# 2

# Economic and Fiscal Impacts of the Canterbury Earthquakes

## Overview

The earthquakes in Canterbury were very destructive, resulting in significant loss of life and turmoil for those involved. They have also had a significant effect on the economy, and will continue to do so for many more years. This, combined with the Government's response, means that the Government's fiscal position has also been significantly affected. This chapter provides a summary of the Treasury's current analysis of these economic and fiscal effects.

## Damage Estimates

It is still too early to estimate with confidence the financial cost of the damage caused by the Canterbury earthquakes, and there will always be uncertainty around the exact cost. Nevertheless, information received over the past couple of months suggests that the Treasury's initial assumptions made in late February remain reasonable[7]. Allowing for some double counting for cases where prior damage has been compounded, the Treasury estimates the combined financial cost of the damage caused by the two earthquakes to be around $15 billion – about 8% of GDP and 2.5% of the nation's capital stock. Although there will be a significant boost to economic activity during the rebuild, it is clear that New Zealand's wealth and living standards have suffered as a result of these earthquakes. Resources will be used to rebuild the capital stock rather than grow it.

***Table 2.1*** – Damage estimates

| **$ billion** | **Residential** | **Commercial** | **Infrastructure** | **Total** |
|---|---:|---:|---:|---:|
| 4 September | 3.25 | 0.75 | 1.0 | 5.0 |
| 22 February | 6.0 | 3.0 | 3.0 | 12.0 |
| **Total*** | **9.0** | **3.0** | **3.0** | **15.0** |

* Totals do not sum to avoid double counting of damage

Source: The Treasury

[7] See February Monthly Economic Indicators (http://www.treasury.govt.nz/economy/mei/archive)

# Economic Impacts

Economic activity in Canterbury fell significantly in the immediate aftermath of both earthquakes as people stayed at home and businesses did not open. Business and consumer confidence declined sharply, including the confidence of those outside Canterbury less directly affected, further dampening economic activity. Beyond exports of services, the impact on export activity has been relatively limited.

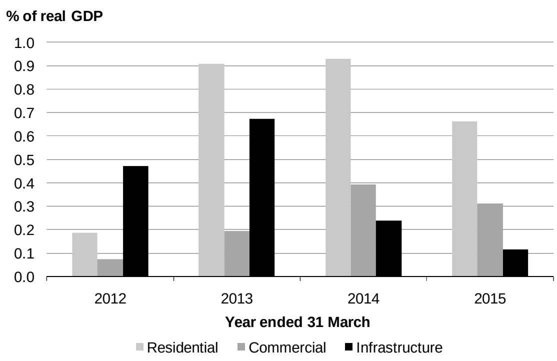
As businesses have re-opened, people have recommenced work, initial reconstruction activity has gotten underway and economic activity has increased again. The Treasury estimates that nationwide GDP will be around 1.5% lower in 2011 than it would have been otherwise, although it is worth noting there will be difficulties for Statistics New Zealand as it tries to measure economic activity in the earthquake-affected area.

The Treasury is working on the assumption that at least $15 billion is spent repairing, replacing or renewing damaged properties over the next seven years – acknowledging the considerable uncertainty around the extent, cost and timing of rebuilding. It is not expected that rebuilding activity will fully get underway until early 2012, but that it will accelerate quickly thereafter. The rebuild will be assisted by the combination of the settling of insurance claims and a subdued construction sector elsewhere in New Zealand.

A significant amount of the financial costs associated with the damage and rebuild will be covered by private and public (in the form of the Earthquake Commission) insurance, with the majority of the insurance claims subsequently covered by international reinsurers. These reinsurance flows could be in the area of $10 billion – enough to push New Zealand's current account balance temporarily into a rare surplus. The remainder of the costs will be largely borne by the Government, with individuals and private businesses covering the rest.

Although the Treasury expects rebuilding to occur in all three sectors simultaneously, it is assumed that the big increase in residential investment activity will take place in calendar 2012, with commercial activity building up steadily, and infrastructure spending this year and next. It is expected construction activity will remain at a high level throughout most of the forecast period, before starting to trend down in 2014.

