FORSYTH BARR

Transport Trends

Growth Inflection Point

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The demand picture for freight and passenger services has stabilised following several quarters of successive slowing. Economic stimulus, both domestically and offshore, will be supportive to a moderately better volume backdrop through 2020, in our opinion. While current volumes are broadly flat year on year across different modes, price growth generally remains robust. The earnings growth outlook among listed players is mixed and will be partially held back by the slower start to FY20. Valuations remain elevated and continue to discount higher growth rates than are currently being generated. We retain a neutral to negative stance on the sector. Our favoured stocks are NEUTRAL rated Mainfreight (MFT) and Freightways (FRE).

Key transport trends and themes

Key themes across airports and airlines, roads and rail, and ports and shipping identified in Transport Trends include:

- **Log price recovery:** Having fallen materially mid-year, export log prices have rebounded. This will help mitigate the negative impact on export volumes, which have slowed in recent months.
- **Traffic data stabilising:** NZTA heavy vehicle data suggests domestic conditions have stabilised after a sustained downturn through 2019. The data is consistent with anecdotal industry feedback.
- **Aviation growth by the decade:** The 2010s have bucked the long term international aviation growth deceleration trend with growth in excess of the 2000s. The 2020s is likely to revert to trend.

Sector preferences

We summarise our sector stock ratings as follows:

- **OUTPERFORM:** n/a
- **NEUTRAL:** Air New Zealand, Freightways, Mainfreight, Napier Port
- **UNDERPERFORM:** Auckland Airport, 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 highlight several key trends shaping the broader transport industry that are relevant to one or more NZX listed transport companies:

- **Trend #1: Log price recovery**
- **Trend #2: Traffic data stabilising**
- **Trend #3: Longer term international aviation growth profile**

Stock preferences

We are underweight the transport sector given elevated valuations.

NEUTRAL: Air NZ (AIR), Freightways (FRE), Mainfreight (MFT), Napier Port (NPH)

- **AIR's** capacity growth through 1H20 has been at its lowest level for many years. The company's response to a lower demand environment has been rapid. However, we expect capacity growth to accelerate through 2H20 before moderating in FY21.
- **FRE's** near term earnings growth profile will be driven by pricing gains from its B2C 'pricing for effort' initiative. The deceleration and decline in parcel growth appears to have arrested. The Big Chill acquisition could be completed in 3Q20.
- **MFT's** elevated earnings growth outlook was carried by margin expansion through 1H20. Revenue growth needs to accelerate to justify its elevated valuation on forward earnings multiples. Nonetheless, we believe it remains one of the highest quality structural growth stories in the New Zealand market.
- **NPH** is heavily reliant on forestry and pip-fruit exports. The longer term outlook for both is positive. A recovery in log prices will assist near term earnings as confidence in the log export sector improves.

UNDERPERFORM: Auckland Airport (AIA), Port of Tauranga (POT)

- **AIA** has experienced a slowdown in passenger growth rates, with the near term outlook subdued. Lower demand growth and unsustainable capacity have been the key drivers. At the same time, the company's capex spend levels have undershot its forecasts, which provides balance sheet headroom but may have an impact on regulatory income through the current price setting period (no runway land charge) and the next period (projects deferred).
- **POT's** elevated valuation is, in our opinion, a function of (1) low bond yields, and (2) the potential for structural change in the domestic port industry given the on-going current Upper North Island Supply Chain study. The working group's final report is due to be published this week. A recovery in log prices may assist POT during a year of subdued growth implied in its earnings guidance range.

Figure 1. Valuation summary as at 11 December 2019 (NZ$)

					Gross yld	PE		EV/EBITDA	
Company	Code	Rating	Share Price	Target Price	FY20	FY20	FY21	FY20	FY21
Operators									
Air New Zealand	AIR	NEUTRAL	2.78	2.60	11.0%	11.6x	10.7x	5.0x	4.5x
Freightways	FRE	NEUTRAL	8.32	8.10	5.1%	21.1x	20.5x	12.8x	12.4x
Mainfreight	MFT	NEUTRAL	41.05	39.00	1.9%	29.3x	26.2x	16.6x	15.0x
Infrastructure									
Auckland Airport	AIA	UNDERPERFORM	9.04	7.90	3.4%	39.7x	40.5x	23.7x	23.5x
Napier Port	NPH	NEUTRAL	3.39	3.05	1.0%	20.6x	33.5x	16.0x	15.7x
Port of Tauranga	POT	UNDERPERFORM	6.66	5.25	2.8%	45.1x	44.9x	28.4x	28.3x

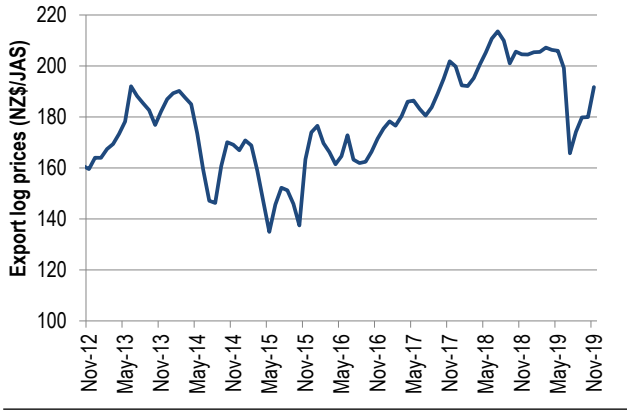
Source: IRESS, Forsyth Barr analysis

Key trends identified

Trend #1: Log price recovery

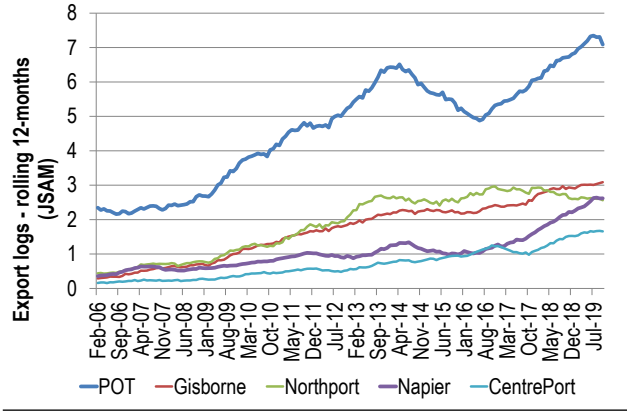
Log prices are rebounding having fallen dramatically mid-year. This is good news for log exporters and key log export ports. Data from AgriHQ suggest that A-grade log prices are now US$123/JASm^3, up from a low of US$110/JASm^3 in July 2019 but still down on the most recent peak of US$1141/JASm^3 in March 2019. However, after accounting for currency movements NZD based prices are now only -7.5% lower than the peak.

Figure 2. Log export prices (A-grade)



Source: AgriHQ, Forsyth Barr analysis

Figure 3. Log volume growth at POT and NPH has stalled



Source: Statistics NZ, Forsyth Barr analysis

Implications for Port of Tauranga (POT) and Napier Port (NPH)

Log exports represent an important share of the cargo mix of both POT and NPH. We estimate logs account (based on FY19) for ~22% of POT's EBITDA and ~52% of NPH's.

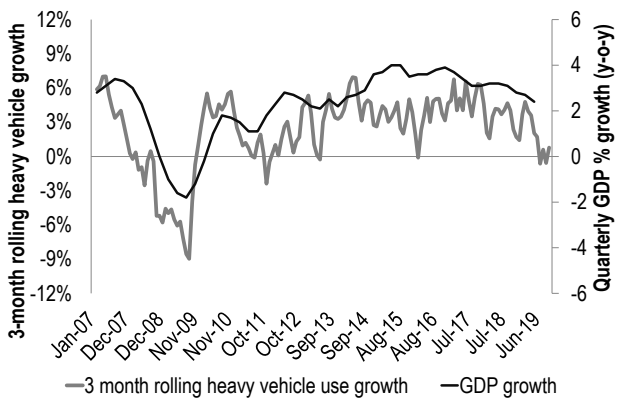
The impact of log price movements is delayed on the export trade. Consequently, we expect monthly export volumes to be below recent peak levels for at least the next few months. Thereafter export levels will firm, particularly if prices continue to recover, in our opinion. Our current log export volume forecasts for POT and NPH in FY20 are 6.4m JAS (-10% against the prior year) and 2.5m JAS (-3% against the prior year), respectively.

Trend #2: Traffic data stabilising

Heavy vehicle traffic data as measured by NZTA via its telemetry sites on state highways shows a stabilisation of the deceleration evident in recent months. November 2019 data suggests overall heavy vehicle traffic increased +1.4% against the prior year, and compares to a -1.3% decline in October 2019. While we are conscious that the data can be volatile from month to month, the trend has deteriorated as shown in Figure 4.

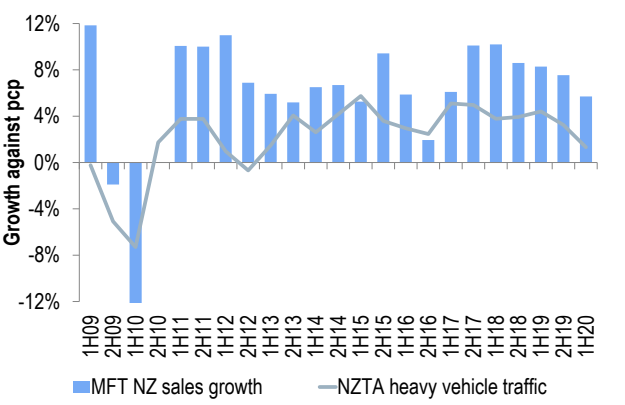
The data we use differs from that used by ANZ's Truckometer — we use all of NZTA's telemetry sites (118), whereas ANZ only uses 11 roads.

Figure 4. NZTA's heavy vehicle traffic data vs GDP



Source: NZTA, RBNZ, Forsyth Barr analysis

Figure 5. MFT revenue growth vs NZTA's heavy vehicle traffic data



Source: MFT, NZTA, Forsyth Barr analysis

Implications for Mainfreight (MFT) and Freightways (FRE)

Recent results and commentary from both MFT and FRE suggest freight industry conditions deteriorated through 2019, consistent with NZTA data. Moreover, current trading and forward outlook commentary suggests that the rate of decline has been arrested with some optimism for the peak season (pre-Christmas).

With economic headwinds easing both domestically and internationally, the outlook for calendar 2020 is increasingly optimistic.

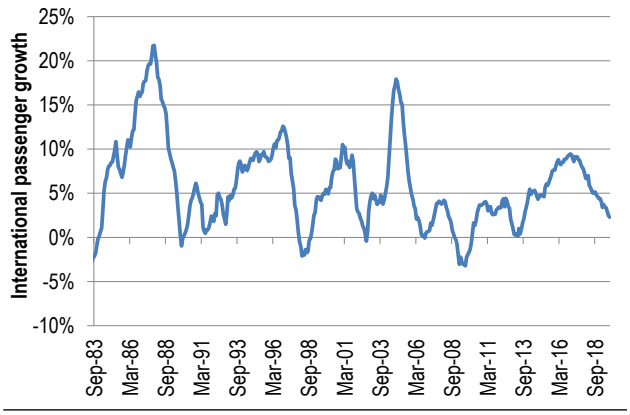
Trend #3: Longer term aviation growth profile

International passenger growth has flattened over the past year. For the three months to September 2019, passengers have grown just +0.7% against the same period in 2018. This reflects a combination of lower demand and reduced airline capacity to New Zealand. The backdrop appears very different to the boom years of 2015–2017.

Over the past 30 years growth has averaged ~+5% albeit volatile on a year to year basis as shown in Figure 6. Over the past six decades growth has slowed sequentially, until the 2010s. This decade appears to be an anomaly helped by (1) structurally lower fuel prices, (2) better aviation technology, (3) synchronised global growth following the global financial crisis, and (4) a growing middle class in Asia.

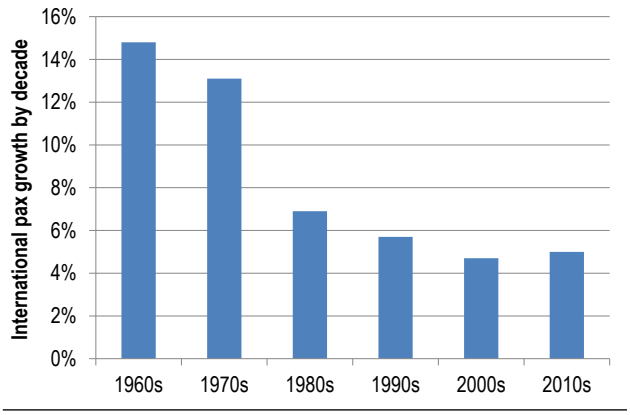
Growth has exceeded the previous decade, albeit only marginally. Over the next 10 years we expect growth to continue its decelerating longer term pattern due to (1) the base effect, (2) the implications of climate change on consumer and corporate behaviour, and (3) the downside from over-tourism with a more concerted switch to value over volume for inbound travellers.

Figure 6. 12m rolling international passenger growth



Source: Stats NZ, Forsyth Barr analysis

Figure 7. International pax growth by decade



Source: Stats NZ, Forsyth Barr analysis

Implications for Air New Zealand (AIR) and Auckland Airport (AIA)

Longer term consumer demand for aviation is increasingly difficult to predict given the unknown consumer response to the emissions profile of the sector. Our base case for the sector remains consistent growth over the longer term albeit we recognise the downside risk from the broader flight shaming issue, which will be difficult to mitigate for the foreseeable future, even given the industry's commitments around carbon neutral growth.

AIR has been proactive in its sustainability drive in recent years. We expect this to continue. However, its emissions profile remains high (it is the highest Scope 1 emitter of any NZX company) and it's likely to remain elevated until lower carbon technology is available on a commercial basis (for example biofuels used for long haul).

