value
Waste	8m	0.18m ³	0%
Industrial grade logs	8m	0.31m ³	7%
Sawlogs	15m	1.15m ³	43%
Pruned logs	5m	0.64m ³	50%
Stump	0.2m	0.03m ³	0%
Total	36m	2.3m³	100%

Source: ANZ, SCION

FIGURE 3: TYPICAL LOG OUT-TURN – STRUCTURAL REGIME

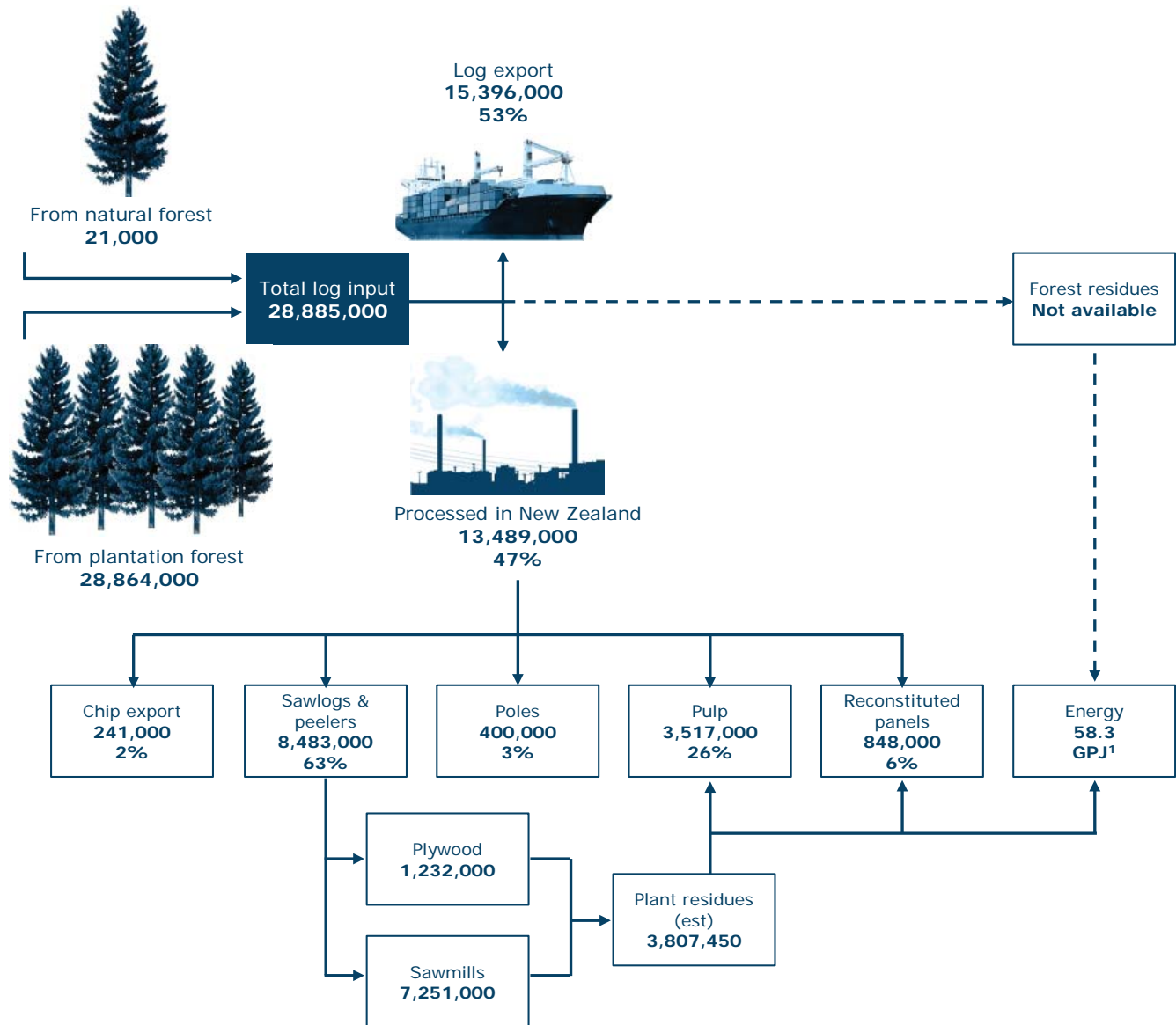
Pruned and thinned. Final crop stocking 487 stems per hectare

	Length	Volume	Value
Waste	8m	0.24m ³	0%
Industrial grade logs	8m	0.41m ³	20%
Sawlogs	19m	0.95m ³	80%
Pruned logs	0m	0.00m ³	0%
Stump	0.2m	0.01m ³	0%
Total	35m	1.61m³	100%

Source: ANZ, SCION

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FIGURE 4: FLOW OF LOGS IN THE NEW ZEALAND FORESTRY INDUSTRY



GPJ: Gross Petajoules

¹ Source: Energy in NZ 2015

Source: ANZ, MPI, FOA

It shows the vast majority of New Zealand's wood supply comes from plantation forests, of which 90% is *Pinus radiata*. Total harvest volumes have been hovering a touch under 30 million m³ since 2013, up from around 20 million m³ in 2009/10. The flurry of smaller woodlot plantings in the 1990s means harvestable volumes are set to increase toward 32.5 to 35 million m³ over the next 10 years or so.

Back in 2012 exactly half the supply was directly exported as logs, with the other half processed within New Zealand. As supply has increased since 2012 the proportion directly

exported as logs has shifted toward 55% of the total harvest. The remaining 45% has been further processed in New Zealand into a range of products, for both domestic use and export.

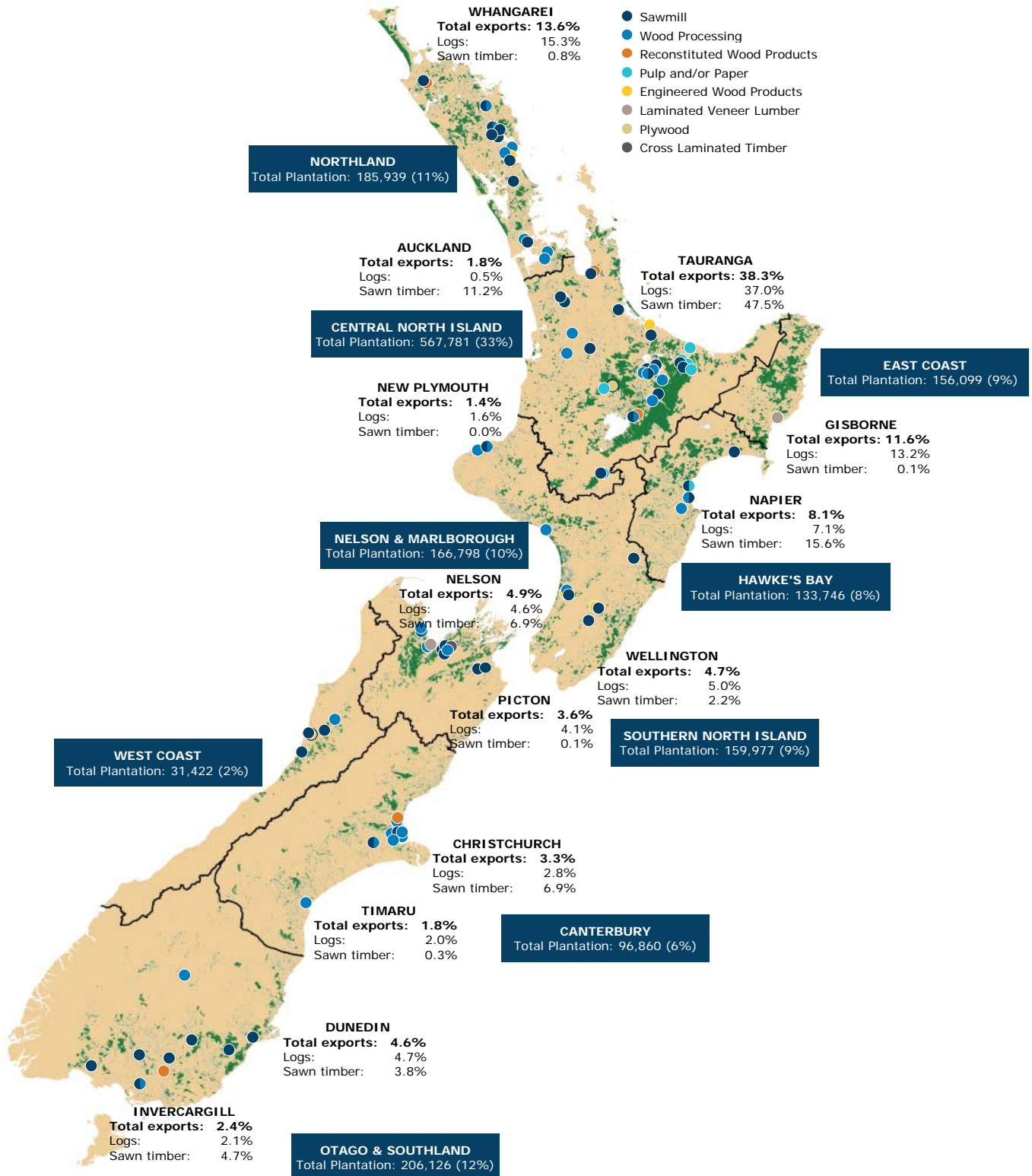
Overall, local processing capacity appears to have increased slightly in recent years, albeit with some natural churn occurring. Of the product processed locally, around 26% is pulp, 6% reconstituted panels, 3% poles and 2% wood chips. The remaining 62% is saw or peeler logs. Of this, around 14-15% is processed into plywood products and the remainder is destined for sawmills to make sawn lumber, panels, laminated products and

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mouldings. The sawmill residues are also fed back into pulp and reconstituted panel production, as well as being used as an energy source.

The map below (figure 5) provides an overview of the New Zealand forestry industry's infrastructure and resources.

FIGURE 5: MAP OF THE FORESTRY INDUSTRY'S INFRASTRUCTURE



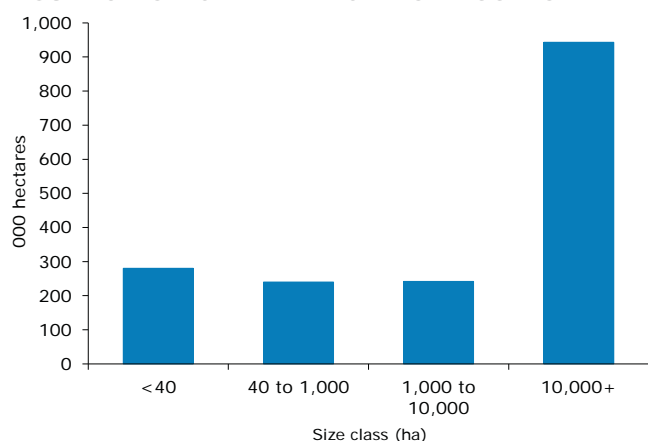
Source: ANZ, WPMA, FIEA, FOA, MPI

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The central North Island accounts for around a third of the total plantation area due to superior growing conditions, followed by the East Coast at 17%, with the rest evenly distributed around the remaining regions.

Just over half (55%) of the total forest area is owned by 27 entities in woodlots that are 10,000 or more hectares in size. The remaining 45% is fairly evenly split over the other size cohorts. There are 96 entities with woodlots of 1,000 to 10,000 hectares in size that account for 14% of the forest area. The remaining 31% of the area is fairly evenly split between woodlots less than 40 hectares in size and those 40 to 1,000 hectares in size. The number of owners for woodlots between 40 to 1,000 hectares in size is estimated to be 1,643.

FIGURE 6: FOREST AREA BY SIZE OF WOODLOT



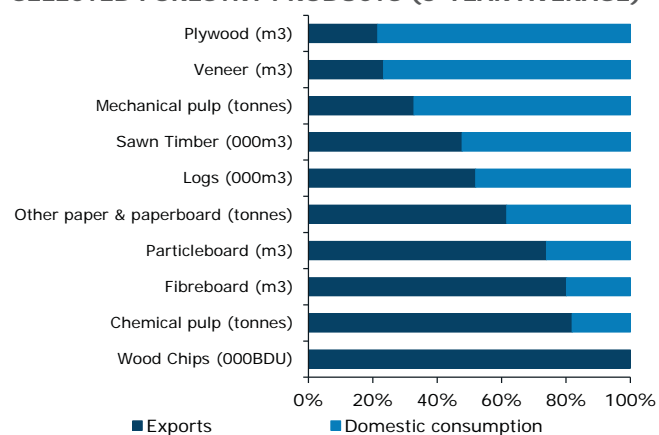
Source: ANZ, MPI

Processing plants are clustered around the supply of wood and other important infrastructure such as ports, because logs and timber are expensive to transport long distances. The major export ports are Tauranga, Whangarei and Gisborne, which together have accounted for 63% of total log and sawn timber exports in recent years. Other key ports are Napier, Wellington, Nelson, Dunedin and Picton, accounting for an additional 26% of total log and sawn timber exports.

A LOOK AT KEY END-MARKET PROSPECTS

Figure 7 gives a high-level view of the main forestry products New Zealand produces and how much is consumed domestically versus exported.

FIGURE 7: NEW ZEALAND'S MARKET MIX FOR SELECTED FORESTRY PRODUCTS (5-YEAR AVERAGE)



Source: ANZ, Statistics NZ, MPI, FOA

As previously mentioned, the increase in harvested volumes in recent years has seen an increasing number of logs being directly exported, especially to China. Nevertheless, looking at the logs that are processed into a range of products in New Zealand we can see a slight domestic market share gain at the expense of exports. This is largely due to the construction boom for housing, where there is a strong preference to use timber for structural framing compared with the likes of concrete and steel. Indeed, the quantity of sawn timber utilised by the domestic market has been rising, while the share exported has dropped from around 50% to 44% recently. It's a similar story for other building materials, such as fibreboard, plywood, veneer and particleboard.

Domestic market prospects

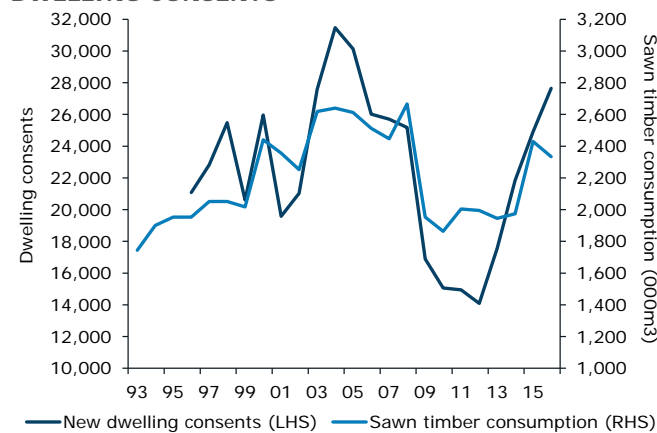
The vast majority of New Zealand's sawn timber and other wooden materials are destined for the local construction market, specifically new houses. This is highlighted by the strong relationship between sawn timber consumption and new dwelling consents (figure 8).

Since post-recession lows in 2011, the annual number of new dwellings consented has surged toward 30,000 per annum, the highest since mid-2004. In real terms, residential investment has subsequently risen by 84%, experiencing a compound annual growth rate of over 11% the same period.

There are a number of reasons for this strong performance. Historically low borrowing costs, strong house price gains relative to construction costs (improving returns for developers), rebuild work associated with the 2010/11 Canterbury earthquakes, and a strong economy more generally, with decent levels of confidence, are generating an appetite to put cash to work.

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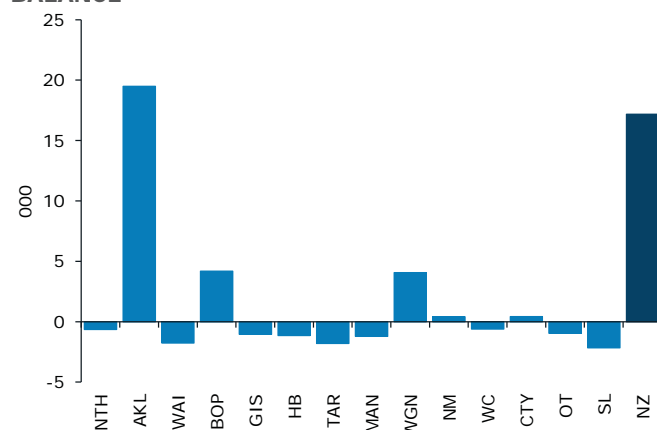
FIGURE 8: SAWN TIMBER CONSUMPTION AND NEW DWELLING CONSENTS



Source: ANZ, MPI, Statistics NZ

More fundamentally, it reflects the strongest population growth since the early 1990s of over 2% per annum (courtesy of record rates of immigration and declines in emigration) and a housing shortage, which we estimate at over 17,000 over the whole country, as supply has not been able to keep pace with this demand in recent years.

FIGURE 9: REGIONAL HOUSING SUPPLY-DEMAND BALANCE



Source: ANZ

Looking forward, many of the factors mentioned above are expected to continue to support housing construction activity. While now rising, borrowing rates are expected to remain historically low. And even if the number of people per household was assumed to be 3 (higher than it is currently), the current rate of new dwelling consent issuance is really only just keeping pace with current demand, and not eating into the existing 17,000 shortage. Given New Zealand's solid economic performance and political upheavals globally, we expect net migrant inflows to remain strong for some time yet. Housing pressures are estimated to be most intense in

Auckland, which is grabbing more than its economic share of these new arrivals and also has the most pronounced dwelling shortage (estimated at close to 20,000). So the demand outlook is strong.

That said, **there are some challenges for the construction sector to navigate, and these are reflected in the recent decline in residential building consents. These challenges include capacity constraints such as skilled labour, the availability of credit for larger projects, and housing affordability becoming so stretched it is dampening demand.** The capacity constraints are being reflected in rising construction costs, which is subsequently spilling over into the viability of some larger development projects. It has also seen increased import competition for a range of wooden products from the likes of Canada, Chile, China and even Russia in recent years. Other construction challenges include access to suitable land due to local council zoning restrictions, through to the availability/cost of waste and water infrastructure.

Looking at the big picture, we see a positive outlook for the construction sector in the long term. Rather than seeing significantly more upside to current levels of activity, we feel that because of the above capacity constraints that are now biting, and housing affordability concerns, the cycle will be more elongated at current levels than has been seen in the past. A more enduring cycle is also being assisted by credit rationing at present, which is curbing excesses at the top of the cycle, and thus reducing the risk of a boom/bust scenario, as has been the historical experience. This should continue to translate into solid domestic sawn timber and other building material requirements at current levels for some time to come.

Key export markets

Looking offshore, the top 10 forestry export markets account for 91% of total export returns. Of these, the top six destinations of China, Australia, Japan, South Korea, US and India account for 83% of total exports. This makes for a somewhat consolidated marketplace versus many other export sectors.

China

China accounts for 38% of New Zealand's total forestry export returns. The bulk of it (76%) is logs destined for further processing into a range of products for the construction market (an estimated 85-90%) and other products such as finger jointing, finger jointed edge-glued clearwood panels, finger jointed mouldings, painted mouldings, doors, furniture and glulam beams. Logs used in

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the construction sector are mainly used as framing materials, or as box framing for concrete in multi storey (apartment) buildings. China is also a key destination for New Zealand’s sawn timber (18% of total) and wood pulp (32% of total).

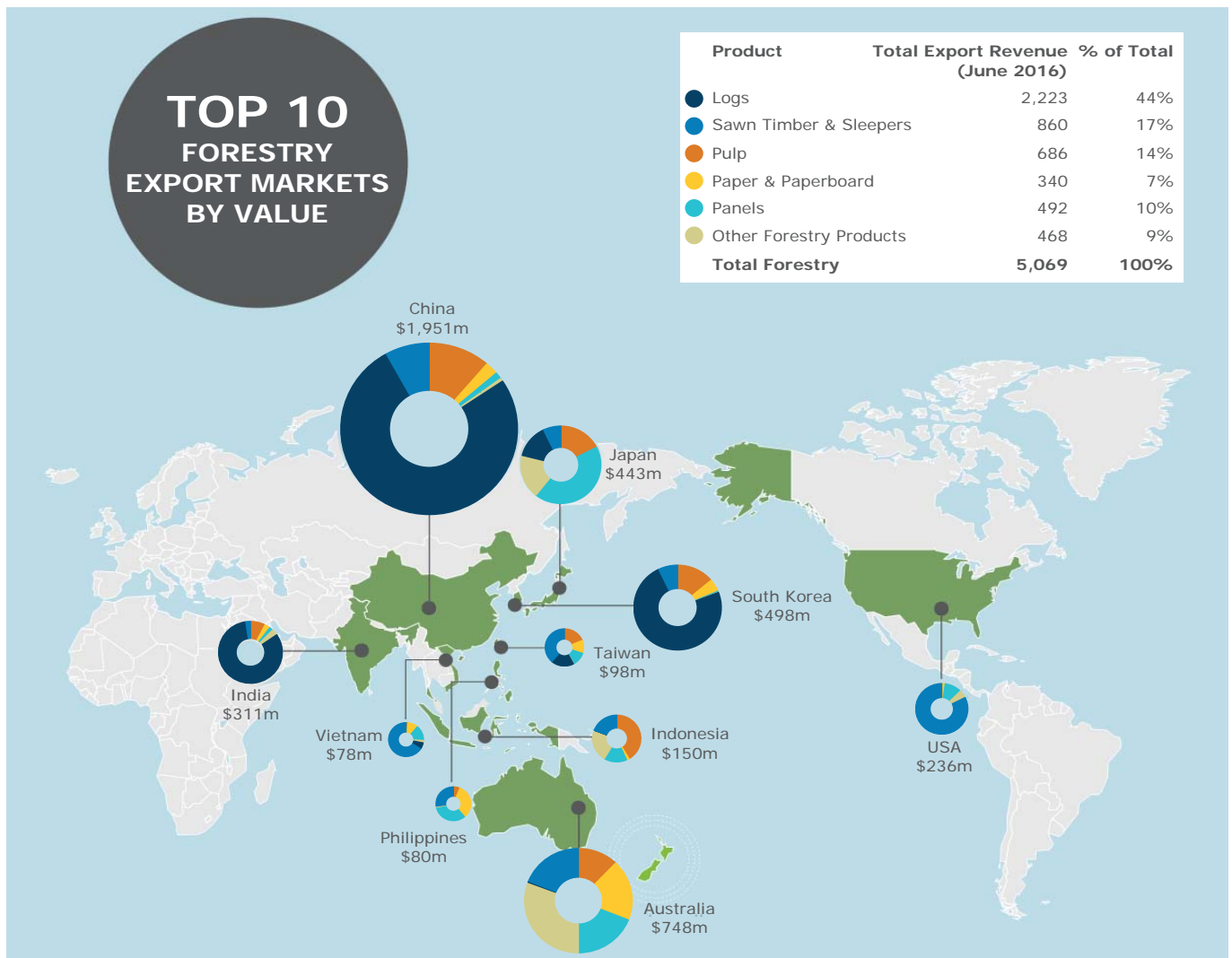
Supply sources

Overall Chinese lumber and log imports have trended higher in recent years on the back of strong construction sector activity and a tightening in commercial harvesting of natural forests. China’s total forestry area is estimated at 208 million hectares, of which a third (69 million hectares) is deemed timber-producing. New Zealand’s total plantation area pales in comparison at just 2.5% of China’s timber-producing plantation area. That said, China’s wood quality is low and log diameter generally small, meaning much of the domestic

supply is destined for pulp production, wooden panels/flooring, plywood and self-use in agriculture or forest areas. Imported product is used for construction materials in urban areas, furniture and packaging materials.

