The Earthquake in an Investment Context

New Zealand Equities Monthly Commentary

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Geo-political concerns, the exit from QE2 and weak domestic economies provide headwinds for investment markets. Which equity strategy looks best suited to chart the way forward?

- *Several of the Harbour Asset Management team call Christchurch and Canterbury "home". Our families, cousins and friends are but one small layer in Canterbury of people that are so determined to mourn those we have lost, assist those who are in hardship and also consider already just how to go forward.*
- Whenever in the developed world has the force of nature galvanised a country and the world? The Kobe 1995 Earthquake appears closest in terms of its relative local and national impact, which is why it is so tragic that many of those lives that have been lost were from Japan.
- In a special report we have already written about our immediate investment reaction[1] and the portfolio. The portfolio performed strongly in February, up 1.43% beating both the benchmark and the NZX50 index. This report considers the economic, market and security implications of the Christchurch earthquake against a backdrop of rampant global liquidity and magnified geo-political uncertainty.
- The NZ equity market rose in February (led by Fletcher Building +13%), New Zealand's long term bonds barely moved, but shorter term maturities rallied and the kiwi was only about 2% lower, although slumped 4% against the Australian dollar. These market outcomes highlight the strength of New Zealand's balance sheet, and that fact that the global reinsurers will bear the financial brunt of this disaster.

February 2011	***Month***	***3 months***	***6 months***
Portfolio	1.43%	6.18%	13.75%
Benchmark**	0.12%	3.29%	12.69%
Relative Performance	1.30%	2.89%	1.06%

** Benchmark is the Russell JB Were Tradeable including imputation credits. Returns are before fees and taxes. Investor returns may differ.

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[1] "Earthquake 6.3" 23 February 2011, Harbour Asset Management

Strategy – key themes

Normally we would focus a February monthly report on the most important company reporting period of the year. Although several key trends emerged (such as the improvement in consumer banking profits), by and large the portfolio was positioned well for the reporting season. In February the changes we have made in the portfolio are largely more in response to the macro-risks evolving from the following factors:

- Geo-political influences and the global commodity boom – supply shock or too much money chasing too few goods?

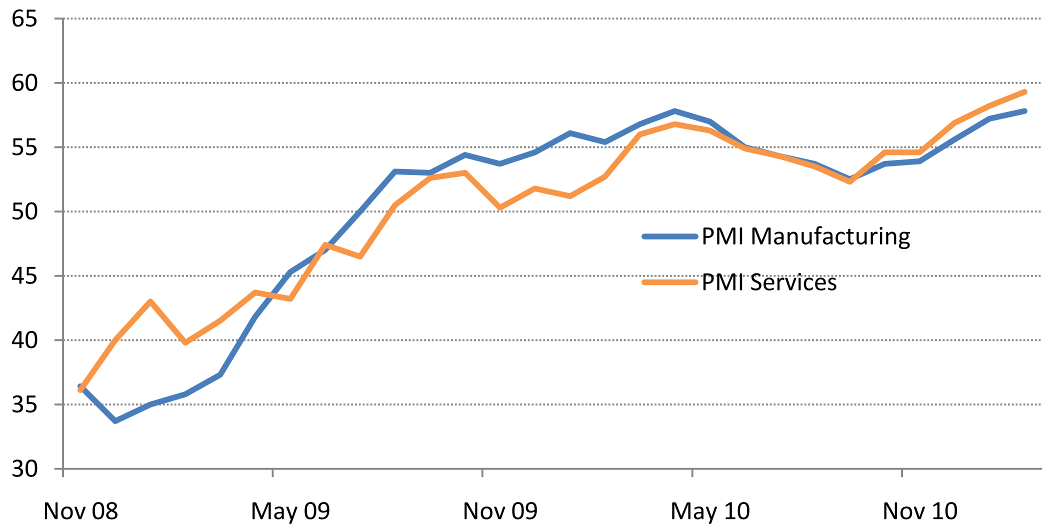
- The exit from QE2 – too late already? Implications for inflation, bonds and equities.

- "Dutch" disease – strong commodity prices create an elevated real exchange rate for both Australia and New Zealand.

