

# Transport Trends

## Applying the Brakes

Anecdotal feedback and industry data support a broader softening of freight and passenger demand. The near term volume outlook is subdued and won't be helped by above trend pricing growth across various modes, given cost pressures needing to be passed on. Operating deleverage (i.e. margin pressure) may be a feature over the next 12 months, if the softening volume story continues to play out. In contrast, sector valuations are close to record highs, thanks largely to low bond rates benefiting the transport infrastructure stocks. Our favoured sector plays are now Freightways (FRE) and Air New Zealand (AIR).

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### Key transport trends and themes

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

- **Heavy vehicle traffic falling:** NZTA data shows that two of the past three months have shown a decline against the prior year. Industry feedback suggests softening activity across different freight modes.
- **Air NZ taking back international capacity share:** Having lost share during the 2016–2017 aviation boom, Air NZ is now winning some of it back. It continues to pursue robust capacity growth despite softer demand.
- **Tauranga's cargo gains:** Port of Tauranga has gained significant share of Upper North Island import/export cargo from Ports of Auckland and Northport over the last few decades; share gains have accelerated in recent years, but will likely slow over the next 12 months.

### 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: ‘Truckometer’ signalling downturn**
- **Trend #2: Air NZ taking back international capacity share**
- **Trend #3: Tauranga’s cargo gains at expense of Auckland and Northport**

### Stock preferences

We are underweight the transport sector given elevated valuations and increasing earnings risk as a result of deteriorating cyclical conditions.

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

- **AIR** appears to be struggling to digest strong capacity growth of recent years. In particular domestic leisure demand has come under pressure, resulting in it cutting capacity. International capacity growth will remain elevated through FY20, driven by new long haul destinations (Chicago, Seoul, Taipei), before moderating in FY21.
- **FRE’s** near term earnings growth profile will be driven by pricing gains from its B2C ‘pricing for effort’ initiative. However, the benefit will be at least partially offset by a slowdown in B2B parcel volume growth.
- **MFT’s** elevated earnings growth outlook is at risk from growing headwinds from cyclical downturns and the US–China trade-war. Notwithstanding its elevated valuation on forward earnings multiples, 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. However, key customer risk exists with its WPI container export contract, and lower log prices will adversely impact FY20 export volumes.

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

- **AIA’s** shares have responded spectacularly to lower bond rates. We think overly so, particularly given slowing international passenger growth. Both, together with a deferral to the Northern runway project, present near-term earnings risk. AIA is undergoing a major capital investment programme, which it is struggling to execute against given planning and construction delays.
- **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 ongoing current Upper North Island Supply Chain study. The study’s working group’s second report is now well overdue. We expect it will recommend (largely for political reasons) that Northport should become Auckland’s container port. However, we also believe the likelihood of the review’s conclusion becoming Government policy is low, given the material cost and significant ownership challenges to overcome.

Figure 1. Valuation summary as at 24 September 2019 (NZ\$)

Company	Code	Rating	Share Price	Target Price	Gross yld		PE		EV/EBITDA	
					FY19	FY19	FY19	FY20	FY19	FY20
<u>Operators</u>										
Air New Zealand	AIR	NEUTRAL	2.69	2.60	11.4%	11.2x	10.3x	4.9x	4.4x	
Freightways	FRE	NEUTRAL	8.13	8.30	5.2%	20.6x	18.9x	12.6x	11.7x	
Mainfreight	MFT	NEUTRAL	39.70	36.00	2.0%	28.3x	24.5x	16.0x	14.2x	
<u>Infrastructure</u>										
Auckland Airport	AIA	UNDERPERFORM	9.31	7.90	3.3%	40.9x	41.7x	24.3x	24.1x	
Napier Port	NPH	NEUTRAL	3.08	3.00	1.1%	30.2x	30.8x	17.0x	17.0x	
Port of Tauranga	POT	UNDERPERFORM	6.38	5.25	2.9%	43.2x	40.5x	27.3x	26.1x	

Source: IRESS, Forsyth Barr analysis

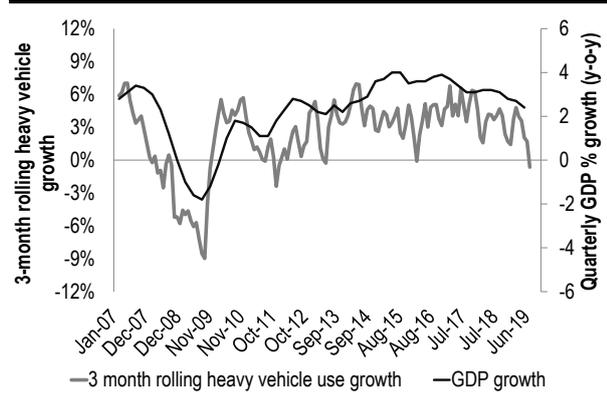
# Key trends identified

## Trend #1: 'Truckometer' signalling downturn

Recent NZTA heavy traffic data shows a deterioration of activity in recent months. August data was particularly weak at -2.6% year-on-year, which may reflect the impact on the forestry sector from lower export log prices. However, aggregate data for June and July shows only +0.4% growth, during a period of booming log exports.

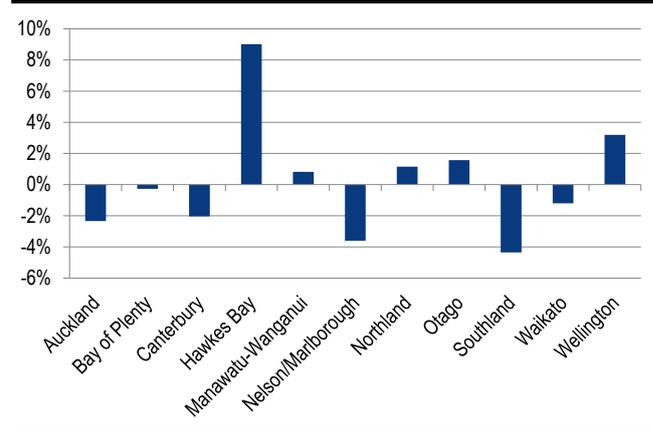
Note that the data we use here is different to ANZ's Truckometer. We use all of NZTA's 118 telemetry sites, whereas ANZ only uses 11 sites.

Figure 2. GDP link to heavy traffic data



Source: NZTA, Forsyth Barr analysis

Figure 3. Heavy vehicle y-o-y growth by region (3m to August 2019)

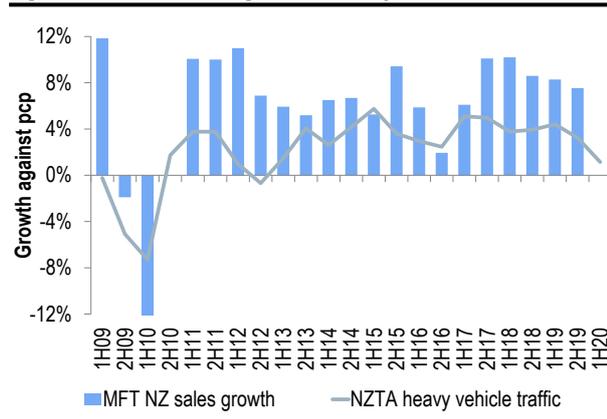


Source: NZTA, Forsyth Barr analysis

### Implications for Mainfreight (MFT)

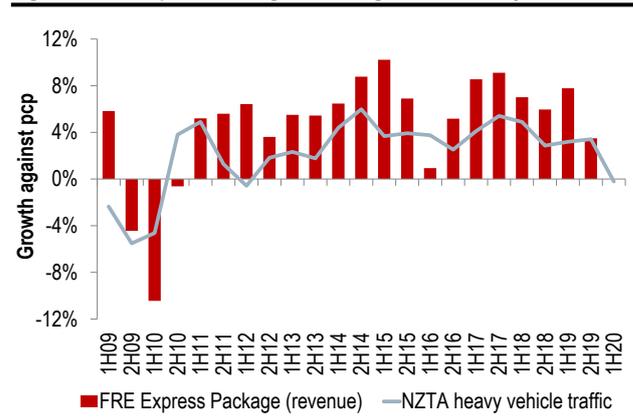
MFT's New Zealand revenue growth profile has been gradually slowing for some time, albeit from elevated levels. We expect 1H20 to show a further slowdown when it reports on 13 November 2019. Its New Zealand operations are more exposed to the cyclical environment than any other geography given their relative maturity and leading market share.

Figure 4. MFT NZ revenue growth vs. heavy vehicle data



Source: Forsyth Barr analysis

Figure 5. FRE Express Package revenue growth vs. heavy vehicles



Source: Forsyth Barr analysis

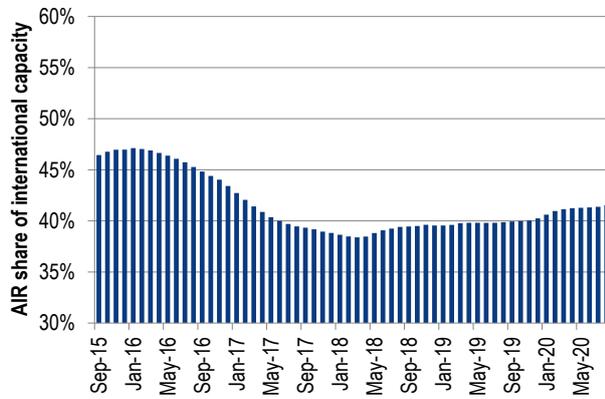
### Implications for Freightways (FRE)

At its recent FY19 result FRE acknowledged that business-to-business (B2B) parcel volumes were in decline with growth slowing through CY19-to-date. This is consistent with heavy vehicle data and reflects its early cycle nature. While business-to-consumer (B2C) industry volume growth remains at strong levels (industry value growth of +9% in August year-on-year according to Marketview) FRE's B2C growth has also slowed. We believe this reflects the significant price increases that FRE is actioning on residential deliveries through its 'pricing for effort' initiative.

## Trend #2: Air NZ taking back international capacity share

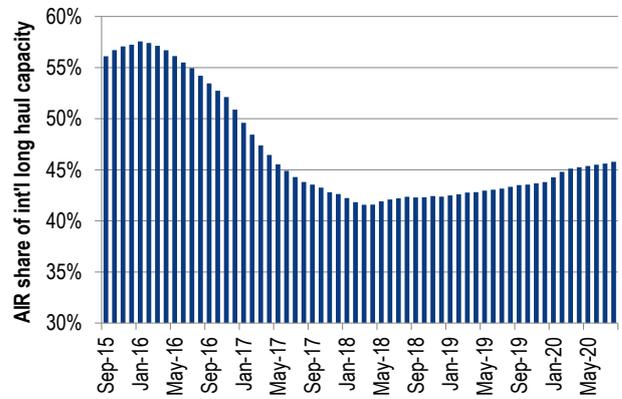
During the aviation boom of 2016–2017 AIR lost considerable market share, despite expanding aggressively itself. The share loss was most pronounced in long haul. Over the past two years AIR has started to take back capacity share with it now sitting at ~42% compared to ~46% prior to the boom (Figure 6).

Figure 6. AIR share of NZ-international capacity...



Source: OAG, Forsyth Barr analysis

Figure 7. ...most pronounced in long haul



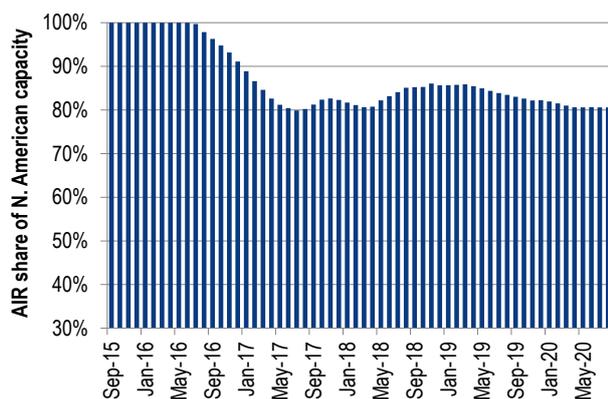
Source: OAG, Forsyth Barr analysis

Taking an overall market wide view of AIR's capacity share may not tell the whole story given the distinct market segments and different levels of competition that exist on each route. At a regional level the story can be quite different.

Ironically, AIR's share of direct Asian route capacity is now back to where it was at the beginning of 2016 at ~41%, signally a more rational market approach from many competitor airlines.

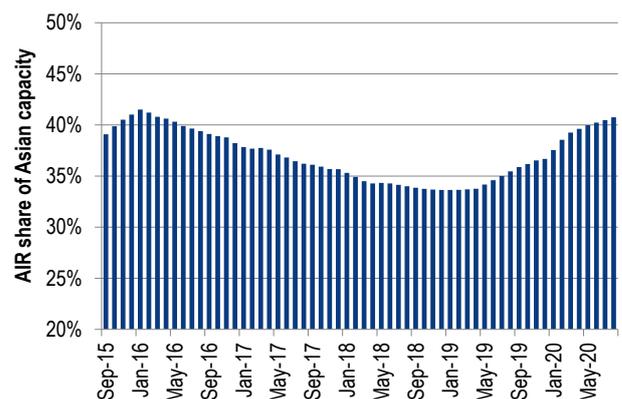
In contrast, its share of direct capacity on North American routes is down ~19% to ~81%. Prior to the recommencement of flights from its partner, United Airlines, and competitor American Airlines, it had a monopoly on trans-Pacific flights between North America and New Zealand. With the Qantas/American JV likely to announce updated route information over the next few weeks, AIR's share of North American traffic will likely reduce further.

