# Monthly Economic Indicators

THE TREASURY
Kaitohutohu Kaupapa Rawa

May 2016

## Executive Summary

- **Recent data indicate the economy has grown at a reasonable pace so far in 2016, as employment increased strongly in the first quarter.**

- **Retail spending growth was also solid, although there are hints the pace may ease in the second half of the year.**

- **Trade data suggests the external sector has held up better than expected in the *Budget Update*, particularly the terms of trade.**

- **Global financial markets stabilised in May with risks to the world economy declining to some extent.**

Key economic data releases over the past month have confirmed that, for the most part, the domestic economy started 2016 on a solid footing. Jobs growth was strong in the March quarter, buoyed by a reasonable level of confidence in the outlook. High net migration inflows boosted labour supply growth, contributing to nominal wage growth remaining moderate.

Consumers maintained a healthy appetite to spend in the first quarter of this year, although easing consumer confidence might indicate a slower pace of household consumption growth in the second half of the year. On the other hand, the renewed vigour in the housing market is likely to support consumer spending as household wealth rises. Tourist inflows continued to rise.

The OTI goods terms of trade rose 4.4% in the March quarter, driven by lower fuel import prices. Goods import volumes were down 0.7%, with the contribution from net exports to GDP growth (released June 16) expected to be more positive than forecast in the *Budget Update*.

The inflation outlook remains weak, with costs faced by businesses low or declining and inflation expectations stabilising near record low levels. However, some pricing pressures appear to be emerging, with more firms expecting to increase prices, fuel prices rising, and hints of wage pressures emerging. Overall, it appears that inflation may be slightly higher than forecast in the *Budget Update* over 2016.

March quarter growth in our main trading partners was moderate but outturns have surprised commentators more positively recently, although risks to the outlook remain.

New Zealand Government

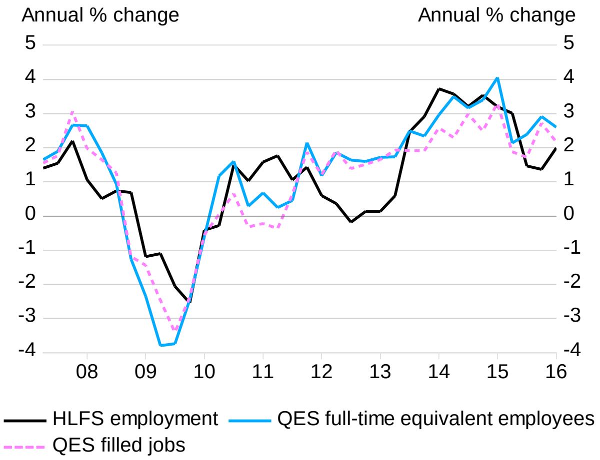
# Analysis

The economy appears to have maintained solid momentum over the first half of the year. Labour demand was very strong in the March quarter but rapid labour force growth led to unemployment rising in the quarter. Robust real wages, along with high migration and tourism inflows, supported retail spending in the March quarter. Costs faced by businesses remain subdued but there are signs of increased price pressures. The OTI goods terms of trade rose in the March quarter and net exports have held up better than expected. On balance, the economy appears to be doing slightly better so far this year than anticipated in the *Budget Update*.

**Employment growth was robust in the March quarter…**

According to the Household Labour Force Survey (HLFS), the number of people employed rose by 1.2% (or 28,000) in the March 2016 quarter – substantially stronger than forecast in the *Budget Update* (0.5%) and expected by the market (0.7%). This took annual employment growth to 2.0% (47,000), as negative growth over mid-2015 weighed on the annual figure with the series volatile on a quarterly basis. Details of the quarterly growth were also positive, with 75% of jobs growth in full-time employment and Quarterly Employment Survey (QES) measures of labour demand painting a similar picture (Figure 1).

**Figure 1: Labour demand**



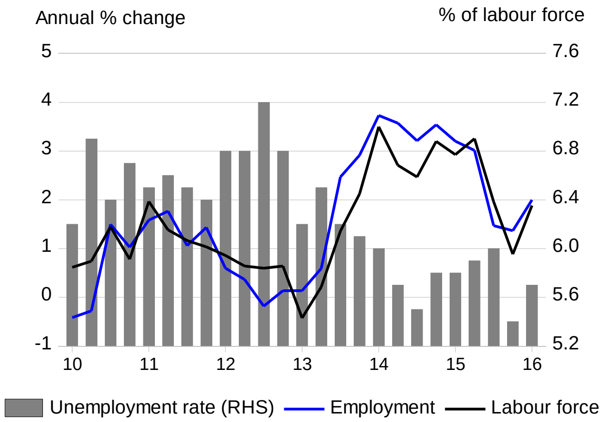

Source: Statistics NZ

By industry, construction continued to expand rapidly while professional services was also up strongly, each contributing 17,500 jobs over the past year. Jobs growth in construction is being increasingly driven by Auckland, as the residential part of the Canterbury rebuild has plateaued and as Auckland building activity increases.

**…but even stronger labour supply…**

The working-age population increased by 0.8% (21,000 people) in the March quarter, to be up 2.5% in the year. This is the fastest pace of annual growth recorded in the HLFS and is chiefly owing to record high net migration. In addition, better job prospects (2.2% jobs growth in the past six months) are encouraging more people to look for work, with the participation rate up 0.5% points to 69.0% in the quarter as a result. Overall, higher participation and strong growth in the working-age population led to the labour force rising a record 1.5% in the quarter. However, labour force growth can be volatile and flat outturns in mid-2015 dampened annual growth to 2.0% (Figure 2).

**Figure 2: Labour market performance**




Source: Statistics NZ

**…led to a rise in unemployment**

The increase in the labour force more than offset strong growth in employment, which led to the unemployment rate rising to 5.7% from 5.4% in the December quarter (Figure 2). Although the unemployment rate was a little higher than forecast, it does not materially change the labour market outlook. As in the *Budget Update*, we continue to expect unemployment to remain a little below 6.0% this year, as labour force growth and employment growth remain broadly balanced. Labour market indicators, such as hiring intentions and job ads, point to positive employment growth over 2016, albeit moderating from recent strength. The labour supply outlook also remains solid, with ongoing high net migration expected to continue but possibly easing (discussed below).

**Real earnings growth remains robust…**

Increasing labour supply and consistently low inflation are keeping earnings growth moderate. Annual average hourly earnings growth picked up to 2.4% in March from 2.1% in December, owing to an increase in public sector wage growth (boosted by police and health sector settlements), but a fall in average weekly paid hours led to annual average weekly earnings growth easing to 2.3% in March from 3.1% in December. This, combined with slightly slower growth in full-time equivalent employees, resulted in total weekly gross earnings growth moderating from 6.0% in December to 4.8% in March. Inflation of just 0.4% indicates robust real earnings growth, which is positive for real consumption growth.

