FORSYTH BARR

NEW ZEALAND EQUITY RESEARCH

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Transport Trends
Range of Recovery Rates

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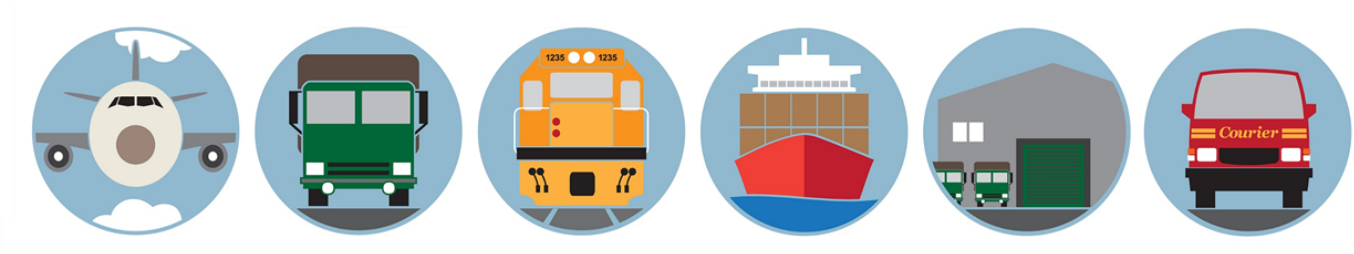
The transport sector has been hard hit by COVID-19, with aviation most impacted given border measures in place and lower demand. The domestic aviation recovery has commenced but capacity remains materially down on pre COVID-19 levels. Freight, in contrast, has experienced a strong bounce and is now at, or above, prior year levels. However, we are wary that pent-up demand is masking the ongoing economic consequences of the government restrictions in recent months; the current backdrop may represent a false dawn. Earnings guidance is reappearing as we head towards June balance dates given greater certainty for profit outcomes. Air New Zealand (AIR; UNDERPERFORM) reinstated its FY20 guidance last week. We expect other transport companies to provide earnings updates over the next week or two in order to align market expectations. Our preferred sector exposure is Mainfreight (MFT; OUTPERFORM). While we recognise MFT is exposed to global economic headwinds, its ability to win new customers and cross-sell across existing customers places it in a strong competitive position.



Key transport trends and themes

We pay particular attention to a number of enduring trends in this edition of Transport Trends, that are reshaping the broader industry backdrop as a result of COVID-19:

- **Parcel volumes** spiked during Alert Levels 4 and 3 as a result of the surge in e-commerce. May 2020 data for online sales volumes and industry feedback indicates that the volume of business-to-consumer (B2C) parcels has remained elevated through Alert Level 2 despite the re-opening of traditional retail stores.
- **Domestic aviation** fell significantly through Alert Levels 4 and 3 as travel was limited to essential personnel only. Air New Zealand's (AIR) capacity was cut back to a skeleton operation, with Jetstar stopping all domestic routes. Domestic capacity is now returning but remains materially lower than in the prior year.
- **Heavy vehicle traffic volumes** declined sharply under Alert Level 4 but have since recovered, with volumes now above prior year levels. We are wary that the recovery is partly a function of pent-up demand, and supply chain restocking, and may be masking weaker underlying demand.

Sector preferences

We summarise our sector stock ratings as follows:

- OUTPERFORM: Mainfreight
- NEUTRAL: Auckland Airport, Freightways, Napier Port
- UNDERPERFORM: Air New Zealand, Port of Tauranga

A summary of Transport Trends

In each edition of Transport Trends we provide the latest available transport sector statistics and industry data. We extract and analyse the data to determine the impact and implications for companies under our coverage.

Key trends discussed

In this edition of Transport Trends we feature several key trends that highlight the broader economic recovery as well as New Zealand's move down the Alert Level system. These trends shape the broader transport industry and are relevant to one or more NZX listed transport companies:

- Trend #1: Parcel volumes boost
- Trend #2: Domestic aviation recovery
- Trend #3: Heavy vehicle traffic rallying

Stock preferences

The transport sector is as exposed as any to the impact of COVID-19. However, the impact to date and on an ongoing basis differs materially between each company.

OUTPERFORM: Mainfreight (MFT)

- **MFT** reported a strong FY20 result and is cautiously optimistic around the near-term outlook. Despite being subject to the likely broader economic slowdown, MFT's superior growth qualities (i.e the ability to win new customers and cross-selling) mean it is well placed to strengthen its competitive position.

NEUTRAL: Freightways (FRE), Auckland Airport (AIA), Napier Port (NPH)

- **FRE's** revenue will have been severely impacted by government restrictions, but since the move down the Alert Levels has experienced a strong recovery thanks to resurgent but low margin business-to-consumer (B2C) deliveries. With traditional retail and business, in general, largely returning to near pre COVID-19 levels, we expect FRE's adverse product mix to begin to improve.
- **AIA's** recovery will be largely determined by the return of international travel. With both aeronautical and commercial income streams remaining materially depressed until borders re-open. The return of some domestic capacity under Alert Level 1 will have reduced AIA's losses, though the company will only get to break-even with the return of international travel.
- **NPH** was able operate through Alert Level 4, although at materially lower levels, as inland supply chains came to a halt. While forestry is recovering, we are wary of import container risk and a lack of cruise ship visits over the next 12 months.

UNDERPERFORM: Air NZ (AIR), Port of Tauranga (POT)

- **AIR** is currently operating at a loss and will do so until international travel resumes, in our opinion. AIR has said it plans to be a much smaller airline and has made large scale cost reductions. The removal of social distancing restrictions on planes will have helped domestic profitability in the short-term.
- **POT** has experienced a decline in volumes through Alert Levels 4 and 3. With export log prices firming we expect a solid recovery in FY21. Structural change among the Upper North Island ports remains a key driver of POT's medium to longer term value, however, COVID-19 is likely to have deferred any government decision making until after the election.

Figure 1. Valuation summary as at 22 June 2020 (NZ$)

			Share	Target	Gross yld	PE		EV/EBITDA	
Company	Code	Rating	price	price	FY20	FY20	FY21	FY20	FY21
Air New Zealand	AIR	UNDERPERFORM	1.48	0.80	0.0%	-20.0x	-6.5x	4.3x	7.8x
Auckland Airport	AIA	NEUTRAL	6.58	5.50	0.0%	49.9x	n/a	26.8x	77.2x
Freightways	FRE	NEUTRAL	7.30	6.40	4.4%	23.5x	20.1x	9.7x	8.5x
Mainfreight	MFT	OUTPERFORM	40.20	40.00	2.0%	25.9x	32.6x	14.9x	11.3x
Napier Port	NPH	NEUTRAL	3.79	3.05	1.1%	42.9x	37.2x	20.4x	17.9x
Port of Tauranga	POT	UNDERPERFORM	8.09	5.20	2.3%	56.6x	52.8x	35.2x	32.5x

Source: Forsyth Barr analysis NOTE: *Please be aware that given the rapid escalation in the COVID-19 crisis and the substantial uncertainty it represents for the economy and businesses the underlying forecasts which drive the valuation multiples above may not have been updated to reflect current economic and market conditions. A greater degree of caution needs to be applied to these multiples than usual. *reflects the interim dividend already paid. This falls to 0% on a forward run-rate basis.*

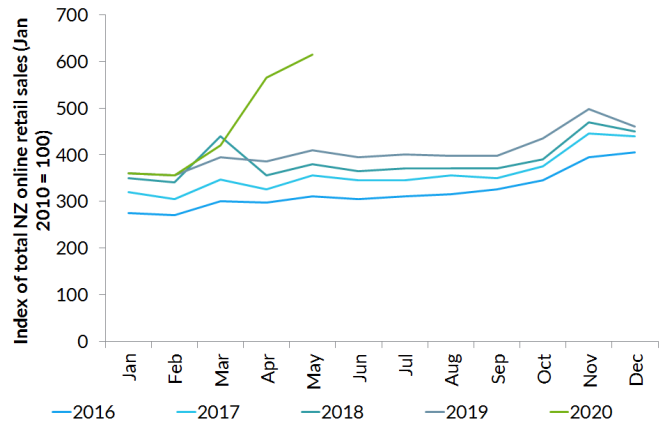
Key trends identified

Trend #1: Parcel uplift

E-commerce demand remained elevated through Alert Level 2 despite brick and mortar stores re-opening. This follows the sharp increase in demand during Alert Levels 4 and 3. Alert Level 1 data is not yet available. Marketview BNZ online retail sales for May 2020 show online retail spending up +50% compared to the prior year and follows a +48% increase experienced in April. This aligns with the comments made by courier companies highlighting the significant uplift in volumes.

While domestic online volumes have grown substantially, international growth has declined for seven consecutive months following GST changes that applied to overseas imports from November 2019. Growth in traditional retail was down -44% in April 2020 against the prior year, and remained subdued down -3% in May; however, both April and May included heavily restricted trading conditions. The 12 month average growth for traditional retail is +1.5% compared to online of 9.3%

Figure 2. New Zealand online retail sales since 2016



Source: Marketview, BNZ, Forsyth Barr analysis

Figure 3. Monthly growth against the same month in 2019

	Mar-20	Apr-20	May-20
Online - total	6.0%	48.0%	50.1%
Online - domestic	24.0%	90.0%	92.7%
Online - international	-18.0%	-8.4%	-8.6%
Traditional retail	**0.9%**	**-43.7%**	**-2.6%**
Traditional ex hospitality	10.9%	-28.6%	8.3%

Source: Marketview, BNZ, Forsyth Barr analysis

Implications for Freightways (FRE)

FRE's business-to-consumer (B2C) volumes will benefit from the sustained increase in online retail sales. B2C represents around ~20% of FRE's domestic parcels, the remainder reflecting its higher margin business-to-business (B2B) volumes. The lower margin nature of B2C will have a negative impact on overall company margins, though further to FRE's 'pricing for effort' gains over the past 12 months, the additional B2C volume will be incremental to profits. This increase in revenue due to B2C will help to offset the potential downside risk associated with an economic downturn and the effect this may have on many of FRE's B2B customers.

FRE has announced a further 50c per parcel 'pricing for effort' increase for B2C parcels from 1 August 2020. This is on top of a +1.9% general rate increase for all parcels.

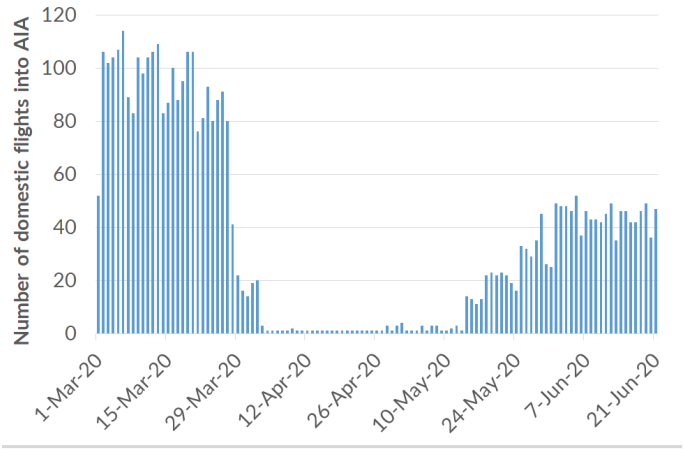
Trend #2: Domestic aviation recovery afoot; likely to be gradual

Air New Zealand (AIR) maintained a skeleton domestic service between key centres through Alert Level 4 and 3 but as restrictions have eased its domestic capacity has increased. It is now operating at about ~50% of pre COVID-19 levels. In contrast, Jetstar's domestic services are due to recommence on 1 July 2020, having stopped on 27 March 2020.

Domestic aviation now benefits from zero restrictions on airports, crew, or passengers. There are no social distancing or other restrictions, which now allows airlines to operate on a fully commercial basis (unlike during Alert Levels 4, 3 and 2). We expect demand/capacity to gradually improve from current levels assisted by the price stimulus of Jetstar's re-commencement.

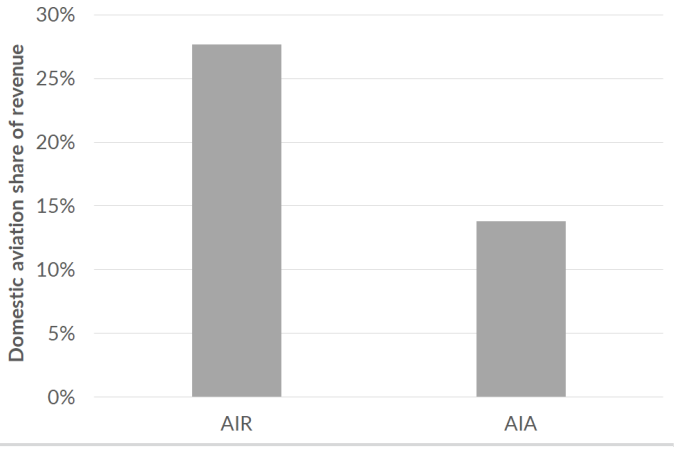
However, demand will likely remain materially lower than pre COVID-19 levels due to (1) no connecting traffic to/from international services, which previously accounted for ~20% of domestic pax, (2) consumer headwinds with rising unemployment, (3) lower levels of business travel given the structural shift to zoom, and (4) consumer apathy to travel given the risk of restrictions being re-imposed/ health concerns. International Air Transport Association (IATA) carried out public opinion research in early June and found only 45% of consumers intended to return to the skies within a few months of the pandemic subsiding, down from 61% from a similar survey in April.

