

# COVID-19's effect on industry and regional economic outcomes for NZ Transport Agency

May 2020



**Infometrics**

Economics put simply

## Authorship

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# Table of contents

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<b>Executive summary</b> .....	<b>4</b>
<b>Introduction</b> .....	<b>6</b>
Likelihoods of each scenario .....	7
Structure of the report.....	8
<b>Key urban centres</b> .....	<b>11</b>
Auckland.....	11
Hamilton.....	12
Tauranga .....	12
Wellington.....	12
Christchurch.....	13
Queenstown.....	13
<b>Treasury Scenario 5</b> .....	<b>16</b>
March 2021 .....	16
March 2025 .....	18
March 2031 .....	21
Key transport industries .....	23
<b>Treasury Scenario 1</b> .....	<b>25</b>
March 2021 .....	25
March 2025 .....	26
March 2031 .....	29
Key transport industries .....	30
<b>Treasury Scenario 4</b> .....	<b>32</b>
March 2021 .....	32
March 2025 .....	34
March 2031 .....	36
Key transport industries .....	36
<b>Appendix 1: Scenario 5 key outputs</b> .....	<b>38</b>
<b>Appendix 2: Scenario 1 key outputs</b> .....	<b>47</b>
<b>Appendix 3: Scenario 4 key outputs</b> .....	<b>53</b>
<b>Appendix 4: Pre-COVID BAU key outputs</b> .....	<b>59</b>

## Executive summary

New Zealand's economy is currently undergoing an exceptional shock due to the COVID-19 pandemic and the effects of the resultant public health response. Economic activity was significantly restricted by the lockdown that occurred in March and April this year, and many businesses and industries continue to be affected by the restrictions in place at the lower COVID Alert Levels. The most severe ongoing impacts are on tourism-related industries due to the extended closure of New Zealand's borders, which is likely to continue into 2021, notwithstanding the possibility of a Trans-Tasman bubble.

Considerable uncertainty remains about the economic ramifications of these events. This uncertainty emanates from several factors: a lack of clarity about the size of the global downturn and how quickly the international economy might recover; differing views about the ability of the New Zealand economy to bounce back from the significant job losses that are occurring and how much of a structural change in the economy is required; and the possibility of a further wave of COVID-19 cases within New Zealand that might necessitate a return to Alert Levels 3 or 4. Against this backdrop of uncertainty, we have modelled the effects of three different scenarios on employment and GDP across New Zealand's local authority areas and industries.

Although there are variations between the results of each scenario, there are several themes that recur throughout the modelled outcomes.

- Areas reliant on tourism will be hit the hardest, particularly areas in the South Island that are primarily focused on international visitors and have limited other industries of note. **Even in those scenarios where international tourism activity has recovered by 2025 or 2031, employment and GDP in these areas remains well below its pre-COVID trends.** This persistence of weaker outcomes reflects a loss of capacity in the economy and workforce of these areas that cannot be easily rebuilt. Queenstown-Lakes, Mackenzie, Central Otago, and Thames-Coromandel regularly feature in the list of worst-performing areas.
- Parts of the upper North Island also struggle to return to their pre-COVID trends over the medium term. **Projections of slower population growth and a sluggish Auckland economy appear to have spill-over effects into some other parts of the Golden Triangle,** with growth prospects in areas such as Waipā, Tauranga, and Waikato District being negatively affected over the medium term.
- **The loss of jobs in tourism-related and media-related industries creates opportunities for labour to be redeployed into other industries over the medium term.** The industries that generally benefit the most tend to be agriculture, forestry, parts of the manufacturing industry, and construction. How much of this excess labour that each of these industries pick up depends on the strength of the global economy and the implications on demand for New Zealand exports.
- **By 2025, this movement of workers towards primary industries or manufacturing shows through in several provincial areas** where employment is projected to be above its pre-COVID trend. Areas such as Kawerau, Rangitikei, Waimate, and Whanganui regularly appear in the grouping of the best performers in 2025 and 2031.

- **Much of the lower North Island is also expected to hold its own over the medium term.** This outcome reflects the relatively high levels of public sector employment in Wellington, which will naturally be more resilient in the face of the economic downturn than private sector employment. Although Wellington will not escape the effects of the COVID-19 pandemic, the region's decline in overall employment will be relatively mild, and it will thus have less negative flow-on effects for other outcomes such as consumer spending, the housing market, and construction. This near-term resilience is expected to lead to economic and employment outcomes over the medium term that are better than many other parts of the country. Upper Hutt, Kāpiti Coast, and parts of the Wairarapa are beneficiaries of this trend.

## Introduction

As indicated by NZ Transport Agency (NZTA), we have used Treasury's Scenarios 1, 4, and 5, published on April 14, as the baselines for our projections of employment and GDP by industry and region between now and 2031.

Treasury's scenarios consisted of high-level projections of GDP, unemployment, and inflation for New Zealand between 2020 and June 2024. The key differences in the scenarios' assumptions were the amount of time spent in COVID Alert Levels 3 and 4 and the magnitude of the downturn in the global economy during 2020 and 2021.

- Scenario 1 assumed one month at each of Level 3 and Level 4 and 10 months in total across Levels 1 and 2. Borders remain closed to foreign visitors for up to 12 months. World GDP growth is -2.9% in 2020 (six percentage points lower than Treasury's December 2019 forecast).
- Scenario 4 assumed three months at each of Level 3 and Level 4 and six months in total across Levels 1 and 2. The other assumptions were the same as for Scenario 1.
- Scenario 5 assumed world GDP growth of -5.9% in 2020 and -0.7% in 2021. The other assumptions were the same as for Scenario 1.

Given the lack of any projections beyond mid-2024, we have taken the GDP and unemployment numbers at June 2024 as a proxy for economic conditions in the March 2025 year.

We have also been forced to make our own assumptions about the possible size and structure of the economy by 2031. We have assumed that nationwide GDP and employment recover to their pre-COVID trends by 2031. Under Scenarios 1 and 4, we have also assumed that the structural make-up of the economy returns to what would have been considered "business as usual" (BAU) had the COVID-19 pandemic not occurred.

In contrast, under Scenario 5, we assume that structural changes persist in the economy over the medium term. For example, the loss of capacity in the tourism and hospitality sectors, combined with a permanent increase in the cost of international travel, could prevent employment and GDP in tourism-related industries from returning to pre-COVID trends. With total nationwide GDP and employment recovering to their pre-COVID trends, this outcome implies that other industries will have attracted additional capital and labour resources to make up for the shortfalls in tourism.

We also note that the outputs of Treasury's high-level projections and accompanying assumptions are impossible to completely replicate using independent modelling. As a result, our aggregate outputs for each scenario are close to, but not exactly the same as, Treasury's results. However, given the extremely high level of uncertainty about the economic outlook currently, we believe these relatively small forecast and modelling differences do not materially affect the conclusions reached.

This uncertainty has also influenced the range of scenarios we have chosen to model for this project. Treasury's *Budget Economic and Fiscal Update 2020*, published on May 15, included four updated forecast scenarios: the main (BEFU) forecast, the full COVID-19 Response and Recovery Fund (CRRF) forecast, a slower recovery scenario, and a moderated impact from COVID-19 scenario.

In 2021, the BEFU and CRRF forecasts are both less negative than any of the original scenarios presented by Treasury, partly because of the near-term support the government has provided for the labour market. However, we judge that Scenario 1 is still a reasonable approximation for these economic outcomes for the March 2021 year.

GDP projections for 2021 are very similar between Scenario 5 and Treasury's slower recovery from the Budget. For 2021, there is no equivalent of Scenario 4 and its extended or repeated lockdowns in the Budget. However, it remains important to examine a worst-case scenario if another significant outbreak of COVID-19 were to occur within New Zealand and force further public health measures.

By 2024, the CRRF forecasts resemble Scenario 1, while the BEFU forecasts are similar to Scenario 4. Unemployment in Scenario 5 is reasonably close to Treasury's slower recovery, although GDP in the latter is significantly weaker than in Scenario 5. Even so, given the uncertainty associated with the modelling outcomes, we are comfortable that the original Scenarios 1, 4, and 5 generally provide a more comprehensive range of possible economic outcomes than the forecasts published with the Budget.

## Likelihoods of each scenario

Nevertheless, the shift in Treasury's thinking between its April scenarios and the May budget provides information on the likelihoods of the different scenarios or aspects within those scenarios. In our view, Scenario 5 appears to be the most closely aligned with other forecasts, particularly regarding the effects of the COVID pandemic over the medium-term through to 2024/25. It also incorporates additional likely weakness in the global economy that we believe is yet to be fully reflected in Consensus forecasts or those of other international agencies such as the IMF or OECD.

Despite the weak international economy, we caution that Scenario 5 might overstate the near-term impact of the pandemic on the New Zealand economy because of the substantial fiscal support that has been provided by the government.

Our assessments of the key assumptions and outcomes are as follows.

- Recent new case numbers of COVID-19 in New Zealand suggest that the public health response has been very effective. The chances of a return to Alert Levels 3 or 4 appear to be slim, meaning that an economic downturn in the near-term as shown in Scenario 4 is very unlikely. Indeed, the implementation of Level 3 for only two weeks is more positive than any of Treasury's scenarios and highlights potential upside risks to some of the economic outcomes in the near term. More relaxed conditions around domestic travel around Level 2 and the possibility of staying at Level 2 for a relatively small proportion of the 10-month period allowed for Treasury could also help reduce of the economy's downturn.
- Examining Treasury's April and May scenarios suggests that the government's policy interventions and fiscal support for the economy could have a significant effect on limiting job losses in the near term. For example, Treasury's Scenario 1 projected an unemployment rate of 9.4% in March 2021, and this figure was the least pessimistic of any of Treasury's April scenarios. In contrast, Treasury's most pessimistic scenario in May, the slower recovery scenario, projected an unemployment rate of 9.0% in March 2021, having allowed for full spending of the government's \$50b CRRF on top of the \$12.1b already allocated as part of the Economic Recovery Package.

- Global GDP forecasts continue to be revised down. Consensus forecasts for world growth in 2020 slipped from +2.3% in February to -2.5% in April, and they have been lowered by about another percentage point in May. This trend suggests that the global growth assumption used in Scenario 5 could be most appropriate for 2020, rather than the more muted decline in activity assumed in Scenarios 1 and 4. The effects of the larger global downturn will offset some of the positive effects from the previous two bullet points.
- Most private sector forecasts indicate that the economic recovery is expected to take longer than suggested by Treasury's BEFU forecasts. This weight of views implies that the risks to Treasury's medium-term forecasts are on the downside. In other words, GDP and employment could be weaker than Scenario 1 between 2021 and 2025, even allowing for the positive effects of the government's support on employment outcomes in the near term.
- In broad terms, the industrial outcomes implied by our modelling of Scenarios 4 and 5 by 2024/25 are largely similar. One of the key assumptions in our modelling of these scenarios is prolonged weakness in the tourism sector and related industries, reflecting a mix of two factors: the combination of a structural shift in the international tourism market, and the lingering effects of the COVID-19 pandemic on global economic growth and spending. We favour a scenario where one or both factors are still having some influence on New Zealand's economic outcomes in four years' time.
- The case for structural changes persisting in the economy in a decade's time is less clear. It is possible that factors such as reduced capacity within New Zealand's tourism sector, decreased availability of international flights and higher travel costs, or lingering health concerns mean that tourism's share of GDP does not return to pre-COVID levels. Equally, events that seem very significant at the time often result in few lasting structural changes in the economy or its structure. We have no strong opinion either way regarding the scenarios beyond 2025, and we believe that NZTA should be cognisant of both possibilities. Which outcome is more likely for the economy should become more apparent over the next 2-3 years.

## Structure of the report

The remainder of this report examines projected GDP and employment growth using modelling based on Treasury's Scenarios 1, 4, and 5. Growth in these variables is split by both industry and local authority area. Our focus is highlighting industries or areas where GDP or employment growth are projected to be significantly different under each scenario than under pre-COVID BAU conditions.

Our nationwide projections of employment and GDP across each of the scenarios, as well as a pre-COVID BAU projection, are shown in Graph 1 and Graph 2. Note that we have only prepared projections for 2020, 2021, 2025, and 2031. The exact path of employment or GDP is likely to vary from the straight-line interpolations shown in these graphs, particularly during the recovery phase from 2021 onwards.

We have chosen to cover Scenario 5 first, followed by Scenario 1 and Scenario 4. This ordering reflects our view of the relative likelihoods of each scenario taking place. However, there is extreme uncertainty about the outlook for the economy given the current pandemic far outweighs any other shocks that have been experienced since the

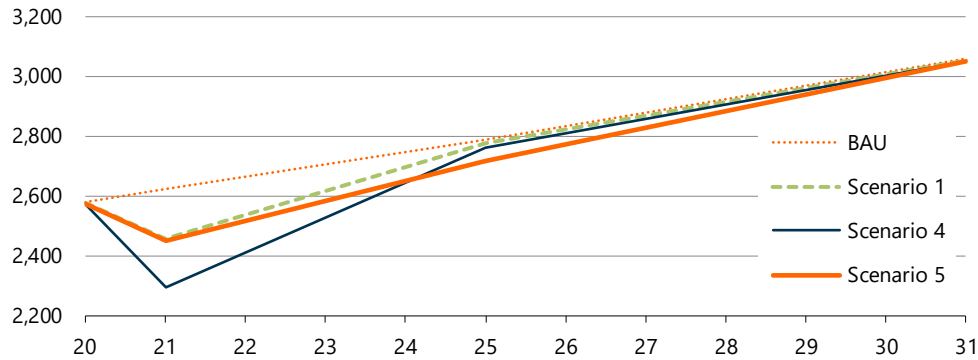


1930s. Graph 3 shows the variation in unemployment rate forecasts from New Zealand's retail banks, the Reserve Bank, Treasury,<sup>1</sup> and Infometrics. Our view is that the labour market will take longer to recover from the substantial rise in unemployment than most other forecasters are predicting, with the redeployment of capital and workers into new businesses and roles taking time to be worked through.

Graph 1

Employment projections by scenario

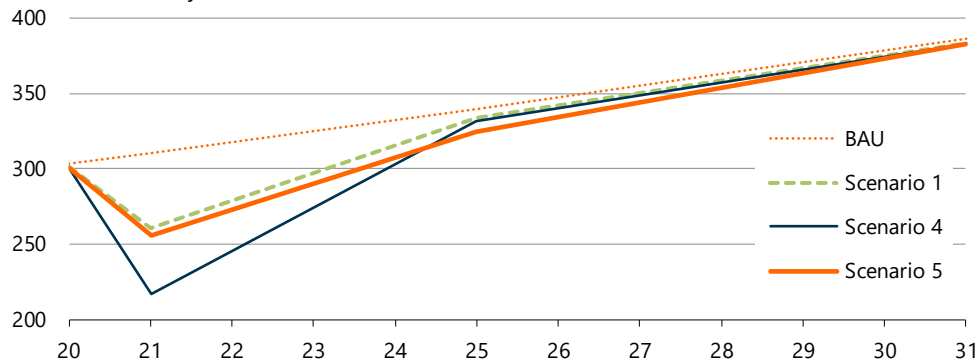
Total filled jobs (000), March years



Graph 2

GDP projections by scenario

2019 \$b, March years



As part of our analysis, we also highlight the outlooks for nine specific industries or industry groupings. These industries are agriculture, forestry, mining, food manufacturing, non-food manufacturing, construction, retailing, road transport, and logistics. Focusing on these industries provides additional insights into the effects of COVID-19 and its aftermath on potential demand for land transport services.

Prior to going into each scenario in detail, we have provided high-level commentary on the key factors affecting the performance of the six major urban centres of most interest to NZTA: Auckland, Hamilton, Tauranga, Wellington, Christchurch, and Queenstown. Although the relative performance of each urban centre differs across the various

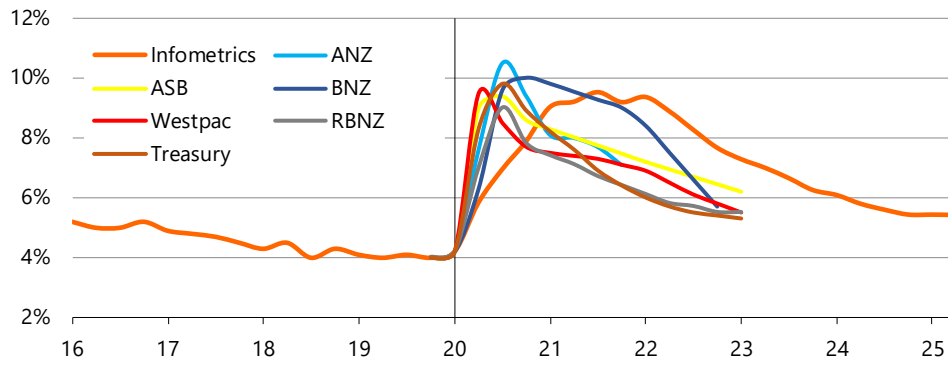
<sup>1</sup> Both the Reserve Bank and Treasury published several scenarios in their recent forecast documents. Graph 3 shows the baseline or central forecast for both institutions.

scenarios, the underlying issues affecting employment and economic growth remain largely the same.

Graph 3

### How big is the labour market hit?

Unemployment rate forecasts, seasonally adjusted



## Key urban centres

Urban centres can be a major source of pressure on infrastructure, particularly where economic and population growth is relatively rapid. This section discusses some of the key factors affecting growth prospects for six urban centres around New Zealand in the wake of COVID-19. Our forecasts of employment for these six areas under each of the three scenarios are contained in Table 1, Table 2, and Table 3 at the end of this section.

### Auckland

Representing about 38% of the New Zealand economy, Auckland's size means that its performance is never going to vary too significantly from the nationwide average. Nevertheless, under Scenarios 4 and 5, Auckland's employment results (relative to BAU) are slightly worse than nationwide outcomes. These results reflect a range of factors.

- Although tourism represents a smaller share of GDP in Auckland than nationally, international tourist spending makes up 53% of the total visitor spend in Auckland compared to 41% across all New Zealand. As a result, the border closures and loss of international tourism will have a greater effect on Auckland than many other parts of the country.
- Alongside international tourism, international education is another key sector for Auckland that has been heavily affected by the pandemic. The effects of the loss of students this year are likely to be felt throughout the next couple of years as well, particularly for those institutions providing multi-year courses of study. Those students intending to study in New Zealand from 2020 who did not arrive will effectively leave a hole in student numbers during 2021 and 2022 as well.
- Auckland's above-average population growth over the last 20 years has been largely driven by international migration and people arriving from other countries. Border closures over the next 9-12 months and prospects of net migration flows remaining below normal throughout the following 2-3 years are likely to limit Auckland's population growth, which will have flow-on effects for potential GDP and employment growth.

This last point has important implications for other parts of the upper North Island. In recent years, we have seen an increasing outflow of people from Auckland to other regions such as Waikato and Bay of Plenty, in search of more affordable housing and better lifestyle opportunities. The current economic downturn and likelihood of slower population growth in Auckland will reduce demand pressures and take some of the heat out of the city's housing market. The rationalisation of business numbers during the downturn is also likely to alleviate some cost pressures for firms, such as rents or labour costs.

These factors are likely to temporarily slow the trend of business and population movements into other parts of the Golden Triangle. Although we would expect these cost pressures to reappear over the medium term, the pause in this trend suggests a possible step down in likely growth rates in some other parts of the upper North Island.

Our modelling suggests not all areas are likely to be equally affected. The areas that appear to be most vulnerable are those ones where construction and population growth have been strongest in recent years: Waikato District, Waipā, and Tauranga.

## Hamilton

Notwithstanding slower growth in Waipā, the Hamilton urban area is expected to perform relatively well under each of the three scenarios we have modelled. This outcome reflects a relatively low reliance on international tourism, the importance of agriculture in the surrounding area, and the city's role as a significant hub for education, healthcare, and other government services. The city also has an above-average proportion of employment in more highly skilled jobs, with people more likely to have been able to continue working during the lockdown.

A long-term trend of significant infrastructure improvements also stands Hamilton in good stead. The near completion of the Waikato Expressway has made the city an increasingly attractive and viable place for firms to site themselves. The establishment of facilities such as the Waikato Innovation Park and the Ruakura Inland Port further enhance the city as a place to do business. These factors make us confident that employment and economic growth in Hamilton have a solid base of underlying strength and will not be significantly affected over the medium term by any sluggishness in the Auckland economy.

## Tauranga

Compared with Hamilton, Tauranga looks set to be more significantly affected by the current downturn. This result reflects the relatively high proportion of the city's economy that is made up of construction and retail trade, with both industries projected to experience significant job losses. A close look at Tauranga's workforce also reveals that it is less skilled on average than other parts of the country, with businesses and workers in the city hit by the lockdown and the continuing softening in demand conditions.

Furthermore, Tauranga has been a considerable beneficiary of the population drift out of Auckland over the last 25 years. Although these inflows initially largely consisted of older people, the last 10-15 years has seen the city attract a broader cross section of people as its economy has broadened. However, near-term job losses combined with reduced population and housing pressures in Auckland suggest that Tauranga will struggle to maintain such strong population growth over the next decade. This weaker population growth will naturally weigh on the city's employment and GDP growth.

The strength of Tauranga's port, as well as the performance of the horticultural sector in surrounding areas, present some upside risks to the city's growth potential. The chances of Tauranga surpassing our growth projections hinge most heavily on a relatively quick recovery in the global economy from the current downturn. Government decisions about the ports at Auckland and Whāngārei could also have significant implications for the Port of Tauranga.

## Wellington

The prevalence of public sector employees in Wellington will help shield the region from the worst of the economic downturn. Increasing government spending in response to the pandemic necessitates a level of additional administrative support, while the public sector is also not subject to the same profit requirements that underpin private sector employment. Furthermore, the current Labour-led government is also more likely to preside over an expanding government sector, although this left-right distinction is arguably less relevant over the next 2-3 years given the substantial support and stimulus response to the COVID-19 pandemic required from the government.

In addition, even in the private sector, Wellington's professional and service-orientated workforce is likely to be less affected by the downturn on average than the workforce in many other parts of the country.

A less sharp downturn in the economy in the near-term will stand the Wellington Region in good stead over the medium term. The flow-on effects into the housing market and residential construction activity are likely to be less severe than in other parts of the country, particularly when Wellington's shortage of housing prior to the pandemic is also taken into account.

Our modelling suggests that this relative stability within the Wellington Region will have the most positive medium-term flow-on effects for the economy in the more peripheral parts of the urban area. The Kāpiti Coast, Upper Hutt, and parts of the Wairarapa are expected to perform well in the wake of COVID-19 relative to BAU.

## Christchurch

The structure of Christchurch's economy is generally very close to the structure of the nationwide economy. As a result, one would generally expect its economic prospects to closely follow New Zealand's overall prospects. However, across all three of the scenarios we have modelled, Christchurch is projected to fare slightly worse than the rest of the country.

There are two main reasons for this outcome. Firstly, Christchurch's role as a gateway for international tourists to the South Island means that it could be disproportionately affected by the border closures. The direct spend of international visitors makes up 40% of overall tourism spending in the city, which is in line with the nationwide split of spending. But the flow-on effects for businesses connected with the airport and associated services are likely to result in a bigger hit to the economy than the international visitor spend on its own would imply.

Secondly, the city's construction industry entered the COVID-19 pandemic already in a state of vulnerability. Although building activity peaked 4-5 years ago, activity is still at elevated levels, particularly in terms of non-residential construction. Further declines in construction were already expected as activity retreats after the post-quake rebuild to more "normal" levels.

We also note that construction makes up a significant portion of economic activity in the neighbouring Selwyn District. Weaker economic outcomes in the near term will also weigh on the volume of construction activity likely to take place over the medium term.

## Queenstown

Queenstown-Lakes is projected to be the local authority area most heavily affected by COVID-19 and its aftermath. The District has a major reliance on international tourism, with an estimated 63% of visitor spending coming from overseas people, compared with a nationwide average of 41%. Spending by New Zealanders will be unable to make up for the drop in international visitors over the next year. This conclusion is strengthened by the likelihood that there will be fewer domestic air connections, some people will be reluctant to fly given health concerns, and declines in incomes and employment nationally will reduce people's willingness to spend on discretionary items such as holidays.

We have detailed many of the modelled outcomes for Queenstown-Lakes throughout this report due to the extreme nature of the results. The District's workforce is significantly overrepresented in accommodation and food services, construction, retail trade, and arts and recreation services. These industries will all struggle over the next 1-2 years given border closures and the broader economic downturn. The area is likely to suffer a severe loss of capacity across its tourism sector, and these businesses and jobs will not be quickly recovered.

Across all three scenarios, total employment in Queenstown-Lakes is forecast to be below its pre-COVID levels by March 2025. Although the area is still expected to be one of the faster-growing parts of New Zealand over the longer-term, this growth is unlikely to return the District's economy to its pre-COVID trend. Our modelling shows that activity is expected to be about 16% below BAU levels in 2031.

Table 1

**Employment in key urban areas - Treasury Scenario 5**

Total filled jobs, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Auckland	924,606	-5.1%	877,412	2.8%	980,697	2.1%	1,109,583
Hamilton <sup>1</sup>	122,696	-3.3%	118,612	2.6%	131,197	2.2%	149,788
Tauranga	74,816	-4.1%	71,717	1.9%	77,285	2.0%	86,898
Wellington <sup>2</sup>	257,419	-3.9%	247,313	2.7%	275,134	2.1%	312,548
Christchurch	231,085	-5.5%	218,345	2.4%	239,778	1.9%	268,658
Queenstown	31,869	-21.1%	25,135	5.0%	30,601	2.4%	35,297
<b>New Zealand</b>	<b>2,575,549</b>	<b>-4.9%</b>	<b>2,448,655</b>	<b>2.7%</b>	<b>2,719,260</b>	<b>1.9%</b>	<b>3,052,460</b>

1: Includes Waipā

2: Includes Porirua, Upper Hutt, Lower Hutt, and Wellington City

Table 2

**Employment in key urban areas - Treasury Scenario 1**

Total filled jobs, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Auckland	924,606	-4.6%	882,369	3.3%	1,003,471	1.7%	1,110,447
Hamilton <sup>1</sup>	122,696	-3.2%	118,787	3.0%	133,864	1.9%	149,734
Tauranga	74,816	-3.9%	71,895	2.4%	78,990	1.6%	86,955
Wellington <sup>2</sup>	257,419	-3.7%	247,955	3.2%	281,059	1.8%	312,748
Christchurch	231,085	-5.2%	219,062	2.9%	245,160	1.5%	268,757
Queenstown	31,869	-20.5%	25,325	5.9%	31,862	1.8%	35,467
<b>New Zealand</b>	<b>2,575,549</b>	<b>-4.6%</b>	<b>2,457,097</b>	<b>3.1%</b>	<b>2,776,276</b>	<b>1.6%</b>	<b>3,052,460</b>

1: Includes Waipā

2: Includes Porirua, Upper Hutt, Lower Hutt, and Wellington City

Table 3

**Employment in key urban areas - Treasury Scenario 4**

Total filled jobs, Infometrics forecasts

	<b>Mar 20</b>	<b>%pa</b>	<b>Mar 21</b>	<b>%pa</b>	<b>Mar 25</b>	<b>%pa</b>	<b>Mar 31</b>
Auckland	924,606	-11.2%	820,855	5.0%	995,942	1.8%	1,110,447
Hamilton <sup>1</sup>	122,696	-8.7%	112,054	4.4%	133,168	2.0%	149,734
Tauranga	74,816	-10.0%	67,330	3.9%	78,420	1.7%	86,955
Wellington <sup>2</sup>	257,419	-8.9%	234,441	4.5%	279,059	1.9%	312,748
Christchurch	231,085	-11.5%	204,599	4.4%	243,407	1.7%	268,757
Queenstown	31,869	-25.3%	23,809	6.9%	31,077	2.2%	35,467
<b>New Zealand</b>	<b>2,575,549</b>	<b>-10.9%</b>	<b>2,294,622</b>	<b>4.7%</b>	<b>2,761,139</b>	<b>1.7%</b>	<b>3,052,460</b>

1: Includes Waipā

2: Includes Porirua, Upper Hutt, Lower Hutt, and Wellington City

## Treasury Scenario 5

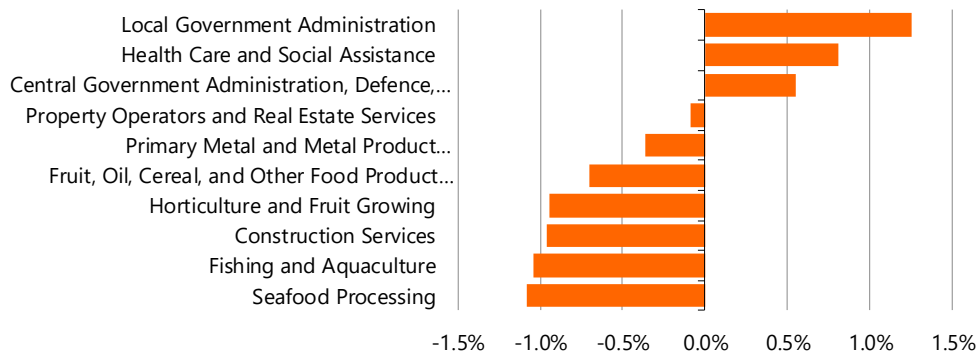
### March 2021

Total filled job numbers across New Zealand are forecast to drop 4.9% under Scenario 5 to lie 6.7% below our pre-COVID BAU projections. Almost all industries are expected to record a drop in employment, with the largest declines occurring in retailing, tourism-related, and media industries. In contrast, agriculture, food manufacturing, government, and health industries are expected to be less affected generally by the current economic shock. The least affected and most affected industries are shown in Graph 4 and Graph 5.

