

Monthly Economic Indicators

New Zealand Government

February 2019

Executive Summary

- The unemployment rate rose to 4.3% in the December quarter, from 4.0% (revised) in the September quarter.
- Retail sales volumes rebounded in the December quarter
- Trading partner growth stabilised in the December quarter

Labour market data was weaker than expected for the December quarter, with the unemployment rate coming in above expectations at 4.3%. The labour force expanded by 0.4%, as the number of people in employment grew. Wages grew moderately; Quarterly Employment Survey (QES) ordinary time hourly earnings rose 0.9% in the quarter taking annual growth to 3.1%. The Labour Cost Index (LCI) grew by 1.9% in the year to December.

Retail spending volumes grew strongly, up 1.8%, in the December quarter. The strong retail sales result is indicative of solid private consumption growth and supports our forecast of 0.6% real GDP growth in the December quarter.

Overseas trade data showed a record January month deficit of \$914 million. Petroleum products led imports higher but growth was broad-based. Strong dairy production and higher prices, following the sell-off of European intervention stocks, drove up exports. We expect continued good agricultural growing conditions and an improving price outlook to support export growth in coming months.

Growth in New Zealand's main trading partners stabilised in the fourth quarter of 2018 (2018Q4), despite continued cooling in the advanced economies. According to our estimate, New Zealand's 16 largest trading partners expanded 3.6% in 2018Q4 from the same quarter the previous year, but growth appears to have eased in the first quarter of 2019. In Australia, the Reserve Bank of Australia revised down its growth forecasts, reflecting a weaker consumption outlook.

This month's special topics are on Stats NZ's new migration measure, and the economic implications of a 'no-deal Brexit' for New Zealand.

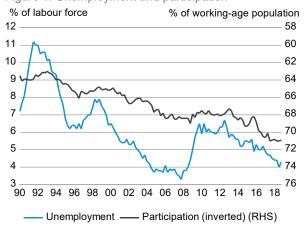
Analysis

A weaker labour market was tempered by a recovery in consumption growth in the December quarter. Retail sales volumes rose 1.7%, with nominal retail spending up 1.8%, consistent with strength in GST revenue over the same quarter. Residential building consents rose 5.1% in December and house prices were steady in January. The overseas merchandise trade balance reached a record deficit of \$914 million for the January month, representing 9.0% of two-way trade.

Unemployment rate rose...

The unemployment rate rose to 4.3% in the December quarter from 4.0% (revised) in the September quarter (Figure 1). The rise in the number of unemployed was concentrated in the youth age group (15-24 year olds), reversing the fall in unemployment in this age group in the September quarter. Over a longer time horizon, the unemployment rate has been trending down, implying some tightening in the labour market, although the current rate is largely unchanged from the level that prevailed at the beginning of 2018. We expect the unemployment rate to continue to track around 4.3% in the near term.

Figure 1: Unemployment and participation



Source: Stats NZ

Stats NZ included a supplement (the Survey of Working Life) in the December quarter survey and identified part-way through that some questions in the survey increased the probability of respondents identifying as not in the labour force. They have adjusted some key Household Labour Force Survey (HLFS) series in the December quarter release to account for this, making some of the data in this release, such as the number of people employed and people underemployed, less reliable than usual.

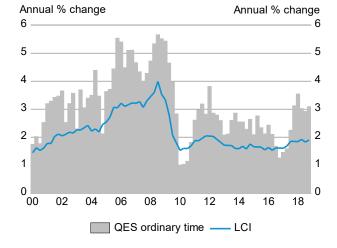
The total number of people employed rose 0.1% in the quarter (2.3% annually). Full-time employment rose 0.4% and part-time employment fell 1.4% in the quarter. The underutilisation rate rose from 11.4% to

12.1% (sa). The working age population grew by 0.7% in the quarter, exceeding the 0.4% rise in the labour force and the participation rate fell to 70.9%. Notably, the HLFS estimated working age population was not affected by Stats NZ's new official measure of net migration. We expect future revisions to the working age population estimate to reflect this new, lower measure of net migration.

The Quarterly Employment Survey (QES) recorded that the number of full-time employees rose 0.4% in the December quarter and filled jobs were up 0.3%. QES ordinary time hourly earnings increased 0.9% in the quarter to be up 3.1% annually (Figure 2). While gross weekly earnings growth has moderated, it is still strong, up 5.1% from the same quarter the previous year.

Labour Cost Index (LCI) wage measures showed moderate growth, up 0.5% in the quarter, supported by the Nurses' collective employment agreement settlement. On an annual basis, the LCI grew 1.9%, up from 1.8% in the September quarter. We expect tightening in the labour market together with further collective settlements and government policies (including further minimum wage increases) to support a pick up in wage inflation over the next few years.

Figure 2: Wage growth



Source: Stats NZ

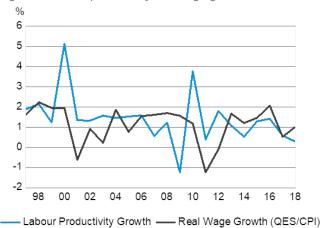
...and labour productivity growth slowed

Productivity statistics were released for the year ended March 2018. The annual productivity statistics estimate productivity for the 'measured sectors', for which separate output and input measures can be estimated independently. Productivity is a measure of how efficiently inputs (capital and labour) are used within the economy to produce outputs (goods and services). Measured sector output expanded by 3.2% in the year to March 2018. It is estimated that multifactor productivity (MFP), labour productivity and

capital productivity all grew by 0.3%. Gains in labour and capital inputs made up the balance.

Labour productivity growth of 0.3% for the year ended March 2018, is slower than growth of 0.6% for the previous year and the lowest growth rate since 2009. Real wages have moved largely in line with labour productivity (Figure 3).

Figure 3: Labour productivity and wage growth



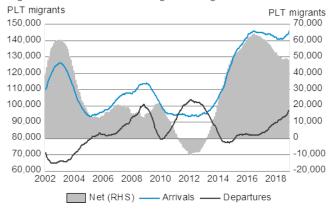
Source: Stats NZ

Permanent and long term migration revised up

Annual PLT net migration continued its downwards trend in December, falling to 48,300 from 52,600 in December 2017 (Figure 4). The increase in PLT departures outstripped the increase in PLT arrivals. Annual PLT net migration peaked in July 2016 at around 64,000 and since then an increase in departures of non-NZ citizens has driven the decline in PLT net migration. PLT migration increased on a monthly basis, up from 3,310 (sa) in November to 5,080 (sa) in December.

