Estimating the impact of the earthquake on economic activity in Waimakariri, Christchurch City, Selwyn and

This note describes how Infometrics have incorporated the impact of the earthquake on our current and forecast estimates of GDP for the Waimakariri, Christchurch City and Selwyn (WCCS) Districts.

1. Estimate impact of earthquake on national economy

Infometrics had just completed its March 2011 economic forecasts for New Zealand at the time of the February 2011 earthquake. Shortly after the earthquake we revised our forecasts based on available information. We estimated that the earthquake would knock more than one percentage point off GDP growth in the March quarter. Further details of our view of the impact of the earthquake are provided in the appendix.

A comparison of our pre-quake and post-quake quarterly forecasts provide us with an estimate of the impact of the quake on the national economy ('the quake increment') for each quarter from March 2011 to March 2015.

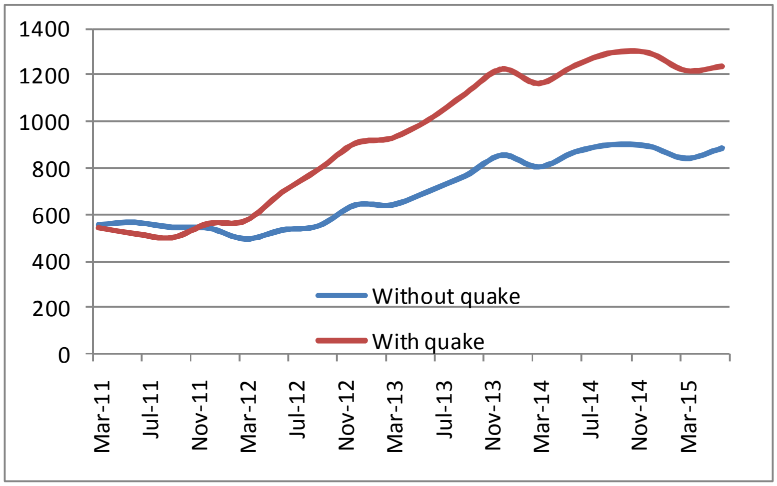
2. Estimate impact of earthquake on WCCS economy

We have assumed that 90% of the impact of the earthquake is concentrated on the WCCS districts. This is based on our observation of partial economic indicators from other parts of the country that suggest that the rest of the economy has been largely unaffected. By multiplying the quarterly national quake increments by 90% we arrive at the total quake increments for WCCS. These increments are made up of construction industry increments and non-construction industry increments.

3. Estimate impact of earthquake on WCCS construction industry

Infometrics prepares forecasts of construction activity at the national level and for six regions including Canterbury. The difference between our pre-quake and post-quake quarterly construction forecasts provide us with the WCCS construction quake increments for each quarter from March 2011 to March 2015. Figure 1 shows our forecasts for construction activity for the construction industry with and without the impact of the quake.

Figure 1. Forecasts of value of construction work put in place ($m) before and after the quake



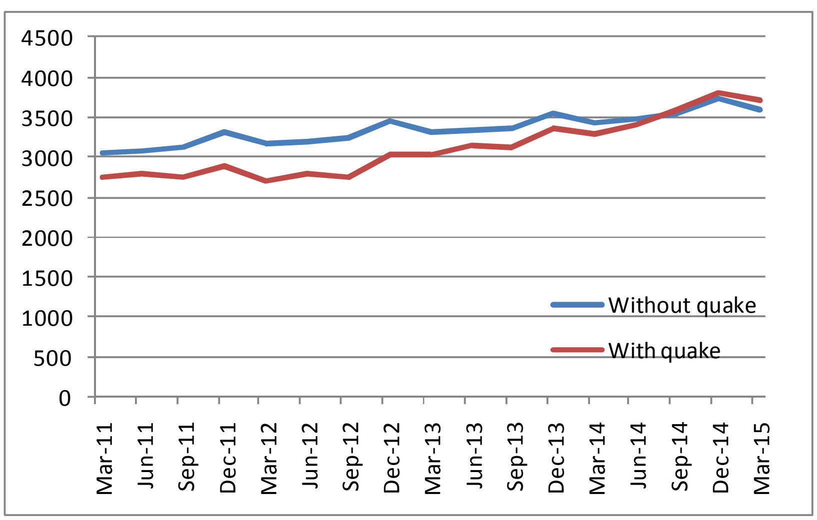
4. Estimate impact of earthquake on WCCS non-construction industries

The WCCS non-construction quake increment is calculated as the difference between the WCCS total quake increment and WCCS construction quake increment.