Graph 4

#### Employment relative to BAU, 2021

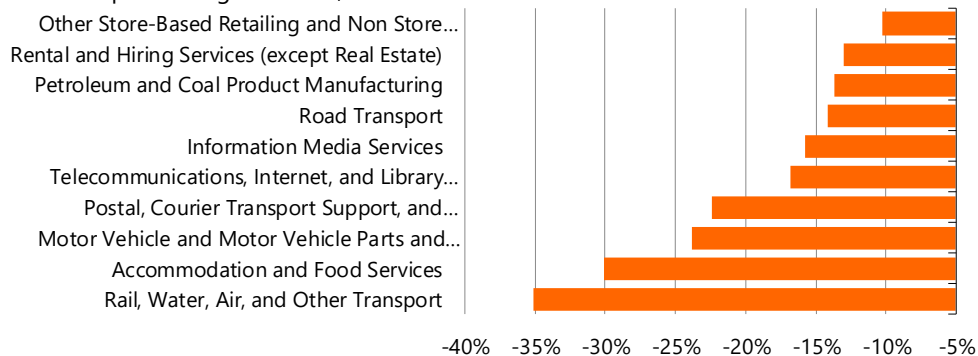
10 best performing industries, Scenario 5



Graph 5

#### Employment relative to BAU, 2021

10 worst performing industries, Scenario 5



The range of effects across different industries is clearly reflected in the projected changes in employment by territorial authority (TA). Provincial areas that are mostly reliant on agriculture tend to be the best performers, with North Island areas dominating this grouping (see Graph 6). We note that Ōtorohanga's increase in employment results from two large construction projects in the District, which are likely to be able to more easily source workers given the projected downturn in the broader construction industry and economy overall.

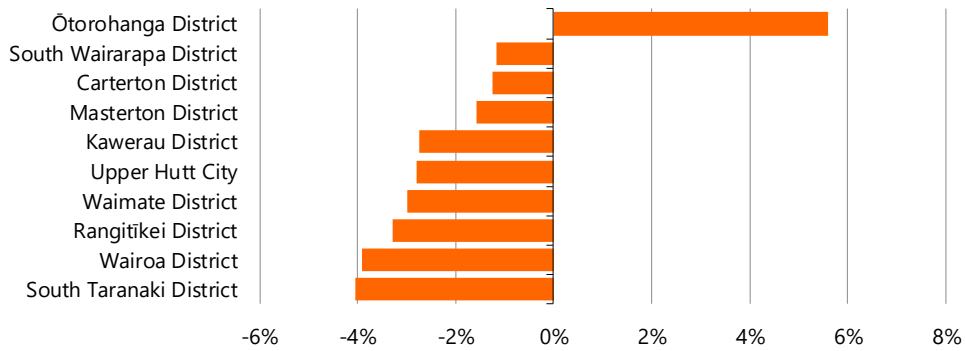


In contrast to the best performers, provincial centres and areas that are highly reliant on tourism are the most heavily negatively affected, right across the country. Christchurch also appears in Graph 7, in part reflecting its role as a tourism gateway to other parts of the South Island.

**Graph 6**

**Employment relative to BAU, 2021**

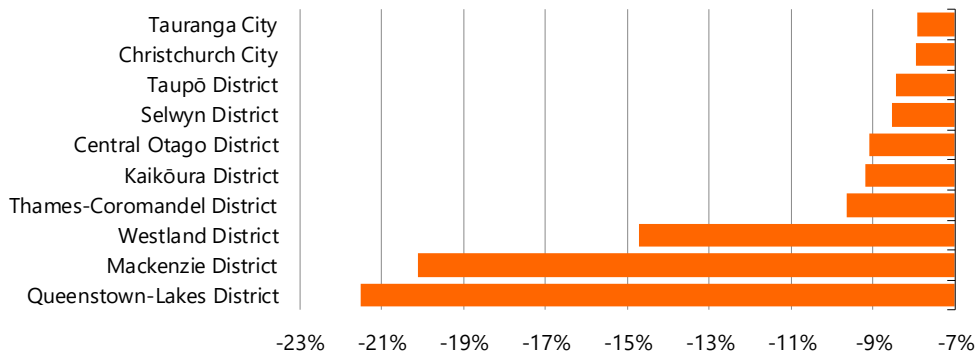
10 best performing local authorities, Scenario 5



**Graph 7**

**Employment relative to BAU, 2021**

10 worst performing local authorities, Scenario 5



With Scenario 5 being, in our view, the most likely path for the New Zealand economy going forward, we have also included additional graphs showing our employment projections by regional council. Graph 8 shows how we expect the regions to perform over the year to March 2021.

Changes in GDP relative to our BAU projections generally mirror our employment projections, although the magnitudes of the declines are larger (down 14.9% nationally to be 17.7% below BAU). This larger fall primarily results from the Level 3 and Level 4 lockdown, which significantly reduced output but did not necessarily result in job losses. The gap also reflects that firms typically reduce worker hours before laying off staff in a downturn. Productivity is also likely to be lower in the near term as weaker demand conditions result in reduced workloads and less pressure for staff.

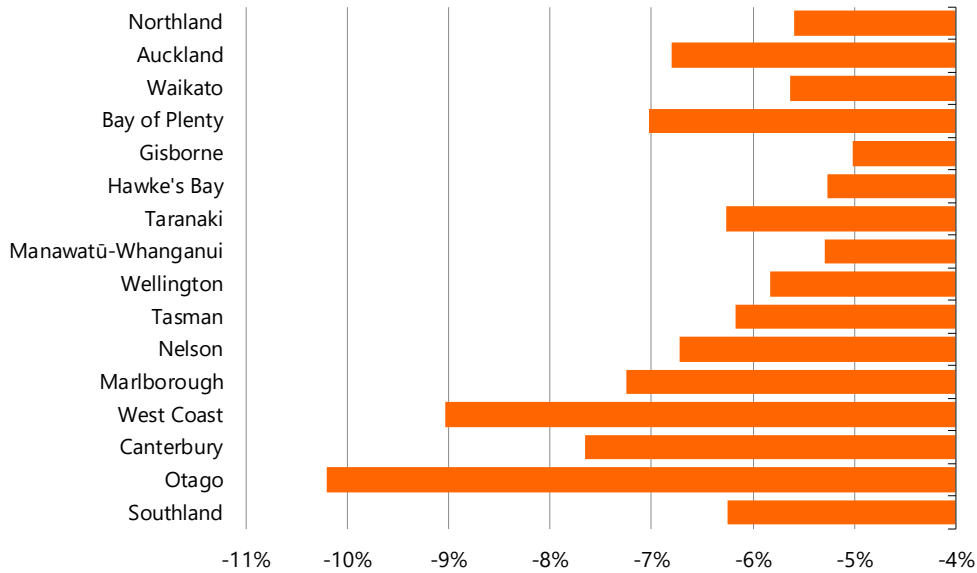
Because of the similarities in trends between employment and GDP, we have chosen not to provide detailed coverage of our GDP results, instead highlighting any areas where they differ significantly from the employment results. For 2021, we see additional

weakness showing through in real estate and arts and recreation. New Plymouth also appears as an underperformer, negatively affected by lower demand for energy and its effect on related industries.

Graph 8

Employment relative to BAU, 2021

By regional council, Scenario 5



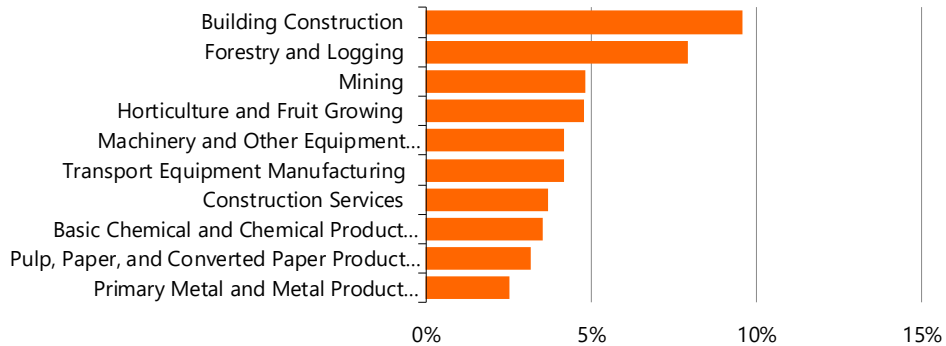
March 2025

Total filled job numbers are forecast to grow by an average of 2.7%pa between March 2021 and March 2025. This growth would place nationwide employment in 2025 up 5.6% from its 2020 level, implying average growth of 1.1%pa over the five-year period. However, employment would still be 2.5% below our pre-COVID projections for BAU.

Graph 9

Employment relative to BAU, 2025

10 best performing industries, Scenario 5

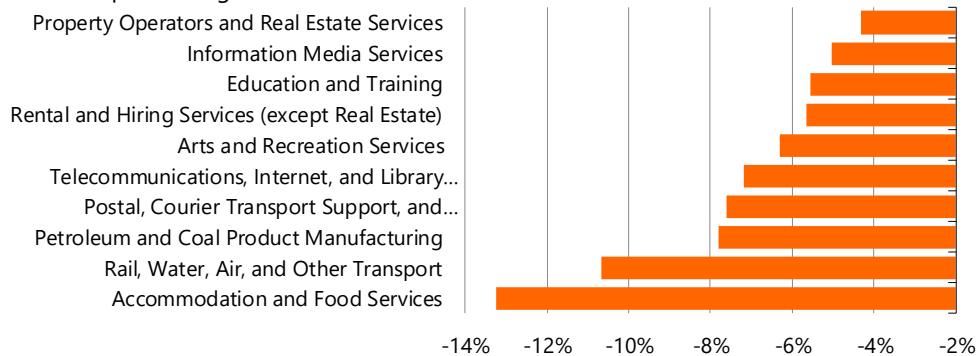


In this scenario, primary industries (agriculture, forestry, and mining<sup>2</sup>) are expected to do better than BAU, along with non-food manufacturing and construction (see Graph 9). Despite weaker global economic conditions in Scenario 5 negatively affecting New Zealand's exports, the most significant effects show through in more sustained weakness in areas such as tourism, education, and arts and recreation (see Graph 10). Output in these industries is typically more reliant on labour, so the consequent drop in required workers frees up resources for other industries. Primary and manufacturing industries then become more willing to take on labour given that it has become relatively cheaper and more available due to the fortunes of the services industries.

Graph 10

### Employment relative to BAU, 2025

10 worst performing industries, Scenario 5



Forestry and wood processing areas tend to be the ones that show the most positive employment outcomes by 2025 relative to BAU. This trend means that several North Island TAs appear in Graph 11. Parts of the lower North Island also show through as relatively good performers through to 2025, possibly reflecting spill-over effects of Wellington's greater resilience to the economic downturn due to the significant presence of public sector workers in the region.

Persistently lower service exports result in tourism-reliant areas continuing to struggle, particularly in the South Island. We note that, although Queenstown-Lakes' employment is forecast to rebound by an average of 5.0%pa between 2021 and 2025, it will still be 4.0% below its 2020 level. This outcome represents a sharp contrast from the 13.4% growth in job numbers that we had anticipated for the District, prior to COVID-19, between 2020 and 2025.

One of the other key trends to show through in the data to 2025 is the emergence of some relative weakness in parts of the Golden Triangle in the upper North Island (see Graph 12). Although underperformance in Thames-Coromandel could be sheeted home to tourism, the Waikato and Waipā Districts, along with Tauranga City, are less expected. These results appear to reflect some spill-over from some weakness in Auckland, with

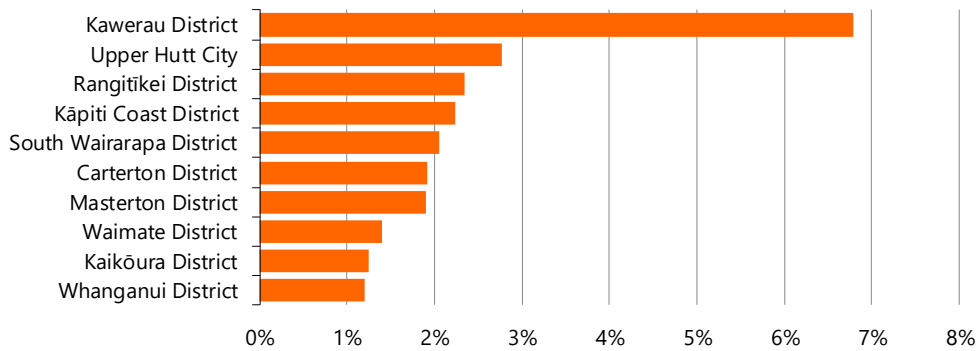
<sup>2</sup> Although mining performs better over the medium term in Scenario 5 than under BAU, this result reflects a relatively temporary shift of labour resources away from industries that have been hit hard by COVID-19, such as tourism. Over the longer term, carbon policies and other environmental considerations are expected to lead to significant declines in mining employment and output by 2031, with the gap between our BAU and scenario projections shrinking.

lower net migration and less pressure on the housing market potentially slowing the drift of workers and businesses to neighbouring regions.

Graph 11

Employment relative to BAU, 2025

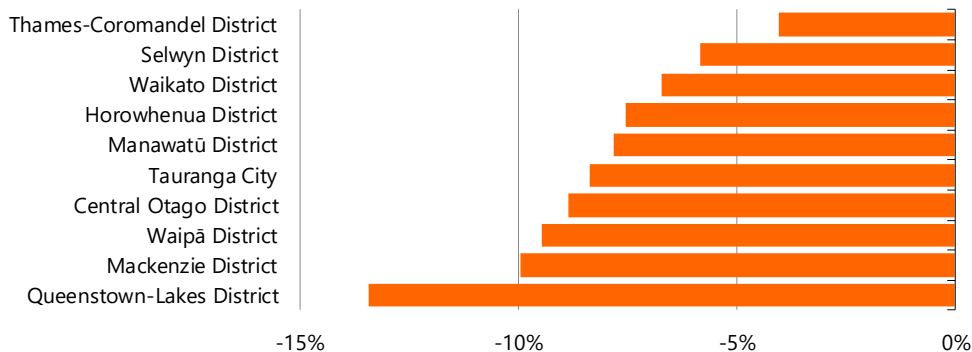
10 best performing local authorities, Scenario 5



Graph 12

Employment relative to BAU, 2025

10 worst performing local authorities, Scenario 5



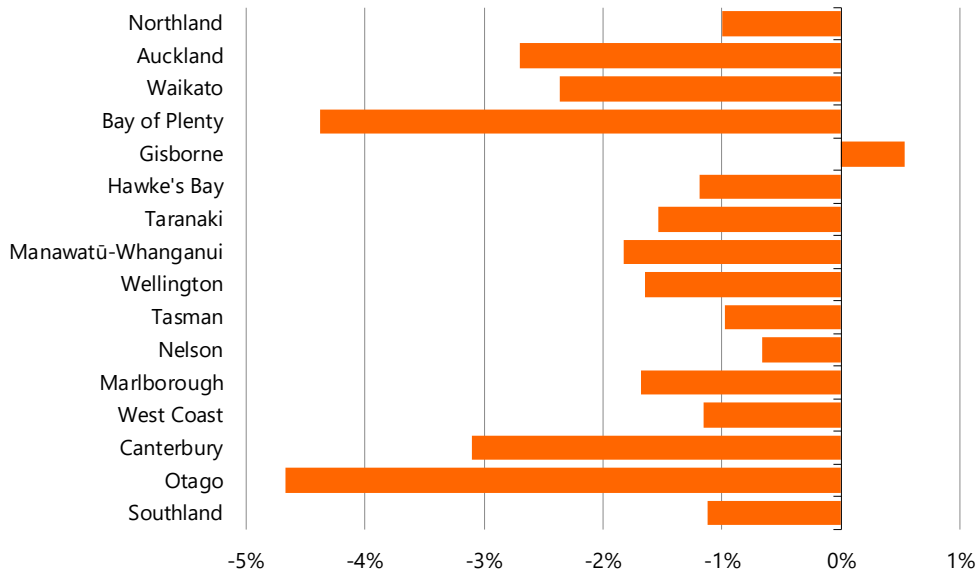
Total GDP is projected to grow by an average of 6.1%pa between 2021 and 2025. This increase equates to average growth of 1.5%pa between 2020 and 2025, but it would still leave economic activity 4.5% below our BAU projections in 2025.

There are few differences in the key trends between GDP and employment by 2025. The main divergence is that a weaker outlook for economic activity compared with BAU is expected to weigh on energy prices, negatively affecting value-add in the petroleum and coal product manufacturing industry and the electricity and gas supply industry. The latter industry, in particular, is not labour-intensive, so the effect on employment is more muted.

Graph 13

### Employment relative to BAU, 2025

By regional council, Scenario 5



### March 2031

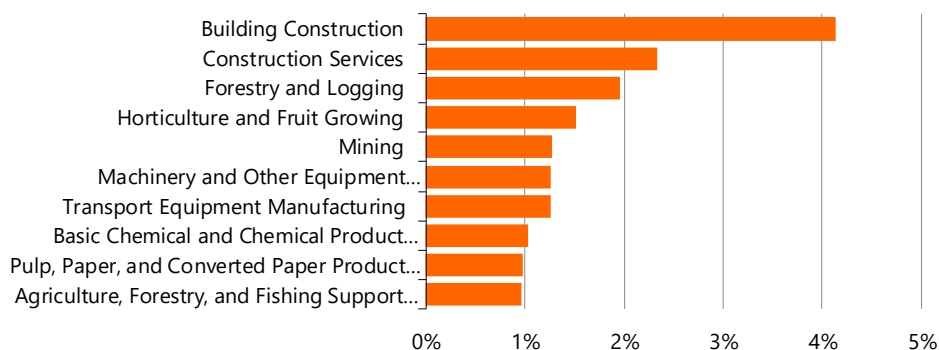
Total filled job numbers are projected to grow by a further 1.9%pa between 2025 and 2031. This growth would result in total employment almost returning to our pre-COVID BAU projections by 2031.

Although economy-wide employment is back at its BAU trend, our assumption of a permanent step down in demand for international tourism affects the industry mix of employment. The individual industry outcomes are very similar to the 2025 outcomes noted above, with primary industries, some non-food manufacturing, and construction all expected to have higher shares of total employment (see Graph 14). A range of service industries are negatively affected by the weaker service export position, including tourism-related services, media, financial services, and arts and recreation (see Graph 15).

Graph 14

### Employment relative to BAU, 2031

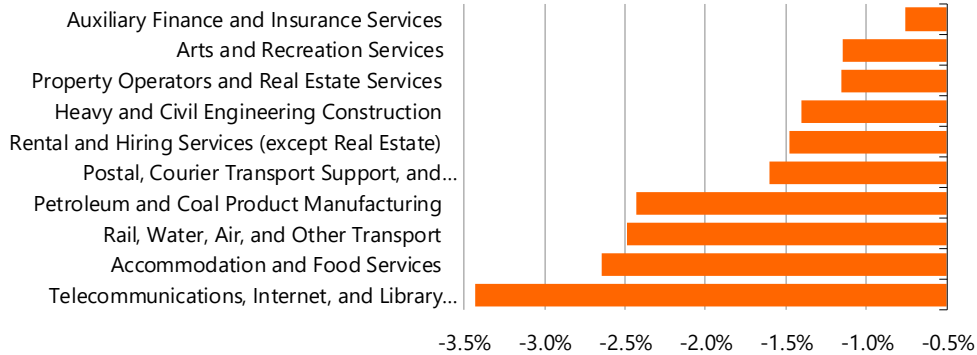
10 best performing industries, Scenario 5



Graph 15

Employment relative to BAU, 2031

10 worst performing industries, Scenario 5

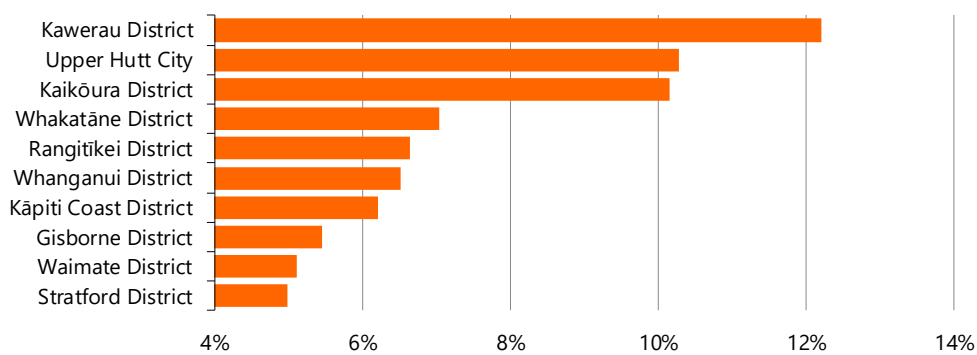


Geographically, the trends that had emerged by 2025 are expected to largely remain in place by 2031. Several forestry-dependent areas show through as relatively good performers, and parts of the lower North Island continue to appear with strong employment results relative to BAU (see Graph 16). Employment in some parts of the Golden Triangle in the Upper North Island remains a step below BAU levels, while the struggles also persist for areas reliant on tourism, particularly in the South Island (see Graph 17).

Graph 16

Employment relative to BAU, 2031

10 best performing local authorities, Scenario 5

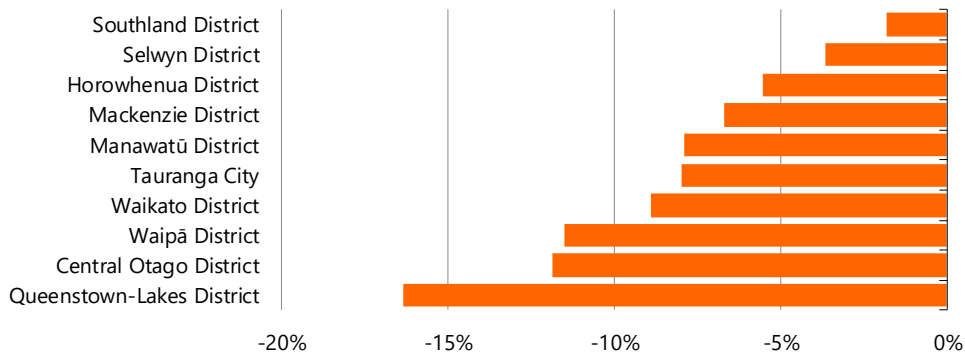


With regards to GDP by 2031, parts of the retail industry are expected to be outperforming their BAU projections in Scenario 5. The strength of motor vehicle retailing reflects persistently lower fuel prices, indicating there could be more private vehicle use under this scenario. The other side of this outcome is that industries including mining, some areas of non-food manufacturing, and utilities could face lower value-add given the implied medium-term outlook for energy prices. These factors also show through in a weaker GDP result for New Plymouth.

Graph 17

Employment relative to BAU, 2031

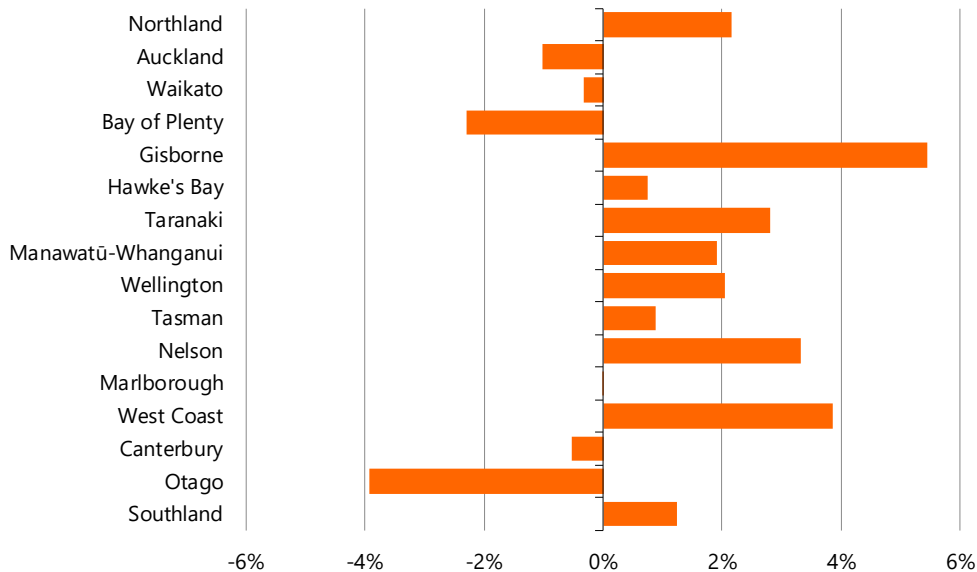
10 worst performing local authorities, Scenario 5



Graph 18

Employment relative to BAU, 2031

By regional council, Scenario 5



Key transport industries

In terms of key drivers for land transport activity, Table 4 shows that the biggest near-term effects of COVID-19 on value-add will be experienced by forestry, mining, retailing, road transport, and logistics. These declines reflect a range of factors, including weaker global demand conditions, an inability to work under the lockdown, and reduced consumer spending due to job losses and incomes cuts.

By 2025, forestry and construction are expected to be performing ahead of BAU. Retailing, road transport, and logistics are still projected to be operating at levels below BAU, although all three of these industries will have rebounded strongly from the sharp decline in activity during 2020/21.

By 2031, most industries are expected to have recovered to close to BAU levels. Value-add for construction and retailing is projected to be 1.2-1.5% ahead of BAU. Mining is

likely to be the biggest underperformer over the medium term, with low energy prices compounding the effects of probable environmental policies on the industry's activity between 2025 and 2031.