Domestic supply is set to tighten further with China’s latest five-year plan having a timber harvesting quota for 2016 to 2020 that is 6.3% below the previous period. In 2017 the plan also extends a ban on all commercial logging of natural forests from certain states in the northeast region to include virtually all of China’s last remaining natural forests. While radiata pine doesn’t directly substitute for the domestic hardwood species that are used in wooden panels/flooring and plywood, some substitution is expected, supporting softwood import demand.

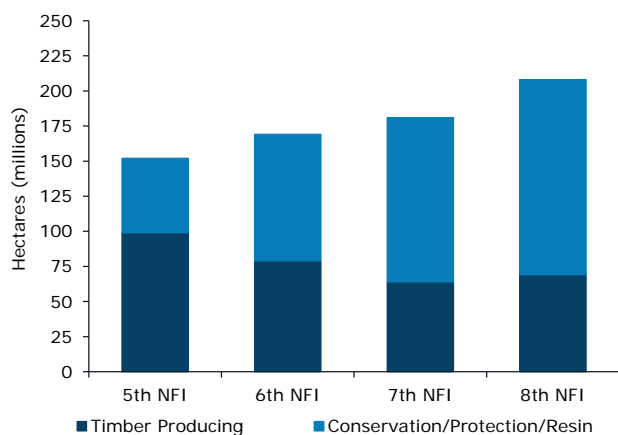
FIGURE 10: NEW ZEALAND’S TOP 10 EXPORT MARKETS AND PRODUCT MIX



Source: ANZ, MPI, Statistics NZ

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FIGURE 11: CHINA'S PRODUCTIVE ESTATE



Source: China National Forestry Inventory

On the import front, China's demand has increased in recent years and softwood log imports hit new highs in 2016. Log imports also pushed toward 2014 highs. Wood Markets estimate China's total 2016 log imports hit 48.7 million m³ in 2016. Softwood species accounted for 69% of these log imports, with the remaining 31% from hardwood species. Total lumber imports were estimated at 31.6 million m³ in 2016. Softwood species accounted for 67% of these lumber imports with the remaining 33% from hardwood species.

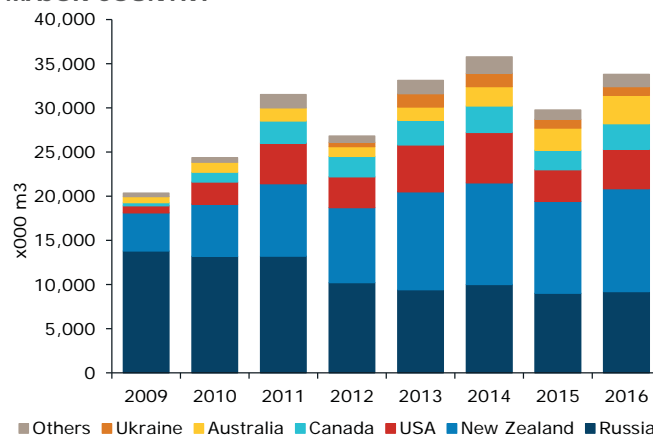
TABLE 1: CHINA'S LOG AND LUMBER IMPORTS IN 2016

Products	Volume (x000 m ³)		
	2016	2015	% change
Softwood Log	33,665	29,736	13.2%
Hardwood Log	15,068	14,834	1.6%
Total Logs	48,733	44,570	9.3%
Softwood Lumber	21,075	17,462	20.7%
Hardwood Lumber	10,564	9,162	15.3%
Total Lumber	31,638	26,624	18.8%

Source: China Customs, Wood Markets

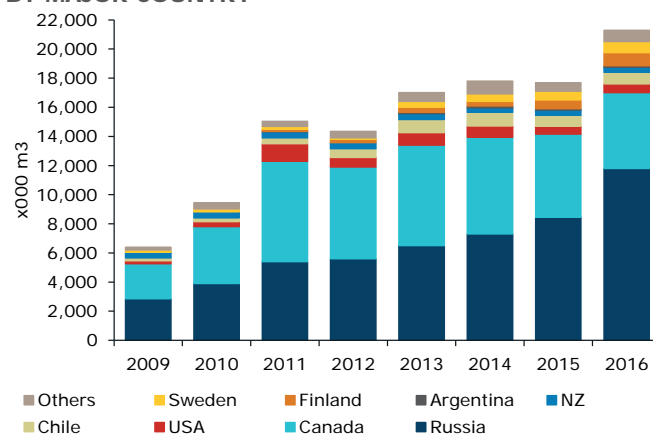
The top suppliers of logs are New Zealand, Russia, US, Australia, Papua New Guinea, Canada and the Solomon Islands, together accounting for 83% of total imports. The top lumber suppliers are Russia, Canada, Thailand and US, accounting for 79% of total imports.

FIGURE 12: CHINA'S SOFTWOOD LOG IMPORTS BY MAJOR COUNTRY



Source: China Customs, Wood Markets

FIGURE 13: CHINA'S SOFTWOOD LUMBER IMPORTS BY MAJOR COUNTRY



Source: China Customs, Wood Markets

Russian competition

The largest direct competition for New Zealand radiata pine is wood sourced from Russia, North America and Southern Asia-Pacific.

Russian supplies are New Zealand's largest direct competition. Russia is estimated to have the largest harvestable area of forests in the world and an estimated 20% of the world's softwood forests. The total growing stock of Russian forests is estimated at 82.1 billion m³. Annual harvesting levels are around 200 million m³ with exports of only 20 million m³, made up of logs (about 12 million m³) and lumber (about 8 million m³). Most of the exports go to China. The balance is domestic consumption.

Russia has a 23% share of China's total log imports, slightly lower than New Zealand's 25% share (top supplier). Whilst softwood log supply from Russia has been in decline, supply of softwood

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lumber has been increasing and currently accounts for 40% of China's total imports. This trend was boosted about seven years ago by log export tariffs imposed by Russia (while lumber avoided the costly tariffs). Despite the tariffs being subsequently eased, investment in lumber processing capacity in areas such as Siberia and Russia's Far East grew rapidly, as was the intent of the policy. In 2005 Russia exported just under 1 million m³ of softwood lumber to China; in 2016 volumes reached 12.8 million m³.

This supply of lumber, most of which enters overland by rail, is more difficult to monitor and has a bigger impact on the log market than log sales, since it is already converted into the end product.

That said, while Russia has the ability to increase competition further, there are some constraints in the form of:

1. Long distances from forest source to end market, adding additional transport costs;
2. New processing investment in North-West Russia has added additional distance to China's market;
3. Despite improved infrastructure, forest roads, harvesting resources and the transportation network remain below par; and
4. The government continues to change tax regimes in unfavourable ways.

These constraints suggest more modest growth moving forward, but modernisation of the sawn timber industry, supply chain improvements and advances in harvesting productivity will no doubt allow Russia to continue to harvest more of its vast forest resource and sell into China.

China's construction/housing demand

There is also the end demand to consider. With China's construction/housing market utilising the lion's share of New Zealand's logs and sawn timber, activity in these segments matter the most.

While China has undertaken a lot of construction/infrastructure activity over the last 10 years, more is still required over coming decades. The normal drivers of population growth, societal preferences and demographics in developed economies are still important drivers of long-term capital and construction/housing formation in China. But continued urbanisation, a rapid lift in consumer purchasing power, and a need to enhance the economy's overall efficiency/productivity add additional drivers.

Indeed, as the urbanisation process continues, and earnings of urban dwellers continue to rise at a rapid rate, the burgeoning middle class population will provide the impetus for China to shift more toward a consumption-led economy.

If the urbanisation process and rise in incomes continues we estimate housing-related expenditure could surge four-fold to USD2.2trn (PPP), due to demand for better and bigger houses.

The demand for construction materials lifts as the average dwelling size increases, as well as the need for more wooden furniture and other furnishings. While there are offsets from an aging population, the anticipated rise in incomes and the urbanisation process are expected to supersede these, supporting long-term housing formation rates.

That's not to say there won't be ups and downs.

Near term there are challenges in the form of an overhang of housing stock, especially in lower/ third-tier cities, and financial stability concerns arising from a build-up of excessive debt and rising non-performing loans. State and local government regulatory settings play an important role in the cycles of construction/housing activity in China and the risk is a near-term correction due to excessive tightening. There is also the reality that history shows few emerging-market economies successfully make the difficult jump out of the middle-income trap to reach 'developed' status.

All up, the above market dynamics, combined with an opaque supply chain, make it challenging to understand and forecast what might happen to the demand for and price of New Zealand radiata pine in China over the long term. However, with pine being very good for a wide range of end-use applications it is very versatile. This should serve it well in meeting current applications in the housing/construction sectors, as well as being able to adapt to meet newer functions for housing fit-outs, wood remanufacturing applications and furniture end-uses as market conditions dictate. The latter two applications open up more export opportunities and reduce reliance on domestic Chinese demand too.

Australia

Australia is the next-largest market, accounting for 15% of New Zealand's total forestry exports. It takes a wider range of products than China, being an important destination for sawn timber (16% of total), wood pulp (13% of total), paper & paperboard (41% of total) and plywood (81% of total).

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Again, much of this product is destined for the housing market. Australia's housing market has similar drivers to New Zealand's. Population growth, societal preferences and demographics all play an important role in determining rates of housing formation. In the past decade population growth has outpaced housing construction activity, resulting in a shortfall of housing stock (especially detached housing). This has led to higher house prices and overvaluation concerns in some areas.

Looking forward, Australia remains an attractive place to live and this is expected to support migration and population growth, albeit at a slower rate than during the mining boom.

Combined with the existing housing shortfall from 10 years of underbuilding this is expected to support dwelling formation rates above long-term averages.

But there could be a changing mix toward more apartments and less detached housing, due to both affordability issues and the current migrant mix being more inclined toward apartment living.

Other drivers include apartments' proximity to transportation and other infrastructure, as well as professional management reducing maintenance requirements. Currently there is concern about oversupply but this will depend on future migration flows. Overall this perhaps suggests more steady sawn timber and panel demand around current levels.

In terms of competition, domestic log supply is slightly lower than New Zealand's total production, averaging 27.2 million m³ in recent years. The majority (84%) comes from a fairly stable commercial plantation area of 2 million hectares and the remainder from a much larger native forestry area of 82 million hectares. The supply of hardwood from the native forest areas has been in decline in recent years and much of it is protected. However, the large native area suggests an ability to increase supply and/or expand the commercially-focused plantation area if desired. Of the log supply 44% is hardwood and the rest softwood.

Imports account for around 10% of sawn wood, 17% of wood-based panels and 45% of paper and paperboard consumption. Import competition is spread across a number of countries. China is the largest overall supplier, but this is mainly concentrated in wood panels and paper/paperboard products. New Zealand is the main sawn timber supplier, given proximity to market. Indonesia, Malaysia and North America are other competition sources.

Other Asia

South Korea and Japan are similar sized export markets, but the product mix varies. The South Korean market is focused on logs (16% of total) and wood pulp (10% of total), whereas Japan takes a wider variety of products and is particularly important for fibreboard (54% of total), largely due to their investment mix in New Zealand wood-processing assets. These markets are viewed as largely stable these days, with fluctuating import competition from Russia, Chile and North American supply depending on local conditions within Canada/US.

US & India – possible future growth markets

Rounding out the top six export markets are India and the US. India takes mainly logs (12% of total NZ log exports) and the US sawn timber (23%) and fibreboard (9%). Both offer growth opportunities; the US in the near term and India over the longer term.

US

The US market is large, but much of it is supplied from domestic sources. Imports account for around 20% of total consumption, with Canadian supplies dominating log and sawn timber products. Most of the softwood products sourced from New Zealand are destined for the housing market where activity is picking up and the Canadian softwood trade is in jeopardy.

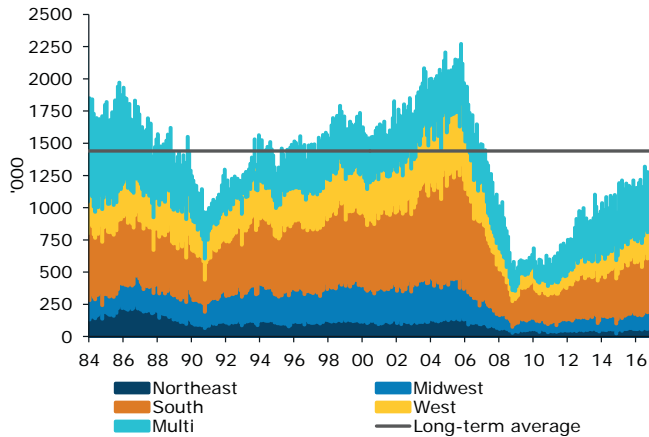
A trade dispute between the US and Canada is likely to further escalate under the Donald Trump administration. The US Lumber Coalition has long been advocating that Canadian exporters have been unfairly advantaged by their production costs being virtually subsidised by the Canadian Government. The organisation petitioned the Government late last year to impose duties on Canadian lumber. But in equal measure the Canadian Border Services Agency has recently imposed as much as a 324% anti-dumping duty on US drywall imports, with the rates varying between exporters. With the new US administration advocating trade protectionism, there is a sense Canada needs to diversify their customer base with a shift in focus to China, Japan and India.

On the demand side the US housing market looks set to see formation rates head back to long-run averages. While still carrying scars from the subprime lending crisis, favourable demographics, a strong labour market and still-low (albeit rising) interest rates suggest a tailwind for US housing formation rates.

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Annual housing starts continue to gradually recover to their long-term average with 1,166,400 units started in 2016. This compares to a long-term average of nearly 1,500,000 units annually.

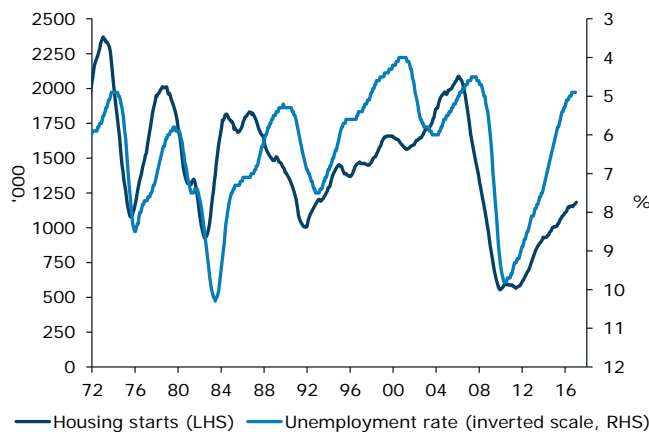
FIGURE 14: HOUSING STARTS RETURNING TO TREND



Source: ANZ, Haver, Bloomberg

Historically there is a decent relationship between the unemployment rate and housing starts (figure 15). The longer the unemployment rate remains low, the more likely it is that household formation rates will return to normal, accelerating the building cycle.

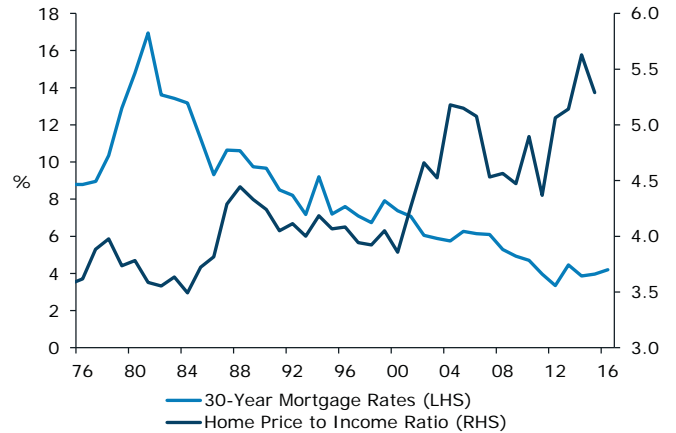
FIGURE 15. UNEMPLOYMENT AND HOUSING STARTS



Source: ANZ, Haver, Bloomberg

Mortgage rates have begun to rise, but they remain near 40-year lows (Figure 16). Unless there is a sharp rise in interest rates, credit availability and affordability metrics should remain favourable. On outright affordability, with stagnant wages over the past decade, the ratio of the median price of a single family home to income has risen, but it has come off the peak and remains low in a global context. With the new US administration targeting a raise in wages, the outlook for this ratio should also be supportive of housing activity.

FIGURE 16. US MORTGAGE RATES AND HOME PRICE TO INCOME RATIO



Source: ANZ, FreddieMac, Bloomberg

On the population side, the US Census Bureau estimates that the resident population will grow by over 11m to 334.5m by 2020. Importantly, these gains are concentrated within age groups which have historically had much higher rates of household formation. The reasons for the current lower household formation rates are beyond our scope; however, it is important to highlight that the majority of age cohorts have seen their formation rates bottom and are gradually rising again.

As figure 17 shows, three scenarios for household formation rates and their impact on housing starts through 2020. Notably, in all scenarios housing starts are expected to at least match 2016, with upside risk expected.

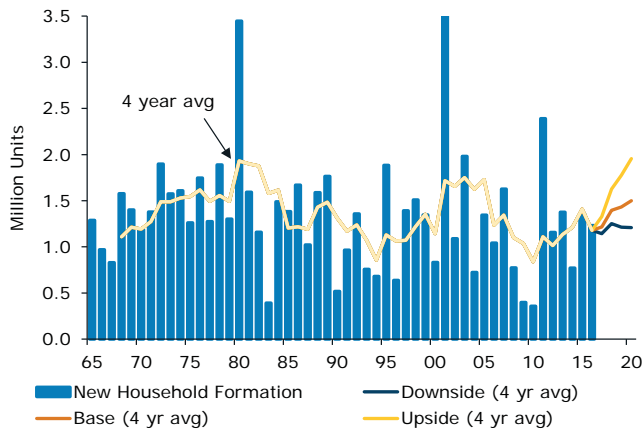
Baseline: Household formation rates remain at their 2015 level for each age cohort. 6.331m households will be formed through to 2020, resulting in an average of 1.583m new households annually.

Upside: Household formation rates return to their 25 year average for each age group. 8.618m households will be formed, or 1.957m annually.

Downside: Formation rates fall to the lowest level they've been over the past decade. 4.872m household will be formed through 2020, or 1.218m annually.

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FIGURE 17. HOUSEHOLD FORMATION FORECASTS



Source: ANZ, NAHB

The upshot is that with greater construction activity in the pipeline, US demand for sawn timber looks likely to continue growing.

Additionally, the uncertain trade environment for Canadian products could open up more opportunities for New Zealand suppliers.

India

India offers long-term opportunities too, with a growing wood supply deficit. India has a culture of wood use, and uses it extensively for a range of products. Hardwoods have traditionally been the material of choice, but as global supply is becoming more limited and expensive, softwood imports have gained acceptance as a substitute.

Local supply is becoming more constrained due to both land use change reducing forestry areas, and stricter regulatory restrictions (environmental, biodiversity etc) on the harvesting of native forests. With domestic growth remaining robust this could see the deficit widen quickly. This increases import demand for softwood logs to process at local sawmills. However, infrastructure remains a challenge for imports, with many small sawmills and an inefficient supply chain, especially further in from coastal areas.

Wood pulp and paper markets

The wood pulp and paper/paperboard markets are another part of overall forestry returns.

Wood pulp and paper/paperboard can be used in a wide variety of end products/industries ranging from newsprint, printing material, writing paper, and sanitary products through to packaging materials.

New Zealand produces around 800,000 tonnes of chemical pulp each year and 680,000 tonnes of mechanical pulp. Around 80% of the chemical pulp and one third of the mechanical pulp

is exported. Mechanical pulp is used for products that require less strength, such as newsprint and paperboards. Chemical pulp is used for materials that need to be stronger, or is combined with mechanical pulps to give different characteristics to a product.

The top five New Zealand wood pulp markets of China, Australia, Japan, Indonesia and Korea account for 78% of exports. China is the dominant market at 40% of total exports. The top five New Zealand paper/paperboard markets of Australia, China, Malaysia, Philippines and Korea account for 78% of exports too. Australia is the main market at 42% of total exports.