**…driving healthy retail spending in March…**

Retail spending started 2016 on a solid footing, supported by robust income growth, a resurgent housing market, low interest rates, high visitor arrivals and rapid population growth. Total retail sales volumes rose 0.8% in the March quarter, down slightly from the December quarter, but consistent with our expectation of robust, albeit slightly softer, private consumption growth in the first quarter of 2016 (0.8%). In value terms, total sales rose a more subdued 0.6%, dampened by lower fuel and apparel prices.

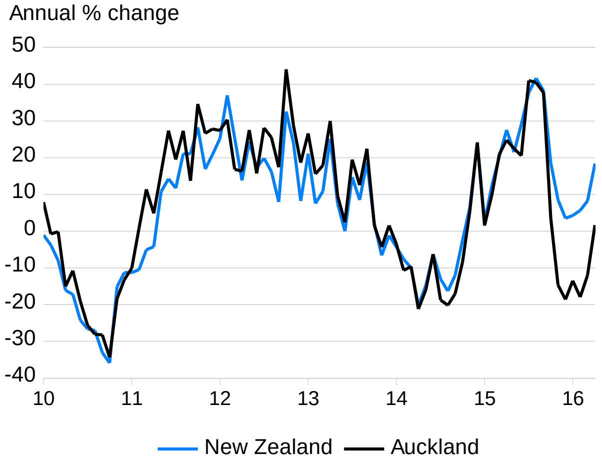
Volume growth for core retail industries was slightly stronger at 1.0%, as lower fuel and vehicle sales detracted from total sales. Some of the core spending growth is likely to be attributable to tourism, as visitor arrivals continued to increase in the quarter.

Falling fuel prices (down 7.5% in the March quarter) may explain some of the recent strength in retail volumes with consumers taking the opportunity to spend the cash 'windfall' elsewhere. If that is the case, the rise in fuel prices over the past couple of months may dampen spending growth in the June quarter. However, the expansion in sales was relatively broad-based (11 out of 15 industries rose) and April total electronic card transaction values were up 1.5%, suggesting spending growth is unlikely to be dampened significantly by rising fuel prices (increased around 2% in April and up further in May).

**…supported by the resurgent housing market…**

Momentum in the housing market continued from March into April following a pause in the December quarter as the market adjusted to regulatory changes. The Real Estate Institute of New Zealand's (REINZ) figures showed national house sales rose 9.8% in April (seasonally adjusted), to be 18.4% higher than a year ago (Figure 3). The monthly rise was led by Auckland, although declines in the five months to February left sales up only 2% on an annual basis.

**Figure 3: House sales**




Sources: REINZ

The national stratified median house price index rose 2.2% (s.a.) in April, also led by Auckland. On an annual basis, national house prices were up 14.5%, the highest pace since the regulatory changes were introduced in the December quarter, as house prices in Auckland and other North Island areas continued to pick up. That said, at an annual pace of 14%, Auckland house price inflation is about half the peak it reached last year.

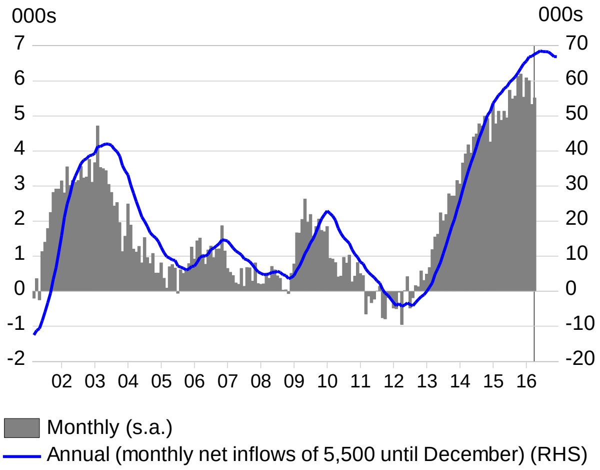
**…and record high migration and tourism**

Net migration inflows reached 68,100 in the year to April, their twenty-first consecutive record high. At 5,500, seasonally adjusted monthly net inflows were up slightly from March, as a bounce-back in arrivals more than offset a pick-up in departures. However, monthly net inflows have eased from 6,000 in February and, if they continue at this level, the annual total will reach a turning point in mid- to late-2016 (Figure 4), in line with our *Budget Update* forecast of a turning point in the September quarter. There was a seasonally adjusted net outflow of around 100 to Australia in April, the first since March 2015, reflecting the recent stronger performance of the Australian labour market. Student arrivals, which were a significant driver of arrival growth, have also been lower than a year ago for several months.

Seasonally adjusted international visitor arrivals fell 1% in April, due to a pull-back following the Easter holidays in March. However, April arrivals were a new record for the month and the trend continues to rise. Arrivals were 10.6% (312,500)

higher in the year ended April 2016 than the prior year, contributing to robust retail spending and labour demand.

**Figure 4: Net migration flows**




Source: Statistics NZ

### Indicators suggest the June quarter started solidly…

The BNZ-BusinessNZ Performance of Services (PSI) and Performance of Manufacturing Indexes (PMI) suggest both sectors made a solid start to the June quarter. The PSI rose to 57.7 in May from 55.1 in April, while the PMI ticked up to 56.5 from 54.7 (a PSI/PMI reading above 50 indicates the sector is expanding).

Business confidence was also up from the previous month in the May ANZ Business Outlook (ANZBO) while firms' own activity expectations showed no marked change, with the latter pointing to around trend growth continuing through 2016. Consistent with this positive view, profit expectations, and employment and investment intentions all edged higher to sit close to their historical averages.

### …although some easing indicators suggest weaker patches in the second half of 2016

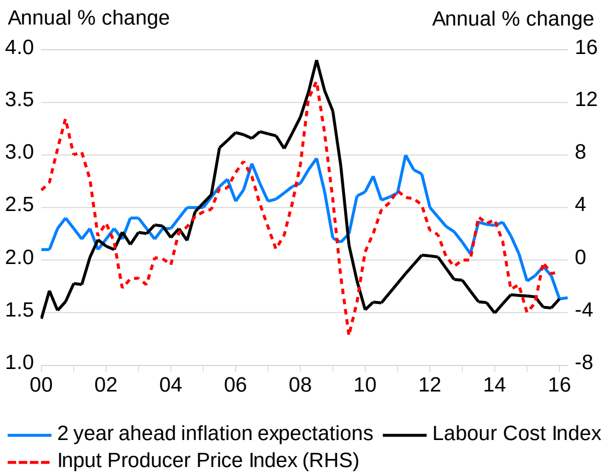
According to the ANZ-Roy Morgan consumer confidence survey, consumer confidence eased a little further in May to 116.2. The outturn is slightly below the historical average and consistent with softer, albeit still moderate, consumption growth over the second half of 2016.