Figure 8. AIR's share of NZ-North America direct capacity



Source: OAG, Forsyth Barr analysis

Figure 9. AIR's share of NZ-Asia direct capacity



Source: OAG, Forsyth Barr analysis

### Implications for Air New Zealand (AIR)

AIR remains in growth mode. Its capacity guidance for FY20 is +4% to 5%. In contrast its competitors on mass are cutting capacity. In particular, competition on some Asian routes has recently reduced with a number of new entrant airlines pulling out (including Hong Kong Airlines). Some more established Asian Airlines have cut capacity given a greater profitability focus

However, erosion of share will likely continue on North American routes due to (1) the Qantas/AA JV building capacity, and (2) the arrival of Air Canada (AIR is pursuing a JV with Air Canada subject to Government approvals) with Vancouver services from December 2019.

While Middle Eastern and Asian carriers are behaving more rationally than they were 5+ years ago the aviation world remains intensely competitive, which will mean AIR's ability to drive a recovery in earnings in a lower demand environment will be as much about the oil prices as anything else.

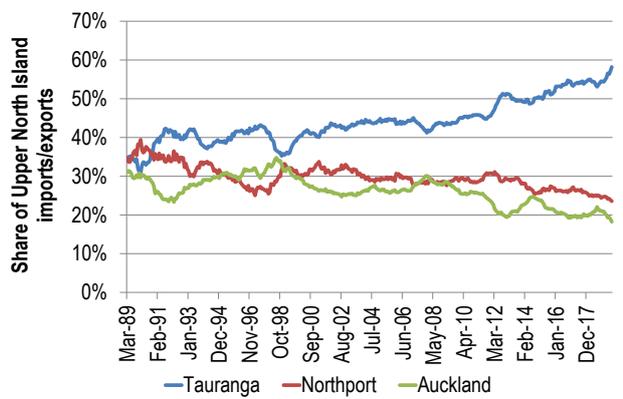
### Trend #3: Tauranga's longer term cargo gains at expense of Auckland and Northport

Over the past 30 years Port of Tauranga (POT) has almost doubled its share of the Upper North Island import/export market. We believe this is largely a function of the success of its Sulphur Point container terminal, which was opened in 1992.

In contrast the Upper North Island share of Ports of Auckland and Northport have both declined materially.

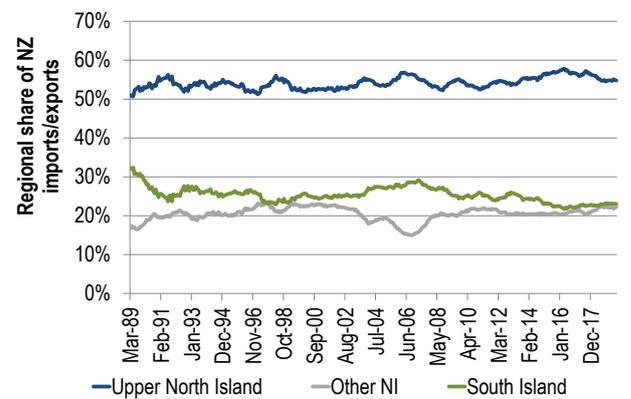
Despite the success of POT, the Upper North Island ports have only retained their share of the overall New Zealand freight import/export market at around 55%.

Figure 10. Tauranga share gains over 30 years



Source: Stats NZ, Forsyth Barr analysis

Figure 11. Upper North Island's share of total stable over 30 years



Source: Stats NZ, Forsyth Barr analysis

#### Implications for Port of Tauranga (POT)

The Upper North Island remains a key economic and political battleground in the New Zealand ports sector. POT has been the long term winner to-date. It has recorded cargo growth of +6.5% on a compound annual growth rate basis over the past 30 years, compared to Auckland at +3.0% and Northport at +3.2%. The average growth rate for all New Zealand ports is +4.5%.

However, the outlook may be subject to near term political moves given the current Upper North Island Supply Chain Study being undertaken. The Study Group was due to release its second report in June 2019 and its final report this month, however, nothing new has been published since its opening report in April 2019.

Instead, the Government has recently announced an NZ\$95m upgrade of the North Auckland rail line through the Provincial Growth Fund. This falls well short of the NZ\$1.3bn plan for a full upgrade of the rail line linking Auckland to Northport, but does provide political capital to NZ First, which is advocating a Ports of Auckland shift to Northport.

In the meantime we expect POT's share gains to slow as (1) Ports of Auckland recovers from the problems experienced during its automation project over the past 12 months, and (2) the growth in log exports declines given the material fall in log pricing.

## **Operating statistics and industry data**

# Airports and airlines

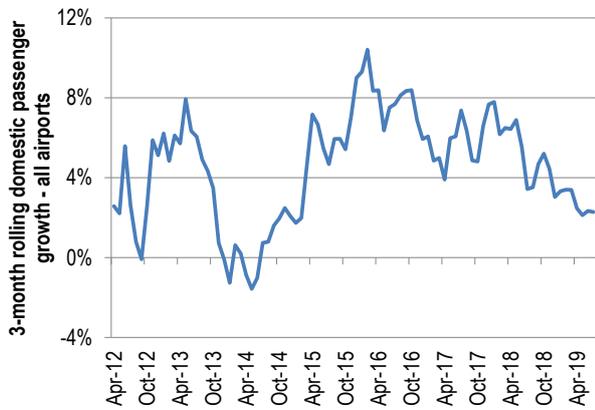
Data in this section is relevant to listed companies including Auckland Airport (AIA), Infratil (IFT) and Air New Zealand (AIR). Statistics principally reflect passenger movements but also cover seat capacity changes and other key airline specific data.

## Airports

### Domestic passenger movements within New Zealand

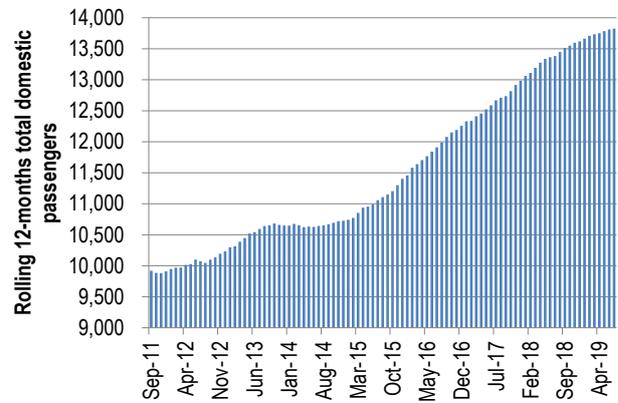
Monthly domestic passenger data for all NZ airports is not publically available. While Air NZ provides monthly statistics, Jetstar has historically provided six-monthly summaries (at financial result time). As a result we have built our own domestic passenger series using available airport and airline data. We show the assumed growth in passengers in Figure 12.

Figure 12. Total domestic passenger growth



Source: Company reports, Forsyth Barr analysis

Figure 13. Total domestic passengers ('000)

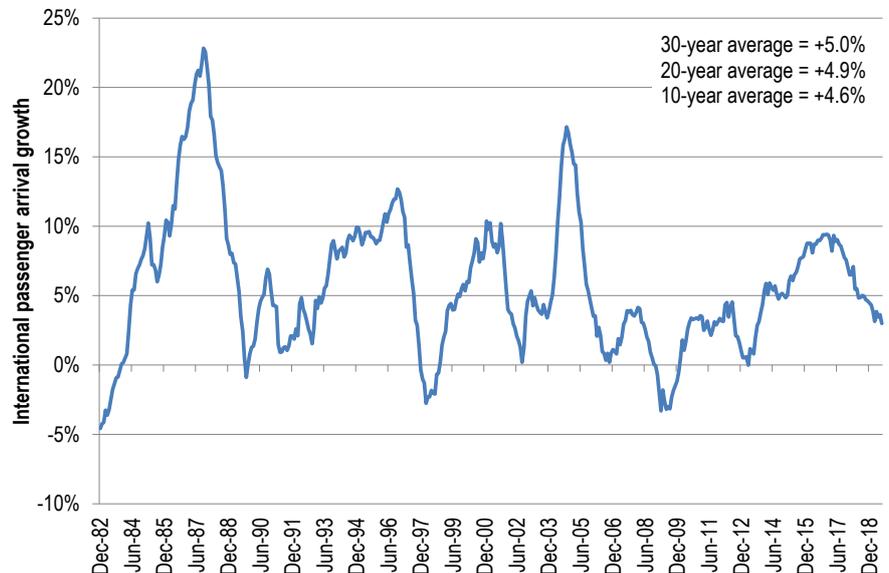


Source: Company reports, Forsyth Barr analysis

### International passenger movements into New Zealand

In Figure 14. Total international pax arrivals across all New Zealand airports (12 months rolling) 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 14. Total international pax arrivals across all New Zealand airports (12 months rolling)

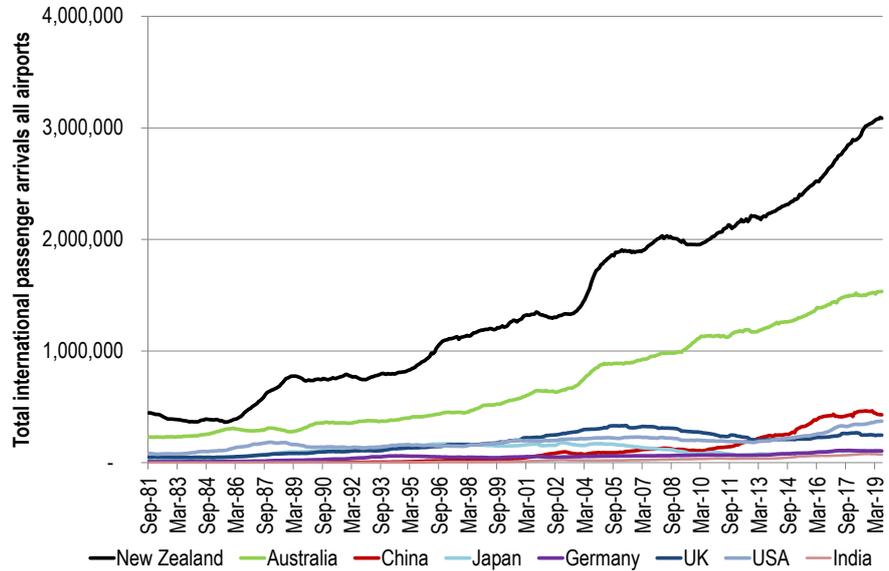


Source: Statistics NZ, Forsyth Barr analysis

**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.

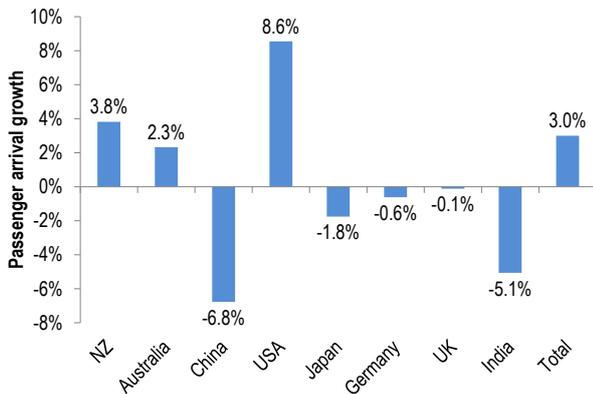
**Figure 15. International passengers country of residence (12 months rolling)**



Source Statistics NZ, Forsyth Barr analysis

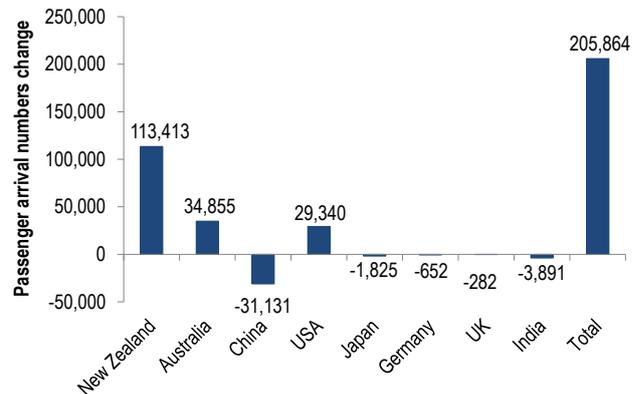
The year-on-year change in both percentage and absolute numbers for Figure 15 are shown in Figure 16 and Figure 17 respectively. Overall, growth is being driven by a combination of nationalities but remains heavily reliant on more New Zealanders travelling offshore.

**Figure 16. International arrivals growth (12m to July 2019)**



Source: Statistics NZ, Forsyth Barr analysis

**Figure 17. International arrivals change (12m to July 2019)**

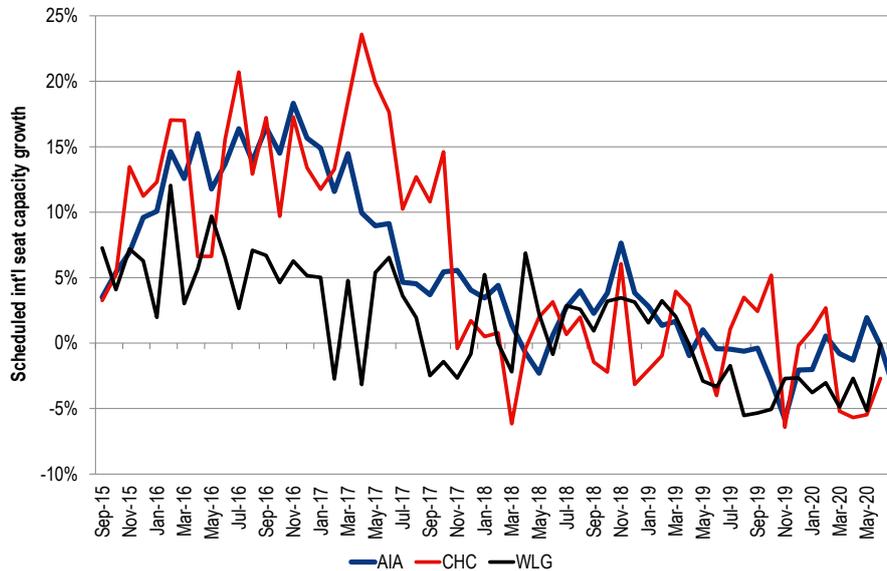


Source: Statistics NZ, Forsyth Barr analysis

**International seat capacity**

In Figure 18. we show scheduled international seat capacity growth for each of New Zealand's main airports.