Figure 4. Domestic AIR and Jetstar flights into Auckland Airport



Source: Flightaware, Forsyth Barr analysis

Figure 5. Domestic contribution to pre COVID-19 revenue



Source: Forsyth Barr analysis

Implications for Air New Zealand (AIR)

Domestic passenger services provided ~27% of total group revenue pre COVID-19, but given higher margins a larger proportion of profitability. A gradual recovery of domestic services will assist AIR to at least partially offset its cash burn. We believe the company is reliant on international long haul services recommencing in order for it to be profit making.

Implications for Auckland Airport (AIA)

Domestic aviation represents a small part of AIA's revenue base, on our estimates. Aeronautical pricing is currently heavily weighted to international services, albeit, subject to the recovery profile over the next several years, we suspect AIA may revisit the weightings between domestic and international pricing at its next price reset (price setting event 4; PSE4) due to take effect in July 2022. Commercial income is heavily weighted to international pax. While car parking is reliant on domestic passengers, retail income is driven predominantly by international pax.

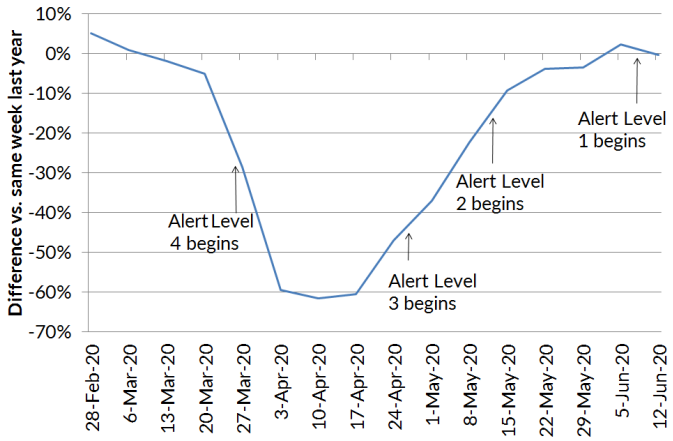
Trend #3: Domestic freight returns to the road

In recent weeks NZTA heavy vehicle traffic data has shown a return to normality, following a material dip through Alert Level 4. Heavy vehicle traffic volumes for the week ending 12 June 2020 are up flat against the corresponding week in 2019, despite bottoming out at over -60% down vs the prior year at the trough of the downturn. This sharp recovery in volumes is likely a factor of both (1) pent up demand due to only essential deliveries allowed through Alert Level 4, and (2) the re-stocking of supply chains following the re-opening of many businesses as well as the strain on wide-scale distribution during Alert Level 4.

We expect that at least some of this increase in heavy traffic is a pull-forward rather than a return to normality, as the data includes buses as well as trucks, and with international travel at essentially zero and domestic tourism not yet fully online, this indicates that the current year-on-year growth in road-freight is well above the reported value.

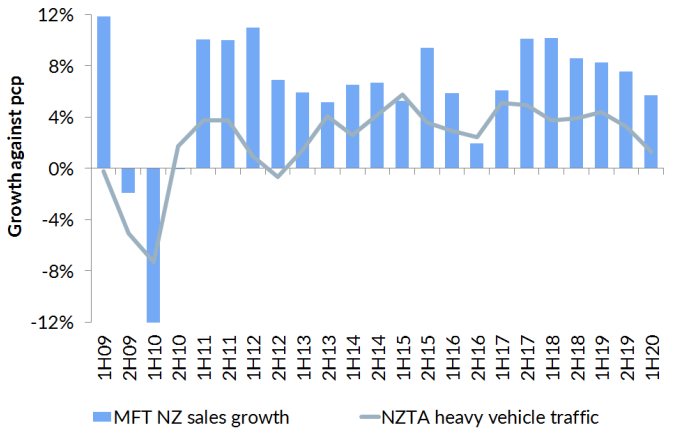
The week ending 5 June 2020 was up +2% on the same week in 2019, and this has now dropped to flat year-on-year growth. However, we still anticipate the data in the coming weeks to continue to show positive signs following the government's decisions to move New Zealand to Alert Level 1 on 9 June 2020.

Figure 6. Heavy vehicle traffic vs. prior year



Source: NZTA, Forsyth Barr analysis

Figure 7. MFT New Zealand sales growth vs. heavy vehicle traffic



Source: MFT, NZTA, Forsyth Barr analysis

Implications for Mainfreight (MFT)

Domestic freight makes up ~24% of MFT's revenue and ~35% of MFT's EBITDA so the recovery of domestic freight has a meaningful impact on the company. MFT highlighted its New Zealand business revenue was down -16% for FY21 to date when it reported its FY20 result on 27 May 2020. We expect this gap has been reduced in line with the increase in heavy vehicle traffic, as New Zealand sales growth for MFT has broadly tracked heavy vehicle traffic growth as shown in Figure 7. However, MFT highlighted the potential downside risk associated with an economic downturn and the resulting pressures on it customers.

Operating statistics and industry data

Airports and airlines

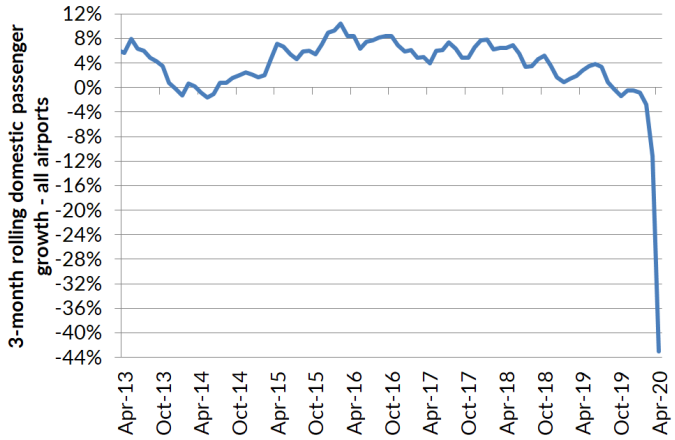
Data in this section is relevant to listed companies including Auckland Airport (AIA), Infratil (IFT) and Air New Zealand (AIR). Statistics principally reflect passenger movements but also cover seat capacity changes and other key airline specific data.

Airports

Domestic passenger movements within New Zealand

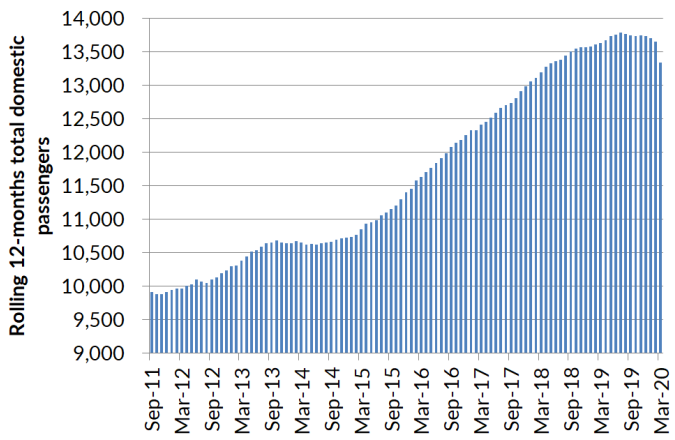
Monthly domestic passenger data for all NZ airports is not publicaly available. While Air NZ provides monthly statistics, Jetstar has historically provided six-monthly summaries (at financial result time). As a result, we have built our own domestic passenger series using available airport and airline data. We show the assumed number of passengers in Figure 9.

Figure 8. Total domestic passenger growth



Source: Company reports, Forsyth Barr analysis

Figure 9. Total domestic passengers ('000)



Source: Company reports, Forsyth Barr analysis

International passenger movements into New Zealand

In Figure 10 we show total international passenger arrivals across all New Zealand international airports (including Auckland, Christchurch, Wellington, Queenstown and Dunedin). Average annual international passenger growth for the past 30-years amounts to +5.0%.

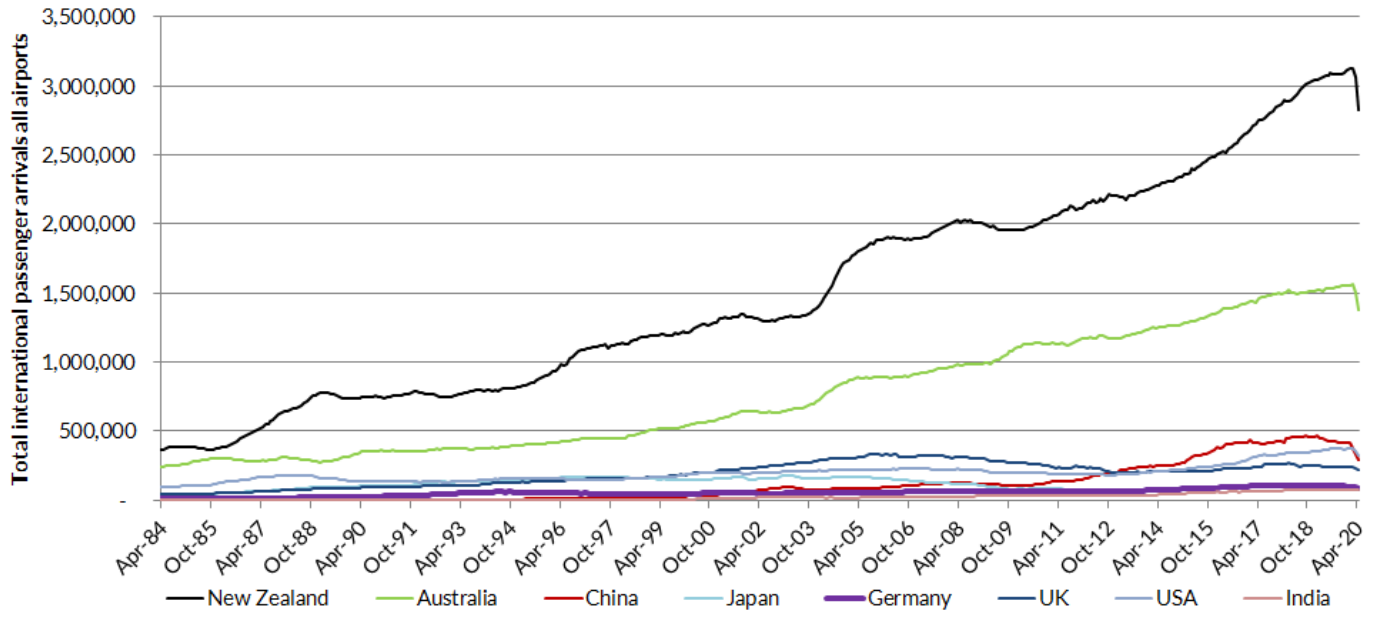
Figure 10. Total international pax arrivals across all New Zealand airports (12 months rolling)

Source: Forsyth Barr analysis

The origin of International passenger arrivals

New Zealanders travelling overseas account for the largest proportion of international travellers. Australians represent the next biggest segment of the market. China has risen rapidly in recent years overtaking more traditional visitor countries.

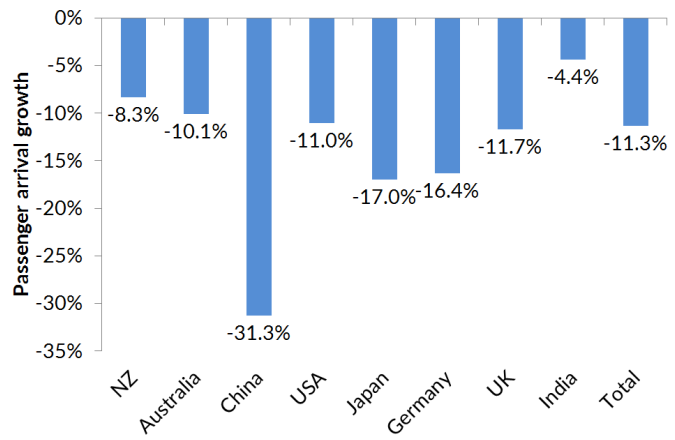
Figure 11. International passengers country of residence (12 months rolling)



Source: Statistics NZ, Forsyth Barr analysis

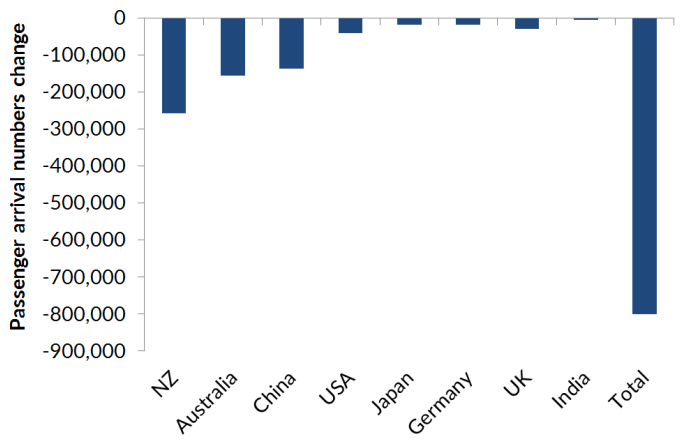
The year-on-year change in both percentage and absolute numbers for Figure 11 are shown in Figure 12 and Figure 13 respectively. Overall growth is being driven by a combination of nationalities but remains heavily reliant on more New Zealanders travelling offshore.