5. Add the quake increments to the business as usual forecasts

To arrive at our final estimates of GDP for WCCS districts we add the quarterly quake increments (construction and non-construction separately) to our business as usual forecasts for the WCCS ie our forecasts based on a scenario without the earthquake.

Figure 2. GDP forecasts ($m) for WCCS with and without the earthquake

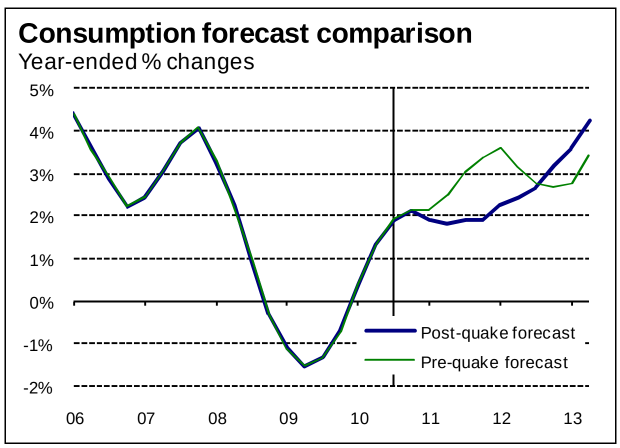


APPENDIX: CANTERBURY EARTHQUAKE SPECIAL

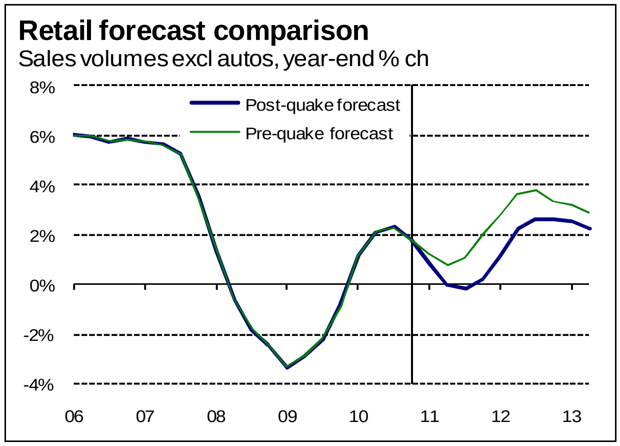
A different outlook for the coming year

We had prepared our numbers and written large chunks of our forecasts prior to last month's earthquake in Canterbury, but were then forced to re-evaluate our predictions for the economy. We have fully incorporated the earthquake in our forecasts, but this supplement highlights the effects that the disaster and its aftermath will have on various economic indicators over the next two years.

We estimate that nationwide household spending will be 1.1% lower in the March 2011 quarter than would have been the case without the quake (see Graph 0.1). Although consumption will start to recover from this knock in mid-2011, total spending activity in the 2011 calendar year will be much weaker than it would have been without the quake. Some catch-up occurs in 2012 and 2013 as confidence, particularly in the Canterbury Region, returns to normal.