**Figure 18. Scheduled international seat capacity growth**



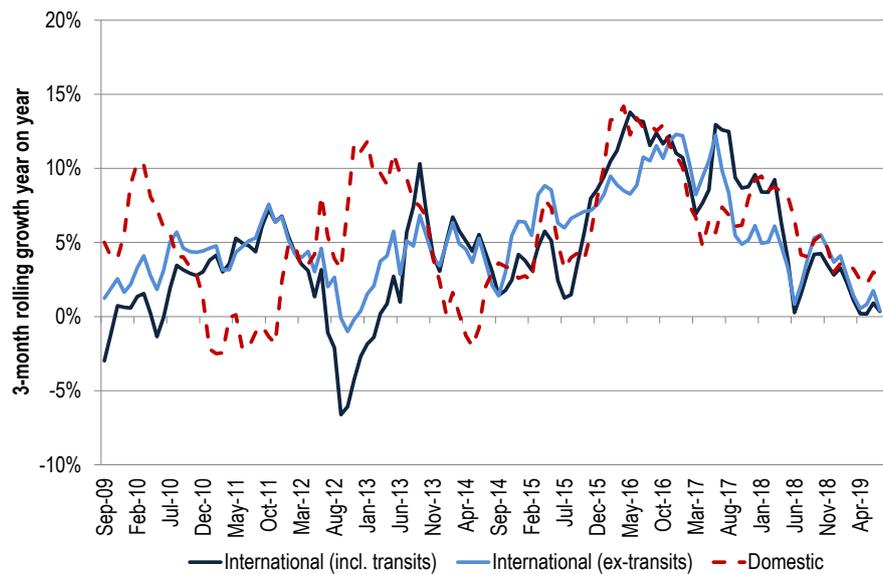
Source: OAG, Forsyth Barr analysis

**Auckland Airport**

**Monthly pax numbers**

AIA reports monthly traffic numbers. We chart the airport's passenger growth history since 2009 in Figure 19.

**Figure 19. Passenger growth dynamics at AIA**

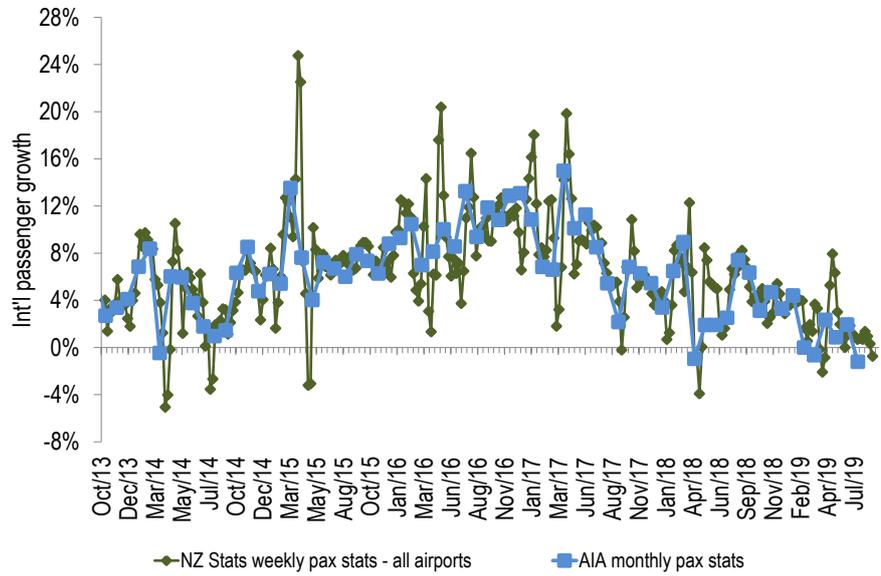


Source: Company reports, Forsyth Barr analysis

**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 20. AIA's international pax growth follows all airports pax data**



Source: NZ Stats, Company reports, Forsyth Barr analysis

### International airline seat capacity changes

In Figure 21 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 15 July 2019. The net increase of ~85,500 seats is the first positive change in seat capacity since the second quarter of 2018.

**Figure 21. Capacity changes since 15 July 2019 – new additions/(reductions)**

Start date	Carrier	Service	Equipment	Frequency	Duration	Annual seat capacity chg
Sep-19	China Eastern	Shanghai	B787-9	Uppauge 1x daily	Seasonal	13,500
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/Uppauge	Seasonal	35,000
Apr-20	Air New Zealand	Denpasar	B787-9	Plus 1x weekly	Seasonal	30,000
<b>Total of new additions announced in past two months</b>						<b>~85,500</b>

Source: Forsyth Barr analysis

We provide a detailed history of this data in Figure 22 with all major seat capacity changes that have impacted capacity since April 2018.

**Figure 22. AIA international seat capacity watch – the pipeline**

Start date	Carrier	Service	Equipment	Frequency	Duration	Annual seat capacity chg
Apr-18	Tianjin	Tianjin-Chongqing	A330	Less 1x weekly	Year round	(11,000)
Apr-18	Air New Zealand	Apia	B787-9	Plus 2x weekly	Seasonal	17,000
Apr-18	Air New Zealand	Denpasar	B787-9	Plus 2-5x weekly	Seasonal	28,000
Apr-18	Air NZ/Virgin	Brisbane		Plus up to 5x weekly	Seasonal	38,000
Apr-18	Air New Zealand	Honolulu	B787-9	Plus 2x weekly	Seasonal	60,000
Jun-18	Philippines Airlines	Manila (direct)	A330	Uppauge 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	Uppauge 3x weekly	Year round	23,000
Oct-18	China Eastern	Shanghai	B777-300ER	Uppauge	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	Uppauge 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	Less 1-2 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	Uppauge 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/Uppauge	Seasonal	35,000
Apr-20	Air New Zealand	Denpasar	B787-9	Plus 1x weekly	Seasonal	30,000

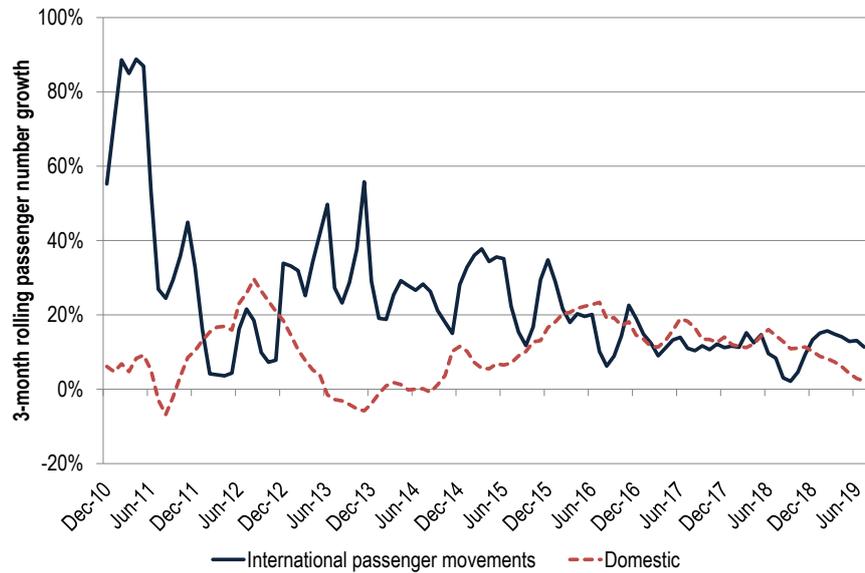
Source: Company reports, Forsyth Barr analysis

**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 23.

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

**Figure 23. Queenstown Airport passenger number growth**

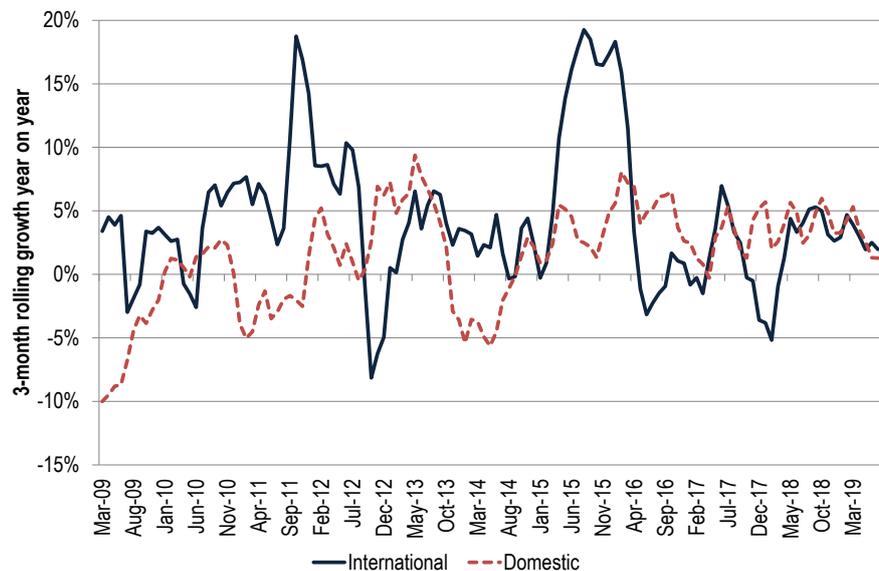


Source: Company reports, Forsyth Barr analysis

**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 24.

**Figure 24. Wellington Airport passenger number growth**

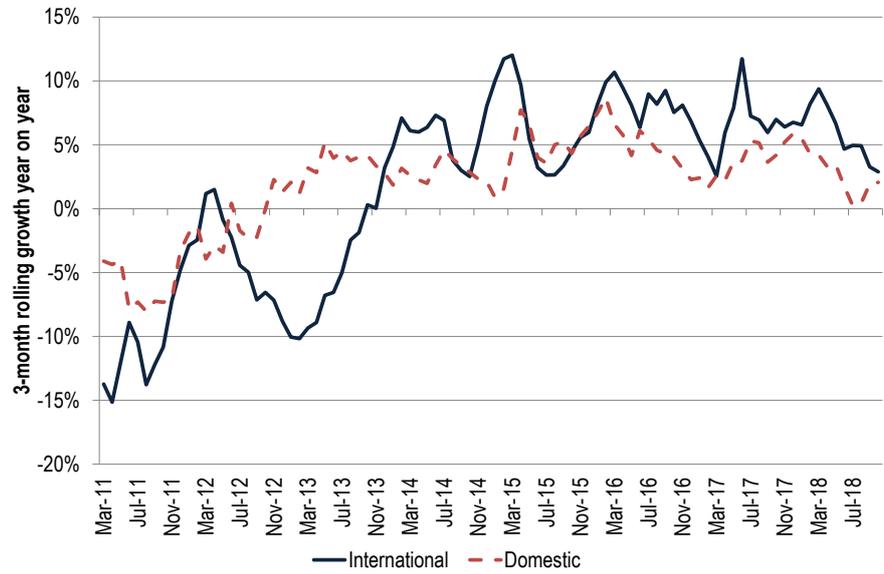


Source: Company data, Forsyth Barr analysis

## 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 is now enjoying above market growth levels.

Figure 25. Christchurch Airport passenger number growth



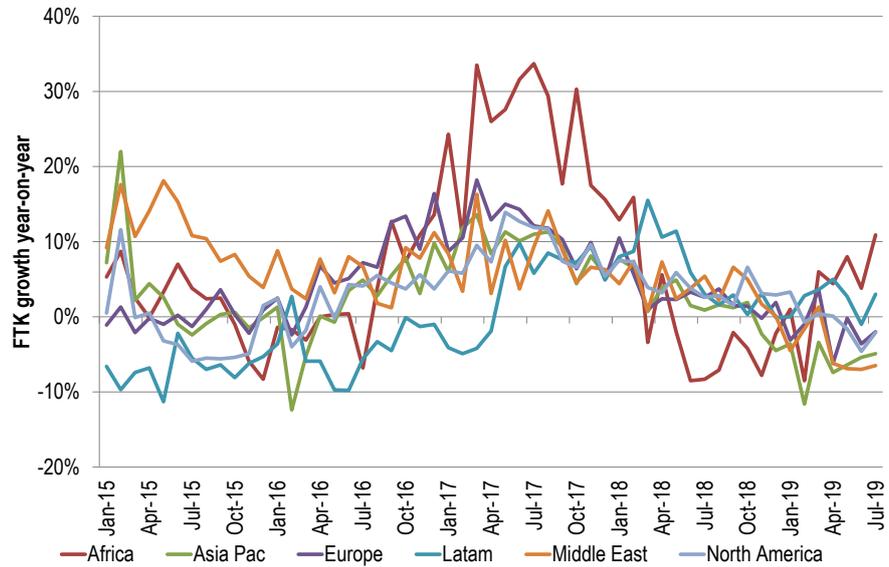
Source: Company data, Forsyth Barr analysis