The trend for residential building consents continued to decline in April due to further weakness in apartment consents. However, consents for stand-alone dwellings continued to rise strongly, up 15% in the month.

### Price outlook remains weak…

The RBNZ's June 2016 *Quarterly Survey of Expectations* revealed a marginal lift in inflation expectations from the March quarter. Even so, at current levels, expectations remain near historical lows. The one-year-ahead measure edged up to 1.2% from 1.1% in the March quarter, while the two-year-ahead was broadly flat at 1.6% (Figure 5).

**Figure 5: Business costs and expectations**




Sources: RBNZ, Statistics NZ

Low inflation expectations are consistent with the moderation, and in some cases decline, in businesses costs. The Labour Cost Index (LCI), which measures changes in wages and salaries for a fixed quantity and quality of labour, increased 1.6% over the past year, while the producers' price input index fell 1.0% in the March 2016 quarter, to be down 0.9% in the year. Key drivers of the annual decline in input prices were falls in dairy and oil prices (the latter influencing petroleum and coal manufacturing) and lower electricity and gas prices. Excluding those falls, input cost pressures were still weak.

### …although there are some signs of rising price pressures

Capital goods prices continue to rise, up 3.1% in the year to March. Construction costs remain the key driver, with plant, machinery and equipment costs also rising. Higher construction costs were also evident in ANZBO firms' pricing intentions, which ticked up in May to a net 22% from a net 16% in April; the lower NZ dollar in the month and higher fuel costs may have also contributed. In addition, there are signs of emerging wage pressures, with the private sector unadjusted LCI (ie, including productivity increases) accelerating to 3.1% (from 2.8%) and a higher share of pay

rates recording an annual rise (up from 60% in December to 66%).

Overall, these indicators suggest consumer price inflation will remain low in the near term, as indicated in the *Budget Update*. That said, the March quarter annual outturn, at 0.2% points higher than our *Budget Update* forecast, and fuel prices rising faster than anticipated will lead to slightly higher inflation over the rest of 2016.

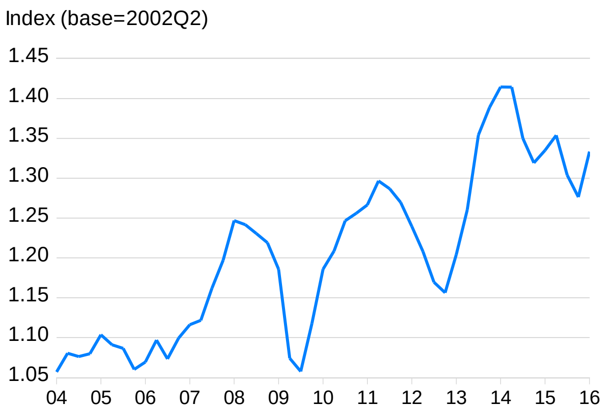
### Trade deficit trends wider...

Overseas merchandise trade data showed a $163 million deficit for April, narrower than the $483 million deficit recorded in March, although the narrowing is likely due to monthly volatility (March export values were unusually weak) with the trend still towards a widening deficit. However, the annual deficit narrowed slightly from March to $3.7 billion. Treasury expects the annual trade deficit to widen in coming months, with the current account deficit increasing to 3.5% of GDP in the June 2016 quarter from 3.1% in December, as lower dairy prices flow through and meat export volumes fall following earlier-than-usual livestock slaughter.

### ...while the goods terms of trade rises…

Overseas trade indexes showed the merchandise terms of trade rose 4.4% in the March quarter (Figure 6), owing to a broad-based fall in import prices (-4.3%), while export prices were largely flat. On the volume side, exports fell 2.7% in the quarter while imports fell 0.7%. Overall, the external sector appears to be more supportive of income and output growth than forecast in the *Budget Update*.

**Figure 6: OTI goods terms of trade**




Sources: Statistics NZ

### ...and dairy prices stabilise in final auctions of season

Dairy prices rose modestly at GlobalDairyTrade (GDT) auctions in May, the final month of the dairy season. The GDT price index rose 1.2% in the month to around the 2016 year-to-date average, consistent with our expectation of flat to marginal rises in dairy prices over 2016. The GDT price index rose 3.4% at the first auction in June, but whole milk powder prices were down 1.7%.

Fonterra announced an opening farm gate milk price of $4.25/kg of milk solids for the 2016/17 season, slightly below expectations. However, Fonterra is looking to offset some of the cash flow effects of the low headline price with increased advanced payments (see the Special Topic: Outlook for the Dairy Sector for further discussion).

### On balance, slightly more positive outlook than *Budget Update*

Overall, outturns released since the *Budget Update* forecasts were finalised on April 13 – chiefly the labour market, inflation, and the terms of trade – suggest that the economy is tracking slightly better than expected. The more positive than expected outlook, in addition to the resurgent housing market, has contributed to the market pushing back expectations of OCR reductions by the RBNZ.

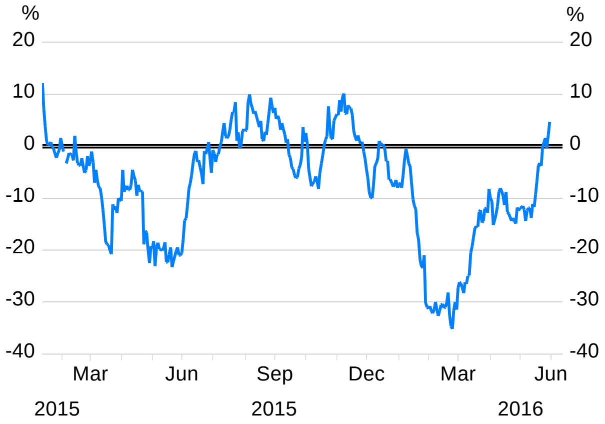
April GST and source deductions outturns were a little higher than the forecasts presented in the *Budget Update*, and reinforce the view of the domestic economy performing slightly better than expected. On the other hand, company tax revenue was significantly below forecast but we expect some of this to reverse by the end of June as there appear to be a number of large income tax assessments that are yet to be filed.

### Steadier global markets and economic growth

Financial markets stabilised in May with risks to the global economy declining to some extent. Commodity prices generally rose over the month, with the rebound in WTI oil prices to an average of around $46/bbl relating more to supply disruptions than higher demand. Equities broadly strengthened over the month, bond rates rose and the USD appreciated as markets re-evaluated the prospect of a June rate hike to around 60%. The AUD moved in the opposite direction, falling significantly following the May RBA cut. As a result, the NZD fell against the USD but rose against the AUD.