The release contained significant revisions to prior months, with migration in the twelve months to November revised to 48,000 from 43,400 previously. These revisions are the result of Stats NZ moving to a new outcomes-based measure of PLT migration, for which the most recent 16 months of arrivals are modelled estimates. Over time the new measure should provide a more accurate estimate of PLT migration, however, there is risk of substantial revisions to recent figures on a monthly basis (please see our special topic). We expect migration to continue to decline over coming years.

Figure 4: Permanent and long-term migration



Source: Stats NZ

Strength in home building consents continued...

Residential building consents rose 5.1% (sa) in December following a 1.9% (sa) fall in November. In the year to December, consents rose 6.1%, with Auckland up 18% and Wellington up 19%. Standalone home consents rose 6.7% in the quarter and usually precede residential investment by a quarter or two. This implies some strength in residential investment in the first two quarters of 2019.

...and house sales held up...

House sales rose 13.6% (sa) in January, largely offsetting the fall in December. National house prices rose 3.1% in the year to January. In Auckland, prices continued to fall, down 2.1% annually while prices ex-Auckland rose 8.0% (Figure 5). We expect modest growth in house prices over the next few years as pent up demand, supply constraints and near-record low mortgage rates are being offset by the effect of the foreign buyer restriction, uncertainty regarding future tax treatment of housing and affordability constraints.

Figure 5: House price growth

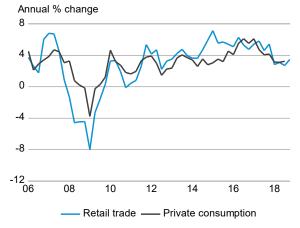


Source: REINZ

Consumption growth higher...

Retail sales bounced back following a weak September guarter. Values rose 1.8% in the December quarter, following 0.8% growth in the September quarter. On an annual basis, total retail sales values were up 4.5%, compared with 4.0% in the September quarter. Volumes rose 1.7% following a 0.3% rise in the September quarter. Annually, volumes rose 3.5%, following a 2.7% increase in the September quarter (Figure 6). The strong retail sales result is indicative of solid private consumption growth and supports our forecast of 0.6% real GDP growth in the December quarter. The impact on private consumption is likely to be smaller than indicated by the total retail trade increase. Stats NZ suggested that a lot of the growth in spending in the pharmaceutical and other store-based retailing category (which includes duty-free stores) may have come from duty free spending by visitors, and may therefore be attributed to services exports.

Figure 6: Private consumption and retail trade



Source: Stats NZ

...business confidence eased

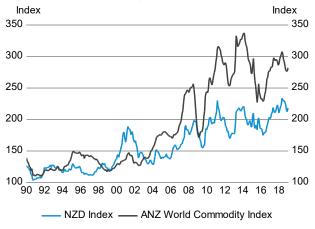
February's ANZ business confidence survey showed a modest pullback, with the net balance of firms expecting general business conditions to deteriorate down 7%-points to -31% following December's 13%-point gain. Firms' expectations for their own performance eased 3%-points to a net 11% expecting improved performance. ANZ note that slowing global growth and rising challenges to profitability may have affected confidence.

Commodity prices rose...

The ANZ World Commodity Price Index rose 2.1% in January (Figure 7). Dairy drove the increase with prices up 5.4% on the back of higher skim milk powder prices (up 18.8%). Dairy prices during the latter part of 2018 were impacted by the European Union selling down their intervention stockpiles of skim milk powder. These stockpiles have now been

cleared, providing a more positive outlook for dairy prices. Meat prices also rose 0.6%. The NZ index lifted 2.9% as the NZD weakened to end up 3.8% year on year.

Figure 7: ANZ Commodity Price Index



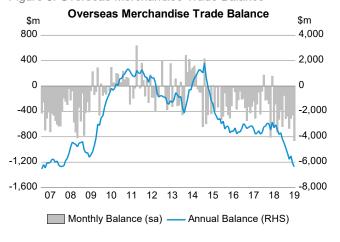
Source: ANZ

Fonterra raised its forecast farmgate milk price to a range of \$6.30 to \$6.60/kg of milk solids from the previous \$6 to \$6.30 range, but won't be paying an interim dividend. They also reduced their earnings forecast.

...and the trade balance recorded a record deficit

The annual merchandise trade deficit widened to \$6.4 billion in January from \$6.1 billion in December (Figure 8). Compared with January 2018, seasonally adjusted export volumes rose 3.0%, supported by strong dairy production. Imports rose 7.7% compared to the same time last year, driven by increased imports of petroleum products. Continued good agricultural growing conditions and an improving price outlook bode well for export revenue growth in coming months.

Figure 8: Overseas Merchandise Trade Balance



The OCR remained unchanged

The Reserve Bank of New Zealand (RBNZ) released its latest OCR decision and Monetary Policy Statement in February. As expected, the RBNZ left the OCR at 1.75%. The Bank expects to keep the OCR unchanged until the end of 2020. The Bank reiterated that employment is roughly around its 'maximum sustainable level'.

Trading partner growth stabilised in the fourth quarter...

Growth in New Zealand's main trading partners stabilised in the fourth quarter of 2018 (2018Q4), despite continued cooling in the advanced economies. Growth was strong in the first half of 2018 but moderated in the second half. According to our estimate, New Zealand's 16 largest trading partners expanded 3.6% in 2018Q4 from the same quarter the previous year, which is around average (Table 1).