Table 4

**Key industries for transport activity - Treasury Scenario 5**

2019 \$m, Infometrics forecasts

	<b>Mar 20</b>	<b>%pa</b>	<b>Mar 21</b>	<b>%pa</b>	<b>Mar 25</b>	<b>%pa</b>	<b>Mar 31</b>
Sheep, Beef, and Dairy	9,074	-11.8%	8,001	3.9%	9,312	1.0%	9,863
Forestry	435	-17.6%	359	7.2%	473	-1.3%	438
Mining	3,525	-18.9%	2,860	2.4%	3,141	-6.2%	2,145
Food Manufacturing	9,007	-13.3%	7,813	4.3%	9,243	1.7%	10,221
Non-Food Manufacturing	19,246	-13.5%	16,657	6.1%	21,135	1.7%	23,429
Construction	19,540	-14.7%	16,668	5.0%	20,224	2.6%	23,582
Retailing	15,579	-16.7%	12,983	9.9%	18,907	4.9%	25,247
Road Transport	4,700	-21.5%	3,691	8.7%	5,144	3.0%	6,156
Logistics	5,960	-29.2%	4,219	11.0%	6,413	5.5%	8,831



## Treasury Scenario 1

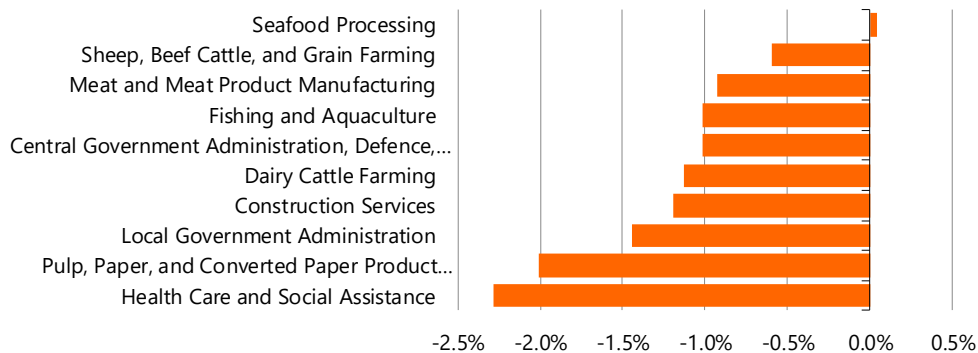
### March 2021

Scenario 1 is slightly less negative than Scenario 5 in the near term, with its assumption that global economic activity does not contract as much over 2020 and 2021. Total filled job numbers are forecast to drop 4.6%, to be 6.4% below BAU. All industries are expected to record a drop in employment, with construction, tourism-related, and media industries coming under the most pressure. As in Scenario 5, agriculture, food manufacturing, government, and health industries are anticipated to be generally the least affected by COVID-19 (see Graph 19 and Graph 20).

Graph 19

#### Employment relative to BAU, 2021

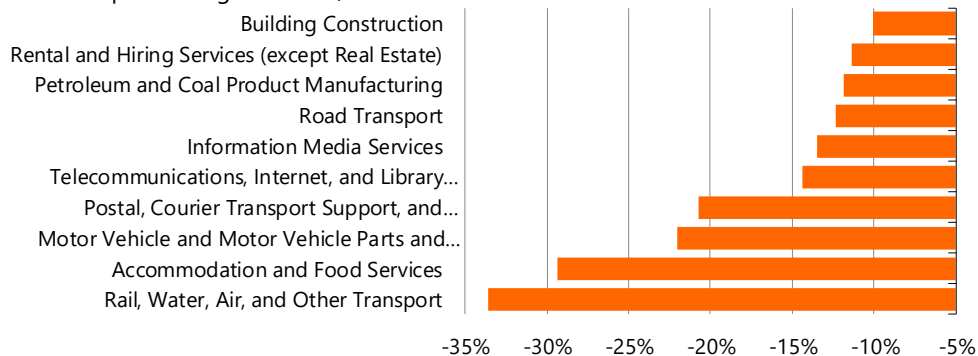
10 best performing industries, Scenario 1



Graph 20

#### Employment relative to BAU, 2021

10 worst performing industries, Scenario 1



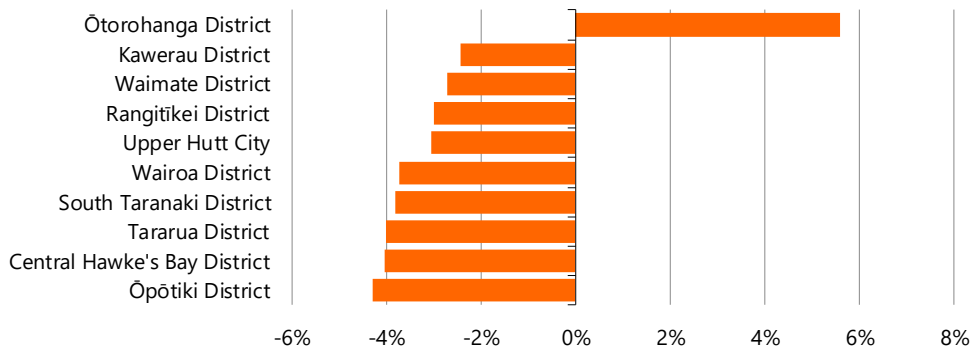
The effects by TA are also largely similar to those seen under Scenario 5. Provincial areas reliant on agriculture tend to be less heavily affected by the downturn, with North Island areas again dominating the best performers (see Graph 21). Tourism-dependent areas will be hit the hardest over the next year, with employment in Mackenzie and Queenstown-Lakes forecast to drop by more than 20% (see Graph 22).

Although Christchurch does not appear among the 10 worst performers (as it does in Scenario 5 for 2021), it is only just outside this grouping. We also note that Selwyn's

heavy reliance on residential construction will result in a significant drop in employment in the District.

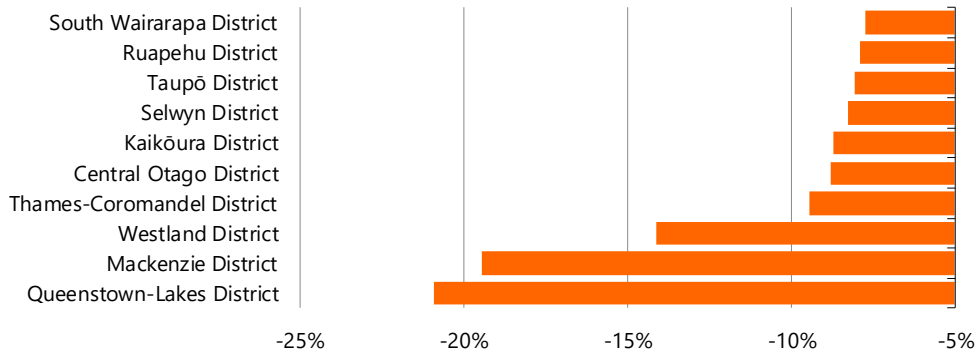
**Graph 21**

**Employment relative to BAU, 2021**  
10 best performing local authorities, Scenario 1



**Graph 22**

**Employment relative to BAU, 2021**  
10 worst performing local authorities, Scenario 1



Nationwide GDP is expected to drop 13.4% under this scenario to be 16.2% below BAU in 2021. The industry and geographic mixes are similar to the ones in our employment projections, with Christchurch appearing as one of most heavily affected TAs in terms of GDP.

**March 2025**

Under Scenario 1, total filled job numbers are forecast to increase at an average rate of 3.1%pa between 2021 and 2025. By March 2025, this growth would push total employment up by 7.8% from its 2020 level, implying average growth of 1.5%pa over the five-year period. Employment would then be only 0.5% below our pre-COVID projections for BAU.

The faster recovery in the economy between 2021 and 2025 in Scenario 1 effectively arises from two key assumptions: that the global economy recovers more quickly than in Scenario 5, and that there is less structural change in services export patterns, particularly international tourism.

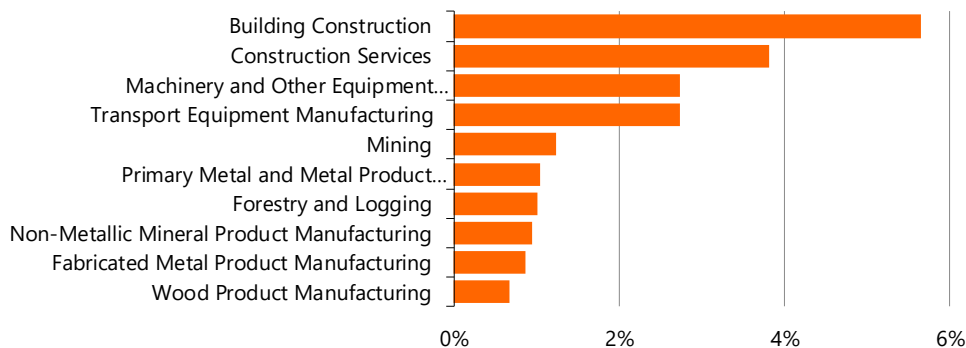
Nevertheless, there is an element of “path dependency” that shows through in our projections by industry. In other words, the significant loss of capacity in tourism-related industries in the near term has implications for employment in those industries over the longer term. The persistent changes in these industries can be thought of enforced rationalisation, productivity improvements, or a change in focus towards higher-value tourism, rather than the focus on increasing visitor numbers that has typified tourism’s growth over the last decade or longer.

As a result, non-food manufacturing and construction are expected to have higher employment outcomes by 2025 than under BAU conditions (see Graph 23). In contrast, tourism-related services, media, government, health, and arts and recreation are all anticipated to have employment levels still sitting 1.5% to 4.5% below BAU levels (see Graph 24).

**Graph 23**

**Employment relative to BAU, 2025**

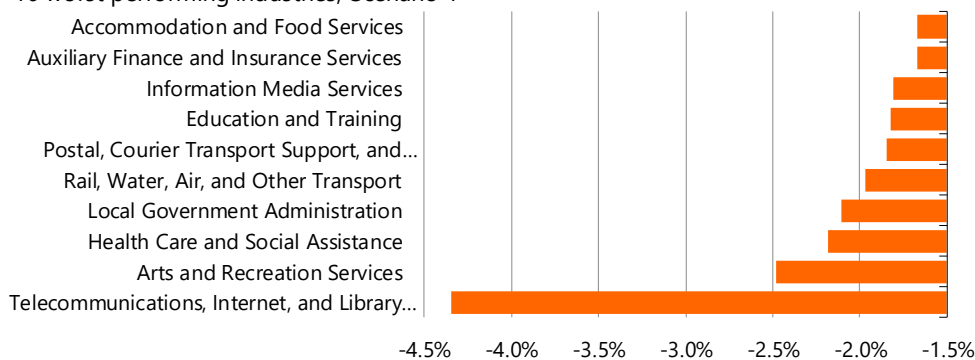
10 best performing industries, Scenario 1



**Graph 24**

**Employment relative to BAU, 2025**

10 worst performing industries, Scenario 1



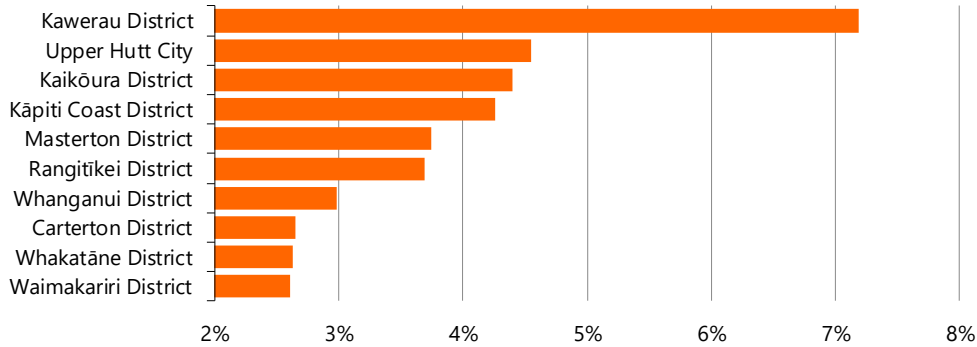
As in Scenario 5, many of the better-performing TAs by 2025 have a strong forestry or wood processing industry. The lower North Island continues to feature strongly (see Graph 25), and this result is likely to be a lagged effect of public sector resilience leading to less downward pressure on the housing market in this part of the country. One of the implications of this outcome is that construction activity could be a contributor to the lower North Island’s relative strength in terms of employment numbers.

Scenario 1 shows a similar geographic pattern to Scenario 5 for those areas that are likely to struggle a bit more: parts of the Golden Triangle in the upper North Island, and many tourism-dependent areas in the South Island (see Graph 26). Employment in Queenstown-Lakes is forecast to recover by 5.9%pa between 2021 and 2025, taking total job numbers in the District back to pre-COVID levels. This employment result is about 4.1% better than the District's outcome under Scenario 5.

Graph 25

Employment relative to BAU, 2025

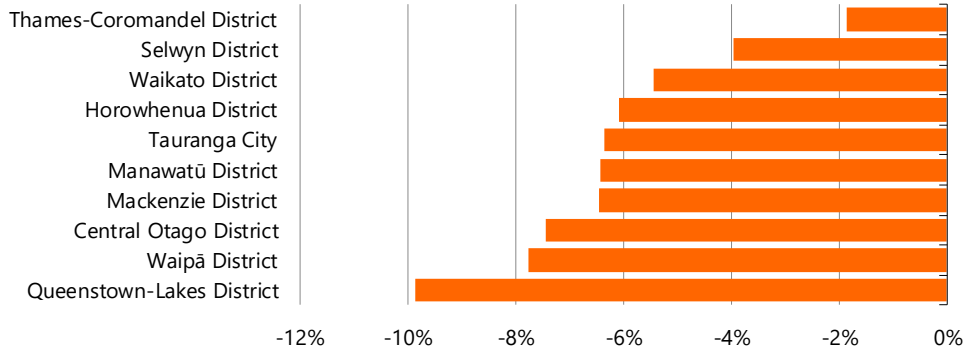
10 best performing local authorities, Scenario 1



Graph 26

Employment relative to BAU, 2025

10 worst performing local authorities, Scenario 1



Total GDP is projected to increase at an average rate of 6.4%pa between 2021 and 2025. This growth would push average growth over the five years between 2020 and 2025 up to 2.1%pa, which would have been a reasonable performance even without any pandemic taking place. This scenario relies on the New Zealand economy being able to bounce back very quickly from the effects of COVID-19, without any structural limitations or systemic issues preventing a quick return to “normal” for the economy after the shock.

GDP trends by industry and geographic area out to 2025 closely mirror trends in projected employment. As in Scenario 5, the petroleum coal product manufacturing industry and the electricity and gas supply industry are likely to struggle with lower value-add due to some weakness in energy prices.

## March 2031

Employment is forecast to increase by another 1.6%pa between 2025 and 2031. This growth rate is slower than in Scenario 5, reflecting the assumption in Scenario 5 that the economy will still be operating below potential due to the medium-term structural effects of the COVID-19 pandemic in New Zealand as well as some persistent weakness in global demand conditions. By 2031, total employment in Scenario 1 is essentially in line with our BAU projections.

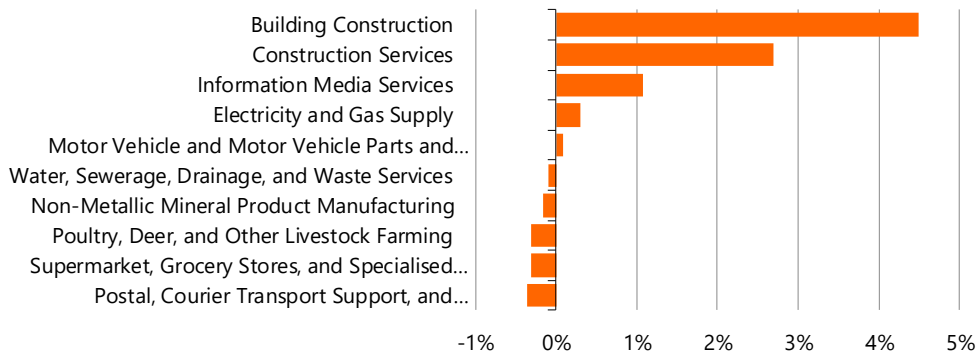
As we previously noted, path dependency plays a role in determining employment and economic outcomes under each scenario. Thus by 2031, segments of the utilities and construction industries have employment levels slightly above BAU (see Graph 27).

Nevertheless, not all industries are constrained by where they have come from. Parts of retailing and logistics have recovered from weakness early in the forecast period to be among the better performers. These industries look to have been buoyed by a persistent period of relatively strong spending growth as the labour market and consumer spending have recovered in the years after the shock of the pandemic.

Graph 27

### Employment relative to BAU, 2031

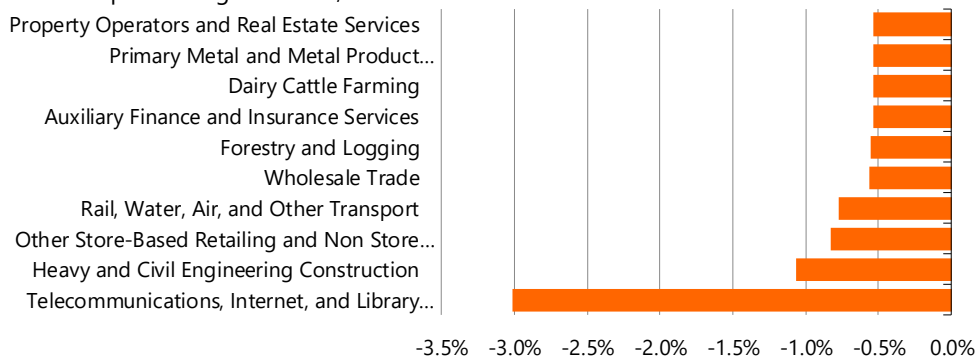
10 best performing industries, Scenario 1



Graph 28

### Employment relative to BAU, 2031

10 worst performing industries, Scenario 1



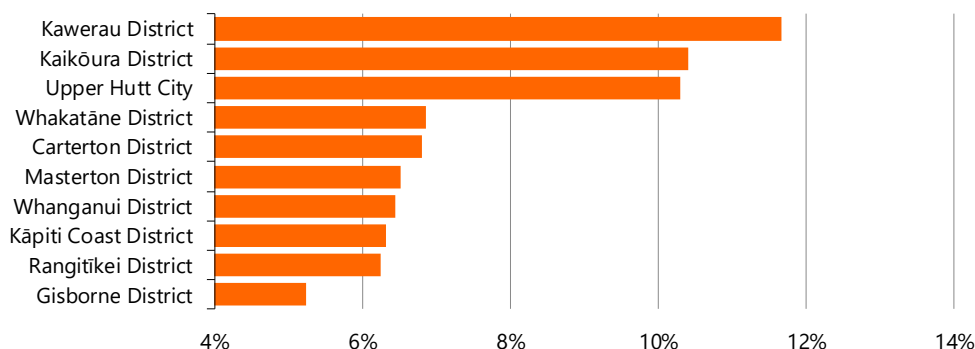
Graph 28 shows that there is no clear pattern to the industries with employment outcomes below BAU. This absence of any pattern reflects the lack of any persistent effects of the current shock to the New Zealand economy in 10 years' time.

Nevertheless, the persistence of employment and population trends from 2025 is more noticeable on a geographic basis. By 2031, many of the provincial and lower North Island areas that had held up relatively well between 2021 and 2025 have been able to hold onto or extend their gains (see Graph 29). Similarly, employment numbers in parts of the upper North Island's Golden Triangle, along with many tourism-dependent areas in the South Island, will remain well below their BAU levels (see Graph 30).

**Graph 29**

**Employment relative to BAU, 2031**

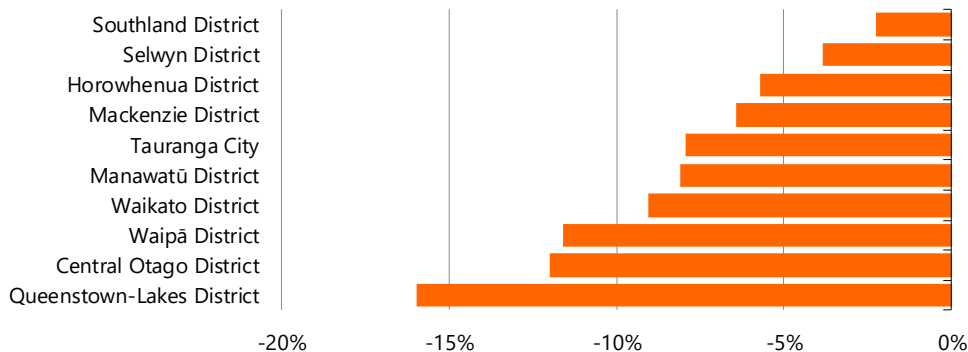
10 best performing local authorities, Scenario 1



**Graph 30**

**Employment relative to BAU, 2031**

10 worst performing local authorities, Scenario 1



As is the case for employment, trends in GDP by 2031 are also quite mixed by industry, and we would not read too much into any individual industry performance. Scenario 5 showed that the fortunes of the energy sector could have an important effect of New Plymouth's GDP by 2031, and this outcome is also the case in this scenario.

**Key transport industries**

The initial shock of the COVID-19 pandemic and lockdown on key industries for land transport activity under Scenario 1 is smaller than in Scenario 5, but the pattern across industries is essentially the same (see Table 5). By 2025, most of the industries have

recovered towards BAU. In general, the differences between our BAU projections for 2025-31 and our Scenario 1 projections are smaller than the difference with Scenario 5. This outcome is consistent with the absence of any permanent shocks to the economy, or changes to the structure of the economy that persist over the longer term.

Table 5

**Key industries for transport activity - Treasury Scenario 1**

2019 \$m, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Sheep, Beef, and Dairy	9,074	-10.1%	8,160	3.7%	9,442	0.6%	9,766
Forestry	435	-15.7%	367	5.1%	448	-0.8%	427
Mining	3,525	-14.6%	3,010	0.5%	3,069	-6.1%	2,110
Food Manufacturing	9,007	-11.9%	7,931	4.4%	9,417	1.3%	10,155
Non-Food Manufacturing	19,246	-12.5%	16,848	6.0%	21,242	1.5%	23,172
Construction	19,540	-13.9%	16,822	5.0%	20,445	2.5%	23,674
Retailing	15,579	-13.7%	13,448	9.9%	19,636	4.3%	25,212
Road Transport	4,700	-18.9%	3,813	8.8%	5,343	2.4%	6,159
Logistics	5,960	-26.8%	4,362	12.1%	6,894	4.4%	8,947

## Treasury Scenario 4

### March 2021

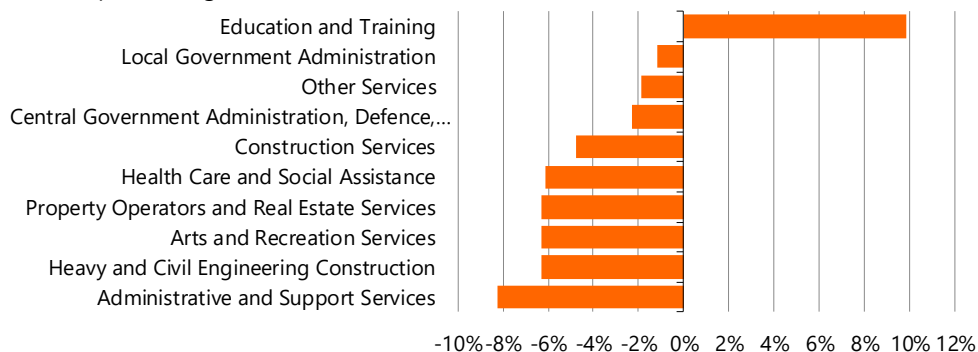
Scenario 4 involves a much larger shock to the economy in the near-term, with Treasury allowing for three months of Level 4 lockdown and another three months at COVID Alert Level 3. These conditions result in a 10.9% decline in employment during the March 2021 year, which would leave employment 12.6% below BAU levels.

All industries are forecast to experience a decline in employment except education and training, which is projected to record a 9.9% increase in job numbers (see Graph 31). This result comes about because of the extreme drop in economy-wide employment that occurs. The big rise in joblessness encourages more people to take up training or study, and this increase in demand for education services necessitates a rise in employment in our model. Although this relationship makes sense, the magnitude of the shocks we had input to the model means that the normal behavioural responses incorporated in the model are being severely stretched. It is possible that the education response would be less pronounced, so this particular result should be treated with some caution.

Graph 31

#### Employment relative to BAU, 2021

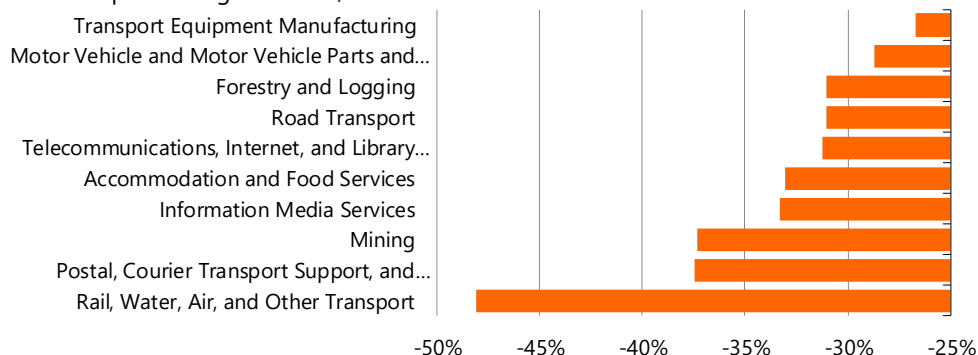
10 best performing industries, Scenario 4



Graph 32

#### Employment relative to BAU, 2021

10 worst performing industries, Scenario 4





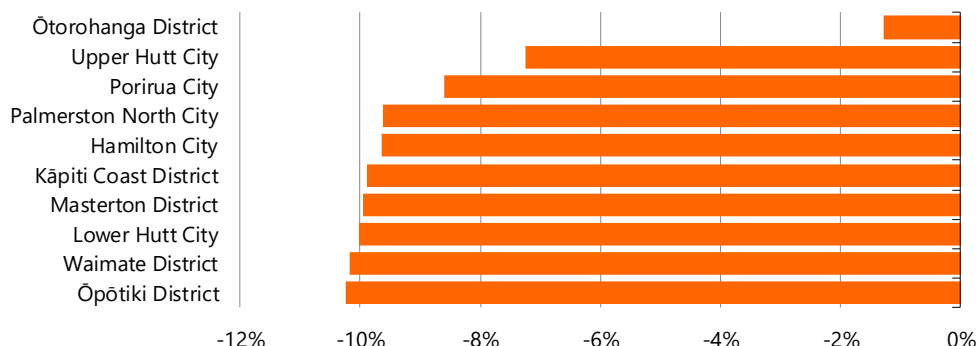
The biggest declines in employment are concentrated in forestry, mining, tourism-related, and media-related services (see Graph 32). The largest drop is for rail, water, air, and other transport, with a 46.7% fall in employment, reflecting the inability of people to travel domestically on top of the absence of international tourism.

The industries least affected over the first year of the forecasts are concentrated in the services areas. Many people in these industries can work from home. Additionally, government employees, including those in education and health, will continue to be required in lockdown conditions. Interestingly, construction also features as one of the less affected parts of the economy, which might reflect its ability to fully return to work at Level 3, notwithstanding some productivity issues caused by physical distancing or other health and safety requirements.

Agriculture, education, and public sector work are key determinants of the least affected TAs in the first year of Scenario 4 (see Graph 33). Hamilton and Palmerston North show through as education hubs, while the Wellington Region is somewhat insulated by the prevalence of government jobs. Ōpōtiki and Waimate are examples of areas where agricultural activity will continue, although both areas are still projected to suffer job losses of 10.0% over the year.

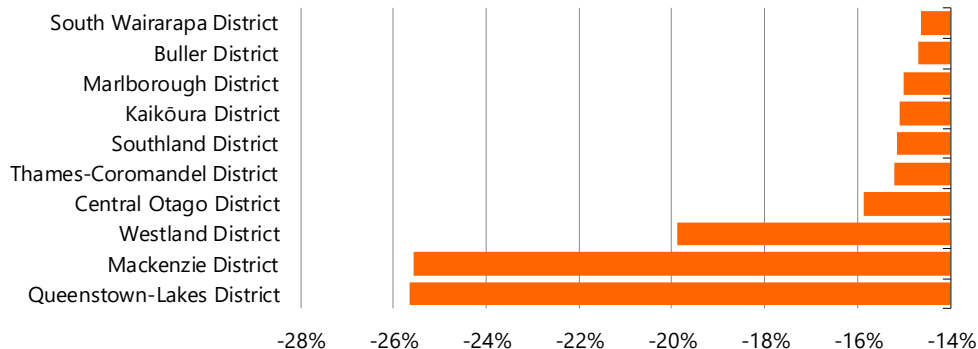
Graph 33

Employment relative to BAU, 2021  
10 best performing local authorities, Scenario 4



Graph 34

Employment relative to BAU, 2021  
10 worst performing local authorities, Scenario 4



Tourism-dependent areas across the South Island are hardest hit during 2021, with other areas such as Buller and Southland also being negatively affected by mining (see Graph 34). Notably, Queenstown-Lakes is forecast to suffer a 25.3% drop in employment, which is only about four percentage points worse than in Scenario 5. In other words, the effects of an extended lockdown tend to be spread more evenly across the country than those factors that have driven the baseline outcomes in Scenario 5, such as extended border closures.