AIA's longer term planning has historically used growth rates of 3.5%-4.0% pa. However, in light of the climate change issue we see some risk to its planning assumptions, which may slow its capital investment programme with potential further project delays. In particular, we expect the planned commissioning date of the Northern Runway to be pushed out further beyond 2030, when the company provides an update next year.

Operating statistics and industry data

Airports and airlines

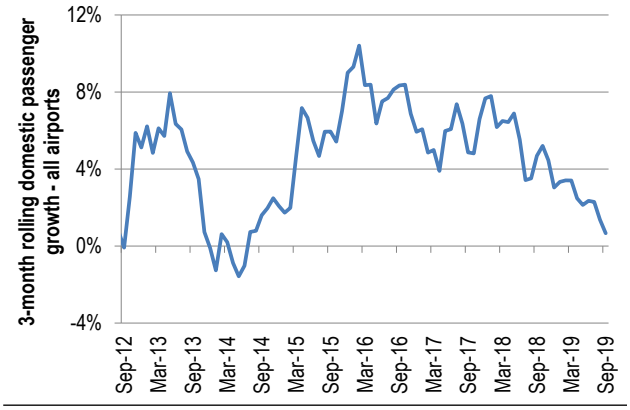
Data in this section is relevant to listed companies including Auckland Airport (AIA), Infratil (IFT) and Air New Zealand (AIR). Statistics principally reflect passenger movements but also cover seat capacity changes and other key airline specific data.

Airports

Domestic passenger movements within New Zealand

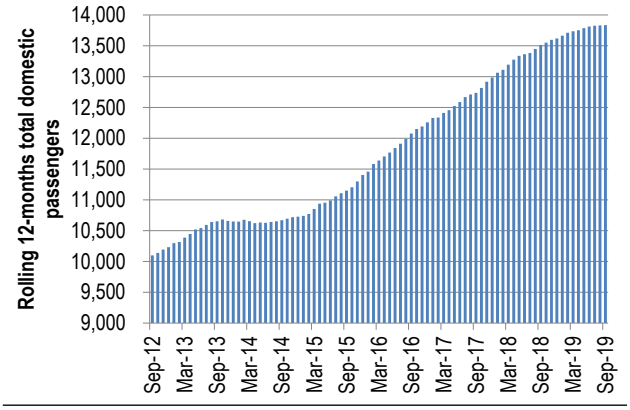
Monthly domestic passenger data for all NZ airports is not publically available. While Air NZ provides monthly statistics, Jetstar has historically provided six-monthly summaries (at financial result time). As a result, we have built our own domestic passenger series using available airport and airline data. We show the assumed growth in passengers in Figure 8.

Figure 8. Total domestic passenger growth



Source: Company reports, Forsyth Barr analysis

Figure 9. Total domestic passengers ('000)

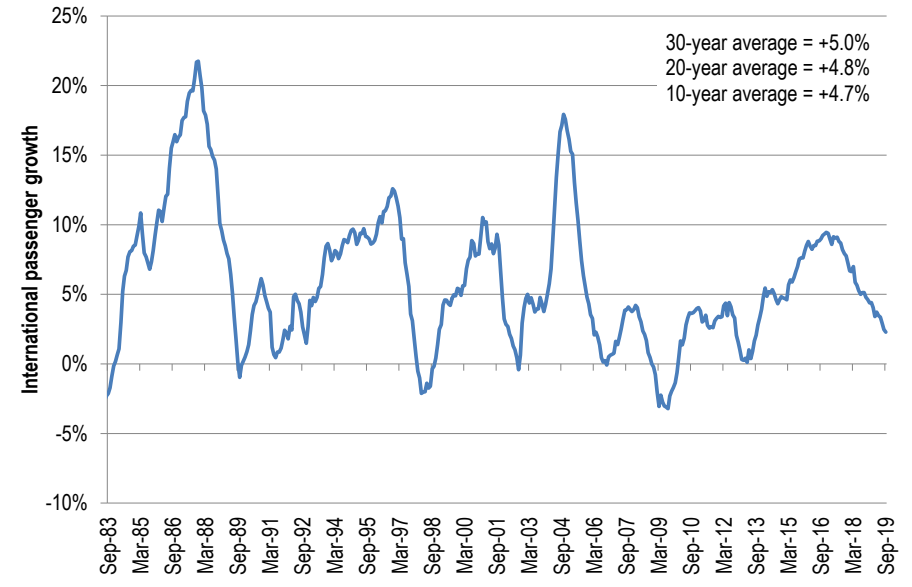


Source: Company reports, Forsyth Barr analysis

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)

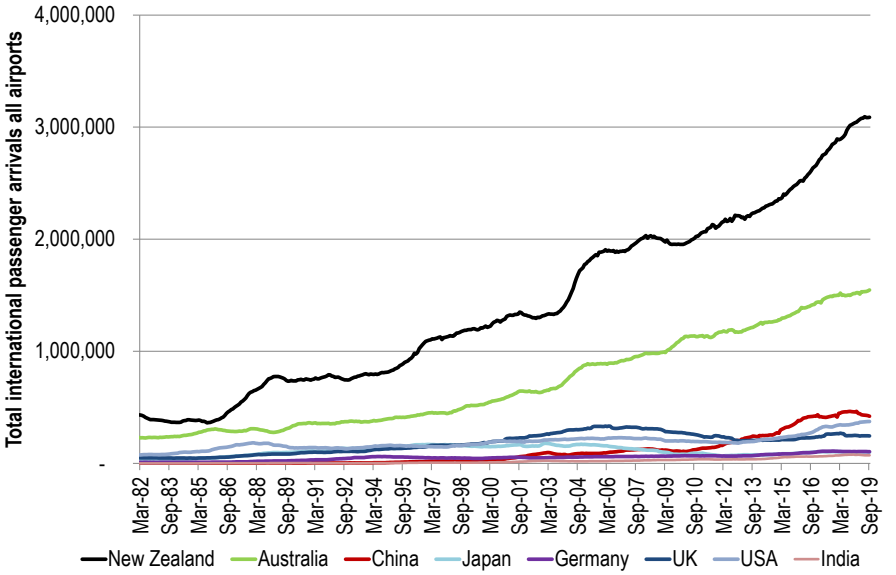


Source: Statistics NZ, Forsyth Barr analysis

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.

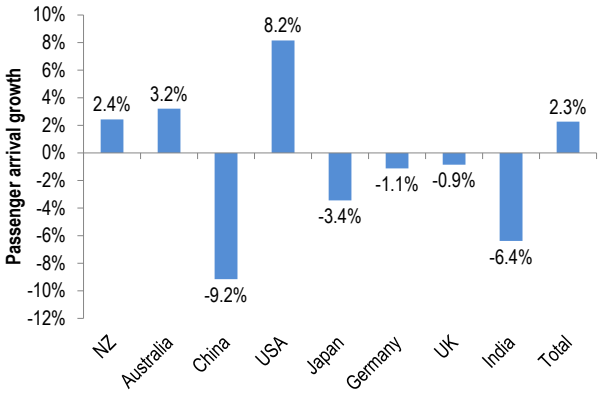
Figure 11. International passengers country of residence (12 months rolling)



Source: Statistics NZ, Forsyth Barr analysis

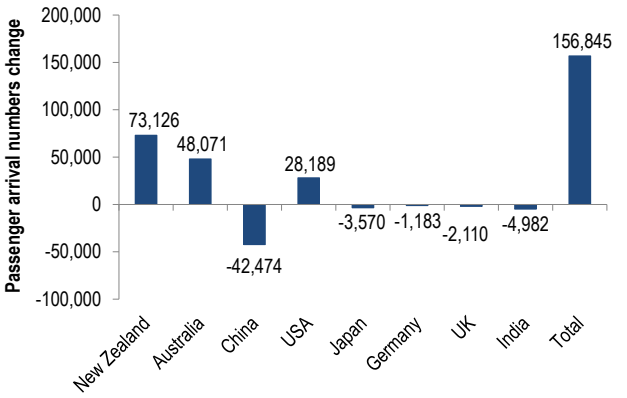
The year-on-year change in both percentage and absolute numbers for Figure 11 are shown in Figure 12 and Figure 13 respectively. Overall growth is being driven by a combination of nationalities but remains heavily reliant on more New Zealanders travelling offshore.

Figure 12. International arrivals growth (12m to September 2019)



Source: Statistics NZ, Forsyth Barr analysis

Figure 13. International arrivals change (12m to September 2019)

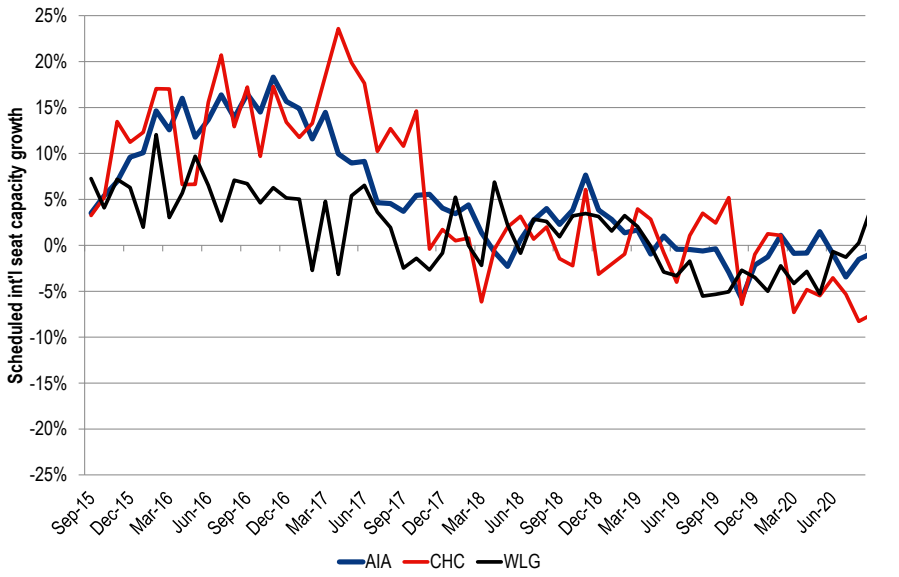


Source: Statistics NZ, Forsyth Barr analysis

International seat capacity

In Figure 14 we show scheduled international seat capacity growth for each of New Zealand's main airports. As new capacity additions are cycled in the second half of 2017, industry growth will likely slow.

Figure 14. Scheduled international seat capacity growth



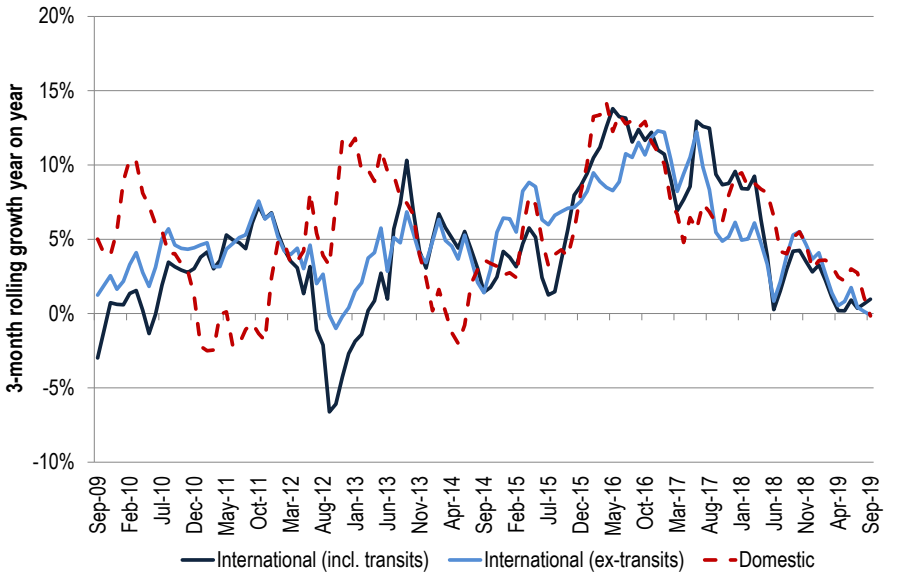
Source: OAG, Forsyth Barr analysis

Auckland Airport

Monthly pax numbers

AIA reports monthly traffic numbers. We chart the airport's passenger growth history since 2009 in Figure 15.

Figure 15. Passenger growth dynamics at AIA

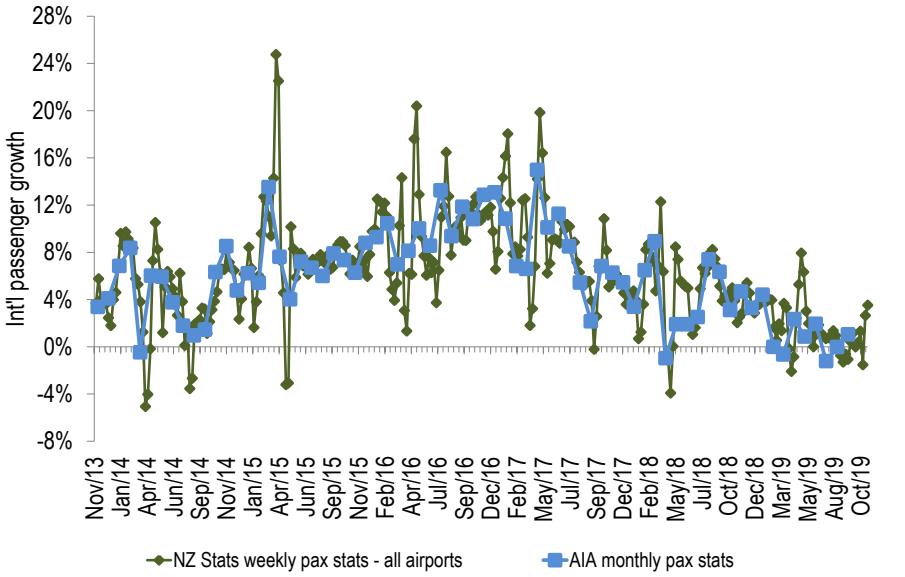


Source: Company reports, Forsyth Barr analysis

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: NZ stats, Forsyth Barr analysis

International airline seat capacity changes

In Figure 17 we show the announced changes in seat capacity for Auckland's international services that have been announced since our previous Transport Trends report published on 25 September 2019. The net increase of ~68,000 seats follows a similar sized increase in the previous three month period.