March quarter growth in our main trading partners was moderate but positive. Outturns surprised economic commentators more positively recently, in contrast to earlier in the year (Figure 7, where a figure above zero indicates data were better than expected). The 2016 *Budget Update* forecasts are for slow but increasing trading partner growth, as strengthening growth in most economies offsets slower growth in China, while the risks of a weaker world are covered in a scenario.

**Figure 7: Citigroup Economic Surprise Index**




Source: Haver

### Some positive US data raise expectations of continued Fed tightening…

Several indicators of US activity were stronger than expected: April personal spending, retail sales and industrial production rose well above expectations, the housing market remained buoyant, and the labour market remained strong (with the unemployment rate stable at 5.0% and annual wage growth of 2.5% in April). The Federal Reserve's preferred measure of core inflation was 1.6% in the year to April, and it has indicated that an increase in its funds rate would be "appropriate" in coming months. Markets have priced in almost a full rate increase by July.

However, some indicators of activity were weaker. Non-farm productivity and payroll growth were softer than expected in April and core capital goods orders fell. Consumer confidence and the May manufacturing and services PMIs remained subdued, but some commentators anticipate a rebound in second quarter activity.

### …and euro area growth lifts slightly

Euro area growth was a positive surprise. March quarter GDP grew 0.5%, up from 0.3% in the previous quarter, driven by domestic demand (Figure 8). That said, activity towards the end of the quarter appeared lacklustre, with industrial production and consumer demand (retail sales and imports) falling in March, and the unemployment rate unchanged at 10.2% in April. Against this backdrop of slowing activity, annual CPI inflation remained negative in May at -0.1% (core 0.8%). The manufacturing and services PMIs were little changed and consumer confidence was steady in May.

### UK growth steady before Brexit referendum

March quarter GDP growth in the UK was unchanged at 0.4%. Growth was predominantly driven by private consumption, which grew 0.7% in the quarter, supported by a labour market that remained near capacity (the unemployment rate was unchanged at 5.1% in the March quarter). Investment grew only 0.4% in the quarter, in line with falling industrial production (down 0.3% apc). This weakness is likely to continue in light of low recent manufacturing and services PMIs. The Bank of England voted unanimously to keep its policy rate unchanged at 0.5% as consumer prices grew only 0.3% in the year to April (core inflation at 1.2%), and in face of uncertainty around the Brexit referendum (23 June).

### However, a rise in Japan's GDP growth is unlikely to be sustained…

Despite an upwards surprise in Japan's first quarter GDP, further monetary stimulus is still expected. Japan's GDP growth in the March quarter rose to 0.4% from -0.4% in the previous quarter. Growth was driven by private and government consumption, while private investment contracted. This growth is regarded as temporary, with the Kumamoto earthquakes, appreciation of the yen in April and weak consumer confidence likely to weigh on future outturns. The most recent outturns show retail sales growth was flat in April, industrial production grew 0.3% (better than expected, but still low), and consumer prices fell 0.3% in the year to April. Although core prices (ex food and energy) rose 0.7%, monetary policy may be eased further as consumer demand remains subdued. In early June, PM Abe postponed the sales tax increase from April 2017 until October 2019 and hinted at more fiscal stimulus.

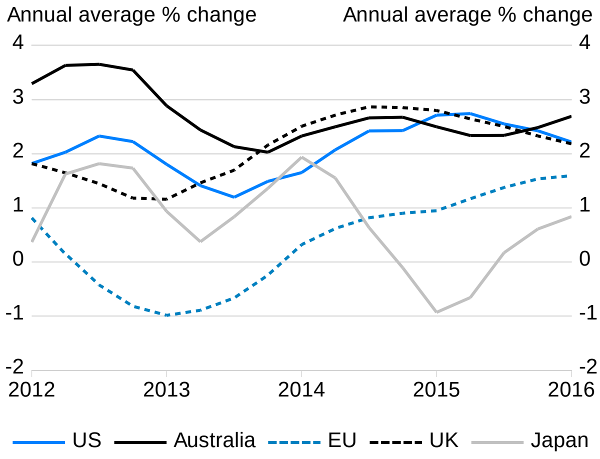
### …and China's state-backed growth eased

Growth in China eased in the first quarter, and has continued to moderate. Both industrial production and retail sales growth fell in April, and imports and exports declined in the year to April. Consequently price pressures were subdued; consumer price inflation remained at 2.3% for the year to April, below target, and producer prices fell

3.4% in the same period. China's official manufacturing PMI was steady in May, but the services and Caixin manufacturing PMIs both fell slightly and consumer confidence dropped, indicating weaker future activity.

Government stimulus has, to date, been liberal. Although fixed asset investment growth eased to 10.5% in the year to April, it was supported by state-owned enterprise investment, which increased 23.7%. This investment appears to be supported by government borrowing, which surged in April amidst falling lending in China generally.

**Figure 8: Trading partner economic growth**




Source: Haver

## Australia's growth solid, despite falling investment

Australian first quarter GDP growth surprised at 1.1% (0.8% expected) (Figure 8). Exports led growth, as volumes surged 4.4% in the quarter, reducing the current account deficit 0.5ppts to 5.0% of GDP. Private consumption was also robust, in line with above-expected March retail sales growth and a strong labour market (with 2.1% annual employment growth and unemployment at 5.7%). Business investment was the main detraction from growth, as capital expenditure fell 5.2% in the quarter.

The Reserve Bank of Australia cut its policy rate by 25 basis points to 1.75% at its May meeting following a surprise low inflation outturn, which led the Bank to cut its inflation forecasts from 2-3% to 1-2% for 2016, in line with a now internationally common 'lower for longer' inflation outlook.

## On balance, global risks declining

Broader risks to global economic growth have decreased slightly. Euro area finance ministers agreed to release a further €10.3bn in bailout funds to Greece, Brexit appears less likely in most polls (average 53% vote for Remain, although this may have changed recently), and the US Federal Reserve is expected to tighten policy again as inflation and the labour market continue to strengthen. Risks remain on the policy front, in particular around the Chinese government's balance between stimulating short-term growth and supporting future economic stability.

***Monthly Economic Indicators*** is a regular report prepared by the Forecasting team of the Treasury.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# MEI Special Topic: Outlook for the Dairy Sector

This special topic outlines the Treasury's current understanding of global dairy supply and demand and their implications for the outlook for dairy prices. The topic also presents some modelling of aggregate New Zealand dairy farm revenues, expenses and cash-flows. The topic concludes with an assessment of the impact on the New Zealand economy, including what has been factored into the *2016 Budget Update* forecasts.