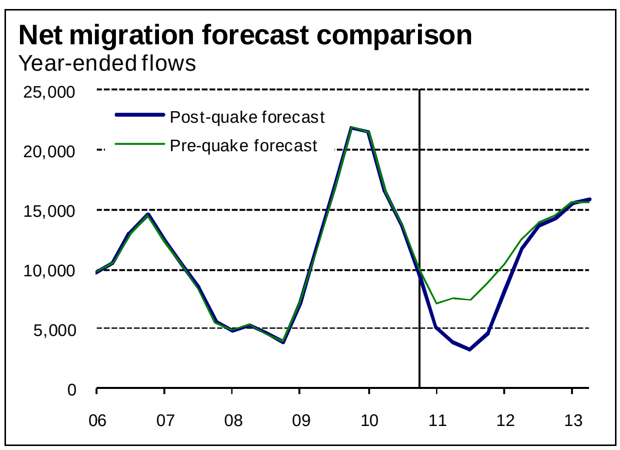
Graph 0.1



Graph 0.2

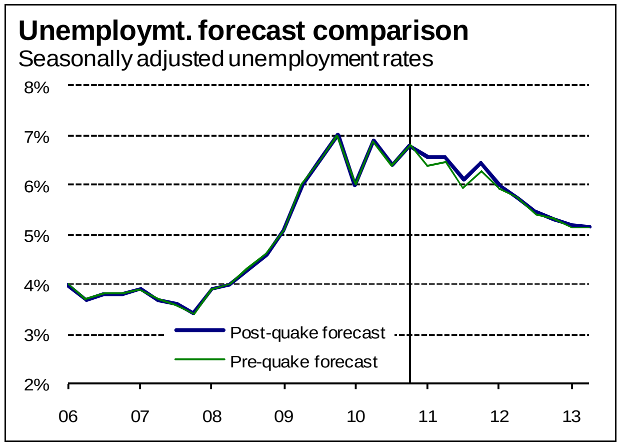
In line with consumption, retail activity will also take a hit in the current quarter (see Graph 0.2). Although total spending will largely recover over subsequent quarters, the lower exchange rate will push up prices and limit growth in sales volumes. Tougher profitability conditions will also leave retailers with little choice but to put up prices.

Another effect of the earthquake is on population. There has been plenty of coverage of people leaving Christchurch for other parts of New Zealand temporarily or permanently, but we expect there to be some outflow overseas as well – particularly to Australia. We now predict that net migration will bottom out at about 3,300pa in September this year (see Graph 0.3).



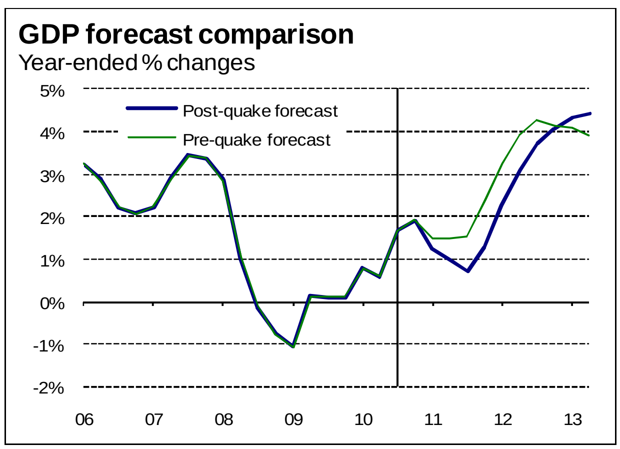
Graph 0.3

One area we don't expect the quake to have a significant effect is on unemployment (see Graph 0.4). Although some jobs and businesses have been lost, the combination of population movements and government assistance will limit the immediate increase in unemployment. Any rise in the unemployment rate will also be restricted by the official definition of unemployment, which requires people to be actively looking for work, as well as a temporary increase in the number of people permanently heading overseas.



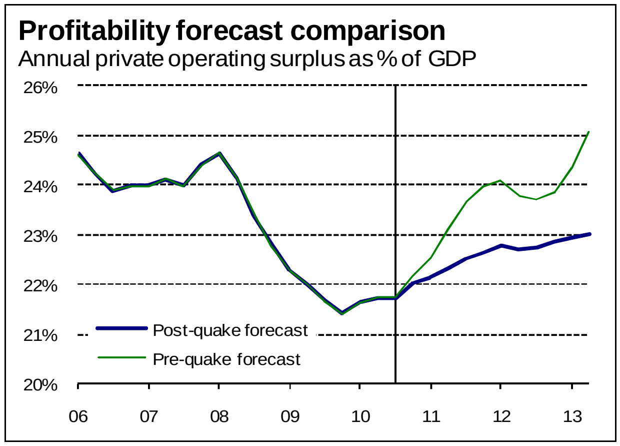
Graph 0.4

With private consumption representing 61% of GDP, it is unsurprising that we have significantly reduced our near-term forecasts of economic growth (see Graph 0.5). Investment spending will also be weaker in the near-term, but government consumption spending is likely to be stronger. GDP growth will recover later this year as there is some spending catch-up and the Rugby World Cup takes place. We don't expect the rebuilding of Christchurch to start to show up in the data until 2012.