FIGURE 18A: WOOD PULP MARKETS

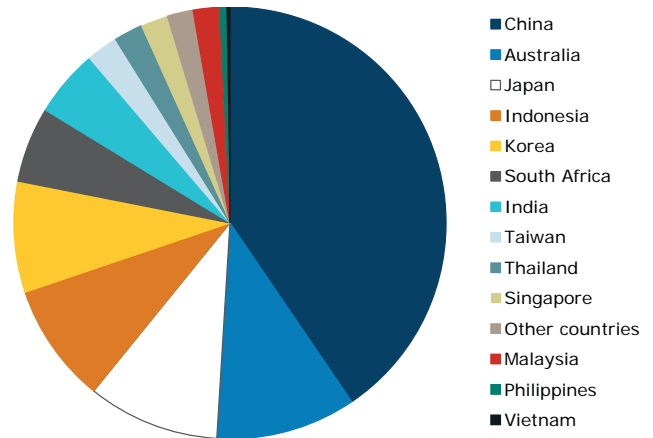
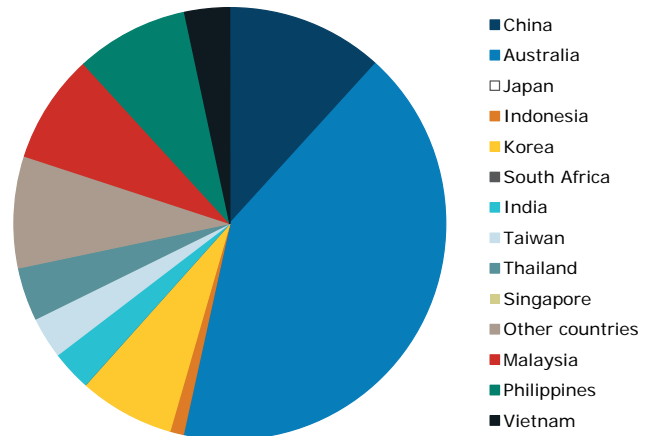


FIGURE 18B: PAPER/PAPERBOARD MARKETS



Source: ANZ, Statistics NZ

Longer term the consumption of paper products for newsprint, writing, books etc is under downward pressure due to the digitisation of written material and improved recycling efforts in developed countries. No doubt these trends will extend and limit any upside from natural consumption growth in developing markets. **Other areas such as household sanitary and packaging**

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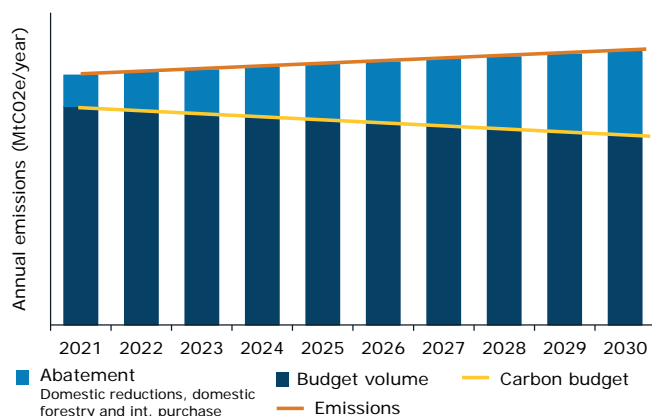
materials are lifting; especially in developing countries where general consumption levels are lifting with wage rises.

New processes and concepts are expected to result in innovative new products and applications based on cellulose fibre that generate more added value. These could include products that fit into the textile, cosmetics, food, pharmaceutical and bio-based fuel/chemical areas.

Carbon

The other potential revenue stream from forestry is carbon, with the introduction of the emissions trading scheme in 2008. Given New Zealand's Paris commitment to reduce net emissions by 30% below 2005 levels by 2030, there is an increasing abatement need over coming years. This means there is a need to reduce domestic emissions, increase forestry carbon-removals (i.e. plant trees) and/or purchase credible international units.

FIGURE 19: EMISSIONS TRADING SCHEME SUPPLY AND DEMAND



Source: ANZ, Ministry for the Environment

We are not going to detail all the ins and outs of the local carbon market, but **several recent regulatory changes to the scheme's settings have lifted carbon unit prices** from \$6/t to \$18/t. These changes have included:

1. **The phased removal over three years of a one-for-two obligation on all sectors captured in the ETS from 2017.** This means the 50% surrender obligation increases to 67% from 1 January 2017; 83% from 1 January 2018; and full surrender from 1 January 2019. This increases overall demand from the current 20 to 40 million units per year.
2. **The other major change was the banning of foreign credits** (i.e. emitters can't surrender foreign units to meet domestic obligations as previously was the case).

In 2015 there were an estimated 140 million units in the NZ emissions unit registry, meaning there is enough 'banked' to meet short-term obligations. But with international units no longer accepted and the ongoing annual supply of units from carbon-removal activities (i.e. forestry and free allocation of units) being less than anticipated demand, the balance is tipped toward a shortage emerging in time, which would drive the price higher. However, at present the market is capped at \$25/t as the Government will accept direct payment equivalent to this level for emitters' obligations.

FIGURE 20: NEW ZEALAND'S CARBON PRICE



Source: ANZ

The ETS is currently under review, which could result in further changes to the likes of the carbon price the Government is willing to be paid directly for, or even the auctioning of units under certain conditions. Given the market is heavily regulated there is a lot of political risk. Things could easily change with each election cycle – favourably or unfavourably for the forestry industry.

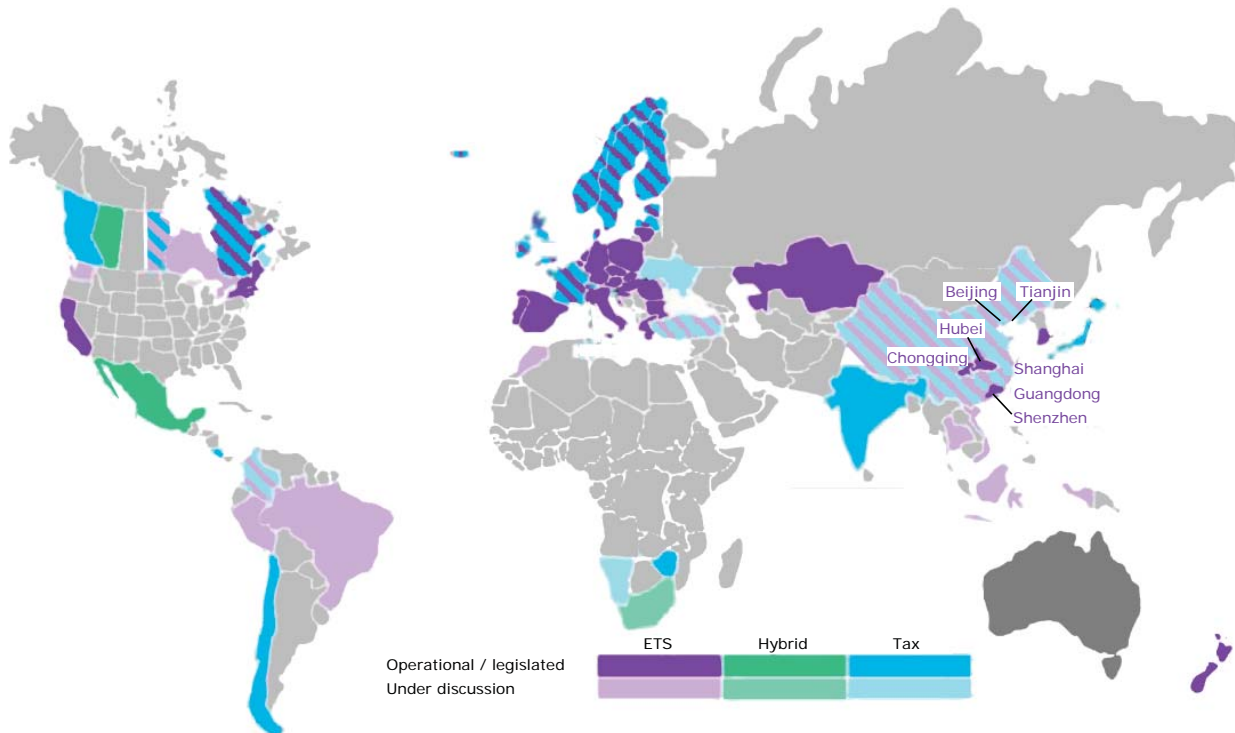
The real long-term prospects crucially depend on how the international carbon market develops. Despite the US looking less committed under their new administration, globally there is an increasing number of schemes, suggesting continuity and possible new opportunities (e.g. an Australasian carbon market in the future?).

Forests act as carbon sinks. They do not offer a permanent solution to reducing emissions, but can buy time to adjust to a carbon-constrained world.

Around 20-25% of the carbon sequestered in a permanent forestry situation is classified as 'safe'. This means it's not deemed to be emitted when the trees are harvested and then replanted. This can only be claimed for the first rotation, however. Under current rules the other 75-80% of sequestered carbon that accumulates through

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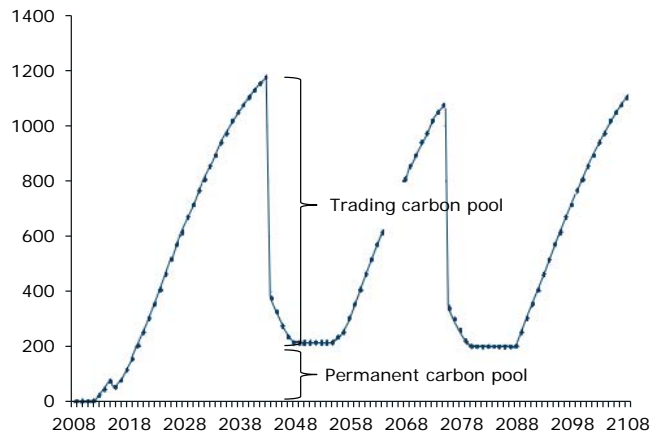
FIGURE 21: GLOBAL CARBON MARKET DEVELOPMENTS



Source: ANZ, Bloomberg New Energy Finance

the forest’s growth cycle is deemed to be emitted at harvest time. This means there is an obligation created to surrender the equivalent carbon units at this point in time.

FIGURE 22: ILLUSTRATIVE CARBON SEQUESTRATION PROFILE OF FORESTS



Source: ANZ, Ministry for the Environment

As a result there are a number of different ways to view the potential revenue from carbon units. The 20-25% that is deemed permanent can be sold fairly easily if the land use is intended to remain forestry. The remaining trading pool is trickier and depends on the price movements in the carbon and forestry markets over its growth cycle and at the time of harvesting.

Perhaps most importantly, carbon units provide forestry owners with an earlier cashflow option over the growth cycle of the forest. This provides time value for this cash, but depending on the relative movement in carbon and forestry prices come harvest time, it could also create large cashflow and return risks. Some of this risk, but not all, can be mitigated through:

1. The creation of a multi-age forest to spread risk;
2. Selecting a production regime that has a long and stable maturity profile. This means that harvesting can occur over a very long period of time.

A game changer for these risks from forestry and carbon is the current government review is looking at two alternative carbon accounting systems. One is an averaging option where the credits would not have to be repaid upon harvest, provided the forest is re-planted. The liability for the used carbon units would remain with the forest and be transferred to any new land owners though. The second option (harvested wood product) looks at products produced from a forest and allows for a greater proportion of this carbon to be recognised as being ‘stored’ in these products. This means the carbon accounting still follows the principles of figure 22, but the liability at harvest time is lower (or proportion of ‘safe’ carbon higher) because a greater component of carbon is

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deemed stored in the final products produced from the woodlot.

For smaller woodlots there is an additional compliance cost challenge (both time and direct cost) of belonging to the emissions trading scheme that needs to be considered too.

RETURNS AND KEY SENSITIVITIES

The difficulty with any forestry investment is that while you can assess today's markets and returns, things are guaranteed to have changed 25 to 30 years down the track at harvest time. Given this long investment time horizon, in practice most investors, rightly or wrongly, use 'current' market conditions and recent smoothed returns, alongside other yield and cost assumptions, to assess prospects. This means there is a leap of faith required that 'current' returns will be within the ball-park of future returns. Of course some of this risk can be offset by using conservative investment assumptions, having a higher investment threshold (i.e. factoring in a higher targeted rate of return), selling cutting rights/forest before harvest when market conditions are favourable, and the time of harvesting.

As with any investment there is a range of factors that need to be considered when looking

at forestry. Some of the key ones include product prices, tree quality/yield, tree type, silviculture regime, topography, arterial access quality, harvesting difficulty, distance to port/mill, cost of land and annual plantation costs. All of these factors can have an impact on whether or not it's worthwhile planting a forest on a particular site.

Table 2 looks at the high-level returns for a range of these key variables for a pruned radiata pine forest situation (28-year rotation), applying average prices from the past year. The carbon returns are modelled at \$18/t (current price) and it's assumed 80% is released upon harvest. The remaining 20% is assumed to be 'safe', with the forest replanted for a second rotation. A discount rate of 7% has been applied, which is in line with the long-run cost of capital for the primary sector. The other main plantation and harvesting cost assumptions are shown in table 3.

The results for forests that are good-to-excellent in quality/yield and located within 200 kilometres of a port/mill show an average pre-tax real rate of return (excluding carbon revenue) of 6.3%. The range varies from 4.4% to 7.9%. If you include carbon revenue the average pre-tax real rate of return lifts to 9.9%, with a range of 8.3% to 11.25%.

TABLE 2: FINANCIAL REALITIES BY QUALITY AND DISTANCE TO MARKET

Distance to Market	Block	\$/t Gross	Logging operating costs	Net\$/ha	Tonnes/ha	\$/JAS/t	Nominal \$/Yr/ha	Rate of return (excl carbon)	Rate of return (incl carbon)
50	Excellent	130	50	56,000	700	80	2,000	7.9	11.25
	Good	126	60	40,920	620	66	1,461	6.6	10.15
	Poor	107	70	18,500	500	37	661	3.5	7.49
100	Excellent	130	60	49,000	700	70	1,750	7.3	10.8
	Good	126	70	34,720	620	56	1,240	6	9.6
	Poor	107	80	13,500	500	27	482	2.4	6.46
150	Excellent	130	67	44,100	700	63	1,575	6.9	10.4
	Good	126	77	30,380	620	49	1,085	5.4	9.1
	Poor	107	87	10,000	500	20	357	1.4	5.46
200	Excellent	130	78	36,400	700	52	1,300	6.1	9.75
	Good	126	88	23,560	620	38	841	4.4	8.29
	Poor	107	98	4,500	500	9	161	-0.8	2.33
250	Excellent	130	89	28,700	700	41	1,025	5.2	8.95
	Good	126	99	16,740	620	27	598	3.2	7.16
	Poor	107	109	-1,000	500	-2	-36	-5.8	na
300	Excellent	130	100	21,000	700	30	750	4	7.91
	Good	126	110	9,920	620	16	354	1.4	5.43
	Poor	107	120	-6,500	500	-13	-232	na	na

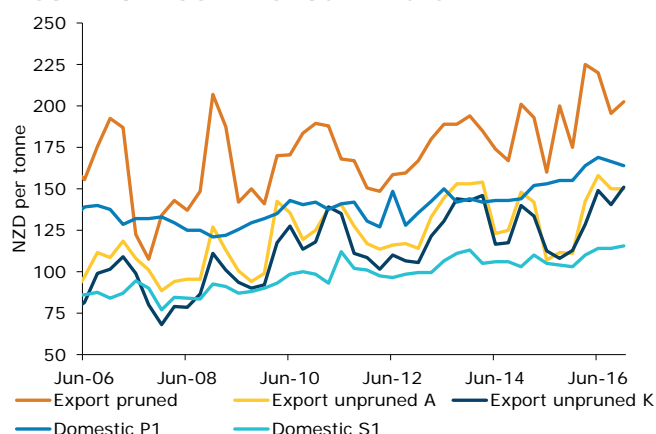
Source: ANZ

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The table also shows any forest too far from market or of poor quality/yield doesn't provide an adequate return if the weighted average cost of capital is assumed to be around 7% (i.e. the IRR should be around this level for an investment to proceed). Most of the other situations do, especially when carbon is considered as part of the proposition.

It has to be remembered there are differences between corporate-type investments and small individual woodlots on larger drystock blocks. The corporate-type investment tends to have established annual cashflows from continuous harvesting. This spreads the risk from fluctuating log/sawn timber prices, which can move significantly, like many commodities (see figure 23). They also leverage their economies of scale to significantly lower plantation and logging costs. This includes efficient systems to manage health and safety, forestry management, carbon trading and environmental aspects of a forest.

FIGURE 23: WOOD PRODUCT PRICES



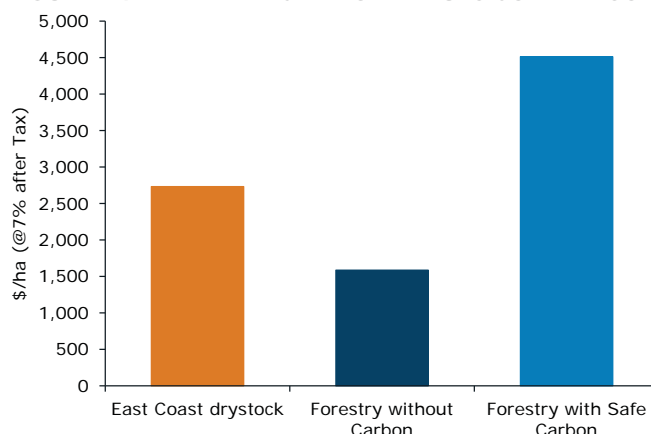
Source: ANZ, MPI

An individual woodlot is slightly different, as when it's harvested it receives the spot price, which can vary significantly, impacting on returns (although this can be managed somewhat through adjusting the time of harvest). Cashflow is not continuous as revenue is only received upon completion of harvest – although incorporating carbon has changed this too. There are higher costs per unit associated with establishment, ongoing management and logging/clean-up also.

The price of land is also a key determinant of returns. We have used a fairly low valuation for the land – the open market is likely to be considered higher than \$3,000 to \$4,000/ha. Nevertheless the above net cash returns from just the forestry operations (not including carbon) are very competitive when compared with drystock farming in many situations. Additionally, if one looks at land

expectation values by discounting annual net returns from East Coast drystock over the last 10 years and comparing this with forestry (at a 7% discount rate), it shows forestry and using the 'safe' carbon performs a lot better.

FIGURE 24: LAND EXPECTATION VALUES COMPARISON



Source: PF Olsen

The other advantages of considering a small woodlot on drystock farms include income diversification and meeting new environmental regulations. With drystock farmers having to eliminate stock access to streams in coming years and limit other environmental externalities (i.e. sedimentation and phosphate), planting trees on some of the more sensitive (i.e. erosion-prone) areas is likely to make both financial and regulatory sense.

TABLE 3: MAIN COST ASSUMPTIONS APPLIED

Plantation Costs	NZ\$ per hectare
Planting	~\$1,000-\$1,200
Land	~\$3,000-\$4,000
Pruning (per lift, usually require three)	~\$850-\$750
Thin to waste	~\$500-\$700
Animal control	~\$15-\$25
Management & administration	~\$50
Tracking	~\$100-\$200
Carbon compliance	~\$25

Harvest costs (NZ\$/m ³)	Logging & Loading	Cartage	Other	Total
Flat	\$28-\$30	\$15-\$17	\$7-\$9	\$50-\$57
Easy/Tracked	\$31-\$33	\$25-\$29	\$7-\$11	\$63-\$71
Steep/Tracked	\$36-\$40	\$36-\$43	\$9-\$12	\$81-\$90
Very Steep/Hauler	\$40-\$48	\$48-\$56	\$9-\$14	\$90-\$108

Source: ANZ



THE MONTH IN REVIEW

SUMMARY

Dry conditions developed in parts of the country during the summer months. However, heavy rainfall in mid-February/early March helped relieve many North Island areas. Dairy production conditions have improved. National production could finish less than 2% behind last year. Meat and fibre production has been tight across nearly all classes, but some autumn catch-up is expected. The 2017 kiwifruit and grape crops are expected to be smaller than last year. In contrast a high quality and record sized pipfruit crop is expected.

MOTHER NATURE

Dry conditions started to develop from Northland to North Waikato, Gisborne to South Hawke's Bay, Otago and Canterbury from early December.

Heavy rainfall in mid/late January across the South Island helped to relieve dry conditions in most of these areas. But limited rainfall in the Canterbury region since then has seen soil moisture conditions remain drier than normal in some areas. In the North Island soil moisture deficit conditions deteriorated further into mid February. Northland was officially declared a drought area in early February. Heavy and widespread rainfall in mid-February/early March helped to break the dry conditions in many areas and a decent autumn period now looks on the cards.

In the Waikato, Manawatu, Taranaki and Southland conditions for pasture growth have been more favourable due to more consistent rainfall. However, in some cases there has been too much rain at times and conditions have been cooler and also windier than normal.

DAIRY

Dairy production has improved since the start of the year with some North Island herds hitting their peak in January. **National production is currently tracking 3% behind the same period last year. If the last quarter of the season can match the last two autumns then national production will finish only 2% behind 2016/17.** The current risk is its even better than this, prompting more production upgrades.

While the national production outlook is better than many had initially feared, there is wide variability across the different regions due to the erratic seasonal conditions. **With some farms already down to once-a-day milking, and cashflow remaining tight, how seasonal conditions evolve will have a big say in autumn production.** Recent rainfall in the North Island will extend the season through to May for many, but irrigators are likely to remain busy in Canterbury. The supplementary feed market saw some additional

demand for both maize and barley to extend milking, but this was mainly to fill immediate pasture deficits in February until covers improved, rather than extending end-of-season milking.