## 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 26. Freight tonne kilometre (FTK) growth year-on-year by region

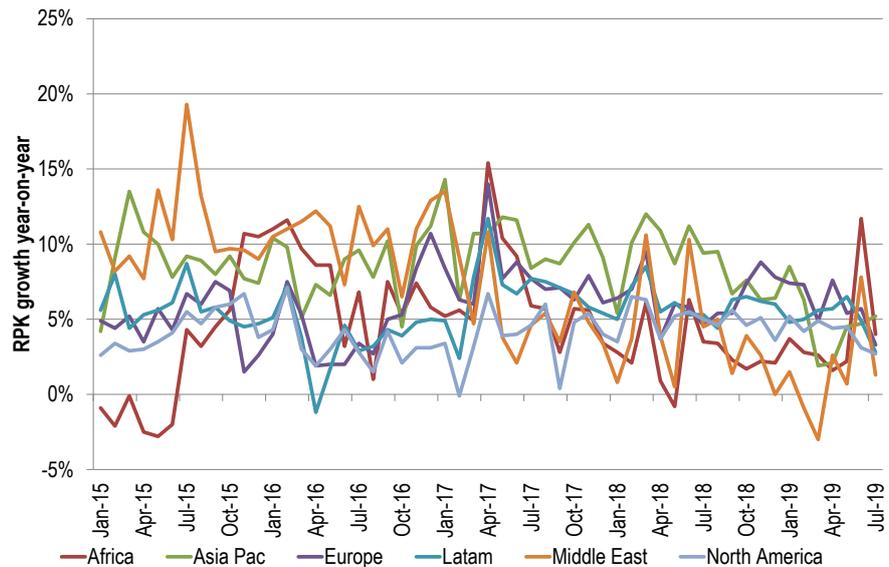


Source: IATA, Forsyth Barr analysis

### IATA global air passenger data

In Figure 27 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 27. Revenue per kilometre (RPK) growth year-on-year by region

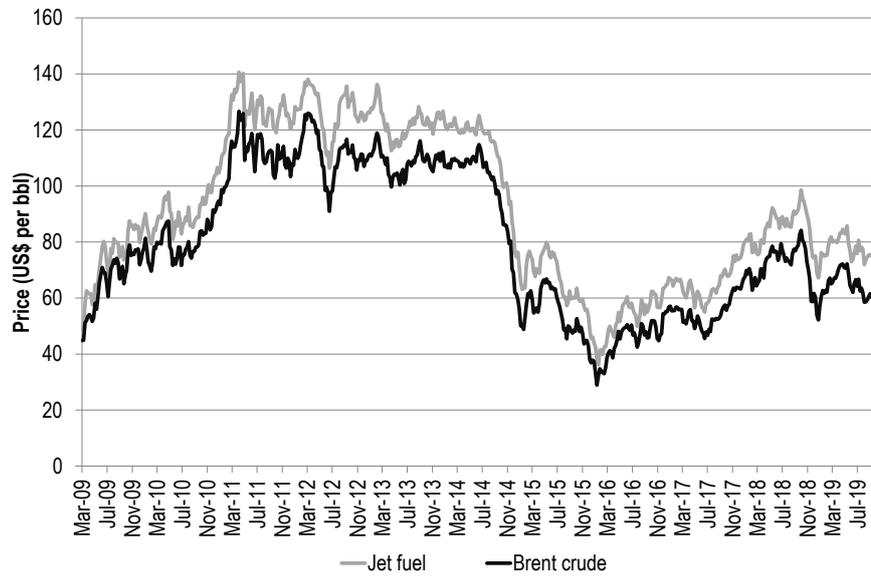


Source: Forsyth Barr analysis

**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 28 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 28. Jet fuel price (spot)**

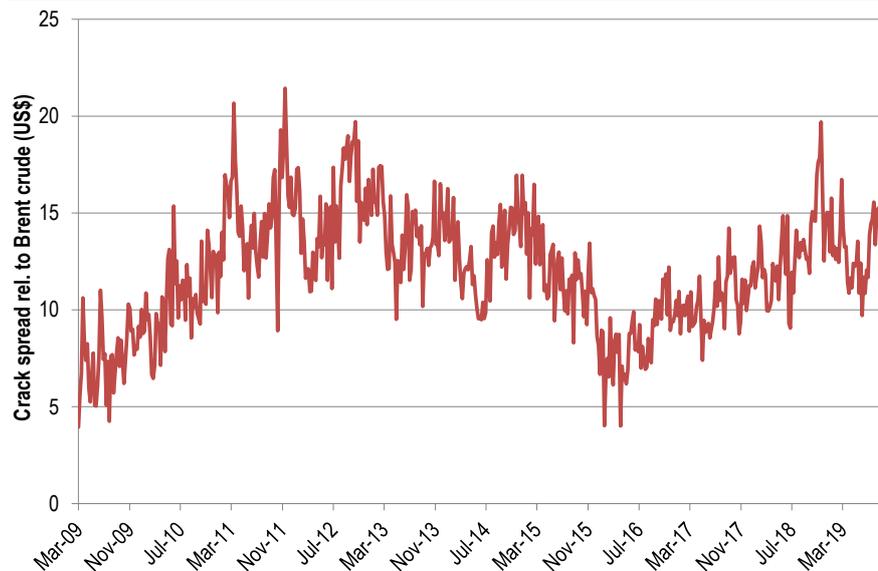


Source: Bloomberg, Forsyth Barr analysis

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

**Figure 29. Crack spread relative to Brent crude price**

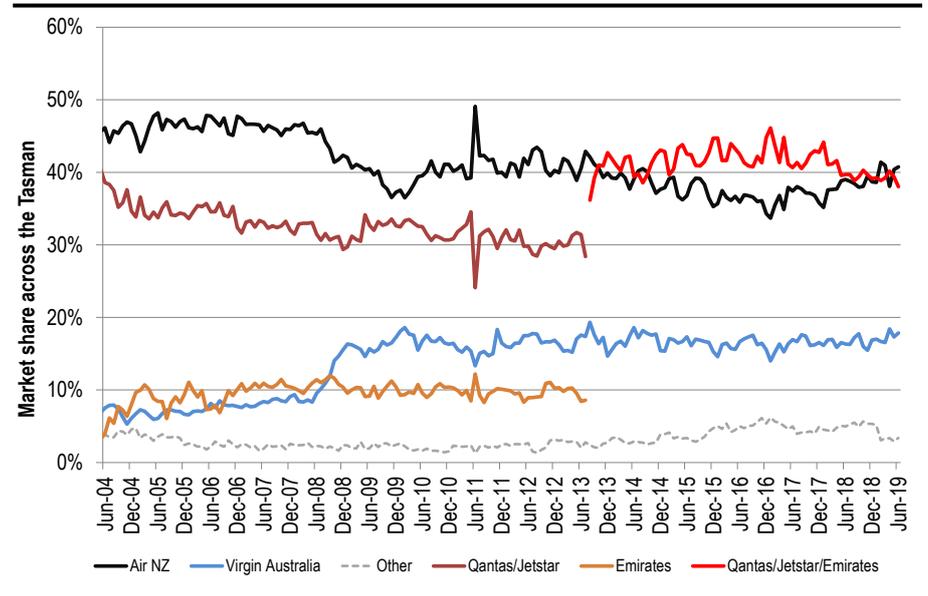


Source: Bloomberg, Forsyth Barr analysis

**Trans-Tasman market share**

In Figure 30 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 18 months. The Air New Zealand and Virgin Australia JV ended in late October 2018.

**Figure 30. Trans-Tasman market share**

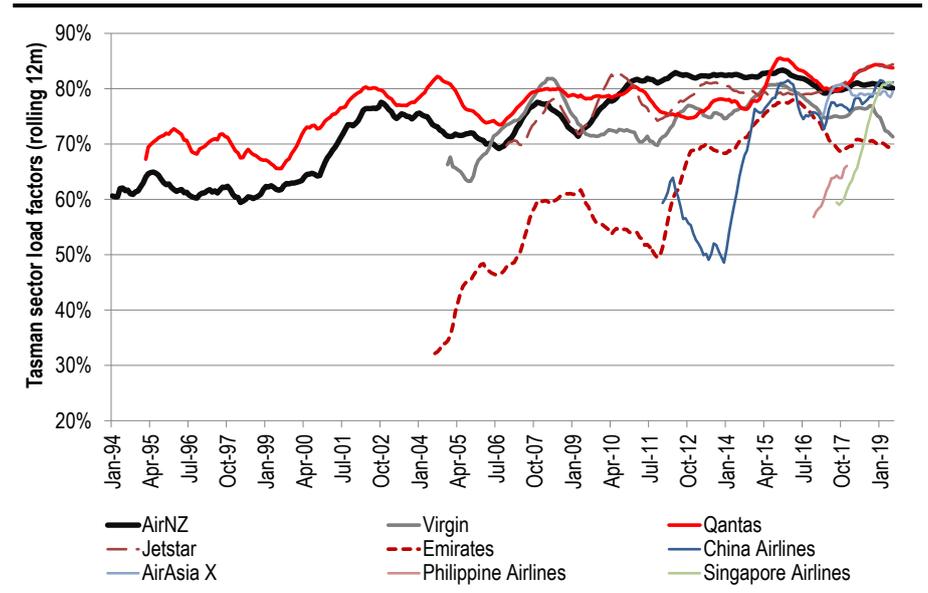


Source: BITRE, Forsyth Barr analysis

**Tasman load factors**

In Figure 31 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 31. Trans-Tasman load factors (12-month rolling)**



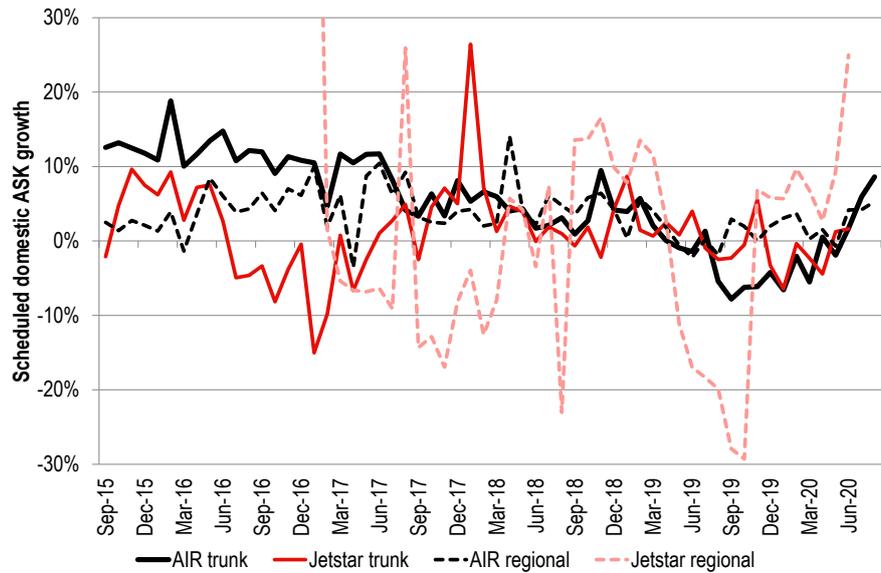
Source: BITRE, Forsyth Barr analysis

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

**Figure 32. Scheduled domestic capacity growth**

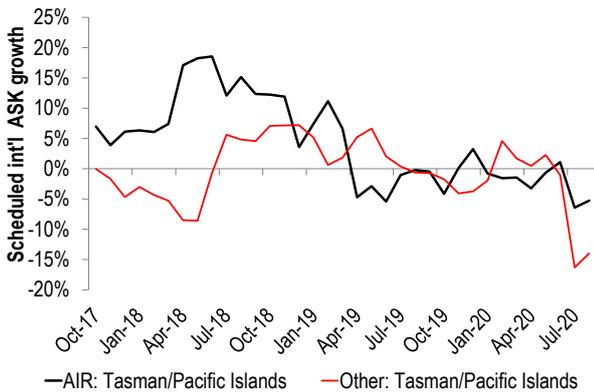


Source: OAG, Forsyth Barr analysis

**International airline capacity outlook**

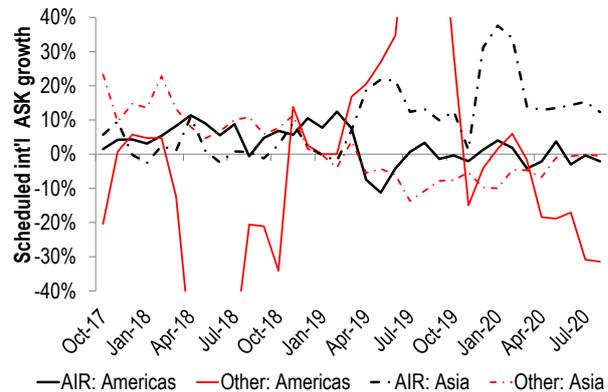
In Figure 33 and Figure 34 we show the scheduled international capacity growth across AIR's international regions. The data shows its increasing share of capacity in its Tasman and Pacific Island operations, but the opposite across Asia.

**Figure 33. Scheduled Tasman and Pacific Island capacity growth**



Source: OAG, Forsyth Barr analysis

**Figure 34. Scheduled long-haul capacity growth**



Source: OAG, Forsyth Barr analysis

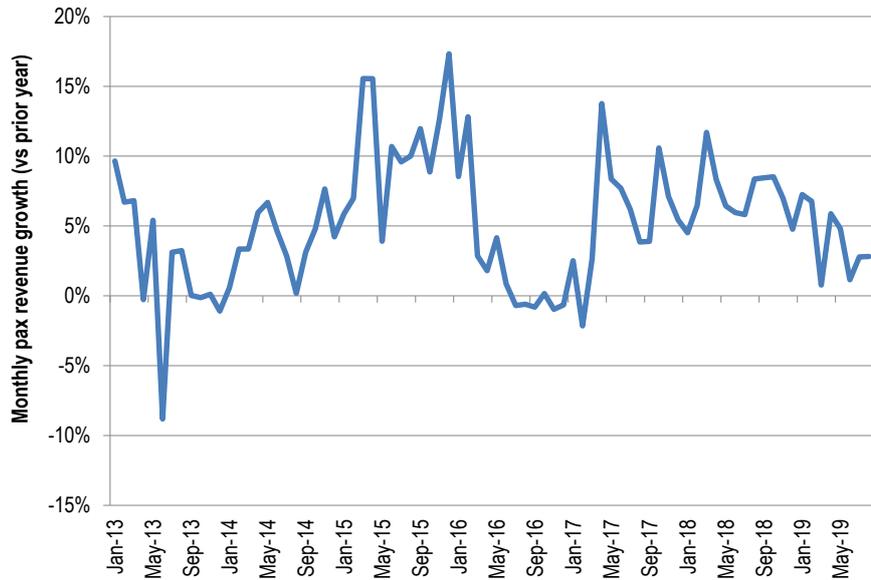
## Air New Zealand

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 35.