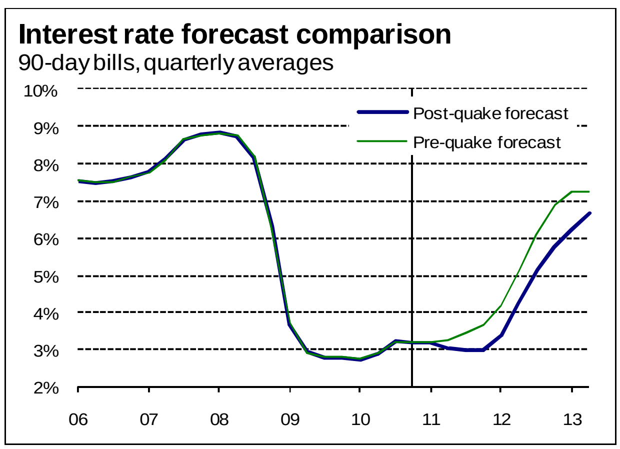
Graph 0.5

Weaker growth in spending and other economic activity will also have a negative effect on business profitability (see Graph 0.6). Profitability has been hit hard previously by the drought in 2007/08 and the global financial crisis. Ongoing acceleration in the improvement in profitability would have been very welcome for businesses this year, but the legacy of the quake's effect on the business community is set to be felt for some time.



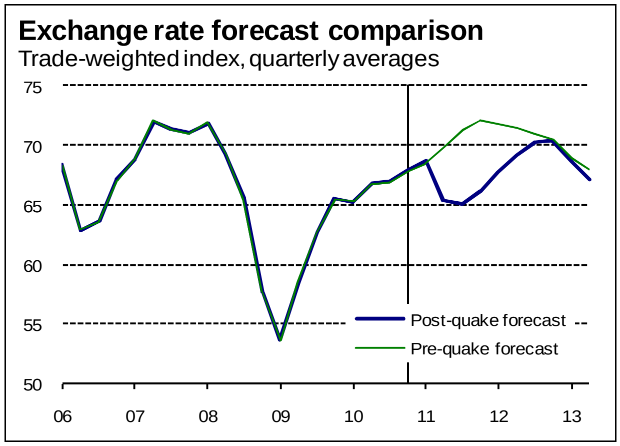
Graph 0.6

The negative effect on confidence from the earthquake has given the Reserve Bank a good reason to cut interest rates, particularly given the economy's sluggish end to 2010 (see Graph 0.7). The likelihood of accelerating GDP growth and inflation in 2012 suggests that rate cuts now may not be strictly necessary. But interest rates will remain lower for longer as the Bank pays less attention to inflation and is more concerned to make sure the economy is definitely on a sustainable path to recovery.



Graph 0.7

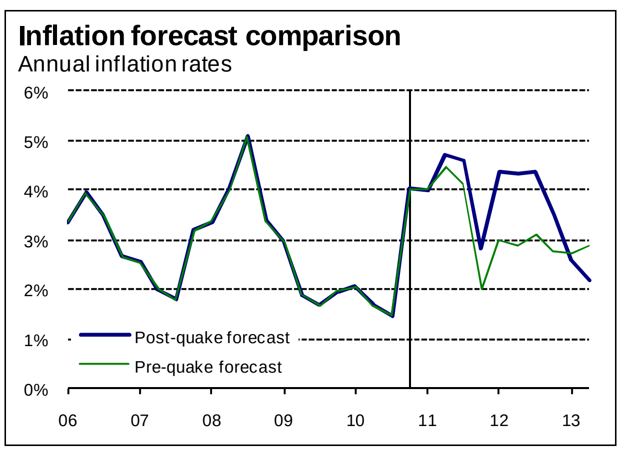
The earthquake's impact on economic growth prospects and interest rate differentials will have a noticeable flow-on effect for the exchange rate (see Graph 0.8). The dollar is set to be up to 10% weaker than it would otherwise have been this year as international investors reassess their willingness to put money in New Zealand. The dollar is likely to start appreciating again from late 2011 as interest rate rises draw closer.