MEAT AND FIBRE

Meat and fibre production across all nearly classes has had a very tight start to the 2016/17 season. Growth rates of finishing stock were low during the spring and early summer period. Combined with farmers looking to add more weight, this has delayed turnoff. This means some catch-up is anticipated over the autumn period as stock hit target weights. This will in turn alleviate some of the procurement pressure on processors. When compared with the season before, slaughter rates have been well behind due to El Niño fears prompting early turn-off in 2015/16.

Currently lamb slaughter is running 11% behind the same period last year. Industry expectations for the entire season are for a 2.7% reduction to 19.35 m head. The risk seems to be the downside from higher hogget retentions as farmers look to rebuild stock numbers. **Beef production is currently running 5% behind the same period last year.** Softness has centred on bull and cow turnoff. Dairy cull cow turnoff is set to moderate from record highs this year with improved returns likely to support higher stocking rates, although higher empty rates have been noted in some key regions. There is expected to be a catch-up in bull turn-off as they reach target weights. Larger numbers of calves reared in 2015 suggests there is more to come.

HORTICULTURE

It is still early days, but industry expectations are for a smaller 2017 kiwifruit crop. Green volumes are expected to fall by almost 20% to 75 m trays. A lower bud break due to a warmer winter, lower light levels than the previous summer, and vine exhaustion in the wake of two extraordinary seasons for Green yields are expected to substantially reduce average yields. In contrast, Gold volumes are expected to increase to between 55-60 m trays (+14-24%) as new vines come into production and other canopies reach maturity.

On the other hand a record pipfruit crop of 584,000 mt (+6.2% y/y) is expected for 2017. There has been less hail than in the past two years, and good pollination and fruit set, especially in Hawke's Bay. In addition, new higher-yielding club varieties are coming into production, such as Envy, Honeycrisp, Koru, Rockit, Lady in Red, Ambrosia, Breeze, Candy and Smitten – all coming on stream in increasing volumes. Mid-February rain in Hawke's Bay is also expected to have increased the average size. Soluble solids are the highest ever recorded, which supports eating quality and storage longevity too.

RURAL PROPERTY MARKET

SUMMARY

The rural property market has continued to see robust turnover and prices. While cautious sentiment has been noted, healthy turnover levels during the summer period, and the fact that the adjusted REINZ index for 2016/17 shows prices are only 3% lower than the previous two years, suggest otherwise.

Healthy turnover activity has been broad-based across most land types. In particular there has been good turnover of finishing, arable, horticulture, subdivision blocks (i.e. close proximity to growing urban areas) and lifestyle blocks. Dairy farm turnover has been solid too, albeit it remains behind the highs set in recent years. Grazing land is the only type to have seen a fall in turnover due to buyer uncertainty over the Waikato Healthy River Plan and reduced income for meat & fibre.

It's a similar story for prices, which have nosedived for grazing properties. In part this reflects a lower number of sales in the traditionally higher-priced

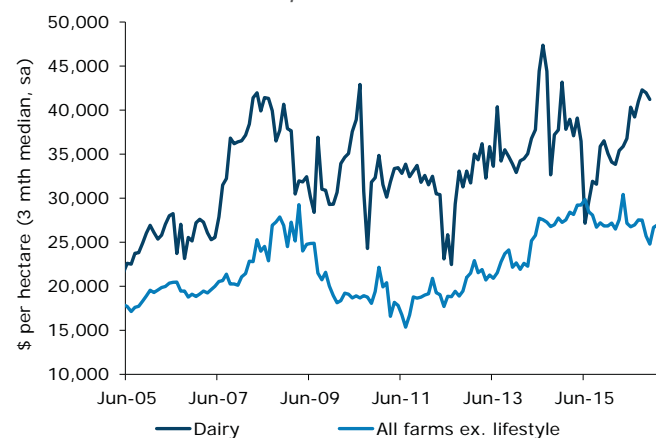
Waikato region. The opposite has occurred for dairying, where the average price has increased due to a higher proportion of sales in the more expensive Waikato and Taranaki regions. Adjusting for compositional differences suggests steady to slightly lower prices.

The latest REINZ data paints a fairly healthy overall picture of the rural property market.

While there are pockets of stress for certain types of assets, and a more cautious tone has been noted lately, this doesn't appear to have affected activity levels and prices over the summer period. In fact total turnover has run nearly 10% above its long-term average through the summer period, with solid activity across all land types except grazing. The average all-farm price has been around \$27,000/ha. The adjusted REINZ index for 2016/17 shows prices are only 3% lower than the previous two years and for dairying they have been in line with those achieved in 2014/15 (the previous peak).

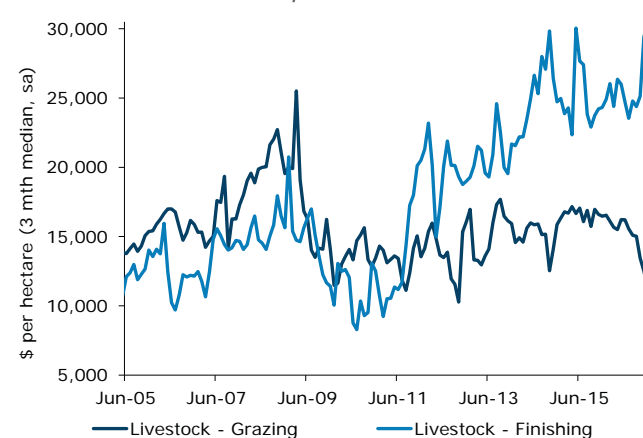
3-Month Seasonally Adjusted		Current Period	Previous Period	Last Year	10-Year Average	Chg. P/P	Chg. Y/Y	Chg. P/10yr
Dairy	Number of Sales	57	52	55	61	↑	↑	↓
	Median Price (\$ per ha)	41,200	42,000	36,500	34,000	↓	↑	↑
Livestock – Finishing	Number of Sales	129	123	88	70	↑	↑	↑
	Median Price (\$ per ha)	30,500	30,200	24,900	18,300	↑	↑	↑
Livestock – Grazing	Number of Sales	148	134	200	187	↑	↓	↓
	Median Price (\$ per ha)	11,500	11,200	17,000	15,600	↑	↓	↓
Horticulture	Number of Sales	60	62	68	43	↓	↓	↑
	Median Price (\$ per ha)	210,200	192,200	224,900	161,700	↑	↓	↑
Arable	Number of Sales	44	43	43	22	↑	↑	↑
	Median Price (\$ per ha)	38,900	34,900	40,300	33,400	↑	↓	↑
All Farms ex. Lifestyle	Number of Sales	458	437	469	414	↑	↓	↑
	Median Price (\$ per ha)	27,000	26,700	27,200	22,700	↑	↓	↑
Lifestyle	Number of Sales	2,074	2,120	2,230	1,574	↓	↓	↑
	Median Price	580,000	579,000	547,000	478,000	↑	↑	↑

FIGURE 1. FARM SALES, MEDIAN PRICE



Source: ANZ, REINZ

FIGURE 2. FARM SALES, MEDIAN PRICE



Source: ANZ, REINZ

RURAL PROPERTY MARKET

The star performers continue to be horticultural, lifestyle and subdivision blocks next to growing urban areas. In the horticulture space, prices remain hot for existing operations, suitable bareland conversions and lifestyle options.

Strong cash-income prospects, more corporate-type and Māori investment, a diminishing area of suitable land in key regions, and migration out of expensive urban areas in search of lifestyle options are all combining in various measures to support valuations. In addition, interest rates remain low and credit readily available, albeit conditions have tightened somewhat in recent months. This is providing additional support for horticultural assets, as well as more broadly all land/primary sector assets.

Kiwifruit orchards continue to sell strongly. Well-located green kiwifruit orchard prices have ranged from \$360,000 to \$400,000/ca ha. This is up slightly from \$350,000 to \$375,000/ca ha last year. While the 2017 green crop is expected to see lower yields this is expected to be mostly offset by higher per-tray returns and lower operating costs (i.e. less thinning). Some green orchards are also being bought for future re-grafting to gold too.

Well-located gold kiwifruit orchard prices have moved even higher than last year, trading between \$700,000 to \$770,000/ca ha. This is up from \$525,000 to \$625,000/ca ha at the same time last year. The increase has been driven by higher future revenue expectations (for both yield and per-tray returns). There is continued strong demand for G3 licences and convertible bare land is selling for over \$100,000/ca ha too, up from \$80,000 to \$100,000/ca ha last year.

In the viticulture space, the main activity remains centred in Marlborough. Mature vineyard sale values have moved up between 8 and 15% (opinions vary) over the last 18 months. Transaction volumes have remained reasonably high with approximately 17 commercial scale (8.0ha plus) vineyards changing hands in 2016.

Sales have been almost exclusively in the main Wairau Plain area, with only 2 sales in the Awatere. Values in the Wairau area have ranged from circa \$130,000/ha (on a land and vineyard value net planted area basis) in the upper Wairau up to \$270,000/ha in more preferred areas. A number of the large (Category 3) wine companies remain active in seeking to secure large parcels of land for development in the middle and upper Wairau Valley to meet future demand.

Pipfruit orchards are showing a lot more life this year due to some of the strongest cash rates of returns (15-20%) on offer across the

primary sector. Much of the activity is being driven by corporate investment as the sector continues to consolidate. **Land prices are variable, but smaller pipfruit orchards with existing irrigation infrastructure are often fetching \$100,000 to \$200,000/ha. Larger blocks, less well located and without existing irrigation infrastructure (but usually with consents) are selling for between \$70,000 to \$100,000/ha.**

Elsewhere, finishing blocks have also seen prices push toward \$30,000/ha in recent months, with very healthy levels of turnover. This is well above the \$24,000-\$26,000/ha range that had been traded since mid-2014. The increase in price doesn't appear to be compositional, with a spread of sales around different regions. Anecdotally, offshore and 'out of town' interest has been noted as driving the increase. In certain cases land located close to growing urban areas has been attracting keen interest and high valuations.

It's a similar story for arable/cropping properties, with turnover remaining nearly double the 10-year average. While average prices have slipped this seems to reflect the regional composition of sales more than anything else. There has been lower turnover in the Canterbury area, which is traditionally more expensive, and higher turnover in the lower North Island/Hawke's Bay, which is traditionally less expensive.

Dairy farm turnover has been solid, albeit it remains behind the highs set in recent years. Prices for high-quality and well-located properties have continued to hold up. Larger-scale and lower-quality properties remain more difficult to sell, with a gap in valuations between buyers and sellers. The average price for dairying land has increased to \$41,000-\$42,000/ha over the summer period. This mainly reflects a higher proportion of sales (circa 60%) in the more expensive Waikato and Taranaki regions. On a milksolid basis the monthly average price has ranged from \$40 to \$43/kg ms over the summer period.

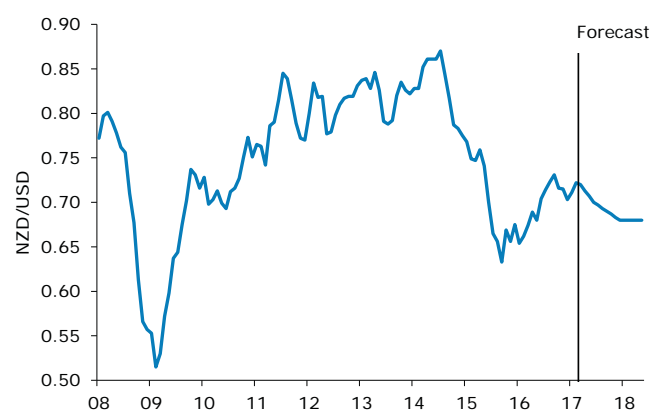
Grazing is the one area of weakness, with turnover dropping in recent months and the average price heading back to \$11,500/ha. Part of this is compositional, with lower turnover in the Waikato and higher turnover in Northland. Lower turnover reflects buyer uncertainty over the impact of the Waikato Healthy River Plan on land use flexibility and earning potential. The lower average price is also likely to reflect weaker sentiment and income prospects for meat & fibre properties. This has impacted negatively on buyer valuations.

ECONOMIC INDICATORS

EXCHANGE RATES

	Current Month	3 Mth Trend	Last Year	Chg. M/3M	Chg. Y/Y
NZD/USD	0.722	0.710	0.662	↑	↑
NZD/EUR	0.679	0.666	0.597	↑	↑
NZD/GBP	0.579	0.572	0.463	↑	↑
NZD/AUD	0.942	0.954	0.929	↓	↑
NZD/JPY	81.58	80.29	76.07	↑	↑
NZD/TWI	77.23	77.18	71.03	↑	↑

NZD BUYS USD

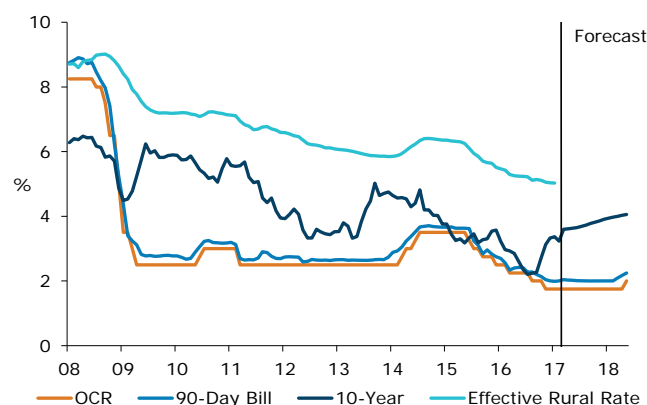


Source: ANZ, Bloomberg

NZ INTEREST RATES

	Current Month	3 Mth Trend	Last Year	Chg. M/3M	Chg. Y/Y
Official Cash Rate	1.75	1.75	2.50	↔	↓
90 Day Bill Rate	2.00	2.01	2.56	↓	↓
2 yr	2.16	2.20	2.22	↓	↓
3 yr	2.39	2.41	2.28	↓	↑
5 yr	2.58	2.62	2.47	↓	↑
10 yr	3.23	3.27	2.97	↓	↑
Effective Rural Rate	5.03	5.07	5.47	↓	↓
Agricultural Debt (\$b)	61.23	61.08	58.99	↑	↑

KEY INTEREST RATES



Source: ANZ, RBNZ

‘Elevation’ remains the main theme for NZD over the coming quarters. On some metrics the NZD looks too high; the TWI has averaged well above its post-float/pre-GFC high of 75.0 over the past 3 years (76.1). **Yet it is not evident that this has impacted New Zealand’s ability to grow at “rock star” pace and the current account remains contained at 3% of GDP.**

Relative to peers, New Zealand stands in good stead – it is the fastest-growing economy in the G10; commodity prices are well higher than pre-GFC days; relative interest rates are still the highest in the G10; inflation has turned higher; net migration has soared; and our public finances and political stability are enviable. Against a backdrop of still-lethargic growth and demographic challenges in Europe and Japan, and political instability/unease in Europe and the US, it is not hard to see why the NZD continues to fly.

However, the USD is starting to firm and this has turned the NZD/USD lower. The Federal Reserve is set to lift interest rates more aggressively, supporting the USD, and growth has picked up. This is somewhat tempered by uncertainty over what the Trump administration will do. We expect NZD/USD to weaken slightly and hit 0.68 by the end of 2017.

The outlook for interest rates is a “game of two halves”, with the short end holding steady over the coming year as the RBNZ remains on hold; but the long end drifting higher (driven primarily by global rates), steepening the yield curve. Although markets expect the RBNZ to hike this year, we do not believe they are in any hurry. After years of inflation undershoots and two false starts to the tightening cycle, higher inflation is welcome, rather than something to be feared. With the TWI elevated and wage inflation still muted, the RBNZ has time on its side.

The primary driver of higher global yields (which tend to be more influential than RBNZ policy for local long-end rates) **is the so-called “reflation trade”,** which has, in turn, been driven by:

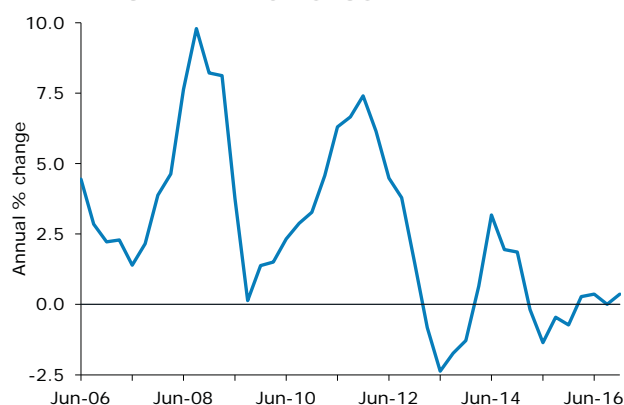
- expectations that US President Trump’s policies will deliver faster US growth in the near term and result in increased government borrowing;
- an expectation that easy monetary and liquidity policy settings in Europe, the UK and Japan are on borrowed time; and
- the recovery in oil prices, which has helped lessen fears of deflation taking hold.

However, political instability has emerged as a key concern for markets, so while the “economics” points to a higher bond yields, the extent of the rise will be capped by political and economic realities. The world has too much debt for interest rates to move up too far or quickly.

ECONOMIC INDICATORS

INFLATION GAUGES					
Annual % change	Current Qtr	Last Qtr	Last Year	Chg. Q/Q	Chg. Y/Y
Consumer Price Index	1.3	0.4	0.1	↑	↑
Farm Input	0.4	0.0	-0.7	↑	↑
Net Imp. Margins PPI	12.2	4.1	-4.2	↑	↑

FARM INPUT INFLATION GAUGE



Source: ANZ, Statistics NZ

ANNUAL NET IMPLIED MARGINS PPI AG/FORESTRY/FISHING (OUTPUTS – INPUTS)



Source: ANZ, Statistics NZ

Headline inflation both domestically and globally (particularly in advanced economies) **has continued to lift off lows**. The sharp global pickup has been driven mainly by the cyclical upswing in commodity prices during 2016 – particularly energy prices. An important factor behind the lift in commodity prices has been supply-side reductions by producers and governments across a number of sectors to reduce surpluses and restore margins. Further upside seems likely in the first part of 2017, but if prices push too far the risk is that supply once again increases.

In contrast, core measures of inflation have remained steadier in most advanced economies. Low productivity gains, subdued growth, technology shifts, high debt levels and excess spare capacity are still widespread, suggesting only gradual increases in inflation at best. The must-watch will be the US, where capacity constraints are increasing with the labour market at full employment. China remains important too, especially for global commodity prices.

Domestically it's a slightly different story, with underlying inflation pressures lifting gradually. Stronger inflation has threatened before, only to prove to be a head-fake, and deflationary factors here and abroad still persist. However, the number of 'traditional' inflation drivers that are pointing in the same direction (output gap, labour market, inflation expectations, and the global inflation cycle) has become hard to ignore.

For the dairy sector one of the biggest challenges over the next year will be maintaining the extra cost efficiencies that were achieved during the downturn. There will be some natural unwind from extreme lows as some deferred spending becomes pressing, but there is a risk that if cost efficiencies are completely unwound profitability will remain elusive even with the lift in the milk price. There is a close relationship between the milk price and the costs of grazing, supplementary feed, cows, a range of services and fertiliser. Where this is the case farmers will need to think carefully about ways to lock down these and other costs that swing with the milk price.

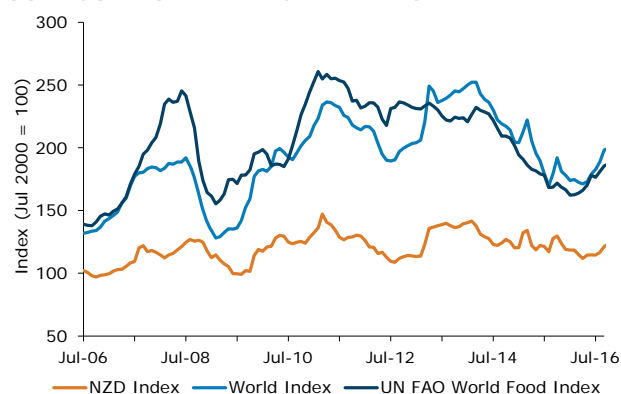
For the December quarter producer net margins expanded 5%. Dairy jumped 15% q/q due to a 13% increase in output prices. Movements for the other sectors were fairly tame. Forestry saw a 2% q/q increase and the other major sectors experienced slight declines of 0.5 to 1.5%. Output prices for forestry increased 2.8% q/q, with good export and domestic demand.

KEY COMMODITIES: OVERALL INDEX AND DAIRY

SOFT COMMODITY PRICE INDICES

	Current Month	3 Mth Trend	Last Year	Chg. M/3M	Chg. Y/Y
ANZ NZD Index	129	129	119	↑	↑
ANZ World Index	211	207	175	↑	↑
FAO World Food Index	190	187	163	↑	↑

SOFT COMMODITY PRICE INDEXES



Source: ANZ, FAO

The cyclical upswing in global soft commodities has continued into the New Year. Much of the improvement has been driven by supply corrections (due to weather and earlier low returns) helping to balance out market fundamentals. An increase in Chinese imports for nearly all New Zealand products has been influential too.

While supply-demand fundamentals will be important for direction, the biggest potential 'game changer' remains US trade and tax policies. Given their political nature, which will dictate final form, and the potential overlapping nature of impacts, it's difficult to say what the final farm-gate result will be.

At present the deterioration in Mexican and US relations is already having a negative impact on global meat, grain and dairy markets. This is due to Mexico being the largest export market for most of these US products – often by a substantial margin. South American suppliers are already looking to fill the void, and New Zealand could well benefit in time with improved access into Mexico, but it remains to be seen where dislodged US product will end up.