Figure 12. International arrivals growth (12m to April 2020)



Source: Statistics NZ, Forsyth Barr analysis

Figure 13. International arrivals change (12m to April 2020)

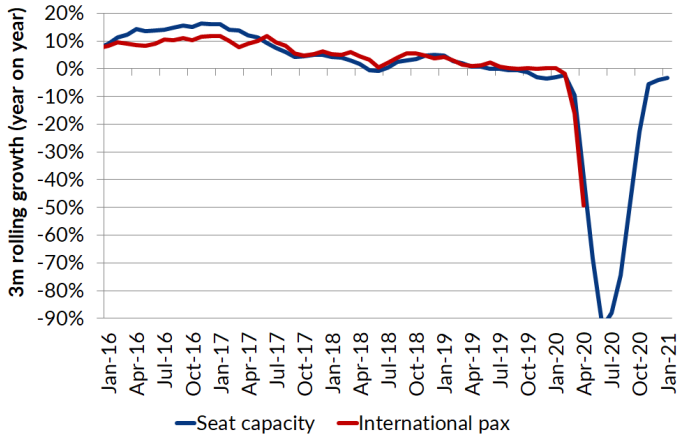


Source: Statistics NZ, Forsyth Barr analysis

International seat capacity compared to passenger data

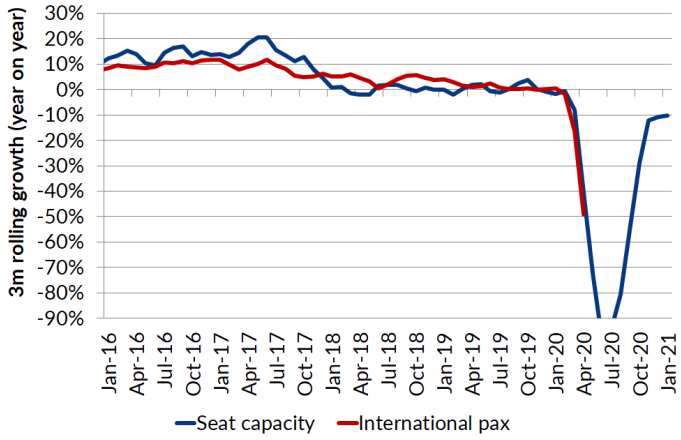
In Figures 14 and 15 we show scheduled international seat historic capacity growth for Auckland and Christchurch airports respectively over recent years and compare to international passenger data. Where gaps appear load factors will be changing.

Figure 14. AIA international capacity vs passengers



Source: OAG, NZ Stats, Forsyth Barr analysis

Figure 15. CIAL international capacity vs passengers



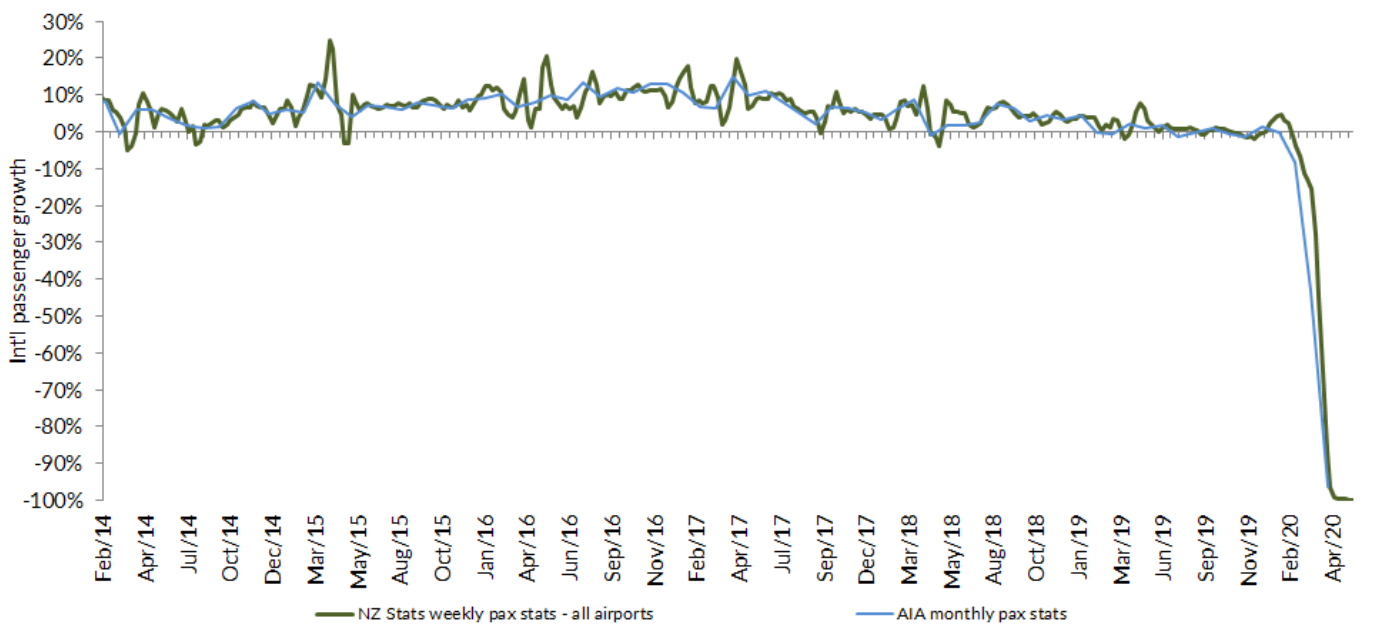
Source: OAG, NZ Stats, Forsyth Barr analysis

Auckland Airport

Weekly international pax data

NZ Statistics provides weekly international pax data based on New Zealand resident departures and overseas resident arrivals. While the data is for all New Zealand airports, AIA's ~75% share of international pax means the data offers a good forward proxy of its upcoming monthly releases.

Figure 16. AIA's international pax growth follows all airports pax data



Source: Statistics NZ, Forsyth Barr analysis

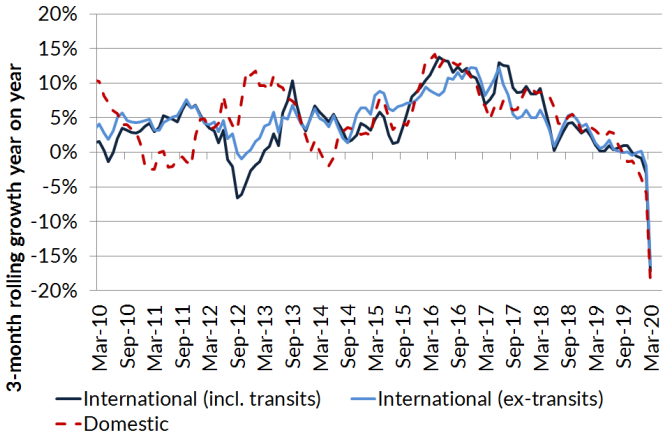
Monthly pax numbers

Auckland Airport is ~22% owned by the Auckland City Council and is New Zealand's premier airport, it also provide Air New Zealand with a domestic and international hub. AIA reports monthly traffic numbers. We chart the airports passenger growth history since 2009 in Figure 17.

Queenstown Airport (24.99% AIA owned)

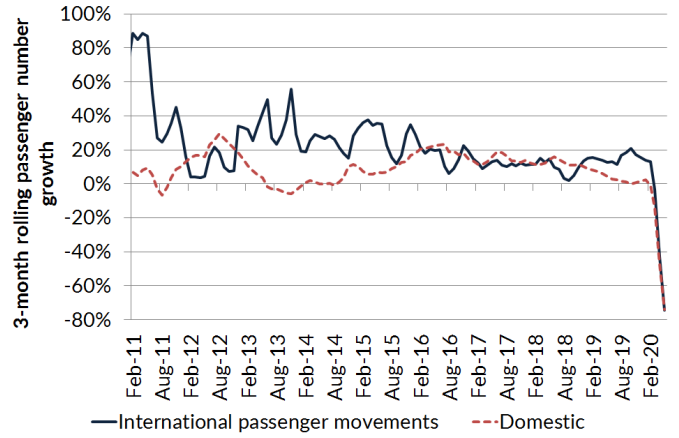
AIA acquired a 24.99% stake in Queenstown Airport in July 2010. Queenstown is the fourth busiest airport in New Zealand and is a key entry point for Australian visitors during the ski season. We show passenger growth trends in Figure 17.

Figure 17. Auckland Airport passenger number growth



Source: Company reports, Forsyth Barr analysis

Figure 18. Queenstown Airport passenger number growth



Source: Company reports, Forsyth Barr analysis

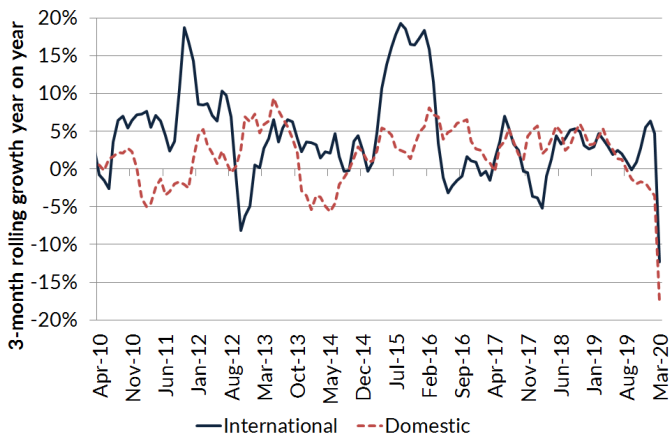
Wellington Airport

Wellington Airport is owned by Infratil (66%) and Wellington City Council (34%). It is the third busiest airport in New Zealand. Domestic passengers account for ~87% of all passengers. The relatively short length of the runway (~1.9km) limits the use of the airport for larger planes on long-haul services. We show recent passenger growth trends in Figure 19.

Christchurch Airport

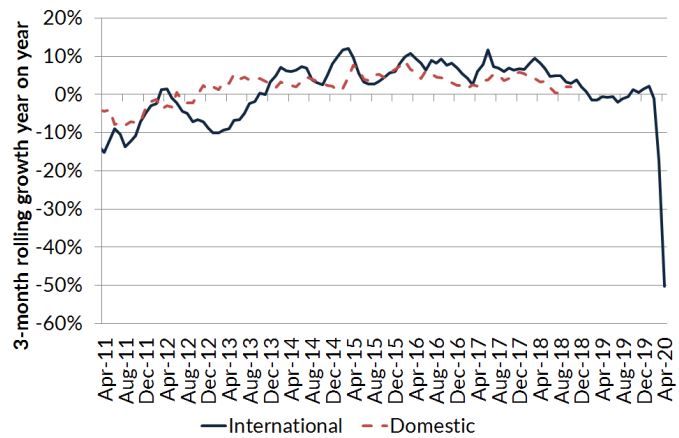
Christchurch Airport is 75% owned by the Christchurch City Council and 25% owned by the New Zealand Government. Since the 2010/2011 earthquakes Christchurch has lost share of international passengers to Auckland but experienced growth from late 2013. Christchurch Airport has not reported domestic passenger numbers since late 2018.

Figure 19. Wellington Airport passenger number growth



Source: Company reports, Forsyth Barr analysis

Figure 20. Christchurch Airport passenger number growth



Source: Company reports, Forsyth Barr analysis

Airlines

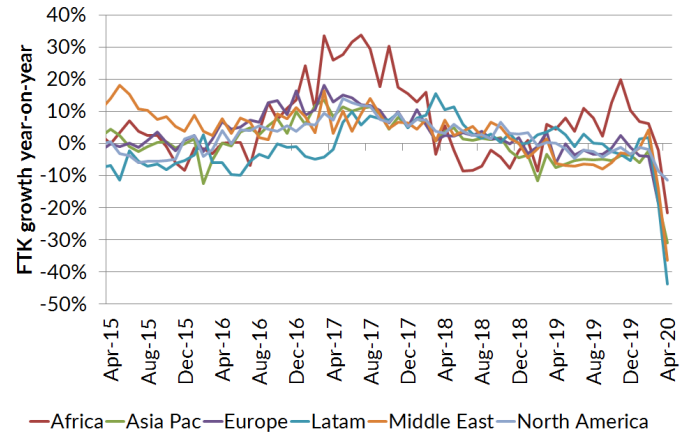
IATA global air freight data

IATA releases air freight tonne kilometres (FTKs) travelled monthly for all regions globally. FTK is a measure of the size of an airline's freight business and is calculated as freight tonnage multiplied by distance travelled.