***Figure 2.1*** – Indicative timing of Canterbury rebuilding




Source: The Treasury

While some of the construction activity in Canterbury will come at the expense of activity elsewhere, nationwide construction activity is expected to remain above where it would have been otherwise throughout most of the next seven years. The Treasury also forecasts higher private consumption as damaged possessions are replaced and to some extent higher public consumption and transfers owing to earthquake-related expenditure. The extra activity over the medium term is expected to broadly offset the near-term weakness, such that nominal GDP, and hence tax revenue, return to pre-earthquake levels by the end of the forecast period.

It is likely that inflation pressures next year and beyond will be higher than what they would have been otherwise, as the rebuilding activity absorbs currently underutilised labour and capital. The unemployment rate is forecast to fall to 4.8% in March 2013. Construction cost inflation is forecast to increase to around 6% per annum. Lower forecast government consumption growth provides some offset to the extra private consumption and investment activity, providing some reduced pressure on non-tradable inflation. It is likely that recent natural disasters around the world, including the Canterbury earthquakes, will prompt (potentially significant) increases in insurance premiums over time. Finally, as noted above, the Canterbury earthquakes are estimated to have destroyed around 2.5% of the nation's capital stock, reducing the level of potential output and meaning slightly more inflation for any given level of economic activity.

The Reserve Bank of New Zealand will likely be required to have higher interest rates than otherwise over the medium term in order to keep the resulting inflation pressures in check. Higher interest rates imply somewhat greater upward pressure on the New Zealand dollar than would be the case in the absence of the earthquakes, with lower export volume growth as a result. The current account deficit over the forecast period is forecast to be higher because much of the rebuild will involve increased capital imports, although reinsurance inflows have reduced the deficit over recent quarters.

# Fiscal Impacts

The earthquakes will have a significant impact on the Government's fiscal position. Operating spending and debt will be higher as a result of providing short-term income support and assistance, paying for reconstruction of infrastructure and repairing government-owned property, land remediation and Earthquake Commission (EQC) payments to households. Each of these areas is discussed in more detail below. The changed outlook for the economy will also affect tax revenue as noted earlier. The tax forecasts included in the *Budget Update* are based on an economic outlook that includes the impact of the earthquake on economic activity and therefore incomes and expenditure.

The current estimate of the total cost to the Crown is $8.8 billion, with the vast majority of this figure expected to occur within the 2010/11 to 2014/15 period. Around $5.5 billion of this cost impacts on the core Crown sector and $3.3 billion on the State-owned enterprise and Crown entity sector, mainly via the EQC. Only the core Crown element adds to core Crown net debt although total government net worth is reduced by the full amount. The direct impact of these expenses means net debt is about 3% of GDP higher by the end of the forecast period than it would be without the earthquakes.

Table 2.2 outlines the assumed timing of when the major spending hits the operating balance at both the core and total Crown levels. This timing reflects a combination of accounting rules about when events are recognised and our current best estimate of when decisions are likely to be made. To help manage the costs of the earthquakes a Canterbury Earthquake Recovery Fund of $5.5 billion has been set up. Around $2.3 billion of this fund has already been allocated.

***Table 2.2*** – Impact on operating expenses of earthquake costs (years ended June)

| Accrual expenses $million | 2010/11 | 2011/12 | 2012/13 | 2013/14 | 2014/15 | 2015/16 | Total |
|---|---|---|---|---|---|---|---|
| Local infrastructure | 789 | 59 | 78 | 79 | 79 | 78 | 1162 |
| State-owned assets (schools etc) | 25 | 45 | 15 | | | | 85 |
| Welfare support and emergency response | 457 | 52 | 6 | 6 | | | 521 |
| AMI Insurance contingency | 427 | 18 | 18 | 18 | 19 | | 500 |
| Yet to be allocated | 1111 | 1492 | 234 | 166 | 165 | 71 | 3239 |
| Total Canterbury Earthquake Recovery Fund | 2809 | 1666 | 351 | 269 | 263 | 149 | 5507 |
| EQC | 3050 | | | | | | 3050 |
| ACC | 181 | | | | | | 181 |
| Other SOE and CE costs | 40 | | | | | | 40 |
| Total Crown | 6080 | 1666 | 351 | 269 | 263 | 149 | 8778 |

### *Residential property*

EQC has reinsurance for its costs above $1.5 billion, up to $4 billion for each of the two earthquakes. Given current information, the total cost to EQC of its share of the damage to residential property is forecast to be $3.1 billion. This forecast cost has increased the 2010/11 forecast total Crown operating deficit (by the $1.6 billion) from that in the *Half Year Update*, but has not impacted on core Crown net debt because EQC's assets and liabilities are not part of the core Crown. The impact on EQC and the National Disaster Fund (NDF) is discussed further in the *Investment Statement Supplement*.