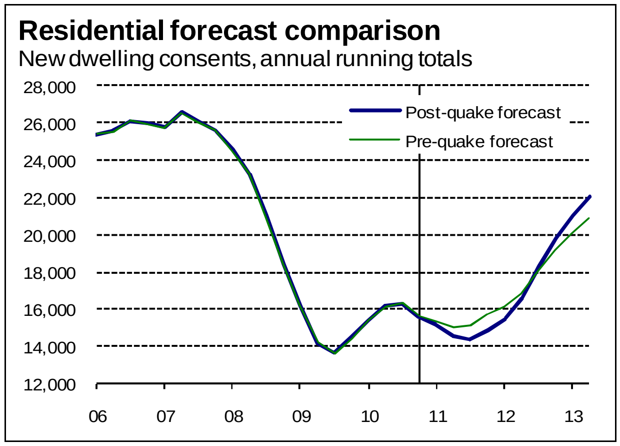
Graph 0.8

Although the outlook for interest rates is lower in the short-term, the earthquake will have the dual effects of reducing the Canterbury economy's productive capacity as well as increasing aggregate demand for resources as rebuilding work gets underway. Throw in the stimulatory effects of lower interest rates and a weaker dollar, and we see a definite risk of substantially higher inflation in 2012 (see Graph 0.9).

We had previously expected rebuilding work following last September's earthquake to be getting underway in the current quarter. The latest quake will delay that process by up to nine months, but will also significantly increase the number of replacement houses that need to be built. We expect some additional resources to be put towards the residential rebuilding effort, but the process is also likely to last a lot longer than was expected after the first earthquake, and could extend through until 2015/16 (see Graph 0.10).



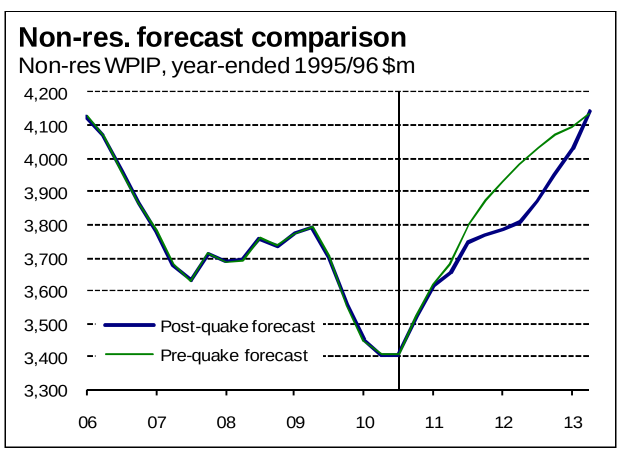
Graph 0.9



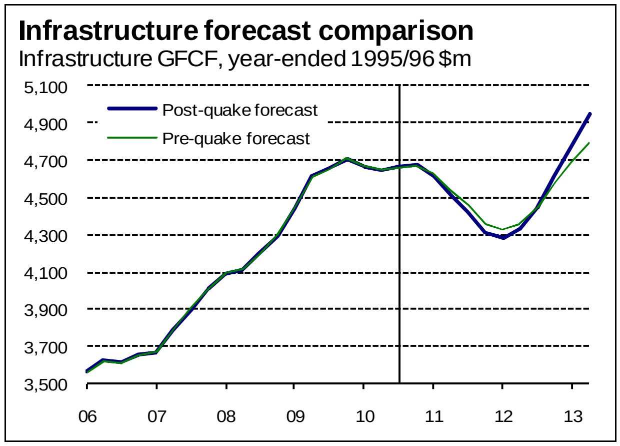
Graph 0.10

We had expected the non-residential rebuilding effort to take longer to get underway than the residential rebuilding. On that basis, the delays caused by the latest earthquake do not start to show up until the second half of 2011 (see Graph 0.11). We now expect non-residential building work in Canterbury to gather pace in the second half of 2012. Rebuilding work is still likely to take longer than for the residential sector, with resource constraints, more complex planning decisions, and questions about business demand for space combining to prolong the process.