Figure 17. Capacity changes since 25 September 2019 – new additions/(reductions)

Start date	Carrier	Service	Equipment	Frequency	Duration	Annual seat capacity chg
Mar-20	Virgin Australia	Sydney	B737	Less 5x weekly	Year round	(90,000)
Oct-20	American Airlines	Dallas	B787-9	3x weekly to daily	Seasonal	72,000
Oct-20	Air New Zealand	Newark	B787-9	3x weekly	Year round	86,000
Total of new additions announced in past two months						**~68,000**

Source: Forsyth Barr analysis

We provide a detailed history of this data in Figure 18 with all major seat capacity changes that have impacted capacity since June 2018.

Figure 18. AIA international seat capacity watch – the pipeline

Start date	Carrier	Service	Equipment	Frequency	Duration	Annual seat capacity chg
Jun-18	Philippines Airlines	Manila (direct)	A330	Upgauge 3x weekly	Year round	17,000
Jun-18	Emirates	Denpasar-Dubai	B777-300ER	1x daily new service	Year round	222,000
Oct-18	China Eastern	Shanghai	A330-200	Downgauge	Seasonal	(25,000)
Oct-18	Hainan	Shenzhen	B787-9	Upgauge 3x weekly	Year round	23,000
Oct-18	China Eastern	Shanghai	B777-300ER	Upgauge	Seasonal	24,000
Oct-18	Air NZ/Singapore Airlines	Singapore	B787-9/A380/B777	Plus 5-7 weekly	Year round	148,000
Nov-18	Air New Zealand	Taipei	B787-9	Less 2x weekly	Seasonal	(7,000)
Nov-18	Virgin Australia	Newcastle, Australia	B737-800	3x weekly	Seasonal	13,000
Nov-18	Air New Zealand	Taipei	B787-9	Up to 5x weekly	Year round	95,000
Nov-18	Emirates	Denpasar-Dubai	B777-300ER	Less 2-3x weekly	Seasonal	(23,000)
Nov-18	Air New Zealand	Chicago	B787-9	3x weekly	Year round	85,800
Nov-18	Hong Kong Airlines	Hong Kong	A330-200	Less 3-5x weekly	Seasonal	(45,000)
Dec-18	Virgin Australia	Tasman - various	Various	Various	Year round	118,000
Dec-18	Air New Zealand	Tasman - various	Various	Various	Year round	125,000
Dec-18	Sichuan Airlines	Chengdu	A350-900 and A330	Upgauge 3x weekly	Seasonal	17,000
Feb-19	AirAsia X	Gold Coast	A330-300	Exit	Year round	(275,210)
Feb-19	Air New Zealand	Gold Coast	A321	Plus 1x daily & upgauge	Year round	55,000
Mar-19	Hong Kong Airlines	Hong Kong	A330-200	Less 2-4x weekly	Seasonal	(73,000)
Mar-19	Air New Zealand	San Francisco	B777-300ER	Less 2x weekly	Seasonal	(34,000)
Mar-19	Tianjin	Tianjin-Chongqing	A330	Exit	Year round	(95,000)
Mar-19	Air New Zealand	Honolulu	B787-9	Less1-2 weekly	Year round	(37,000)
Apr-19	United Airlines	San Francisco	B777-300/200ER	3x weekly	Year round	48,000
May-19	Hong Kong Airlines	Hong Kong	A330-200	Exit	Year round	(104,000)
May-19	Air New Zealand	Ho Chi Minh	B787-9	Exit	Seasonal	(10,900)
Sep-19	China Eastern	Shanghai	B787-9	Upgauge 1x daily	Year round	66,000
Oct-19	Air New Zealand	Taipei	B787-9	Plus 1-2x weekly	Year round	16,000
Oct-19	LATAM	Santiago-AKL-Sydney	B787-9	Less 3x weekly	Year round	(195,000)
Nov-19	Air New Zealand	Seoul	B787-9	Up to 5x weekly	Year round	100,000
Dec-19	Air Canada	Vancouver	B787-8	4x weekly	Seasonal	30,000
Dec-19	Air New Zealand	Chicago	B787-9	Pus 2x weekly	Seasonal	11,000
Dec-19	Malaysian Airways	Kuala Lumpur	A330	Plus 1x weekly	Seasonal	7,000
Mar-20	Air NZ/Singapore Airlines	Singapore	B787-9/B777/A380	Plus 2x weekly/Upgauge	Seasonal	35,000
Mar-20	Virgin Australia	Sydney	B737	Less 5x weekly	Year round	(90,000)
Apr-20	Air New Zealand	Denpasar	B787-9	Plus 1x weekly	Seasonal	30,000
Oct-20	American Airlines	Dallas	B787-9	3x weekly to daily	Seasonal	72,000
Oct-20	Air New Zealand	Newark	B787-9	3x weekly	Year round	86,000

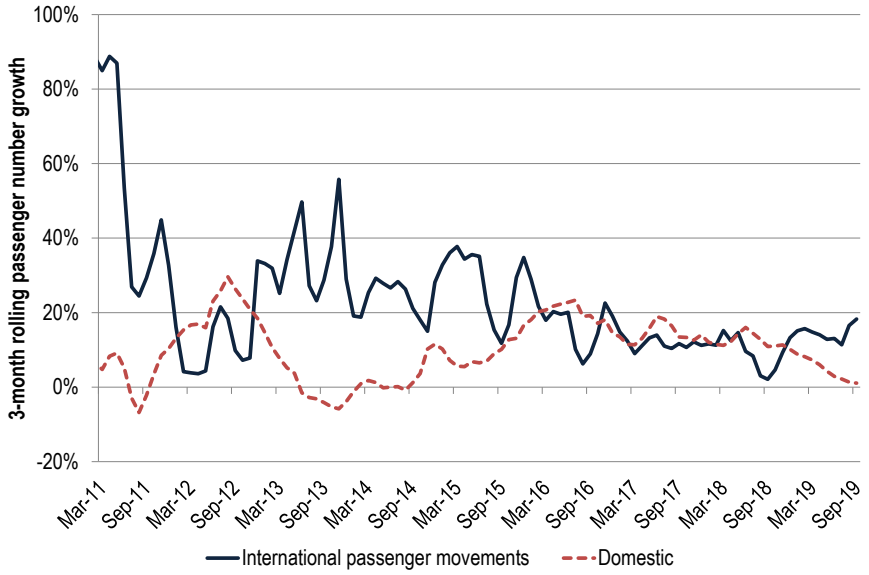
Source: Company reports, Forsyth Barr analysis

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 19.

The recent introduction of night flights provides scope for a near term lift in both domestic and international seat capacity.

Figure 19. Queenstown Airport passenger number growth

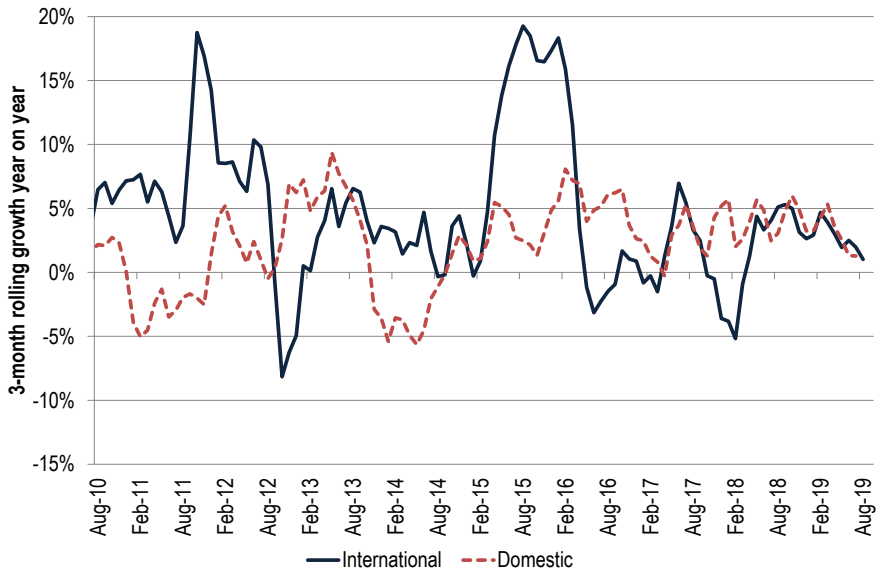


Source: Company reports, Forsyth Barr analysis

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 20.

Figure 20. Wellington Airport passenger numbers growth =

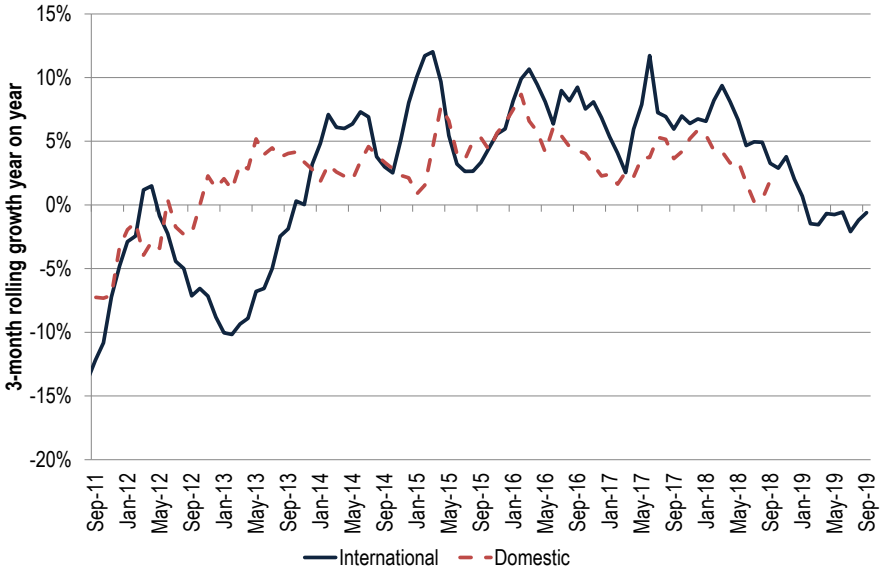


Source: Company data, Forsyth Barr analysis

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 21. Christchurch Airport passenger number growth



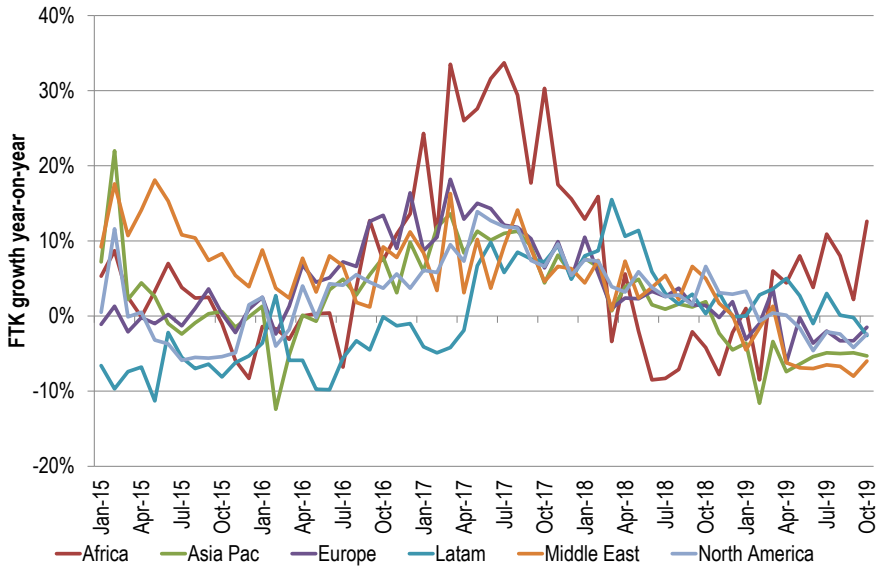
Source: Stats NZ, Company data, Forsyth Barr analysis

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.