IATA global air passenger data

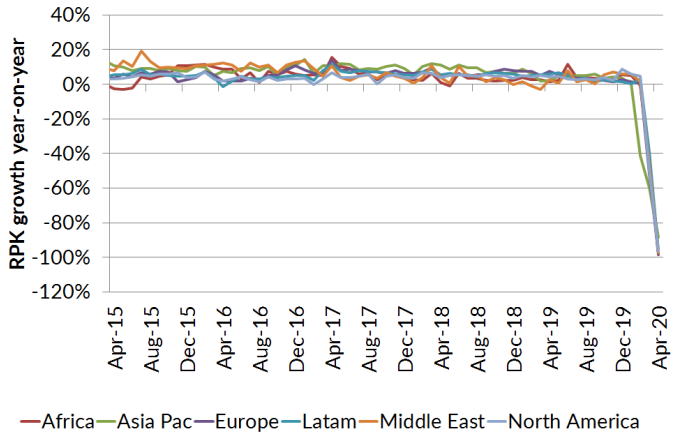
In Figure 21 we show IATA data for airline sector growth in revenue passenger km (RPK) across all regions. RPK is a measure of the passenger volume flown by airlines. It is calculated by multiplying the number of passengers flown by distance travelled.

Figure 21. Freight tonne kilometre (FTK) growth by region



Source: IATA, Forsyth Barr analysis

Figure 22. Revenue passenger km (RPK) growth by region



Source: IATA, Forsyth Barr analysis

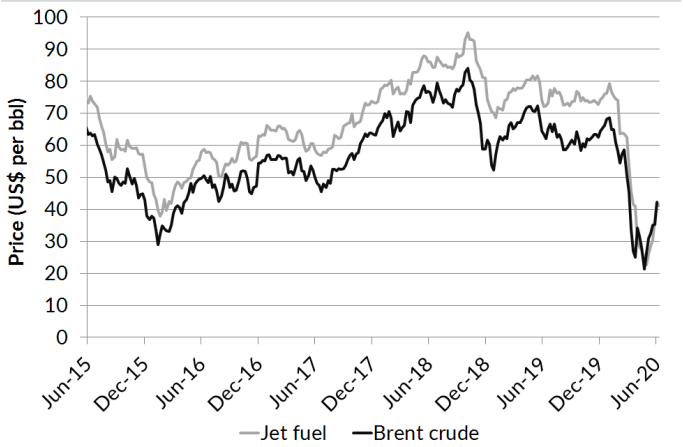
Jet fuel prices

Jet fuel is the largest single operating cost for airlines. Jet fuel prices have fallen significantly over the past two years as shown in Figure 23 but are now materially off these lows. The price of jet fuel acquired in New Zealand is likely to rise and close the gap to import parity prices over the near-term.

Brent and crack spread

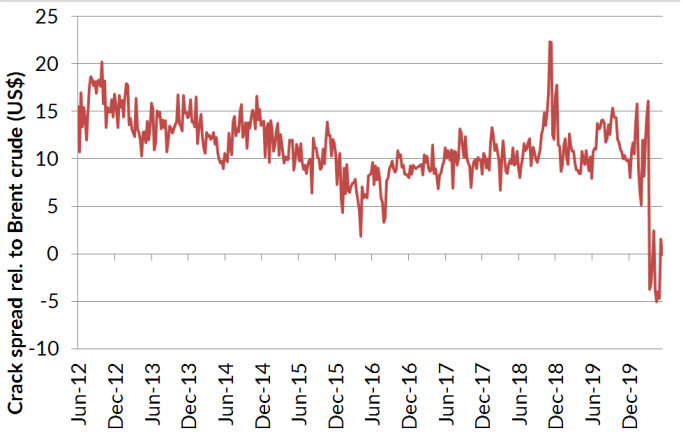
Jet fuel prices are a function of crude prices, the crack spread (the cost of converting crude oil into jet fuel), and into plane (supply chain) expenses. In Figure 24 we show the history of the crack spread relative to the Brent crude price.

Figure 23. Jet fuel price (spot)



Source: Bloomberg, Forsyth Barr analysis

Figure 24. Crack spread relative to Brent crude price



Source: Bloomberg, Forsyth Barr analysis

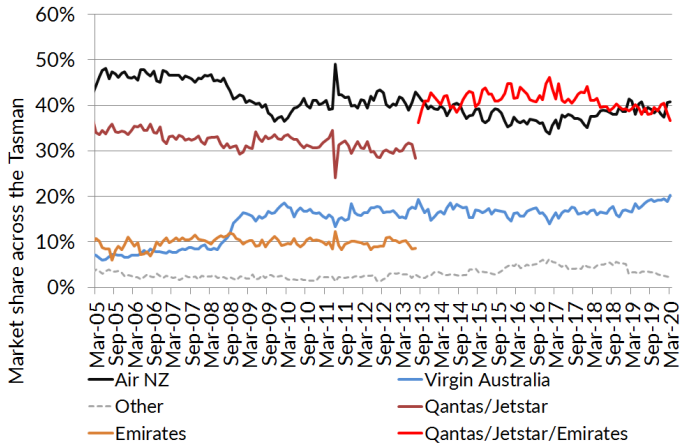
Trans-Tasman market share

In Figure 25 we show the historical market share development of trans-Tasman services. Air New Zealand currently has a ~39% market share, having recovered share from Qantas over the past two years. The Air New Zealand and Virgin Australia JV ended in late October 2018.

Tasman load factors

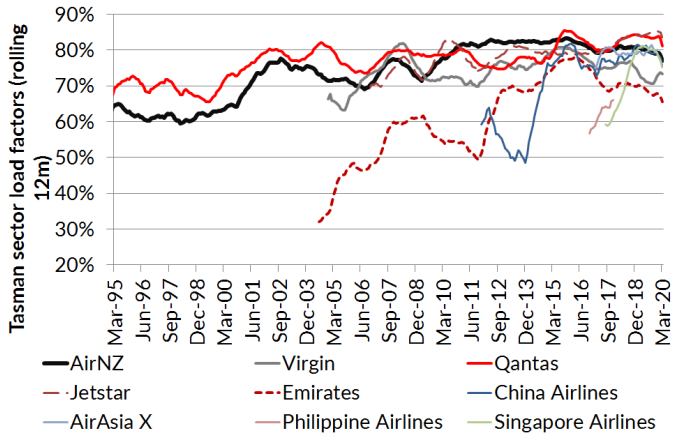
In Figure 26 we show trans-Tasman load factors by airline. Air New Zealand and Qantas enjoy the highest load factors, while fifth freedom carrier (the right to fly between two foreign countries on a flight originating or ending in one's own country) Emirates, the lowest.

Figure 25. Trans-Tasman market share



Source: BITRE, Forsyth Barr analysis

Figure 26. Trans-Tasman load factors (12-m rolling)



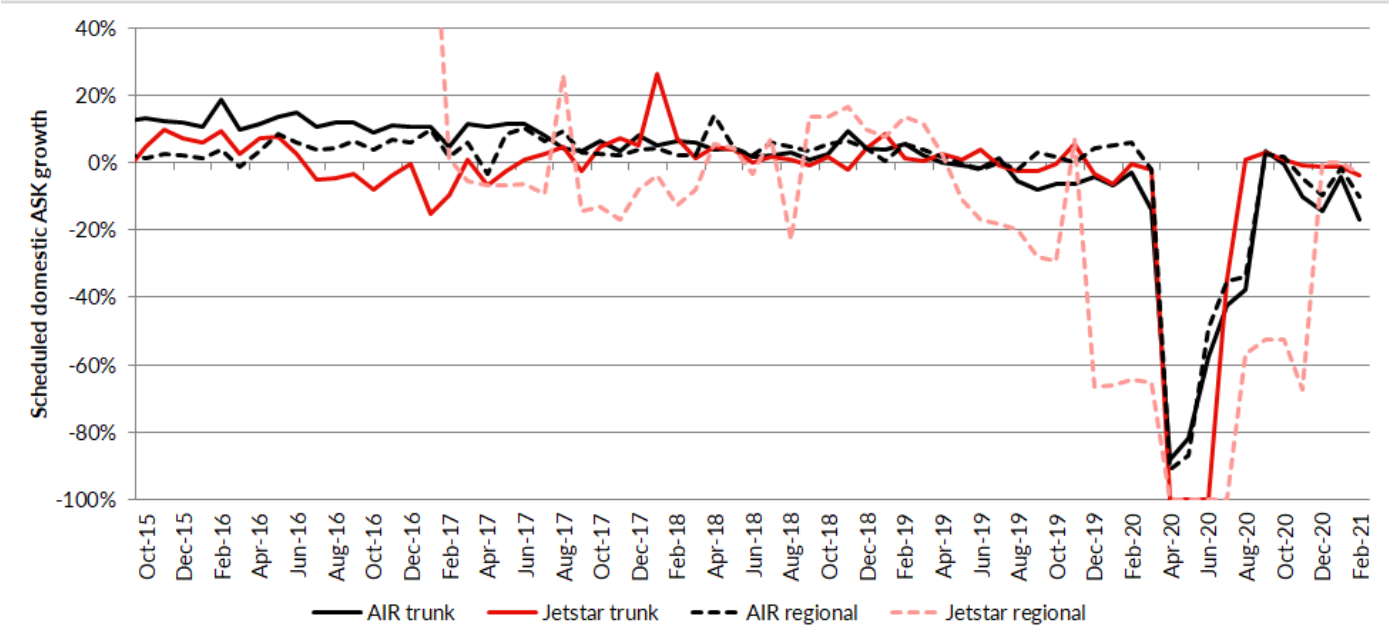
Source: BITRE, Forsyth Barr analysis

Domestic airline capacity outlook

Airline schedule data from OAG provides a picture of the capacity outlook. This is subject to change as airlines constantly amend their schedule to meet demand trends and capacity issues, the data is broadly consistent with capacity guidance issued by key airlines. In light of COVID-19 very little reliance can be placed on the forward schedules at this stage.

In Figure 27 we show the scheduled domestic capacity growth across both trunk (Wellington, Christchurch, and Auckland) and regional airports for Air New Zealand and Jetstar.

Figure 27. Scheduled domestic capacity growth

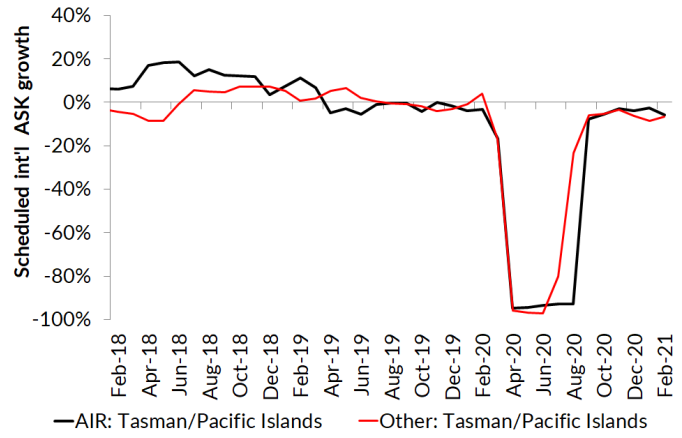


Source: OAG, Forsyth Barr analysis

International airline capacity growth

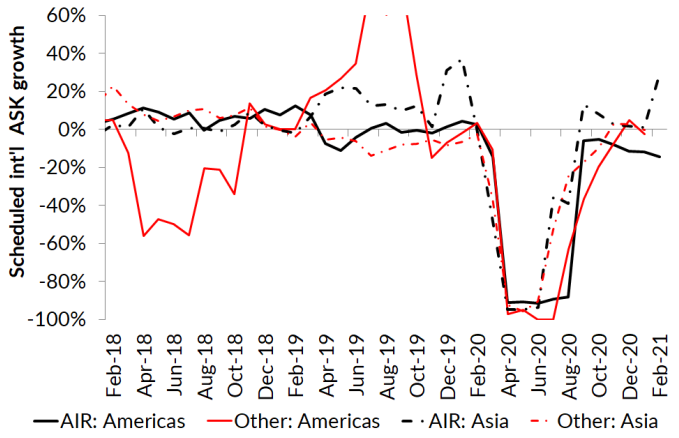
In Figure 28 and Figure 29 we show the scheduled international capacity growth across AIR's international regions. The data shows its increasing share of capacity in its Tasman and Pacific Island operations, but the opposite across Asia.