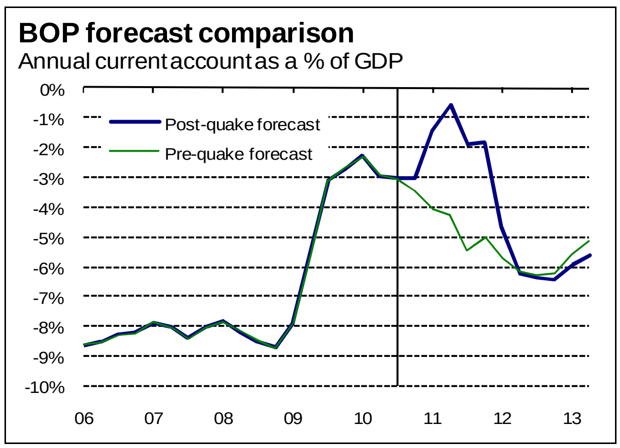
We anticipate that the lags around infrastructure work will be similar to those for non-residential building (see Graph 0.12). Although central and local government will work as quickly as possible to restore essential services, there will be ongoing upgrades and repair work over the medium-term. This repair work will be needed to ensure that infrastructure that has been given a "quick fix" following the quake is sufficiently robust for the city's longer-term requirements.



Graph 0.11



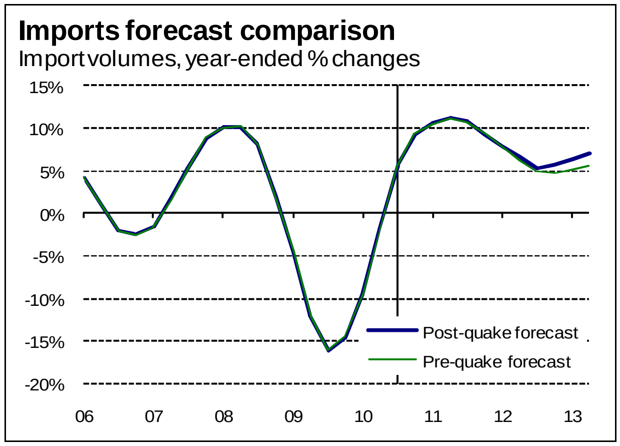
Graph 0.12



Graph 0.13

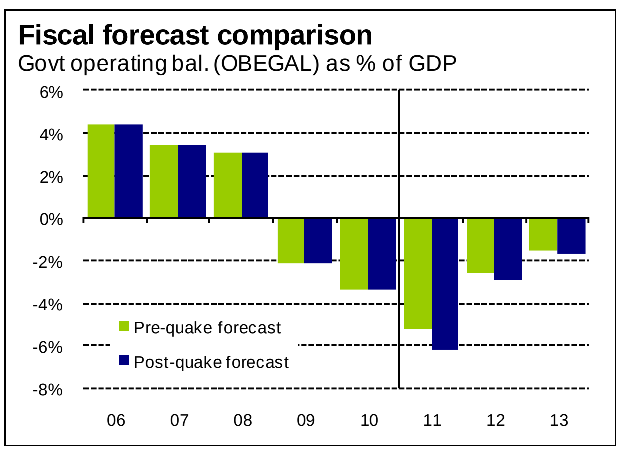
The money for all that rebuilding work has to come from somewhere. Overseas reinsurers are set to face a significant bill for the losses caused by the quake – the Earthquake Commission will have cover of about $2.5bn, and private insurers will have some reinsurance cover too. The inflow of funds will push New Zealand desperately close to its first current account surplus since 1973 (see Graph 0.13).

Although domestic spending will be weaker in the near-term as a result of the earthquake, we do not expect to see any discernible effect on import volumes. But by 2012/13, we are forecasting faster growth in imports as some materials to facilitate the rebuilding will be source offshore (see Graph 0.14). The higher import track will lead to a slightly larger current account deficit in 2013.



Graph 0.14

The government also faces a considerable bill from the earthquake in terms of its EQC liabilities, funding for repairing infrastructure, and welfare and business assistance for people and firms that have been displaced by the disaster (see Graph 0.15). Weaker economic growth in the short term will also reduce the government's tax take. We expect some reprioritisation of existing spending by the government, but we also recognise that we may have underestimated the effect of the earthquake on the government's finances.



Graph 0.15