CHAPTER 13

Shocks and Jolts

September 2010–December 2011

While we watched the unsettling developments in Europe and the United States, we were also dealing with a major crisis at home. It started unexpectedly on 4 September 2010.

That Saturday morning I awoke, turned on the radio and heard the bad news: a massive 7.1 magnitude earthquake had just struck Christchurch. Christchurch? It was hard to believe. We constantly planned for 'the big one' in Wellington; we had even prepared for a volcanic eruption in Auckland; but the quake in Christchurch took us – including some geologists – by surprise. Regular radio programming had been abandoned and instead there was a constant feed from the scene, where homes and workplaces had been destroyed. The brutal shock a few hours earlier had caused considerable damage but, miraculously, there appeared to be no loss of life.

It was fortunate that the quake had occurred so early: at 4.35 a.m. most people had been safe in bed. I recalled a conversation with the Chilean central bank governor after the big Chilean earthquake that had struck the previous year at exactly the same time of day. If one had to have a quake, early on a Saturday morning was the best time: with people safely at home and a weekend ahead to try to restore commercial services.

I started phoning my colleagues. While others dealt with immediate threats to life and limb, at the Reserve Bank our first thought was for financial services: was there enough cash in town and would there be enough working ATMs or banks open to distribute it? Emergencies can provoke a rush to hold cash and if banks run out, things can rapidly deteriorate. Some urgent ringing around established that there were good stocks of cash in Christchurch, and that at least some ATMs still had power and were accessible. We monitored the foreign exchange markets, just closing in the US. They seemed to have good information and were not panicking: the New Zealand dollar had hardly moved. That was satisfactory news for the first day.

Over the following days we talked to the banks about how they were assessing damage to their branches and their clients, and what provisioning they needed for losses on their loans.

The Reserve Bank was in the process of taking over responsibility for regulating the insurance industry. New Zealanders appeared to be well insured through Earthquake Commission insurance for homes and private insurance for businesses, and this insurance was in turn substantially reinsured offshore. We had never seen how this would be tested in a crisis, but the industry seemed confident it could meet claims.

Our economists went to work and estimated that the damage to houses, commercial buildings and underground infrastructure was going to be in the vicinity of $5 billion, making the quake the most expensive natural disaster ever to hit New Zealand. Though it was a significant disaster for the people of Canterbury, we saw the cost as manageable, as much of it would ultimately be paid for by foreign reinsurers. It had been a significant emergency, but we were reasonably satisfied with how the cash transporters, the banks and the insurance companies had responded. Unfortunately, these September events would also prove to be a test – for the real thing.

There was no Saturday-morning respite next time. In the early afternoon of Tuesday, 22 February 2011, my assistant Jo Lawrence interrupted a meeting at the Reserve Bank, pulling me out to hear reports of another large earthquake hitting Christchurch, this time with major casualties. The quake was centred under the central business district, where lunchtime crowds had been enjoying the fresh air on a summer's day. As reports filtered through, we realised that this was a devastating event: many people were injured, and this time there were fatalities. Workers were trapped, travellers missing, buildings toppled, cars wrecked, power lines awry, roads a broken mess, and everywhere the cracks in the paving oozed a fine slime – liquefaction. Only a month previously I had given a talk on the fourteenth floor of the Hotel Grand Chancellor. Now this tall building stood on a dangerous lean in the middle of the ruined business district.

Search and rescue teams sprang into action, and saving people came first. Survivors were pulled from the rubble, some in a bad way. The country watched in horror as reports of fatalities grew. Around me colleagues tried desperately to contact family members in Christchurch.

Many government agencies pitched in with urgent assistance. Together with the banks, we at the Reserve Bank organised internet mapping to assist people to locate operational ATM machines to get cash. We talked to foreign exchange traders, playing down the chances of a run on the New Zealand dollar. We monitored the insurance companies, who had clearly taken a big hit this time. And we started to tally the fresh damage.

In the still fragile New Zealand economy, signs were emerging that the earthquakes would affect business and consumer confidence right across the country. We took a fortnight to assess and monitor this information, then in early March we announced we would use monetary policy to help boost confidence. The official cash rate would be cut, this time down to 2.5 per cent.