The other policy of note is the proposed 'border tax adjustment'. In theory this should be positive for the US trade balance – supporting a higher USD. In turn this could support farm-gate returns via a lower NZD/USD. But equally, it could slow the US economy, with consumption taking a hit from higher tradable inflation. This would mean reduced demand and returns for New Zealand exports, with limited ability to pass on the extra tax. The impact would be particularly noticed for beef, wine and sawn timber exports, where the US is a significant market. The other impact is a higher USD versus emerging markets (key importers), which is usually negative for commodity prices due to it reducing emerging-market purchasing power. So the relative movement in international prices and the NZD/USD would be very important in determining the overall impact on NZD earnings.

Sentiment in dairy markets has swung with the improvement in global supply conditions. Global milk supply suffered a dramatic fall over the second half of 2016, which was key in supporting the price rally. However, higher farm-gate returns, more conducive production conditions and normal seasonality of higher Northern Hemisphere supply have now tipped the market into reverse. In New Zealand the risk is for further production upgrades before the end of year. However, as processors have low inventory levels and more product mix flexibility due to the time of the season, they should be able to appropriately manage volumes to help stabilise pricing. **Seasonally European supply is set to increase.** Higher farm-gate returns, favourable seasonal conditions and limited subsidies to reduce supply should support an increase. Combined with continued growth in US supply the pendulum has now swung in the other direction for global milk supply, with the fall in milk powder prices at the early-March GlobalDairyTrade auction (on higher volumes) providing for part of the adjustment.

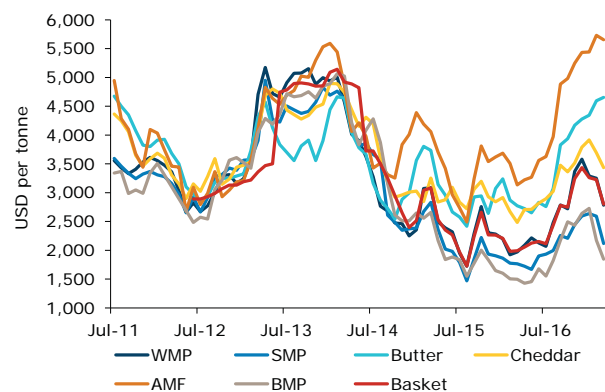
On the buy side there are bullish estimates on China's import requirements and most other NZ markets are expected to be steady. The consensus view is that Chinese dairy import requirements will lift by a further 10 to 20% in 2017. If such demand does materialise this should be supportive of WMP above US\$2,800/t.

With just over 80% of the season's product sold, current market indicators are pointing toward a \$6.00 to \$6.10/kg MS milk price in 2016/17. Looking toward to 2017/18, the opening forecast is likely to be somewhere between the mid to high-\$5/kg MS mark.

OCEANIA DAIRY PRICE INDICATORS

USD per tonne	Current Month	3 Mth Trend	Last Year	Chg. M/3M	Chg. Y/Y
Milk Price YTD (\$ per MS)	6.10	5.80	4.00	↑	↑
Milk Price Forecast (\$ per MS)	6.00	6.00	4.05	↑	↑
Whole Milk Powder	2,782	3,374	1,973	↓	↑
Skim Milk Powder	2,118	2,608	1,766	↓	↑
Butter	4,653	4,406	2,772	↑	↑
Anhydrous Milk Fat	5,653	5,534	3,134	↑	↑
Butter Milk Powder	1,846	2,513	1,499	↓	↑
Cheese	3,435	3,800	2,485	↓	↑

DAIRY PRODUCTS – NZ EXPORT MARKET PRICES



Source: ANZ, GlobalDairyTrade

KEY COMMODITIES: BEEF AND LAMB

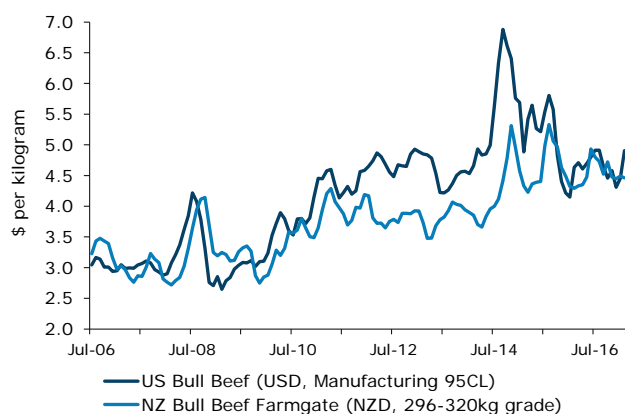
BEEF PRICE INDICATORS

\$ per kg	Current Month	3 Mth Trend	Last Year	Chg. M/3M	Chg. Y/Y
NZ Bull Beef ¹	4.46	4.47	4.29	↓	↑
NZ Steer ¹	4.98	5.02	4.74	↓	↑
NZ Heifer ¹	4.41	4.45	4.17	↓	↑
NZ Cow ¹	3.25	3.20	2.99	↑	↑
US Bull Beef ²	4.91	4.45	4.64	↑	↑
US Manu Cow ³	4.50	4.19	4.33	↑	↑
Steer Primal Cuts	7.82	7.89	7.51	↓	↑
Hides ⁴	63.8	62.5	58.5	↑	↑
By-Products ⁴	50.4	50.0	42.9	↑	↑

¹ (NZD, 296-320kg Grade Bull & Steer), (NZD, 195-220kg Grade Heifer) (NZD, 160-195kg Grade Cow)

² USD, Manufacturing 95 CL ³ USD Manufacturing 90 CL ⁴ USD\$ per Hide

BEEF INDICATOR PRICES



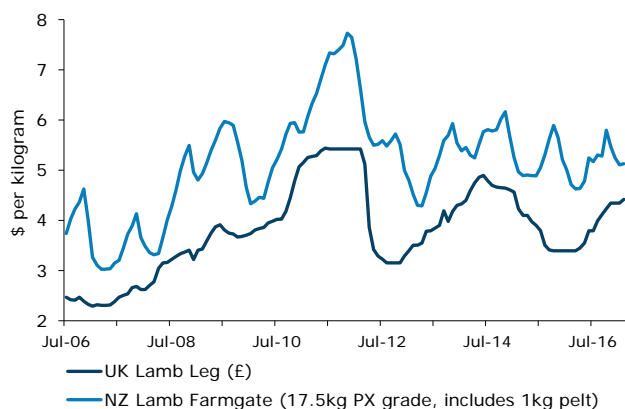
Source: ANZ, Agrifax

LAMB PRICE INDICATORS

\$ per kg	Current Month	3 Mth Trend	Last Year	Chg. M/3M	Chg. Y/Y
NZ Lamb ¹ (NZD)	5.13	5.27	4.71	↓	↑
UK Lamb Leg (£)	4.42	4.34	3.40	↑	↑
Rack US (USD)	16.2	15.9	14.2	↑	↑
Flaps (USD)	5.46	5.03	3.52	↑	↑
Skins ²	2.64	3.24	3.70	↓	↓

¹ 17.5kg PX grade, including 1kg pelt ² USD per skin

LAMB INDICATOR PRICES



Source: ANZ, Agrifax

US manufacturing beef prices have rallied

aggressively since the start of 2017, driven by both lower supplies and robust demand. **Domestic US lean beef supplies remain constrained** with the retention of beef cows continuing. Dairy cull numbers have also softened recently. **On the US import side there has been a large fall of 16% y/y since the start of 2017.** The decline has been led by the top three importers – Australia (-40%), New Zealand (-20%) and Canada (-20%) – due to tight local supply. US demand has been bolstered by a combination of disposable incomes increasing at or slightly above the long-run trend, the economy being close to full employment, household wealth expanding due to robust gains in housing and equities, and the new US administration promising further stimulus/reform, buoying confidence.

Looking forward, robust demand is set to continue but supply conditions are expected to improve, especially over the second half of 2017.

Australian supply is forecast to fall further (-3% in 2017), but the majority of this is expected to occur in the first half of the year. New Zealand bull beef supply is set for a catch-up period and this plus higher dairy culls will ease local procurement pressures into mid-2017. US domestic supply is biased higher as the year progresses, but with imported manufacturing prices above domestic equivalents this is already seeing some cuts diverted to grinding. Combined with a capped NZD/USD this is expected to support farm-gate prices at similar levels to last year into mid-2017.

Prime beef markets have started the year on a softer note though. Many of NZ's key markets are facing supply pressure from competitors. US beef is dominating the Japanese and Korean markets. Brazil continues to keep the pressure on in China, and cheap Indian buffalo meat has swamped the Indonesian market since the relaxation of import restrictions imposed in 2011.

Lamb prices have turned out better than expected due largely to very tight local supply and low inventory levels lifting in-market prices. While some catch-up in lamb supply is expected in the autumn as target weights are hit, tight tradable supply (from Australia too) is expected to be an ongoing feature in 2016/17. **This should support farm-gate prices in at least in the low-to-mid \$5/kg range during the autumn.**

Where there is intermarket competition in-market prices for some cuts have climbed to new records and all others are sitting well above last year. Competitive pressure between continental Europe and the US has pushed up prices for middle cuts. This has especially been the case in Europe, where there is limited competition from Australian product. Chinese and Middle Eastern demand is supporting forequarter and flap prices. Lamb flaps have posted new records. The recent outbreaks of bird flu in China are expected to support red meat consumption through to the end of winter. In the UK there have been solid chilled sales for Easter and in-market prices are reportedly a touch better than last year. However, the 25% lift in the NZD/GBP still means lower local returns. Interestingly, frozen UK leg prices have moved substantially higher than a year ago (+30%), but limited sales during the Easter chilled period perhaps mean the market isn't actually at this level.

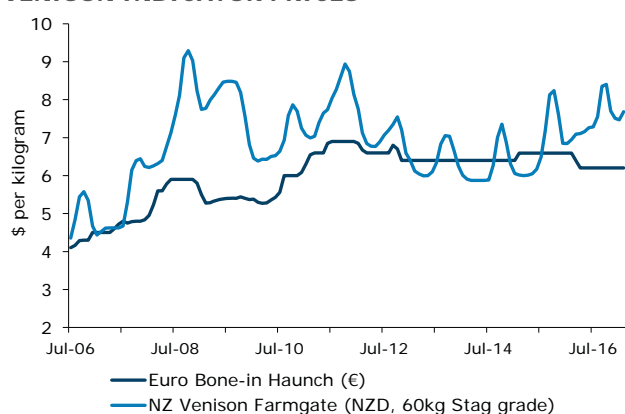
KEY COMMODITIES: VENISON AND WOOL

VENISON PRICE INDICATORS

\$ per kg	Current Month	3 Mth Trend	Last Year	Chg. M/3M	Chg. Y/Y
NZ Stag ¹	7.68	7.56	6.95	↑	↑
NZ Hind ¹	7.57	7.45	6.84	↑	↑
Euro Bone-in Haunch (€)	6.20	6.20	6.59	↔	↓
Boneless Shoulder (€)	4.95	4.94	4.88	↑	↑
Loin (€)	19.0	19.0	16.0	↔	↑

¹ (60kg Stag AP grade), (50kg Hind AP grade)

VENISON INDICATOR PRICES

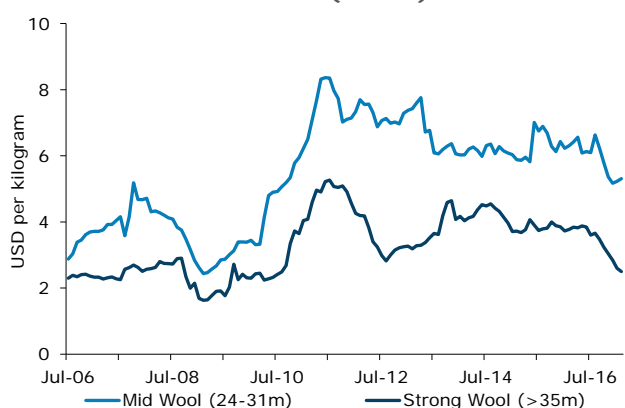


Source: ANZ, Agrifax

CLEAN WOOL INDICATOR PRICES

\$ per kg	Current Month	3 Mth Trend	Last Year	Chg. M/3M	Chg. Y/Y
NZ Mid Wool (24-31m)	7.35	7.40	9.52	↓	↓
NZ Strong Wool (>32m)	3.46	3.99	5.70	↓	↓
USD Mid Wool (24-31m)	5.31	5.25	6.30	↑	↓
USD Strong Wool (>32m)	2.50	2.83	3.77	↓	↓

WOOL INDICATOR PRICES (CLEAN)



Source: ANZ, Beef + Lamb NZ, Wool Services International

Strategies to diversify markets are lessening the impact of the weak euro and GBP on the farm-gate venison price. In particular there has been more focus on increasing exports to the US to capitalise on trends of rising demand for natural and exotic premium meats offers, and to reduce reliance on the Eurozone. Venison exports to the Eurozone dropped from 70% of total in 2012 to 50% in 2016. The US market share has grown from 9% to 21% of total exports over same period.

Immediate prospects for venison prices appear positive. US demand for both table cuts for the restaurant trade, and trim and manufacturing items for ingredients in the burger trade and further processed food items continues to increase. Demand in the traditional European markets is strong, with inventory levels lower than recent years too. Combined with NZ venison production remaining tight due to lower weaner numbers coming into 2016/17, and the retention of breeding stock to rebuild herds, farm-gate prices should remain firm and well above the same time last year.

Velvet sales have reportedly been solid despite some early season jitters about the issuance of import licenses into China. **While prices are back from the highs of the past two years, long-term prospects are still strong** as it taps into the fast-growing traditional medical and pharmaceutical markets of Korea and China.

Wool prices appear to have now reached a bottom after falling 40-50% (depending on type) into early February. Farmers started to hold back supply in February as prices fell below the cost of production. Demand also lifted following the Chinese New Year period and as lower prices encouraged manufacturers to re-evaluate using NZ-sourced wool.

Short-term high seasonal supply into March and the fact that offshore inventory is moving only slowly through processing lines are expected to keep gains contained. A more sustained upturn will require increased demand from China. New Zealand exports to China through the first half of 2016/17 have tracked 37% behind the same period last year. There have been a number of reasons given for the drop, ranging from lower end-product demand in Europe/UK, a weaker RMB, changed sourcing patterns to cheaper product from UK and Mongolia, liquidation of local cotton stocks, and general high prices over the two previous seasons leading to fibre substitution and changed local fashion trends.

Now prices have fallen so far, drivers such as sourcing product elsewhere and substitution to other cheaper fibres are starting to operate in reverse. Despite this, high inventory levels of coarse wool in China and changed local fashion trends for this type of fibre are expected to result in only a modest improvement. The outlook for fine wool types shows more promise as it represents very good value compared with other textiles, and its use in certain types of fashion are more stable.

In a suppressed market buyer activity will be focussed on high-quality wool in terms of colour, fineness and vegetable matter. Those that fail to meet high-quality specifications are likely to be heavily discounted.

KEY COMMODITIES: GRAINS

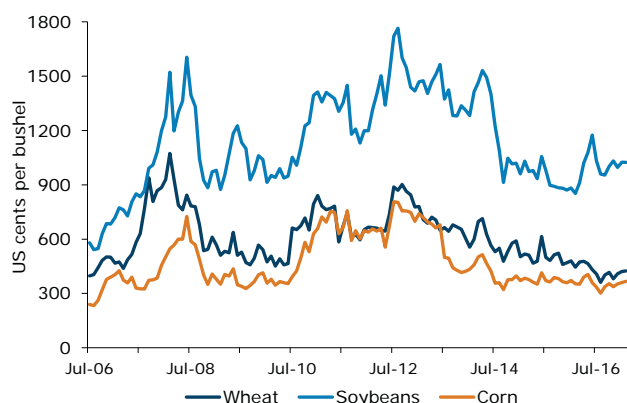
GRAIN & OILSEED PRICE INDICATORS

	Current Month	3 Mth Trend	Last Year	Chg. M/3M	Chg. Y/Y
NZ Milling Wheat ¹	327	327	350	↔	↓
NZ Feed Wheat ¹	294	282	305	↑	↓
NZ Feed Barley ¹	288	273	292	↑	↓
Palm Kernel Expeller ¹	256	235	234	↑	↑
US Wheat ²	4.25	4.03	4.45	↑	↓
US Soybeans ²	10.24	10.18	8.53	↑	↑
US Corn ²	3.68	3.50	3.54	↑	↑
Australian Hard Wheat ¹	286	278	344	↑	↓

¹ NZD per tonne

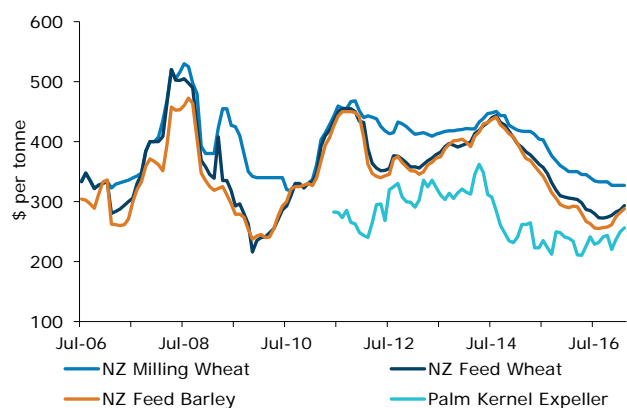
² USD per bushel

CBOT FUTURE GRAIN & OILSEED INDICATOR PRICES



Source: ANZ, Bloomberg

KEY NZ GRAIN PRICES



Source: ANZ, Agrifax

Local grain prices have lifted. There was little 2016 wheat and barley supply left before the new season's harvest recently hit silos. This, combined with dry conditions in parts of the North Island and dairy farmers looking to fill feed deficits, improved prices.

The local harvest for 2017 appears mixed, with only average yields, especially for barley and maize crops. In the South Island, the quality of barley and yields are reportedly reasonable. But with a reduced area planted, a smaller overall crop is expected. The South Island wheat crops have been better, with conducive weather conditions delivering moisture and sunshine at the right times. This is seeing exceptional yields for dryland crops, but slightly lower yields on irrigated areas, evening things out.

In the North Island it's been a mixed bag for both the quality and yields from barley and wheat crops. Both crops had to navigate a variety of climatic challenges throughout their growth cycles ranging from too wet, then too dry, windy and insufficient sunshine hours. Barley crops that were planted later have had better quality, with earlier plantings more likely to have been hit with the wet conditions in November and then wind in some regions just before harvesting started.

Maize crops are also in mixed condition depending on the time of planting and how much rain and sunshine a particular region has received. Widespread rain in mid-February/early March helped most North Island regions, and this could well improve things. The harvest is likely to be later given delayed planting.

Palm kernel prices have moved up recently as demand from the dairy sector has lifted. Demand has been higher in regions that have experienced dry patches. Supply out of Southeast Asia generally starts to pick up in March, but local demand requirements will set the tone for prices.

Global grain prices are expected to remain fairly range bound until more information is available on the yields and quality of the upcoming Northern Hemisphere harvest in May/June.

Overall global stocks remain high historically, which is creating stiff export competition amongst the main suppliers. That said, export demand has been strong too, with the likes of China, Southeast Asia and Egypt all buying.

Longer term there are continued rumours about changes to the ethanol blending rules in the US. The current proposals being floated could dramatically increase ethanol producers' margins and increase demand for corn, which currently accounts for around 40% of total usage.

KEY COMMODITIES: HORTICULTURE

HORTICULTURE PRICE INDICATORS					
	Current Month	3 Mth Trend	Last Year	Chg. M/3M	Chg. Y/Y
Kiwifruit (USD per kg)	2.9	2.9	2.7	↓	↑
Apples (Weighted Index)	242	242	244	↔	↓
Average Wine Price ¹	4.74	4.60	4.75	↑	↓
Packaged White Wine ¹	5.60	5.61	5.46	↓	↑
Packaged Red Wine ¹	8.20	8.43	8.70	↓	↓
Bulk wine ¹	3.04	2.76	3.01	↑	↑

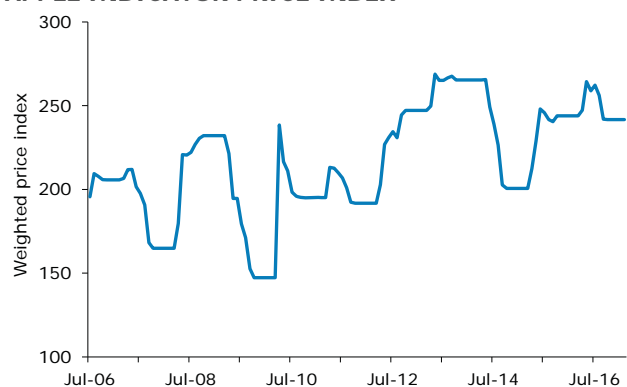
¹ USD per litre

GREEN KIWIFRUIT INDICATOR PRICE



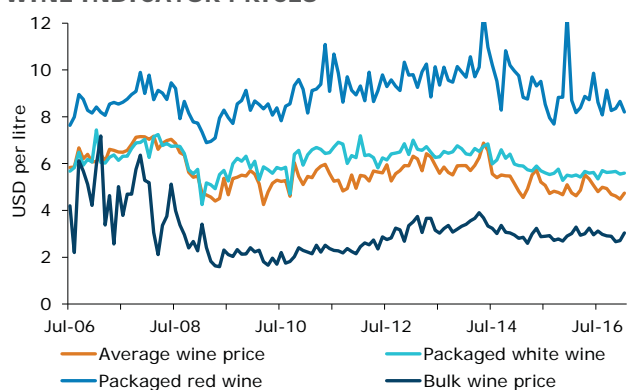
Source: ANZ, Zentrale Markt- und Preisberichtsstelle

APPLE INDICATOR PRICE INDEX



Source: ANZ, Zentrale Markt- und Preisberichtsstelle

WINE INDICATOR PRICES



Source: ANZ, NZ Winegrowers

Green kiwifruit volumes are expected to fall by almost 20% to 75 m trays. A lower bud break due to warmer winter, lower light levels the previous summer, and vine exhaustion in the wake of two extraordinary seasons for Green yields are expected to substantially reduce average yields. **In contrast, Gold volumes are expected to increase to between 55-60 m trays (+14-24%)** as new vines come into production and other canopies reach maturity.