**Milk production growth continues to outstrip dairy demand growth**

Persistent global supply and demand imbalances have seen dairy prices fall sharply from their peak in early 2014. The initial imbalance was a combination of strong milk production growth in major exporters (including New Zealand, the EU and the US) and negative demand shocks in the two largest dairy importers, China and Russia.

More recently the imbalance has been chiefly due to the failure of milk production growth to slow below demand growth (Table 1). This is most pronounced in the EU, where milk production continues to grow despite negative price signals and growing inventories. This is partly a function of the removal of EU production quotas in April 2015, with more efficient farmers and producers ramping up production in anticipation of their removal. The relatively weak euro and low feed and fuel prices have also helped shield European farmers from the full impact of low dairy prices. Finally, the EU has recently increased the volume of butter and skim milk powder (SMP) that it will accept at intervention prices.

**Table 1: Dairy Production, Consumption and Inventory Growth (annual % change)**

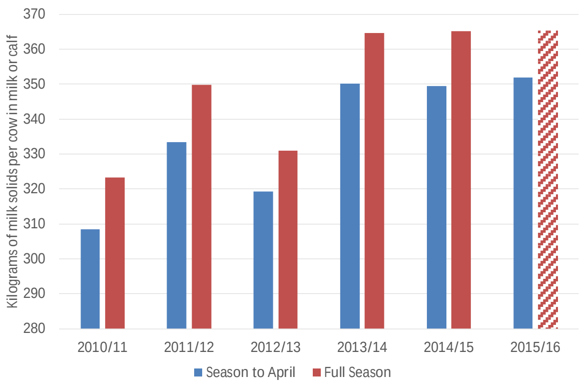
| | Latest Figures (12 month total) | | USDA Estimates 2014 | 2015 | 2016f |
|---|---|---|---|---|---|
| *Milk Production* | | | | | |
| European Union | 4.2% | to Feb | 4.1% | 1.1% | 0.6% |
| United States | 1.3% | to March | 2.4% | 1.1% | 2.0% |
| New Zealand | -1.1% | to April | 8.4% | -2.3% | -3.0% |
| World Milk Production | | | 3.7% | 1.7% | 1.8% |
| | | | | | |
| World Dairy Consumption (LME)* | | | 2.6% | 1.7% | 1.6% |
| World Dairy Inventories (LME)* | | | 26.3% | 2.0% | 2.5% |

Source: DCANZ, Milk Market Observatory, Treasury, USDA
* Converted to Liquid Milk Equivalent (LME) by Treasury

US farmers have also benefitted from low feed and fuel prices, which are particularly beneficial to the more intensive style of dairy farming typically practised there. US farmers and producers have also benefitted from a strong domestic market, which has helped sustain domestic returns above break-even levels.

Milk production in New Zealand has contracted compared to a year ago, although not to the extent anticipated at the start of the season when El Niño weather conditions were looming as a significant risk in addition to low milk prices. El Niño has not been as severe as initially anticipated. Furthermore, farmers appear to have maintained recent productivity gains despite sharp cuts to expenditure over the past two seasons (Figure 1). The number of dairy cows in milk or calf at the start of the season fell by 2.3% but milk production has only contracted by 1.7% in the season to April. Some of these productivity gains are likely to be from the least productive cows being culled from dairy herds.

**Figure 1: New Zealand dairy farm productivity**




Source: DCANZ, Statistics New Zealand

Over late 2013 and the first half of 2014, China built up significant inventories of whole milk powder (WMP) and, to a lesser extent, SMP. As a result, Chinese WMP import volumes fell by 17% (174,000 mt) in 2015 as they reduced these inventories. More recently, import volumes have returned to more "normal" levels, suggesting that inventories have fallen.

The import ban imposed by Russia on agricultural products from the EU, US and several other countries remains in place. Prior to the ban, instituted in August 2014, Russia was the world's largest importer of cheese and butter, with much of this coming from the EU. Russian butter imports are about 30% lower than in 2013, while cheese imports have more than halved. This has led to some displacement of EU exports into New Zealand's traditional markets.

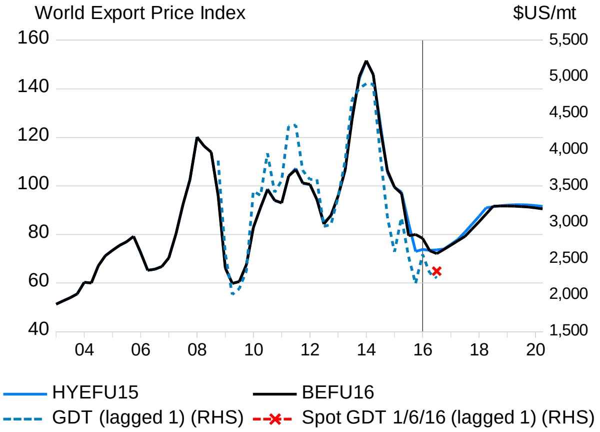
The global supply and demand imbalance is expected to persist throughout 2016. The United

States Department of Agriculture (USDA) forecasts global milk production growth of 1.8% in 2016, with dairy consumption expanding 1.6%. Inventories are expected to increase further from their already high levels, although the excess inventory mix has changed from WMP held in China (in 2014 and early 2015) to SMP, cheese and butter stored in Europe, and SMP and cheese in the US (in 2015 and 2016).

### Dairy prices are expected to recover slowly

Owing to this supply overhang, dairy prices are expected to recover only slowly. The Treasury's *Budget Update* economic forecasts, released on 26 May, assume a gradual recovery in dairy prices as monthly milk production growth slows in the second half of 2016 (Figure 2). Dairy prices are assumed to return to their long-term levels around the middle of 2018 as the global market returns to a more balanced position. There are clear risks to these assumptions, chiefly owing to the speed of adjustment in global milk production growth. Should the production adjustment take longer than anticipated, recovery in prices could be delayed and/or take longer.

**Figure 2: New Zealand dairy export price outlook**




Source: GlobalDairyTrade, Statistics New Zealand, Treasury

### Many dairy farms are facing a third consecutive season of negative cash-flows…

On 26 May, Fonterra forecast an initial farm-gate price of $4.25/kg milk solids (kg MS) for the 2016/17 season, below analyst expectations of $4.50 - $4.80/kg MS. This is the third low farm price in a row (Table 2). However, Fonterra is looking to offset some the cash-flow effects of the low headline price by increasing the advanced payment (the monthly payment made to farmers based on their milk production) as well as bringing forward the retrospective payments from the 2015/16 season.