Figure 35. AIR's monthly pax revenue growth

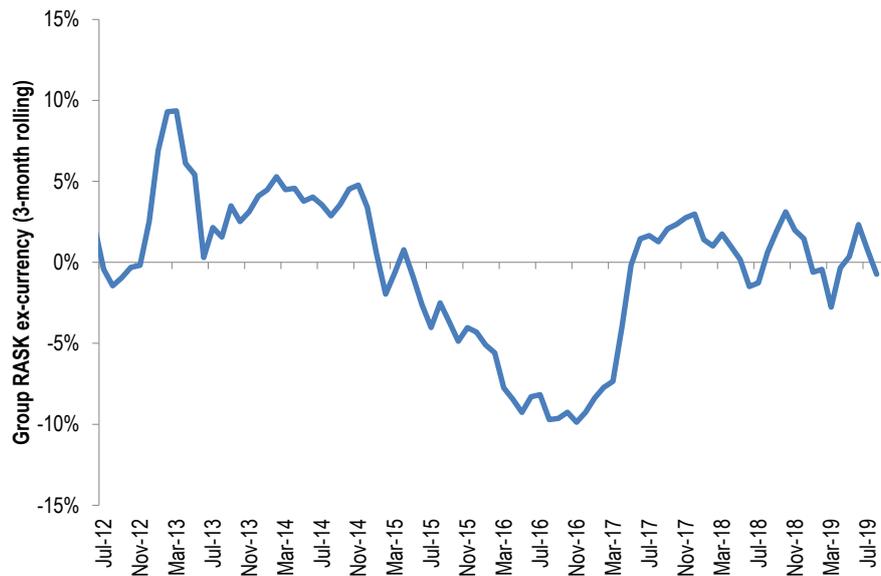


Source: Company data, Forsyth Barr analysis

### 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.

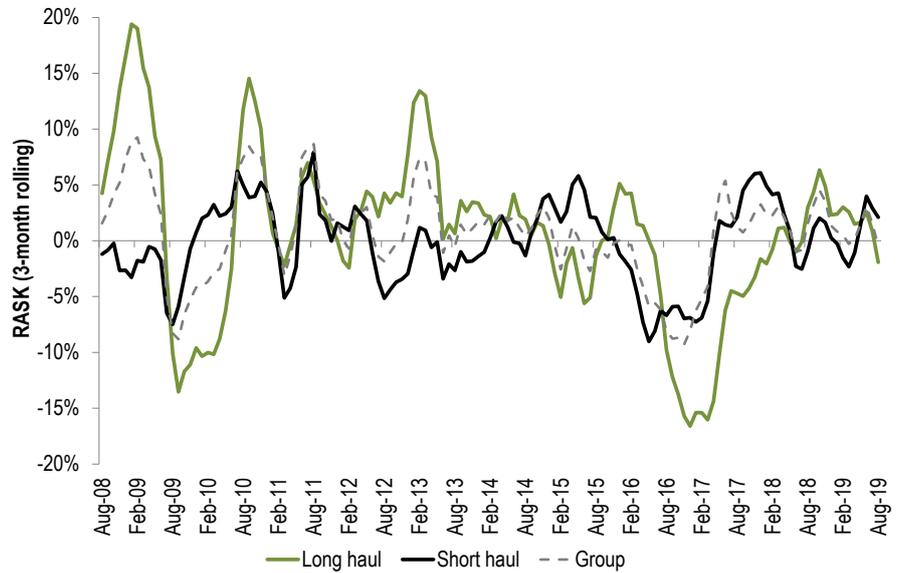
Figure 36. AIR's RASK growth (constant currency)



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.

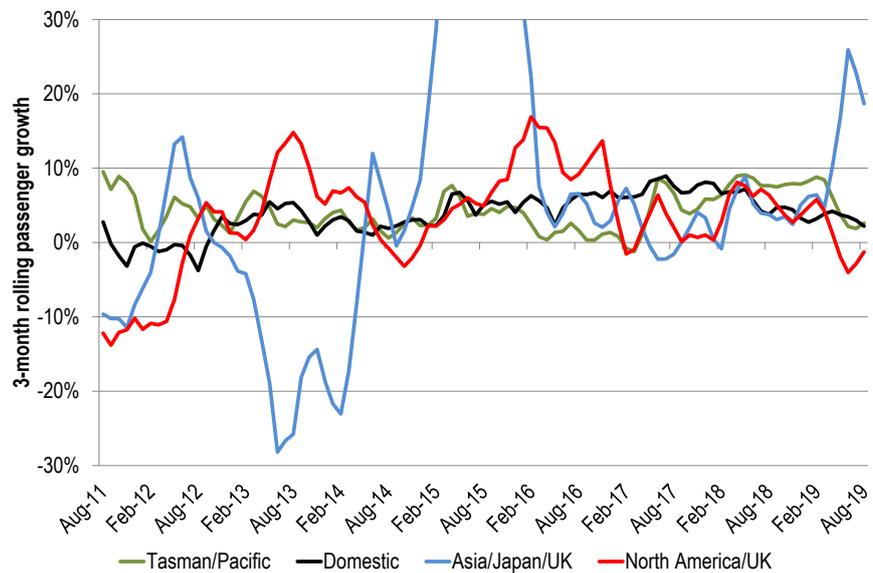
Figure 37. AIR's long haul and short haul RASK growth (NZD)



Source: Company data, Forsyth Barr analysis

We show in Figure 38 growth in passenger numbers by region for AIR.

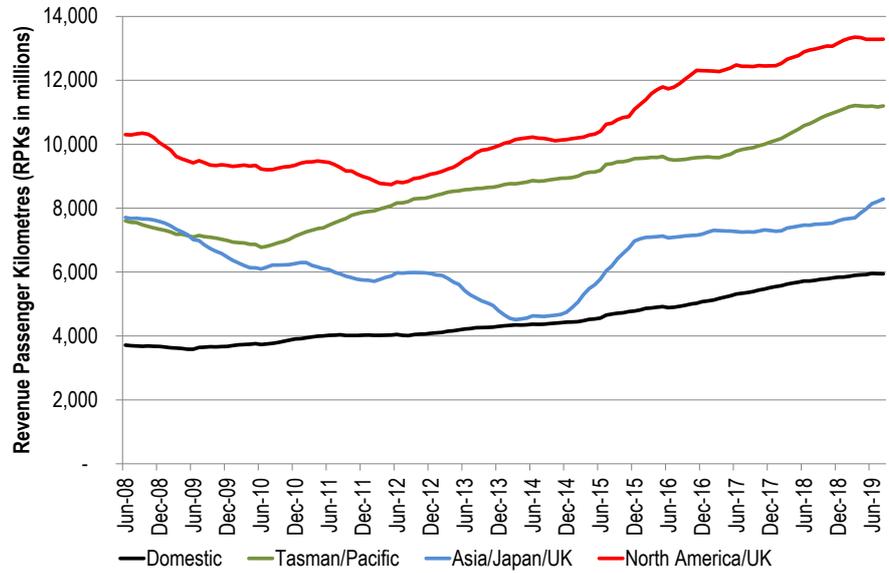
Figure 38. AIR's passenger growth (3-month rolling)



Source: Company data, Forsyth Barr analysis

Revenue Passenger Kilometres (RPK) is a key measure of output for airlines. In Figure 39 we show the rolling annual RPK for AIR across each of its regions.

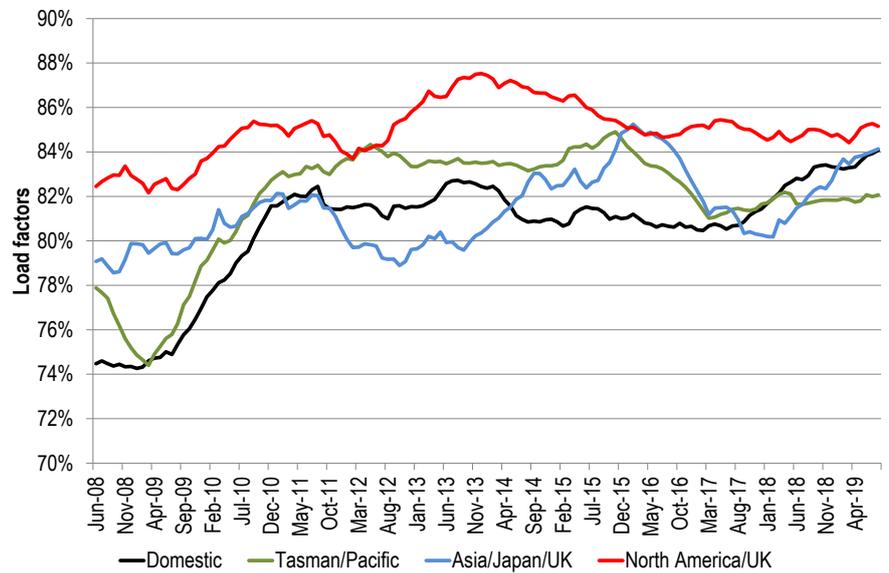
Figure 39. AIR's Revenue Passenger Kilometres (RPK)



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 40.

Figure 40. 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 41. New Zealand retail transport fuel costs