Table 1: Trading partner GDP growth (annual % change)

	2018q1	2018q2	2018q3	2018q4
	-			
Total TPG growth	4.1	4.0	3.6	3.6
Australia	3.0	3.1	2.8	2.8
US	2.6	2.9	3.0	3.0
Japan	1.3	1.4	0.1	0.0
Euro area	2.4	2.2	1.6	1.2
UK	1.3	1.4	1.6	1.3
Canada	2.3	1.9	2.1	2.1
Total adv. econ.	2.5	2.6	2.2	2.1
China	6.8	6.7	6.5	6.4
Korea	2.8	2.8	2.0	3.2
Singapore	4.6	4.3	2.3	1.9
Taiwan	3.3	3.1	2.3	1.9
Malaysia	5.4	4.5	4.3	4.7
Indonesia	5.1	5.3	5.2	5.2
Thailand	4.9	4.6	3.2	3.7
Hong Kong	4.6	3.5	2.9	2.5
Philippines	6.6	6.1	5.9	6.1
India	7.7	8.2	7.1	6.9
Total Asia	5.9	5.7	5.2	5.2

Source: Haver Analytics, Treasury

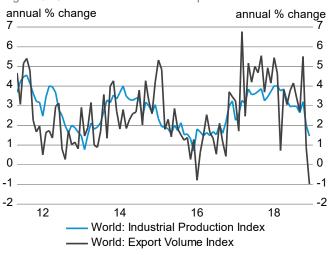
The easing in trading partner growth reflects the effects of tighter financial conditions in the world's two largest economies, the United States and China. It also reflects the effects of increased frictions on global trade and the uncertainty surrounding future trade relationships. Slower growth in global trade volumes is reflected in weaker industrial production (figure 9).

Looking at the performance of the advanced economies, the pace of growth in the euro area was stable on a quarterly basis in 2018Q4, up 0.2%, but slowed sharply to 1.2% on an annual basis, down from 1.6% in 2018Q3. Details of growth in the quarter have yet to be released, but available data shows industrial production declined in the quarter, led by a fall in manufacturing activity. Export volume growth also likely eased as global demand slowed. According

to the EU Commission, weaker momentum over the second half of 2018 will persist. The Commission downgraded its forecast for 2019 growth to 1.3% from 1.9% in November.

Brexit uncertainty continued to weigh on UK growth as investment contracted further. GDP data for the US has been delayed by the government shutdown in December and January. Indicators to date point to a slowdown in quarterly growth, although the market consensus is for annual GDP growth to be stable at 3.0%.

Figure 9: Global trade and industrial production



Source: Haver Analytics

Growth was stable in Asia, although uncertainty around trade and weaker growth in advanced economies raises the question of whether it will be sustained. Activity rebounded in Japan in the fourth quarter following disruption from several natural disasters in 2018Q3. However, growth was flat over the year pointing to weak underlying demand growth.

In contrast to the slower pace of growth in China reported last month, December quarter growth in South Korea picked up to 1.0%, helped by higher government spending. However, weak consumer confidence and a slowing labour market pose risks to the outlook. The unemployment rate rose sharply to 4.4% in January from 3.8% in December, which some analysts attribute to large minimum wage increases this year and last year.

GDP growth in Malaysia also firmed, led by a recovery in net exports and strong private consumption growth. Private consumption growth also supported stronger growth in Thailand, the Philippines and Indonesia, with government social assistance increasing strongly in the latter in the build up to April's general election. Growth in Taiwan slowed, driven by the slowdown in the tech sector and sluggish sales of Apple's iphone.

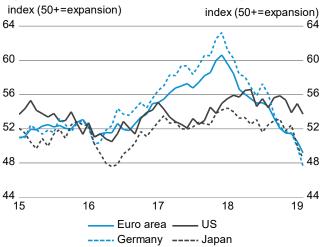
In India, the government's interim budget for the 2019 fiscal year, which begins on 1 April, included a 13%

increase in total expenditure and a targeted fiscal deficit of 3.4% of GDP. The budget is considered interim as general elections are due in April and May and the government that is subsequently formed may make changes to the budget. Data for 2018Q4 GDP are expected to show economic activity continued to grow strongly.

...despite weakness in manufacturing activity

Data for the first quarter of 2019 point to a further moderation in manufacturing activity. Euro area manufacturing sentiment continued to fall; from 50.5 to 49.2 (a reading over 50 indicates expansion in the sector). The new orders subcomponent fell sharply – an indication of weak demand. Manufacturing sentiment also weakened in the US and Japan in February (figure 10).

Figure 10: Selected IHS Markit Manufacturing PMIs



Source: IHS Markit/Haver Analytics

Factors such as uncertainty in relation to global trade and Brexit are likely to be weighing on sentiment, however measures of internal demand remain buoyant. Markit Services PMIs, for example, ticked up in the US and the euro area in February.

In addition, solid labour market growth continues to underpin domestic activity in many countries. The US added 304,000 jobs in January (up 0.2% in the month, 1.9% on an annual basis) and the unemployment rate is sitting at 4.0%. Unemployment rates in the euro area, Germany and Japan are sitting near post-GFC lows.

RBA downgrades growth...

As expected, the Reserve Bank of Australia (RBA) held the official cash rate unchanged at 1.5% at their February meeting. More importantly, the Bank shifted to a neutral stance on the outlook, with Governor Lowe stating "over the past year, the next-move-is-up scenarios were more likely than the next-move-is-down scenarios. Today, the probabilities appear to be more evenly balanced". The Bank also downgraded

its forecasts of the domestic economy, reflecting a weaker consumption outlook. The Bank now forecasts GDP growth to be 2.5% (previously 3.3%) in June 2019 and 2.8% (previously 3.3%) in June 2020. The RBA also downgraded CPI forecasts suggesting that the pick-up in inflation will "take a little longer than earlier expected".

Construction activity was weak in the December quarter, falling 3.4% (following a downwardly revised 3.6% fall in the September quarter). The weakness was concentrated in housing and public engineering. Weak construction activity will drag on residential investment in next week's December quarter GDP release. GDP growth is expected to pick up to 0.7% (2.9% annually), following 0.3% growth in the September quarter (2.8% annually).

...amid deteriorating housing data...

Forward looking housing market indicators have also been weak. Residential building approvals fell 8.4% m/m (sa) in December and are down 22.5% annually. The fall was driven by multi-unit dwellings (which tend to be more volatile) (Figure 11). Similarly, non-residential building approvals fell 9.8% in December and are down 15.0% annually.

Figure 11: Australian building approvals



Source: Australian Bureau of Statistics/Haver Analytics

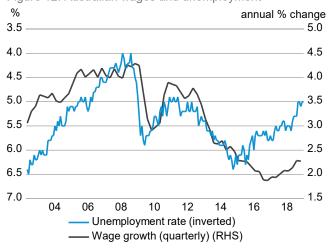
Australian home finance approvals fell 5.8% in December, to the lowest level in 5 years (down 19.8% on an annual basis). The outturn was driven by sharp falls for owner-occupier and first home buyer categories.