Figure 22. Freight tonne kilometre (FTK) growth year-on-year by region

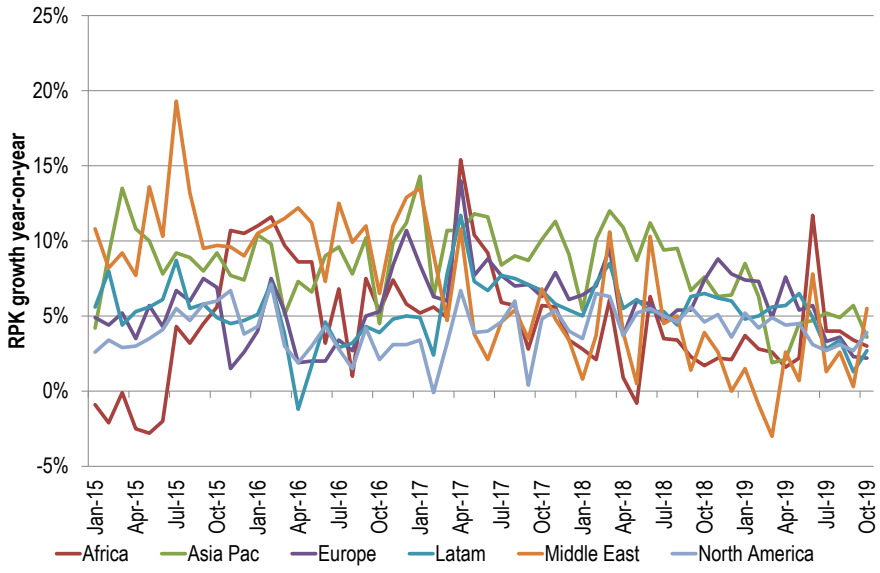


Source: IATA, Forsyth Barr analysis

IATA global air passenger data

In Figure 23 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 23. Revenue per kilometre (RPK) growth year-on-year by region

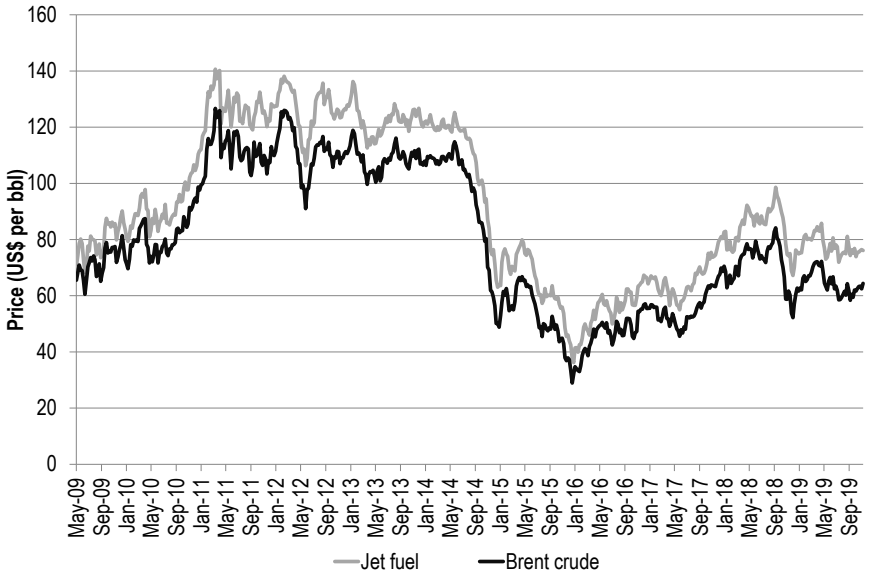


Source: IATA, Forsyth Barr analysis

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 24 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.

Figure 24. Jet fuel price (spot)

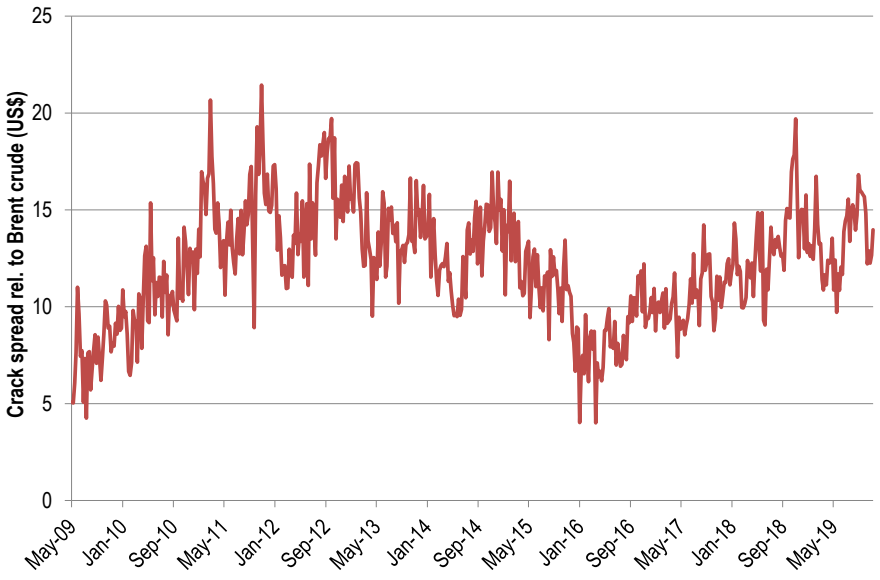


Source: Bloomberg, Forsyth Barr analysis

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 25 we show the history of the crack spread relative to the Brent crude price.

Figure 25. Crack spread relative to Brent crude price

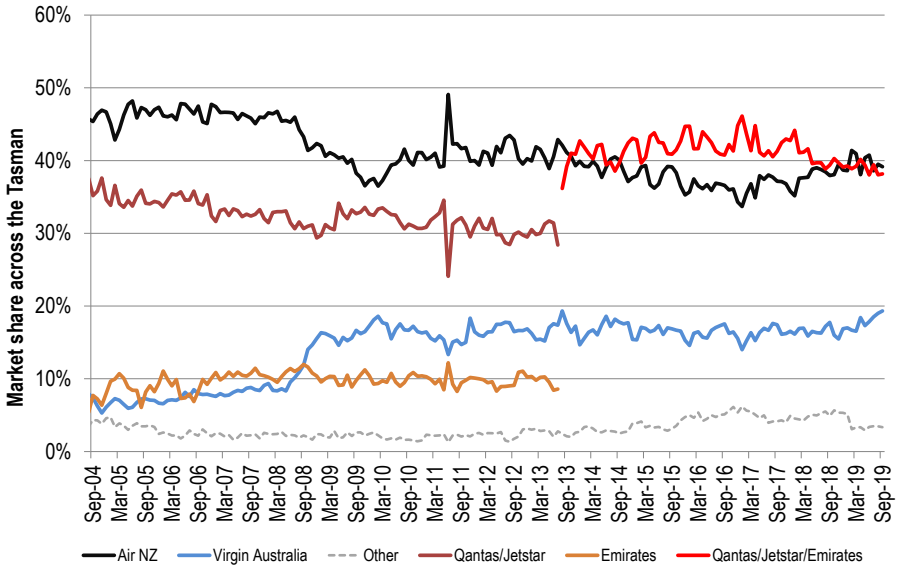


Source: Bloomberg, Forsyth Barr analysis

Trans-Tasman market share

In Figure 26 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.

Figure 26. Trans-Tasman market share

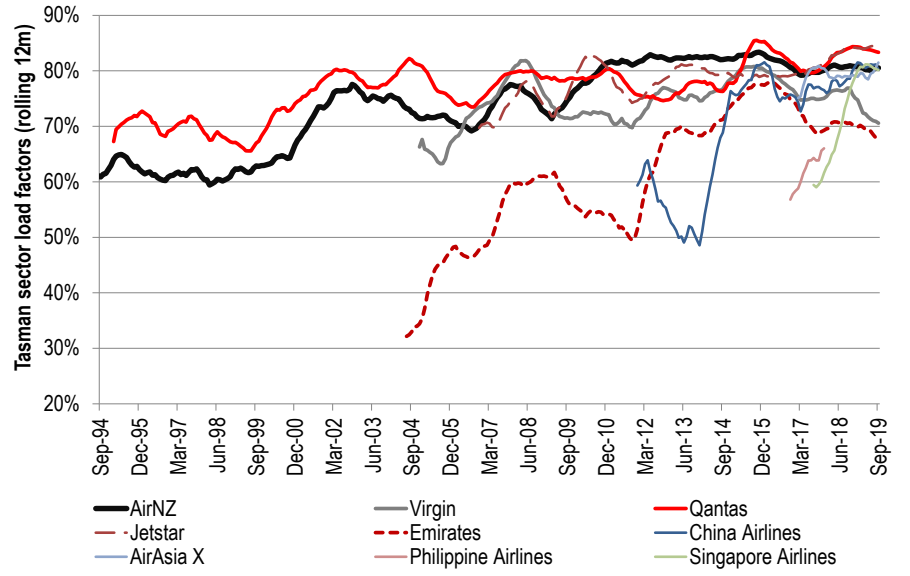


Source: BITRE, Forsyth Barr analysis

Tasman load factors

In Figure 27 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 27. Trans-Tasman load factors (12-month rolling)



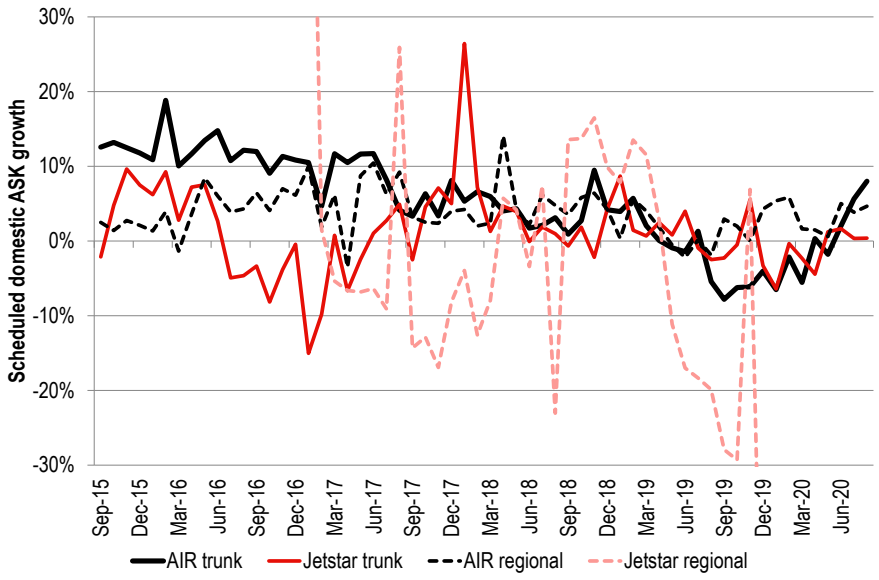
Source: BITRE, Forsyth Barr analysis

Domestic airline capacity outlook

Airline schedule data from OAG provides a picture of the capacity outlook. While 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 Figure 28 we show the scheduled domestic capacity growth across both trunk (Wellington, Christchurch, and Auckland) and regional airports for Air New Zealand and Jetstar.

Figure 28. Scheduled domestic capacity growth

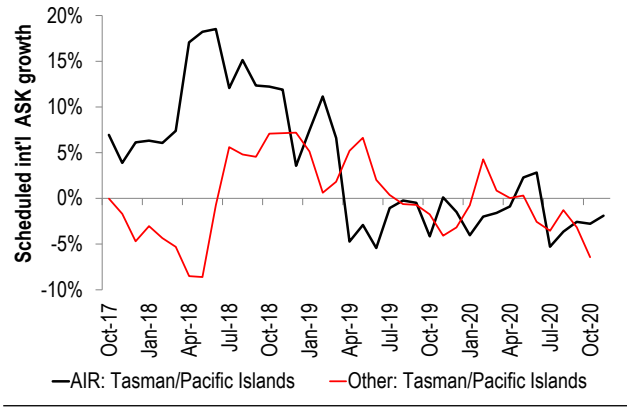


Source: OAG, Forsyth Barr analysis

International airline capacity outlook

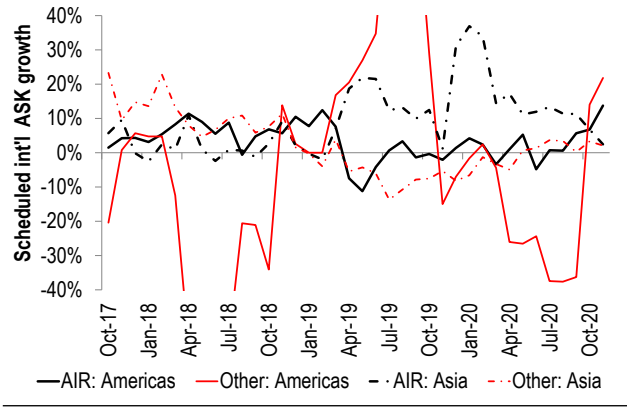
In Figure 29 and Figure 30 we show the scheduled international capacity growth across AIR's international regions. The data shows its increasing share of capacity in its Tasman and Pacific Island operations, but the opposite across Asia.

Figure 29. Scheduled Tasman and Pacific Island capacity growth



Source: OAG, Forsyth Barr analysis

Figure 30. Scheduled long-haul capacity growth



Source: OAG, Forsyth Barr analysis

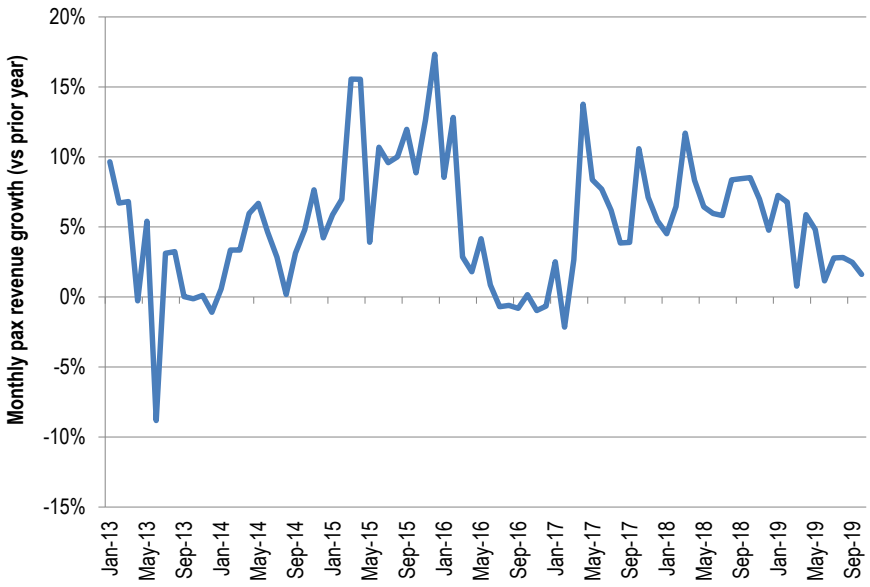
Air New Zealand

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 31.