Improvement in the taste profile through better management practices and industry standards, combined with a smaller-sized crop, is expected to lift green prices back into the mid-\$5 to \$6/ tray range in 2017. Although a smaller green crop is expected this follows two years of record-high yields which ultimately meant that crop management was needed to maintain price premiums, and importantly, a sub-optimal dry matter profile resulted in consumer markets reporting less-than-ideal taste. For Gold, higher volumes will further test the strength of developing markets and the industry's target to keep pricing above \$8/tray. We take being able to maintain pricing at \$8.30/ tray for the 2016 crop despite the substantial step-up in supply, as well as demand signals encouraging further Gold licensing, as good indicators.

A record-sized pipfruit crop of 584,000 mt (+6.2% y/y) is expected for 2017. Mid-February rain in Hawke's Bay is also expected to increase the average size. Soluble solids are the highest ever recorded, which supports eating quality and storage longevity too. **Initial demand has reportedly been strong, led by Asian countries, which now account for 40% of the total crop.** Local Braeburn returns are likely to face some downward pressure due to unfavourable exchange rates (euro and GBP) and the US is expected to be more challenging due to a large domestic crop providing competition.

In the viticulture sector it has been a tough growing season with adverse weather impacting flowering periods for many, extended periods of extreme dry, plus high wind levels. In addition, those in the Marlborough region have had to deal with infrastructure damage from last year's series of earthquakes. **At this stage only an average-sized vintage is expected and this will be managed to fit available processing/storage capacity.**

Market-wise, export sales for 2016/17 have continued to track 15% y/y ahead. However, average returns are 9% y/y lower, leaving total export revenue up only 5% y/y. **Average returns out of the UK have dropped 20% y/y largely due to the lower GBP.** In Australia (-8%) and the US (-1%) average returns have performed better and both have increased import volumes by 11-12% y/y. The US currently accounts for 28% of 2016/17 sales, so changes in US policy (e.g. a border tax adjustment) need to be watched closely by the industry to assess possible impacts.

KEY COMMODITIES: OIL, FREIGHT AND FERTILISER

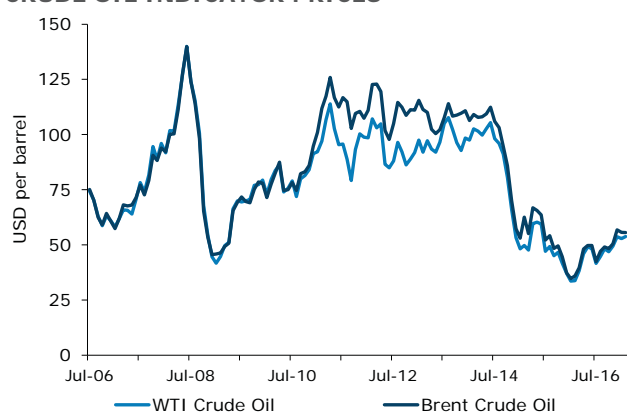
OTHER COST INDICATORS

	Current Month	3 Mth Trend	Last Year	Chg. M/3M	Chg. Y/Y
WTI Oil ¹	54	52	34	↑	↑
Brent Oil ¹	56	54	36	↑	↑
Ocean Freight ²	878	988	329	↓	↑

¹ USD per barrel, grade WTI

² Baltic Dry Index

CRUDE OIL INDICATOR PRICES



Source: ANZ, Bloomberg

Reflationary economic signals around the globe, a stronger Chinese economy and OPEC production cuts have seen oil prices lift 59% in the past year. More recently the market has been caught between the exuberance of production cuts from OPEC and concerns over rising inventories/supply in the US. Indeed the oil rig count in the US is now at 617 and US crude oil inventories have also increased, but this isn't unusual before higher seasonal gasoline demand during the spring/summer period.

We continue to view the trend of rising inventories and drilling activity in the US as an expected consequence of rising prices after OPEC's production cut agreement. However, it still remains unlikely to offset the impact from lower OPEC output on reducing current global surpluses. As such, prices are expected to push higher as the year progresses.

Overall, the OPEC and non-OPEC cuts represent approximately 1.8mb/d. Saudi Arabia has promised the biggest cut at 486kb/d, while Russia (-300kb/d), Iraq (-210kb/d), Kuwait (-131kb/d), and the UAE (-139kb/d) are also contributing large reductions.

Thus far, progress appears to be well on track. In several instances, producers have cut more than required. Already, Saudi Arabia has cut production below 10mb/d, representing a fall of 550kb/d from the reference output levels agreed to in the December deal. Other countries who have gone beyond the agreed cuts include Kuwait, Algeria, and UAE. In total, it's estimated that 77% of the agreed-to production cuts have already been implemented.

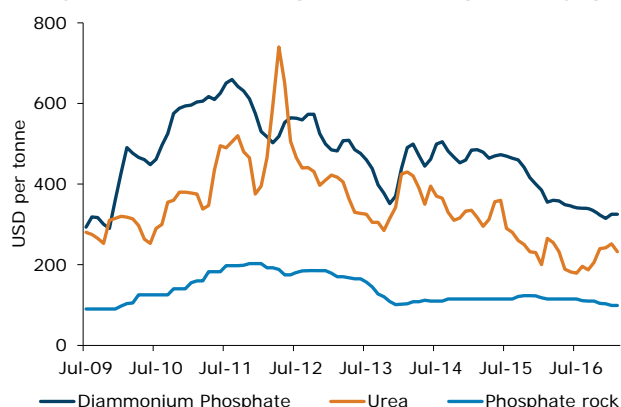
However, with the market becoming increasingly impatient with the rebalancing, the group is being pressured to extend the production cut agreement. Such a move would create the perception that OPEC is serious about focusing on prices, rather than volume. And this may be what is required to get prices back above the critical USD50/bbl and long-term viable level of USD60/bbl.

Movements in farm-gate fertiliser prices have been mixed, but are generally lower than the same time last year. International urea prices have lifted recently. Seasonal purchasing activity picked up in South America and Europe, while supply has contracted as Chinese exporters withdraw from the market. This has led to an increase in farm-gate urea prices. For phosphate nutrients there has been little change. Some plants continue to run at reduced capacity to keep market fundamentals in balance with sluggish demand from key importers.

FERTILISER PRICE INDICATORS

USD per tonne	Current Month	3 Mth Trend	Last Year	Chg. M/3M	Chg. Y/Y
DAP (USD)	325	321	355	↑	↓
Urea (USD)	232	245	265	↓	↓
Phosphate Rock (USD)	99	102	115	↓	↓
Farm-gate DAP (NZD)	744	757	840	↓	↓
Farm-gate Urea (NZD)	509	492	505	↑	↑
Farm-gate Super phosphate (NZD)	317	315	330	↑	↓

INDICATIVE INTERNATIONAL FERTILISER PRICES



Source: ANZ, Bloomberg

BORROWING STRATEGY

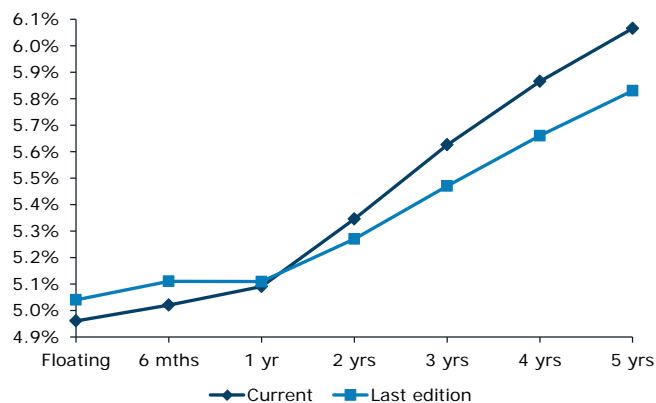
SUMMARY

Indicative rural lending rates have changed very little since our last edition, but the small changes we have seen have steepened the borrowing curve a touch. We expect this trend to continue, with the OCR expected to remain on hold, anchoring the short end; but the long end biased higher as global interest rates rise. Although the short end is expected to remain anchored for the next few quarters, we do expect to see rises in 2018 and beyond as the Reserve Bank (RBNZ) embarks on a fresh tightening cycle. Time is thus of the essence, as it is unlikely to get cheaper to fix for longer terms in the foreseeable future; and remaining on floating will start to become more expensive from next year onward. That said, as the curve steepens, breakevens move incrementally higher, so it pays to do the maths and set limits on the highest rate you're prepared to pay, bearing in mind that rates do fluctuate by a fair degree in any given month.

OUR VIEW

Indicative rural rates are little changed compared to levels prevailing in December, but the adjustments seen have steepened the yield curve a touch, and created a less "tick-shaped" curve.

FIGURE 1. INDICATIVE RURAL LENDING RATES



Source: ANZ, Bloomberg

Looking ahead, we expect this trend to continue, albeit at a more moderate pace than seen over late last year. This is based on our expectation that the RBNZ will leave the OCR on hold until early next year, anchoring the short end; and our expectation that global long-end interest rates will continue to rise gradually as the US economy picks up momentum, inflation returns to target and Fed policy normalises. While there are risks to this view (primarily political risks in Europe), real yields remain low across the globe and that's more a function of super-easy monetary policy settings than the market's collective judgement that the developed economies of the world are in a state of permanent stagnation. This suggests the gravitational pull for interest rates is higher rather than lower.

With limited scope for short-end rates to fall materially further (and an expectation that they will eventually rise as the RBNZ resumes OCR hikes in 2018), **and the long end biased higher, borrowers don't have time on their side.** All else equal, our forecast for rising term interest rates suggests that borrowers looking to fix for a given term are likely to find that rates will end up having been lower now than they will be in future. Recent rises have certainly validated moves by borrowers to fix sooner rather than later. The question now is; is the case for fixing still as strong as it was?

The short answer is "no, not quite". To the extent that we expect 3-5 year rates to rise, it makes sense to act soon. But breakevens are higher than they were in December, and so are current fixed rates. So unless you think the case for rates to rise is stronger, one's eagerness to fix ought to be tempered somewhat (but not extinguished), in our view.

Consider, for example the choice between fixing for 4 years or back-to-back 2 year terms. In December, you could have fixed for 4 years at 4.67%. Had you done so, you'd have implicitly been making the judgement that it was likely that the 2 year rate would rise from its then level of 5.27% to at least 6.06% 2 years later (the 2yr/2yr breakeven at the time was 6.06%). Fast forward to today, and as our table below shows, the 4 year rate is 5.87% and the 2yr/2yr breakeven is 6.39%. Those rates are both higher, so unless you believe rates are at increased risk of rising, your enthusiasm to fix ought perhaps to be tempered somewhat. In short, the journey higher has already begun, and as it matures, or certain global risks (e.g. European politics) become reality, altering the trajectory of rates, one should be more cautious.

Rural Lending Rates (incl. typical margin)		Breakeven rates			
Term	Current	in 6mths	in 1yr	in 2 yrs	in 3 yrs
Floating	4.96%				
6 months	5.02%	5.16%	5.47%	6.05%	6.47%
1 year	5.09%	5.32%	5.60%	6.19%	6.59%
2 years	5.35%	5.60%	5.89%	6.39%	6.73%
3 years	5.63%	5.87%	6.12%	6.55%	
4 years	5.87%	6.08%	6.31%		
5 years	6.07%				

Given the inherent volatility in interest rates (noting for example that 5-year swap rates have traded largely sideways over 2017, but ranged from 2.92% to 3.09%), it pays to get your timing right. **Given where breakevens sit, we favour setting limits on what you're prepared to pay and fix if/when opportunities arise.**

ECONOMIC BACKDROP

SUMMARY

The economy is expanding briskly but growth is set to moderate over 2017. Key factors driving this softening include capacity bottlenecks (notably finding skilled labour) and a winding down of credit-driven excesses. A moderation is required to ensure no build-up in nasty imbalances that would require purging. The next move in the OCR looks to be up. However, with inflation still low and retail rates being forced higher as banks compete for deposits, time is on the RBNZ's side.

OUR VIEW

The economy is growing above trend, eating into spare capacity. Key growth drivers include booming migration, strong construction activity, lifts in tourism activity and earlier supportive financial conditions. However, the story is far broader than these factors alone, with across-the-board strength across sectors and regions. Business and consumer confidence are both elevated and firms are employing.

We project GDP growth of around 3% over the year ahead. Our confidence composite gauge is pointing towards even stronger growth. Job ads remain on a positive trend. Income growth is running in excess of 5%. Headwinds from low dairy prices have dissipated (New Zealand's terms of trade have started to lift again) though some cash-flow pressures remain and dairy prices have weakened of late. On the other side, financial conditions have tightened somewhat, residential building consents are falling, and our Truckometer's Light Traffic Index has moderated.

We expect a 'gallop to a canter' style moderation in growth over 2017. Key influences include:

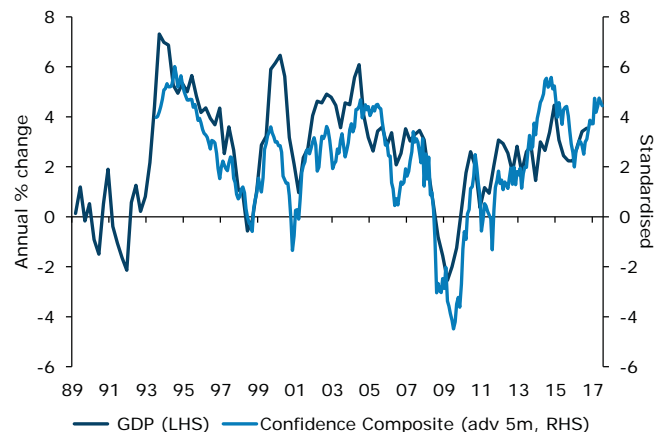
- **Capacity bottlenecks.** Firms are finding it more difficult to attract skilled staff, notably in sectors such as construction. The task of filling this void will increasingly fall on offshore labour, but the migration lever faces political sensitivities. Finding skilled staff is now the biggest constraint on business, according to our Small Business Monitor. The job vacancy rate (the ratio of jobs advertised to the working age population) is the highest we have seen since 1994; that flags pressure for wages to rise and the unemployment rate to fall.
- **Slower credit growth.** The financial sector continues to manage a mismatch between strong credit growth and more modest deposit growth. The former needs to slow and latter needs to rise. A failure to do so would risk extending imbalances across the economy (lifting dependence on offshore funding, increasing leverage, higher inflation, and a likely blow-out in the current account deficit). Such imbalances would lift the risk of an economic correction in the future and a larger swing in the economic cycle (which has

been the historical tendency). A side effect of dampening credit growth will be less activity growth (and housing supply).

The next move in the OCR will likely be a hike, though time is still on the RBNZ's side. Inflation is still low, the NZD is still high (with a strong economy supporting it), and banks are lifting retail interest rates, doing the RBNZ's job for it.

The biggest risk facing the economy is the global scene, which continues to perplex us. Emerging markets in Asia have high leverage. Europe faces structural and political challenges. Market distortions are aplenty. The US Fed is set to lift interest rates again shortly. A normalisation in monetary policy is long overdue but how will markets, which have been addicted to cheap money, cope? Western countries face a demographic headwind courtesy of slower working age population growth and more retirees. The social contract between mainstream politics and the electorate is broken. Populist politicians have emerged. That's not a great recipe for good policy outcomes.

FIGURE 1: GDP VS CONFIDENCE COMPOSITE



Source: ANZ, Roy Morgan, Statistics NZ

FIGURE 2. ANZ JOB AD VACANCY RATE AND THE UNEMPLOYMENT RATE



Source: ANZ, Statistics NZ, Seek, Trade Me

EDUCATION CORNER: NEW ZEALAND'S CHANGING TRADE PATTERNS

SUMMARY

New Zealand exported \$48.4bn worth of products in 2016 with an average annual growth rate of 4.4% since 1990. That compares to average growth across the New Zealand economy of 4.8%. So while export growth has been okay, it's hardly stellar relative to the broader economy, and certainly well below the growth in trade around the globe.

There have been large changes in export destinations since the reforms to the primary sector and broader economy during the 1980s. China is now New Zealand's largest goods export destination, having accelerated since 2008. Traditional markets such as Australia, the US, UK, Japan and South Korea are still prominent, though with lower shares. The likes of Singapore, Taiwan, Indonesia and Thailand are increasing the range and value of products they import. All have pushed up the rankings and into the top 10 destinations.

In terms of the mix of products, it's no surprise that dairy products have increased their share, courtesy of more milk powder. Other big movers are logs and wine, which have collectively doubled their share of New Zealand exports since 1990. The biggest loser is wool products, which made up 7.2% of total exports in 1990 but now comprises just 1.4%. Other products stepping aside were raw hides & skins, frozen lamb and aluminium products.

THE 'WHERE TO' FOR NEW ZEALAND EXPORTS

It's been an arm wrestle of late between Australia and China for the title of New Zealand's largest export destination. Exports to China really took off in 2008, hitting their highest point of \$11.6bn in August 2014 when dairy exports (and prices) were at their peak. Annual average growth averaged 32% through this period. That's one of the biggest-ever market shifts in New Zealand's entire trading history. Unfortunately what goes up fast can reverse quickly too. The unwinding of some speculative Chinese behaviour and a (not entirely unrelated) global slump in dairy prices saw a 29% correction occur in the 9 months to May 2015. Australia has been more steady-as-you-go, but with a downward trend since 2011. The main driver there has been the appreciation in the NZD/AUD and lower crude oil exports. That said, the decline is a concern, given Australia's close proximity and the two nation's linkages.

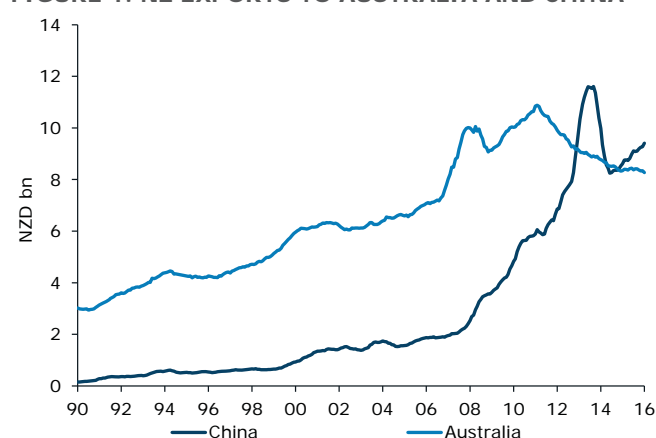
TABLE 1: NZ'S TOP 10 EXPORT DESTINATIONS

	Export value (NZDm)		Annual growth rate 90-16	Export share (%)		Rank 2016 (1990)
	1990	2016		1990	2016	
China	152	9,406	17.2	1.0	19.4	1(22)
Australia	3,020	8,270	3.9	19.2	17.1	2(1)
US	2,045	5,298	3.7	13.0	10.9	3(3)
Japan	2,560	2,975	0.6	16.2	6.1	4(2)
Korea	673	1,494	3.1	4.3	3.1	5(5)
UK	1,119	1,463	1.0	7.1	3.0	6(4)
Singapore	201	1,126	6.9	1.3	2.3	7(16)
Taiwan	267	1,088	5.5	1.7	2.2	8(12)
Indonesia	159	868	6.7	1.0	1.8	9(20)
Thailand	138	825	7.1	0.9	1.7	10(25)
Netherlands	142	808	6.9	0.9	1.7	11(23)
Malaysia	276	797	4.2	1.7	1.6	12(10)
Hong Kong	234	795	4.8	1.5	1.6	13(14)
Algeria	126	696	6.8	0.8	1.4	14(26)
Germany	384	680	2.2	2.4	1.4	15(6)
India	113	639	6.9	0.7	1.3	16(27)
Philippines	140	634	6.0	0.9	1.3	17(24)
UAE	35	621	11.8	0.2	1.3	18(45)
Canada	280	598	3.0	1.8	1.2	19(9)
Vietnam	1	516	28.6	0.0	1.1	20(126)

Source: ANZ, Statistics NZ

While China has seen the most notable shift in its ranking versus New Zealand's other export destinations, other big movers since 1990 have included Singapore, Taiwan, Indonesia and Thailand, which have all climbed the league table into the top 10. Traditional markets such as Australia, the US, UK, Japan and South Korea are all still important too, but many other emerging markets continue to offer attractive opportunities for New Zealand exports.

FIGURE 1: NZ EXPORTS TO AUSTRALIA AND CHINA



Source: ANZ, Statistics NZ

EDUCATION CORNER: NEW ZEALAND'S CHANGING TRADE PATTERNS

COUNTRY SPECIFICS

China

China is New Zealand's largest export destination, taking \$9.4bn worth of products in 2016 (19.4% of total goods exports). While this might seem like a lot, New Zealand is small fry in the grand scheme of things, accounting for only 0.4% of China's total imports for 2016.

Compare that to China's total import bill of \$1,589bn (USD), importing most from South Korea (~10%) and the US (~8%), while Australia is sixth on the list at 4% of total imports. China ranks as the largest export destination for 12 of New Zealand's 75 export groups. This is behind Australia (first for 32), but the 12 it ranks first in are some of New Zealand's largest export categories (i.e. milk powder, cheese, frozen lamb, logs etc).

China first took notice of New Zealand products around 2000, but growth really accelerated in 2008 as the free trade agreement took hold, reaching a peak of \$11.6bn in August 2014. At the epicentre of this exceptional growth between 2008 and 2014 (26% per annum) was dairy products (up \$3.9bn). New Zealand doubled its share of China's dairy imports from 22% to 44% over this period.