The recent deterioration in housing market data has largely been caused by credit tightening, which some analysts attribute to the Hayne Royal Commission Inquiry. The Commission delivered its final report early in the month, which included 76 recommendations to reform the Australian banking sector. The report stopped short of recommending stricter lending standards and analysts suggest that the findings in the report should not trigger a further acceleration in credit tightening.

...although the labour market remains tight

The Australian labour market remained tight in January. Employment rose by 39,000 (growth of 0.3%). On an annual basis, employment growth was steady at 2.2% and the unemployment rate was 5.0%. December quarter growth in the wage price index was 0.5% (similar to 0.6% growth in the September quarter). On an annual basis wage growth was steady at 2.3%. Relative to the tightness in the labour market, wage growth is subdued (Figure 12).

Figure 12: Australian wages and unemployment



Source: Australian Bureau of Statistics/Haver Analytics

Central banks acknowledge weak activity

The European Central Bank (ECB) acknowledged the recent weakness in European economic data, with minutes from the January meeting noting uncertainty regarding the persistence of the current slowdown. Members of the ECB have recently suggested that a new round of targeted long-term loans to private banks may be necessary to stimulate economic activity, should economic data deteriorate further. The Bank's forward guidance suggests interest rates will remain on hold 'at least through the summer' but markets do not expect an interest rate hike until June 2020.

At its latest meeting, the Bank of England (BoE) left the cash rate unchanged at 0.75% (as expected), although the Bank downgraded its growth forecast for 2019 to 1.2% (from 1.6%) and to 1.5% in 2020 (from 1.7%). The Bank noted that Brexit is weighing significantly on activity.

China fears ease on strong lending data...

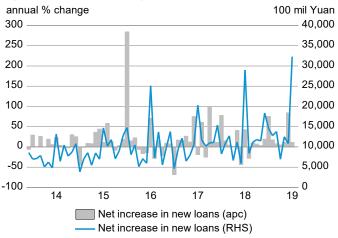
Banks in China lent out a record value of new loans in January (3.23 trillion yuan) (Figure 13), which some analysts interpret as an early sign that policy efforts to stimulate the economy are beginning to take effect. However, with leverage already at very high levels the Chinese authorities are walking a fine line between

preserving financial market stability and supporting growth.

Chinese imports and exports recovered strongly in January, following large falls in both imports and exports in December.

Data from China in the first two months of the year must be treated with caution due to business distortions caused by the timing of the week-long Lunar New Year public holiday, which fell in mid-February in 2018 but started on 4 February this year.

Figure 13: Chinese lending



Source: Haver Analytics

...and positive trade news

Trade tensions eased following US President Trump's announcement that the US will delay implementing tariffs of imports from China (originally planned for 1 March). President Trump cited 'substantial progress' on issues such as 'intellectual property protection, technology transfer, agriculture, services and currency'. There was no announcement regarding how long the delay will last and an agreement on trade is still to be reached.

Special Topic: How a 'no deal Brexit' might affect New Zealand.

The United Kingdom parliament continues to debate the terms of the UK's departure from the European Union (EU) (the departure is called 'Brexit'). One possibility is that the UK leaves without a withdrawal agreement and transition plan. This Special Topic discusses the economic impacts of a 'no deal Brexit' on the UK and the implications for New Zealand.

The impacts of Brexit depend on the terms...

Most studies conclude that Brexit will reduce the UK's economic output owing to frictions that reduce trade and investment. These effects may be larger or smaller depending on the terms under which the UK exits.

Brexit has already had negative consequences for the UK economy. Leaving the EU abruptly, without a withdrawal agreement and transition plan would amplify these effects. Growth in the EU would also be lower, particularly in the latter scenario. In contrast, scenarios where the UK maintains current arrangements over a transition period to a future state that has few new barriers to trade have relatively benign impacts on the UK and its trading partners.

The consensus view among economic forecasters is that the UK will avoid a no deal scenario, although the shape of the deal is uncertain and both no deal and no Brexit are still possible. The 'no deal' scenario, which could cause a serious economic shock in the UK, is the most likely to have significant implications for New Zealand.

...a no deal Brexit may have small negative impacts on economic activity in New Zealand

Should it occur, our judgement is that a no deal Brexit would be likely to have a modest overall negative impact on economic activity in New Zealand. There are three main reasons for this assessment:

- Total trade with the UK is a small proportion of total trade and New Zealand's direct investment in the UK is also relatively small (see Table 2).
- Some goods exports would likely be diverted to other markets eventually, although they may receive a lower price.
- New Zealand businesses and the government have taken steps to mitigate adverse impacts.

Nonetheless, some specific New Zealand businesses and industries may experience particular disruption. Inbound UK tourism may fall sharply as real UK incomes fall. Goods exports may be delayed at the UK border, and it may not be possible to find alternative markets in the short term, causing hardship for some exporters. Some importers may encounter supply disruptions from the UK and returns to some investors may be reduced by weaker UK conditions.

The medium-term impacts also depend on the nature of future trade arrangements New Zealand is able to agree with the UK and the EU.

Table 2: New Zealand/UK trade and investment (\$billion and shares as a percentage of New Zealand's total goods exports, and imports, total services exports, and imports, and stocks of total inward, and outward investment, year ended September 2018)

	\$billio	on (% of total)		\$billion (% of total)	
Exports			Imports		
Total goods exports		1.5 (2.6%)	Total goods imports	1.7 (2.9%)	
Sheep meat	0.5		Mechanical machinery	0.4	
Wine	0.4		Vehicles	0.6	
Total services exports		1.5 (5.9%)	Total services imports	0.9 (4.9%)	
Tourism	1.0				
Total UK investment in NZ		55.5 (16.6%)	Total NZ investment in the UK	6.6 (5.0%)	
Direct investment	6.1		Direct investment	1.4	
Portfolio investment	49.4		Portfolio investment	5.3	

Activity in the UK could fall markedly...

The Bank of England finds that a "no deal" Brexit could generate a contraction in GDP of comparable magnitude to the global financial crisis. That is, GDP could be 3% to 8% lower than baseline where the UK remains in the EU¹. The unemployment rate could rise to around 6% from below 4% at present.