Figure 31. AIR's monthly pax revenue growth

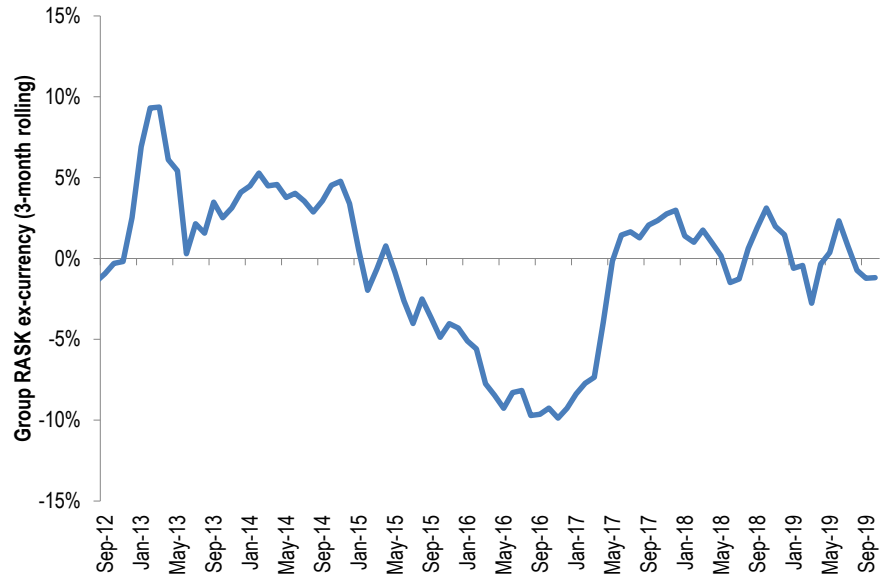


Source: Company data, Forsyth Barr analysis

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.

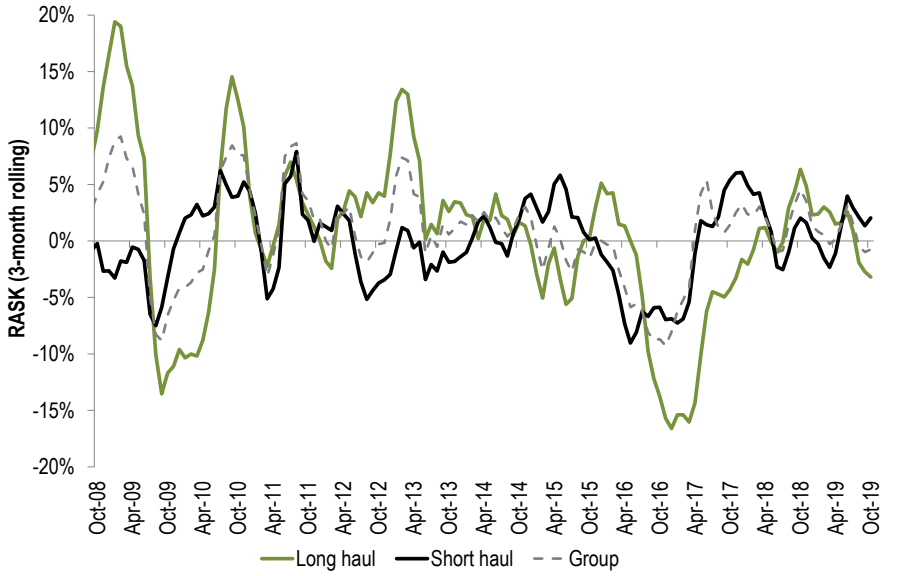
Figure 32. AIR's RASK growth (constant currency)



Source: Company data, Forsyth Barr analysis

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.

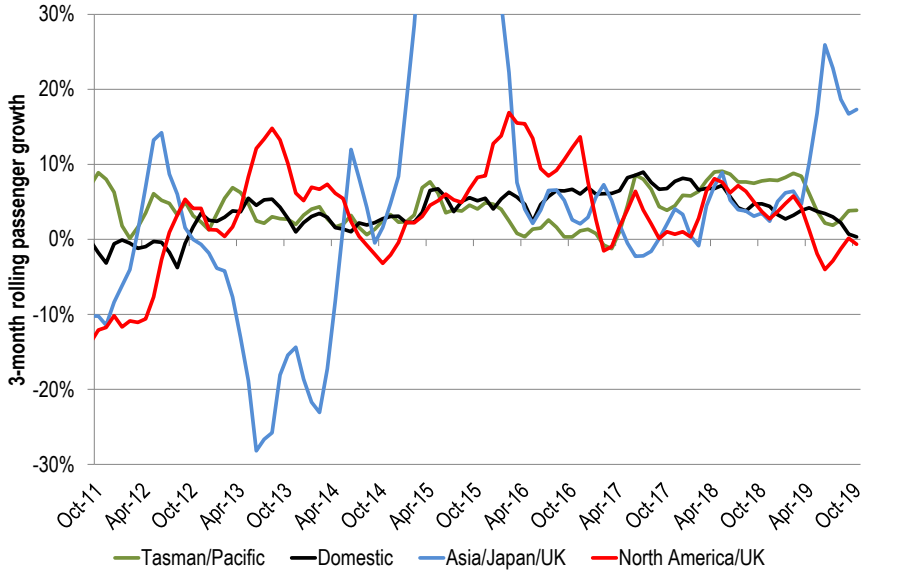
Figure 33. AIR's long haul and short haul RASK growth (NZD)



Source: Company data, Forsyth Barr analysis

We show in Figure 34 growth in passenger numbers by region for AIR.

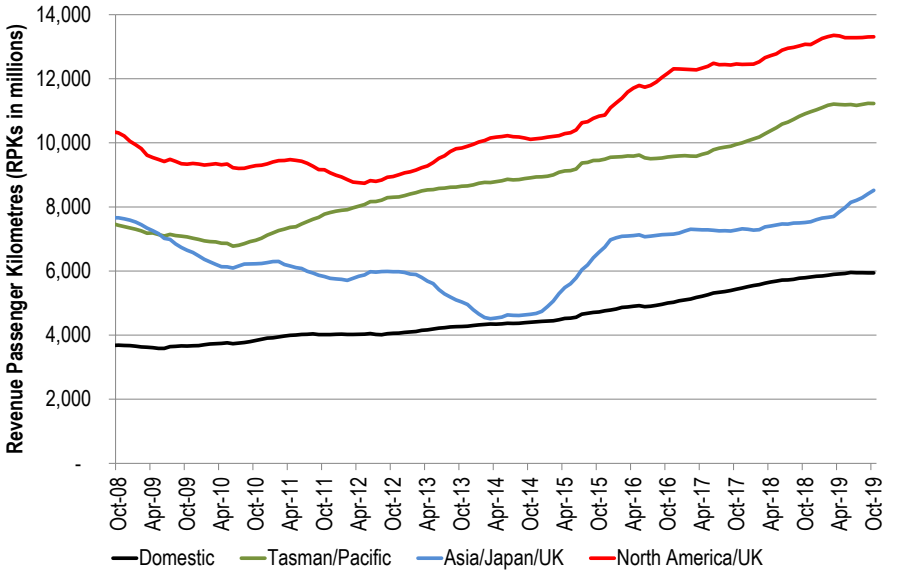
Figure 34. AIR's passenger growth (3-month rolling)



Source: Company data, Forsyth Barr analysis

Revenue Passenger Kilometres (RPK) is a key measure of output for airlines. In Figure 35 we show the rolling annual RPK for AIR across each of its regions.

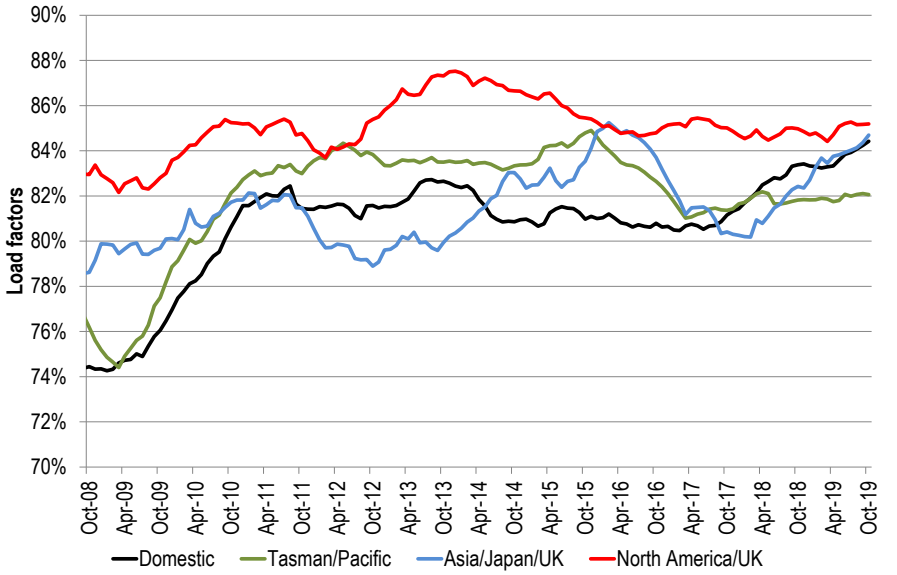
Figure 35. AIR's Revenue Passenger Kilometre (RPK)



Source: Company data, Forsyth Barr analysis

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 have been stabilising in recent months as shown in Figure 36.

Figure 36. AIR's 12-month rolling load factors by region



Source: Company data, Forsyth Barr analysis

Road and rail

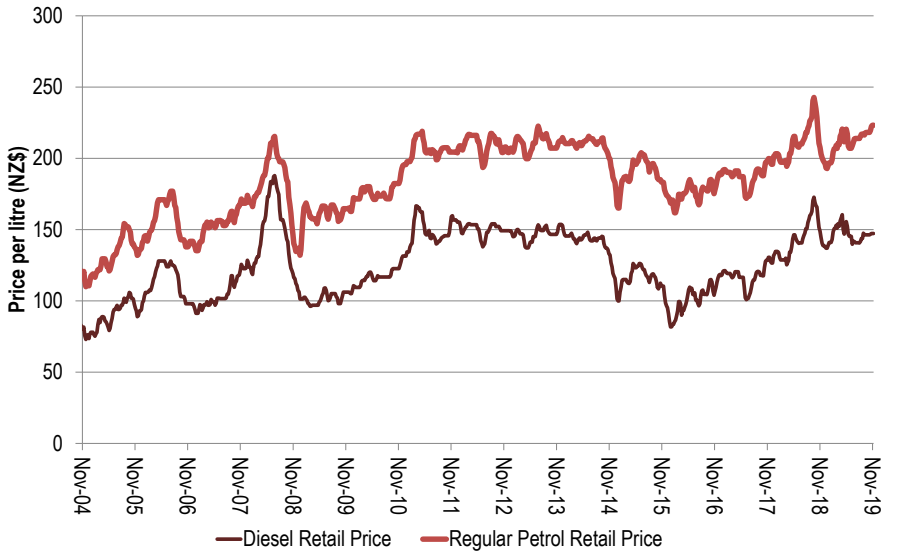
Road and rail data is most relevant to freight and courier related operators including Mainfreight (MFT) and Freightways (FRE). It may also be relevant to the ports in light of the competitive dynamics between road, rail and coastal shipping.

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.

Figure 37. New Zealand retail transport fuel costs

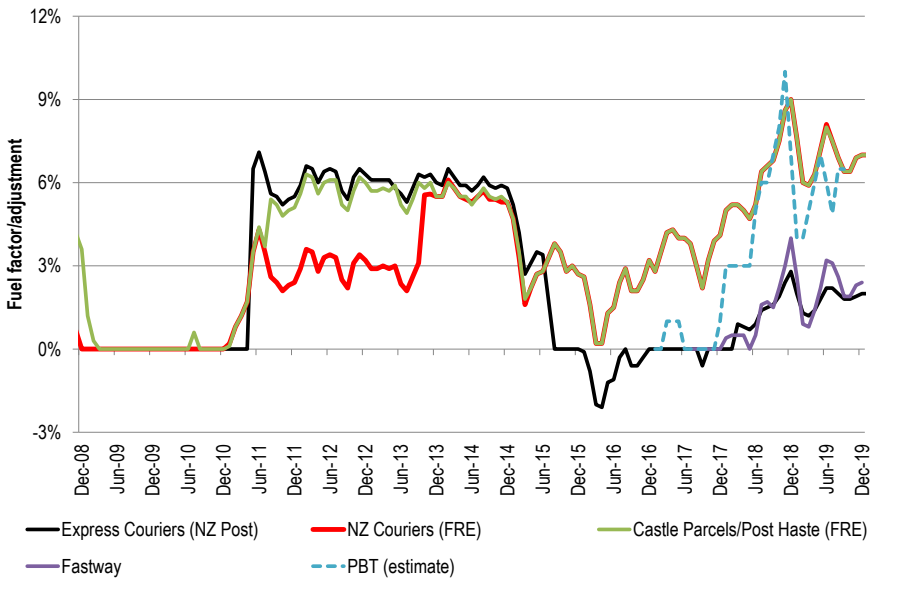


Source: MBIE, Forsyth Barr analysis

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 38. Courier company fuel adjustment levies

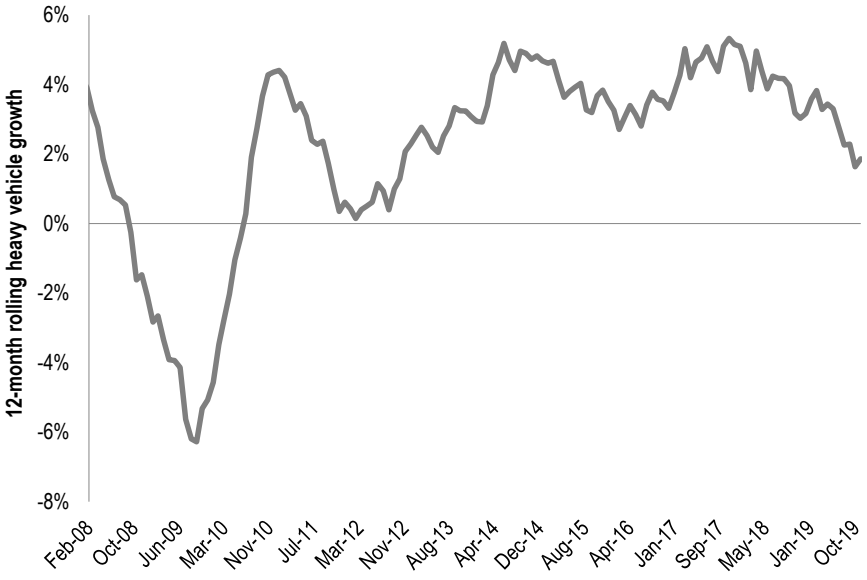


Source: Company websites, Forsyth Barr analysis

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.