TABLE 2: NZ'S EXPORT PRODUCTS TO CHINA, 1990 AND 2016

	Share of China imports (%)		Share of NZ exports (%)		Rank
	1990	2016	1990	2016	2016
Dairy	9.8	29.8	0.6	23.2	1
Forestry	22.5	23.8	2.2	42.2	1
Other	7.1	11.7	0.2	8.9	3
Meat	0.0	10.8	0.0	16.6	1
Processed foods	12.9	6.7	3.7	14.3	2
Seafood	0.1	6.0	0.0	32.1	1
Fruit and veges	0.0	4.9	0.0	14.4	2
Wool	46.6	3.3	6.3	47.3	1
Other agri/hort	1.0	2.6	0.2	31.3	1
Beverages	0.0	0.5	0.0	2.5	5
Total	100	100	1.0	19.4	1

Source: ANZ, Statistics NZ

After falling back to \$8.2bn in May 2015, **Chinese interest in New Zealand products has started to pick up again.**

The lift in exports to China has been driven by a range of factors. These have included:

1. **A growing population, larger middle class, urbanisation and higher personal incomes.** Combined with the modernisation of the food

supply chain and increasing presence of modern retail outlets and quick service chains, this has led to a more westernised diet and higher calorie intakes.

2. **Improved infrastructure, especially the cool chain and more refrigerators in homes.** This has increased market penetration of NZ's perishable exports by improving shelf-life and the ability to transport and store products throughout a larger area of China.
3. **Tight domestic supply and associated rising retail prices for certain goods, such as dairy and red meat.** This has supported a general increase in soft commodity imports. The tightness in domestic supply has often been driven by disease issues, or low profitability for small/backyard producers and regulatory changes to the food system causing consolidation and higher compliance costs.
4. **Consumer concerns over food safety with regard to China's domestic supply, and the Government's resulting stricter control over food safety.** This has boosted sourcing from multinational retailers and foodservice companies, expanding their footprints and the general underlying demand for imported food products.
5. **NZ's free trade agreement, which has lowered trade barriers and tariffs** for a range of exports, boosting our competitiveness against both other countries and domestic supply.

New Zealand exporters have experienced exceptionally high demand from China over a relatively short period of time and demand has again gained momentum over the last 18 months. The strengthening of business relationships, direct investment further up supply chains, growth in new distribution channels such as online sales, regulatory changes to food safety standards, product innovation and further increases in purchasing power have all combined in different measures to lead this recovery. While there are new opportunities, true success doesn't come easily and there are still many unknowns in such a large market. This means agility is required and appropriate due diligence to truly understand and be successful in a very dynamic marketplace.

Australia

Australia is currently New Zealand's second-largest export market at \$8.3bn in 2016 (17% of total exports). It also the second-most diverse export destination, taking 74 of our 75 export products by group. Singapore is the most diverse, taking all 75. Fresh & chilled lamb/

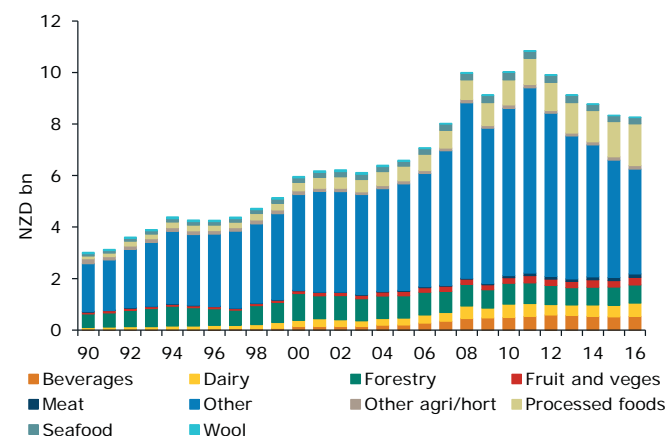
EDUCATION CORNER: NEW ZEALAND'S CHANGING TRADE PATTERNS

mutton was the only product not to be exported to our nearest neighbour, with Australia having its own plentiful local supply. Our export profile to Australia hasn't changed significantly since 1990. Our largest export groups are oil, chemicals, machinery and equipment. Crude and other extracts are imported by Australia to be manufactured into other products (i.e. petrol).

To detail Australia's current export profile:

- Australia ranks first for 32 exports and is in the top five for 57 of the 75 groups. No surprises here, given their proximity.
- 83% of our crude oil exports went to Australia in 2016 (\$484m). The only other recipients of NZ crude oil are Singapore, Thailand, Korea and Tonga.
- 96% of our gold exports go to Australia (\$382m in 2016). The remainder is spread over 10 other destinations.
- Australia is our fourth-largest dairy market, taking 4% of total exports consisting of mostly cheese (\$293m) and butter (\$108m).
- The largest export group is machinery and equipment at \$546m. The largest component of this group is heat pumps, with a total value of \$72m, down from its peak of \$181m in 2011.
- \$316m of malt extract and \$238m of plastics were exported to Australia in 2016.

FIGURE 2: NZ EXPORTS TO AUSTRALIA

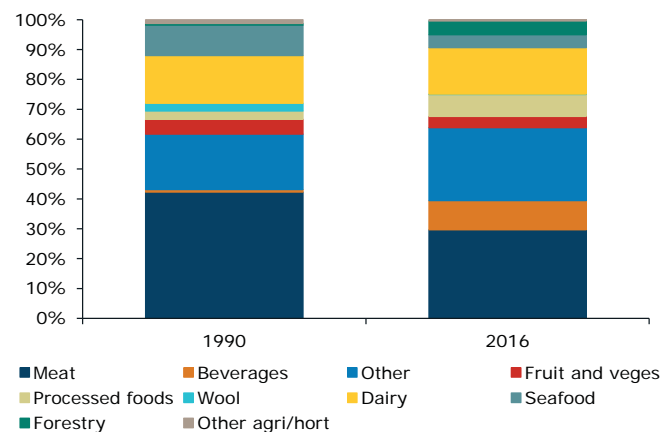


United States

The United States sits third on New Zealand's exports market list (no change from 1990) at \$5.3bn in 2016 (11% of total exports). The mix of products leaving our borders for the US has evolved as meat products make way for growing machinery and equipment, beverages and forestry

exports. While frozen beef exports have increased 45% since 1990 and are still the largest group at \$1.2bn, total exports have risen 159% (3.7% per year). Wine exports are second on the list (\$488m), growing at an average rate of 28% per year since 1990. Forestry products (mainly sawn timber and fibre-board) have also lifted, growing 12.6% per year on average.

FIGURE 3: PRODUCT GROUP SHARES TO US



The US is our top importer for 11 products, including frozen beef; wine; apples; prepared or preserved fish; albumins, gelatin, glues, and enzymes; animal products (not elsewhere specified); optical, medical, and measuring equipment; dairy liquids; whey; sawn timber and casein exports. It is second for 18 other products, including beer.

Japan

Japan is New Zealand's fourth-largest export market at \$3.0bn in 2016 (6% of total exports). While it is slowly falling down the list of top destinations (from second place in 1990), it is still a prolific buyer, ranking highest for nine product groups. Included in this list are kiwifruit, juices, aluminium, fibre and particle board, fresh/chilled beef, vegetables, other meat & edible offal and horticulture products. This is down from 20 products in 1990. The products that gained share within exports sent to Japan are fruit and vegetables (up 8pts to 18%, and within this, kiwifruit is up 7pts to 13% of Japanese exports), dairy (up 8pts to 15%) and processed foods (up 6pts to 12%). The largest demise in share has been for seafood, aluminium and wool products, which were 38% of exports to Japan in 1990, but now account for only 19%.

EDUCATION CORNER: NEW ZEALAND'S CHANGING TRADE PATTERNS

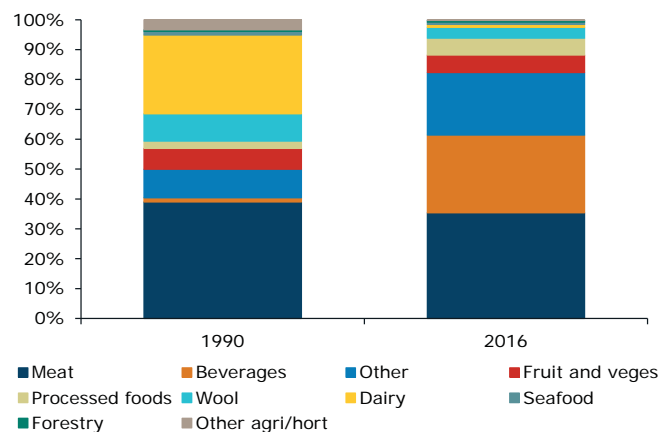
Korea

Exports to Korea were \$1.5bn in 2016 and the country remains the fifth-largest export destination, the same as it was in 1990. Logs are our largest export at \$376m, frozen beef (\$128m), cheese (\$93m) and aluminium (\$88m) make up the other large groups. Korea is also our sixth-largest kiwifruit destination.

United Kingdom

The United Kingdom is New Zealand's sixth-largest export destination (fourth in 1990). It is the largest destination for fresh/chilled lamb (\$265m, 33% of total) and honey (\$50m, 17% of total). It is also an important destination for wine.

FIGURE 4: PRODUCT GROUP SHARES TO UK



Source: ANZ, Statistics NZ

The UK ranked first in 2016 for fresh/chilled lamb and second behind China for frozen lamb. These two products account for 32.5% of all exports to the UK, down from a 37% share in 1990. The small decline for meat and a more dramatic drop in dairy products' share (-25 percentage points) largely reflects increased wine exports. New Zealand exported \$12m worth of wine to the UK in 1990 (54% of all New Zealand wine exports at the time and larger than any other country). In 2016, despite slipping to number two behind the US, wine exports have grown to \$379m. Wine now makes up 26% of New Zealand's export value to the UK.

ROUNDING OUT THE TOP 10

Singapore

Exports to Singapore came to \$1.1bn in 2016, making it number seven on the export list. It is also the most diverse, being the only country to receive all 75 export groups, some of which may well be redistributed to other markets

within the Asian region. It edges out Australia (74), Japan (73), Thailand (72) and China, Taiwan and the US (71) that make up the top five for sheer number of products received. Exports to Singapore are mostly made up of ships, boats and floating structures (\$281m), dairy products (\$251m) and \$150m of processed foods. The smallest group is seeds, fruit and spores for sowing, which came to \$9,231 in 2016.

Taiwan

Exports to Taiwan reached \$1.1bn in 2016 (2.2% of total) and is now the eighth-largest market (12th in 1990). Taiwan imports more NZ cherries than any other destination and is in the top five for 10 other product groups, which include some of our largest exports in beef, apples, kiwifruit and logs.

Indonesia

Dipping below the \$1bn mark, exports to Indonesia reached \$868m in 2016. This destination has outdone its peers since 1990, having increased its share of exports from 1% to 1.8% and jumped 11 places to be the ninth-largest market. Indonesia doesn't rank highest for any of the 75 groups, but has always imported a diverse range of products (currently 57). The vast majority (49%) of exports to the region are dairy products; milk powder alone is 24% of all exports.

Thailand

New Zealand exported \$825m worth of goods to Thailand in 2016, up from \$138m in 1990. Thailand's share of exports reached 1.7% (up from 0.9%) and it climbed 15 places over this period. The bulk of products going to Thailand are dairy products (41%), but exports in the fruit & vegetable, beverage and processed food categories have grown at an average annual rate of greater than 15% since 1990.

OTHER NOTABLE CHANGES

Vietnam

Vietnam is an emerging economy with real GDP and per capita growth rates above 5% on an annual basis¹. It was destination number 126 in 1990, importing only eight of the 75 product groups we monitor, and was made up mostly of skim milk powder and various machinery and equipment. Consumer tastes and trends have evolved as the economy matures and standard of living improves, which provides opportunities for exporting nations.

¹ Haver Analytics

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In 2016, New Zealand exported goods worth \$516m to Vietnam, making it the 20th-largest export destination. This consisted of 62 different products which were mostly dairy (\$253m), forestry (\$83m) and fruit and vegetables (\$42m). The change from eight to 62 exported products is the most among all of New Zealand's trading partners.

Canada

Canada has slipped to 19th place in 2016 when it used to be ninth in 1990. While the product mix sent to Canada is still diverse (59 of the 75 groups in 2016), it is dominated by wine (\$110m), frozen beef (\$98m), machinery (\$67m) and frozen lamb (\$61). Canada is New Zealand's fourth-largest wine export destination behind the US, UK and Australia.

Italy

Falling 16 places (now 25th) is exports to Italy. Most of the 45 products exported to Italy haven't changed significantly: skins/hides (\$157m in 2016), wool (\$67m) and sheepmeat (\$25m) still feature as some of the major groups now as they did in 1990. Italy is our largest export partner for hides, skins and leather products. Kiwifruit is the third-most exported item at \$33.4m in 2016 (90% green variety, 10% gold variety). Italy itself is the world's second-largest producer of kiwifruit behind China; New Zealand sits third on this list.

India

India has grown in prominence as an export destination; it is now New Zealand's 16th largest market. While there are significant barriers to the exponential growth seen with China, it represents an exciting longer-term prospect. India is our largest importer of lactose and scrap metals (\$7.4m and \$56m respectively). Our largest export is logs (\$243m, third behind China and South Korea), which account for 38% of exports to India. Logs and other forestry products are sought after because India has limited domestic forest supply.

TABLE 3: INDIA'S TOP 4 IMPORT NATIONS AND NEW ZEALAND (2016)

	Total imports	Rank	Share (%)
China	60.6	1	16.8
US	21.7	2	6.0
UAE	19.3	3	5.3
Saudi Arabia	18.5	4	5.1
New Zealand	0.5	62	0.1

Source: Haver Analytics, all values are USDbn

Despite strong trade relationships and growing trade ties, New Zealand was India's 62nd-largest import nation, making up only 0.1% of total imports.

Trade negotiations with India are ongoing and will serve to strengthen economic ties and complement well-established education and tourism-related trade relationships. However, currently there are many impediments for New Zealand primary sector exports to India:

1. Despite improvement, India still ranks low in a number of performance measures that support international trade; 79th on the Corruption Perceptions Index (though that's equal with China), and 35th in the Logistics Performance Index, for example;
2. A number of trade barriers and high import tariffs exist for many products, particularly agricultural products;
3. Still low average incomes;
4. Poorly developed cool chain and other infrastructure for the distribution and storage of perishable products;
5. Government intervention and regulation in a range of soft commodity markets that favour domestic produce over imports.

Pacific Islands

The Pacific Islands Forum (ex-Australia) includes some of New Zealand's closest neighbours and collectively buys \$1.07bn of New Zealand exports (2.2% of total). That would make the Forum our ninth largest trading partner, ahead of Indonesia and Thailand. Non-primary products are the main export (62% in 2016) to the region. Meat (8.2%) is the next-largest category but gaining in share are dairy, processed foods, fruit & vegetables and beverages.

The largest export destination of the Forum is Fiji, which imported \$470m of New Zealand product (1%) and is our 22nd largest destination overall. Dairy products are the largest group of exports (10%) and have grown at 14% per annum over the last 10 years. The last two years have seen forestry, meat, processed foods, fruit & vegetables and beverage exports increase significantly. Fiji ranks in the top 10 destinations for 22 products.

Exports to Papua New Guinea reached \$178m in 2016, making it the second-largest destination in the Forum (38th overall), but exports have fallen 18% over the last five years. Meat is the

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main primary export. Dairy products have fallen 26% since 2011, while processed foods have increased 9% making it the second-largest primary export group.

TABLE 4: NZ'S EXPORT PRODUCTS TO THE PACIFIC ISLAND FORUM (ex-AUSTRALIA), 1990 AND 2016

	Export value (NZDm)		Annual growth rate 90-16	Export share (%)		Rank 2016 (1990)
	1990	2016		1990	2016	
Fiji	259	470	2.3	1.65	0.97	22(13)
PNG	64	178	4.0	0.41	0.37	38(31)
Samoa	45	109	3.5	0.29	0.23	43(39)
Cook Islands	30	102	4.9	0.19	0.21	44(50)
Tonga	26	80	4.4	0.16	0.16	49(52)
Vanuatu	11	51	6.0	0.07	0.11	64(70)
Solomon Islands	12	29	3.5	0.08	0.06	77(68)
Niue	7	16	3.4	0.04	0.03	94(80)
Kiribati	4	13	4.8	0.02	0.03	100(88)
Marshall Islands	2	6	4.6	0.01	0.01	123(106)
Micronesia	0	5	18.7	0.00	0.01	129(154)
Tuvalu	1	4	7.1	0.00	0.01	137(129)
Nauru	3	2	-2.2	0.02	0.00	163(96)
Palau	0	1	21.1	0.00	0.00	175(173)
PIF	463	1067	3.3	2.94	2.20	9(6)

Source: ANZ, Statistics NZ

A small island in the central Pacific Ocean with a population of about 10,000 people, **Nauru was the export destination for 41 different New Zealand products in 1990; it received only 18 in 2016.**

The dropping of 23 of New Zealand's products is the largest decline of any export destination, reflecting a decline in the island's purchasing power as its own exports have declined. Most of New Zealand's \$1.6m exports to Nauru are machinery, equipment, crude materials and metals.

In 1990 Palau, another small Pacific nation, imported only textile products from New Zealand, and not much of them – it now buys 47 different products from New Zealand exporters. Palau imported almost a million dollars of product from New Zealand in 2016, most of which was pharmaceutical products, seafood, and medical and measuring equipment.

Keeping perspective – New Zealand's small stature in international trade

New Zealand products are sought by a number of countries and many are attracting comparatively higher prices versus the competition, but in the grand scheme of things our scale is miniscule compared to other countries. Table 5 shows New Zealand's share of imports among the world's top 10 importing nations

is between 0.1% and 0.4% respectively. To be fair, NZ's GDP share is estimated to be within this range too.

TABLE 5: NEW ZEALAND RANKING AMONG TOP 10 IMPORTING NATIONS

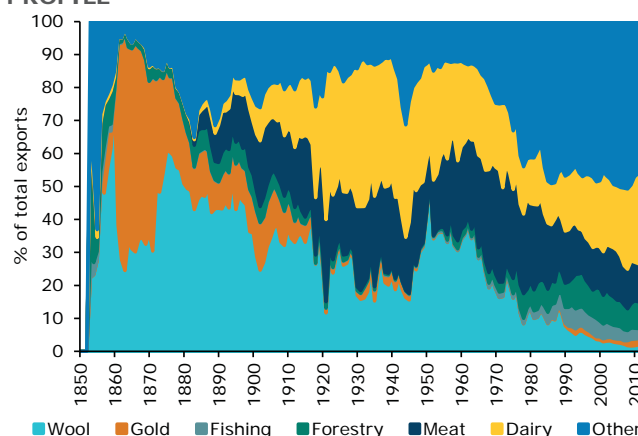
	NZ imports	Total imports	NZ Rank	NZ share of imports (%)
US	4.5	2313	51	0.2
China	6.6	1826	38	0.4
Germany	0.7	1058	70	0.1
UK	1.3	630	49	0.2
Japan	2.4	626	34	0.4
France	0.4	569	72	0.1
Hong Kong	0.5	559	35	0.1
Rep. of Korea	1.2	437	37	0.3
Netherlands	0.4	425	72	0.1
Canada	0.5	422	47	0.1

Source: ANZ, Comtrade (2015), all values are USDbn

WHAT IS NEW ZEALAND EXPORTING?

New Zealand's exports of primary goods were founded on the shipping of primary goods to the UK. In 1882 the first refrigerated shipment of lamb carcasses was sent to London. The introduction of refrigeration helped to transform the New Zealand economy and the wealth of the nation grew exponentially.

FIGURE 5: LONG-TERM PERSPECTIVE OF NZ'S EXPORT PROFILE



Source: ANZ, Statistics NZ, NZIER

From a trade policy perspective, two important trends emerged. New Zealand's export orientation rapidly swung towards the middle class consumers of South Eastern England. New Zealand's comparative advantages became concentrated in animal products for this single market (meat, wool and dairy). Furthermore, the prices New Zealand received were often set by inter-governmental agreement at high

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levels as a result of the two World Wars. Living standards rose to be the third-highest amongst nations. They remained there for over 70 years, until the early 1950s when the end of World War II coincided with a new period of globalisation, opening up of markets, loss of preferential access for New Zealand into key markets (the UK joining the EEC in 1973), and the end of guaranteed export prices.

Fast forward to 2016 and the influence of this history still lingers, with animal products being an important contributor to overall exports. However, end markets have shifted substantially and a range of other exports have entered the picture as the New Zealand economy has diversified.

TABLE 6: NZ'S BROAD EXPORT GROUPS IN 2016

	Export value (NZDm)		Annual growth rate 90-16	Export share (%)		Rank 2016 (1990)
	1990	2016		1990	2016	
Other	4751	12290	3.7	30.2	25.4	1(1)
Dairy	2582	12112	6.1	16.4	25.0	2(2)
Meat	2513	6079	3.5	15.9	12.5	3(3)
Forestry	1539	5296	4.9	9.8	10.9	4(4)
Processed foods	531	4375	8.5	3.4	9.0	5(9)
Fruit and veges	936	3174	4.8	5.9	6.6	6(7)
Beverages	95	1924	12.3	0.6	4.0	7(10)
Seafood	747	1751	3.3	4.7	3.6	8(8)
Other agri/hort	937	781	-0.7	5.9	1.6	9(6)
Wool	1127	666	-2.0	7.2	1.4	10(5)

Source: ANZ, Statistics NZ

Annual dairy exports reached \$17.1bn in August 2014 (its highest export value), but have since pulled back to \$12.1bn. Nonetheless dairy products have gained share overall, from 16.4% in 1990 to 25% of New Zealand's exports in 2016. Making the largest stride in the dairy group is wholemilk powder, which accounted for 9.4% of total exports in 2016.