Figure 28. Scheduled Tasman & Pacific Island capacity growth



Source: OAG, Forsyth Barr analysis

Figure 29. Scheduled long-haul capacity growth



Source: OAG, Forsyth Barr analysis

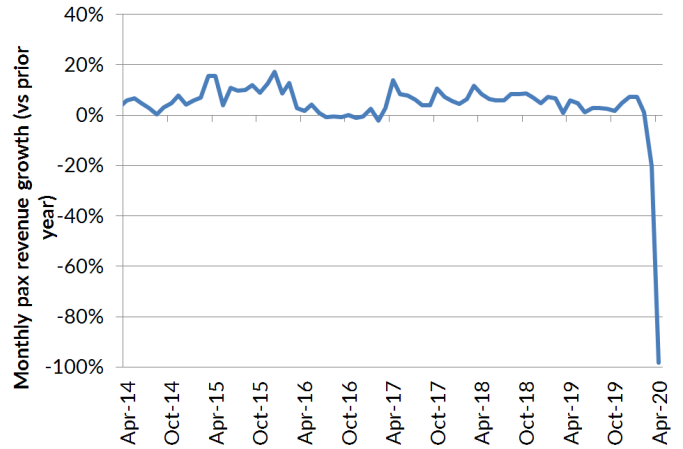
Air New Zealand

AIR publishes monthly operating statistics covering passenger numbers, Revenue Passenger Kilometres, load factors, and yields.

Revenue growth

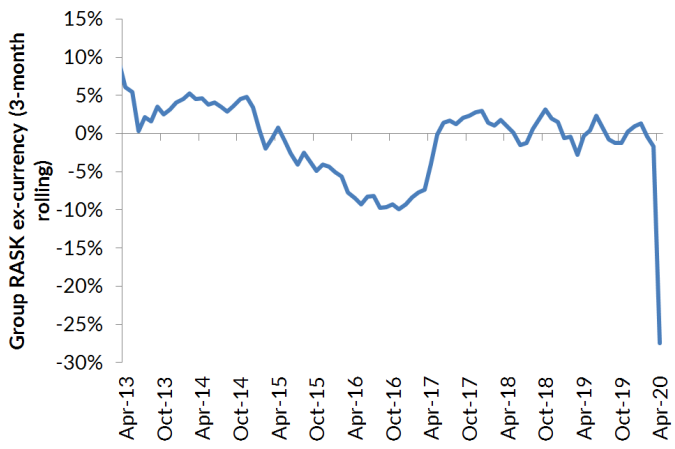
We calculate AIR's monthly passenger revenue growth from its operating statistics releases as shown in Figure 30.

Figure 30. AIR's monthly pax revenue growth



Source: Company data, Forsyth Barr analysis

Figure 31. AIR's RASK growth (constant currency)



Source: Company data, Forsyth Barr analysis

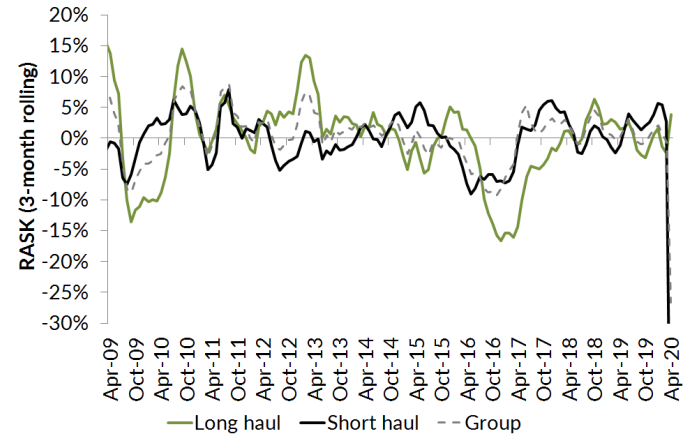
Operating statistics

RASK reflects the amount of revenue generated per ASK (available seat kilometre). Changes in RASK can reflect various drivers of demand and supply. The improving RASK highlights sustained demand and moderating capacity increases.

Long haul and short haul RASK growth are subject to different drivers. Long haul RASKs tend to be more indirectly impacted by oil prices, given the higher proportion of jet fuel burnt on long haul services compared to short haul.

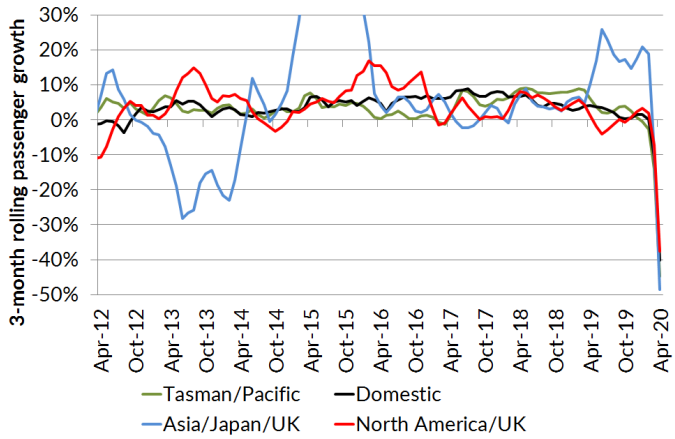
We show in Figure 33 growth in passenger numbers by region for AIR.

Figure 32. AIR's long haul and short haul RASK growth (NZD)



Source: Company reports, Forsyth Barr analysis

Figure 33. AIR's passenger growth (3-month rolling)

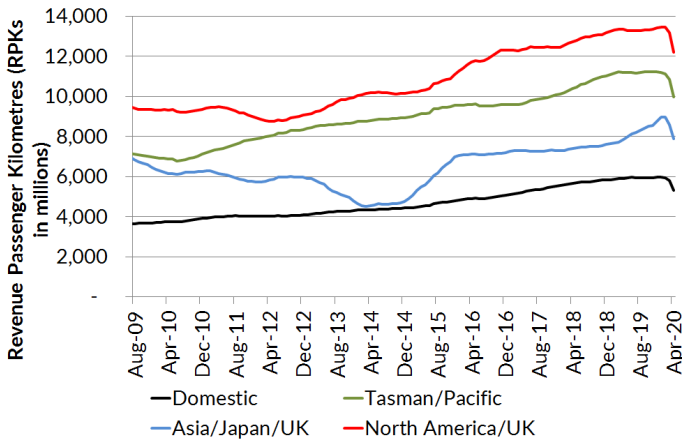


Source: Company reports, Forsyth Barr analysis

Revenue Passenger Kilometres (RPK) is a key measure of output for airlines. In Figure 34 we show the rolling annual RPK for AIR across each of its regions.

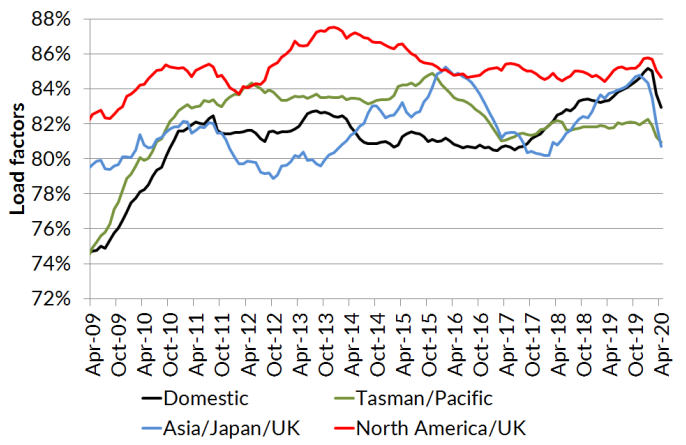
Load factors are a key measure of capacity utilisation. An airline's load factors equates to its RPK divided by its ASK (Available Seat Kilometres). Load factors at AIR will decline as a result of COVID-19 as shown in Figure 35.

Figure 34. AIR's Revenue Passenger Kilometre (RPK)



Source: Company data, Forsyth Barr analysis

Figure 35. AIR's 12-month rolling load factors by region



Source: Company data, Forsyth Barr analysis

Road and rail

Road and rail data is most relevant to freight and courier related operators including Mainfreight (MFT), Freightways (FRE) and TIL Logistics (TLL). It may also be relevant to the ports in light of the competitive dynamics between road, rail and coastal shipping.

Road

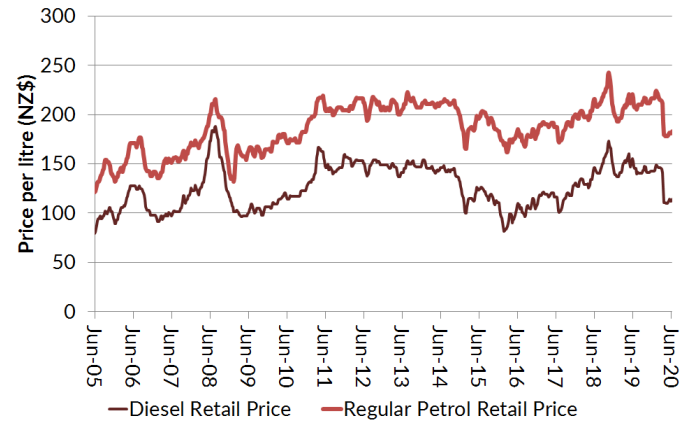
New Zealand retail fuel prices

Fuel price changes are typically passed on to customers via owner-operator models in NZ. Fuel prices may dictate the relative competitiveness of different transport modes.

New Zealand courier fuel surcharges

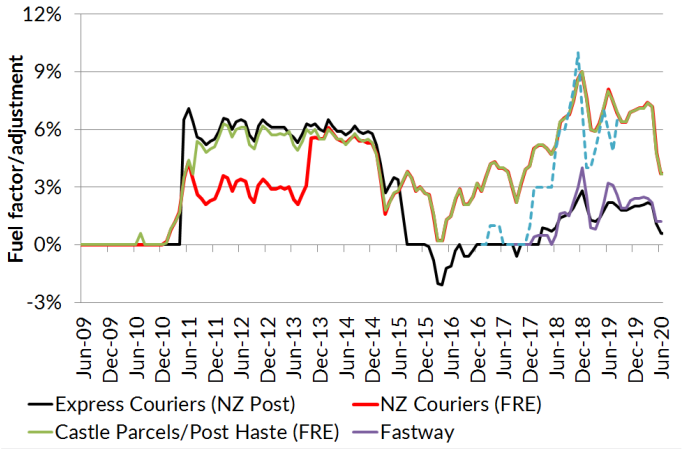
The major courier companies in New Zealand (Freightways and Express Couriers) both charge fuel surcharges on top of their base prices.

Figure 36. New Zealand retail transport fuel costs



Source: MBIE, Forsyth Barr analysis

Figure 37. Courier company fuel adjustment levies



Source: Company websites, Forsyth Barr analysis

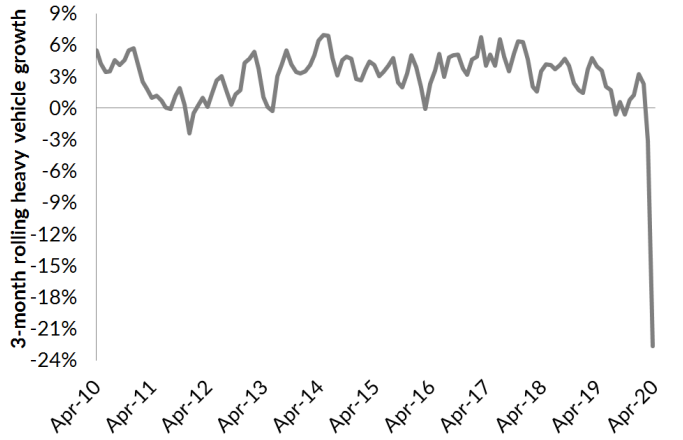
New Zealand heavy vehicle usage statistics

The NZTA publishes monthly data from 118 traffic counting sites throughout New Zealand along main state highways. Heavy vehicles are those categorised as >3,500kg. State Highways account for 10% of roads in NZ but represent 65% of heavy goods traffic.

New Zealand diesel consumption

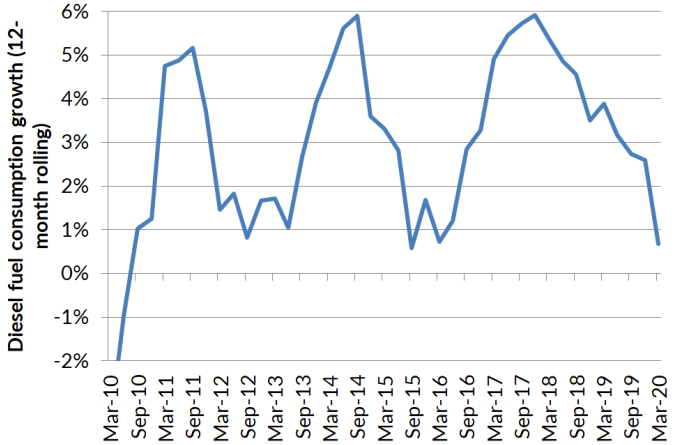
MBIE publishes quarterly fuel consumption data by fuel type as measured by million barrels. Heavy vehicles are predominantly diesel powered and therefore can be used as a reasonable proxy for total heavy vehicle traffic growth.