Figure 39. Heavy vehicle use growth on state highways

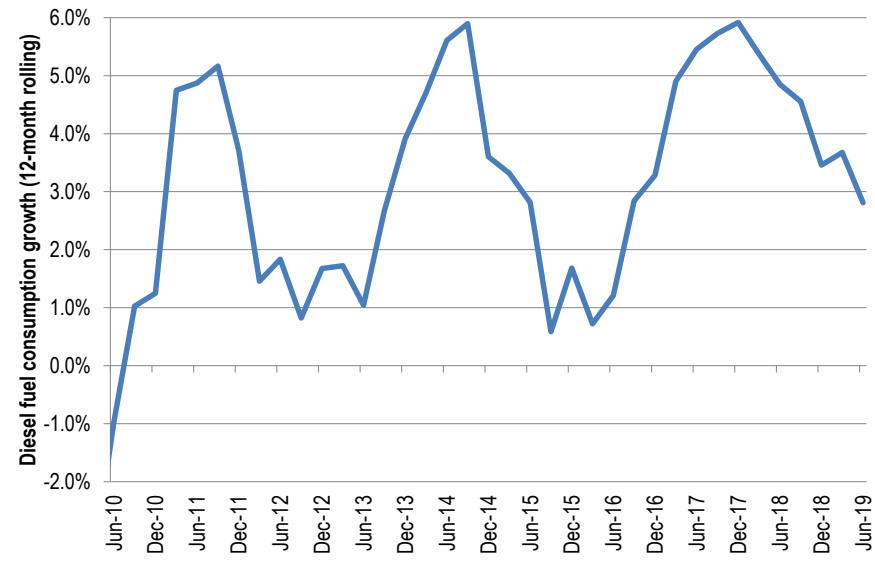


Source: NZTA, Forsyth Barr analysis

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 40. Quarterly diesel consumption growth

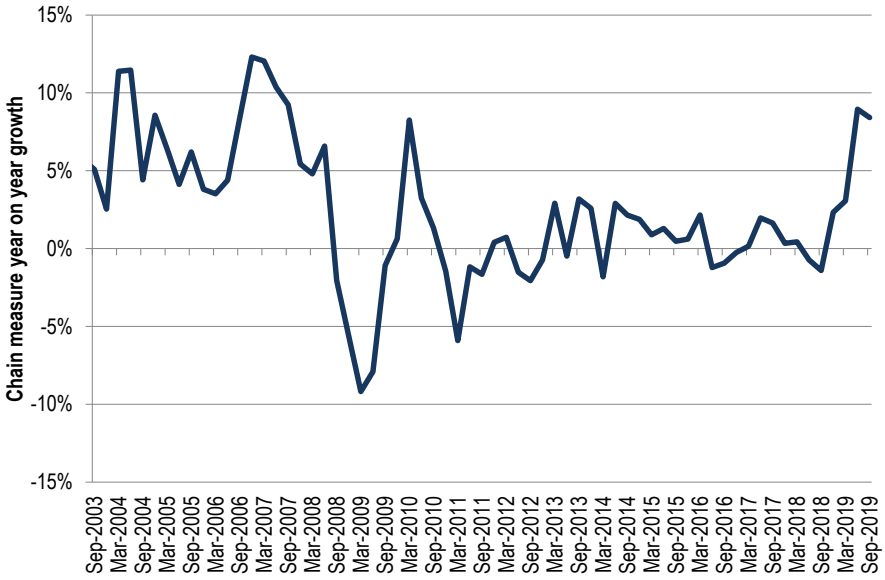


Source: MBIE, Forsyth Barr analysis

Australian road transport volumes

Timely data on the Australian freight transport industry is limited. In Figure 41 we show the growth profile of the road transport contribution to national accounts on a quarterly basis.

Figure 41. Transport, postal and warehousing national account (road transport component)

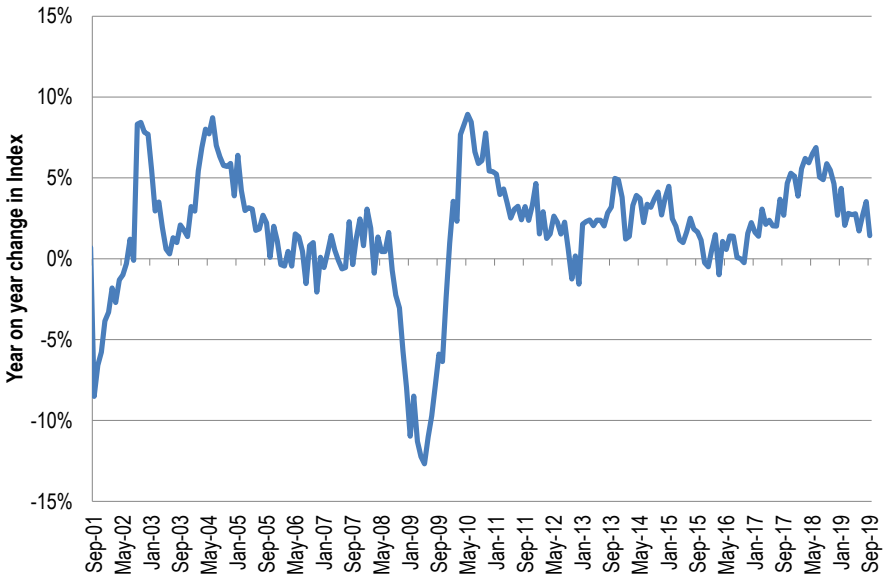


Source: ABS, Forsyth Barr analysis

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 42. Transportation Services Index



Source: US Dept of Transport, Forsyth Barr analysis

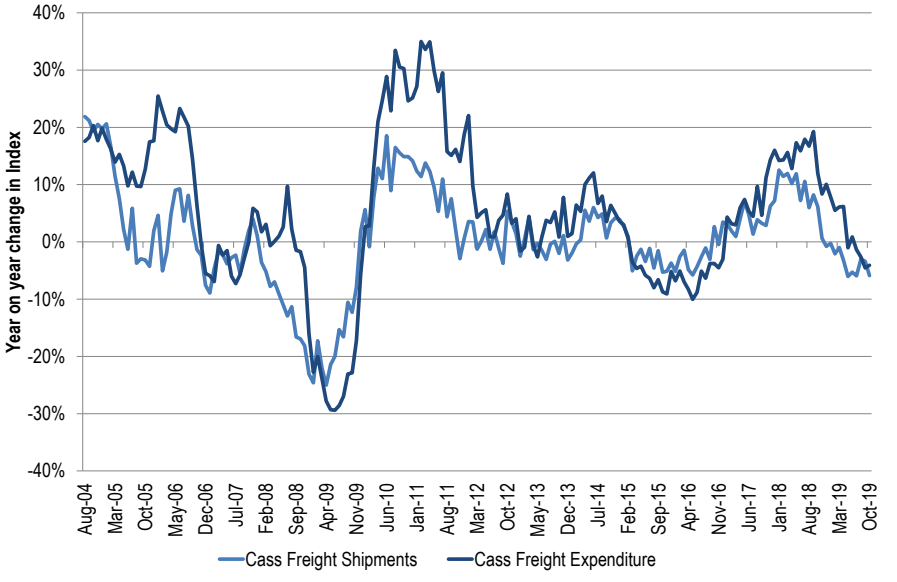
The American Trucking Association (ATA) provides a LTL (less than truckload) tonnage index which encompasses almost 70% of LTL tonnage carried by all modes of US freight transportation, including manufactured and retail goods.

Figure 43. ATA LTL truck tonnage index

Source: Bloomberg/ATA, 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.

Figure 44. Cass freight Indices



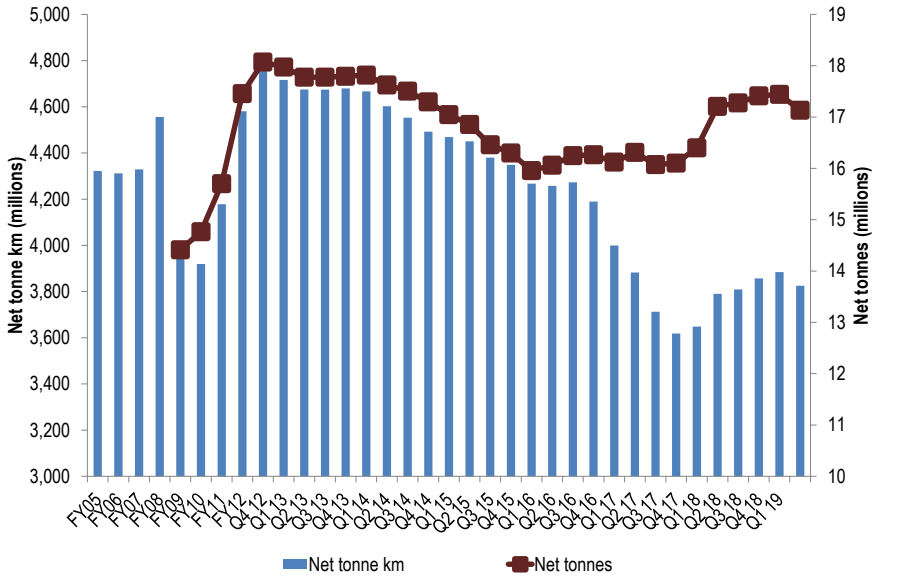
Source: Cass, Forsyth Barr analysis

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 Transport's quarterly FIGS report. Rail competes with road and coastal shipping in transporting containers throughout New Zealand.

Figure 45. KiwiRail volume (12 month rolling recent quarters)

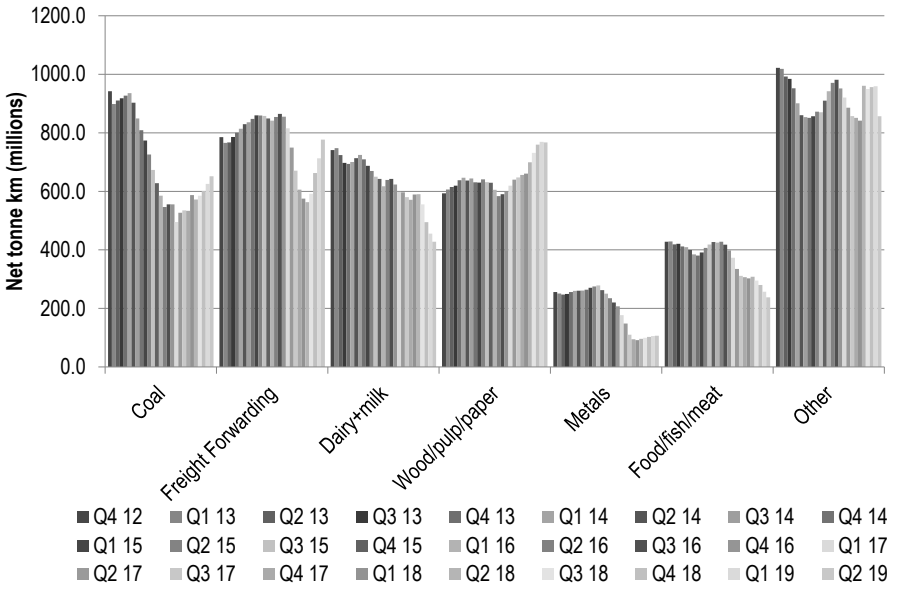


Source: Ministry of Transport, Forsyth Barr analysis

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 46.

Figure 46. 12-month rolling KiwiRail volume by commodity



Source: Ministry of Transport, Forsyth Barr analysis

Ports and shipping

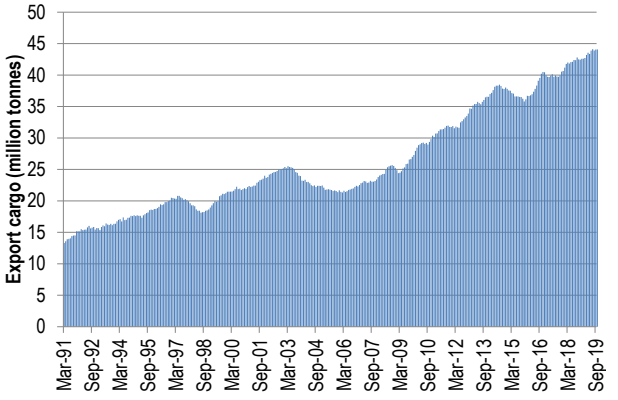
Data in this section is principally relevant to Port of Tauranga (POT) and Napier Port (NPH). It will also be relevant to other port stocks including Marsden Maritime Holdings (MMH) and Southport (SPN).

Ports

Total cargo volumes

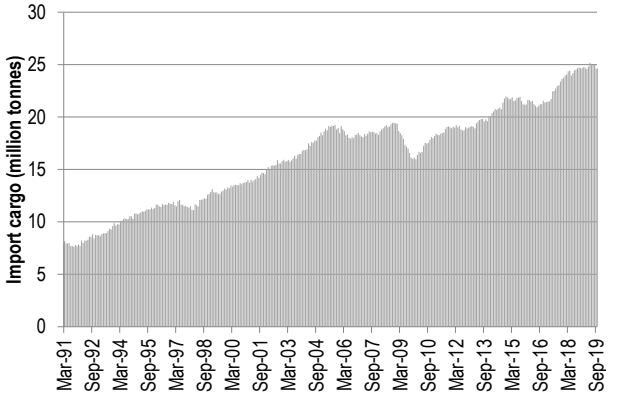
Statistics NZ provides monthly cargo data for all New Zealand seaports. We summarise the aggregated export and import data in Figure 47 and Figure 48 respectively. Over the past 25 years exports have grown at a CAGR of +3.9%, compared to imports at +4.0%.