Treasury has modelled revenues and expenses for dairy farms at an aggregate level. Fonterra's farm-gate price, advanced payment schedule and dividend payment are assumed to be representative of the sector as a whole.[1] Operating expenses are based on DairyNZ benchmarking. Debt and interest rates are sourced from the Reserve Bank.

**Table 2: New Zealand Dairy Statistics**

| | 2013 / 14 | 2014 / 15 | 2015 / 16 | 2016 / 17 (f) |
|---|---|---|---|---|
| Fonterra Milk Price ($/kg MS) | 8.40 | 4.40 | 3.90 | 4.25 |
| Milk Production (millions kg MS) | 1,825 | 1,890 | 1,847 | 1,782 |
| Gross Farm Revenue ($ billions) | 15.5 | 8.8 | 7.9 | 7.9 |
| Dairy Cows in Milk (000s, at 30 June) | 5,005 | 5,176 | 5,056 | n/a |

Source: DCANZ, Fonterra, Statistics New Zealand, Treasury

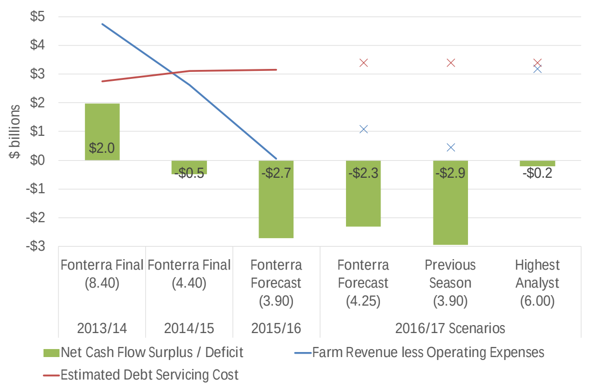
In the 2014/15 season, the sector in aggregate was estimated to have a small cash-flow shortfall of about $0.5 billion (Figure 3). In part this was due to large retrospective payments from the record 2013/14 season helping to offset low advanced payments within the season. Benchmarking data also indicate farmers were successful in cutting expenses by around $1.1 billion. However, this estimate of a small deficit is at the aggregate level. Digging into expense breakdowns by quartile suggests around half of farms had negative cash-flows.[2] This is consistent with analysis by the Reserve Bank based on unit record data.[3] Dairy farm debt held by banks was $37.9 billion at the end of the season.

The cash-flow situation has worsened in the 2015/16 season. Although farmers continue to make progress on reducing operating expenses (by an estimated $0.8 billion), the low milk price in 2014/15 meant that retrospective payments in late 2015 were small. Furthermore, dairy farm debt increased, leading to higher debt servicing costs despite falling interest rates. As a result, the sector as a whole is estimated to face a cash-flow deficit of about $2.7 billion (after accounting for Fonterra's loan support package), with the

[1] In practice, the smaller dairy processors typically have a slightly higher farm-gate price than Fonterra, but this does not materially change the conclusions of the modelling exercise.
[2] The share may differ slightly depending on the distribution of debt and therefore debt servicing costs amongst farms.
[3] *An updated assessment of dairy sector vulnerabilities*, Reserve Bank Bulletin Vol 78, No.8 December 2015.

majority of farms facing negative cash-flows. Dairy farm debt is likely to exceed $40 billion by the end of the season as farmers take on additional debt to cover this negative cash-flow.

**Figure 3: Aggregate dairy sector cash-flows**




Source: DairyNZ, DCANZ, Fonterra, RBNZ, Treasury

The cash-flow situation is expected to remain poor in the 2016/17 season. Based on Fonterra's farm-gate price forecast, and assuming a small decline in milk production in line with the *Budget Update* forecast and a further $0.8 billion reduction in operating expenses, the sector is estimated to face an aggregate cash-flow shortfall of about $2.3 billion. As with the preceding season, the majority of farms will face negative cash-flows. Most farms will be in their second season of negative cash-flows, with half facing a third consecutive shortfall.

Given the inherent difficulty in forecasting milk prices, Figure 3 also presents some alternative scenarios based on different milk price assumptions. The main conclusion from this scenario analysis is that dairy farms in aggregate are likely to face negative cash-flows in the 2016/17 season. Under the model assumptions, a farm gate price of around $6.15/kg MS would be needed for the sector to have neutral cash-flows in aggregate during the season.[4]

**...with a significant flow-on effect to the economy as a whole…**

The dairy sector directly contributes 3.0 – 3.5% of GDP, with roughly two thirds of this contribution from dairy cattle farming and the remainder from dairy product manufacturing.[5] A recent Lincoln University study provides some estimates of the indirect contributions of the agriculture sector as a whole.[6] Assuming these are broadly representative of the dairy sector, this would put dairy's total direct and indirect contribution to the economy at about 5 – 6%.

Low dairy prices and farm incomes flow through to the economy through a number of channels. Dairy is New Zealand's largest goods export category and falling dairy export revenues have driven the annual goods trade balance from surplus to deficit. Dairy export values fell by $3.4 billion in the year to June 2015. In the *Budget Update*, dairy exports are forecast to fall by a further $1.2 and $1.5 billion in the 2016 and 2017 June years respectively. There may be additional impacts on the current account via the primary income deficit if the additional dairy debt leads to increased interest payments overseas (chiefly to the Australian parents of local banks).

Domestically, the fall in farm incomes impacts on consumption and investment, particularly in dairy intensive regions. For example, growth in seasonally adjusted retail sales in Waikato and Canterbury was negative in the December 2015 and March 2016 quarters. While necessary for farmers, the reduction in operating expenses over the past two seasons had a direct impact on the incomes of those businesses servicing the farming sector. Further reductions in farm expenses are expected in 2016/17. In the *Budget Update* forecasts, this is mostly reflected in the moderation of investment growth over the next couple of years. Farm profits are also a major driver of other persons tax. This tax type is expected to be broadly flat in the 2015/16 and 2016/17 fiscal years as few farms make a profit before growing again in subsequent fiscal years.

**…although overall economic growth remains solid**

While lower dairy prices and contracting milk production have been a modest drag on economic growth, New Zealand's overall economic outlook remains positive. Significant drivers of growth include the construction sector, travel services exports (chiefly tourism) and the domestic services sector. Services exports and other goods exports (such as horticulture and beef) are generally performing well, partially offsetting some of dairy's impact on nominal GDP and the current account.