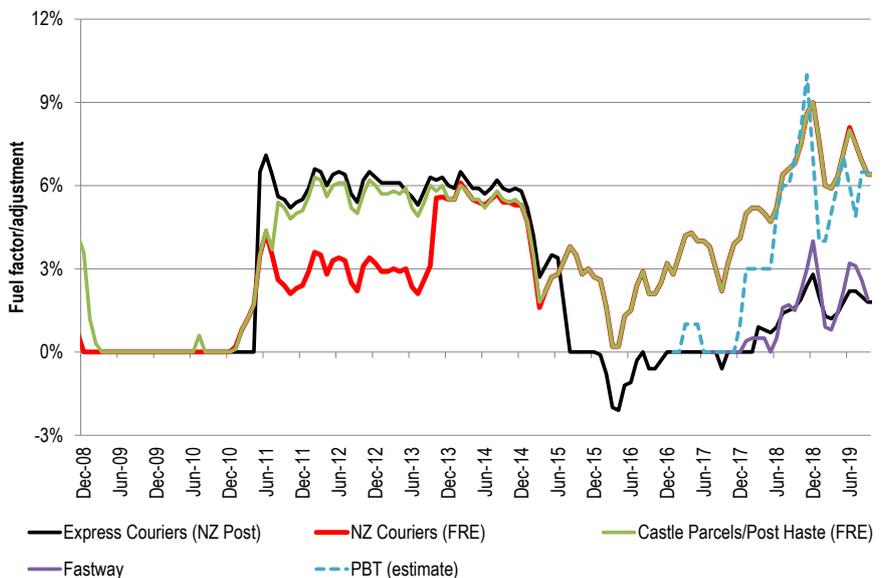


Source: MBIE, Forsyth Barr analysis

#### 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 42. Courier company fuel adjustment levies

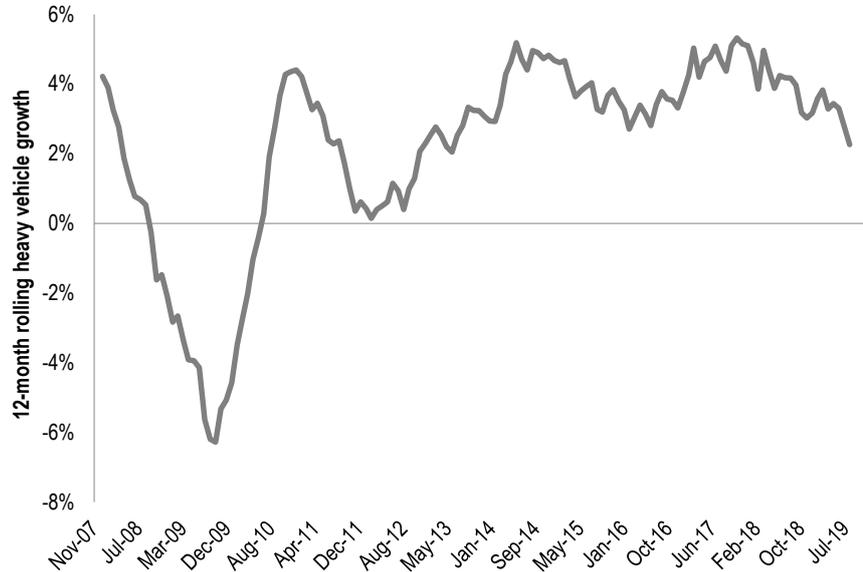


Source: Company websites, Forsyth Barr analysis

**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 43. Heavy vehicle use growth on state highways**

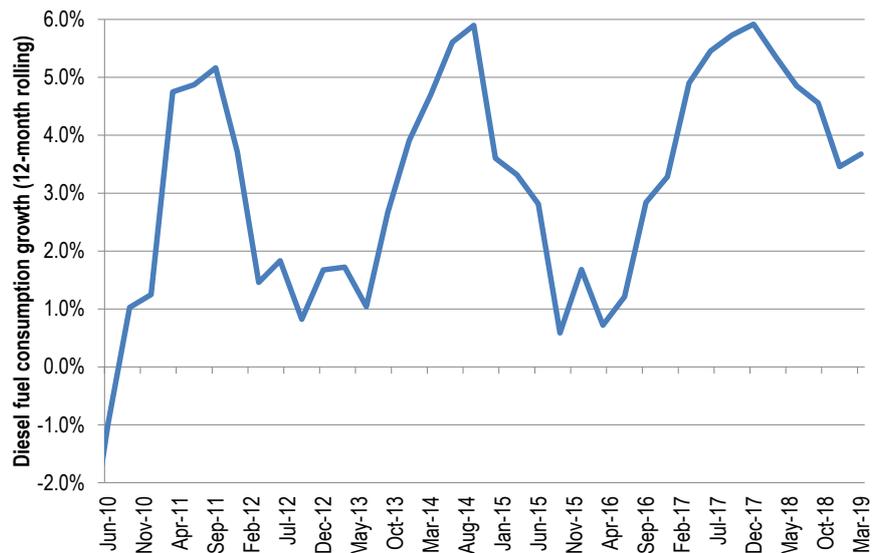


Source: NZTA, Forsyth Barr analysis

**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 44. Quarterly diesel consumption growth**

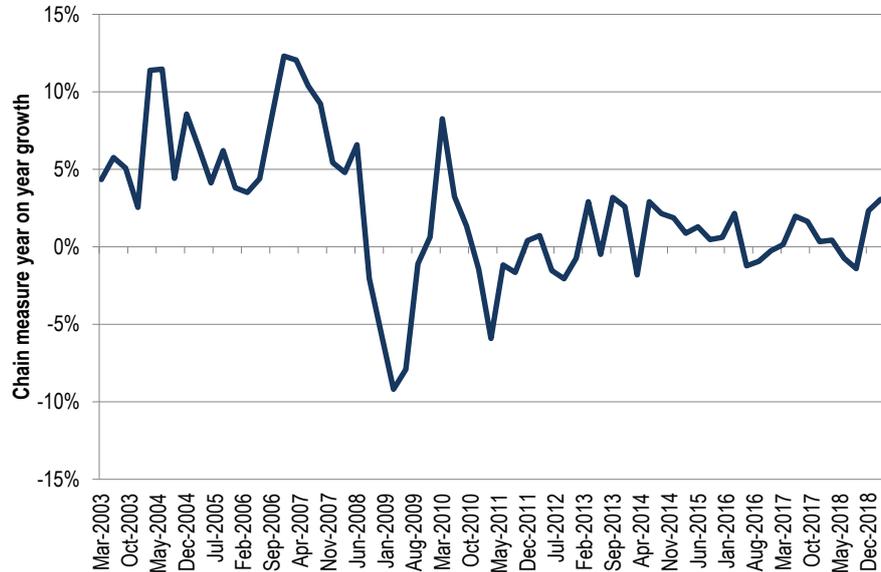


Source: MBIE, Forsyth Barr analysis

**Australian road transport volumes**

Timely data on the Australian freight transport industry is limited. In Figure 45 we show the growth profile of the road transport contribution to national accounts on a quarterly basis.

**Figure 45. Transport, postal and warehousing national account (road transport component)**

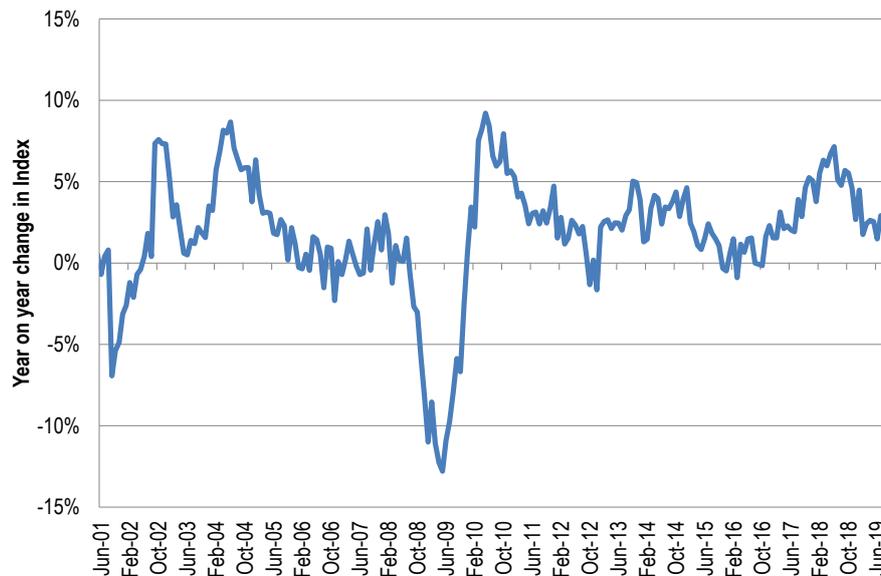


Source: ABS, Forsyth Barr analysis

**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.

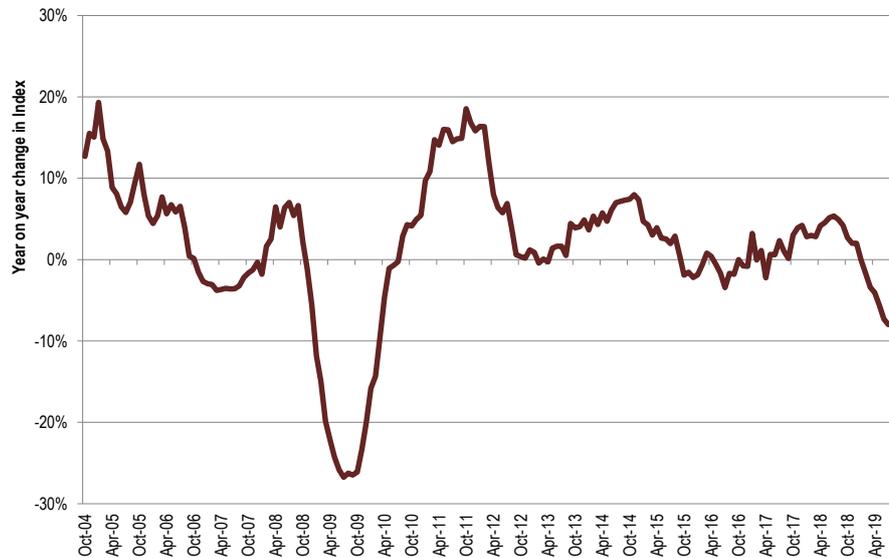
**Figure 46. Transportation Services Index**



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.

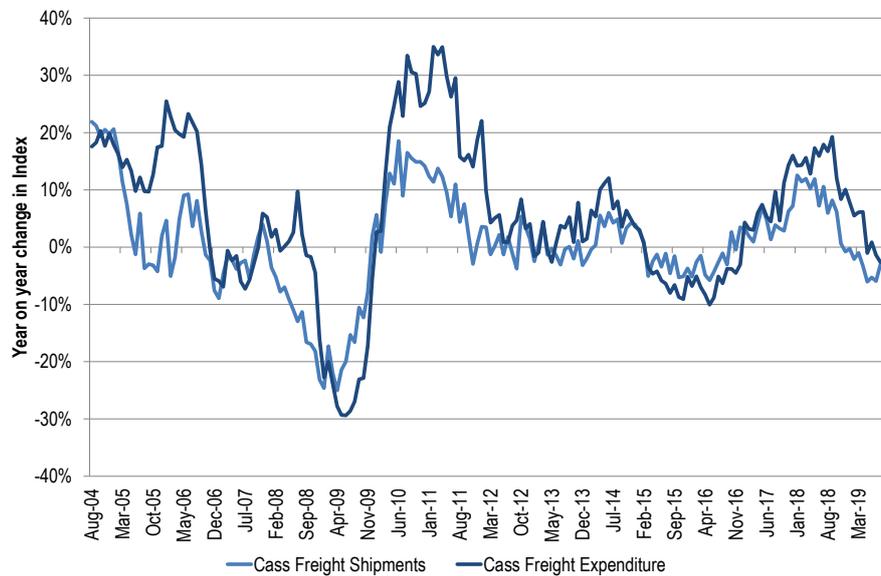
**Figure 47. ATA LTL truck tonnage Index**



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 48. Cass Freight Indices**



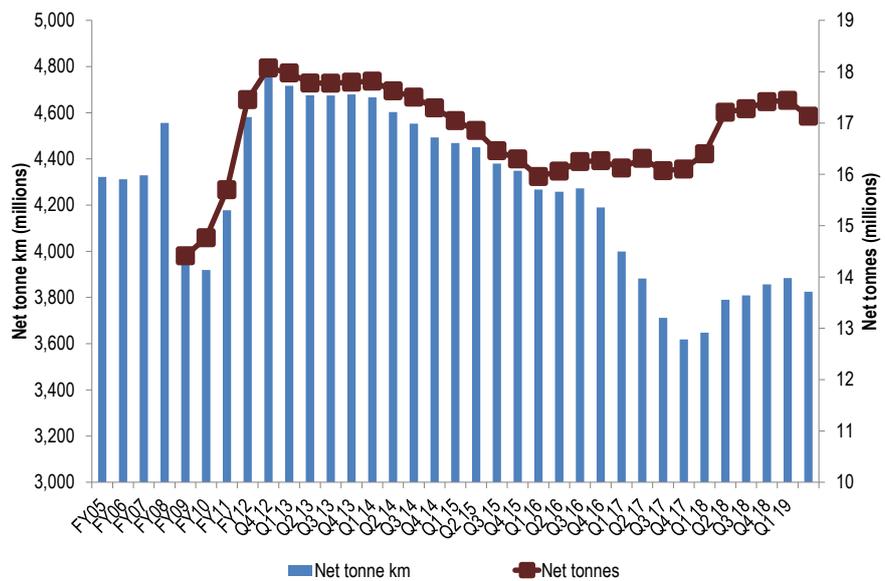
Source: Cass, Forsyth Barr analysis

## 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 49. KiwiRail volume (12 month rolling for recent quarters)

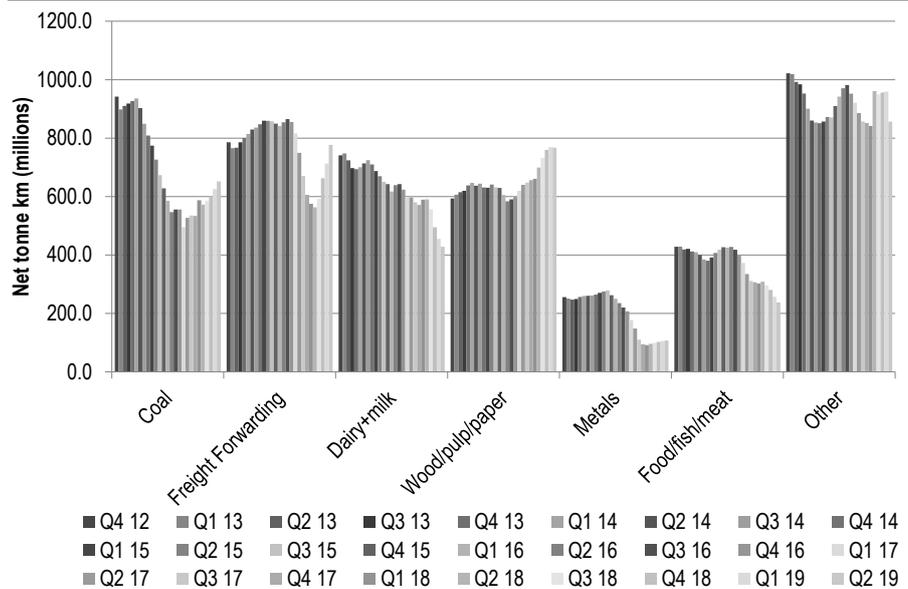


Source: Ministry of Transport, Forsyth Barr analysis

### 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 50.

Figure 50. 12-month rolling KiwiRail volume by commodity



Source: Ministry of Transport, Forsyth Barr analysis

# Ports and shipping

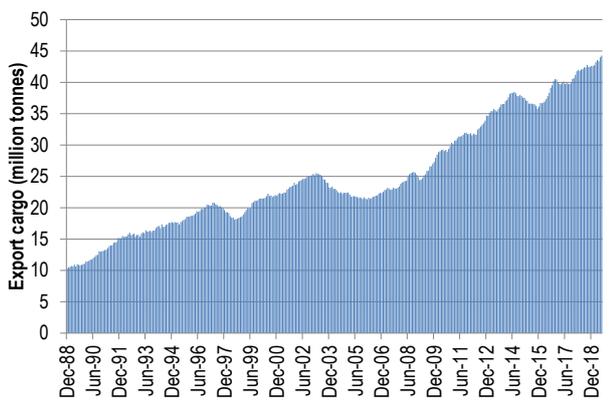
Data in this section is principally relevant to Port of Tauranga (POT) and Napier Port (NPH). It will also be relevant to other port stocks including Marsden Maritime Holdings (MMH) and Southport (SPN).