- The Christchurch Earthquake –investment implications

For the past three months we have consistently stated that our strongest conviction view was that Western policy makers are erring on the side of too much stimulus and that this risked higher commodity prices, inflation concerns and higher bond yields[2]. The leading economic data for both the US and Europe continues to exceed expectations. Manufacturing and non-manufacturing confidence surveys in the US and Europe have significantly positively surprised. Our portfolio continues to focus in "global" names.

Global Business Confidence Continues to Rise



Source: Bloomberg. JP Morgan data. To End February 2011

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[2] See for instance "Too much stimulus" 6 January 2011, "Pedal to the Metal" 6 February 2011, Harbour Asset Management.

Geo-political Factors

We commented last month that only a fraction of the reports in the media regarding "tensions" in first Tunisia, then Egypt, Bahrain and Libya focused on the root cause – the rapid increase in food prices. Citizens in the developing world spend the majority of their income on food and energy. Just as the rise in the oil price to over $150 in 2008 was a significant factor in the global financial crisis, the near doubling of rice prices and other grains and proteins may now create tensions in countries where there is a demonstrable income inequality. At the margin this is a bear story for emerging markets relative to developed markets.

Even in emerging markets with strong economic growth, policy makers are becoming very concerned.[3] Speaking at the opening of the National People's Congress, Wen Jiabao said "China will target inflation as the top economic priority this year and narrow the gap between rich and poor as the government seeks to maintain social stability."[4] What this means is further measures to curb growth in strong emerging markets to take pressure off resources and limit the transmission from cost increases to wage demands. Many economists expect China to raise rates a further three times this year.

Global Food Prices Have Skyrocketed

Source: Bloomberg, CRB Index Food

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[3] China's Gini coefficient, an income-distribution gauge used by economists, has climbed to near 0.5 from less than 0.3 a quarter century ago, according to Li Shi, professor of economics, School of Economics and Business at Beijing Normal University. The measure ranges from 0 to 1, and the 0.4 mark is used as a predictor by analysts for social unrest. Source Bloomberg March 2011.

[4] 5 March, Bloomberg News

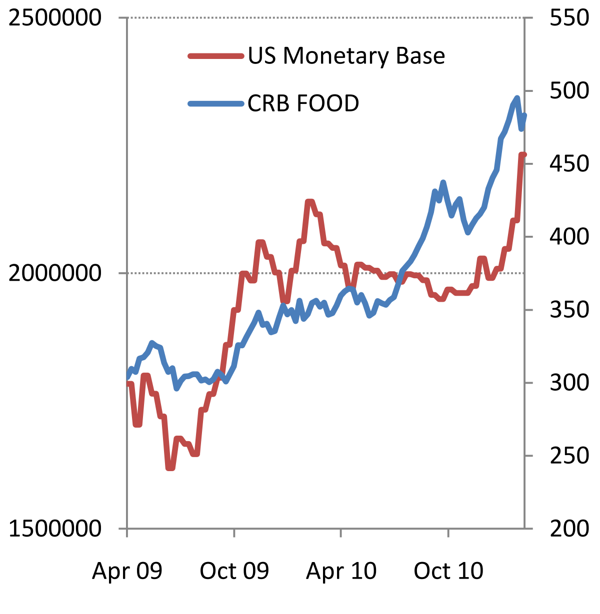
Is the global agricultural price boom a supply shock or is it related to the ample supply of global liquidity? This may be an important question for New Zealand, as a sustained improvement in our terms of trade brought about by shortage of supply has different implications to price rises brought about by global monetary expansion.