More bad news lay ahead. The insurance sector in New Zealand was stable and conservative, but the extent of damage from this quake would bring crippling insurance claims. The major insurance companies all reported big hits to their balance sheets. Most of them had taken on new reinsurance cover since the September quake, but many would now need to raise new capital to bolster their balance sheets. In most cases this did not cause major problems; however one small company went into receivership and another specialist insurer of churches (whose heavy stone structures had been drastically hit) ultimately pulled out of the market. But most problematic of all was the sizeable local company AMI, owned by its policyholders, which had a large share of the residential

Christchurch insurance market and no big shareholders to recapitalise it. AMI announced it might be unable to meet all its payout claims. The Government decided to provide support if necessary. It did so somewhat reluctantly because it didn't want to signal that it would subsidise failure in this industry, and because it was only now emerging from the liabilities of the guarantee schemes entered into during the Global Financial Crisis.

As the weeks passed, it became clearer just how financially damaging this earthquake was going to be. We re-estimated the cost of structural damage: it had risen hugely, to over $20 billion, $13 billion of this in damaged housing, with around $30 billion of insurance payouts. Around 100,000 houses needed to be repaired or completely rebuilt. The seismic shock beneath Christchurch had caused massive vertical acceleration, lifting and dropping parts of the city by up to one metre. The liquefaction was highly problematic: we knew how to rebuild houses, but repairing the land beneath would be complex and very expensive. The aftershocks continued: the earthquakes were turning out to be exceptionally damaging by international standards, with a long afterlife. There had been more than 400 aftershocks measuring over 4 on the Richter scale, and thousands of smaller ones, since 4 September 2010.

While the ground was still rumbling, normal life in the city could not be resumed. The central business district was completely cordoned off; large areas of the eastern suburbs were uninhabitable; there were dangerous cliff slips in the south; and everywhere underground piping was broken and disrupted.

The 22 February quake was followed on 11 March – the day after we eased our monetary policy – by the earthquake in Japan that caused a tsunami and damage to nuclear power stations. We watched the tsunami, as it happened, on YouTube – scenes that looked apocalyptic, with terrible loss of life. We shared notes with the Bank of Japan about dealing with the economic aftermath of earthquakes. Japan's human loss was significantly greater. But we calculated that the Christchurch earthquakes, their damage estimated at 10 to 12 per cent of the country's GDP, represented a much bigger relative economic shock for our country.

From an accounting standpoint, though earthquakes damage balance sheet values they also stimulate economic activity as rebuilding gets under way, especially when much of it is paid for by foreigners through reinsurance. But there could be no new insurance available for the rebuild until there was a return to seismic stability. We reluctantly pushed our economic recovery forecast further into the future, but we knew that in time there would be a silver lining, a massive rebuilding programme, New Zealand's biggest by far. This would potentially add 1 per cent to New Zealand's growth for years to come. The main worry then would be whether the huge demand for materials, skills and manpower would cause bottlenecks and inflation, enough for us to have to tighten monetary policy again.

We studied the economic impact of other relevant earthquakes – Chile, Kobe, San Francisco – and the lessons they held for monetary policy. We found that once rebuilding started, these communities swiftly got back on their economic feet, sometimes faster than forecast. Would that happen in Christchurch, even though each new shake caused more people, businesses and money to leave the region?

Together with a colleague, Sonia Speedy, I travelled to Christchurch to view the damage at first hand and to talk to the people who were going to lead the reconstruction. It was an eerie sight driving in from the airport: much of the landscape appeared normal, apart from a few piles of mud, some minor earthworks, and a ripple or two in the road. Then one would see a beautiful old home standing awry, thrown from its foundations; a chimney smashed across a roof; brick walls that had collapsed; power poles leaning; shop-front windows cracked; whole buildings collapsed into untidy piles of rubble. Here and there a flag or a crude painted sign showed the resilient spirit of the inhabitants. We had seen it all on television, but the reality was shocking: it looked like a war scene. And the damage seemed quite random. Why did this shop-front crumble and not that one? Why was this house destroyed and the next apparently unscathed?

We could not visit the cordoned-off central business district and from a distance the damage wasn't obvious, until we saw the lean of the Grand Chancellor hotel. There was a sharp intake of breath as we drove past the Catholic cathedral – its old stone basilica had been torn apart, leaving a massive gaping hole.

We talked to staff at the Earthquake Commission who, from being a small organisation, were frantically gearing up to handle a huge influx of insurance claims. They had the additional misfortune of needing hundreds of loss adjusters at the same time that devastating floods had hit Queensland, Australia. In a room lined by hundreds of box files, each one a sad story of destruction, we also talked to engineers from Fletcher Building, the firm charged with leading repair work for the less damaged houses. We met geologists from Tonkin & Taylor, who had to focus on the complex question of underground engineering. All the colourful PowerPoint presentations and seismic maps could not disguise the difficulties that lay ahead. Everyone was working very hard in an environment of huge and continuing uncertainty about instability, rebuilding and funding.