In the no deal scenarios, the combination of immediate logistical and regulatory impairment to imports of goods and services, and associated behavioural responses, reduce economic activity. The estimates are largest where lower trade, investment and migration have a permanent effect on UK growth. Conversely, when the UK is able to negotiate free trade access with the EU and with other countries, the impacts are smaller.

...with a lesser contraction in EU activity

The EU's exports of goods and services to the UK, scaled relative to the GDP, are around a quarter of those running in the other direction. Given that the direct systemic consequences for the EU of "no deal" would be less than for the UK, an upper bound of the "no deal" hit to EU/euro area GDP might be 25% of that seen in the UK, that is, in the range of -0.5% to -2%. In the context of the recent loss of euro area growth momentum, the impact may be large enough to push the region as a whole back into recession.

New Zealand trade may be disrupted...

In the short-term, disruptions to trade with the UK can be anticipated owing to logistical issues. UK border inspection and approval services may struggle to cope with the increased volume of physical and regulatory checks and certifications required to move goods. Some transport routes may be disrupted. These issues may lead to exporters facing delays in receiving payment for goods.

A no deal Brexit could lead to tariffs on UK agricultural exports and imports which could lead to large shifts in trade flows. For example, tariffs on UK lamb exports to the EU may lead to more product on the domestic market, driving down prices. Similarly, EU exporters of dairy and beef to the UK may divert produce to their home markets, putting pressure on exports from third markets, including New Zealand.

...and the New Zealand dollar appreciate ...

The UK exchange rate may depreciate sharply, increasing the cost of New Zealand goods to UK buyers, and increasing the cost of UK residents taking holidays in New Zealand. The Bank of England study assumed the UK exchange rate would fall 25%. Under this scenario, the NZD/GBP, which has averaged around NZD\$0.52 over the past year, could rise to NZD\$0.65.²

...while export demand eases...

Slower growth in incomes across the EU more broadly may also depress demand for New Zealand goods and services. In the short to medium term, this is likely to feed into lower prices, but overall export volumes may be less affected if it proves possible to divert these to other markets. It is difficult to judge the magnitude of the impacts, but it is worth noting that movements in New Zealand's export values of around NZ\$600 million per quarter – around 40% of the annual value of goods exports to the UK – are not unusual.³

However, slower income growth in the UK and the EU may put downward pressure on goods prices and slow demand growth in services exports, particularly tourism. Figure 14 shows UK visitor arrivals have been variable in recent years, although it is unclear how big the Brexit impact might be.

Figure 14: Net migration to the UK and UK visitor arrivals Number (000) Number (000) 300 12 280 10 260 8 240 6 220 4 200 2 180 0 -2 160 140 98 00 02 04 08 10 12 14 16 18 Annual net permanent and long-term migration (RHS) Total visitors from the UK (annual)

¹ <u>EU withdrawal scenarios and monetary and financial stability: A response to the House of Commons Treasury Committee,</u> Bank of England November 2018

² The BNZ provide a range of possible currency movements under different Brexit scenarios (BNZ currency research)

³ That is, quarterly goods exports (seasonally adjusted) have a standard deviation of almost \$600 million.

On the other hand, net migration from the UK and EU to New Zealand may increase, as worsening UK economic conditions lead to fewer New Zealand resident departures to the UK and more UK resident arrivals in New Zealand⁴. In the context of an economy operating at full capacity, this may be a positive development.

...and risks to investment in the UK rise

The UK has a large presence in New Zealand's financial markets, particularly in the area of portfolio investment, reflecting its role as a major financial services provider. The UK is also a significant source of foreign direct investment in New Zealand. Whether these investments are affected depends on the details of the individual investments, but in general, Brexit does not appear to pose any immediate threats to investment in New Zealand. However, New Zealand investments in the UK, which are valued at \$1.4 billion, may not realise the return previously expected.

New Zealand's preparations for Brexit and beyond

The New Zealand government has taken steps to ensure continuity in key regulatory arrangements underpinning trade with the UK. These include agreements to maintain all relevant aspects of the current EU-NZ Veterinary Agreement governing the export of animals and animal products and the EU-NZ mutual recognition agreement (MRA) on conformity assessment. The MRA allows for continued recognition of each other's testing and certification in respect of seven areas of manufactured goods.

The UK is also prioritising a new free trade agreement with New Zealand after it leaves the EU as well as potential accession to the trans-Pacific trading bloc, CPTPP, which counts New Zealand as one of its members.

Negotiations towards an EU-NZ free trade agreement will continue without the UK after it leaves the EU. New Zealand launched these negotiations in June 2018 and negotiators met for a third round recently in Brussels.

Free trade deals with the UK and the EU would be expected to have positive impacts on New Zealand's economic activity through increased trade and investment.

⁴ During the global financial crisis, a fall in departures to the UK drove an increase in net UK migration of around 2,000 people. NZ goods exports to the UK rose during the GFC as the NZD fell.

⁵ An appreciation in the NZD/GBP might raise returns for investment in NZ.

Cardless: Stats NZ's new official measure of net migration

Summary

Stats NZ's new official measure of permanent and long-term (PLT) migration indicates that the overall net inflow of PLT migrants is lower over recent years than previously thought. The implication is that the total population has not increased as much as previously reported. The new measure implies a lower level of migration going forward.

Stats NZ is yet to fully incorporate the new measure into other key statistics such as population estimates, GDP and the Household Labour Force Survey (HLFS). Stats NZ have indicated they will progressively incorporate the new measure but do not have a clear timetable for doing so at this time.

The implications for the economic growth outlook remain uncertain. Slower population growth than projected in the Half Year Update, all else equal, would provide less support for GDP growth. However, downward revisions to past population imply that per capita income is a little higher. If past HLFS total hours worked are also revised downwards, then labour productivity may be higher. Should higher productivity persist into the future then it may partially offset the dampening effects of slower population growth.

Outcomes and intentions: explaining the two measures of PLT migration

Stats NZ has adopted a new official measure of permanent and long-term (PLT) migration. The new, outcomes-based, measure estimates PLT migrant arrivals and departures based on actual and projected movements in and out of the country and length of stay. The new measure replaces the old, intentions-based, measure derived from stated intentions on arrivals and departure cards.