Figure 38. Heavy vehicle growth on state highways



Source: NZTA, Forsyth Barr analysis

Figure 39. Quarterly diesel consumption growth



Source: MBIE, Forsyth Barr analysis

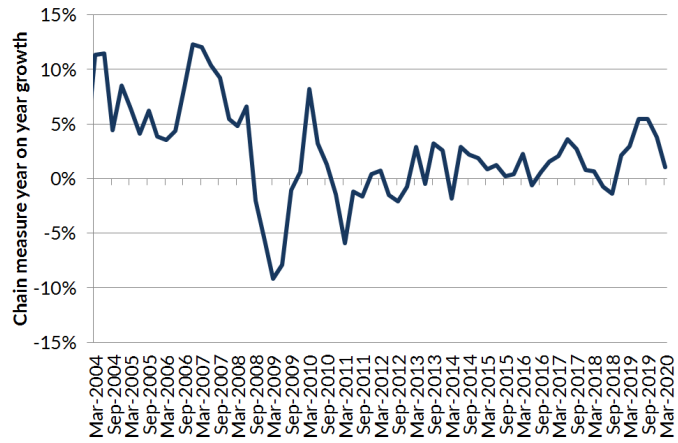
Australia road transport volumes

Timely data on the Australian freight transport industry is limited. In Figure 39 we show the growth profile of the road transport contribution to national accounts on a quarterly basis.

North American freight volumes

The Transportation Services Index (TSI), created by the U.S. Department of Transportation (DOT), Bureau of Transportation Statistics, measures the movement of freight. The index combines data on freight traffic that has been weighted to yield a monthly measure of transportation services output.

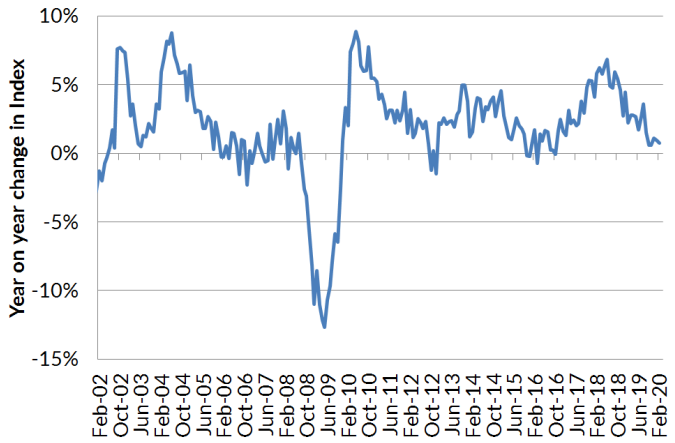
Figure 40. Transport, postal and warehousing national account*



Source: ABS, Forsyth Barr analysis

*Road transport component

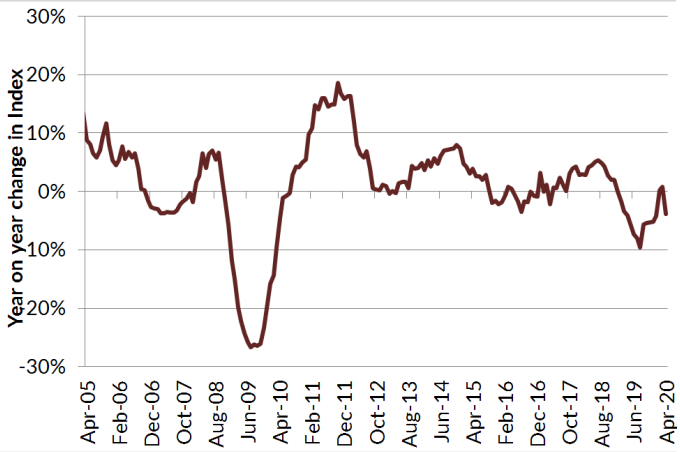
Figure 41. Transportation Services Index



Source: US Dept of Transport, Forsyth Barr analysis

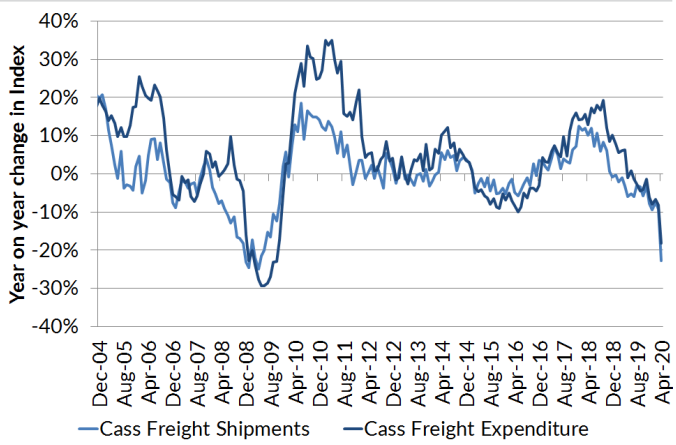
The American Trucking Association (ATA) provides a LTL (less than truckload) tonnage index which encompasses almost 70% of LTL tonnage carried by all modes of US freight transportation, including manufactured and retail goods.

Figure 42. ATA LTL truck tonnage index



Source: Bloomberg, ATA, Forsythyth Barr analysis

Figure 43. Cass freight indices



Source: Cass, Forsyth Barr analysis

The Cass Freight Index is a measure of North American freight volumes. The Index includes all domestic freight modes and is derived from US$22bn of freight transactions processed by Cass annually on behalf of large shippers. These companies represent a broad sampling of industries including consumer packaged goods, food, automotive, chemical, OEM, retail and heavy equipment.

Rail

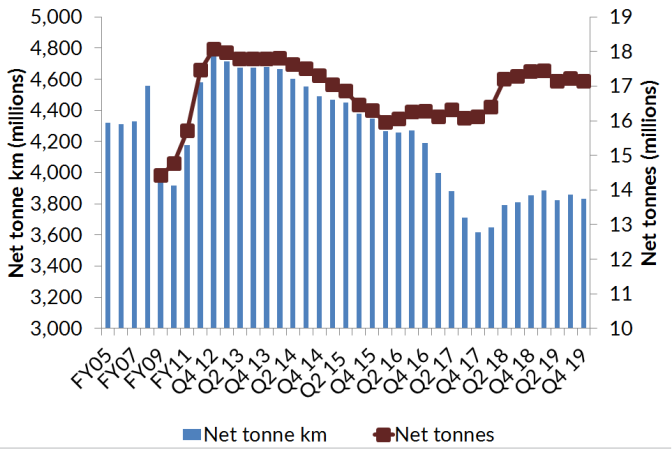
New Zealand rail volume

KiwiRail is state owned. It owns 4,000 kms of track, 198 mainland locomotives and 4,585 freight wagons. It operates around 900 freight trains each week and also owns/leases and operates the three Interislander ferries. The company provides data to the Ministry of Transports quarterly FIGS report. Rail competes with road and coastal shipping in transporting containers throughout New Zealand.

New Zealand rail volume by commodity

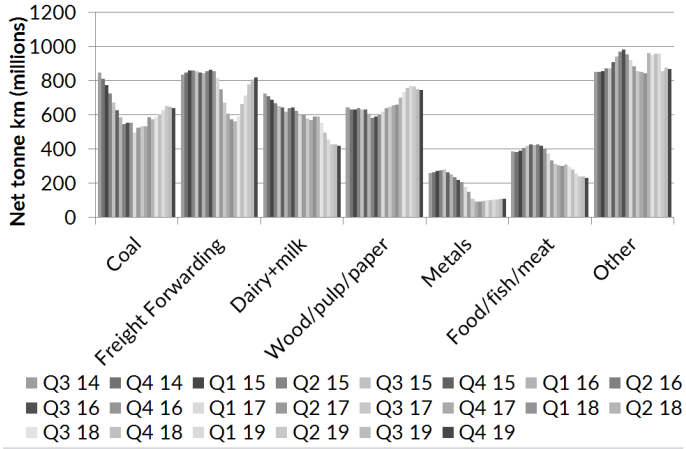
Coal, dairy, and wood products are the three largest commodities transported by rail in New Zealand. Refer to Figure 45.

Figure 44. KiwiRail volume (12-month rolling recent quarters)



Source: Ministry of Transport, Forsyth Barr analysis

Figure 45. 12-month rolling KiwiRail volume by commodity



Source: Ministry of Transport, Forsyth Barr analysis

Ports and shipping

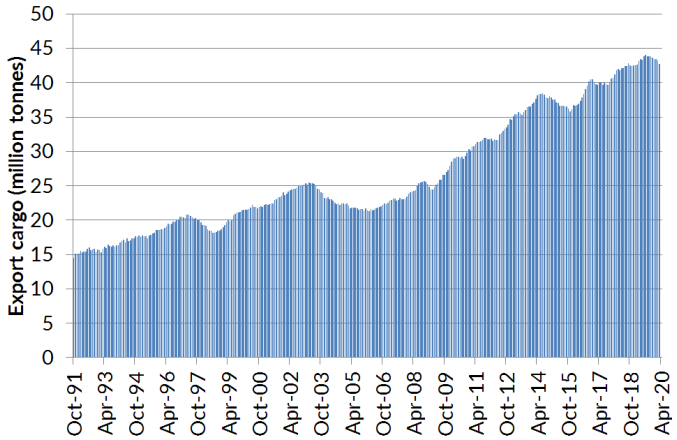
Data in this section is principally relevant to Port of Tauranga (POT) and Napier Port (NPH). It will also be relevant to other port stocks including Marsden Maritime Holdings (MMH) and Southport (SPN).

Ports

Total cargo volumes

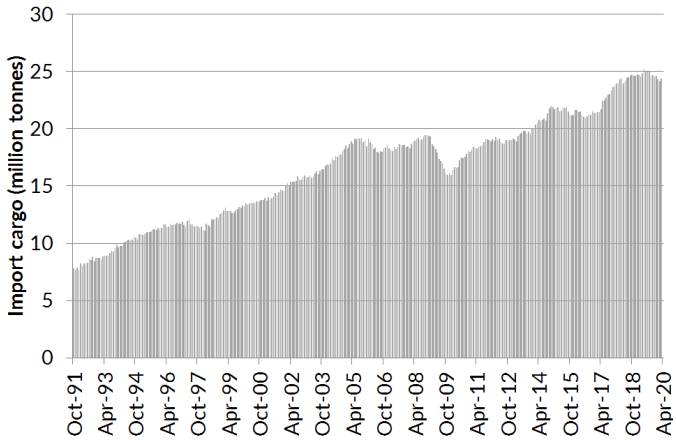
Statistics NZ provides monthly cargo data for all New Zealand seaports. We summarise the aggregated export and import data in Figure 46 and Figure 47 respectively. Over the past 25 years exports have grown at a CAGR of +3.9%, compared to imports at +4.0%.

Figure 46. Export cargo volumes (12-months rolling)



Source: Statistics NZ, Forsyth Barr analysis
Note: Data reflects 12-month rolling aggregates

Figure 47. Import cargo volumes (12-months rolling)

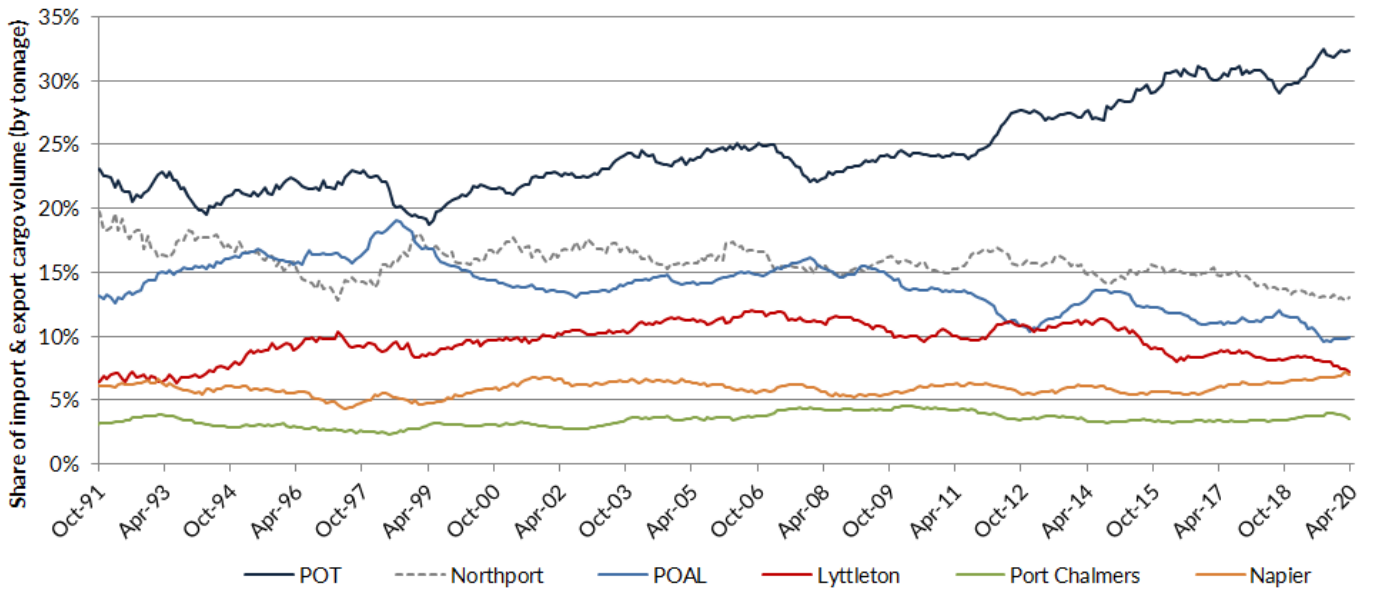


Source: Statistics NZ, Forsyth Barr analysis
Note: Data reflects 12-month rolling aggregates

Share of total cargo volume by port

Port of Tauranga is the largest port in New Zealand. We highlight its share of the leading ports in Figure 48. Imports and exports by port are defined by Statistics NZ as the initial port of entry and the final port of loading respectively.