Figure 47. Export cargo volumes (12 months rolling)



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

Figure 48. Import cargo volumes (12 months rolling)

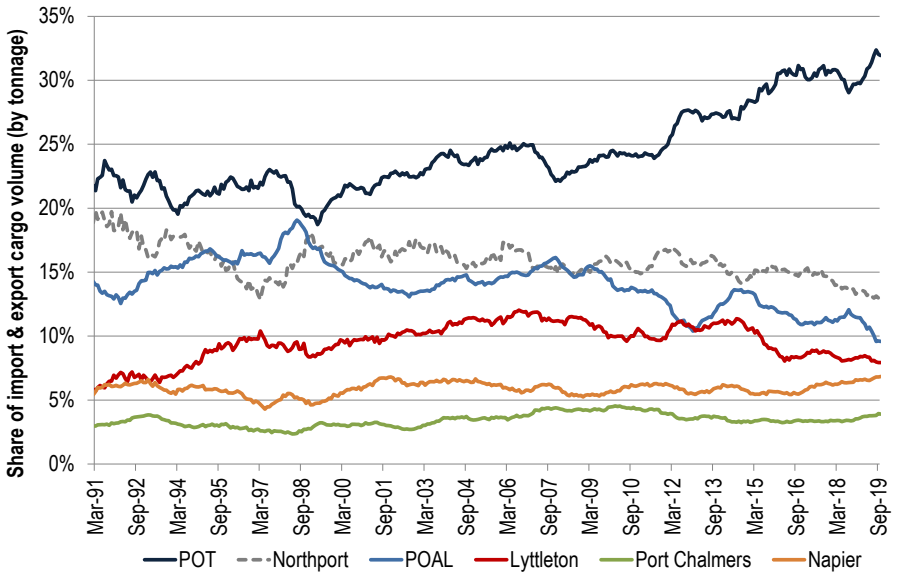


Source: Statistics NZ, Forsyth Barr analysis
Note: Data reflects 12-month rolling aggregates

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 49. Imports and exports by port are defined by Statistics NZ as the initial port of entry and the final port of loading respectively.

Figure 49. Import and export cargo share (by weight) of leading ports

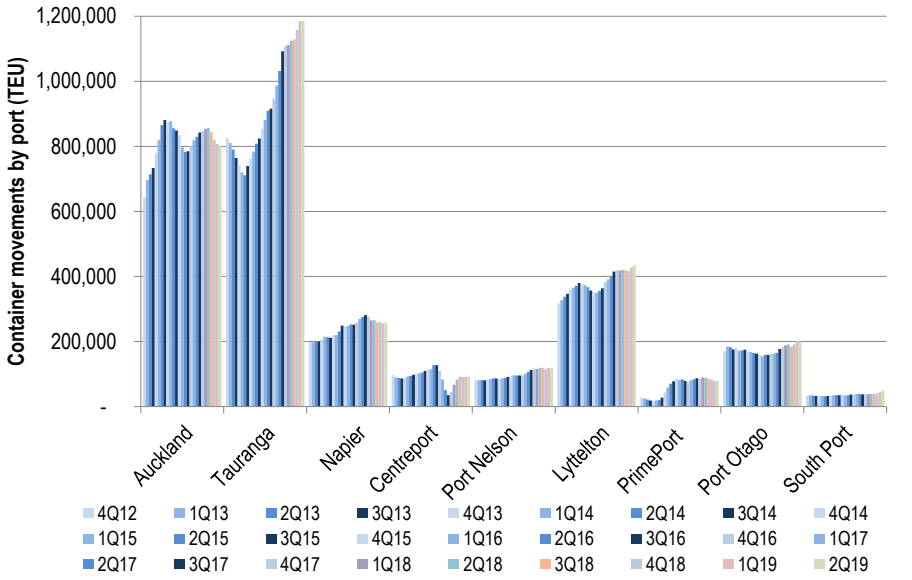


Source: Statistics NZ, Forsyth Barr analysis

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 50. Tauranga is the largest export port for containers, whereas Auckland handles the most import containers.

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

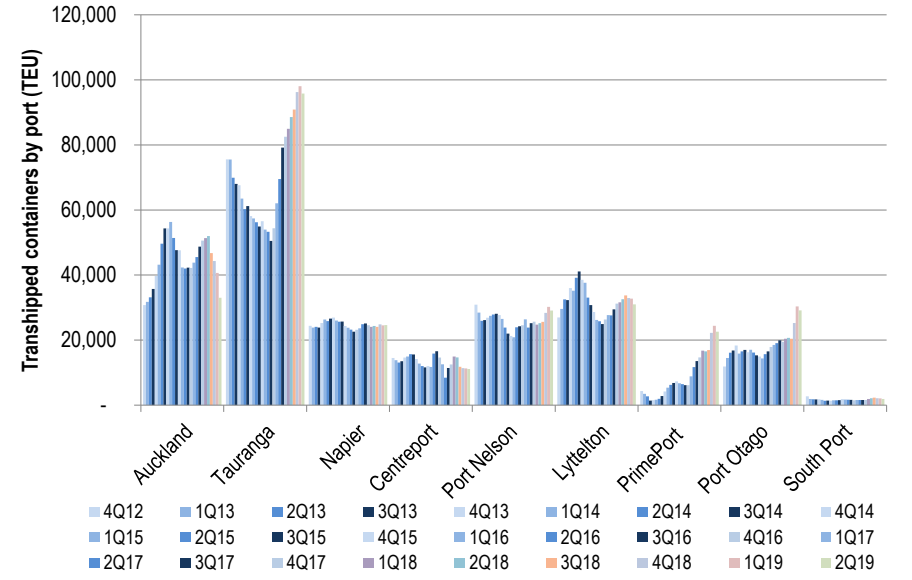


Source: Ministry of Transport, Forsyth Barr analysis

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.

Figure 51. Rolling 12-month transhipments by port (TEUs)

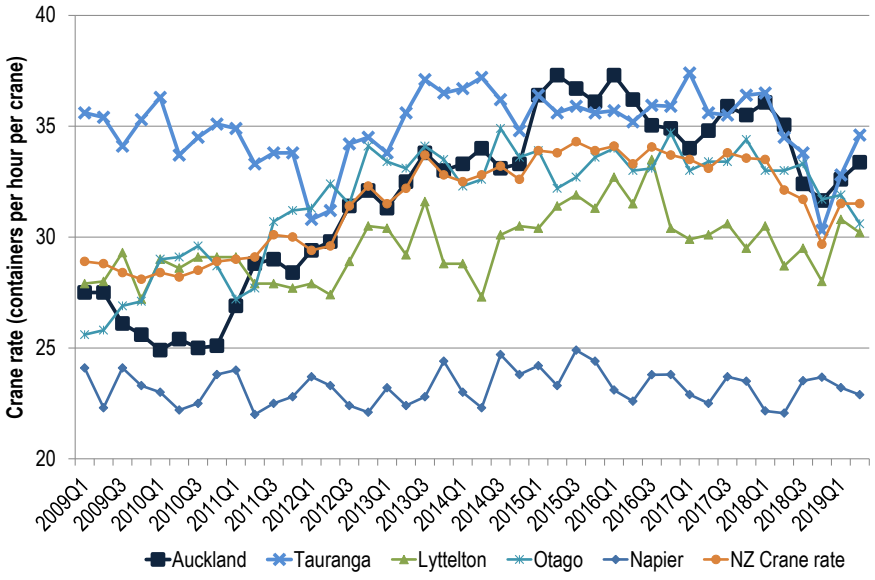


Source: Ministry of Transport, Forsyth Barr analysis Note: Data reflects container tracking data obtained by Ministry of Transport from individual ports. Overall transhipments for POT are different to those presented by the company. However, the trend and rate of change is similar but the absolute numbers differ. We think this largely reflects re-exports published in the POT numbers.

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 52 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.

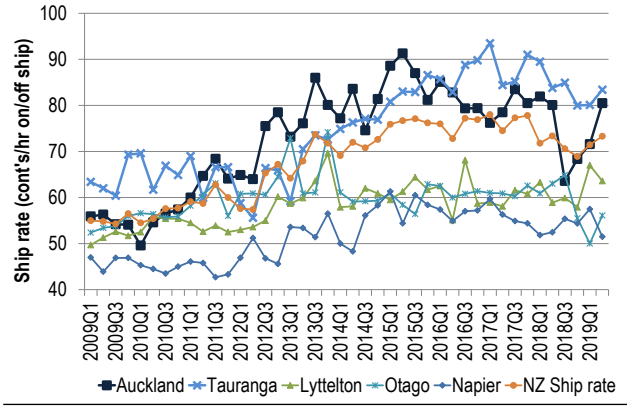
Figure 52. Crane rate



Source: Ministry of Transport, Forsyth Barr analysis

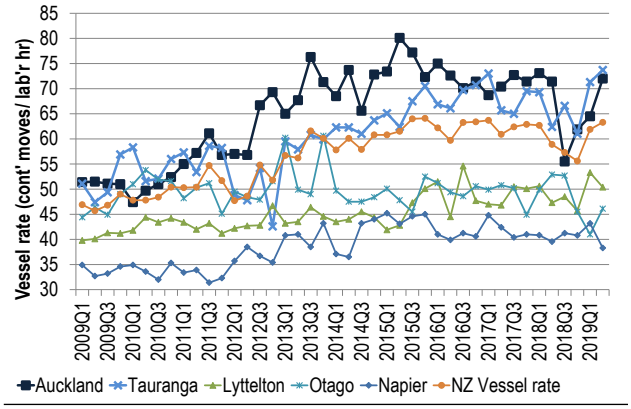
Other measures of port productivity include the ship rate and the vessel rate. These measures reflect the number of containers moved on and off a container ship in (1) an hour (ship rate — Figure 53), and (2) an hour of labour (vessel rate — Figure 54). The ship rate is the most important measure of port productivity for shipping lines.

Figure 53. Ship rate



Source: Ministry of Transport, Forsyth Barr analysis

Figure 54. Vessel rate



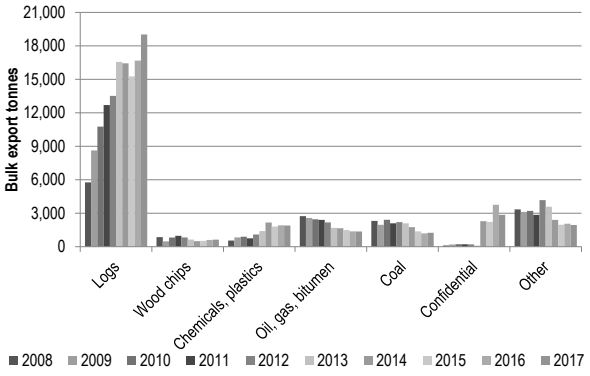
Source: Ministry of Transport, Forsyth Barr analysis

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).

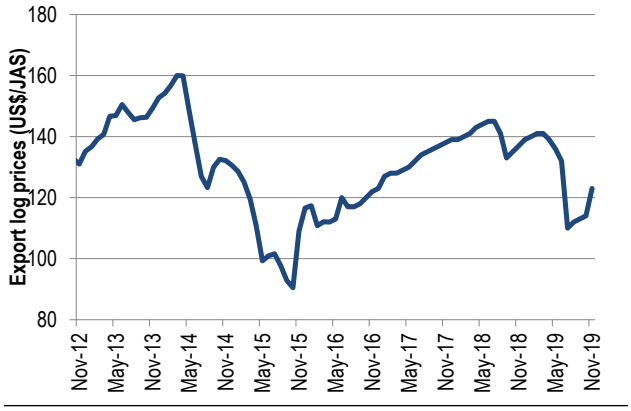
Wood exports are dominated by logs. The industry also exports processed timber, pulp and paper, and wood chips.

Figure 55. Bulk sea export commodities



Source: Ministry of Transport, Forsyth Barr analysis

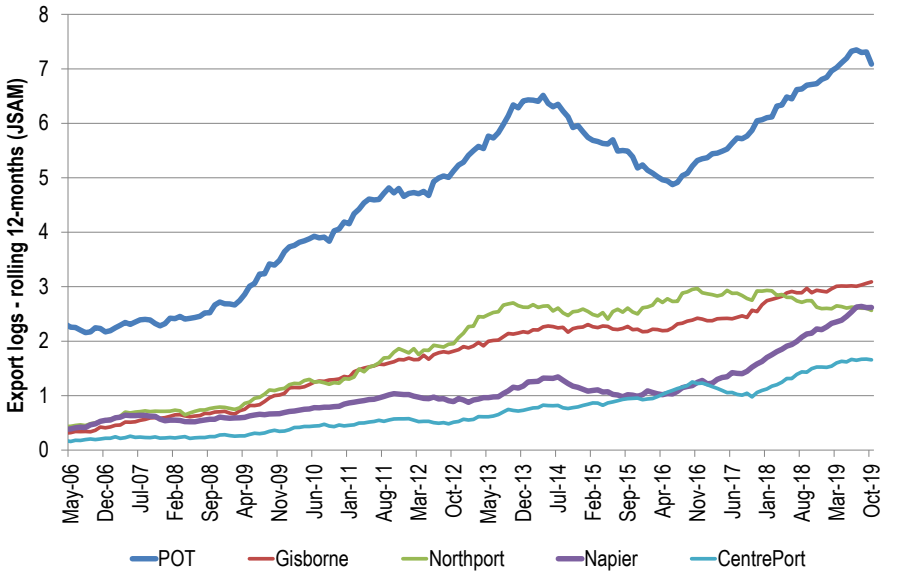
Figure 56. Export log prices (A-grade)



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 57. 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

We summarise in Figure 58 the regular weekly or fortnightly services that stop at POT providing direct access to and from Australia, Asia and the Americas.