The outcomes-based measure uses a '12/16 month rule' to class the migrant status of a traveller. Under a 12/16 month rule, a traveller is considered a permanent arrival (departure) if they spend 12 out of 16 months in (out of) New Zealand following a border crossing. The 12 months need not be consecutive.

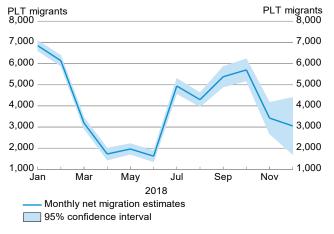
The intentions-based measure uses a traveller's stated intentions reported on departure and arrival cards. Under this system of classification, a traveller is considered a permanent arrival (departure) if they intend to stay in (live away from) New Zealand for at least the next 12 months.

Estimation and uncertainty

In order to mitigate the time lag between a border crossing and the migrant status of a traveller, Stats NZ produces estimates for the most recent 16months. Stats NZ will revise the estimates with each release as they get more information about travellers' length of stay in/out of New Zealand.

In general, the most recent 6-months of data are the most uncertain (Figure 15). For example, the most recent month's estimate (December 2018) is 3,053. However, within a reasonable margin of error, the estimate could be as low as 1,703 or as high as 4,403.

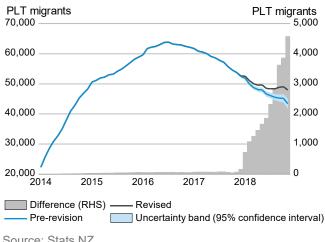
Figure 15: Uncertainty around PLT migration estimates increases the more recent the data are



Source: Stats NZ

Already between releases, we have seen large revisions (Figure 16). The most recent release (December month 2018) saw PLT net migration for the year to November 2018 revised from 43,400 to 48,000. The bulk of the revisions to net migration was due to annual PLT departures being revised down by 4,450 to 96,150. PLT arrivals were revised up 130 to 144,150.

Figure 16: revisions between releases can be substantial

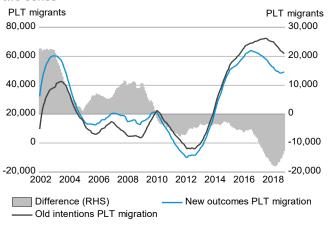


The uncertainty bands reflect model uncertainty not the extent of future revisions to provisional data. Future releases will provide further insights into the reliability of the data. Notably, the most recent months of estimates carry the most uncertainty. In the December 2018 month Stats NZ was able to classify one in four arrivals with certainty, increasing to nine in ten after four months.

What is the difference between the two measures?

In general, historical migration cycles are consistent between the two series, although the magnitudes of the cycles differ (Figure 17). The outcomes-based measure shows annual PLT net migration peaked at 63,948 in July 2016, a year earlier and around 8,000 lower than the 72,402 peak in July 2017 suggested by the intentions-based measure.

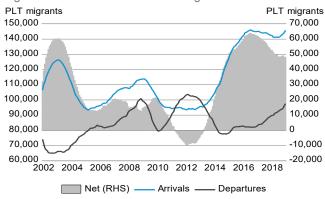
Figure 17: Net migration cycles are consistent between the two series



Source: Stats NZ

The outcomes-based measure shows a consistently higher level of both PLT arrivals and departures compared with the intentions measure (Figures 18 and 19).

Figure 18: Outcomes-based PLT migration

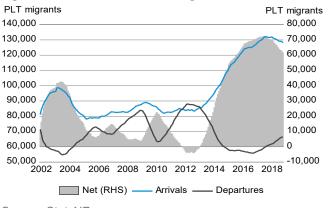


Source: StatsNZ

Over recent months the outcomes-based measure shows a flattening off of the decline in PLT net

migration, settling at levels of around 49,000. This flattening off was not present in intentions measure (Figure 19). The pickup in arrivals has been consistent across recent months, potentially signalling further increases. As these are the most recent data points with the highest level of uncertainty, the Treasury will be closely watching future releases to see how the data change.

Figure 19: Intentions-based PLT migration



Source: StatsNZ

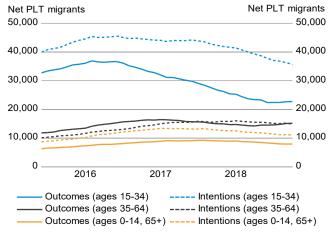
The largest difference between the two series is in the early 2000s, where the intentions-based measure substantially underestimated the net inflow of PLT migrants. Over the 5-years to December 2005, the outcomes-based measure is a cumulative 59,000 (1.4% of the estimated December 2005 population) higher than the intentions measure.

We are unable to tell the compositional differences in the early 2000s net migration cycle as Stats NZ has not produced more detailed breakdowns of new outcomes-based PLT migration for this time period.

What are the compositional differences?

Over the most recent 4-years for which data are available, the drivers of migration in terms of New Zealand and non-New Zealand citizens are broadly consistent between the two series.

Figure 20: Largest difference in migrants aged 15-34



The upswing in the migration cycle was driven by a combination of a decrease in the net outflow of New Zealand citizens and an increase in the net inflow of non-New Zealand citizens.

Almost all of the difference between net migration in the two series can be accounted for by working age migrants aged 15-34 (Figure 20). According to the new outcomes-based measure, the working age share of net migrants is around 2% to 6% lower compared with the intentions-based measure.

Implications for series produced by Stats NZ

Stats NZ is yet to fully incorporate the new measure into other key statistics such as population estimates, GDP and the Household Labour Force Survey. Stats NZ have indicated they will progressively incorporate the new measure but do not have a clear timetable for doing so at this time.

Stats NZ uses census benchmarks to revise estimates of the resident population, so the differences between the two series should be accounted for up to the last census in 2013.

Since 2013, the outcomes-based measure of PLT net migration has been consistently lower than the intentions-based measure that was used by Stats NZ up until the September 2018 quarter to estimate the resident population.

The cumulative difference between the two measures from March 2013 (when the census was held) to October 2018 (when the last intentions-based estimate of PLT migration is available) is 47,000. Applying this difference to the September 2018 quarter resident population estimates would see the population 46,000 (or around 1%) lower.