Figure 48. Import and export cargo share (by weight) of leading ports

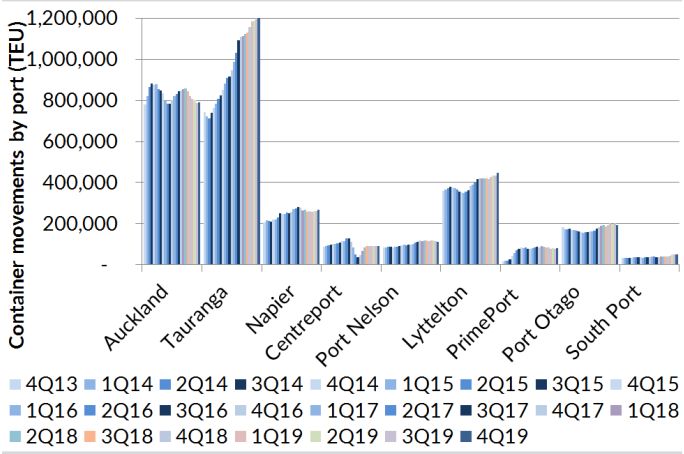


Source: Statistics NZ, Forsyth Barr analysis

Container volumes by port

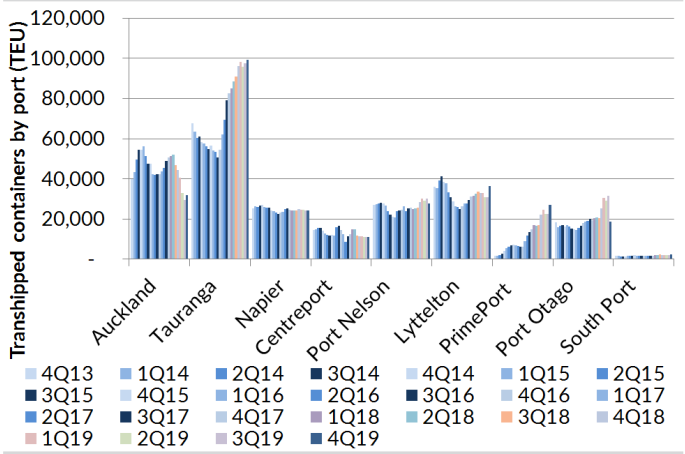
Quarterly container traffic data is available from the Ministry of Transport (MoT). This data is provided to the MoT by each container port. Rolling annual data has only been available since December 2012, which we present in Figure 49. Tauranga is the largest export port for containers, whereas Auckland handles the most import containers.

Figure 49. Rolling 12-month container volumes by port (TEUs)



Source: Ministry of Transport, Forsyth Barr analysis

Figure 50. Rolling 12-month transhipments by port (TEUs)



Source: Ministry of Transport, Forsyth Barr analysis

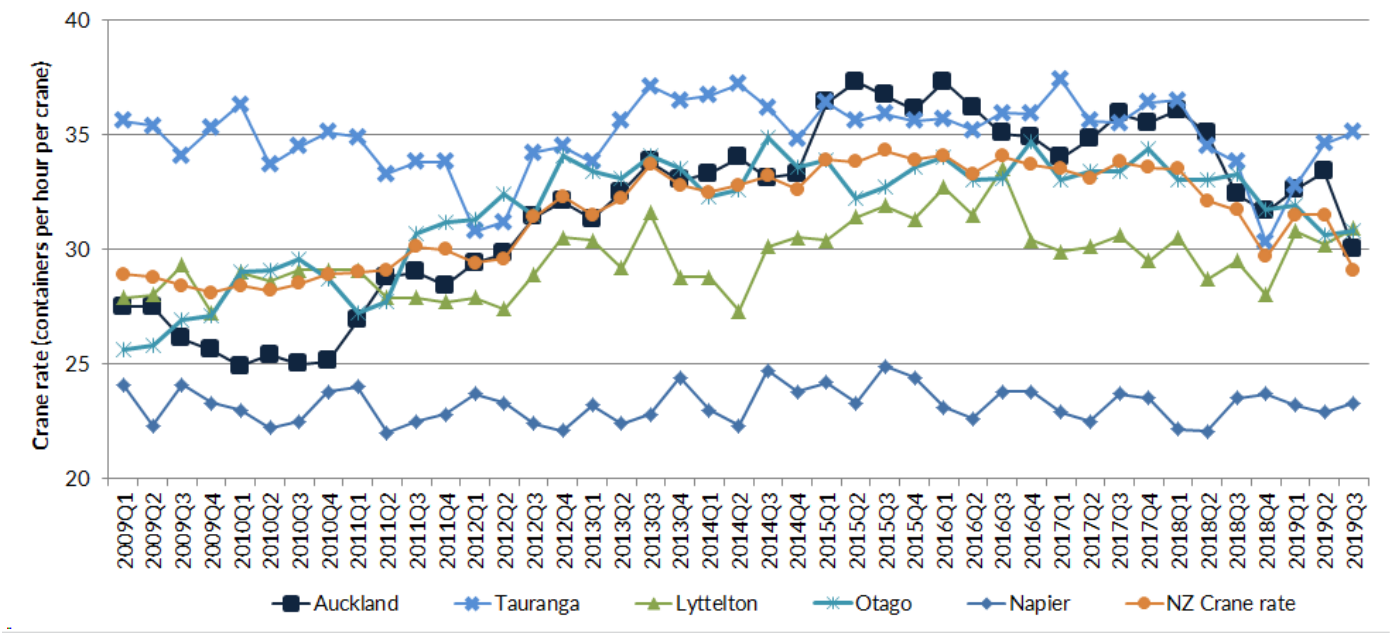
Container transhipments by port

The gradual structural industry shift to a hub and spoke network of ports in New Zealand will drive increased numbers of transhipped containers. Export transhipments reflect containers that are loaded onto a ship at one port, shipped to another port, discharged and then exported via a second ship. Import transhipments reflect containers that are imported and discharged at one port, then loaded onto another ship and shipped to a second port in New Zealand. Tauranga handles the largest number of export transhipments. Auckland handles the highest number of import transhipments.

Container port productivity

The Ministry of Transport compiles port productivity data in its quarterly produced Freight Information Gathering System (FIGS) and Port Productivity Study. In Figure 51 we show the crane rates of the four biggest container ports in New Zealand together with the national average. The crane rate is the best measure of internal efficiency at each port. It measures the number of containers handled as an average per hour for one crane.

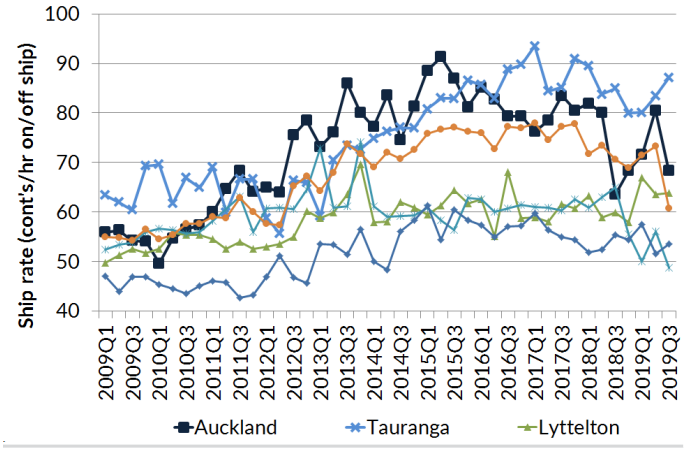
Figure 51. Crane rate



Source: Ministry of Transport, Forsyth Barr analysis

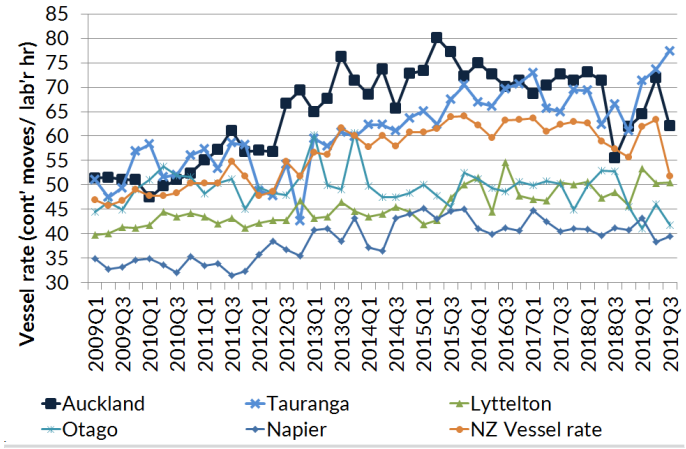
Other measures of port productivity include the ship rate and the vessel rate. These measures reflect the number of containers moved on and off a container ship in (1) an hour (ship rate Figure 51), and (2) an hour of labour (vessel rate Figure 53). The ship rate is the most important measure of port productivity for shipping lines.

Figure 52. Ship rate



Source: Ministry of Transport, Forsyth Barr analysis

Figure 53. Vessel rate



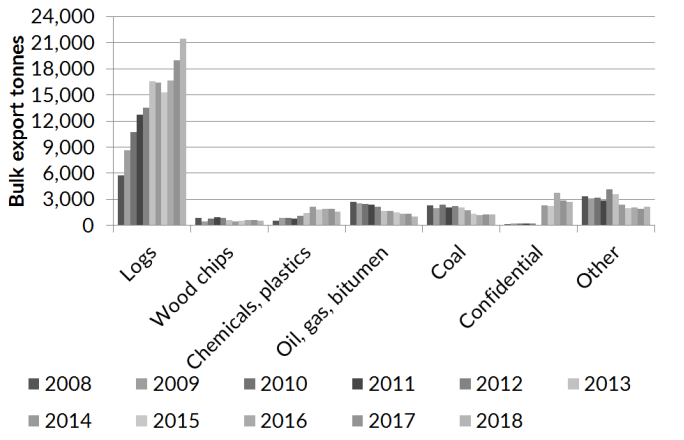
Source: Ministry of Transport, Forsyth Barr analysis

Key exported commodities

New Zealand exports more cargo than it imports. Dairy, meat and other foodstuffs generate the most export value. In contrast export volumes are dominated by wood, and mined commodities (minerals, coal and fuel).

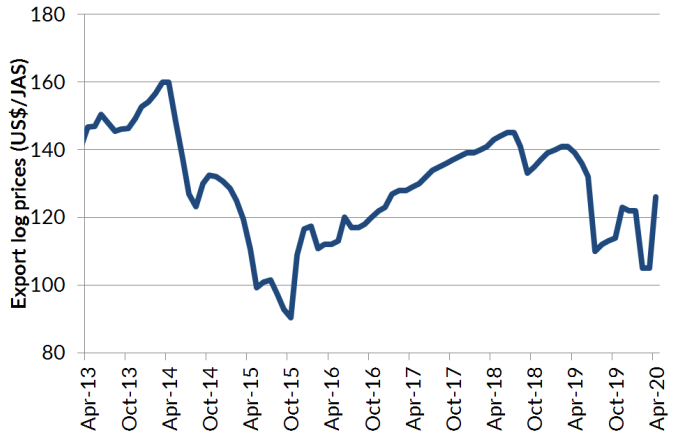
Wood exports are dominated by logs. The industry also exports processed timber, pulp and paper, and wood chips.