Nationwide GDP is projected to plunge 27.8% under this scenario to be 30.1% below BAU. A few more provincial areas show through as being less affected by this measure, such as Whanganui and Rangitikei. However, the differences are marginal – for example, the two areas mentioned still suffer contractions in GDP of 24.9% and 26.4% respectively. The spread of industries affected, in terms of GDP, is broadly in line with the trends shown by employment numbers.

## March 2025

Scenario 4 incorporates the most rapid bounce back in the economy between 2021 and 2025, with employment increasing by an average of 4.7%pa. This increase implies average growth of 1.4%pa between 2020 and 2025, and it would leave total job numbers sitting about 1.0% below our pre-COVID BAU estimate for 2025. Total employment in 2025 lies slightly below the figure contained in Scenario 1.

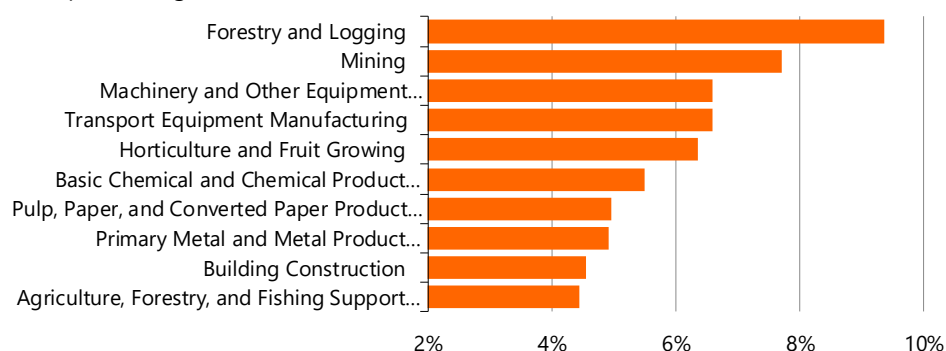
As in Scenario 1, this projection assumes that the global economy recovers relatively quickly from the shock of the COVID-19 pandemic. However, we have assumed that there is greater persistence of weaker international tourism activity and international education than in Scenario 1, and that this trend is still affecting New Zealand's economic outcomes by 2025.

As a result, tourism-related and media-related services, along with arts and recreation are among the more negatively affected industries for employment in five years' time (see Graph 36). After an initial burst of employment in 2021, education job numbers have dropped away by 2025. This outcome reflects the very strong employment growth over subsequent years that has taken people out of training, as well as a persistently lower level of international education. Health employment is also among the weaker performers, reflecting a failure to fully recover the job losses in peripheral health occupations, such as physiotherapy or optometry, four years earlier.

Graph 35

### Employment relative to BAU, 2025

10 best performing industries, Scenario 4

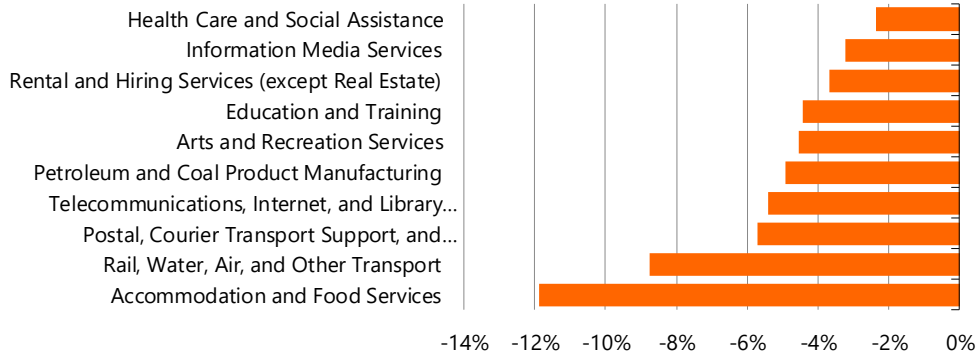


As we saw in Scenario 5, many primary industries benefit from the loss of tourism-related jobs, with sizable employment increases for agriculture, forestry, and mining, along with non-food manufacturing (see Graph 35). In most cases, the lift in job numbers in these industries is greater than in Scenario 5, reflecting the assumption of a stronger global economy and better demand conditions for commodity exports in Scenario 4 by 2025.

Graph 36

Employment relative to BAU, 2025

10 worst performing industries, Scenario 4



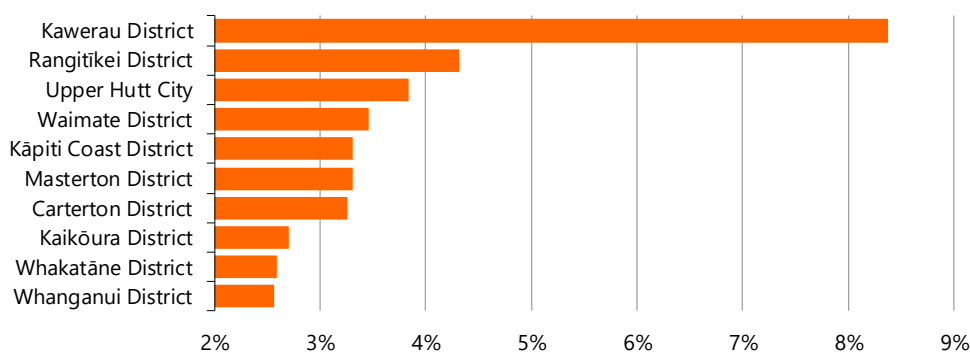
In 2025, the results by TA for Scenario 4 generally mirror what we have seen in Scenarios 1 and 5. Areas with a significant forestry presence are among the better employment performers, with the added strength of a solid global economic outlook reinforcing the recovery of many provincial areas (see Graph 37). The Wellington Region also continues to benefit from the stability offered by the government sector, along with its supportive effects for the housing market and construction activity.

Parts of the upper North Island's Golden Triangle, along with many tourism-dependent areas in the South Island, are still among the biggest strugglers by 2025 (see Graph 38). Under Scenario 4, Queenstown-Lakes' employment is forecast to grow by 6.9%pa between 2021 and 2025. However, this increase would still leave employment 2.5% below its 2020 level and 12.1% below BAU.

Graph 37

Employment relative to BAU, 2025

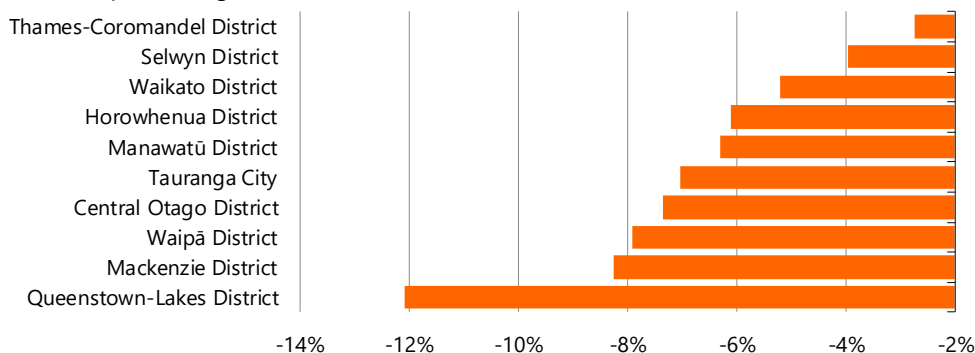
10 best performing local authorities, Scenario 4



Graph 38

**Employment relative to BAU, 2025**

10 worst performing local authorities, Scenario 4



Total GDP is forecast to surge by an average of 11.2%pa between 2021 and 2025, implying average growth between 2020 and 2025 of 2.0%pa. As in Scenario 1, this result assumes few structural limitations of systemic issues for the New Zealand economy that would otherwise prevent a rapid return to its pre-COVID trend in activity.

The GDP trends by industry and TA in 2025 are similar to those for forecast employment. We note that construction appears as one of the better performers in terms of economic activity, with more marked increases in value-add than employment for the industry between 2021 and 2025.

**March 2031**

For Scenario 4, our projected levels of employment and GDP by industry are the same as for Scenario 1, reflecting the same assumption that the economy returns to close to “normal” in a decade’s time. The growth rates in these variables between 2025 and 2031 will differ between Scenarios 1 and 4, particularly for those tourism-related industries that are still experiencing weak demand conditions by 2025 in Scenario 4. However, the structure of the economy and labour market is assumed to be the same across both Scenarios, so the variation in growth rates effectively represents the different assumed timing of when this economic disruption finally fades.

As a result of this identical endpoint, we have not detailed the industry or TA outcomes in this section. The reader can revisit the March 2031 section for Scenario 1 to obtain the key points.

**Key transport industries**

The more extended lockdown assumed in Scenario 4 leads to a much larger decline in activity across the key industries for land transport activity in 2021 than in Scenarios 1 or 5 (see Table 6). The most significant effects are recorded by forestry and mining, reflecting the inability of these industries to operate at the Level 4 lockdown. By 2025, the persistence of weaker demand conditions for tourism and other service imports mean that retailing, road transport, and logistics are still operating at below BAU levels. This shortfall in activity is offset, to some extent, by other industries such as forestry, mining, and non-food manufacturing.

We note that, by 2025, the improvement in broader domestic and international economic conditions means that the below-par activity levels in the likes of road transport or logistics are less pronounced than in Scenario 5.

By 2031, activity across the key industries affecting land transport activity is in line with Scenario 1 and generally close to BAU, reflecting the absence of any persistent structural changes to the economy over the longer term.

**Table 6**

**Key industries for transport activity - Treasury Scenario 4**

2019 \$m, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Sheep, Beef, and Dairy	9,074	-25.9%	6,725	9.5%	9,661	0.2%	9,766
Forestry	435	-42.0%	252	17.6%	482	-2.0%	427
Mining	3,525	-48.5%	1,817	15.6%	3,244	-6.9%	2,110
Food Manufacturing	9,007	-31.3%	6,187	11.3%	9,504	1.1%	10,155
Non-Food Manufacturing	19,246	-34.3%	12,639	14.5%	21,730	1.1%	23,172
Construction	19,540	-23.6%	14,929	7.7%	20,097	2.8%	23,674
Retailing	15,579	-27.4%	11,313	14.5%	19,471	4.4%	25,212
Road Transport	4,700	-41.2%	2,762	17.6%	5,288	2.6%	6,159
Logistics	5,960	-46.8%	3,168	20.0%	6,578	5.3%	8,947

## Appendix 1: Scenario 5 key outputs

Table 7

### Employment by local authority - Treasury Scenario 5

Total filled jobs, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Far North District	25,276	-5.9%	23,789	2.2%	25,991	1.5%	28,365
Whāngārei District	41,258	-4.0%	39,613	2.5%	43,700	2.0%	49,228
Kaipara District	8,676	-5.7%	8,183	2.1%	8,909	1.5%	9,752
Auckland	924,606	-5.1%	877,412	2.8%	980,697	2.1%	1,109,583
Thames-Coromandel District	13,086	-8.5%	11,967	2.5%	13,226	1.6%	14,555
Hauraki District	7,620	-4.9%	7,247	1.7%	7,756	1.1%	8,301
Waikato District	24,196	-5.5%	22,853	2.4%	25,134	1.6%	27,581
Matamata-Piako District	18,374	-4.6%	17,535	2.3%	19,217	1.3%	20,763
Hamilton City	97,945	-2.9%	95,139	2.9%	106,513	2.5%	123,190
Waipā District	24,752	-5.2%	23,473	1.3%	24,683	1.3%	26,598
Ōtorohanga District	4,836	3.1%	4,985	-1.2%	4,755	1.2%	5,100
South Waikato District	9,975	-2.4%	9,735	2.8%	10,864	1.7%	12,012
Waitomo District	5,056	-4.5%	4,827	0.8%	4,981	0.4%	5,096
Taupō District	18,891	-8.8%	17,220	2.6%	19,108	1.5%	20,926
Western Bay of Plenty District	24,138	-2.0%	23,645	3.5%	27,090	2.2%	30,940
Tauranga City	74,816	-4.1%	71,717	1.9%	77,285	2.0%	86,898
Rotorua District	35,978	-5.7%	33,915	3.2%	38,449	2.1%	43,535
Whakatāne District	15,798	-3.7%	15,219	2.3%	16,643	1.8%	18,550
Kawerau District	2,907	-1.9%	2,852	3.7%	3,297	1.6%	3,620
Ōpōtiki District	3,823	-4.2%	3,664	1.3%	3,866	1.0%	4,093
Gisborne District	22,235	-2.9%	21,601	2.6%	23,930	1.7%	26,499
Wairoa District	3,417	-2.7%	3,325	1.3%	3,507	1.1%	3,750
Hastings District	45,419	-3.2%	43,978	2.6%	48,665	1.6%	53,646
Napier City	28,466	-4.6%	27,167	2.9%	30,442	2.1%	34,502
Central Hawke's Bay District	6,428	-2.7%	6,252	1.6%	6,655	0.6%	6,909
New Plymouth District	41,489	-4.7%	39,523	2.4%	43,386	2.0%	48,913
Stratford District	3,413	-4.4%	3,264	1.9%	3,514	1.3%	3,801
South Taranaki District	14,086	-2.8%	13,694	1.6%	14,613	0.6%	15,128
Ruapehu District	6,422	-6.0%	6,040	2.1%	6,561	1.4%	7,131
Whanganui District	20,157	-2.9%	19,580	2.9%	21,939	2.2%	24,937
Rangitikei District	6,591	-3.3%	6,375	1.9%	6,871	1.0%	7,296
Manawatū District	12,320	-3.9%	11,840	1.8%	12,711	1.4%	13,789
Palmerston North City	52,999	-3.7%	51,031	2.7%	56,669	2.2%	64,657
Taranua District	7,656	-2.9%	7,436	1.7%	7,966	0.8%	8,378
Horowhenua District	11,279	-4.1%	10,820	1.2%	11,362	1.5%	12,411
Kāpiti Coast District	17,738	-3.5%	17,117	3.9%	19,910	2.1%	22,532
Porirua City	20,952	-3.6%	20,207	2.7%	22,443	2.4%	25,813
Upper Hutt City	13,845	-2.6%	13,490	2.1%	14,645	2.1%	16,608
Lower Hutt City	50,759	-3.1%	49,179	2.4%	54,013	1.9%	60,616
Wellington City	171,863	-4.3%	164,437	2.9%	184,033	2.2%	209,512
Masterton District	12,490	-4.3%	11,956	2.4%	13,126	1.5%	14,392
Carterton District	3,778	-4.9%	3,594	2.6%	3,986	1.9%	4,456
South Wairarapa District	4,255	-6.1%	3,995	2.6%	4,420	1.7%	4,881
<b>Total New Zealand</b>	<b>2,575,549</b>	<b>-4.9%</b>	<b>2,448,655</b>	<b>2.7%</b>	<b>2,719,260</b>	<b>1.9%</b>	<b>3,052,460</b>

*Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios*

Table 8

**Employment by local authority - Treasury Scenario 5**

Total filled jobs, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Tasman District	25,098	-4.6%	23,941	2.8%	26,696	1.7%	29,624
Nelson City	30,054	-5.4%	28,417	2.9%	31,866	1.9%	35,726
Marlborough District	27,467	-5.5%	25,964	2.6%	28,760	1.2%	30,979
Kaikōura District	1,936	-12.9%	1,687	2.7%	1,877	2.2%	2,144
Buller District	4,027	-6.2%	3,777	2.6%	4,178	1.1%	4,465
Grey District	7,390	-4.6%	7,048	1.9%	7,596	1.7%	8,387
Westland District	4,660	-12.4%	4,081	4.6%	4,883	2.0%	5,507
Hurunui District	6,190	-6.9%	5,762	2.0%	6,231	1.1%	6,657
Waimakariri District	19,252	-3.2%	18,631	3.3%	21,225	2.0%	23,954
Christchurch City	231,085	-5.5%	218,345	2.4%	239,778	1.9%	268,658
Selwyn District	23,317	-9.2%	21,161	2.2%	23,067	2.1%	26,155
Ashburton District	18,784	-3.4%	18,141	2.2%	19,778	1.4%	21,451
Timaru District	25,321	-4.1%	24,270	2.3%	26,573	1.3%	28,666
Mackenzie District	2,854	-23.5%	2,184	3.5%	2,507	1.8%	2,795
Waimate District	3,105	-2.8%	3,019	1.8%	3,239	1.3%	3,495
Waitaki District	11,527	-4.7%	10,982	1.9%	11,863	1.0%	12,623
Central Otago District	13,298	-6.3%	12,463	1.6%	13,274	1.2%	14,276
Queenstown-Lakes District	31,869	-21.1%	25,135	5.0%	30,601	2.4%	35,297
Dunedin City	65,453	-4.1%	62,775	3.5%	72,169	2.1%	81,935
Clutha District	9,221	-3.3%	8,915	2.0%	9,637	0.8%	10,128
Southland District	17,347	-6.1%	16,282	1.9%	17,535	0.4%	17,958
Gore District	6,967	-3.3%	6,734	2.2%	7,356	1.2%	7,885
Invercargill City	29,267	-4.2%	28,050	2.6%	31,043	1.8%	34,452
<b>Total New Zealand</b>	<b>2,575,549</b>	<b>-4.9%</b>	<b>2,448,655</b>	<b>2.7%</b>	<b>2,719,260</b>	<b>1.9%</b>	<b>3,052,460</b>

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios

Table 9

**Employment by region - Treasury Scenario 5**

Total filled jobs, Infometrics forecasts

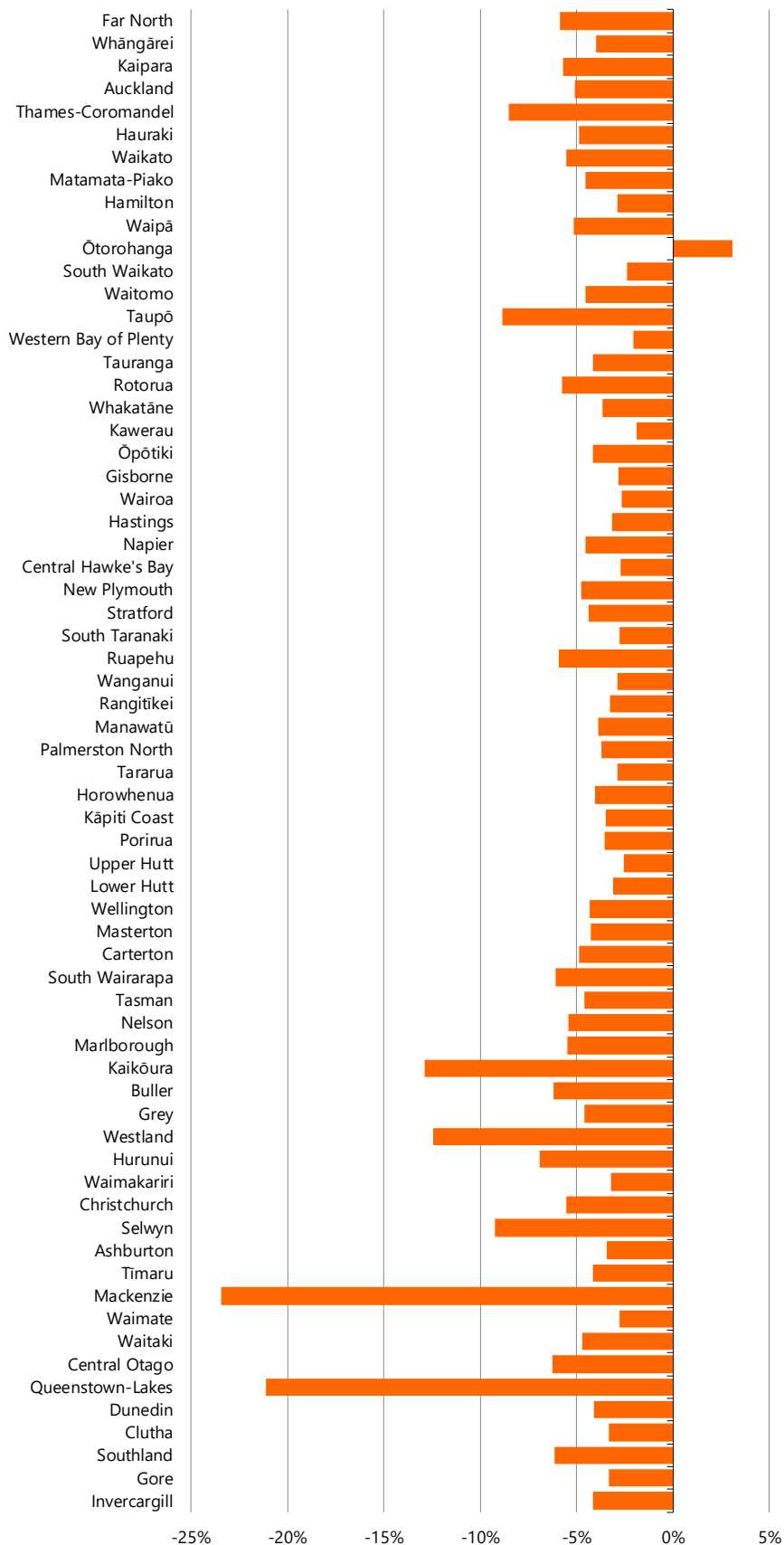
	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Northland	75,210	-4.8%	71,584	2.4%	78,600	1.8%	87,344
Auckland	924,606	-5.1%	877,412	2.8%	980,697	2.1%	1,109,583
Waikato	224,731	-4.3%	214,981	2.4%	236,237	1.9%	264,123
Bay of Plenty	157,460	-4.1%	151,011	2.5%	166,629	2.0%	187,635
Gisborne	22,235	-2.9%	21,601	2.6%	23,930	1.7%	26,499
Hawke's Bay	83,730	-3.6%	80,721	2.5%	89,269	1.7%	98,808
Taranaki	58,988	-4.3%	56,481	2.2%	61,514	1.6%	67,842
Manawatū-Whanganui	117,423	-3.7%	113,122	2.3%	124,079	1.9%	138,601
Wellington	295,680	-4.0%	283,976	2.8%	316,576	2.1%	358,809
Tasman	25,098	-4.6%	23,941	2.8%	26,696	1.7%	29,624
Nelson	30,054	-5.4%	28,417	2.9%	31,866	1.9%	35,726
Marlborough	27,467	-5.5%	25,964	2.6%	28,760	1.2%	30,979
West Coast	16,076	-7.3%	14,906	2.8%	16,656	1.6%	18,360
Canterbury	331,844	-5.6%	313,201	2.4%	344,273	1.8%	383,973
Otago	131,367	-8.4%	120,270	3.4%	137,545	1.9%	154,259
Southland	53,581	-4.7%	51,066	2.3%	55,935	1.3%	60,295
<b>Total New Zealand</b>	<b>2,575,549</b>	<b>-4.9%</b>	<b>2,448,655</b>	<b>2.7%</b>	<b>2,719,260</b>	<b>1.9%</b>	<b>3,052,460</b>