Figure 58. Regular container services currently stopping at POT

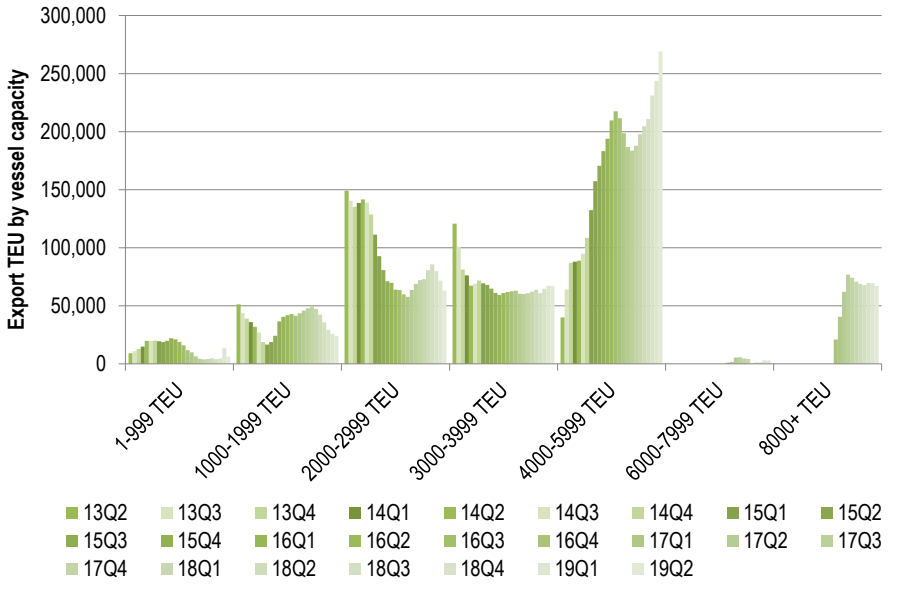
Shipping lines	Service	POT code	POT service	Frequency	From	To
Pacifica	CFD	CFD	Domestic	Weekly	Domestic	Domestic
Pacifica	Feeder	Pacman	Domestic	Weekly	Domestic	Domestic
CMA-CGM/PIL/ OOCL/COSCO/ANL	China New Zealand Service	AANZ	Export	Weekly	Lyttleton/Napier	Hong Kong
Maersk	AC3	AC3	Export	Weekly	South America	Kaohsiung
Maersk/HSD/COSCO/ONE	ANZL (Asia)	ANZL	Export	Weekly	Lyttleton/Napier	Tokyo
MSC	Capricorn	MSC	Export	Weekly	Bluff/Port Chalmers/ Lyttelton/ Nelson/Napier/Tauranga	Tanjung Pelepas
OOCL/ANL/PIL/COSCO	New Zealand Service	NZS	Export	Weekly	Lyttleton/Wellington/Napier	Brisbane
Maersk/HSD	OC1/Trident Nth Bnd	OC1N	Import/Export	Weekly	Australia/Timaru/Chalmers/ Napier/ Tauranga/Auckland	Panama
Maersk/HSD	OC1/Trident Sth Bnd	OC1S	Import/Export	Weekly	Tauranga	Sydney
ANL	TTZ	TTAZ	Import/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/Export	Weekly	Singapore/Brisbane	Napier/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
ANL/Hapag LLoyd/Maersk	PSW Loop1	PSW	Import/Export	Fortnightly	Adelaide/Tauranga	Oakland
ANL/Hapag LLoyd/Maersk	PSW Loop 2	PSW	Import/Export	Fortnightly	Sydney/Tauranga	Pappeete/Oakland

Source: POT, Forsyth Barr analysis

Container movements at POT

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

Figure 59. 12m-rolling export TEU by vessel capacity

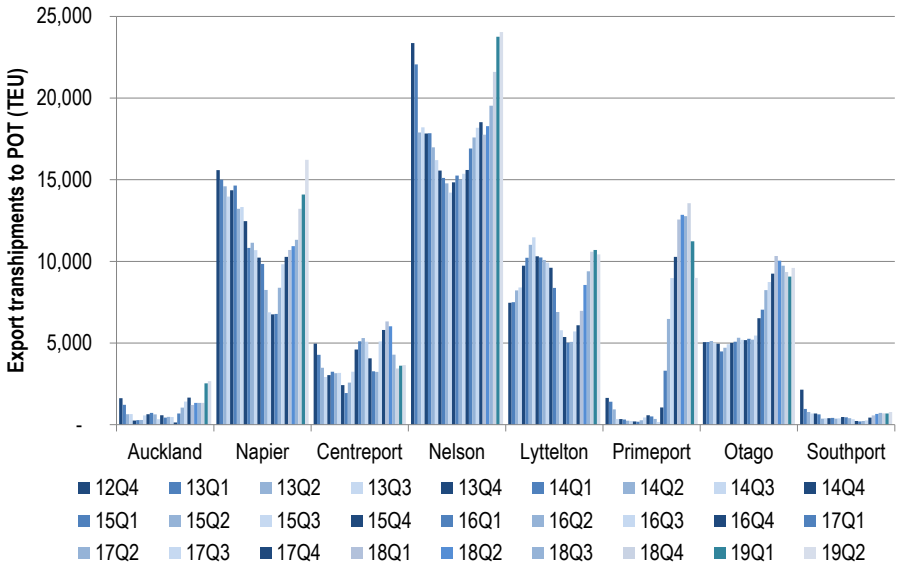


Source: Ministry of Transport, Forsyth Barr analysis

Transhipments at POT

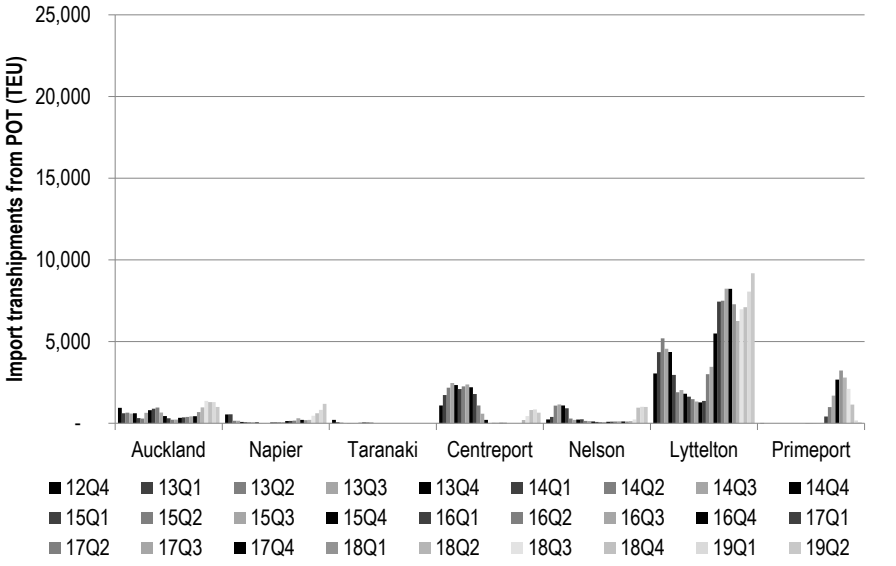
POT operates a hub and spoke model with transhipments a key driver of growth. Further shipping industry consolidation will likely lead to rationalisation of shipping services, which we expect will increase transhipments. Lyttelton (imports) and Nelson (exports) are the largest spoke ports for POT.

Figure 60. 12m-rolling export transhipments to POT



Source: Forsyth Barr analysis, MOT

Figure 61. 12m-rolling import transhipments from POT

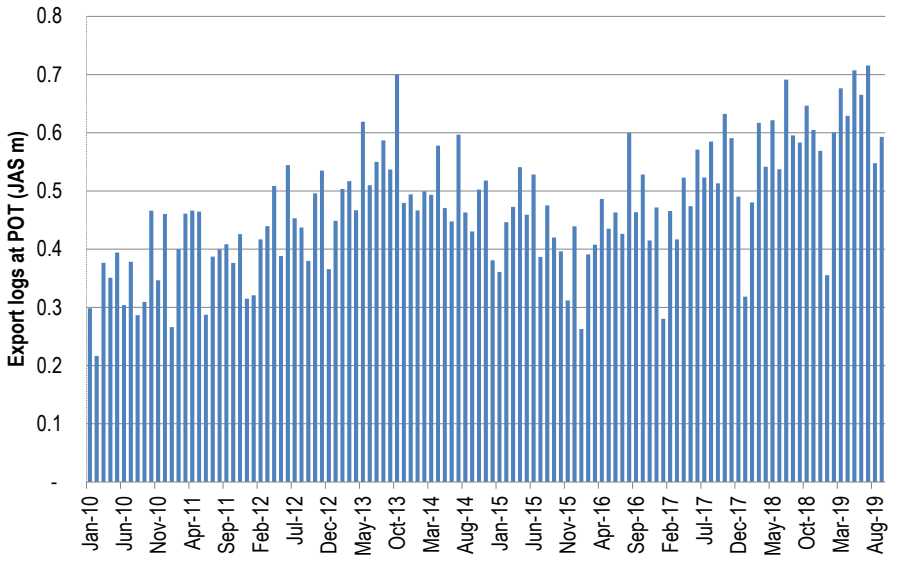


Source: Forsyth Barr analysis, MOT

Log exports at POT

In Figure 62 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 62. Log exports at POT



Source: Statistics NZ, Forsyth Barr analysis

Napier Port

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

Regular container services

We summarise in Figure 63 the regular weekly or fortnightly services that stop at NPH providing direct access to and from Australia, Asia and the Americas.

Figure 63. Weekly container shipping services currently visiting NPH

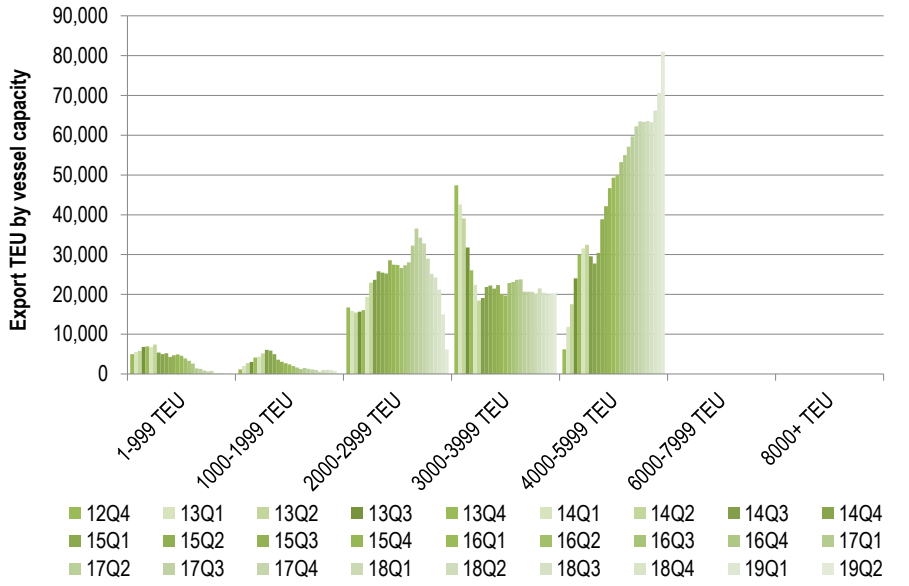
Shipping line	Service	Frequency	Origin/Destination	From	To
MSC	Capricorn	Weekly	Australia/South East Asia	South Port, Otago, Lyttelton	Tauranga, Auckland, Brisbane
CMA-CGM/PIL	NZ Service/KIX	Weekly	South East Asia	Brisbane, Auckland, Lyttleton, CentrePort	Tauranga, Brisbane
CMA-CGM	ANZEX	Weekly	North 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.

Figure 64. 12m-rolling export TEU by vessel capacity

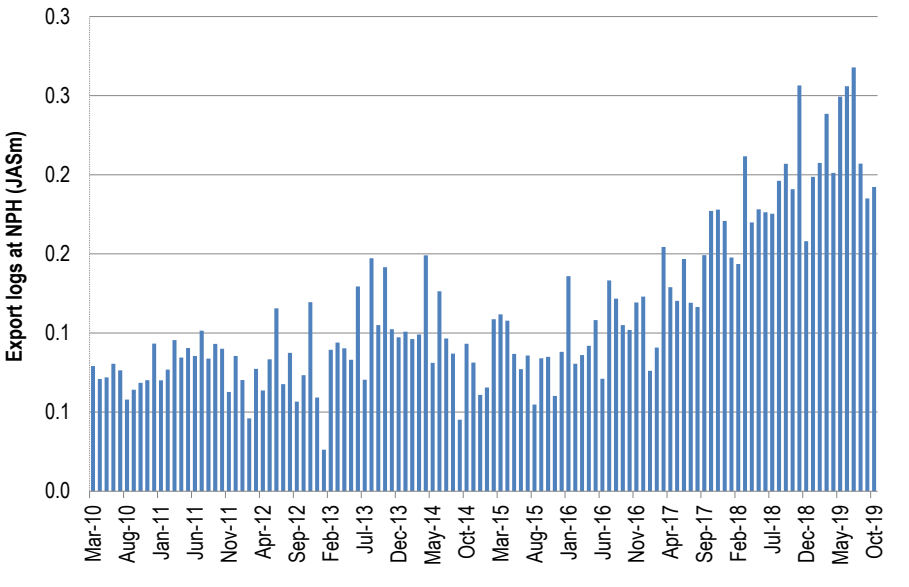


Source: Ministry of Transport, Forsyth Barr analysis

Log exports at NPH

In Figure 65 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 65. Log exports at NPH



Source: Statistics NZ, Forsyth Barr analysis