In terms of how many countries for which it is New Zealand's largest single export, wholemilk powder rank second in 18 different countries in 1990 (first was frozen lamb at 24 countries). It is now the highest-value export for 49 destinations, by far the most of any of the 75 groups. The next best are seafood and butter with 14 apiece.

Exports of dairy liquids have grown to \$2.3bn (a 13% annual growth rate since 1990). It is New Zealand's fourth-largest export item and accounts for 4.7% of total exports. The US has been the most

important market for the last 10 years at \$393m in 2016 (a 17% share), but Chinese demand has grown very quickly (42% over the last year) to reach \$392m last year. Mexico (third-largest destination and 11% overall share) purchased 4.5 times more product in 2016 than five years before.

FIGURE 6A: NZ DAIRY EXPORTS SHARE OF TOTAL, 1990

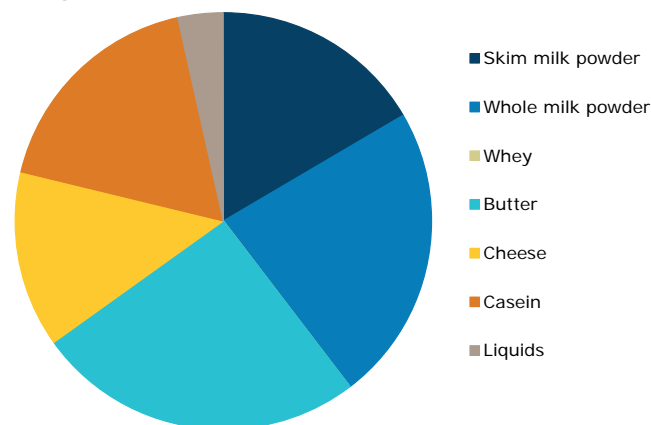
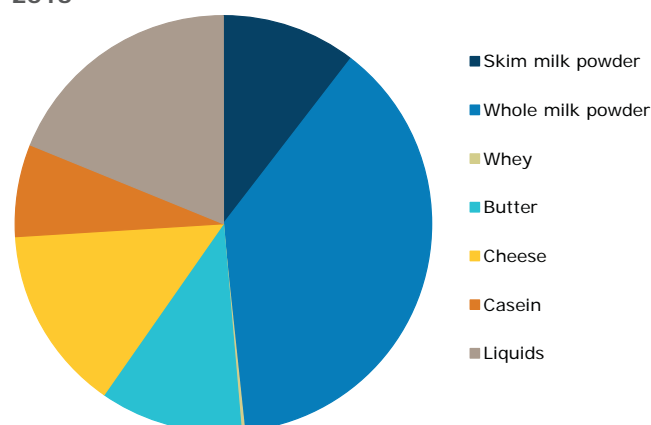


FIGURE 6B: NZ DAIRY EXPORTS SHARE OF TOTAL, 2016



Source: ANZ, Statistics NZ

Cheese exports totalled \$1.7bn in 2016 and accounted for 3.6% of New Zealand's total exports. It is the seventh largest export earner. Chinese demand for cheese products through the foodservice channel has accelerated over the last 10 years and they now account for 18% of total cheese exports. Traditionally Australia and Japan have accounted for up to a third of all cheese exports (17% and 16% respectively), but there has been little growth in exports to these markets for some time.

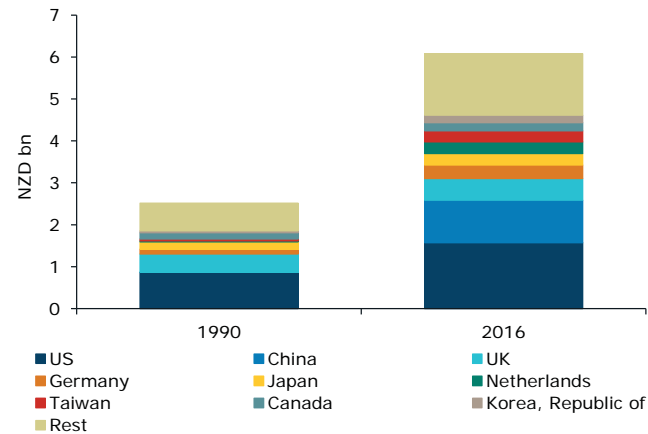
Butter exports are now \$1.3bn, making up 2.8% of total exports (down from 4.2% in 1990). It is the 12th-largest export earner. Exports have trended upwards since 2006, having almost doubled in that time thanks largely to Chinese interest.

² Includes milk, cream, yoghurt, buttermilk, milk or cream curd.

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Meat exports are the second-largest primary export group at \$6.1bn in 2016 (12.5% of total exports). Most meat products are sent to the US (26%) and China (17%) and their shares have been getting larger. The UK, Germany and Japan make up the next 18% of meat exports, but have been losing share over the last five years.

FIGURE 7: NZ MEAT EXPORT DESTINATIONS

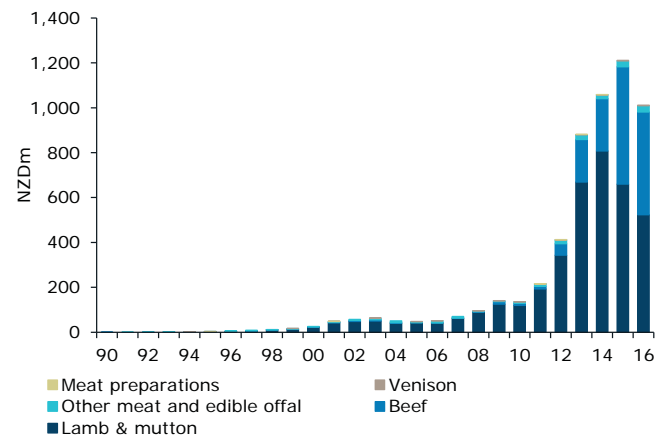


Source: ANZ, Statistics NZ

Three quarters of the \$1.6bn of meat products sent to the US is frozen manufacturing beef (49% of total NZ exports). Frozen beef exports to the US have grown by 50% in the last five years.

Meat exports to China have grown by almost \$800m (370%) in the last five years to reach \$1bn. This exceptional growth has mostly been frozen sheepmeat (up \$331m) and frozen beef (up \$445m).

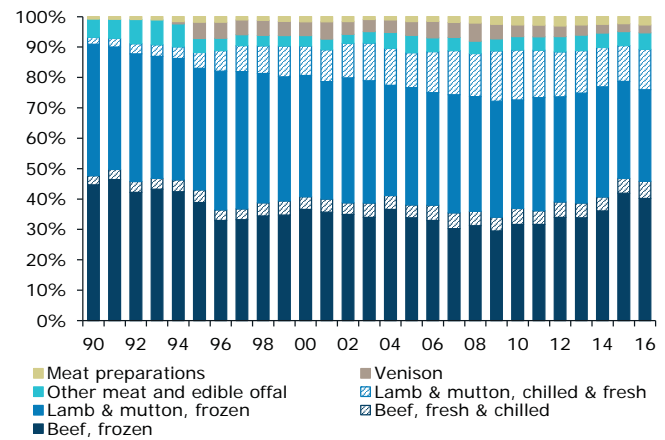
FIGURE 8: NZ MEAT EXPORTS TO CHINA



Source: ANZ, Statistics NZ

Frozen beef and lamb make up the lion's share of meat export products (70%), but the latter has lost ground, going from 43% in 1990 to 30% in 2016. Chilled and fresh lamb makes up another 13%.

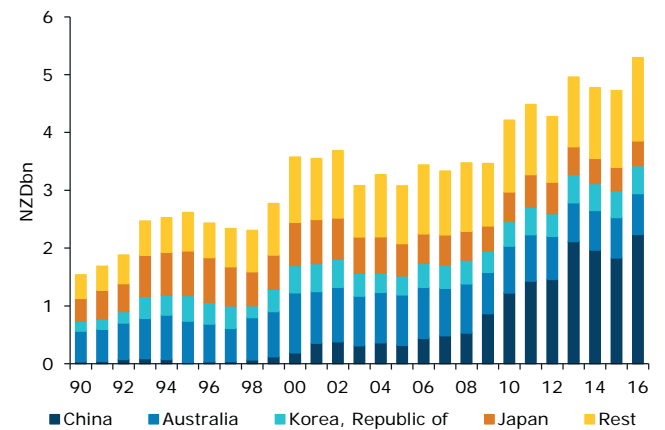
FIGURE 9: NZ MEAT EXPORT PRODUCTS



Source: ANZ, Statistics NZ

New Zealand forestry exports totalled \$5.3bn in 2016 (11% of total). The emergence of Chinese demand has helped exports grow steadily since 1990 at an average annual rate of 4.9%. China's share of forestry exports has risen from 13% in 2006 to 42% in 2016, totalling \$2.2bn. Australia's export share has halved in the last 10 years, with total value down 20%. The traditional Japanese market is now valued at \$430m, down 24% over the last five years.

FIGURE 10: NZ FORESTRY EXPORT DESTINATIONS



Source: ANZ, Statistics NZ

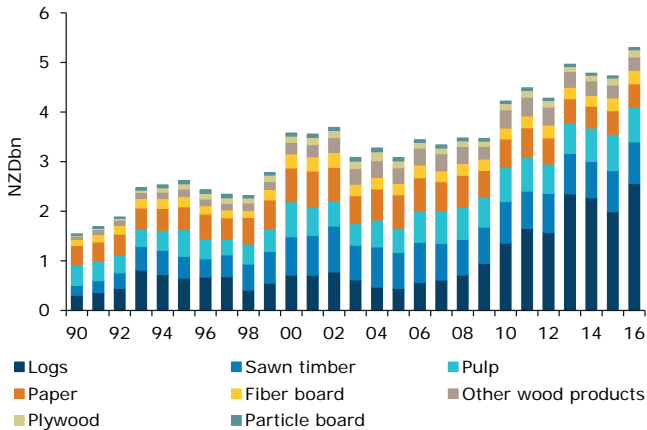
Some notable growth markets include:

- India: bought \$297m worth of product in 2016 (fifth largest market), up from \$55m in 2006 at an average rate of 18.3% per year.
- Singapore: has almost doubled demand in the last five years to \$40m in 2016.
- South Africa: forestry exports have receded in the last two years, but achieved 38% average growth from 2006 to 2014.
- The Netherlands: imported \$34m in 2016, growing at an average rate of 58% over the last 10 years.

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New Zealand log exports rose to \$2.6bn in 2016 and are the second-largest export product behind wholemilk powder. Its share of forestry exports has lifted to 48% (5% of all exports), having more than doubled (20%) since 1990. Chinese demand now soaks up 71% of the log market. Sawn timber (\$839m) and wood pulp (\$695m) made considerable contributions to forestry exports.

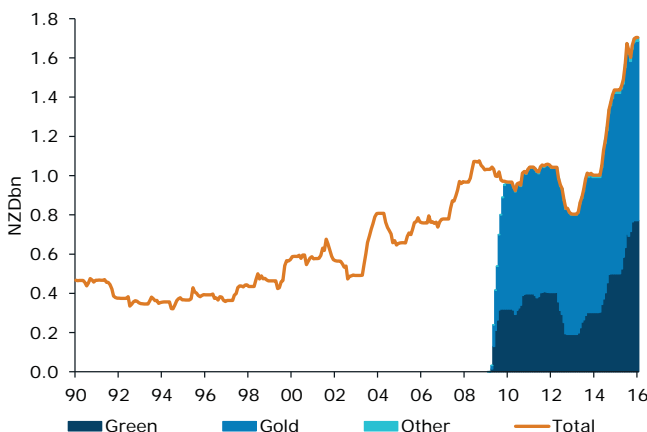
FIGURE 11: NZ FORESTRY EXPORT GROUPS



Source: ANZ, Statistics NZ

Fruit and vegetables made up 6.6% of New Zealand exports and totalled \$3.2bn in 2016, which is more than double the value achieved 10 years ago. At the forefront of growth is kiwifruit, which is now a \$1.7bn export earner and ranked eighth out of all products. The taste profile has largely determined the destination; Asian consumers are demanding the sweeter Sungold variety, whereas European consumers prefer the traditional Green variety.

FIGURE 12: NZ KIWIFRUIT EXPORTS BY TYPE



Note: Individual varieties were not coded until 2010.

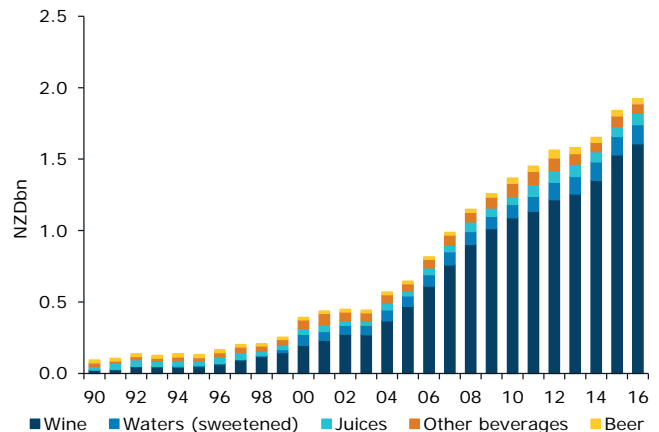
Source: ANZ, Statistics NZ

Apple exports were \$707m in 2016, having almost doubled in value in the last five years. Apples are our 24th-largest commodity and make up 1.5% of overall exports. Apples were exported to 67 different destinations in 2016, with the top three being the US (\$112m), the UK (\$79m) and Taiwan (\$78m).

Exports of avocados (\$126m) and cherries (\$68m) are growing very quickly, with average annual growth rates of 14% and 15% respectively since 1990.

New Zealand beverages were on the cusp of hitting the \$2bn mark in 2016 (\$1.92bn), having grown 12% per year on average since 1990. The beverage sector has undergone significant changes since 1990. Wine, juices, beer and 'other' beverages each held 22%-26% share of beverage exports in 1990, but with 18% growth per annum since then, wine now makes up a whopping 84% of this group. Water (sweetened) is the next largest at 6.9%.

FIGURE 13: NZ BEVERAGE EXPORT GROUPS



Source: ANZ, Statistics NZ

Wine is New Zealand's 11th largest export product at \$1.6bn in 2016 and has grown on average 18% each year since 1990. The US (\$488m), the UK (\$380m) and Australia (\$370m) accounted for 77% of total exports in 2016. Exports to the US in particular have more than doubled in the last five years. Other destinations such as Canada, the Netherlands and France are also growing.

Seafood exports³ were \$1.8bn in 2016, having largely maintained a steady total share (3.6%) since 1990. China (32%), Australia (14.2%) and the US (13%) make up 60% of the market. Chinese demand has accelerated since 2011, having doubled

³ This group includes fish/crustaceans/molluscs/aquatic invertebrates, prepared or preserved fish and fish fats and oils.

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in that short five year period and having grown 19% per year over the last 10 years. Australian demand for seafood products has fallen 9% over the last five years but is trending up again. Seafood exports to this destination have been steadily increasing at 4.2% per year since 1990. Japan held 38% of the market in 1990, but has declined since then to just 5.7% now.

Honey is a growing sector, having peaked at \$315m in June 2016. Honey exports finished the year at \$295m, and were sent to 51 countries.

The UK (\$50m), China (\$49m) and Japan (\$43m) are the main destinations, although demand is growing from a number of others.

Wool was our largest export in 1990 at \$1.1bn, but having peaked at \$1.3bn in 1995, wool exports have declined at an average 2% per year to reach \$666m in 2016.

TABLE 7: RELATIVE RANKING OF NEW ZEALAND'S EXPORT MARKETS, 2016 VERSUS 1990

	Total	Meat	Dairy	Wool	Forestry	Fruit & vegetables	Seafood	Other agriculture/horticulture	Processed foods	Beverages
China	1(22)	1(22)	1(32)	1(6)	1(7)	2(.)	2(.)	1(23)	2(6)	5(47)
Australia	2(1)	2(1)	4(10)	7(8)	2(1)	4(5)	4(5)	3(1)	1(2)	1(1)
USA	3(3)	3(3)	2(1)	15(9)	6(14)	6(3)	6(3)	7(10)	3(3)	2(2)
Japan	4(2)	4(2)	5(3)	9(1)	4(2)	1(2)	1(2)	6(4)	4(1)	6(4)
Korea	5(5)	5(5)	18(22)	35(14)	3(3)	8(24)	8(24)	5(2)	7(10)	20(16)
UK	6(4)	6(4)	60(2)	3(2)	26(18)	9(4)	9(4)	21(7)	10(5)	3(3)
Singapore	7(16)	7(16)	16(16)	41(45)	13(8)	14(7)	14(7)	12(18)	6(17)	8(9)
Taiwan	8(12)	8(12)	14(12)	29(25)	9(4)	5(10)	5(10)	17(16)	11(8)	22(28)
Indonesia	9(20)	9(20)	7(17)	30(52)	7(5)	13(15)	13(15)	9(20)	19(18)	39(34)
Thailand	10(25)	10(25)	13(11)	12(24)	11(9)	10(29)	10(29)	13(21)	8(27)	24(36)
Netherlands	11(23)	11(23)	22(28)	37(11)	15(20)	12(16)	12(16)	10(13)	12(7)	7(30)
Malaysia	12(10)	12(10)	8(6)	20(35)	12(10)	17(14)	17(14)	23(19)	9(34)	15(12)
Hong Kong	13(14)	13(14)	24(29)	.(19)	17(6)	11(8)	11(8)	4(8)	5(19)	11(10)
Algeria	14(26)	14(26)	3(7)	.(.)	.(.)	53(.)	53(.)	.(.)	28(.)	.(.)
Germany	15(6)	15(6)	47(9)	5(3)	33(22)	21(13)	10(18)	15(22)	13(4)	13(33)
India	16(27)	16(27)	57(73)	4(7)	5(11)	16(23)	106(.)	8(15)	34(71)	52(48)
Philippines	17(24)	17(24)	6(8)	.(51)	8(12)	34(22)	32(37)	22(26)	18(42)	23(40)
UAE	18(45)	18(45)	9(23)	.(42)	27(34)	15(28)	31(.)	33(.)	32(62)	19(.)
Canada	19(9)	19(9)	34(30)	24(30)	37(39)	22(25)	14(16)	16(12)	20(14)	4(5)
Vietnam	20(126)	20(126)	15(76)	.(.)	10(.)	18(.)	18(.)	11(.)	16(104)	38(.)

Source: ANZ, Statistics NZ

KEY TABLES AND FORECASTS

FX RATES	ACTUAL			FORECAST (END MONTH)						
	Jan-17	Feb-17	14-Mar	Mar-17	Jun-17	Sep-17	Dec-17	Mar-18	Jun-18	Sep-18
NZD/USD	0.728	0.719	0.692	0.72	0.70	0.69	0.68	0.68	0.68	0.67
NZD/AUD	0.964	0.938	0.914	0.92	0.92	0.93	0.94	0.94	0.93	0.91
NZD/EUR	0.680	0.679	0.650	0.70	0.69	0.68	0.68	0.68	0.65	0.64
NZD/JPY	82.80	80.79	79.49	82.8	80.5	79.4	78.2	78.2	78.2	77.1
NZD/GBP	0.585	0.578	0.566	0.59	0.58	0.58	0.58	0.55	0.54	0.54
NZ TWI	78.3	77.2	76.0	78.0	76.5	76.1	75.7	75.5	74.2	72.9

INTEREST RATES	ACTUAL			FORECAST (END MONTH)						
	Jan-17	Feb-17	14-Mar	Mar-17	Jun-17	Sep-17	Dec-17	Mar-18	Jun-18	Sep-18
NZ OCR	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	2.00	2.25
NZ 90 day bill	1.99	2.00	1.96	2.00	2.00	2.00	2.00	2.10	2.30	2.50
NZ 10-yr bond	3.37	3.23	3.37	3.60	3.70	3.80	3.90	4.00	4.10	4.30
US Fed Funds	0.75	0.75	0.75	0.75	1.00	1.00	1.25	1.25	1.50	1.75
US 3-mth	1.03	1.05	1.12	1.13	1.20	1.33	1.45	1.60	1.75	2.00
AU Cash Rate	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
AU 3-mth	1.77	1.78	1.80	1.70	1.70	1.70	1.70	1.70	1.70	1.70

ECONOMIC INDICATORS	Sep-16	Dec-16	Mar-17	Jun-17	Sep-17	Dec-17	Mar-18	Jun-18	Sep-18	Dec-18
GDP (% q/q)	1.1	0.7	0.9	0.8	0.8	0.6	0.6	0.5	0.5	0.5
GDP (% y/y)	3.5	3.2	3.4	3.5	3.2	3.1	2.8	2.5	2.2	2.1
CPI (% q/q)	0.3	0.4	0.5	0.4	0.6	0.2	0.9	0.5	0.6	0.1
CPI (% y/y)	0.4	1.3	1.7	1.7	1.9	1.7	2.1	2.2	2.2	2.0
Employment (% q/q)	1.3	0.8	0.7	0.6	0.4	0.4	0.4	0.4	0.3	0.3
Employment (% y/y)	6.1	5.8	5.2	3.4	2.5	2.1	1.8	1.6	1.5	1.4
Unemployment Rate (% sa)	4.9	5.2	5.0	4.8	4.7	4.7	4.6	4.5	4.5	4.4
Current Account (% GDP)	-2.9	-2.8	-2.7	-2.7	-2.7	-2.9	-3.0	-3.1	-3.2	-3.2
Terms of Trade (% q/q)	-1.1	5.7	0.3	-0.1	-0.4	-0.6	0.4	0.2	0.1	0.1
Terms of Trade (% y/y)	-1.1	6.7	2.7	4.7	5.4	-0.9	-0.8	-0.4	0.1	0.8

Figures in bold are forecasts. q/q: Quarter-on-Quarter, y/y: Year-on-Year

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