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[4] Note this is different to the breakeven price (of about $5.10 in this model for 2016/17) as some revenue from the headline price falls into the 2017/18 season.
[5] For the most recent five year period available, 2009-2013, dairy farming accounted for 2.4% of GDP on average and manufacturing for 1.0%. Statistics New Zealand ANZSIC06 detailed industry group's data, value added measure.
[6] Caroline Saunders, Paul Dalziel, Meike Gunther, John Saunders and Paul Rutherford (2016). *The Land and the Brand.* AERU Research Report No. 339

# New Zealand Key Economic Data

## Quarterly Indicators

| | | 2014Q3 | 2014Q4 | 2015Q1 | 2015Q2 | 2015Q3 | 2015Q4 | 2016Q1 |
|---|---|---|---|---|---|---|---|---|
| **Gross Domestic Product (GDP)** | | | | | | | | |
| Real production GDP | qtr % chg[1] | 0.9 | 0.9 | 0.3 | 0.3 | 0.9 | 0.9 | ... |
| | ann ave % chg | 3.2 | 3.7 | 3.6 | 3.3 | 3.0 | 2.5 | ... |
| Real private consumption | qtr % chg[1] | 1.3 | 0.2 | 0.6 | 0.5 | 0.8 | 1.0 | ... |
| | ann ave % chg | 2.8 | 2.7 | 2.6 | 2.7 | 2.4 | 2.5 | ... |
| Real public consumption | qtr % chg[1] | 0.4 | 0.1 | 0.9 | 0.9 | 0.3 | 0.4 | ... |
| | ann ave % chg | 2.9 | 2.7 | 2.3 | 2.1 | 2.0 | 2.2 | ... |
| Real residential investment | qtr % chg[1] | 0.0 | 4.2 | 0.8 | -0.1 | 1.3 | 1.6 | ... |
| | ann ave % chg | 13.6 | 14.6 | 11.6 | 8.6 | 7.8 | 6.0 | ... |
| Real non-residential investment | qtr % chg[1] | 4.1 | 0.2 | -3.0 | 2.1 | 2.3 | -2.6 | ... |
| | ann ave % chg | 8.6 | 9.6 | 9.0 | 7.5 | 5.0 | 2.0 | ... |
| Export volumes | qtr % chg[1] | 0.1 | 6.1 | 1.6 | -0.1 | 1.8 | 0.3 | ... |
| | ann ave % chg | 1.4 | 3.0 | 4.2 | 5.8 | 7.5 | 6.7 | ... |
| Import volumes | qtr % chg[1] | 1.0 | 2.5 | 0.8 | 1.6 | -2.6 | 0.7 | ... |
| | ann ave % chg | 8.0 | 7.9 | 7.4 | 6.6 | 5.6 | 3.6 | ... |
| Nominal GDP - expenditure basis | ann ave % chg | 7.1 | 5.1 | 3.6 | 2.8 | 2.8 | 3.3 | ... |
| Real GDP per capita | ann ave % chg | 1.8 | 2.2 | 1.9 | 1.5 | 1.1 | 0.6 | ... |
| Real Gross National Disposable Income | ann ave % chg | 6.3 | 5.1 | 3.5 | 2.2 | 1.4 | 1.5 | ... |
| **External Trade** | | | | | | | | |
| Current account balance (annual) | NZ$ millions | -5,913 | -7,464 | -8,064 | -8,259 | -8,096 | -7,709 | ... |
| | % of GDP | -2.5 | -3.1 | -3.4 | -3.4 | -3.3 | -3.1 | ... |
| Investment income balance (annual) | NZ$ millions | -9,373 | -9,449 | -9,217 | -9,049 | -9,094 | -8,488 | ... |
| Merchandise terms of trade | qtr % chg | -4.5 | -2.4 | 1.2 | 1.5 | -3.8 | -2.0 | 4.4 |
| | ann % chg | -0.3 | -5.0 | -5.6 | -4.2 | -3.6 | -3.2 | -0.1 |
| **Prices** | | | | | | | | |
| CPI inflation | qtr % chg | 0.3 | -0.2 | -0.2 | 0.4 | 0.3 | -0.5 | 0.2 |
| | ann % chg | 1.0 | 0.8 | 0.3 | 0.4 | 0.4 | 0.1 | 0.4 |
| Tradable inflation | ann % chg | -1.0 | -1.3 | -2.4 | -1.8 | -1.2 | -2.1 | -1.2 |
| Non-tradable inflation | ann % chg | 2.5 | 2.4 | 2.4 | 2.1 | 1.5 | 1.8 | 1.6 |
| GDP deflator | ann % chg | 1.1 | -2.2 | -1.0 | 0.3 | 0.4 | -0.2 | ... |
| Consumption deflator | ann % chg | 0.7 | 0.7 | 0.5 | 0.5 | 0.9 | 0.7 | ... |
| **Labour Market** | | | | | | | | |
| Employment (HLFS) | qtr % chg[1] | 1.1 | 1.1 | 0.6 | 0.3 | -0.4 | 1.0 | 1.2 |
| | ann % chg[1] | 3.2 | 3.5 | 3.2 | 3.0 | 1.5 | 1.4 | 2 |
| Unemployment rate | %[1] | 5.5 | 5.8 | 5.8 | 5.9 | 6.0 | 5.4 | 5.7 |
| Participation rate | %[1] | 68.8 | 69.5 | 69.4 | 69.3 | 68.7 | 68.5 | 69.0 |
| LCI salary & wage rates - total (adjusted)[5] | qtr % chg | 0.5 | 0.5 | 0.3 | 0.5 | 0.4 | 0.4 | 0.4 |
| | ann % chg | 1.7 | 1.7 | 1.7 | 1.6 | 1.6 | 1.5 | 1.6 |
| QES average hourly earnings - total[5] | qtr % chg | 1.4 | 0.5 | 0.0 | 0.8 | 1.0 | 0.3 | 0.3 |
| | ann % chg | 2.3 | 2.6 | 2.1 | 2.8 | 2.3 | 2.1 | 2.4 |
| Labour productivity[6] | ann ave % chg | -0.4 | 0.1 | 0.5 | 0.7 | 0.8 | 0.7 | ... |
| **Retail Sales** | | | | | | | | |
| Core retail sales volume | qtr % chg[1] | 1.7 | 1.8 | 2.1 | 0.2 | 1.1 | 1.3 | 1.0 |
| | ann % chg | 4.5 | 6.0 | 7.2 | 5.8 | 5.2 | 5.2 | 4.7 |
| Total retail sales volume | qtr % chg[1] | 1.5 | 1.8 | 2.0 | 0.2 | 1.5 | 1.1 | 0.8 |
| | ann % chg | 4.7 | 5.9 | 7.1 | 5.5 | 5.7 | 5.3 | 4.8 |
| **Confidence Indicators/Surveys** | | | | | | | | |
| WMM - consumer confidence[3] | Index | 117 | 115 | 117 | 113 | 106 | 111 | 110 |
| QSBO - general business situation[4] | net % | 19.0 | 23.6 | 23.3 | 5.1 | -14.5 | 14.7 | 1.7 |
| QSBO - own activity outlook[4] | net % | 33.9 | 26.7 | 25.0 | 9.3 | 21.7 | 21.6 | 3.8 |