Estimates of the resident population are used in a range of key statistics produced by Stats NZ including the Household Labour Force Survey (HLFS) and estimates of GDP. It is unclear what impact revisions to the population will have on these measures, for example HLFS estimates of total number of employed and unemployed and total hours

worked could be revised down, but ratios such as the unemployment rate may remain unchanged.

Forecast implications

Population growth is likely to be lower in the near-term than previously forecast by the Treasury at the 2018 *Half Year Update* (HYEFU). At HYEFU, Stats NZ had estimated PLT net migration at 62,700 for the year to September 2018. The latest estimates for the year to December 2018 using the outcomes-based measure show that net migration is around 48,300. Using this lower starting point, net migration will be lower over the near-term. Lower net migration will see a slower pace of population growth.

The Treasury recently revised its long-run assumption for PLT net migration from 15,000 to 25,000, as we expect net migration to be persistently higher. Although this change was made using the intentions-based measure, the average annual level of the two series over 2002 to 2018 (the period for which annual outcomes-based data are available) are largely the same. The average for the intentions-based measure is 27,360 and 28,320 for the intentions-based measure. Both of these are broadly consistent with a long-run average of 25,000.

The implications for the economic outlook are uncertain. All else equal, a slower rate of population growth in the near term would result in slower GDP growth. However, if the population is revised down over history, consistent with the lower levels of net migration, then the view of history also changes. A downward revision to past population would imply higher per capita income. Should HLFS total hours worked also be revised downwards, then labour productivity could be higher. If higher productivity persist into the future then it may partially offset the dampening effects of slower population growth.

The implications of lower-than-expected net migration will become clearer as Stats NZ feeds these through into other key statistics. The Treasury will be closely monitoring future releases.

Monthly Economic Indicators is a regular report prepared by the Forecasting team of the Treasury.

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⁶ See special topic in April 2018 MEI.

New Zealand Key Economic Data

Quarterly Indicators

Consense			2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4
Real private consumption	Gross Domestic Product (GDP)								
Real private consumption	Real production GDP								
Real public consumption		<u>.</u>					3.1		
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Export volumes	Treat non-residential investment								
Import volumes	Export volumes	7							
Import volumes	Export volumes								
Nominal GDP - expenditure basis Sann ave % chg Sann	Import volumes	=							
Real GDP per capita ann ave % chg 1.2 1.0 1.0 1.0 1.1 1.0 Real Gross National Disposable Income ann ave % chg 4.4 4.4 3.7 3.8 3.5 3.3 External Trade "Type of the control		. •							
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NZ\$ millions		_							
Current account balance (annual) NZ\$ millions % of GDP -7,117 -7,370 -8,180 -8,540 -9,548 -10,539 Investment income balance (annual) NZ\$ millions -8,582 -9,218 -10,221 -10,343 -10,815 -10,556 Merchandise terms of trade qt % chg -11 1.3 1.4 -2.0 -0.4 -0.3 Prices CPI infation qt % chg 0.0 0.5 0.1 0.5 0.4 0.9 Tradable infation ann % chg 0.9 1.1 0.5 0.0	Real Gross National Disposable Income	ann ave % chg	4.4	4.4	3.7	3.8	3.5	3.3	
Current account balance (annual) NZ\$ millions % of GDP -7,117 -7,370 -8,180 -8,540 -9,548 -10,539 Investment income balance (annual) NZ\$ millions -8,582 -9,218 -10,221 -10,343 -10,815 -10,556 Merchandise terms of trade qt % chg -11 1.3 1.4 -2.0 -0.4 -0.3 Prices CPI inflation qt % chg 0.0 0.5 0.1 0.5 0.4 0.9 Tradable inflation ann % chg 0.7 1.9 1.6 1.1 1.5 1.9 Tradable inflation ann % chg 0.9 1.1 0.5 0.3 0.3 1.0 Non-tradable inflation ann % chg 3.1 3.8 3.4 1.3 2.1 1.9 Consumption defator ann % chg 3.1 3.8 3.4 1.3 2.1 1.9 Consumption defator qt % chg¹ 0.0 1.9 0.6 0.5	External Trade								
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CPI inflation qt % chg ann % chg an		ann % cng	9.7	12.6	7.9	1.8	1.2	-0.5	
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Non-tradable inflation		_							1.9
GDP deflator ann % chg ann		•							0.9
Consumption deflator ann % chg 1.3 1.6 1.6 0.7 1.2 1.8 Labour Market Employment (HLFS) qt % chg¹ 0.0 1.9 0.6 0.5 0.6 1.1 ann % chg¹ 3.1 4.1 3.7 3.1 3.7 2.8 Unemployment rate %¹ 4.7 4.7 4.5 4.4 4.4 4.0 Participation rate %¹ 70.1 71.0 70.9 70.8 71.0 71.0 LCI salary & wage rates - total (adjusted)⁵ qt % chg 0.4 0.6 0.4 0.3 0.5 0.5 ann % chg 1.7 1.8 1.8 1.8 1.9 1.8 QES average hourly earnings - total⁵ qt % chg 0.6 1.2 0.8 0.9 0.1 1.1 abour productivity⁶ ann ave % chg -1.6 -2.2 3.1 3.5 3.0 2.9 Labour productivity⁶ ann ave % chg¹ 1.4 1.0 1.5 <td></td> <td>_</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>2.7</td>		_							2.7
Employment (HLFS)		_							
Employment (HLFS)									
Ann % chg		1		4.0		0.5			
Unemployment rate	Employment (HLFS)	. •			0.6		0.6		0.1
Participation rate		_							2.3
LCI salary & wage rates - total (adjusted) ⁵ ann % chg	· ·								4.3
Ann % chg 1.7 1.8 1.8 1.8 1.9 1.8 1.9 1.8 1.9 1.8 1.9 1.8 1.9 1.8 1.9 1.8 1.9 1.8 1.9 1.8 1.1	•								70.9
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Ann % chg 5.2 5.2 5.6 4.6 4.5 3.7 Total retail sales volume qt % chg 1.3 0.8 1.1 0.2 0.9 0.3 Ann % chg 5.8 4.6 5.4 2.8 3.1 2.7 Confidence Indicators/Surveys	Retail Sales								
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Confidence Indicators/Surveys WMM - consumer confidence³ Index 113 112 107 111 109 104 QSBO - general business situation⁴ net % 17.8 5.2 -11.8 -10.7 -20.0 -30.4									5
Confidence Indicators/Surveys WMM - consumer confidence³ Index 113 112 107 111 109 104 QSBO - general business situation⁴ net % 17.8 5.2 -11.8 -10.7 -20.0 -30.4	Total retail sales volume	. •							1.7
WMM - consumer confidence 3 Index 113 112 107 111 109 104 QSBO - general business situation 4 net $\%$ 17.8 5.2 -11.8 -10.7 -20.0 -30.4		ann % chg	5.8	4.6	5.4	2.8	3.1	2.7	3.5
WMM - consumer confidence 3 Index 113 112 107 111 109 104 QSBO - general business situation 4 net 6 17.8 5.2 -11.8 -10.7 -20.0 -30.4	Confidence Indicators/Surveys								
QSBO - general business situation ⁴ net % 17.8 5.2 -11.8 -10.7 -20.0 -30.4		Index	113	112	107	111	109	104	109
									-17.3
QSBO - own activity outlook ⁴ net % 18.4 35.2 18.7 10.9 6.9 18.9									19.4