Figure 54. Bulk sea export commodities



Source: Ministry of Transport, Forsyth Barr analysis

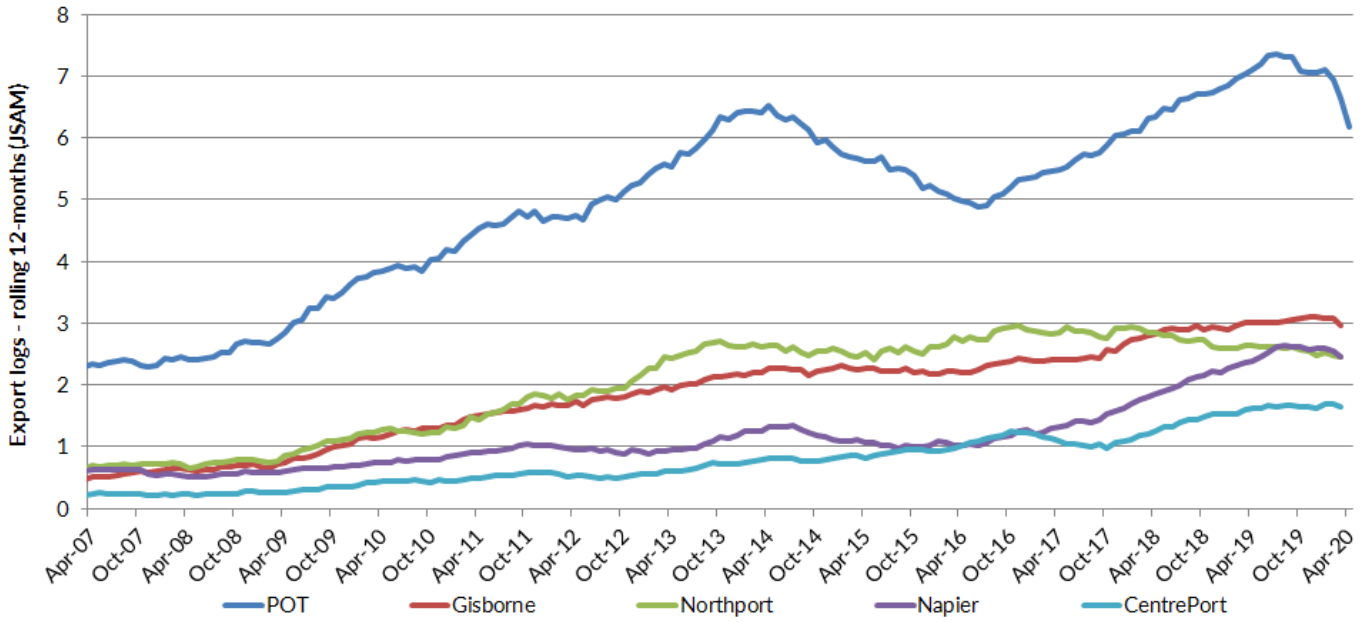
Figure 55. Export log prices (A-grade)



Source: NZX Agrifax, Forsyth Barr analysis

POT (~33% share) is the largest export port for logs in New Zealand followed by Northport (~15% share) and Port of Gisborne (~15% share).

Figure 56. Log exports at leading ports



Source: Statistics NZ, Forsyth Barr analysis

Port of Tauranga

We supplement the data already provided for POT with container services, container movement and log export statistics.

Regular container services

In Figure 57 we summarise regular weekly or fortnightly services at POT providing direct access to Australia, Asia and the Americas.

Figure 57. Regular container services currently stopping at POT

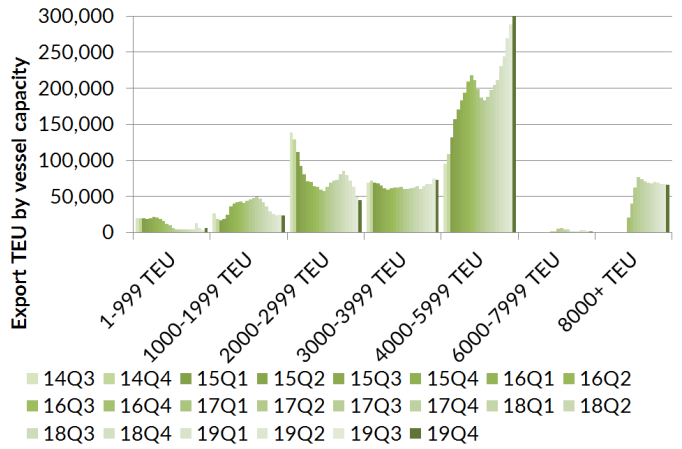
Shipping line	Service	POT code	POT service	Frequency	From	To
Pacifica	CFD	CFD	Domestic	Weekly	Domestic	Domestic
CMA-CGM/PIL/ OOCL/COSCO	China New Zealand Service	AANZ	Export	Weekly	Lyttleton/Wellington/Napier	Hong Kong
Maersk	AC3	AC3	Export	Weekly	South America	Hong Kong
Hamburg-Sud	ANZL (Asia)	ANZL	Export	Weekly	Lyttleton/Napier	Tokyo
MSC	Capricorn	MSC	Export	Weekly	Bluff/Port Chalmers/Lyttelton/Nelson/ Tauranga	Tanjung Pelepas
PIL/CMA-CGM	New Zealand Service	NZS	Export	Weekly	Lyttleton/Wellington/Napier	Brisbane/Port Kelang
Hamburg Sud	OC1/Trident	OAES	Export	Weekly	Australia/Chalmers/Napier	Auckland/Panama
ANL	TTZ	TTAZ	Export	Weekly	Lyttelton/Nelson/Wellington	Sydney
Maersk	AC1	AC1	Import	Weekly	Hong Kong	South America
NPL	Fiji Feeder	NEP	Import	Weekly	Fiji	Auckland
Maersk	Southern Star	SSTR	Import	Weekly	Singapore/Brisbane	Lyttelton/Chalmers/Tanjung Pelepas
MSC	New Kiwi Express	KEX	Import/Export	Weekly	Australia/Auckland	Australia
CMA-CGM	Panama Direct Line	PAD	Import/Export	Weekly	Melbourne	Panama
Hapag Lloyd	US West Coast Australasia Loop 2	WAN	Import/Export	Fortnightly	Oakland	Sydney
Hapag Lloyd	US West Coast Australasia Loop 1	WAS	Import/Export	Weekly	Sydney	[Pappeete]/Oakland

Source: POT, Forsyth Barr analysis

Contained movements at POT

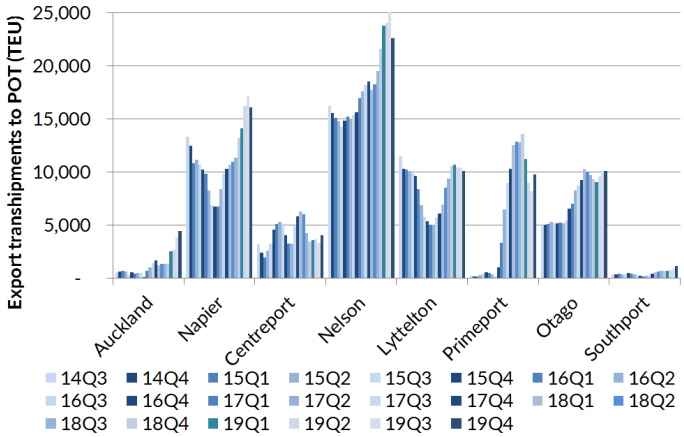
Cargo aggregation at POT was significantly enhanced following the Kotahi deal. More recently dredging has facilitated 8,000+ TEU ships.

Figure 58. 12m-rolling export TEU by vessel capacity



Source: Ministry of Transport, Forsyth Barr analysis

Figure 59. 12m-rolling export transhipments to POT



Source: Ministry of Transport, Forsyth Barr analysis

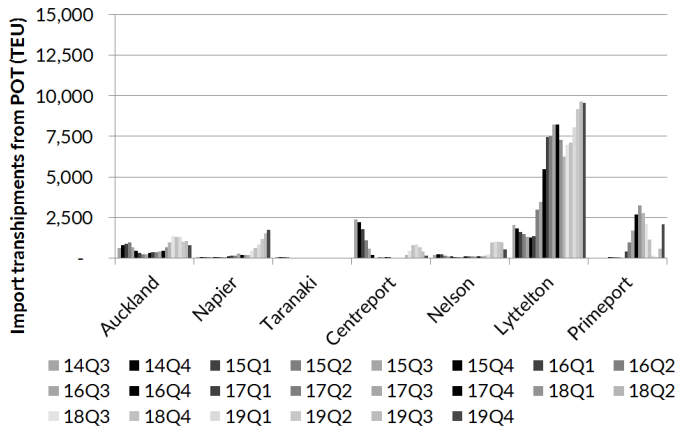
Transhipments at POT

POT operates a hub and spoke model with transhipments a key driver of growth. Further shipping industry consolidation will likely lead to rationalisation of shipping services, which we expect will increase transhipments. Lyttelton (imports) and Nelson (exports) are the largest spoke ports for POT.

Log exports at POT

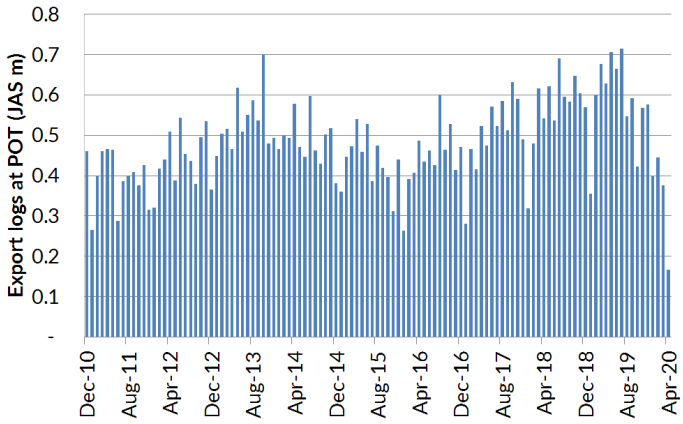
In Figure 61 we show monthly log export volumes through POT using data supplied by NZ Statistics. This data is consistent with the volumes reported by POT in its financial releases. It, therefore, provides a timely and accurate assessment of near term movements in its log export revenues.

Figure 60. 12m-rolling import transhipments from POT



Source: Ministry of Transport, Forsyth Barr analysis

Figure 61. Log exports at POT



Source: Statistics NZ, Forsyth Barr analysis

Napier Port

We supplement the data already provided for NPH earlier with container services, container movement and log export statistics.

Regular container services

We summarise in Figure 62 the regular weekly or fortnightly services that stop at NPH providing direct access to and from Australia, Asia and the Americas.

Figure 62. Weekly container shipping services currently visiting NPH

Shipping line	Service	Frequency	Origin/Destination	From	To
MSC	Capricorn	Weekly	Australia/South East Asia	South Port, Otago, Lyttelton	Tauranga, Auckland, Brisbane
CMA-CGM/PIL	NZ Service/KIX	Weekly	South East Asia	Brisbane, Auckland, Lyttleton, CentrePort	Tauranga, Brisbane
CMA-CGM	ANZEX	Weekly	North Asia	Brisbane, Auckland, Otago, Lyttleton	Tauranga
Maersk	OC1/Trident	Weekly	East Coast North America	Auckland, Sydney, Melbourne, Chalmers	Tauranga, Auckland
Maersk	Southern Star	Weekly	South East Asia	Brisbane, Sydney, Tauranga	Lyttelton, Otago
COSCO	Japan Conference	Weekly	Japan/Korea/China	Lyttleton	Tauranga

Source: Forsyth Barr analysis

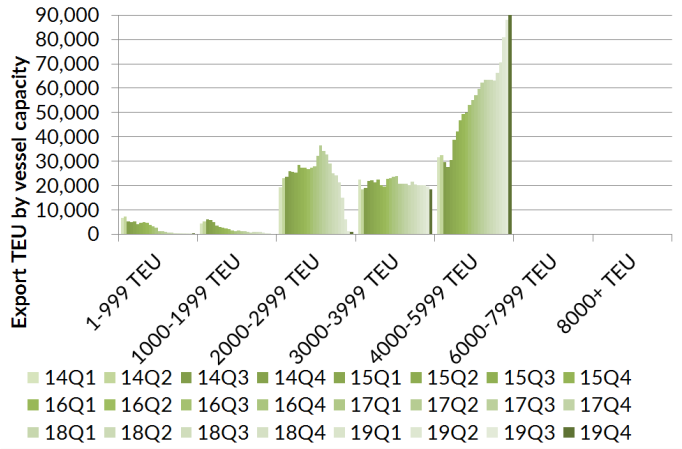
Container movements at NPH

NPH's exports are now really only departing the port on vessels that have capacity of 3,000 TEU or more.

Log exports at NPH

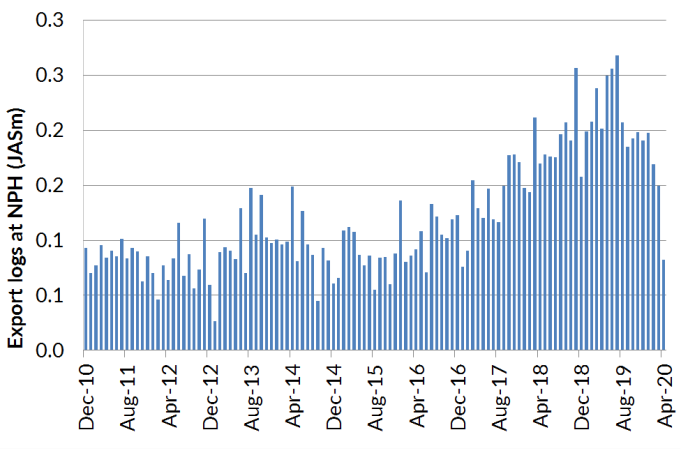
In Figure 64 we show monthly log export volumes through NPH using the same data set as above. This data is on average -9% lower than that reported by NPH in its financial releases.

Figure 63. 12m-rolling export TEU by vessel capacity



Source: Ministry of Transport, Forsyth Barr analysis

Figure 64. Log exports at NPH



Source: Statistics NZ, Forsyth Barr analysis

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