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios

Graph 39

Employment growth 2020-2021

%pa, Scenario 5

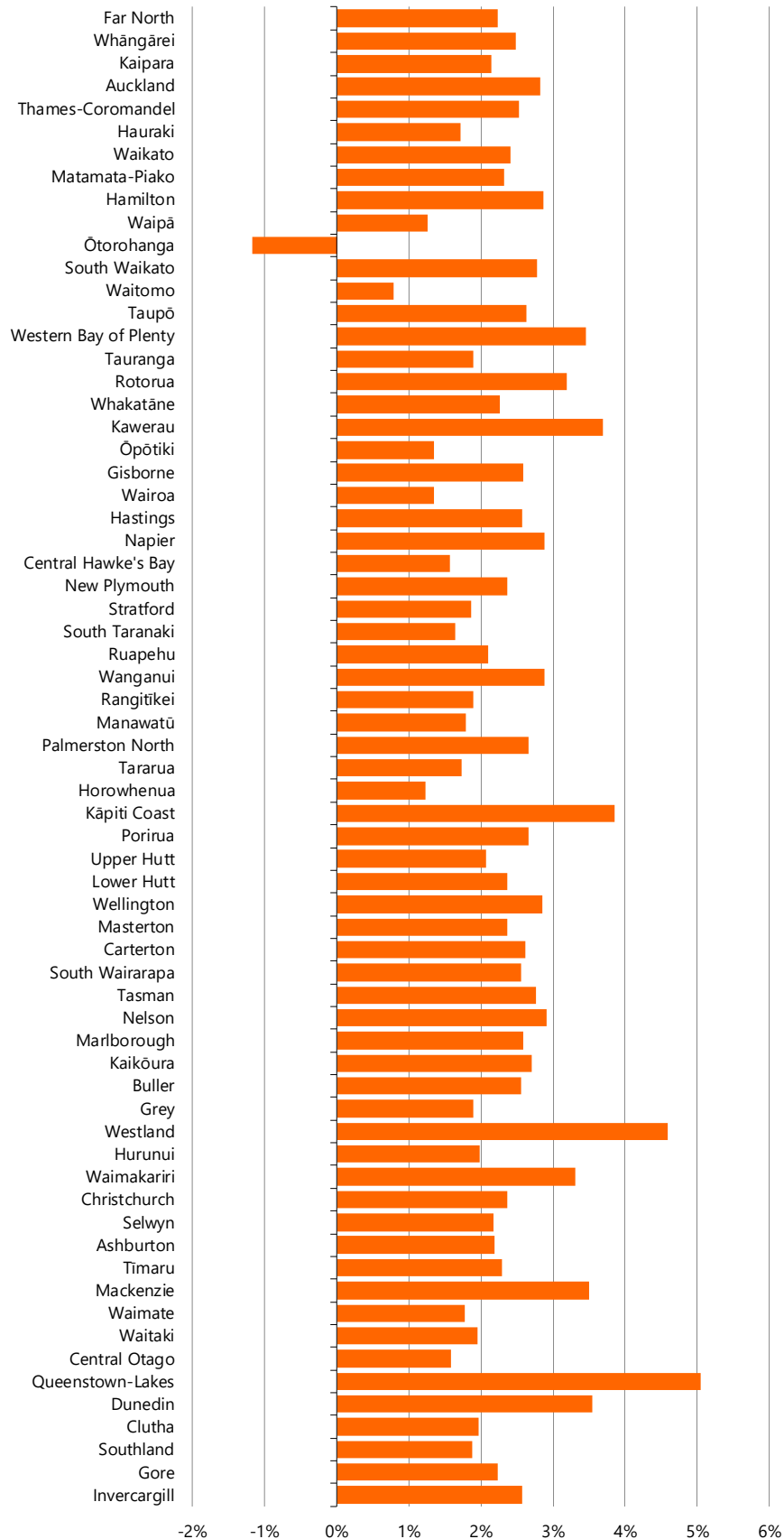




Graph 40

Employment growth 2021-2025

%pa, Scenario 5



Graph 41

Employment growth 2025-2031

%pa, Scenario 5

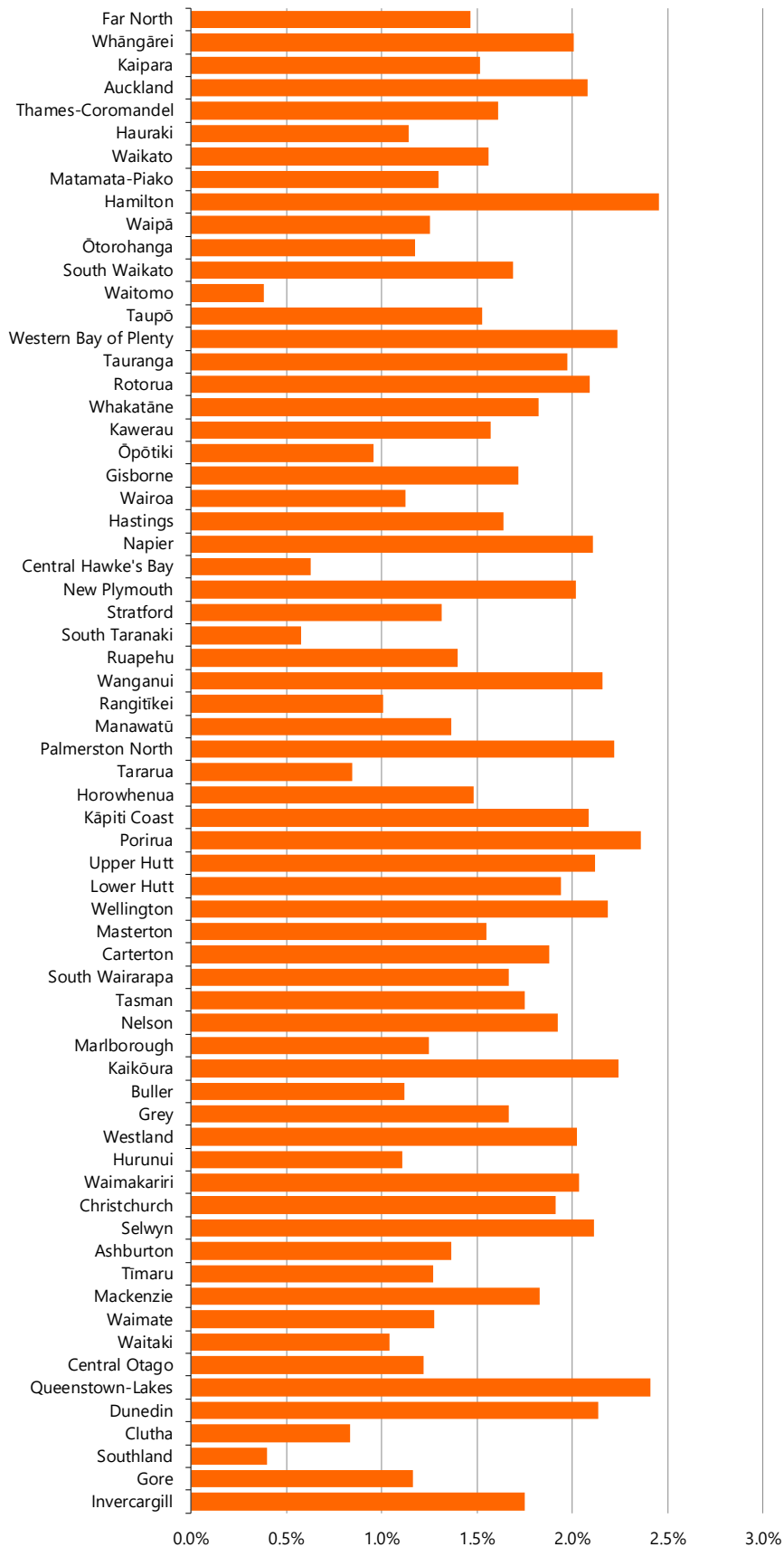


Table 10

**GDP by local authority - Treasury Scenario 5**

2019 \$m, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Far North District	2,461	-15.1%	2,090	5.5%	2,590	2.6%	3,022
Whāngārei District	4,502	-15.1%	3,822	5.7%	4,762	2.5%	5,534
Kaipara District	913	-14.4%	781	5.8%	978	2.8%	1,157
Auckland	115,906	-15.1%	98,422	6.5%	126,676	3.1%	151,849
Thames-Coromandel District	1,310	-16.2%	1,098	6.2%	1,395	2.9%	1,660
Hauraki District	1,050	-15.0%	893	4.2%	1,052	0.6%	1,089
Waikato District	2,946	-15.4%	2,491	4.6%	2,978	2.1%	3,366
Matamata-Piako District	2,090	-14.0%	1,798	5.5%	2,230	2.4%	2,564
Hamilton City	10,030	-13.3%	8,693	6.1%	11,006	3.1%	13,213
Waipā District	2,710	-14.5%	2,318	4.7%	2,782	2.0%	3,138
Ōtorohanga District	594	-8.6%	542	2.9%	608	2.3%	697
South Waikato District	1,297	-11.9%	1,142	6.5%	1,472	2.9%	1,746
Waitomo District	820	-16.1%	687	2.5%	758	-0.5%	738
Taupō District	2,317	-16.4%	1,937	5.5%	2,397	2.2%	2,736
Western Bay of Plenty District	2,140	-12.5%	1,872	6.7%	2,431	3.1%	2,927
Tauranga City	7,126	-14.2%	6,113	5.9%	7,690	3.3%	9,350
Rotorua District	3,507	-14.8%	2,990	6.5%	3,851	3.1%	4,620
Whakatāne District	1,637	-14.7%	1,396	5.0%	1,700	2.3%	1,945
Kawerau District	359	-13.4%	311	6.7%	403	2.1%	457
Ōpōtiki District	337	-13.7%	291	5.2%	357	2.3%	409
Gisborne District	1,952	-13.0%	1,698	6.3%	2,170	3.2%	2,616
Wairoa District	330	-13.2%	286	4.9%	346	1.9%	388
Hastings District	4,116	-13.5%	3,561	6.1%	4,519	2.8%	5,325
Napier City	2,706	-14.1%	2,325	6.7%	3,011	3.5%	3,709
Central Hawke's Bay District	609	-12.9%	530	5.0%	645	1.8%	716
New Plymouth District	6,464	-16.1%	5,427	4.7%	6,531	0.9%	6,907
Stratford District	470	-15.0%	400	4.3%	473	1.3%	511
South Taranaki District	2,228	-14.1%	1,913	4.1%	2,250	0.7%	2,345
Ruapehu District	668	-14.5%	571	5.3%	701	2.3%	805
Whanganui District	1,835	-12.7%	1,601	6.4%	2,049	3.3%	2,492
Rangitikei District	643	-12.7%	562	5.5%	695	2.2%	792
Manawatū District	1,240	-13.3%	1,076	5.3%	1,322	2.6%	1,541
Palmerston North City	4,899	-13.5%	4,238	6.1%	5,367	3.1%	6,464
Taranua District	856	-12.7%	748	5.1%	913	1.9%	1,024
Horowhenua District	1,108	-13.9%	954	4.5%	1,136	2.3%	1,304
Kāpiti Coast District	2,005	-13.6%	1,732	6.8%	2,251	3.1%	2,698
Porirua City	2,278	-13.5%	1,970	6.1%	2,500	3.3%	3,040
Upper Hutt City	1,757	-12.2%	1,543	5.8%	1,930	3.3%	2,351
Lower Hutt City	6,018	-13.5%	5,208	5.8%	6,524	2.8%	7,683
Wellington City	25,926	-14.8%	22,082	6.0%	27,825	2.7%	32,617
Masterton District	1,337	-14.3%	1,145	5.4%	1,414	2.4%	1,631
Carterton District	487	-14.7%	415	6.0%	525	3.1%	628
South Wairarapa District	528	-14.6%	451	6.4%	577	3.2%	698
<b>Total New Zealand</b>	<b>300,914</b>	<b>-14.9%</b>	<b>255,992</b>	<b>6.1%</b>	<b>324,445</b>	<b>2.8%</b>	<b>383,175</b>

*Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios*

Table 11

**GDP by local authority - Treasury Scenario 5**

2019 \$m, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Tasman District	2,230	-14.4%	1,908	6.3%	2,435	3.0%	2,914
Nelson City	2,668	-15.6%	2,251	6.6%	2,902	3.1%	3,482
Marlborough District	3,049	-15.9%	2,564	6.3%	3,273	2.6%	3,822
Kaikōura District	213	-20.3%	170	5.7%	212	2.9%	253
Buller District	525	-15.8%	442	4.2%	521	0.7%	544
Grey District	741	-15.0%	630	4.9%	761	2.3%	874
Westland District	541	-21.2%	426	6.8%	555	2.5%	643
Hurunui District	812	-15.3%	688	5.5%	851	2.4%	978
Waimakariri District	2,118	-13.3%	1,836	6.6%	2,370	3.1%	2,849
Christchurch City	25,156	-15.5%	21,259	6.0%	26,811	2.9%	31,775
Selwyn District	2,740	-17.4%	2,264	5.4%	2,792	2.8%	3,303
Ashburton District	2,306	-13.2%	2,000	5.6%	2,483	2.4%	2,857
Timaru District	2,877	-14.4%	2,462	5.6%	3,061	2.2%	3,488
Mackenzie District	355	-27.3%	258	5.7%	322	2.0%	364
Waimate District	411	-12.9%	358	4.8%	432	2.1%	488
Waitaki District	1,741	-14.3%	1,493	5.3%	1,837	0.2%	1,858
Central Otago District	1,340	-15.7%	1,130	4.7%	1,357	2.2%	1,542
Queenstown-Lakes District	3,244	-28.8%	2,309	8.9%	3,246	3.5%	3,997
Dunedin City	6,153	-14.3%	5,273	6.9%	6,883	3.0%	8,242
Clutha District	951	-13.4%	824	5.4%	1,017	2.0%	1,146
Southland District	2,403	-14.7%	2,050	4.9%	2,485	1.1%	2,659
Gore District	780	-13.7%	673	5.4%	830	1.8%	924
Invercargill City	3,050	-14.6%	2,605	5.5%	3,224	2.2%	3,669
<b>Total New Zealand</b>	<b>300,914</b>	<b>-14.9%</b>	<b>255,992</b>	<b>6.1%</b>	<b>324,445</b>	<b>2.8%</b>	<b>383,175</b>

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios

Table 12

**GDP by region - Treasury Scenario 5**

2019 \$m, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Northland	7,876	-15.0%	6,692	5.6%	8,329	2.6%	9,713
Auckland	115,906	-15.1%	98,422	6.5%	126,676	3.1%	151,849
Waikato	25,163	-14.2%	21,599	5.4%	26,677	2.5%	30,947
Bay of Plenty	15,106	-14.1%	12,971	6.1%	16,431	3.1%	19,709
Gisborne	1,952	-13.0%	1,698	6.3%	2,170	3.2%	2,616
Hawke's Bay	7,761	-13.6%	6,702	6.2%	8,521	2.9%	10,138
Taranaki	9,162	-15.5%	7,740	4.6%	9,253	0.9%	9,763
Manawatū-Whanganui	11,249	-13.3%	9,749	5.7%	12,182	2.9%	14,422
Wellington	40,335	-14.4%	34,546	6.0%	43,546	2.8%	51,348
Tasman	2,230	-14.4%	1,908	6.3%	2,435	3.0%	2,914
Nelson	2,668	-15.6%	2,251	6.6%	2,902	3.1%	3,482
Marlborough	3,049	-15.9%	2,564	6.3%	3,273	2.6%	3,822
West Coast	1,807	-17.1%	1,498	5.2%	1,837	1.9%	2,061
Canterbury	36,987	-15.4%	31,295	5.9%	39,334	2.8%	46,354
Otago	13,430	-17.9%	11,029	6.8%	14,339	2.7%	16,785
Southland	6,233	-14.5%	5,328	5.3%	6,538	1.7%	7,252
<b>Total New Zealand</b>	<b>300,914</b>	<b>-14.9%</b>	<b>255,992</b>	<b>6.1%</b>	<b>324,445</b>	<b>2.8%</b>	<b>383,175</b>

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios

Table 13

**Employment by industry - Treasury Scenario 5**

Total filled jobs, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Horticulture and Fruit Growing	28,182	1.0%	28,459	3.0%	31,997	0.8%	33,523
Sheep, Beef Cattle, and Grain Farming	29,691	-1.8%	29,154	-0.5%	28,531	-1.2%	26,501
Dairy Cattle Farming	35,569	-1.4%	35,055	0.0%	35,124	-0.4%	34,340
Poultry, Deer, and Other Livestock Farming	8,712	-7.4%	8,070	3.9%	9,411	0.1%	9,488
Fishing and Aquaculture	6,317	-0.3%	6,297	1.6%	6,708	0.7%	6,987
Forestry and Logging	4,286	-8.1%	3,939	3.9%	4,597	-1.8%	4,119
Agriculture, Forestry, and Fishing Support Services and Hunting	31,370	0.7%	31,602	3.2%	35,859	0.1%	36,131
Mining	6,066	-6.8%	5,655	3.0%	6,367	-1.9%	5,662
Meat and Meat Product Manufacturing	25,705	-0.3%	25,615	-0.3%	25,284	-1.4%	23,285
Seafood Processing	4,703	-2.0%	4,609	-1.3%	4,377	-1.4%	4,030
Dairy Product Manufacturing	13,563	-1.3%	13,381	1.9%	14,423	0.0%	14,442
Fruit, Oil, Cereal, and Other Food Product Manufacturing	28,755	1.5%	29,179	1.9%	31,500	1.8%	35,084
Beverage and Tobacco Product Manufacturing	7,548	-3.8%	7,260	4.1%	8,517	3.5%	10,445
Textile, Leather, Clothing, and Footwear Manufacturing	10,234	-9.7%	9,245	0.7%	9,522	0.3%	9,667
Wood Product Manufacturing	18,328	-6.9%	17,063	2.4%	18,747	0.6%	19,403
Pulp, Paper, and Converted Paper Product Manufacturing	4,483	-3.3%	4,333	1.2%	4,541	-1.2%	4,235
Printing	8,313	-6.9%	7,738	-0.8%	7,494	-0.3%	7,353
Petroleum and Coal Product Manufacturing	1,126	-10.2%	1,011	1.6%	1,079	-0.6%	1,038
Basic Chemical and Chemical Product Manufacturing	8,545	-2.9%	8,300	3.0%	9,350	1.3%	10,083
Polymer Product and Rubber Product Manufacturing	11,593	-4.3%	11,089	3.1%	12,507	1.1%	13,357
Non-Metallic Mineral Product Manufacturing	9,279	-1.0%	9,186	3.0%	10,359	1.7%	11,456
Primary Metal and Metal Product Manufacturing	4,374	-0.2%	4,363	1.0%	4,544	0.3%	4,629
Fabricated Metal Product Manufacturing	28,483	-2.0%	27,906	3.2%	31,593	1.6%	34,774
Transport Equipment Manufacturing	14,683	-3.7%	14,135	4.3%	16,698	0.7%	17,441
Machinery and Other Equipment Manufacturing	31,239	-0.1%	31,223	2.2%	34,025	0.7%	35,536
Furniture and Other Manufacturing	11,079	-3.2%	10,725	2.2%	11,689	0.8%	12,230
Electricity and Gas Supply	8,640	-4.1%	8,287	2.9%	9,284	1.7%	10,246
Water, Sewerage, Drainage, and Waste Services	8,869	-1.6%	8,723	2.0%	9,425	1.5%	10,327
Building Construction	73,576	-11.4%	65,220	3.8%	75,779	1.4%	82,578
Heavy and Civil Engineering Construction	37,368	-1.3%	36,893	1.3%	38,912	2.5%	45,057
Construction Services	145,777	-2.2%	142,623	1.5%	151,282	2.1%	171,156
Wholesale Trade	125,701	-4.2%	120,416	1.7%	128,611	1.1%	137,507
Motor Vehicle and Motor Vehicle Parts and Fuel Retailing	27,602	-23.5%	21,102	7.2%	27,855	0.6%	28,902
Supermarket, Grocery Stores, and Specialised Food Retailing	73,347	-4.0%	70,401	1.3%	74,272	0.6%	77,108
Other Store-Based Retailing and Non Store Retailing	126,041	-8.7%	115,024	2.7%	127,743	0.6%	132,526
Accommodation and Food Services	171,475	-28.4%	122,827	7.8%	165,693	3.8%	207,159
Road Transport	48,275	-12.5%	42,226	4.2%	49,754	1.1%	53,101
Rail, Water, Air, and Other Transport	19,053	-33.4%	12,685	11.1%	19,330	4.1%	24,620
Postal, Courier Transport Support, and Warehousing Services	39,797	-21.2%	31,354	6.4%	40,208	3.4%	49,230
Information Media Services	22,547	-17.0%	18,710	3.0%	21,092	0.1%	21,196
Telecommunications, Internet, and Library Services	19,039	-13.0%	16,560	2.3%	18,164	-0.5%	17,609
Finance	38,764	-6.3%	36,319	3.4%	41,472	0.4%	42,561
Insurance and Superannuation Funds	10,611	-7.9%	9,772	2.5%	10,769	0.4%	11,000
Auxiliary Finance and Insurance Services	20,132	-6.8%	18,771	2.5%	20,701	0.4%	21,221
Rental and Hiring Services (except Real Estate)	16,590	-9.6%	14,995	4.6%	17,946	2.2%	20,502
Property Operators and Real Estate Services	45,451	1.8%	46,251	0.2%	46,671	1.5%	50,996
Professional, Scientific, and Technical Services	245,157	-2.4%	239,154	3.4%	273,824	2.0%	307,655
Administrative and Support Services	132,213	-2.4%	129,052	2.8%	143,949	2.2%	164,016
Central Government Administration, Defence, and Public Safety	24,533	3.6%	25,422	2.1%	27,610	1.1%	29,434
Local Government Administration	100,150	3.9%	104,059	1.6%	110,954	2.7%	129,935
Education and Training	201,240	1.7%	204,582	1.2%	214,762	3.2%	258,992
Health Care and Social Assistance	253,922	3.6%	263,112	1.6%	280,418	3.1%	336,991
Arts and Recreation Services	48,642	-7.3%	45,089	3.6%	51,943	3.1%	62,511
Other Services	98,810	-4.4%	94,433	2.9%	105,992	2.5%	123,084
<b>Total</b>	<b>2,575,549</b>	<b>-4.9%</b>	<b>2,448,655</b>	<b>2.7%</b>	<b>2,719,260</b>	<b>1.9%</b>	<b>3,052,460</b>

*Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios*

Table 14

**GDP by industry - Treasury Scenario 5**

2019 \$m, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Horticulture and Fruit Growing	1,489	-9.2%	1,352	7.2%	1,786	2.4%	2,057
Sheep, Beef Cattle, and Grain Farming	3,228	-11.7%	2,850	3.6%	3,283	0.4%	3,361
Dairy Cattle Farming	5,846	-11.9%	5,151	4.0%	6,029	1.3%	6,502
Poultry, Deer, and Other Livestock Farming	469	-15.3%	397	8.7%	554	1.6%	609
Fishing and Aquaculture	1,974	-9.4%	1,787	7.3%	2,372	4.0%	3,007
Forestry and Logging	435	-17.6%	359	7.2%	473	-1.3%	438
Agriculture, Forestry, and Fishing Support Services and Hunting	2,222	-9.9%	2,001	6.4%	2,564	0.5%	2,634
Mining	3,525	-18.9%	2,860	2.4%	3,141	-6.2%	2,145
Meat and Meat Product Manufacturing	2,066	-12.5%	1,808	2.1%	1,966	-1.0%	1,847
Seafood Processing	459	-15.0%	390	-0.1%	389	-2.2%	340
Dairy Product Manufacturing	1,585	-14.5%	1,355	3.1%	1,534	-0.6%	1,475
Fruit, Oil, Cereal, and Other Food Product Manufacturing	2,414	-10.8%	2,153	4.6%	2,575	2.4%	2,964
Beverage and Tobacco Product Manufacturing	2,484	-15.2%	2,106	7.2%	2,779	4.4%	3,595
Textile, Leather, Clothing, and Footwear Manufacturing	704	-19.0%	570	5.2%	698	2.4%	804
Wood Product Manufacturing	1,697	-16.3%	1,420	7.3%	1,879	3.2%	2,268
Pulp, Paper, and Converted Paper Product Manufacturing	897	-14.3%	769	5.2%	943	0.7%	986
Printing	705	-17.1%	584	1.9%	631	-0.2%	623
Petroleum and Coal Product Manufacturing	1,381	-19.1%	1,118	7.4%	1,488	1.8%	1,653
Basic Chemical and Chemical Product Manufacturing	1,794	-14.3%	1,537	5.6%	1,912	1.4%	2,084
Polymer Product and Rubber Product Manufacturing	1,561	-15.5%	1,319	5.7%	1,644	1.3%	1,780
Non-Metallic Mineral Product Manufacturing	1,408	-12.5%	1,233	6.1%	1,559	2.5%	1,804
Primary Metal and Metal Product Manufacturing	721	-12.0%	634	3.0%	713	-0.3%	702
Fabricated Metal Product Manufacturing	2,507	-14.1%	2,154	4.9%	2,607	0.9%	2,759
Transport Equipment Manufacturing	1,695	-13.0%	1,475	8.6%	2,052	2.1%	2,331
Machinery and Other Equipment Manufacturing	4,039	-8.7%	3,688	6.8%	4,797	2.1%	5,421
Furniture and Other Manufacturing	839	-13.5%	726	5.8%	911	1.9%	1,018
Electricity and Gas Supply	6,417	-18.2%	5,248	2.1%	5,695	-1.5%	5,193
Water, Sewerage, Drainage, and Waste Services	1,371	-16.2%	1,149	1.3%	1,210	-1.1%	1,133
Building Construction	4,297	-21.5%	3,374	6.7%	4,371	1.9%	4,901
Heavy and Civil Engineering Construction	5,152	-12.3%	4,518	4.3%	5,356	2.9%	6,359
Construction Services	10,091	-13.0%	8,776	4.6%	10,497	2.7%	12,322
Wholesale Trade	15,198	-14.5%	12,996	5.2%	15,935	2.2%	18,189
Motor Vehicle and Motor Vehicle Parts and Fuel Retailing	2,259	-29.6%	1,591	14.8%	2,767	5.5%	3,805
Supermarket, Grocery Stores, and Specialised Food Retailing	4,589	-11.4%	4,066	8.5%	5,643	5.2%	7,661
Other Store-Based Retailing and Non Store Retailing	8,732	-16.1%	7,327	9.4%	10,497	4.6%	13,781
Accommodation and Food Services	6,555	-37.5%	4,097	11.7%	6,380	4.4%	8,265
Road Transport	4,700	-21.5%	3,691	8.7%	5,144	3.0%	6,156
Rail, Water, Air, and Other Transport	2,861	-40.4%	1,704	15.1%	2,990	5.2%	4,059
Postal, Courier Transport Support, and Warehousing Services	5,960	-29.2%	4,219	11.0%	6,413	5.5%	8,831
Information Media Services	2,753	-23.6%	2,104	10.2%	3,105	5.1%	4,197
Telecommunications, Internet, and Library Services	7,825	-20.6%	6,214	8.9%	8,747	3.6%	10,823
Finance	11,995	-16.5%	10,019	6.7%	12,964	1.2%	13,899
Insurance and Superannuation Funds	3,028	-18.1%	2,479	5.5%	3,069	0.8%	3,219
Auxiliary Finance and Insurance Services	2,923	-16.4%	2,445	6.6%	3,156	2.0%	3,563
Rental and Hiring Services (except Real Estate)	3,643	-19.6%	2,930	8.7%	4,093	4.2%	5,236
Property Operators and Real Estate Services	17,542	-9.3%	15,918	4.4%	18,887	3.6%	23,388
Professional, Scientific, and Technical Services	25,463	-12.5%	22,286	7.3%	29,555	3.1%	35,548
Administrative and Support Services	6,220	-13.8%	5,364	5.5%	6,647	2.6%	7,750
Central Government Administration, Defence, and Public Safety	1,568	-7.2%	1,455	5.5%	1,804	1.8%	2,010
Local Government Administration	11,589	-7.6%	10,712	5.2%	13,100	3.9%	16,491
Education and Training	11,301	-11.4%	10,010	2.4%	11,024	2.0%	12,428
Health Care and Social Assistance	17,529	-8.0%	16,118	4.8%	19,409	3.9%	24,415
Arts and Recreation Services	3,997	-18.5%	3,256	5.2%	3,988	2.1%	4,513
Other Services	5,347	-15.6%	4,512	5.4%	5,572	2.5%	6,471
<b>Total<sup>1</sup></b>	<b>300,914</b>	<b>-14.9%</b>	<b>255,992</b>	<b>6.1%</b>	<b>324,445</b>	<b>2.8%</b>	<b>383,175</b>

1: Includes owner-occupied dwellings and unallocated

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios

## Appendix 2: Scenario 1 key outputs

Table 15

### Employment by local authority - Treasury Scenario 1

Total filled jobs, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Far North District	25,276	-5.8%	23,810	2.7%	26,527	1.1%	28,362
Whāngārei District	41,258	-4.0%	39,619	3.0%	44,531	1.7%	49,211
Kaipara District	8,676	-5.4%	8,206	2.4%	9,017	1.3%	9,719
Auckland	924,606	-4.6%	882,369	3.3%	1,003,471	1.7%	1,110,447
Thames-Coromandel District	13,086	-8.4%	11,992	3.1%	13,524	1.2%	14,563
Hauraki District	7,620	-4.8%	7,256	2.1%	7,882	0.8%	8,286
Waikato District	24,196	-5.3%	22,907	2.7%	25,482	1.3%	27,527
Matamata-Piako District	18,374	-4.0%	17,647	2.5%	19,495	1.0%	20,694
Hamilton City	97,945	-2.8%	95,215	3.4%	108,717	2.1%	123,164
Waipā District	24,752	-4.8%	23,572	1.6%	25,147	0.9%	26,570
Ōtorohanga District	4,836	3.1%	4,985	-0.9%	4,802	0.9%	5,079
South Waikato District	9,975	-2.2%	9,758	3.0%	10,990	1.4%	11,962
Waitomo District	5,056	-4.0%	4,855	1.0%	5,051	0.1%	5,082
Taupō District	18,891	-8.4%	17,296	3.2%	19,605	1.1%	20,947
Western Bay of Plenty District	24,138	-1.9%	23,679	3.6%	27,263	2.0%	30,777
Tauranga City	74,816	-3.9%	71,895	2.4%	78,990	1.6%	86,955
Rotorua District	35,978	-5.6%	33,970	3.8%	39,386	1.7%	43,552
Whakatāne District	15,798	-3.7%	15,221	2.7%	16,908	1.5%	18,517
Kawerau District	2,907	-1.6%	2,861	3.7%	3,309	1.4%	3,602
Ōpōtiki District	3,823	-4.0%	3,669	1.7%	3,922	0.7%	4,087
Gisborne District	22,235	-2.9%	21,585	3.0%	24,247	1.5%	26,442
Wairoa District	3,417	-2.5%	3,331	1.6%	3,547	0.9%	3,736
Hastings District	45,419	-3.3%	43,901	2.9%	49,232	1.4%	53,516
Napier City	28,466	-4.3%	27,234	3.4%	31,144	1.7%	34,517
Central Hawke's Bay District	6,428	-2.6%	6,260	1.7%	6,686	0.5%	6,871
New Plymouth District	41,489	-4.4%	39,663	2.8%	44,217	1.7%	48,895
Stratford District	3,413	-4.1%	3,272	2.3%	3,578	1.0%	3,796
South Taranaki District	14,086	-2.6%	13,726	1.9%	14,781	0.3%	15,061
Ruapehu District	6,422	-6.0%	6,038	2.5%	6,677	1.1%	7,123
Whanganui District	20,157	-3.0%	19,554	3.4%	22,326	1.8%	24,917
Rangitikei District	6,591	-3.0%	6,394	2.1%	6,961	0.7%	7,270
Manawatū District	12,320	-3.8%	11,854	2.1%	12,904	1.1%	13,761
Palmerston North City	52,999	-3.7%	51,012	3.2%	57,896	1.9%	64,666
Tararua District	7,656	-2.6%	7,457	2.0%	8,056	0.6%	8,344
Horowhenua District	11,279	-3.9%	10,845	1.6%	11,543	1.2%	12,388
Kāpiti Coast District	17,738	-3.4%	17,143	4.3%	20,304	1.8%	22,557
Porirua City	20,952	-3.6%	20,202	3.2%	22,898	2.0%	25,822
Upper Hutt City	13,845	-2.8%	13,455	2.6%	14,899	1.8%	16,609
Lower Hutt City	50,759	-2.8%	49,331	2.8%	55,137	1.6%	60,636
Wellington City	171,863	-4.0%	164,968	3.3%	188,126	1.8%	209,681
Masterton District	12,490	-4.1%	11,975	2.8%	13,358	1.2%	14,383
Carterton District	3,778	-4.5%	3,609	2.8%	4,036	1.6%	4,443
South Wairarapa District	4,255	-5.7%	4,011	2.9%	4,506	1.3%	4,874
<b>Total New Zealand</b>	<b>2,575,549</b>	<b>-4.6%</b>	<b>2,457,097</b>	<b>3.1%</b>	<b>2,776,276</b>	<b>1.6%</b>	<b>3,052,460</b>