### *Local infrastructure*

The Government is committed to contributing 60% of the cost of repairing essential local infrastructure (water, storm water, sewerage systems and stop banks). A provision for around $0.8 billion in 2010/11 has been included in these forecasts based on current estimates of the amount of damage to underground systems.

The primary government contribution to repairing local roads comes from the National Land Transport Fund. The New Zealand Transport Agency (NZTA) assesses damage estimates and formulates a special funding assistance rate, which determines the split of central and local government funding for repair of local road infrastructure. The current Christchurch City Council estimate of total damage is $0.7 billion. However, it is too soon to know how much is eligible for funding from the National Land Transport Fund. Preliminary estimates from NZTA indicate that around $0.4 billion will be eligible, thus the forecasts apportion this over a number of years. The National Land Transport Fund contribution to local road costs may be absorbed using the provision for emergency work built into the National Land Transport Programme, or if this is exhausted, the costs will be absorbed by reprioritising projects within the National Land Transport Programme. In the event that the Government decides to assist the region to meet its share of roading costs, the additional costs will be met from the Crown contingency allowance discussed below.

Local roads and essential infrastructure repair costs are dependent on decisions around land remediation. The current local road estimates do not attempt to reflect any land remediation policy outcomes.

### *State-owned assets*

The cost of repairing state highways is not expected to be significant and may be absorbed using the provision for emergency work built into the National Land Transport Programme, or if this is exhausted, the costs will be absorbed by reprioritising projects within the National Land Transport Programme.

Costs associated with repairing other government infrastructure, including schools, housing and health facility assets, are largely covered by insurance and no additional provision for these costs, other than for insurance excesses, has been factored into the forecasts.

### *Welfare Support and Emergency Response*

The Government has provided other assistance for the community and the cost of these initiatives is estimated to be $0.5 billion, most of which occurs in 2010/11. This includes the immediate costs incurred during the state of national emergency and various support initiatives such as the Earthquake Employment Support package.

### *AMI Insurance*

On 7 April the Government agreed to provide a back-up financial support package for AMI Insurance (AMI) to give policyholders certainty and to ensure an orderly rebuild of Christchurch. As a result, the Government has entered into a five-year arrangement to subscribe for $500 million in convertible called, but unpaid, preference shares in AMI.

The full extent of the costs faced by AMI for the Canterbury earthquakes will remain unclear for several months until AMI has completed a detailed assessment of claims. Even then, the actual cost will remain uncertain and dependent on factors such as the basis on which claims are settled, potential building cost inflation and the time taken to rebuild. Therefore, it is uncertain if AMI will require the government injection over the next five years, and if it is required, when it would be needed and how much it would require.

Given the significant uncertainties and the limited information available at this time, the forecasts incorporate a high level of caution and prudence. Therefore, the AMI support package is included in the fiscal forecast as follows:

- Recognise a payable of $427 million to AMI in 2010/11 (being the value in today's dollars of a $500 million payment in 2014/15).
- Forecast an expense of $427 million in 2010/11. This expense reflects a very cautious assumption that if funds were injected in 2014/15, the Government's investment would not be recouped on eventual exit.
- Record an "interest" expense of $73 million over four years (which represents the difference between $427 million in today's dollars and the nominal payment of $500 million in 2014/15).
- Forecast a payment of $500 million in 2014/15.

Given the high level of uncertainty around these estimates, a fiscal risk has been included in the *Fiscal Risks* chapter. It is possible some of the Government's investment could actually be recouped on exit, while it is also a possibility that the Government may have to commit to more than a $500 million support package if AMI's shortfall for claims payments, after exhausting its own resources, is greater than $500 million.