Monthly Indicators

		2018M07	2018M08	2018M09	2018M10	2018M11	2018M12	2019M01
External Sector		201011101	201011100	201011103	201011110	201011111	201011112	201311101
Merchandise trade - exports	mth % chg ¹	6.2	-5.9	7.7	-7.0	2.1	3.5	-7.8
	ann % chg	15.5	7.8	12.1	6.0	6.4	-3.9	3.0
Merchandise trade - imports	mth % chg ¹	0.3	-3.3	9.4	-4.9	-2.4	1.3	0.4
P	ann % chg	22.3	14.0	17.7	13.7	0.4	8.0	7.7
Merchandise trade balance (12 month total)	NZ\$ million	-4501	-4894	-5309	-5774	-5504	-6106	-6358
Visitor arrivals	number ¹	313,710	323,200	318,450	331,200	337,670	329,120	
Visitor departures	number ¹	306,970	318,750	321,360	331,720	332,030		
Housing								
Dwelling consents - residential	mth % chg ¹	-9.7	7.1	-1.3	1.5	-1.9	5.1	
-	ann % chg	-0.4	-2.9	-7.6	14.8	-4.4	9.8	
House sales - dwellings	mth % chg ¹	-0.6	3.1	-10.7	28.6	-7.4	-14.9	13.6
-	ann % chg	4.9	5.3	-0.6	20.5	6.3	-9.2	-2.5
REINZ - house price index	mth % chg	0.2	0.3	0.4	0.4	0.1	0.5	0.3
	ann % chg	4.8	4.0	4.0	3.8	3.1	3.2	3.1
Private Consumption								
Electronic card transactions - total retail	mth % chg ¹	0.3	1.2	0.9	0.0	-0.5	-2.3	1.8
	ann % chg	3.8	6.3	5.7	6.2	4.6	0.6	3.5
New car registrations	mth % chg ¹	1.4	-1.6	-5.0	7.6	-8.3	-4.0	4.0
	ann % chg	-0.7	-4.7	-10.8	-5.4	-17.9	-15.8	-12.1
Migration								
Migrant arrivals	number ¹	12,300	12,220	12,280	12,380	12,380	13,690	
Migrant departures	number ¹	8,030	8,310	8,090	8,410	9,070	8,620	
Net migration (12 month total)	number	48,408	48,384	48,906	49,074	47,998	48,278	
Commodity Prices								
Brent oil price	US\$/Barrel	74.25	72.44	78.89	81.03	64.75	57.36	59.41
WTI oil price	US\$/Barrel	70.97	67.99	70.20	70.76	57.00	48.95	51.47
ANZ NZ commodity price index	mth % chg	-1.1	0.4	-1.1	-1.6	-4.2	-0.9	2.9
ANZ world commodify price index	ann % chg	8.6	8.9	5.9	1.6	-4.0 0.5	-2.1	3.8 2.1
ANZ world commodity price index	mth % chg ann % chg	-3.3 -0.2	-1.1 -0.5	-2.4 -3.6	-2.4 -5.6	-0.5 -5.1	-0.2 -3.4	-2.1
Financial Markets						-	-	
NZD/USD	\$ ²	0.6788	0.6671	0.6595	0.6530	0.6766	0.6829	0.6776
	\$ ²							
NZD/AUD		0.9168	0.9100	0.9160	0.9186	0.9342	0.9503	0.9479
Trade weighted index (TWI)	June 1979 = 100 ²	72.96	72.32	71.79	71.67	74.10	74.73	73.59
Official cash rate (OCR)	%	1.75	1.75	1.75	1.75	1.75	1.75	1.75
90 day bank bill rate	% ²	1.94	1.91	1.90	1.90	1.98	1.98	1.91
10 year govt bond rate	% ²	2.81	2.64	2.60	2.62	2.69	2.45	2.33
Confidence Indicators/Surveys	.0/	44.0	50.0	20.0	07.4	07.4	24.4	
ANZ - business confidence	net %	-44.9	-50.3	-38.3	-37.1	-37.1	-24.1	
ANZ - activity outlook	net %	3.8 118.4	3.8 117.6	7.8 117.6	7.4 115.4	7.6 118.6	13.6 121.9	 121.7
ANZ-Roy Morgan - consumer confidence Performance of Manufacturing Index	net % Index	51.3	52.2	52.0	53.6	53.5	121.9 54.8	53.1
Performance of Services Index	Index	51.3 55.1	53.6	54.3	55.5	53.6	53.2	56.3
I GHOTHIGHIGE OF GET VICES HINEX	iliuex	JJ. I	55.0	J 4 .J	55.5	55.0	JJ.Z	50.5

¹ Seasonally adjusted

Sources: Stats NZ; Reserve Bank of NZ; NZIER; ANZ; Haver; Westpac McDermott Miller; ANZ-Roy Morgan; REINZ; BNZ-Buisness NZ

² Average (11am)

³ Westpac McDermott Miller

⁴ NZIER Quarterly Survey of Business Opinion

⁵ Ordinary Time

⁶ Production GDP divided by HLFS hours worked