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios

Table 16

**Employment by local authority - Treasury Scenario 1**

Total filled jobs, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Tasman District	25,098	-4.3%	24,020	3.0%	27,020	1.5%	29,518
Nelson City	30,054	-5.2%	28,494	3.3%	32,507	1.6%	35,727
Marlborough District	27,467	-5.3%	25,997	2.9%	29,174	1.0%	30,919
Kaikōura District	1,936	-12.4%	1,696	3.4%	1,935	1.8%	2,149
Buller District	4,027	-5.6%	3,802	2.8%	4,253	0.8%	4,461
Grey District	7,390	-4.5%	7,060	2.4%	7,753	1.3%	8,386
Westland District	4,660	-11.8%	4,110	5.2%	5,035	1.5%	5,517
Hurunui District	6,190	-6.5%	5,788	2.3%	6,342	0.8%	6,644
Waimakariri District	19,252	-2.9%	18,690	3.7%	21,587	1.7%	23,948
Christchurch City	231,085	-5.2%	219,062	2.9%	245,160	1.5%	268,757
Selwyn District	23,317	-9.0%	21,224	2.6%	23,526	1.7%	26,104
Ashburton District	18,784	-3.1%	18,201	2.5%	20,054	1.1%	21,389
Timaru District	25,321	-3.9%	24,328	2.7%	27,044	1.0%	28,629
Mackenzie District	2,854	-22.8%	2,202	4.3%	2,604	1.2%	2,802
Waimate District	3,105	-2.5%	3,028	1.9%	3,267	1.1%	3,478
Waitaki District	11,527	-4.3%	11,035	2.2%	12,061	0.7%	12,599
Central Otago District	13,298	-6.0%	12,504	1.9%	13,482	0.9%	14,250
Queenstown-Lakes District	31,869	-20.5%	25,325	5.9%	31,862	1.8%	35,467
Dunedin City	65,453	-4.0%	62,809	4.2%	73,956	1.7%	82,043
Clutha District	9,221	-3.2%	8,926	2.2%	9,724	0.6%	10,086
Southland District	17,347	-5.7%	16,354	2.1%	17,752	0.1%	17,878
Gore District	6,967	-3.0%	6,760	2.5%	7,461	0.9%	7,863
Invercargill City	29,267	-4.0%	28,083	3.0%	31,634	1.4%	34,433
<b>Total New Zealand</b>	<b>2,575,549</b>	<b>-4.6%</b>	<b>2,457,097</b>	<b>3.1%</b>	<b>2,776,276</b>	<b>1.6%</b>	<b>3,052,460</b>

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios

Table 17

**Employment by region - Treasury Scenario 1**

Total filled jobs, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Northland	75,210	-4.8%	71,636	2.8%	80,076	1.4%	87,292
Auckland	924,606	-4.6%	882,369	3.3%	1,003,471	1.7%	1,110,447
Waikato	224,731	-4.1%	215,482	2.8%	240,696	1.5%	263,873
Bay of Plenty	157,460	-3.9%	151,294	2.9%	169,779	1.7%	187,490
Gisborne	22,235	-2.9%	21,585	3.0%	24,247	1.5%	26,442
Hawke's Bay	83,730	-3.6%	80,727	2.9%	90,610	1.4%	98,640
Taranaki	58,988	-3.9%	56,660	2.5%	62,576	1.3%	67,752
Manawatū-Whanganui	117,423	-3.6%	113,153	2.8%	126,364	1.5%	138,470
Wellington	295,680	-3.7%	284,694	3.2%	323,264	1.8%	359,004
Tasman	25,098	-4.3%	24,020	3.0%	27,020	1.5%	29,518
Nelson	30,054	-5.2%	28,494	3.3%	32,507	1.6%	35,727
Marlborough	27,467	-5.3%	25,997	2.9%	29,174	1.0%	30,919
West Coast	16,076	-6.9%	14,971	3.3%	17,042	1.3%	18,365
Canterbury	331,844	-5.3%	314,220	2.8%	351,519	1.5%	383,902
Otago	131,367	-8.2%	120,598	4.0%	141,085	1.5%	154,445
Southland	53,581	-4.4%	51,197	2.7%	56,846	1.0%	60,174
<b>Total New Zealand</b>	<b>2,575,549</b>	<b>-4.6%</b>	<b>2,457,097</b>	<b>3.1%</b>	<b>2,776,276</b>	<b>1.6%</b>	<b>3,052,460</b>

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios



Table 18

**GDP by local authority - Treasury Scenario 1**

2019 \$m, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Far North District	2,461	-14.1%	2,114	6.0%	2,665	2.1%	3,019
Whāngārei District	4,502	-13.9%	3,877	6.2%	4,924	2.0%	5,538
Kaipara District	913	-13.2%	792	6.0%	1,000	2.4%	1,153
Auckland	115,906	-13.4%	100,380	6.9%	130,917	2.5%	152,012
Thames-Coromandel District	1,310	-15.2%	1,111	6.6%	1,436	2.4%	1,660
Hauraki District	1,050	-13.1%	912	4.0%	1,068	0.2%	1,084
Waikato District	2,946	-14.1%	2,530	4.7%	3,041	1.7%	3,357
Matamata-Piako District	2,090	-12.5%	1,828	5.7%	2,284	1.9%	2,555
Hamilton City	10,030	-12.1%	8,817	6.4%	11,320	2.6%	13,204
Waipā District	2,710	-13.1%	2,355	5.0%	2,857	1.5%	3,132
Ōtorohanga District	594	-7.5%	549	3.1%	620	1.9%	693
South Waikato District	1,297	-10.7%	1,159	6.6%	1,497	2.5%	1,735
Waitomo District	820	-14.0%	705	2.2%	770	-0.8%	734
Taupō District	2,317	-15.1%	1,967	5.8%	2,469	1.7%	2,734
Western Bay of Plenty District	2,140	-11.4%	1,896	6.9%	2,478	2.7%	2,915
Tauranga City	7,126	-12.9%	6,206	6.4%	7,941	2.8%	9,360
Rotorua District	3,507	-13.5%	3,032	7.0%	3,969	2.6%	4,616
Whakatāne District	1,637	-13.5%	1,416	5.3%	1,741	1.8%	1,941
Kawerau District	359	-11.9%	316	6.4%	406	1.9%	454
Ōpōtiki District	337	-12.5%	295	5.5%	365	1.9%	408
Gisborne District	1,952	-12.0%	1,717	6.7%	2,222	2.7%	2,611
Wairoa District	330	-11.9%	291	5.0%	353	1.5%	386
Hastings District	4,116	-12.5%	3,604	6.4%	4,619	2.4%	5,312
Napier City	2,706	-12.9%	2,357	7.1%	3,106	3.0%	3,709
Central Hawke's Bay District	609	-11.7%	538	5.1%	656	1.4%	713
New Plymouth District	6,464	-13.9%	5,564	4.5%	6,624	0.6%	6,881
Stratford District	470	-13.5%	407	4.4%	483	0.9%	509
South Taranaki District	2,228	-12.6%	1,948	4.1%	2,287	0.3%	2,329
Ruapehu District	668	-13.5%	578	5.6%	718	1.9%	804
Whanganui District	1,835	-11.8%	1,618	6.8%	2,102	2.9%	2,489
Rangitikei District	643	-11.5%	570	5.6%	710	1.8%	788
Manawatū District	1,240	-12.3%	1,088	5.6%	1,355	2.1%	1,537
Palmerston North City	4,899	-12.5%	4,287	6.6%	5,528	2.6%	6,462
Taranua District	856	-11.4%	759	5.3%	933	1.5%	1,020
Horowhenua District	1,108	-12.7%	967	4.7%	1,163	1.9%	1,301
Kāpiti Coast District	2,005	-12.4%	1,756	7.2%	2,319	2.6%	2,701
Porirua City	2,278	-12.5%	1,994	6.6%	2,572	2.8%	3,039
Upper Hutt City	1,757	-11.5%	1,555	6.2%	1,976	2.9%	2,348
Lower Hutt City	6,018	-12.1%	5,292	6.1%	6,716	2.3%	7,682
Wellington City	25,926	-13.2%	22,499	6.3%	28,703	2.2%	32,669
Masterton District	1,337	-13.2%	1,161	5.8%	1,453	1.9%	1,630
Carterton District	487	-13.3%	422	6.2%	538	2.6%	627
South Wairarapa District	528	-13.1%	459	6.7%	594	2.7%	697
<b>Total New Zealand</b>	<b>300,914</b>	<b>-13.4%</b>	<b>260,480</b>	<b>6.4%</b>	<b>334,252</b>	<b>2.3%</b>	<b>383,174</b>

*Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios*

Table 19

**GDP by local authority - Treasury Scenario 1**

2019 \$m, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Tasman District	2,230	-13.1%	1,939	6.5%	2,495	2.6%	2,905
Nelson City	2,668	-14.3%	2,286	7.0%	2,993	2.6%	3,483
Marlborough District	3,049	-14.6%	2,605	6.5%	3,356	2.2%	3,814
Kaikōura District	213	-18.9%	173	6.2%	220	2.3%	253
Buller District	525	-13.9%	452	4.1%	531	0.3%	542
Grey District	741	-13.7%	640	5.2%	783	1.8%	873
Westland District	541	-19.8%	434	7.4%	578	1.8%	644
Hurunui District	812	-13.9%	699	5.7%	872	1.9%	975
Waimakariri District	2,118	-12.0%	1,863	6.9%	2,431	2.7%	2,846
Christchurch City	25,156	-14.1%	21,615	6.4%	27,670	2.3%	31,788
Selwyn District	2,740	-16.1%	2,299	5.6%	2,861	2.4%	3,293
Ashburton District	2,306	-11.9%	2,032	5.8%	2,541	1.9%	2,847
Timaru District	2,877	-13.1%	2,500	5.9%	3,143	1.7%	3,482
Mackenzie District	355	-25.8%	263	6.3%	336	1.4%	365
Waimate District	411	-11.6%	363	4.9%	440	1.7%	486
Waitaki District	1,741	-11.7%	1,537	4.8%	1,854	-0.1%	1,848
Central Otago District	1,340	-14.4%	1,147	5.0%	1,393	1.7%	1,540
Queenstown-Lakes District	3,244	-27.5%	2,350	9.9%	3,425	2.7%	4,019
Dunedin City	6,153	-13.1%	5,345	7.4%	7,114	2.5%	8,253
Clutha District	951	-12.1%	836	5.5%	1,036	1.6%	1,141
Southland District	2,403	-13.2%	2,087	4.9%	2,531	0.7%	2,642
Gore District	780	-12.0%	686	5.4%	846	1.4%	920
Invercargill City	3,050	-13.4%	2,642	5.8%	3,307	1.7%	3,664
<b>Total New Zealand</b>	<b>300,914</b>	<b>-13.4%</b>	<b>260,480</b>	<b>6.4%</b>	<b>334,252</b>	<b>2.3%</b>	<b>383,174</b>

*Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios*

Table 20

**GDP by region - Treasury Scenario 1**

2019 \$m, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Northland	7,876	-13.9%	6,783	6.1%	8,588	2.1%	9,710
Auckland	115,906	-13.4%	100,380	6.9%	130,917	2.5%	152,012
Waikato	25,163	-12.8%	21,932	5.7%	27,362	2.0%	30,889
Bay of Plenty	15,106	-12.9%	13,160	6.5%	16,900	2.6%	19,694
Gisborne	1,952	-12.0%	1,717	6.7%	2,222	2.7%	2,611
Hawke's Bay	7,761	-12.5%	6,789	6.5%	8,734	2.5%	10,120
Taranaki	9,162	-13.6%	7,919	4.4%	9,394	0.6%	9,720
Manawatū-Whanganui	11,249	-12.3%	9,868	6.1%	12,509	2.4%	14,401
Wellington	40,335	-12.9%	35,138	6.3%	44,870	2.3%	51,394
Tasman	2,230	-13.1%	1,939	6.5%	2,495	2.6%	2,905
Nelson	2,668	-14.3%	2,286	7.0%	2,993	2.6%	3,483
Marlborough	3,049	-14.6%	2,605	6.5%	3,356	2.2%	3,814
West Coast	1,807	-15.6%	1,526	5.5%	1,892	1.4%	2,059
Canterbury	36,987	-14.0%	31,807	6.2%	40,514	2.3%	46,334
Otago	13,430	-16.5%	11,216	7.2%	14,822	2.1%	16,800
Southland	6,233	-13.1%	5,415	5.4%	6,684	1.3%	7,227
<b>Total New Zealand</b>	<b>300,914</b>	<b>-13.4%</b>	<b>260,480</b>	<b>6.4%</b>	<b>334,252</b>	<b>2.3%</b>	<b>383,174</b>

*Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios*

Table 21

**Employment by industry - Treasury Scenario 1**

Total filled jobs, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Horticulture and Fruit Growing	28,182	-0.8%	27,960	2.4%	30,697	1.1%	32,853
Sheep, Beef Cattle, and Grain Farming	29,691	-0.8%	29,447	-0.9%	28,423	-1.3%	26,223
Dairy Cattle Farming	35,569	-0.8%	35,272	0.0%	35,319	-0.6%	33,994
Poultry, Deer, and Other Livestock Farming	8,712	-0.6%	8,657	2.1%	9,407	0.0%	9,399
Fishing and Aquaculture	6,317	-0.3%	6,299	1.2%	6,608	0.7%	6,905
Forestry and Logging	4,286	-7.2%	3,978	2.0%	4,302	-1.1%	4,017
Agriculture, Forestry, and Fishing Support Services and Hunting	31,370	-1.1%	31,038	3.1%	35,115	0.2%	35,603
Mining	6,066	-3.1%	5,879	1.1%	6,149	-1.6%	5,568
Meat and Meat Product Manufacturing	25,705	-0.2%	25,662	-0.2%	25,474	-1.6%	23,093
Seafood Processing	4,703	-0.9%	4,662	-1.4%	4,410	-1.6%	3,997
Dairy Product Manufacturing	13,563	-0.9%	13,436	1.9%	14,513	-0.3%	14,285
Fruit, Oil, Cereal, and Other Food Product Manufacturing	28,755	-0.3%	28,680	2.3%	31,361	1.8%	34,811
Beverage and Tobacco Product Manufacturing	7,548	-1.7%	7,419	4.0%	8,669	3.1%	10,408
Textile, Leather, Clothing, and Footwear Manufacturing	10,234	-8.3%	9,386	0.6%	9,610	0.0%	9,636
Wood Product Manufacturing	18,328	-5.3%	17,353	1.7%	18,575	0.5%	19,161
Pulp, Paper, and Converted Paper Product Manufacturing	4,483	-1.8%	4,402	0.1%	4,418	-0.9%	4,173
Printing	8,313	-5.1%	7,892	-0.8%	7,656	-0.7%	7,362
Petroleum and Coal Product Manufacturing	1,126	-8.3%	1,033	2.9%	1,158	-1.5%	1,058
Basic Chemical and Chemical Product Manufacturing	8,545	-1.8%	8,393	2.0%	9,072	1.5%	9,927
Polymer Product and Rubber Product Manufacturing	11,593	-2.9%	11,254	2.3%	12,326	1.1%	13,184
Non-Metallic Mineral Product Manufacturing	9,279	-0.2%	9,262	3.2%	10,513	1.4%	11,395
Primary Metal and Metal Product Manufacturing	4,374	-3.7%	4,211	1.5%	4,477	0.4%	4,578
Fabricated Metal Product Manufacturing	28,483	-1.8%	27,978	2.8%	31,227	1.6%	34,372
Transport Equipment Manufacturing	14,683	-2.3%	14,345	3.5%	16,465	0.7%	17,131
Machinery and Other Equipment Manufacturing	31,239	-3.6%	30,104	2.7%	33,549	0.7%	34,905
Furniture and Other Manufacturing	11,079	-3.7%	10,664	1.6%	11,376	1.0%	12,078
Electricity and Gas Supply	8,640	-2.6%	8,418	2.6%	9,315	1.5%	10,204
Water, Sewerage, Drainage, and Waste Services	8,869	-0.6%	8,817	2.2%	9,609	1.2%	10,335
Building Construction	73,576	-12.8%	64,156	3.3%	73,044	2.1%	82,868
Heavy and Civil Engineering Construction	37,368	-0.7%	37,110	1.8%	39,881	2.1%	45,215
Construction Services	145,777	-2.4%	142,285	1.6%	151,434	2.1%	171,757
Wholesale Trade	125,701	-1.8%	123,479	1.7%	132,028	0.7%	137,266
Motor Vehicle and Motor Vehicle Parts and Fuel Retailing	27,602	-21.8%	21,598	7.3%	28,595	0.1%	28,851
Supermarket, Grocery Stores, and Specialised Food Retailing	73,347	-1.8%	72,047	1.4%	76,245	0.2%	76,973
Other Store-Based Retailing and Non Store Retailing	126,041	-6.6%	117,686	2.7%	131,136	0.1%	132,294
Accommodation and Food Services	171,475	-27.6%	124,075	10.9%	187,797	2.0%	211,651
Road Transport	48,275	-10.7%	43,105	4.3%	51,079	0.7%	53,111
Rail, Water, Air, and Other Transport	19,053	-31.8%	12,999	13.0%	21,211	2.8%	25,053
Postal, Courier Transport Support, and Warehousing Services	39,797	-19.5%	32,022	7.5%	42,723	2.6%	49,855
Information Media Services	22,547	-14.8%	19,220	3.2%	21,811	-0.2%	21,512
Telecommunications, Internet, and Library Services	19,039	-10.5%	17,035	2.4%	18,721	-0.9%	17,687
Finance	38,764	-3.7%	37,331	3.1%	42,118	0.2%	42,656
Insurance and Superannuation Funds	10,611	-5.3%	10,048	2.1%	10,937	0.1%	11,025
Auxiliary Finance and Insurance Services	20,132	-4.7%	19,182	2.3%	21,023	0.2%	21,269
Rental and Hiring Services (except Real Estate)	16,590	-7.9%	15,282	5.3%	18,781	1.6%	20,699
Property Operators and Real Estate Services	45,451	-1.0%	45,010	1.9%	48,533	0.9%	51,317
Professional, Scientific, and Technical Services	245,157	-0.4%	244,077	3.1%	276,122	1.7%	306,307
Administrative and Support Services	132,213	-0.7%	131,247	2.7%	146,241	1.9%	163,653
Central Government Administration, Defence, and Public Safety	24,533	2.0%	25,026	2.4%	27,491	1.1%	29,393
Local Government Administration	100,150	1.1%	101,282	2.2%	110,608	2.7%	129,468
Education and Training	201,240	0.4%	202,107	2.5%	223,215	2.5%	259,418
Health Care and Social Assistance	253,922	0.4%	255,042	2.6%	282,775	2.9%	336,354
Arts and Recreation Services	48,642	-5.5%	45,952	4.1%	54,066	2.6%	62,935
Other Services	98,810	-2.0%	96,794	3.0%	108,871	2.1%	123,218
<b>Total</b>	<b>2,575,549</b>	<b>-4.6%</b>	<b>2,457,097</b>	<b>3.1%</b>	<b>2,776,276</b>	<b>1.6%</b>	<b>3,052,460</b>

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios

Table 22

**GDP by industry - Treasury Scenario 1**

2019 \$m, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Horticulture and Fruit Growing	1,489	-9.7%	1,345	6.6%	1,734	2.5%	2,016
Sheep, Beef Cattle, and Grain Farming	3,228	-9.7%	2,913	3.2%	3,308	0.1%	3,327
Dairy Cattle Farming	5,846	-10.3%	5,247	4.0%	6,134	0.8%	6,439
Poultry, Deer, and Other Livestock Farming	469	-8.1%	431	6.8%	560	1.2%	603
Fishing and Aquaculture	1,974	-8.3%	1,810	6.9%	2,364	3.9%	2,973
Forestry and Logging	435	-15.7%	367	5.1%	448	-0.8%	427
Agriculture, Forestry, and Fishing Support Services and Hunting	2,222	-10.5%	1,990	6.3%	2,540	0.4%	2,597
Mining	3,525	-14.6%	3,010	0.5%	3,069	-6.1%	2,110
Meat and Meat Product Manufacturing	2,066	-11.2%	1,834	2.2%	2,004	-1.5%	1,832
Seafood Processing	459	-12.9%	399	-0.2%	396	-2.6%	338
Dairy Product Manufacturing	1,585	-13.1%	1,378	3.2%	1,561	-1.1%	1,460
Fruit, Oil, Cereal, and Other Food Product Manufacturing	2,414	-11.2%	2,142	4.9%	2,594	2.1%	2,942
Beverage and Tobacco Product Manufacturing	2,484	-12.3%	2,178	7.1%	2,862	3.8%	3,584
Textile, Leather, Clothing, and Footwear Manufacturing	704	-16.7%	586	5.0%	713	2.0%	802
Wood Product Manufacturing	1,697	-13.9%	1,462	6.5%	1,883	2.9%	2,240
Pulp, Paper, and Converted Paper Product Manufacturing	897	-11.9%	791	4.1%	928	0.8%	972
Printing	705	-14.5%	603	2.0%	652	-0.7%	624
Petroleum and Coal Product Manufacturing	1,381	-16.3%	1,156	8.7%	1,615	0.7%	1,686
Basic Chemical and Chemical Product Manufacturing	1,794	-12.3%	1,573	4.5%	1,877	1.5%	2,053
Polymer Product and Rubber Product Manufacturing	1,561	-13.2%	1,355	4.9%	1,639	1.2%	1,758
Non-Metallic Mineral Product Manufacturing	1,408	-10.7%	1,258	6.2%	1,601	1.9%	1,795
Primary Metal and Metal Product Manufacturing	721	-14.1%	620	3.5%	711	-0.4%	694
Fabricated Metal Product Manufacturing	2,507	-12.8%	2,186	4.5%	2,607	0.8%	2,728
Transport Equipment Manufacturing	1,695	-10.6%	1,515	7.8%	2,047	1.9%	2,290
Machinery and Other Equipment Manufacturing	4,039	-10.9%	3,599	7.4%	4,785	1.8%	5,326
Furniture and Other Manufacturing	839	-12.9%	731	5.2%	897	1.9%	1,006
Electricity and Gas Supply	6,417	-15.9%	5,395	1.7%	5,780	-1.8%	5,173
Water, Sewerage, Drainage, and Waste Services	1,371	-14.2%	1,176	1.5%	1,248	-1.6%	1,134
Building Construction	4,297	-21.8%	3,359	6.1%	4,262	2.4%	4,920
Heavy and Civil Engineering Construction	5,152	-10.7%	4,600	4.8%	5,553	2.3%	6,384
Construction Services	10,091	-12.2%	8,862	4.7%	10,630	2.6%	12,370
Wholesale Trade	15,198	-11.2%	13,489	5.2%	16,549	1.6%	18,164
Motor Vehicle and Motor Vehicle Parts and Fuel Retailing	2,259	-27.0%	1,648	14.9%	2,873	4.8%	3,800
Supermarket, Grocery Stores, and Specialised Food Retailing	4,589	-8.2%	4,212	8.6%	5,861	4.5%	7,650
Other Store-Based Retailing and Non Store Retailing	8,732	-13.1%	7,588	9.5%	10,902	4.0%	13,762
Accommodation and Food Services	6,555	-36.1%	4,190	15.0%	7,315	2.4%	8,447
Road Transport	4,700	-18.9%	3,813	8.8%	5,343	2.4%	6,159
Rail, Water, Air, and Other Transport	2,861	-38.2%	1,768	17.1%	3,319	3.7%	4,132
Postal, Courier Transport Support, and Warehousing Services	5,960	-26.8%	4,362	12.1%	6,894	4.4%	8,947
Information Media Services	2,753	-20.5%	2,188	10.4%	3,249	4.6%	4,261
Telecommunications, Internet, and Library Services	7,825	-17.3%	6,471	9.0%	9,120	3.0%	10,874
Finance	11,995	-13.1%	10,424	6.3%	13,319	0.8%	13,936
Insurance and Superannuation Funds	3,028	-14.8%	2,580	5.1%	3,153	0.4%	3,227
Auxiliary Finance and Insurance Services	2,923	-13.5%	2,529	6.4%	3,243	1.6%	3,572
Rental and Hiring Services (except Real Estate)	3,643	-17.0%	3,023	9.4%	4,333	3.4%	5,288
Property Operators and Real Estate Services	17,542	-10.6%	15,680	6.1%	19,869	2.9%	23,544
Professional, Scientific, and Technical Services	25,463	-9.6%	23,023	7.0%	30,150	2.7%	35,406
Administrative and Support Services	6,220	-11.2%	5,522	5.5%	6,832	2.1%	7,736
Central Government Administration, Defence, and Public Safety	1,568	-7.6%	1,450	5.8%	1,817	1.7%	2,008
Local Government Administration	11,589	-8.9%	10,554	5.8%	13,212	3.7%	16,438
Education and Training	11,301	-11.4%	10,010	3.7%	11,591	1.2%	12,453
Health Care and Social Assistance	17,529	-9.8%	15,814	5.8%	19,800	3.5%	24,379
Arts and Recreation Services	3,997	-16.0%	3,359	5.7%	4,199	1.3%	4,545
Other Services	5,347	-12.5%	4,681	5.5%	5,790	1.9%	6,480
<b>Total<sup>1</sup></b>	<b>300,914</b>	<b>-13.4%</b>	<b>260,480</b>	<b>6.4%</b>	<b>334,252</b>	<b>2.3%</b>	<b>383,174</b>

1: Includes owner-occupied dwellings and unallocated

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios

## Appendix 3: Scenario 4 key outputs

Table 23

### Employment by local authority - Treasury Scenario 4

Total filled jobs, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Far North District	25,276	-11.4%	22,387	4.2%	26,363	1.2%	28,362
Whāngārei District	41,258	-9.7%	37,270	4.4%	44,324	1.8%	49,211
Kaipara District	8,676	-12.9%	7,555	4.7%	9,072	1.2%	9,719
Auckland	924,606	-11.2%	820,855	5.0%	995,942	1.8%	1,110,447
Thames-Coromandel District	13,086	-14.2%	11,231	4.5%	13,403	1.4%	14,563
Hauraki District	7,620	-11.5%	6,740	4.0%	7,885	0.8%	8,286
Waikato District	24,196	-12.0%	21,282	4.7%	25,539	1.3%	27,527
Matamata-Piako District	18,374	-11.6%	16,237	4.8%	19,616	0.9%	20,694
Hamilton City	97,945	-8.1%	90,001	4.7%	108,063	2.2%	123,164
Waipā District	24,752	-10.9%	22,053	3.3%	25,106	0.9%	26,570
Ōtorohanga District	4,836	-3.6%	4,661	1.0%	4,843	0.8%	5,079
South Waikato District	9,975	-9.6%	9,021	5.3%	11,075	1.3%	11,962
Waitomo District	5,056	-12.4%	4,427	3.5%	5,081	0.0%	5,082
Taupō District	18,891	-14.7%	16,114	4.8%	19,416	1.3%	20,947
Western Bay of Plenty District	24,138	-9.6%	21,821	6.0%	27,585	1.8%	30,777
Tauranga City	74,816	-10.0%	67,330	3.9%	78,420	1.7%	86,955
Rotorua District	35,978	-11.0%	32,022	5.1%	39,034	1.8%	43,552
Whakatāne District	15,798	-9.0%	14,374	4.1%	16,902	1.5%	18,517
Kawerau District	2,907	-9.4%	2,632	6.2%	3,346	1.2%	3,602
Ōpōtiki District	3,823	-10.0%	3,440	3.4%	3,936	0.6%	4,087
Gisborne District	22,235	-9.7%	20,067	4.9%	24,287	1.4%	26,442
Wairoa District	3,417	-9.1%	3,105	3.6%	3,572	0.8%	3,736
Hastings District	45,419	-10.9%	40,476	5.1%	49,352	1.4%	53,516
Napier City	28,466	-10.2%	25,556	4.9%	30,903	1.9%	34,517
Central Hawke's Bay District	6,428	-11.5%	5,687	4.5%	6,776	0.2%	6,871
New Plymouth District	41,489	-11.3%	36,792	4.6%	44,045	1.8%	48,895
Stratford District	3,413	-9.2%	3,100	3.6%	3,570	1.0%	3,796
South Taranaki District	14,086	-10.1%	12,659	4.2%	14,923	0.2%	15,061
Ruapehu District	6,422	-11.0%	5,716	3.9%	6,658	1.1%	7,123
Whanganui District	20,157	-8.7%	18,410	4.8%	22,235	1.9%	24,917
Rangitikei District	6,591	-10.6%	5,890	4.4%	7,003	0.6%	7,270
Manawatū District	12,320	-10.4%	11,041	4.0%	12,922	1.1%	13,761
Palmerston North City	52,999	-8.3%	48,622	4.3%	57,471	2.0%	64,666
Taranua District	7,656	-10.1%	6,885	4.2%	8,124	0.4%	8,344
Horowhenua District	11,279	-10.4%	10,110	3.4%	11,540	1.2%	12,388
Kāpiti Coast District	17,738	-8.3%	16,274	5.4%	20,119	1.9%	22,557
Porirua City	20,952	-7.2%	19,438	4.0%	22,706	2.2%	25,822
Upper Hutt City	13,845	-7.0%	12,871	3.5%	14,798	1.9%	16,609
Lower Hutt City	50,759	-8.3%	46,533	4.2%	54,760	1.7%	60,636
Wellington City	171,863	-9.5%	155,599	4.7%	186,796	1.9%	209,681
Masterton District	12,490	-9.6%	11,285	4.2%	13,301	1.3%	14,383
Carterton District	3,778	-12.5%	3,305	5.3%	4,060	1.5%	4,443
South Wairarapa District	4,255	-12.8%	3,711	4.9%	4,497	1.4%	4,874
<b>Total New Zealand</b>	<b>2,575,549</b>	<b>-10.9%</b>	<b>2,294,622</b>	<b>4.7%</b>	<b>2,761,139</b>	<b>1.7%</b>	<b>3,052,460</b>

*Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios*

Table 24

**Employment by local authority - Treasury Scenario 4**

Total filled jobs, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Tasman District	25,098	-12.9%	21,871	5.6%	27,149	1.4%	29,518
Nelson City	30,054	-11.6%	26,570	5.0%	32,331	1.7%	35,727
Marlborough District	27,467	-13.4%	23,790	5.3%	29,200	1.0%	30,919
Kaikōura District	1,936	-18.5%	1,578	4.8%	1,904	2.0%	2,149
Buller District	4,027	-13.5%	3,483	5.1%	4,245	0.8%	4,461
Grey District	7,390	-10.7%	6,596	4.0%	7,713	1.4%	8,386
Westland District	4,660	-17.7%	3,834	6.7%	4,973	1.7%	5,517
Hurunui District	6,190	-14.1%	5,320	4.5%	6,347	0.8%	6,644
Waimakariri District	19,252	-8.9%	17,546	5.2%	21,488	1.8%	23,948
Christchurch City	231,085	-11.5%	204,599	4.4%	243,407	1.7%	268,757
Selwyn District	23,317	-15.1%	19,805	4.4%	23,526	1.7%	26,104
Ashburton District	18,784	-10.7%	16,771	4.7%	20,147	1.0%	21,389
Timaru District	25,321	-11.2%	22,474	4.7%	27,012	1.0%	28,629
Mackenzie District	2,854	-28.7%	2,035	5.9%	2,554	1.6%	2,802
Waimate District	3,105	-10.0%	2,796	4.3%	3,304	0.9%	3,478
Waitaki District	11,527	-12.6%	10,072	4.7%	12,081	0.7%	12,599
Central Otago District	13,298	-13.3%	11,534	4.0%	13,495	0.9%	14,250
Queenstown-Lakes District	31,869	-25.3%	23,809	6.9%	31,077	2.2%	35,467
Dunedin City	65,453	-8.4%	59,947	5.1%	73,101	1.9%	82,043
Clutha District	9,221	-10.7%	8,238	4.5%	9,810	0.5%	10,086
Southland District	17,347	-14.5%	14,837	4.8%	17,917	0.0%	17,878
Gore District	6,967	-10.4%	6,242	4.7%	7,490	0.8%	7,863
Invercargill City	29,267	-10.2%	26,292	4.6%	31,503	1.5%	34,433
<b>Total New Zealand</b>	<b>2,575,549</b>	<b>-10.9%</b>	<b>2,294,622</b>	<b>4.7%</b>	<b>2,761,139</b>	<b>1.7%</b>	<b>3,052,460</b>

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios

Table 25

**Employment by region - Treasury Scenario 4**

Total filled jobs, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Northland	75,210	-10.6%	67,211	4.4%	79,759	1.5%	87,292
Auckland	924,606	-11.2%	820,855	5.0%	995,942	1.8%	1,110,447
Waikato	224,731	-10.2%	201,767	4.4%	240,025	1.6%	263,873
Bay of Plenty	157,460	-10.1%	141,620	4.6%	169,223	1.7%	187,490
Gisborne	22,235	-9.7%	20,067	4.9%	24,287	1.4%	26,442
Hawke's Bay	83,730	-10.6%	74,824	4.9%	90,604	1.4%	98,640
Taranaki	58,988	-10.9%	52,551	4.4%	62,538	1.3%	67,752
Manawatū-Whanganui	117,423	-9.2%	106,674	4.2%	125,952	1.6%	138,470
Wellington	295,680	-9.0%	269,016	4.5%	321,036	1.9%	359,004
Tasman	25,098	-12.9%	21,871	5.6%	27,149	1.4%	29,518
Nelson	30,054	-11.6%	26,570	5.0%	32,331	1.7%	35,727
Marlborough	27,467	-13.4%	23,790	5.3%	29,200	1.0%	30,919
West Coast	16,076	-13.5%	13,913	5.0%	16,931	1.4%	18,365
Canterbury	331,844	-11.7%	292,922	4.5%	349,690	1.6%	383,902
Otago	131,367	-13.5%	113,600	5.3%	139,564	1.7%	154,445
Southland	53,581	-11.6%	47,371	4.7%	56,910	0.9%	60,174
<b>Total New Zealand</b>	<b>2,575,549</b>	<b>-10.9%</b>	<b>2,294,622</b>	<b>4.7%</b>	<b>2,761,139</b>	<b>1.7%</b>	<b>3,052,460</b>

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios

Table 26

**GDP by local authority - Treasury Scenario 4**

2019 \$m, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Far North District	2,461	-27.4%	1,787	10.3%	2,648	2.2%	3,019
Whāngārei District	4,502	-27.4%	3,270	10.5%	4,874	2.2%	5,538
Kaipara District	913	-27.7%	660	11.1%	1,004	2.3%	1,153
Auckland	115,906	-28.0%	83,508	11.6%	129,637	2.7%	152,012
Thames-Coromandel District	1,310	-28.2%	941	10.9%	1,425	2.6%	1,660
Hauraki District	1,050	-31.5%	719	10.7%	1,080	0.1%	1,084
Waikato District	2,946	-29.2%	2,085	10.0%	3,052	1.6%	3,357
Matamata-Piako District	2,090	-26.8%	1,531	10.6%	2,294	1.8%	2,555
Hamilton City	10,030	-25.6%	7,463	10.8%	11,239	2.7%	13,204
Waipā District	2,710	-26.6%	1,988	9.4%	2,852	1.6%	3,132
Ōtorohanga District	594	-21.4%	467	7.6%	625	1.8%	693
South Waikato District	1,297	-26.2%	957	12.1%	1,512	2.3%	1,735
Waitomo District	820	-33.3%	547	9.2%	779	-1.0%	734
Taupō District	2,317	-29.7%	1,629	10.8%	2,452	1.8%	2,734
Western Bay of Plenty District	2,140	-25.9%	1,586	12.0%	2,491	2.7%	2,915
Tauranga City	7,126	-26.7%	5,225	10.7%	7,859	3.0%	9,360
Rotorua District	3,507	-27.3%	2,551	11.5%	3,938	2.7%	4,616
Whakatāne District	1,637	-27.6%	1,185	10.1%	1,738	1.9%	1,941
Kawerau District	359	-28.5%	257	12.5%	411	1.7%	454
Ōpōtiki District	337	-26.5%	248	10.2%	366	1.9%	408
Gisborne District	1,952	-26.4%	1,436	11.5%	2,218	2.8%	2,611
Wairoa District	330	-26.8%	241	10.1%	355	1.4%	386
Hastings District	4,116	-27.3%	2,992	11.4%	4,615	2.4%	5,312
Napier City	2,706	-27.1%	1,971	11.8%	3,079	3.2%	3,709
Central Hawke's Bay District	609	-27.3%	443	10.6%	661	1.3%	713
New Plymouth District	6,464	-34.0%	4,266	11.9%	6,692	0.5%	6,881
Stratford District	470	-28.8%	335	9.7%	484	0.8%	509
South Taranaki District	2,228	-29.3%	1,575	10.1%	2,317	0.1%	2,329
Ruapehu District	668	-26.0%	494	9.7%	716	1.9%	804
Whanganui District	1,835	-24.9%	1,378	11.0%	2,092	2.9%	2,489
Rangitikei District	643	-26.4%	474	10.8%	714	1.7%	788
Manawatū District	1,240	-25.6%	923	10.1%	1,354	2.1%	1,537
Palmerston North City	4,899	-24.5%	3,698	10.3%	5,479	2.8%	6,462
Tararua District	856	-26.1%	632	10.3%	937	1.4%	1,020
Horowhenua District	1,108	-26.7%	812	9.4%	1,161	1.9%	1,301
Kāpiti Coast District	2,005	-25.4%	1,495	11.3%	2,296	2.7%	2,701
Porirua City	2,278	-24.4%	1,722	10.3%	2,550	3.0%	3,039
Upper Hutt City	1,757	-23.7%	1,341	10.0%	1,965	3.0%	2,348
Lower Hutt City	6,018	-25.7%	4,473	10.5%	6,666	2.4%	7,682
Wellington City	25,926	-27.5%	18,800	10.9%	28,431	2.3%	32,669
Masterton District	1,337	-26.2%	987	10.0%	1,443	2.1%	1,630
Carterton District	487	-28.1%	350	11.4%	539	2.6%	627
South Wairarapa District	528	-28.1%	380	11.7%	592	2.8%	697
<b>Total New Zealand</b>	<b>300,914</b>	<b>-27.8%</b>	<b>217,217</b>	<b>11.2%</b>	<b>331,918</b>	<b>2.4%</b>	<b>383,174</b>

*Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios*

Table 27

**GDP by local authority - Treasury Scenario 4**

2019 \$m, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Tasman District	2,230	-28.2%	1,602	11.7%	2,493	2.6%	2,905
Nelson City	2,668	-28.1%	1,918	11.5%	2,965	2.7%	3,483
Marlborough District	3,049	-30.4%	2,122	12.1%	3,346	2.2%	3,814
Kaikōura District	213	-31.8%	145	10.5%	217	2.6%	253
Buller District	525	-31.4%	360	10.4%	534	0.2%	542
Grey District	741	-27.6%	537	9.7%	778	1.9%	873
Westland District	541	-32.3%	366	11.7%	570	2.1%	644
Hurunui District	812	-28.7%	579	10.8%	874	1.8%	975
Waimakariri District	2,118	-25.8%	1,572	11.4%	2,418	2.8%	2,846
Christchurch City	25,156	-28.0%	18,122	10.9%	27,403	2.5%	31,788
Selwyn District	2,740	-29.7%	1,926	10.5%	2,868	2.3%	3,293
Ashburton District	2,306	-26.6%	1,693	10.8%	2,549	1.9%	2,847
Timaru District	2,877	-27.7%	2,080	10.8%	3,134	1.8%	3,482
Mackenzie District	355	-39.0%	217	11.1%	330	1.6%	365
Waimate District	411	-25.8%	305	9.9%	445	1.5%	486
Waitaki District	1,741	-33.9%	1,151	13.2%	1,886	-0.3%	1,848
Central Otago District	1,340	-28.5%	958	9.7%	1,387	1.8%	1,540
Queenstown-Lakes District	3,244	-38.0%	2,010	13.4%	3,319	3.2%	4,019
Dunedin City	6,153	-25.5%	4,586	11.2%	7,017	2.7%	8,253
Clutha District	951	-26.9%	695	10.7%	1,042	1.5%	1,141
Southland District	2,403	-29.2%	1,702	10.7%	2,560	0.5%	2,642
Gore District	780	-28.5%	558	11.2%	852	1.3%	920
Invercargill City	3,050	-28.0%	2,196	10.7%	3,294	1.8%	3,664
<b>Total New Zealand</b>	<b>300,914</b>	<b>-27.8%</b>	<b>217,217</b>	<b>11.2%</b>	<b>331,918</b>	<b>2.4%</b>	<b>383,174</b>

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios

Table 28

**GDP by region - Treasury Scenario 4**

2019 \$m, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Northland	7,876	-27.4%	5,716	10.5%	8,527	2.2%	9,710
Auckland	115,906	-28.0%	83,508	11.6%	129,637	2.7%	152,012
Waikato	25,163	-27.2%	18,327	10.5%	27,311	2.1%	30,889
Bay of Plenty	15,106	-26.8%	11,051	11.0%	16,804	2.7%	19,694
Gisborne	1,952	-26.4%	1,436	11.5%	2,218	2.8%	2,611
Hawke's Bay	7,761	-27.2%	5,648	11.4%	8,711	2.5%	10,120
Taranaki	9,162	-32.6%	6,176	11.4%	9,494	0.4%	9,720
Manawātū-Whanganui	11,249	-25.2%	8,411	10.3%	12,453	2.5%	14,401
Wellington	40,335	-26.7%	29,548	10.8%	44,482	2.4%	51,394
Tasman	2,230	-28.2%	1,602	11.7%	2,493	2.6%	2,905
Nelson	2,668	-28.1%	1,918	11.5%	2,965	2.7%	3,483
Marlborough	3,049	-30.4%	2,122	12.1%	3,346	2.2%	3,814
West Coast	1,807	-30.1%	1,263	10.5%	1,882	1.5%	2,059
Canterbury	36,987	-28.0%	26,638	10.9%	40,237	2.4%	46,334
Otago	13,430	-30.0%	9,400	11.7%	14,652	2.3%	16,800
Southland	6,233	-28.5%	4,455	10.8%	6,706	1.3%	7,227
<b>Total New Zealand</b>	<b>300,914</b>	<b>-27.8%</b>	<b>217,217</b>	<b>11.2%</b>	<b>331,918</b>	<b>2.4%</b>	<b>383,174</b>

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios



Table 29

**Employment by industry - Treasury Scenario 4**

Total filled jobs, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Horticulture and Fruit Growing	28,182	-22.0%	21,995	10.2%	32,480	0.2%	32,853
Sheep, Beef Cattle, and Grain Farming	29,691	-14.5%	25,377	3.7%	29,306	-1.8%	26,223
Dairy Cattle Farming	35,569	-9.4%	32,229	3.1%	36,361	-1.1%	33,994
Poultry, Deer, and Other Livestock Farming	8,712	-15.0%	7,407	6.9%	9,654	-0.4%	9,399
Fishing and Aquaculture	6,317	-22.9%	4,869	8.9%	6,856	0.1%	6,905
Forestry and Logging	4,286	-30.7%	2,972	11.9%	4,657	-2.4%	4,017
Agriculture, Forestry, and Fishing Support Services and Hunting	31,370	-7.5%	29,028	6.0%	36,674	-0.5%	35,603
Mining	6,066	-36.5%	3,854	14.1%	6,543	-2.7%	5,568
Meat and Meat Product Manufacturing	25,705	-11.1%	22,860	3.3%	26,027	-2.0%	23,093
Seafood Processing	4,703	-11.7%	4,153	2.1%	4,506	-2.0%	3,997
Dairy Product Manufacturing	13,563	-8.8%	12,366	4.9%	14,946	-0.8%	14,285
Fruit, Oil, Cereal, and Other Food Product Manufacturing	28,755	-20.0%	23,004	8.5%	31,901	1.5%	34,811
Beverage and Tobacco Product Manufacturing	7,548	-21.3%	5,944	10.0%	8,691	3.1%	10,408
Textile, Leather, Clothing, and Footwear Manufacturing	10,234	-21.8%	8,004	4.9%	9,684	-0.1%	9,636
Wood Product Manufacturing	18,328	-18.2%	14,985	6.5%	19,269	-0.1%	19,161
Pulp, Paper, and Converted Paper Product Manufacturing	4,483	-17.7%	3,689	5.8%	4,620	-1.7%	4,173
Printing	8,313	-13.4%	7,197	1.6%	7,666	-0.7%	7,362
Petroleum and Coal Product Manufacturing	1,126	-16.1%	945	4.2%	1,113	-0.8%	1,058
Basic Chemical and Chemical Product Manufacturing	8,545	-19.5%	6,877	8.5%	9,527	0.7%	9,927
Polymer Product and Rubber Product Manufacturing	11,593	-18.0%	9,504	7.7%	12,787	0.5%	13,184
Non-Metallic Mineral Product Manufacturing	9,279	-16.0%	7,791	8.2%	10,661	1.1%	11,395
Primary Metal and Metal Product Manufacturing	4,374	-21.4%	3,436	7.9%	4,648	-0.3%	4,578
Fabricated Metal Product Manufacturing	28,483	-24.9%	21,377	10.8%	32,266	1.1%	34,372
Transport Equipment Manufacturing	14,683	-24.8%	11,047	11.5%	17,082	0.0%	17,131
Machinery and Other Equipment Manufacturing	31,239	-25.8%	23,183	10.7%	34,807	0.0%	34,905
Furniture and Other Manufacturing	11,079	-22.4%	8,601	8.3%	11,828	0.3%	12,078
Electricity and Gas Supply	8,640	-22.1%	6,731	8.5%	9,341	1.5%	10,204
Water, Sewerage, Drainage, and Waste Services	8,869	-13.6%	7,662	5.8%	9,601	1.2%	10,335
Building Construction	73,576	-15.9%	61,842	4.0%	72,281	2.3%	82,868
Heavy and Civil Engineering Construction	37,368	-4.3%	35,772	2.5%	39,465	2.3%	45,215
Construction Services	145,777	-5.9%	137,154	2.2%	149,852	2.3%	171,757
Wholesale Trade	125,701	-10.2%	112,834	4.0%	131,799	0.7%	137,266
Motor Vehicle and Motor Vehicle Parts and Fuel Retailing	27,602	-28.5%	19,736	9.7%	28,546	0.2%	28,851
Supermarket, Grocery Stores, and Specialised Food Retailing	73,347	-10.2%	65,836	3.7%	76,113	0.2%	76,973
Other Store-Based Retailing and Non Store Retailing	126,041	-14.7%	107,541	5.0%	130,909	0.2%	132,294
Accommodation and Food Services	171,475	-31.4%	117,664	9.4%	168,287	3.9%	211,651
Road Transport	48,275	-29.8%	33,912	10.7%	50,888	0.7%	53,111
Rail, Water, Air, and Other Transport	19,053	-46.7%	10,152	18.1%	19,741	4.1%	25,053
Postal, Courier Transport Support, and Warehousing Services	39,797	-36.5%	25,264	12.9%	41,037	3.3%	49,855
Information Media Services	22,547	-34.3%	14,816	9.8%	21,499	0.0%	21,512
Telecommunications, Internet, and Library Services	19,039	-28.1%	13,685	7.9%	18,516	-0.8%	17,687
Finance	38,764	-22.3%	30,127	8.9%	42,359	0.1%	42,656
Insurance and Superannuation Funds	10,611	-23.6%	8,109	7.9%	10,999	0.0%	11,025
Auxiliary Finance and Insurance Services	20,132	-23.1%	15,480	8.1%	21,144	0.1%	21,269
Rental and Hiring Services (except Real Estate)	16,590	-20.7%	13,153	8.6%	18,321	2.1%	20,699
Property Operators and Real Estate Services	45,451	-4.5%	43,386	2.6%	48,002	1.1%	51,317
Professional, Scientific, and Technical Services	245,157	-9.9%	220,783	6.2%	280,654	1.5%	306,307
Administrative and Support Services	132,213	-5.5%	124,967	4.2%	147,359	1.8%	163,653
Central Government Administration, Defence, and Public Safety	24,533	0.7%	24,697	2.9%	27,694	1.0%	29,393
Local Government Administration	100,150	1.4%	101,582	2.3%	111,276	2.6%	129,468
Education and Training	201,240	13.0%	227,419	-1.1%	217,297	3.0%	259,418
Health Care and Social Assistance	253,922	-3.5%	245,094	3.6%	282,236	3.0%	336,354
Arts and Recreation Services	48,642	-3.3%	47,051	3.0%	52,917	2.9%	62,935
Other Services	98,810	0.7%	99,480	2.2%	108,446	2.2%	123,218
<b>Total</b>	<b>2,575,549</b>	<b>-10.9%</b>	<b>2,294,622</b>	<b>4.7%</b>	<b>2,761,139</b>	<b>1.7%</b>	<b>3,052,460</b>

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios

Table 30

**GDP by industry - Treasury Scenario 4**

2019 \$m, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Horticulture and Fruit Growing	1,489	-34.6%	974	17.0%	1,822	1.7%	2,016
Sheep, Beef Cattle, and Grain Farming	3,228	-28.4%	2,312	10.0%	3,388	-0.3%	3,327
Dairy Cattle Farming	5,846	-24.5%	4,414	9.2%	6,272	0.4%	6,439
Poultry, Deer, and Other Livestock Farming	469	-27.6%	339	13.9%	571	0.9%	603
Fishing and Aquaculture	1,974	-34.8%	1,288	17.3%	2,436	3.4%	2,973
Forestry and Logging	435	-42.0%	252	17.6%	482	-2.0%	427
Agriculture, Forestry, and Fishing Support Services and Hunting	2,222	-22.9%	1,713	11.4%	2,635	-0.2%	2,597
Mining	3,525	-48.5%	1,817	15.6%	3,244	-6.9%	2,110
Meat and Meat Product Manufacturing	2,066	-27.2%	1,504	7.8%	2,033	-1.7%	1,832
Seafood Processing	459	-28.6%	327	5.3%	402	-2.9%	338
Dairy Product Manufacturing	1,585	-26.3%	1,167	8.2%	1,597	-1.5%	1,460
Fruit, Oil, Cereal, and Other Food Product Manufacturing	2,414	-34.5%	1,582	13.5%	2,621	1.9%	2,942
Beverage and Tobacco Product Manufacturing	2,484	-35.3%	1,607	15.4%	2,850	3.9%	3,584
Textile, Leather, Clothing, and Footwear Manufacturing	704	-34.6%	460	11.6%	713	2.0%	802
Wood Product Manufacturing	1,697	-31.5%	1,162	13.7%	1,941	2.4%	2,240
Pulp, Paper, and Converted Paper Product Manufacturing	897	-32.0%	610	12.1%	964	0.1%	972
Printing	705	-28.2%	506	6.4%	648	-0.6%	624
Petroleum and Coal Product Manufacturing	1,381	-29.5%	974	12.2%	1,542	1.5%	1,686
Basic Chemical and Chemical Product Manufacturing	1,794	-33.8%	1,187	13.3%	1,958	0.8%	2,053
Polymer Product and Rubber Product Manufacturing	1,561	-32.5%	1,053	12.5%	1,689	0.7%	1,758
Non-Metallic Mineral Product Manufacturing	1,408	-30.8%	974	13.4%	1,612	1.8%	1,795
Primary Metal and Metal Product Manufacturing	721	-35.4%	466	12.0%	733	-0.9%	694
Fabricated Metal Product Manufacturing	2,507	-38.7%	1,538	14.9%	2,676	0.3%	2,728
Transport Equipment Manufacturing	1,695	-36.6%	1,074	18.4%	2,110	1.4%	2,290
Machinery and Other Equipment Manufacturing	4,039	-36.8%	2,552	17.9%	4,932	1.3%	5,326
Furniture and Other Manufacturing	839	-35.3%	543	14.3%	926	1.4%	1,006
Electricity and Gas Supply	6,417	-38.0%	3,975	9.7%	5,758	-1.8%	5,173
Water, Sewerage, Drainage, and Waste Services	1,371	-31.4%	941	7.1%	1,239	-1.5%	1,134
Building Construction	4,297	-30.6%	2,981	8.9%	4,190	2.7%	4,920
Heavy and Civil Engineering Construction	5,152	-20.8%	4,083	7.5%	5,459	2.6%	6,384
Construction Services	10,091	-22.1%	7,865	7.4%	10,449	2.9%	12,370
Wholesale Trade	15,198	-25.3%	11,348	9.7%	16,410	1.7%	18,164
Motor Vehicle and Motor Vehicle Parts and Fuel Retailing	2,259	-38.6%	1,387	19.7%	2,849	4.9%	3,800
Supermarket, Grocery Stores, and Specialised Food Retailing	4,589	-22.8%	3,543	13.2%	5,812	4.7%	7,650
Other Store-Based Retailing and Non Store Retailing	8,732	-26.9%	6,383	14.1%	10,810	4.1%	13,762
Accommodation and Food Services	6,555	-44.2%	3,658	15.5%	6,512	4.4%	8,447
Road Transport	4,700	-41.2%	2,762	17.6%	5,288	2.6%	6,159
Rail, Water, Air, and Other Transport	2,861	-55.6%	1,271	24.6%	3,068	5.1%	4,132
Postal, Courier Transport Support, and Warehousing Services	5,960	-46.8%	3,168	20.0%	6,578	5.3%	8,947
Information Media Services	2,753	-43.6%	1,553	19.6%	3,181	5.0%	4,261
Telecommunications, Internet, and Library Services	7,825	-38.8%	4,785	17.0%	8,961	3.3%	10,874
Finance	11,995	-35.4%	7,745	14.5%	13,306	0.8%	13,936
Insurance and Superannuation Funds	3,028	-36.7%	1,917	13.2%	3,150	0.4%	3,227
Auxiliary Finance and Insurance Services	2,923	-35.7%	1,879	14.6%	3,239	1.6%	3,572
Rental and Hiring Services (except Real Estate)	3,643	-34.2%	2,396	15.1%	4,199	3.9%	5,288
Property Operators and Real Estate Services	17,542	-20.7%	13,915	8.8%	19,521	3.2%	23,544
Professional, Scientific, and Technical Services	25,463	-24.7%	19,173	12.3%	30,441	2.5%	35,406
Administrative and Support Services	6,220	-22.2%	4,841	9.0%	6,838	2.1%	7,736
Central Government Administration, Defence, and Public Safety	1,568	-16.0%	1,317	8.4%	1,818	1.7%	2,008
Local Government Administration	11,589	-15.9%	9,745	7.9%	13,203	3.7%	16,438
Education and Training	11,301	-8.2%	10,370	2.0%	11,209	1.8%	12,453
Health Care and Social Assistance	17,529	-20.2%	13,992	8.8%	19,631	3.7%	24,379
Arts and Recreation Services	3,997	-20.8%	3,166	6.6%	4,083	1.8%	4,545
Other Services	5,347	-17.2%	4,429	6.6%	5,729	2.1%	6,480
<b>Total<sup>1</sup></b>	<b>300,914</b>	<b>-27.8%</b>	<b>217,217</b>	<b>11.2%</b>	<b>331,918</b>	<b>2.4%</b>	<b>383,174</b>