## Monthly Indicators

| | | 2015M11 | 2015M12 | 2016M01 | 2016M02 | 2016M03 | 2016M04 | 2016M05 |
|---|---|---|---|---|---|---|---|---|
| **External Sector** | | | | | | | | |
| Merchandise trade - exports | mth % chg[1] | 6.1 | -8.7 | 5.9 | -6.2 | -7.5 | 12.3 | ... |
| | ann % chg[1] | 0.8 | 0.5 | 5.8 | 9.1 | -14.3 | 4.0 | ... |
| Merchandise trade - imports | mth % chg[1] | 2.9 | -2.8 | 11.5 | -7.8 | -17.2 | 23.4 | ... |
| | ann % chg[1] | 12.6 | -3.0 | 7.0 | 1.8 | -5.4 | 1.5 | ... |
| Merchandise trade balance (12 month total) | NZ$ million | -3695 | -3537 | -3576 | -3294 | -3766 | -3658 | ... |
| Visitor arrivals | number[1] | 277,200 | 272,220 | 280,540 | 276,980 | 288,320 | 285,130 | ... |
| Visitor departures | number[1] | 282,940 | 284,880 | 280,150 | 293,250 | 283,980 | 294,120 | ... |
| **Housing** | | | | | | | | |
| Dwelling consents - residential | mth % chg[1] | 1.7 | 2.7 | -8.4 | 10.4 | -9.7 | 6.6 | ... |
| | ann % chg[1] | 17.0 | 15.4 | -0.5 | 35.3 | 1.9 | 11.8 | ... |
| House sales - dwellings | mth % chg[1] | -3.9 | 7.5 | -9.0 | 3.7 | 5.2 | 9.8 | ... |
| | ann % chg[1] | 8.5 | 3.5 | 4.3 | 5.7 | 8.2 | 18.4 | ... |
| REINZ - house price index | mth % chg | 0.6 | 0.8 | 0.4 | 1.9 | 2.2 | 2.2 | ... |
| | ann % chg | 12.5 | 12.6 | 10.7 | 11.9 | 13.3 | 14.5 | ... |
| **Private Consumption** | | | | | | | | |
| Electronic card transactions - total retail | mth % chg[1] | 0.7 | 0.2 | 0.3 | 0.7 | 0.1 | 0.9 | ... |
| | ann % chg | 4.6 | 6.6 | 5.2 | 9.2 | 6.2 | 7.8 | ... |
| New car registrations | mth % chg[1] | -2.0 | 3.1 | -2.8 | 5.8 | -3.6 | 6.3 | ... |
| | ann % chg | 1.3 | 2.4 | -1.1 | 7.4 | -0.2 | 8.7 | ... |
| **Migration** | | | | | | | | |
| Permanent & long-term arrivals | number[1] | 10,510 | 10,050 | 10,740 | 10,600 | 9,900 | 10,440 | ... |
| Permanent & long-term departures | number[1] | 4,310 | 4,510 | 4,650 | 4,590 | 4,570 | 4,920 | ... |
| Net PLT migration (12 month total) | number | 63,659 | 64,930 | 65,911 | 67,391 | 67,619 | 68,110 | ... |
| **Commodity Prices** | | | | | | | | |
| Brent oil price | US$/Barrel | 44.27 | 38.01 | 30.70 | 32.18 | 38.20 | 41.58 | ... |
| WTI oil price | US$/Barrel | 42.44 | 37.19 | 31.67 | 30.50 | 37.80 | 40.76 | ... |
| ANZ NZ commodity price index | mth % chg | -4.5 | -3.9 | -0.4 | 0.0 | -3.0 | -2.8 | ... |
| | ann % chg | -1.0 | -1.1 | -1.6 | -10.3 | -14.3 | -8.5 | ... |
| ANZ world commodity price index | mth % chg | -5.6 | -1.8 | -2.3 | 0.5 | -1.3 | -0.8 | ... |
| | ann % chg | -15.3 | -12.9 | -14.7 | -17.8 | -22.4 | -16.8 | ... |
| **Financial Markets** | | | | | | | | |
| NZD/USD | $[2] | 0.6567 | 0.6737 | 0.6521 | 0.6634 | 0.6733 | 0.6892 | *0.6804* |
| NZD/AUD | $[2] | 0.9188 | 0.9296 | 0.9313 | 0.9300 | 0.9001 | 0.8998 | *0.9290* |
| Trade weighted index (TWI) | June 1979 = 100[2] | 71.39 | 73.23 | 71.93 | 72.35 | 72.19 | 72.80 | *72.86* |
| Official cash rate (OCR) | % | 2.75 | 2.50 | 2.50 | 2.50 | 2.25 | 2.25 | 2.25 |
| 90 day bank bill rate | %[2] | 2.89 | 2.79 | 2.73 | 2.62 | 2.43 | 2.34 | *2.38* |
| 10 year govt bond rate | %[2] | 3.50 | 3.56 | 3.32 | 3.07 | 3.02 | 2.86 | *2.68* |
| **Confidence Indicators/Surveys** | | | | | | | | |
| ANZ - business confidence | net % | 14.6 | 23.0 | ... | 7.1 | 3.2 | 6.2 | 3.2 |
| ANZ - activity outlook | net % | 32.0 | 34.4 | ... | 25.5 | 29.4 | 32.1 | 29.4 |
| ANZ-Roy Morgan - consumer confidence | net % | 122.7 | 118.7 | 121.4 | 119.7 | 118.0 | 120.0 | 116.2 |
| Performance of Manufacturing Index | Index | 55.1 | 57.0 | 57.8 | 55.9 | 54.7 | 56.5 | ... |
| Performance of Services Index | Index | 59.5 | 58.6 | 55.5 | 56.9 | 55.1 | 57.7 | ... |

qtr % chg — quarterly percent change
mth % chg — monthly percent change
ann % chg — annual percent change
ann ave % chg — annual average percent change

1 Seasonally adjusted
2 Average (11am)
3 Westpac McDermott Miller
4 Quarterly Survey of Business Opinion
5 Ordinary time
6 Production GDP divided by HLFS hours worked

Sources: Statistics New Zealand, Reserve Bank of New Zealand, NZIER, ANZ, Haver, Westpac McDermott Miller, ANZ-Roy Morgan, REINZ, BNZ-Business NZ