## Ports

### Total cargo volumes

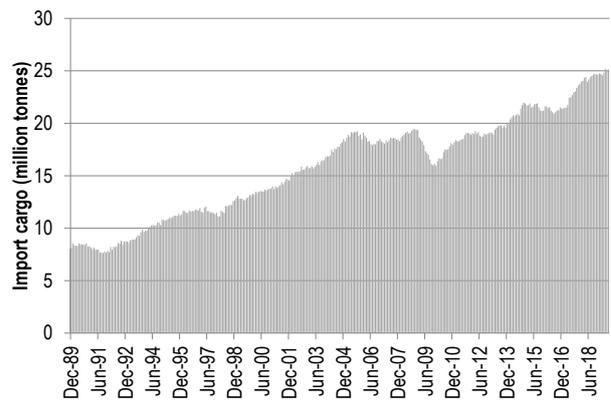
Statistics NZ provides monthly cargo data for all New Zealand seaports. We summarise the aggregated export and import data in Figure 51 and Figure 52 respectively. Over the past 25 years exports have grown at a CAGR of +3.9%, compared to imports at +4.0%.

Figure 51. Export cargo volumes (12 months rolling)



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

Figure 52. Import cargo volumes (12 months rolling)

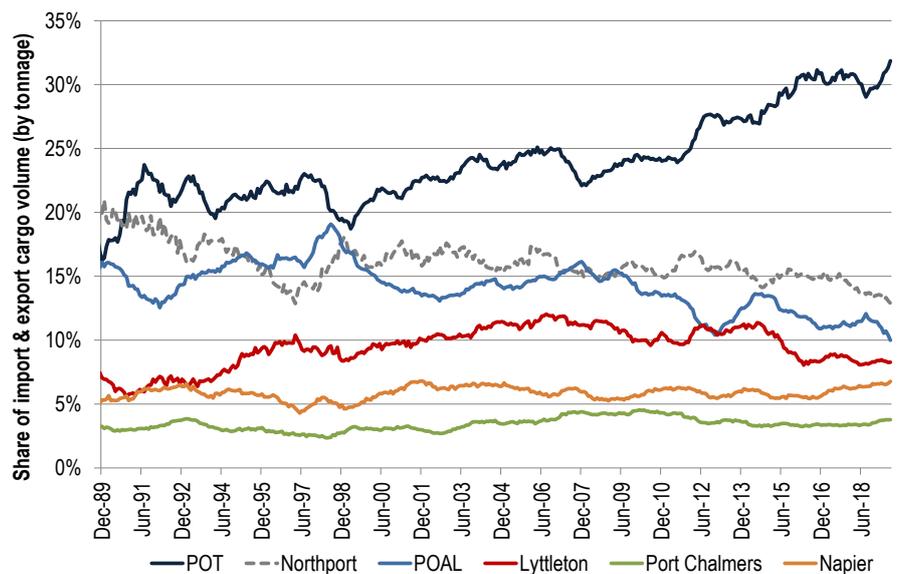


Source: Statistics NZ, Forsyth Barr analysis Note: the data reflects 12-month rolling aggregates

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

Figure 53. Import and export cargo share (by weight) of leading ports

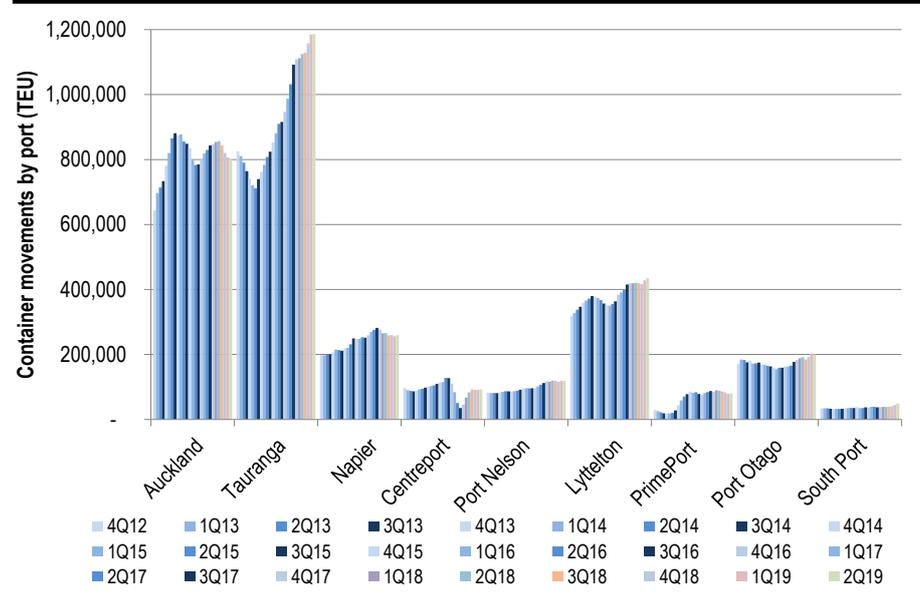


Source: Statistics NZ, Forsyth Barr analysis

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

Figure 54. Rolling 12-month container volumes by port (TEUs)

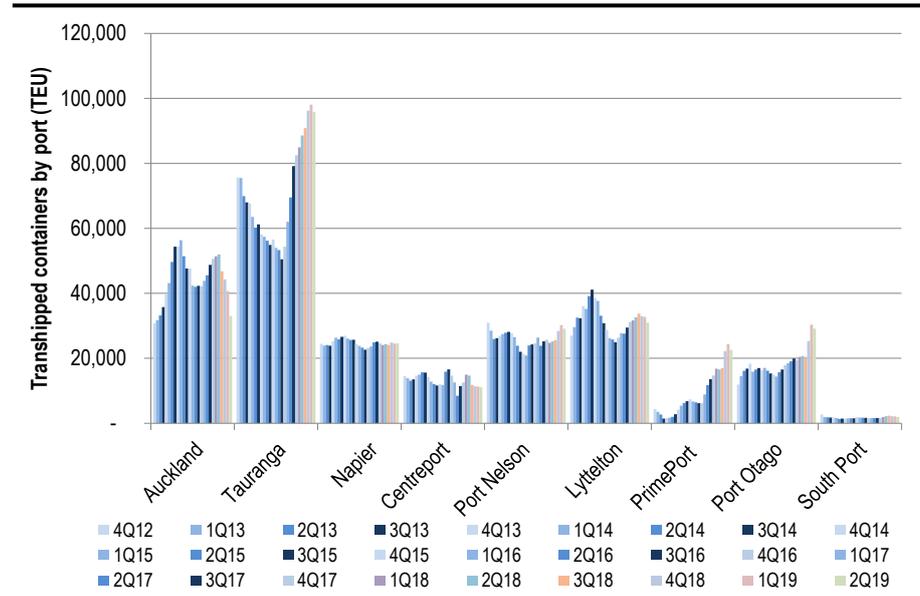


Source: Ministry of Transport, Forsyth Barr analysis

### Container transshipments 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 transshipments reflect containers that are loaded onto a ship at one port, shipped to another port, discharged and then exported via a second ship. Import transshipments 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 transshipments. Auckland handles the highest number of import transshipments.

Figure 55. Rolling 12-month transshipments by port (TEUs)

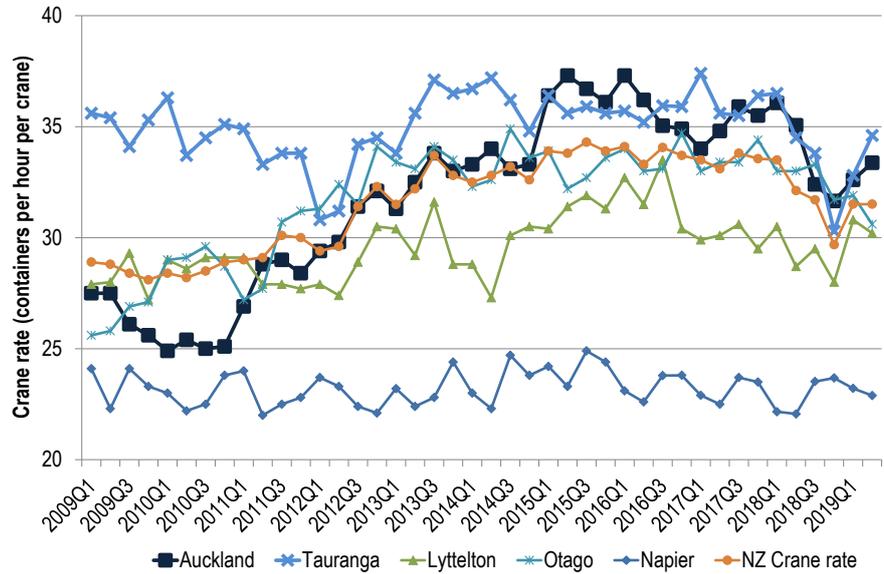


Source: Ministry of Transport, Forsyth Barr analysis Note: Data reflects container tracking data obtained by Ministry of Transport from individual ports. Overall transshipments for POT are different to those presented by the company. However, the trend and rate of change is similar but the absolute numbers 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 56 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.

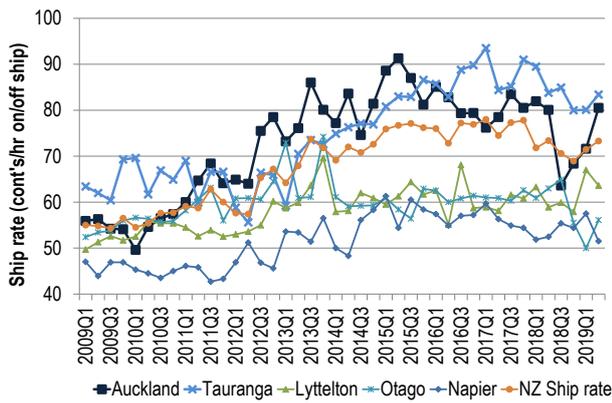
**Figure 56. Crane rate**



Source: Ministry of Transport, Forsyth Barr analysis

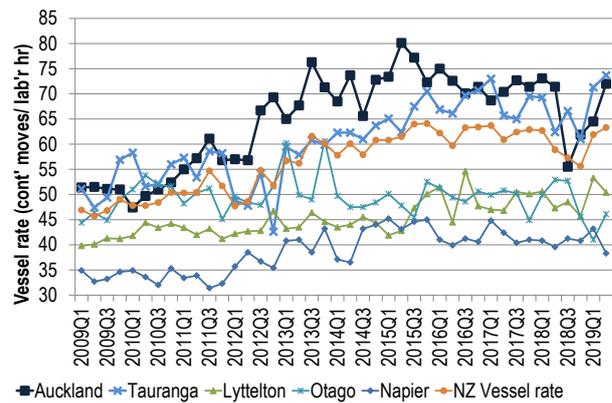
Other measures of port productivity include the ship rate and the vessel rate. These measures reflect the number of containers moved on and off a container ship in (1) an hour (ship rate — Figure 57), and (2) an hour of labour (vessel rate — Figure 58). The ship rate is the most important measure of port productivity for shipping lines.

**Figure 57. Ship rate**



Source Ministry of Transport, Forsyth Barr analysis

**Figure 58. Vessel rate**



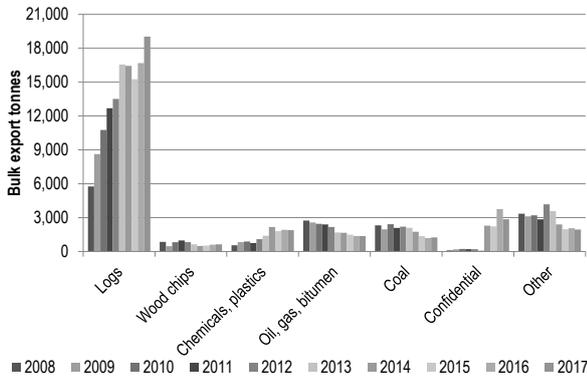
Source: Ministry of Transport, Forsyth Barr analysis

**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).

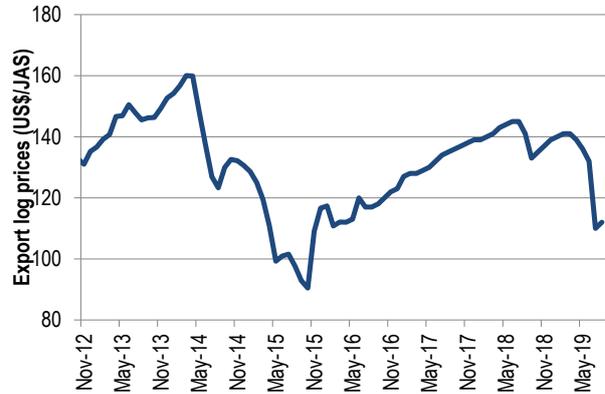
Wood exports are dominated by logs. The industry also exports processed timber, pulp and paper, and wood chips.

**Figure 59. Bulk sea export commodities**



Source: Ministry of Transport, Forsyth Barr analysis

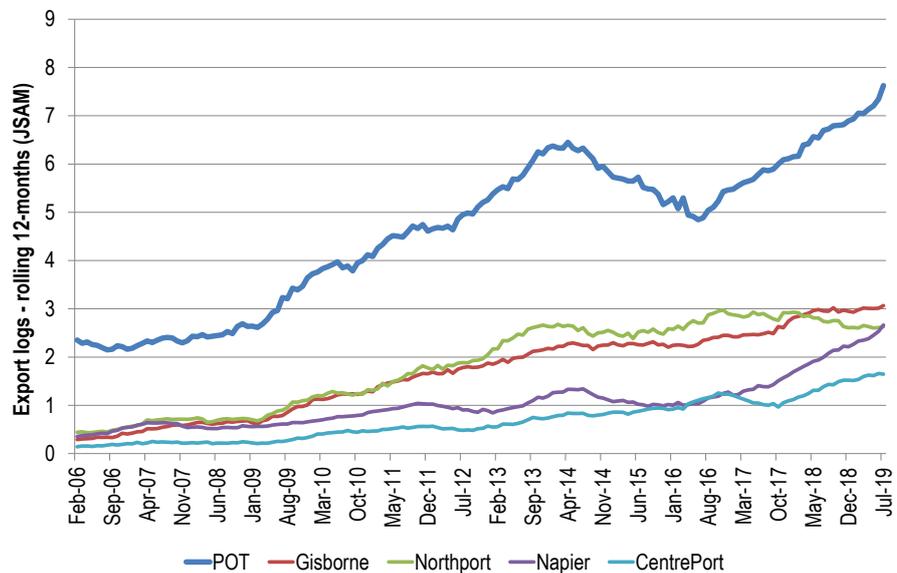
**Figure 60. Export log prices (A-grade)**



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 61. 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 62 the regular weekly or fortnightly services that stop at POT providing direct access to and from Australia, Asia and the Americas.