<sup>1</sup>: Includes owner-occupied dwellings and unallocated

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios

## Appendix 4: Pre-COVID BAU key outputs

Table 31

### Employment by local authority - business as usual

Total filled jobs, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Far North District	25,284	0.6%	25,447	0.8%	26,248	0.9%	27,736
Whāngārei District	41,093	1.3%	41,626	1.5%	44,178	1.5%	48,179
Kaipara District	8,742	0.1%	8,753	0.6%	8,970	1.1%	9,575
Auckland	922,009	2.1%	941,507	1.7%	1,007,918	1.8%	1,121,115
Thames-Coromandel District	13,170	0.6%	13,246	1.0%	13,780	1.2%	14,775
Hauraki District	7,715	0.3%	7,740	0.6%	7,918	0.7%	8,267
Waikato District	24,104	2.0%	24,598	2.3%	26,944	2.0%	30,270
Matamata-Piako District	18,255	1.2%	18,478	1.0%	19,245	0.8%	20,216
Hamilton City	97,721	1.9%	99,605	1.7%	106,759	1.9%	119,379
Waipā District	24,693	2.4%	25,294	1.9%	27,261	1.6%	30,060
Ōtorohanga District	4,699	0.5%	4,721	0.8%	4,865	0.9%	5,121
South Waikato District	10,094	1.3%	10,227	1.5%	10,833	1.1%	11,544
Waitomo District	5,108	-0.2%	5,096	-0.2%	5,058	0.1%	5,085
Taupō District	18,763	0.3%	18,810	0.6%	19,304	0.8%	20,256
Western Bay of Plenty District	24,402	2.7%	25,072	2.2%	27,335	2.0%	30,725
Tauranga City	75,682	2.9%	77,879	2.0%	84,346	1.9%	94,432
Rotorua District	36,108	1.5%	36,667	1.6%	39,096	1.4%	42,417
Whakatāne District	15,848	1.2%	16,042	0.7%	16,475	0.8%	17,330
Kawerau District	2,899	1.2%	2,933	1.3%	3,087	0.7%	3,226
Ōpōtiki District	3,829	0.1%	3,833	0.6%	3,926	-0.1%	3,900
Gisborne District	22,465	1.2%	22,741	1.1%	23,802	0.9%	25,127
Wairoa District	3,447	0.4%	3,461	0.4%	3,515	0.7%	3,659
Hastings District	45,660	1.3%	46,267	1.5%	49,061	1.4%	53,313
Napier City	28,492	1.6%	28,952	1.8%	31,055	1.6%	34,225
Central Hawke's Bay District	6,474	0.8%	6,524	0.7%	6,708	0.4%	6,885
New Plymouth District	41,935	1.4%	42,528	1.0%	44,251	1.1%	47,377
Stratford District	3,446	0.3%	3,455	0.5%	3,523	0.5%	3,620
South Taranaki District	14,138	0.9%	14,271	0.7%	14,696	0.3%	14,991
Ruapehu District	6,499	0.9%	6,556	0.7%	6,752	0.7%	7,022
Whanganui District	20,329	1.1%	20,556	1.3%	21,679	1.3%	23,410
Rangitikei District	6,565	0.4%	6,592	0.5%	6,713	0.3%	6,842
Manawatū District	12,347	2.6%	12,664	2.2%	13,790	1.4%	14,970
Palmerston North City	53,073	1.4%	53,799	1.5%	57,090	1.5%	62,351
Tararua District	7,725	0.5%	7,767	1.0%	8,067	0.4%	8,273
Horowhenua District	11,281	2.1%	11,514	1.6%	12,290	1.1%	13,138
Kāpiti Coast District	17,825	1.3%	18,060	1.9%	19,475	1.4%	21,215
Porirua City	20,777	2.4%	21,269	1.9%	22,896	1.7%	25,342
Upper Hutt City	13,753	0.9%	13,877	0.7%	14,250	0.9%	15,059
Lower Hutt City	50,927	1.5%	51,715	1.3%	54,358	1.3%	58,742
Wellington City	172,530	2.0%	175,963	1.9%	189,568	1.6%	208,782
Masterton District	12,478	0.4%	12,531	0.7%	12,876	0.8%	13,502
Carterton District	3,804	0.4%	3,817	0.7%	3,932	0.9%	4,160
South Wairarapa District	4,326	0.5%	4,347	0.9%	4,510	1.0%	4,797
<b>Total New Zealand</b>	<b>2,581,164</b>	<b>1.7%</b>	<b>2,624,721</b>	<b>1.5%</b>	<b>2,789,682</b>	<b>1.5%</b>	<b>3,059,132</b>

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios

Table 32

**Employment by local authority - business as usual**

Total filled jobs, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Tasman District	25,141	1.5%	25,517	1.4%	26,958	1.4%	29,364
Nelson City	30,159	1.0%	30,466	1.3%	32,080	1.3%	34,580
Marlborough District	27,745	0.9%	27,994	1.1%	29,251	1.0%	30,979
Kaikōura District	1,884	-1.4%	1,858	-0.1%	1,854	0.8%	1,946
Buller District	4,071	0.3%	4,083	0.5%	4,169	0.4%	4,282
Grey District	7,471	0.6%	7,519	0.6%	7,693	0.8%	8,073
Westland District	4,766	0.4%	4,785	1.0%	4,988	1.1%	5,321
Hurunui District	6,214	-0.5%	6,181	0.4%	6,269	0.6%	6,489
Waimakariri District	19,465	2.0%	19,859	1.5%	21,039	1.7%	23,334
Christchurch City	234,849	1.0%	237,237	1.2%	248,781	1.5%	271,243
Selwyn District	22,985	0.6%	23,134	1.4%	24,493	1.7%	27,151
Ashburton District	19,013	0.9%	19,183	1.1%	20,028	0.9%	21,179
Timaru District	25,638	0.9%	25,856	0.9%	26,846	0.9%	28,348
Mackenzie District	2,740	-0.2%	2,734	0.5%	2,784	1.2%	2,995
Waimate District	3,106	0.2%	3,112	0.7%	3,194	0.7%	3,325
Waitaki District	11,606	0.9%	11,713	0.8%	12,074	0.6%	12,527
Central Otago District	13,410	2.2%	13,710	1.5%	14,564	1.8%	16,193
Queenstown-Lakes District	31,180	2.7%	32,022	2.5%	35,346	3.0%	42,200
Dunedin City	66,036	1.7%	67,131	2.0%	72,637	1.6%	79,664
Clutha District	9,304	0.5%	9,352	0.8%	9,659	0.5%	9,978
Southland District	17,441	0.3%	17,486	0.6%	17,885	0.4%	18,291
Gore District	7,113	1.3%	7,204	0.9%	7,479	0.7%	7,797
Invercargill City	29,313	1.6%	29,784	1.2%	31,206	1.2%	33,463
<b>Total New Zealand</b>	<b>2,581,164</b>	<b>1.7%</b>	<b>2,624,721</b>	<b>1.5%</b>	<b>2,789,682</b>	<b>1.5%</b>	<b>3,059,132</b>

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios

Table 33

**Employment by region - business as usual**

Total filled jobs, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Northland	75,119	0.9%	75,826	1.2%	79,396	1.2%	85,489
Auckland	922,009	2.1%	941,507	1.7%	1,007,918	1.8%	1,121,115
Waikato	224,323	1.6%	227,814	1.5%	241,967	1.5%	264,972
Bay of Plenty	158,767	2.3%	162,426	1.8%	174,266	1.6%	192,030
Gisborne	22,465	1.2%	22,741	1.1%	23,802	0.9%	25,127
Hawke's Bay	84,073	1.3%	85,203	1.5%	90,339	1.4%	98,082
Taranaki	59,520	1.2%	60,254	0.9%	62,471	0.9%	65,989
Manawatū-Whanganui	117,820	1.4%	119,449	1.4%	126,381	1.2%	136,007
Wellington	296,419	1.7%	301,580	1.6%	321,865	1.5%	351,599
Tasman	25,141	1.5%	25,517	1.4%	26,958	1.4%	29,364
Nelson	30,159	1.0%	30,466	1.3%	32,080	1.3%	34,580
Marlborough	27,745	0.9%	27,994	1.1%	29,251	1.0%	30,979
West Coast	16,308	0.5%	16,387	0.7%	16,850	0.8%	17,676
Canterbury	335,896	1.0%	339,154	1.2%	355,288	1.4%	386,010
Otago	131,535	1.8%	133,929	1.9%	144,280	1.8%	160,562
Southland	53,867	1.1%	54,474	0.9%	56,570	0.9%	59,550
<b>Total New Zealand</b>	<b>2,581,164</b>	<b>1.7%</b>	<b>2,624,721</b>	<b>1.5%</b>	<b>2,789,682</b>	<b>1.5%</b>	<b>3,059,132</b>

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios

Table 34

**GDP by local authority - business as usual**

2019 \$m, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Far North District	2,478	1.3%	2,510	1.6%	2,672	1.9%	2,983
Whāngārei District	4,508	1.8%	4,588	1.8%	4,933	1.7%	5,470
Kaipara District	923	1.3%	935	1.8%	1,002	2.1%	1,137
Auckland	116,405	2.9%	119,786	2.5%	132,399	2.4%	152,602
Thames-Coromandel District	1,324	1.7%	1,346	2.1%	1,465	2.3%	1,680
Hauraki District	1,064	0.6%	1,070	0.3%	1,084	0.2%	1,095
Waikato District	2,973	2.1%	3,036	2.2%	3,313	2.1%	3,743
Matamata-Piako District	2,092	1.6%	2,125	1.6%	2,266	1.6%	2,490
Hamilton City	10,081	2.2%	10,303	2.2%	11,238	2.2%	12,815
Waipā District	2,721	3.1%	2,806	2.6%	3,111	2.2%	3,545
Ōtorohanga District	586	1.2%	593	1.7%	633	1.8%	706
South Waikato District	1,317	2.4%	1,348	2.6%	1,493	2.3%	1,708
Waitomo District	838	-0.9%	830	-1.1%	795	-0.3%	779
Taupō District	2,318	0.9%	2,339	1.3%	2,466	1.5%	2,697
Western Bay of Plenty District	2,176	3.3%	2,248	2.8%	2,510	2.6%	2,924
Tauranga City	7,246	4.0%	7,537	3.2%	8,558	2.9%	10,150
Rotorua District	3,534	2.3%	3,614	2.3%	3,962	2.1%	4,497
Whakatāne District	1,668	1.4%	1,691	1.1%	1,766	1.4%	1,918
Kawerau District	362	1.8%	369	2.1%	401	1.8%	445
Ōpōtiki District	339	1.1%	342	1.7%	366	1.2%	393
Gisborne District	1,983	2.0%	2,023	2.1%	2,199	2.0%	2,484
Wairoa District	336	1.3%	341	1.3%	359	1.6%	395
Hastings District	4,164	2.1%	4,251	2.3%	4,662	2.3%	5,339
Napier City	2,720	2.5%	2,787	2.7%	3,105	2.8%	3,669
Central Hawke's Bay District	617	1.7%	627	1.7%	671	1.5%	732
New Plymouth District	6,544	1.7%	6,656	0.7%	6,838	0.8%	7,172
Stratford District	480	0.5%	483	0.8%	498	0.8%	523
South Taranaki District	2,250	0.6%	2,264	0.4%	2,300	0.3%	2,343
Ruapehu District	680	2.1%	695	1.6%	739	1.6%	811
Whanganui District	1,858	1.9%	1,892	2.1%	2,056	2.2%	2,337
Rangitikei District	645	1.3%	654	1.4%	692	1.3%	749
Manawatū District	1,251	3.6%	1,296	3.2%	1,470	2.3%	1,688
Palmerston North City	4,932	2.1%	5,033	2.3%	5,505	2.2%	6,266
Tararua District	869	1.5%	882	1.8%	948	1.5%	1,037
Horowhenua District	1,122	2.7%	1,152	2.4%	1,267	2.0%	1,426
Kāpiti Coast District	2,029	2.0%	2,070	2.6%	2,291	2.2%	2,617
Porirua City	2,278	2.8%	2,342	2.6%	2,599	2.5%	3,017
Upper Hutt City	1,763	1.8%	1,795	1.8%	1,927	1.9%	2,163
Lower Hutt City	6,076	2.3%	6,214	2.0%	6,717	2.0%	7,562
Wellington City	26,258	2.7%	26,979	2.4%	29,703	2.1%	33,658
Masterton District	1,345	1.1%	1,359	1.3%	1,431	1.4%	1,558
Carterton District	493	1.1%	498	1.6%	531	1.9%	594
South Wairarapa District	538	1.9%	548	2.3%	601	2.4%	693
<b>Total New Zealand</b>	<b>303,639</b>	<b>2.4%</b>	<b>310,969</b>	<b>2.2%</b>	<b>339,830</b>	<b>2.2%</b>	<b>386,581</b>

*Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios*

Table 35

**GDP by local authority - business as usual**

2019 \$m, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Tasman District	2,252	2.2%	2,301	2.3%	2,520	2.4%	2,912
Nelson City	2,686	1.5%	2,727	1.9%	2,942	1.9%	3,300
Marlborough District	3,096	1.6%	3,144	2.0%	3,408	2.1%	3,860
Kaikōura District	211	-0.4%	210	1.0%	218	1.8%	243
Buller District	537	0.1%	537	0.0%	537	0.3%	547
Grey District	756	0.8%	762	0.8%	788	1.2%	846
Westland District	554	0.2%	555	1.0%	578	1.4%	627
Hurunui District	822	0.6%	827	1.5%	877	1.6%	966
Waimakariri District	2,154	2.7%	2,212	2.4%	2,428	2.6%	2,837
Christchurch City	25,743	1.8%	26,218	2.0%	28,329	2.2%	32,276
Selwyn District	2,726	1.7%	2,771	2.1%	3,008	2.2%	3,424
Ashburton District	2,347	1.6%	2,384	1.8%	2,560	1.6%	2,822
Timaru District	2,931	1.4%	2,971	1.5%	3,154	1.6%	3,464
Mackenzie District	352	0.7%	354	1.2%	372	1.9%	417
Waimate District	414	0.8%	417	1.3%	439	1.4%	479
Waitaki District	1,770	2.4%	1,812	0.8%	1,873	-0.3%	1,845
Central Otago District	1,369	2.8%	1,407	2.2%	1,536	2.6%	1,788
Queenstown-Lakes District	3,192	3.5%	3,303	3.4%	3,774	3.8%	4,729
Dunedin City	6,261	2.4%	6,413	2.7%	7,144	2.2%	8,150
Clutha District	965	1.2%	977	1.6%	1,041	1.6%	1,144
Southland District	2,436	1.0%	2,460	1.1%	2,572	0.9%	2,718
Gore District	798	1.5%	810	1.2%	850	1.2%	916
Invercargill City	3,084	1.8%	3,141	1.5%	3,338	1.6%	3,661
<b>Total New Zealand</b>	<b>303,639</b>	<b>2.4%</b>	<b>310,969</b>	<b>2.2%</b>	<b>339,830</b>	<b>2.2%</b>	<b>386,581</b>

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios

Table 36

**GDP by region - business as usual**

2019 \$m, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Northland	7,909	1.6%	8,033	1.7%	8,607	1.8%	9,590
Auckland	116,405	2.9%	119,786	2.5%	132,399	2.4%	152,602
Waikato	25,313	1.9%	25,797	1.9%	27,866	1.9%	31,258
Bay of Plenty	15,324	3.1%	15,800	2.7%	17,561	2.5%	20,328
Gisborne	1,983	2.0%	2,023	2.1%	2,199	2.0%	2,484
Hawke's Bay	7,837	2.2%	8,006	2.4%	8,797	2.4%	10,135
Taranaki	9,274	1.4%	9,403	0.6%	9,637	0.7%	10,038
Manawatū-Whanganui	11,356	2.2%	11,604	2.2%	12,677	2.0%	14,315
Wellington	40,781	2.5%	41,806	2.3%	45,800	2.1%	51,862
Tasman	2,252	2.2%	2,301	2.3%	2,520	2.4%	2,912
Nelson	2,686	1.5%	2,727	1.9%	2,942	1.9%	3,300
Marlborough	3,096	1.6%	3,144	2.0%	3,408	2.1%	3,860
West Coast	1,847	0.4%	1,855	0.6%	1,903	1.0%	2,021
Canterbury	37,700	1.8%	38,363	1.9%	41,386	2.1%	46,928
Otago	13,557	2.6%	13,912	2.5%	15,368	2.3%	17,656
Southland	6,318	1.5%	6,410	1.3%	6,760	1.3%	7,295
<b>Total New Zealand</b>	<b>303,639</b>	<b>2.4%</b>	<b>310,969</b>	<b>2.2%</b>	<b>339,830</b>	<b>2.2%</b>	<b>386,581</b>

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios

Table 37

**Employment by industry - business as usual**

Total filled jobs, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Horticulture and Fruit Growing	28,328	1.4%	28,729	1.5%	30,537	1.3%	33,021
Sheep, Beef Cattle, and Grain Farming	29,853	-0.8%	29,622	-1.1%	28,366	-1.2%	26,364
Dairy Cattle Farming	35,764	-0.3%	35,674	-0.3%	35,217	-0.5%	34,178
Poultry, Deer, and Other Livestock Farming	8,738	2.5%	8,955	1.1%	9,373	0.1%	9,428
Fishing and Aquaculture	6,352	0.2%	6,363	0.8%	6,582	0.9%	6,943
Forestry and Logging	4,310	0.0%	4,309	-0.3%	4,258	-0.9%	4,040
Agriculture, Forestry, and Fishing Support Services and Hunting	31,532	3.6%	32,675	1.8%	35,111	0.3%	35,785
Mining	6,091	0.9%	6,148	-0.3%	6,074	-1.4%	5,591
Meat and Meat Product Manufacturing	25,845	0.2%	25,902	-0.4%	25,443	-1.5%	23,218
Seafood Processing	4,729	-1.5%	4,660	-1.4%	4,405	-1.5%	4,018
Dairy Product Manufacturing	13,637	2.0%	13,911	1.0%	14,467	-0.1%	14,363
Fruit, Oil, Cereal, and Other Food Product Manufacturing	28,912	1.6%	29,385	1.7%	31,484	1.8%	34,999
Beverage and Tobacco Product Manufacturing	7,588	2.5%	7,775	2.9%	8,729	3.1%	10,462
Textile, Leather, Clothing, and Footwear Manufacturing	10,283	-1.8%	10,096	-1.1%	9,675	0.0%	9,682
Wood Product Manufacturing	18,426	-0.2%	18,393	0.1%	18,450	0.7%	19,262
Pulp, Paper, and Converted Paper Product Manufacturing	4,506	-0.3%	4,492	-0.5%	4,402	-0.8%	4,194
Printing	8,348	-2.4%	8,147	-1.3%	7,719	-0.7%	7,393
Petroleum and Coal Product Manufacturing	1,132	3.5%	1,171	0.0%	1,170	-1.6%	1,064
Basic Chemical and Chemical Product Manufacturing	8,592	1.4%	8,709	0.9%	9,029	1.7%	9,980
Polymer Product and Rubber Product Manufacturing	11,657	0.6%	11,731	1.1%	12,273	1.3%	13,255
Non-Metallic Mineral Product Manufacturing	9,294	2.5%	9,528	2.2%	10,414	1.5%	11,413
Primary Metal and Metal Product Manufacturing	4,398	-0.4%	4,379	0.3%	4,431	0.6%	4,603
Fabricated Metal Product Manufacturing	28,637	1.3%	29,009	1.6%	30,958	1.8%	34,556
Transport Equipment Manufacturing	14,764	2.0%	15,066	1.6%	16,026	1.2%	17,224
Machinery and Other Equipment Manufacturing	31,409	0.7%	31,615	0.8%	32,653	1.2%	35,092
Furniture and Other Manufacturing	11,140	0.6%	11,211	0.7%	11,527	0.9%	12,143
Electricity and Gas Supply	8,599	1.7%	8,743	1.5%	9,285	1.5%	10,173
Water, Sewerage, Drainage, and Waste Services	8,879	1.9%	9,046	1.6%	9,655	1.2%	10,345
Building Construction	70,414	1.3%	71,316	-0.8%	69,138	2.3%	79,302
Heavy and Civil Engineering Construction	37,771	1.1%	38,179	1.1%	39,869	2.3%	45,700
Construction Services	141,964	1.4%	144,005	0.3%	145,856	2.3%	167,256
Wholesale Trade	126,418	0.8%	127,472	0.9%	132,090	0.7%	138,041
Motor Vehicle and Motor Vehicle Parts and Fuel Retailing	27,580	0.4%	27,691	0.7%	28,424	0.2%	28,827
Supermarket, Grocery Stores, and Specialised Food Retailing	73,578	0.8%	74,188	0.6%	76,087	0.2%	77,211
Other Store-Based Retailing and Non Store Retailing	127,099	0.9%	128,228	0.6%	131,549	0.2%	133,398
Accommodation and Food Services	172,410	1.9%	175,695	2.1%	190,986	1.8%	212,792
Road Transport	48,488	1.4%	49,177	1.1%	51,446	0.6%	53,343
Rail, Water, Air, and Other Transport	19,203	1.9%	19,559	2.6%	21,636	2.6%	25,249
Postal, Courier Transport Support, and Warehousing Services	39,941	1.1%	40,397	1.9%	43,525	2.3%	50,033
Information Media Services	22,308	-0.4%	22,222	0.0%	22,213	-0.7%	21,282
Telecommunications, Internet, and Library Services	19,631	1.4%	19,903	-0.4%	19,571	-1.2%	18,235
Finance	38,973	3.0%	40,125	1.6%	42,831	0.0%	42,883
Insurance and Superannuation Funds	10,668	1.2%	10,801	0.7%	11,122	-0.1%	11,084
Auxiliary Finance and Insurance Services	20,242	1.9%	20,619	0.9%	21,381	0.0%	21,384
Rental and Hiring Services (except Real Estate)	16,680	3.3%	17,237	2.5%	19,022	1.5%	20,811
Property Operators and Real Estate Services	45,700	1.3%	46,291	1.3%	48,773	0.9%	51,595
Professional, Scientific, and Technical Services	246,467	2.4%	252,312	2.3%	275,980	1.8%	307,927
Administrative and Support Services	132,926	2.4%	136,182	2.1%	147,983	1.8%	164,526
Central Government Administration, Defence, and Public Safety	24,661	2.5%	25,283	2.0%	27,342	1.3%	29,545
Local Government Administration	100,585	2.2%	102,769	2.4%	112,985	2.4%	130,023
Education and Training	202,336	2.3%	207,008	2.4%	227,369	2.3%	260,816
Health Care and Social Assistance	255,153	2.3%	260,993	2.6%	289,084	2.6%	337,965
Arts and Recreation Services	48,879	2.7%	50,217	2.5%	55,442	2.2%	63,239
Other Services	99,344	2.1%	101,408	2.1%	110,261	2.0%	123,877
<b>Total</b>	<b>2,581,164</b>	<b>1.7%</b>	<b>2,624,721</b>	<b>1.5%</b>	<b>2,789,682</b>	<b>1.5%</b>	<b>3,059,132</b>

*Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios*



Table 38

**GDP by industry - business as usual**

2019 \$m, Infometrics forecasts

	Mar 20	%pa	Mar 21	%pa	Mar 25	%pa	Mar 31
Horticulture and Fruit Growing	1,504	3.1%	1,550	3.0%	1,742	2.6%	2,032
Sheep, Beef Cattle, and Grain Farming	3,260	0.8%	3,286	0.3%	3,331	0.1%	3,348
Dairy Cattle Farming	5,905	0.7%	5,946	0.9%	6,154	0.8%	6,453
Poultry, Deer, and Other Livestock Farming	473	5.6%	500	3.1%	565	1.4%	615
Fishing and Aquaculture	1,994	2.7%	2,048	3.7%	2,365	3.9%	2,969
Forestry and Logging	440	1.3%	445	0.3%	451	-0.5%	437
Agriculture, Forestry, and Fishing Support Services and Hunting	2,244	4.7%	2,349	2.1%	2,557	0.3%	2,604
Mining	3,560	0.0%	3,560	-3.0%	3,154	-4.9%	2,336
Meat and Meat Product Manufacturing	2,087	-0.6%	2,074	-0.7%	2,015	-1.5%	1,839
Seafood Processing	463	-3.4%	447	-2.8%	399	-2.7%	339
Dairy Product Manufacturing	1,601	-0.1%	1,599	-0.4%	1,572	-1.1%	1,472
Fruit, Oil, Cereal, and Other Food Product Manufacturing	2,438	0.9%	2,459	1.6%	2,625	2.0%	2,957
Beverage and Tobacco Product Manufacturing	2,508	2.2%	2,563	3.2%	2,908	3.7%	3,609
Textile, Leather, Clothing, and Footwear Manufacturing	711	-0.4%	708	0.7%	727	1.9%	814
Wood Product Manufacturing	1,714	1.3%	1,736	2.0%	1,882	3.0%	2,246
Pulp, Paper, and Converted Paper Product Manufacturing	906	0.5%	911	1.1%	952	1.2%	1,022
Printing	712	-1.8%	699	-1.2%	666	-0.8%	635
Petroleum and Coal Product Manufacturing	1,395	5.2%	1,468	2.8%	1,640	0.5%	1,687
Basic Chemical and Chemical Product Manufacturing	1,812	0.9%	1,829	0.7%	1,878	1.5%	2,055
Polymer Product and Rubber Product Manufacturing	1,576	0.4%	1,582	1.0%	1,646	1.2%	1,770
Non-Metallic Mineral Product Manufacturing	1,422	2.7%	1,460	2.7%	1,625	2.2%	1,849
Primary Metal and Metal Product Manufacturing	728	-0.8%	722	-0.5%	708	-0.3%	697
Fabricated Metal Product Manufacturing	2,532	0.3%	2,540	0.6%	2,604	0.9%	2,741
Transport Equipment Manufacturing	1,712	4.1%	1,783	3.0%	2,006	2.3%	2,301
Machinery and Other Equipment Manufacturing	4,080	3.8%	4,236	2.6%	4,690	2.2%	5,346
Furniture and Other Manufacturing	847	1.8%	863	1.7%	922	1.8%	1,026
Electricity and Gas Supply	6,565	-0.2%	6,554	-0.1%	6,518	-0.2%	6,442
Water, Sewerage, Drainage, and Waste Services	1,380	-1.8%	1,355	-1.6%	1,269	-1.8%	1,141
Building Construction	4,136	1.3%	4,191	-0.7%	4,071	2.5%	4,718
Heavy and Civil Engineering Construction	5,252	1.4%	5,324	1.3%	5,602	2.4%	6,460
Construction Services	9,886	1.8%	10,066	0.6%	10,323	2.6%	12,054
Wholesale Trade	15,362	1.7%	15,624	1.7%	16,729	1.6%	18,351
Motor Vehicle and Motor Vehicle Parts and Fuel Retailing	2,262	4.5%	2,364	4.7%	2,846	4.2%	3,640
Supermarket, Grocery Stores, and Specialised Food Retailing	4,624	5.1%	4,860	4.9%	5,891	4.5%	7,667
Other Store-Based Retailing and Non Store Retailing	8,835	4.6%	9,245	4.3%	10,933	3.7%	13,633
Accommodation and Food Services	6,619	2.7%	6,798	2.6%	7,546	2.2%	8,573
Road Transport	4,742	2.8%	4,876	2.7%	5,416	2.2%	6,164
Rail, Water, Air, and Other Transport	2,898	3.0%	2,985	3.6%	3,437	3.6%	4,251
Postal, Courier Transport Support, and Warehousing Services	6,010	2.7%	6,171	3.5%	7,086	4.0%	8,973
Information Media Services	2,738	3.7%	2,840	4.2%	3,353	4.0%	4,239
Telecommunications, Internet, and Library Services	8,093	4.6%	8,468	3.2%	9,614	2.7%	11,247
Finance	12,115	3.6%	12,556	2.2%	13,703	0.5%	14,154
Insurance and Superannuation Funds	3,059	1.6%	3,108	1.0%	3,229	0.1%	3,247
Auxiliary Finance and Insurance Services	2,952	3.2%	3,046	2.2%	3,319	1.3%	3,585
Rental and Hiring Services (except Real Estate)	3,680	3.8%	3,820	3.7%	4,419	3.1%	5,308
Property Operators and Real Estate Services	17,718	2.0%	18,067	2.7%	20,102	2.7%	23,630
Professional, Scientific, and Technical Services	25,717	3.7%	26,676	3.3%	30,355	2.7%	35,558
Administrative and Support Services	6,282	2.2%	6,422	2.0%	6,964	1.9%	7,776
Central Government Administration, Defence, and Public Safety	1,583	3.6%	1,641	2.6%	1,819	1.7%	2,014
Local Government Administration	11,688	2.6%	11,995	3.1%	13,577	3.3%	16,461
Education and Training	11,414	0.7%	11,496	0.9%	11,896	0.8%	12,515
Health Care and Social Assistance	17,693	2.5%	18,137	3.0%	20,391	3.1%	24,477
Arts and Recreation Services	4,037	2.0%	4,119	1.4%	4,349	0.9%	4,584
Other Services	5,400	1.8%	5,496	1.8%	5,906	1.6%	6,515
<b>Total<sup>1</sup></b>	<b>303,639</b>	<b>2.4%</b>	<b>310,969</b>	<b>2.2%</b>	<b>339,830</b>	<b>2.2%</b>	<b>386,581</b>

1: Includes owner-occupied dwellings and unallocated

Differences between Treasury's and Infometrics' modelling processes mean that Infometrics estimates and forecasts will not align exactly with the high-level figures published in Treasury's scenarios