With the current state of the financial markets, the earthquake could hardly have come at a worse time. The extra cost to the government was considerable, estimated at around $13 billion. This would start to weigh on its funding requirements at the same time that sovereign funding markets were becoming cautious about the problems of the PIIGS. The Debt Management Office in Treasury is charged with raising through regular bond tenders those funds necessary to finance the government. For much of the year these tenders had gone smoothly – foreign markets liked New Zealand government debt because our public finances are well run, transparent and properly accounted for. New Zealand is one of very few countries in the world never to have defaulted on foreign debt. But in late August–early September 2011 we saw a disquieting trend as demand for our debt fell away. The Debt Management Office responded by reducing tender amounts for the bond programme, but even these were hardly being met by the markets.

As if this wasn't bad enough, the effects of the earthquake persuaded first Standard & Poor's, then Fitch Ratings, to cut the credit rating of the New Zealand Government. I had earlier accompanied the Minister of Finance to meetings with both agencies, and they had recognised that the New Zealand Government had limited its debt very effectively.

However, knowing the extra earthquake costs, both agencies gently hinted that their rating committees would have a hard job maintaining the New Zealand grade. Coming on top of all the other bad earthquake news, their decisions were a blow.

But if government funding was suffering, the banks were suffering too. As explained, banks in New Zealand raise about half their funds from local deposits and for the rest rely on overseas markets, where they seek a mixture of short- and long-term funds. Short-term markets were operational, although expensive, but the longer-term markets had become very fragile due to fallout from the European crisis. When the banks put out feelers for long-term unsecured loans there was little interest, and they had to withdraw quickly.

They resorted to a funding instrument that had been common in Europe but less so for us: the covered bond. Buying a covered bond allows a lender to have first rights over some bank asset, rather than having to line up and take their turn if a bank were to fail. From our viewpoint there were disadvantages to this instrument, namely that the rights of existing unsecured creditors would be diluted, but the market was open for this form of funding. In view of the tight market conditions, we decided to allow a very limited amount of these loans. Several New Zealand banks went quickly to the European markets and were rewarded with extra funding. But it was expensive. By the year's end it was costing them up to 2.5 per cent more than they might have expected to pay for unsecured issues pre-crisis. This would start to hurt the bottom line and eventually would be passed on in higher lending rates.

We had not anticipated what was to happen next: the Australian banks saw the success of their New Zealand subsidiaries raising funds and pressured the Australian Government to allow them to do the same thing. The Australian parent banks then shouldered their subsidiaries aside and went out to the European covered bond market themselves, raising significant amounts of funding for the year ahead. A side effect was that the markets, now saturated with Australasian risk, closed the door on further New Zealand borrowing.

Another problem followed. After the experience of funding markets drying up during the Global Financial Crisis, we had required New

Zealand banks to increase their share of long-term 'sticky funding' – by getting longer maturity funding or more domestic deposits – and this they had been doing. As we monitored progress it became clear that if international markets continued to deteriorate, then insisting that the banks stick to the original timetable for increasing their core funding ratio might have the effect of restricting bank credit at a time of already weak lending growth. Somewhat reluctantly, we chose to play it safe and push out the deadline by six months because the markets were so tight. This was announced in our November 2011 *Financial Stability Report.*

This report noted that financial stress in private and public debt markets, particularly in Europe, had increased the risks of instability in New Zealand's economic and financial system. As shown on page 147, our cobweb diagrams summarise many metrics on financial stability. The web had grown considerably in only six months and now looked almost as bad as it had after the failure of Lehman Brothers, back in 2008.

In the meantime international bank supervisors had been meeting in Basel and elsewhere around the world, mainly under the auspices of the Financial Stability Board. Everyone wanted to tighten up on bank regulation following the crisis, but there were different views afoot. It had become a complex and contentious project. For our part we worried that Australasian banks might be saddled with high regulatory costs as a result of the sins of their northern brethren. But nevertheless we could see the need to strengthen New Zealand banks, through what had become known as 'Basel III' (after the Swiss city of the same name).

We worked through the options. As well as stipulating liquidity through our higher core funding ratios, we would also require banks to hold more capital of better quality. In addition, we wanted a 'conservative buffer' available to absorb losses during times of stress, and a 'counter-cyclical capital buffer' to prevent excess credit growth in the financial system – resulting in more liquidity, more capital, more collateral on every bank's balance sheet to buffer the whole system. We knew that this would not come cheap – at a time when funding margins were already raised in bank markets, we would be requiring banks to increase their capital by a half – but for the most part the banks had accepted this new reality.