Figure 62. Regular container services currently stopping at POT

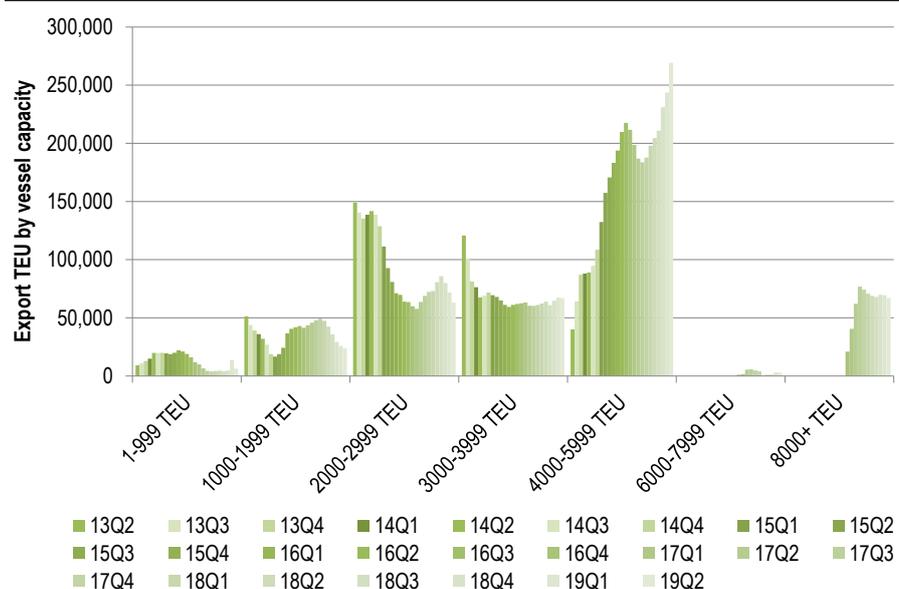
Shipping line	Service	POT code	POT service	Frequency	From	To
Pacifica	CFD	CFD	Domestic	Weekly	Domestic	Domestic
CMA-CGM/PIL/	China New Zealand	AANZ	Export	Weekly	Lyttleton/Wellington/Napier	Hong Kong
OOCL/COSCO	Service					
Maersk	AC3	AC3	Export	Weekly	South America	Hong Kong
Hamburg-Sud	ANZL (Asia)	ANZL	Export	Weekly	Lyttleton/Napier	Tokyo
MSC	Capricorn	MSC	Export	Weekly	Bluff/Port Chalmers/ Lyttleton/Nelson/Tauranga	Tanjung Pelepas
APL	New Zealand Service	NZS	Export	Weekly	Lyttleton/Wellington/Napier	Port Kelang
Hamburg Sud	OC1/Trident	OAES	Import/Export	Weekly	Australia/Chalmers/Napier	Auckland/Panama
ANL	TTZ	TTAZ	Export	Weekly	Lyttleton/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	Lyttleton/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	WAN	Import/Export	Fortnightly	Oakland	Sydney
	Australasia Loop 2					
Hapag Lloyd	US West Coast	WAS	Import/Export	Weekly	Sydney	Papeete/Oakland
	Australasia Loop 1					

Source: Company websites, 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 63. 12m-rolling export TEU by vessel capacity

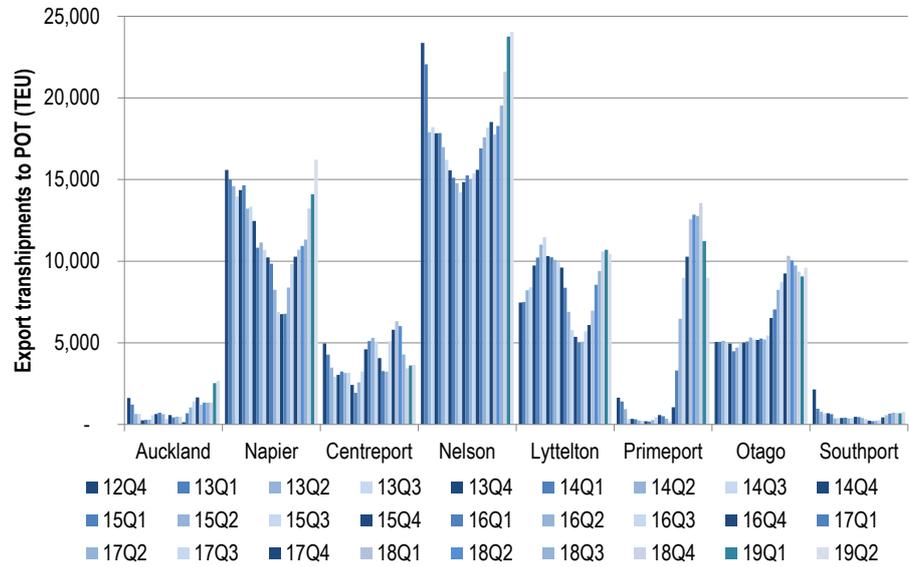


Source: Ministry of Transport, Forsyth Barr analysis

**Transhipments at POT**

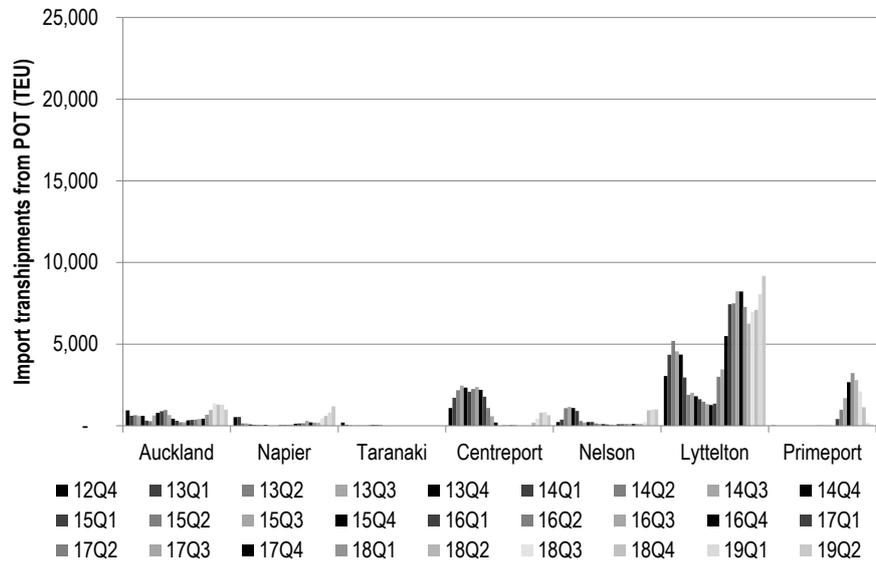
POT operates a hub and spoke model with transhipments a key driver of growth. Further shipping industry consolidation will likely lead to rationalisation of shipping services, which we expect will increase transhipments. Lyttelton (imports) and Nelson (exports) are the largest spoke ports for POT.

**Figure 64. 12m-rolling export transhipments to POT**



Source: Forsyth Barr analysis, MOT

**Figure 65. 12m-rolling import transhipments from POT**

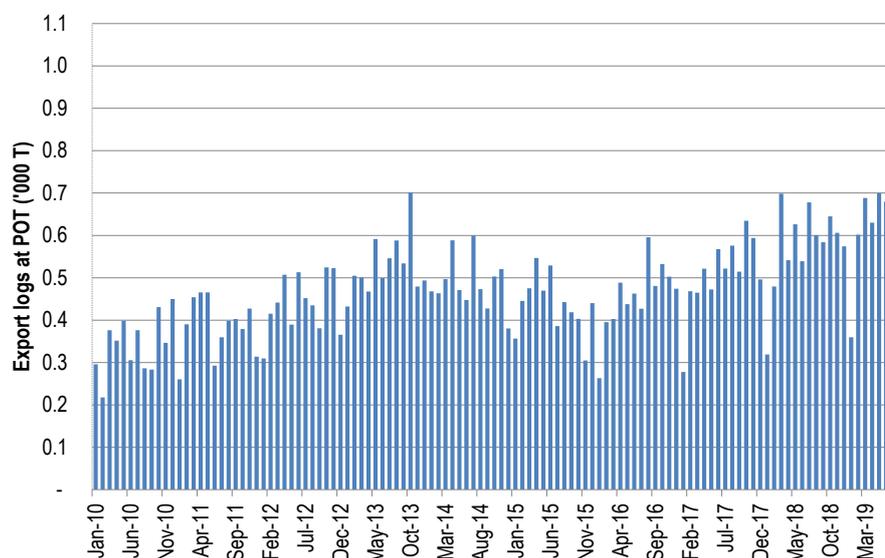


Source: Forsyth Barr analysis, MOT

### Log exports at POT

In Figure 66 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 66. 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 67 the regular weekly or fortnightly services that stop at NPH providing direct access to and from Australia, Asia and the Americas.

Figure 67. Weekly container shipping services currently visiting NPH

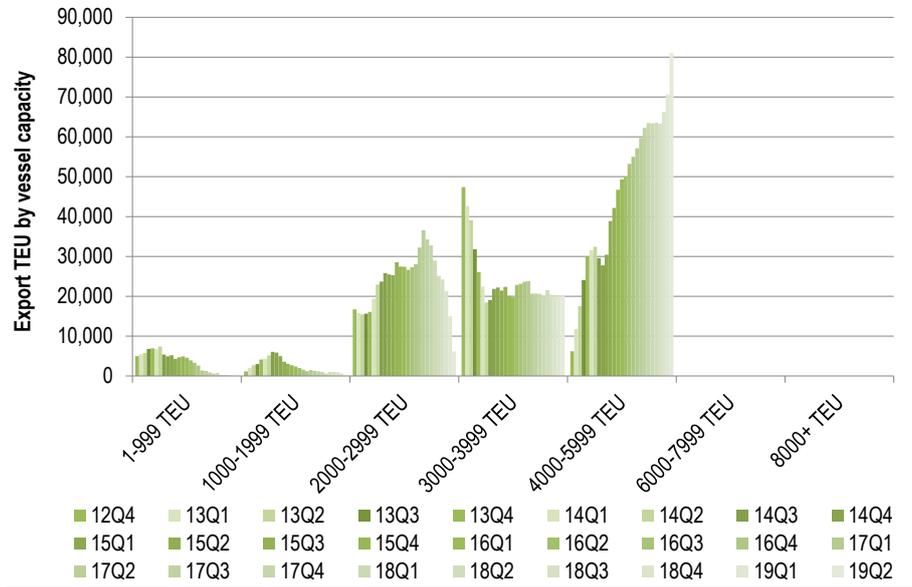
Shipping line	Service	Frequency	Origin/Destination	From	To
MSC	Capricorn	Weekly	Australia/South East Asia	South Port, Otago, Lyttelton	Tauranga, Auckland, Brisbane
CMA-CGM/PIL	NZ Service/KIX	Weekly	South East Asia	Brisbane, Auckland, Lyttelton, CentrePort	Tauranga, Brisbane
CMA-CGM	ANZEX	Weekly	North Asia	Brisbane, Auckland, Otago, Lyttelton	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	Lyttelton	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 68. 12m-rolling export TEU by vessel capacity**

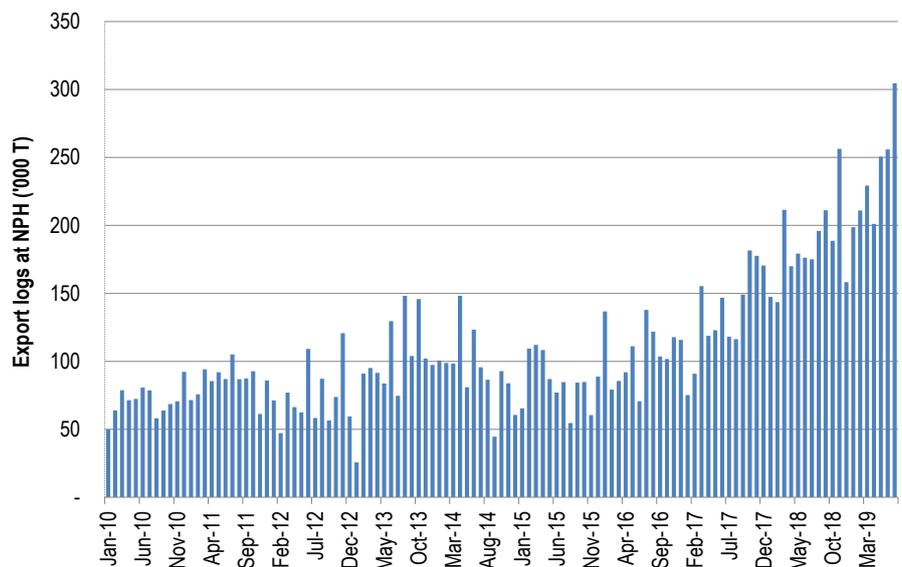


Source: Ministry of Transport, Forsyth Barr analysis

**Log exports at NPH**

In Figure 69 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 69. Log exports at NPH**



Source: Statistics NZ, Forsyth Barr analysis

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