### *Unallocated*

As noted in Table 2.2, the fiscal forecasts incorporate unallocated funds of $3.2 billion. The unallocated funds will be used for any additional costs flowing from current obligations or decisions, as well as for policy decisions that have not yet been made, such as temporary housing and any remediation of land damaged in the February earthquake.

### *Sources of funding in Budget 2011*

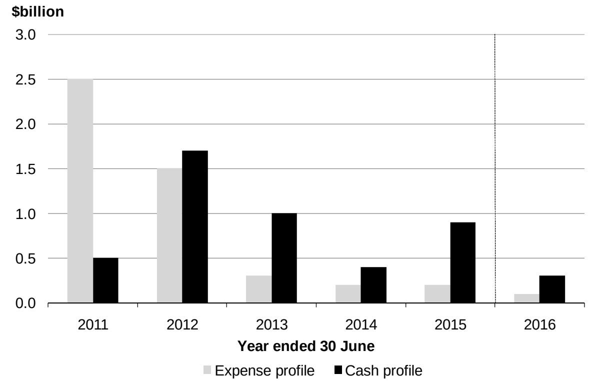
Budget 2011 provides funding to meet these costs via the creation of the Canterbury Earthquake Recovery Fund of $5.5 billion. This represents the core Crown costs discussed above. Around $0.7 billion of funding has already been either charged against the Budget 2010 contingency or met from existing baselines and thus was built into the *Half Year Economic and Fiscal Update (HYEFU)* 2010. The remaining $4.8 billion represents a new addition to net debt as of Budget 2011.

***Table 2.3*** – Sources of funding for earthquake-related costs (years ended June)

| Accrual expenses $million | 2010/11 | 2011/12 | 2012/13 | 2013/14 | 2014/15 | 2015/16 | Total |
|---|---|---|---|---|---|---|---|
| Absorbed by reprioritising within entities | 84 | 123 | 94 | 79 | 79 | 78 | 537 |
| Budget 2010 contingency | 198 | 1 | | | | | 199 |
| Budget 2011 | 2527 | 1542 | 257 | 190 | 184 | 71 | 4771 |
| Total Canterbury Earthquake Recovery Fund | 2809 | 1666 | 351 | 269 | 263 | 149 | 5507 |
| EQC | 3050 | | | | | | 3050 |
| ACC | 181 | | | | | | 181 |
| Other Total Crown | 40 | | | | | | 40 |
| Total Crown | 6080 | 1666 | 351 | 269 | 263 | 149 | 8778 |

As noted above, the earthquake costs impact mainly on the 2010/11 and 2011/12 fiscal years. The timing of cash disbursements and hence the impact on net debt is somewhat different. The impact on net debt gives a better indication of the potential impact on economic activity, although it is still not precise. Figure 2.2 summarises the assumed cash profile of the above earthquake costs. This cash profile represents our current best estimate of likely timing of the impact on net debt, and has been factored into the macro and fiscal forecasts, including estimates of the fiscal impulse. Although the bulk of the increase in net debt will be in the form of standard New Zealand Government bonds, a proportion of the funding will be raised via the issuance of Canterbury Earthquake Kiwi Bonds.

***Figure 2.2 -*** Expense and cash profile of earthquake costs




Source: The Treasury

## Uncertainty Around Economic and Fiscal Impacts

There is a high level of uncertainty surrounding both the economic and fiscal impacts of the earthquakes. In terms of impact on the economy, a range of factors could see the effects differ from those built into the Treasury's economic forecasts. These include the quantum and timing of reconstruction activity. With respect to the fiscal impact, there is uncertainty attached both to costs where decisions have already been taken, and to areas where there is either still too much uncertainty or where decisions have not yet been made.

When such costs are committed to, or when they can be reliably measured, they will be recorded in the Crown's financial statements and forecasts and charged against the $3.2 billion of the Fund yet to be allocated. Similarly, costs over and above those already built into the forecasts will be counted against the Fund. To the extent additional costs add to more than the $5.5 billion in the Fund there will be an adverse impact on the fiscal position.