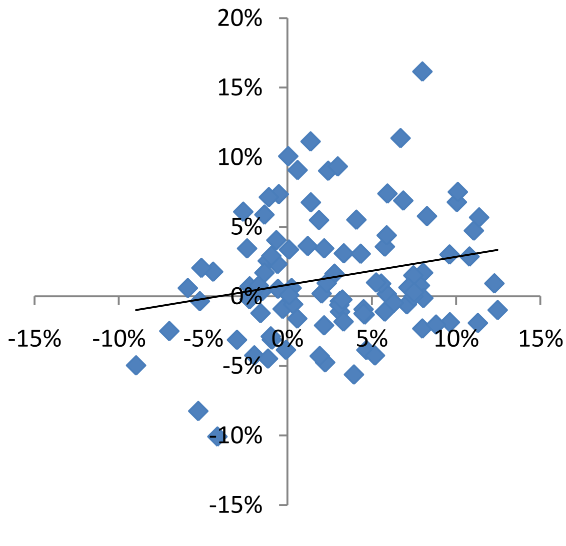
Causation is tough to prove. Global food prices first started to really rise as the US dollar weakened from about July 2010. Concerns regarding global growth, and talk of a double dip, produced a pull back in food prices. The subsequent introduction of QE2 in early November 2010 marks very closely the commencement of a very sharp rise in food prices. However, the Queensland Floods, and poor weather in Brazil, undoubtedly exacerbated the trend in prices. For instance, both cotton and wheat prices (Australia is the third largest producer of both products in terms of the sea-borne market) jumped sharply as the full implications of the Queensland floods became apparent.

Looking at the charts it is by no means clear that QE2 actually had any real direct meaningful impact on food price inflation (see charts below); instead we think that a combination of supply issues and the secular rise in global demand from emerging markets, probably explain much of the spike in agricultural food prices.

Only Limited Direct Relationship Between QE2 and Food Prices

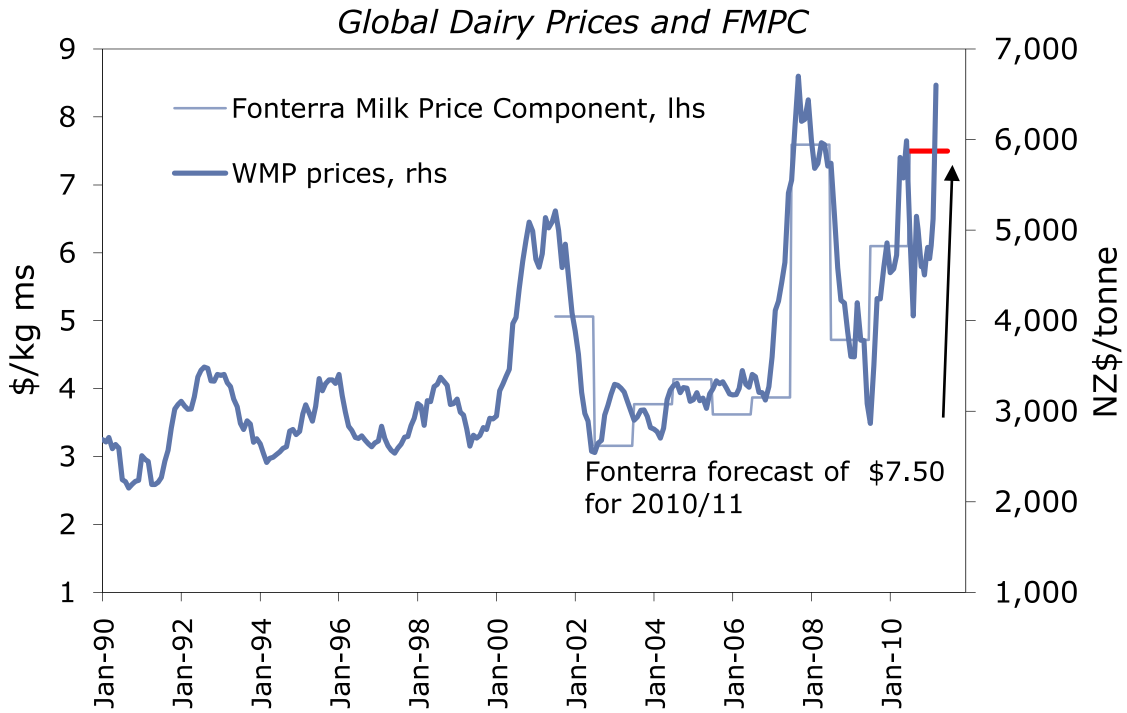
US Monetary Base and Food Prices and Weekly % Change Correlation





Source: Bloomberg, CRB.

However, at the same time, many agricultural commodity prices unaffected directly by climatic events have also continued to rise in price. For instance, **dairy milk powder prices are up 41% this calendar year.**



Source: Fonterra, USDA, GS&PNZ Research estimates

We tend to think that global demand in emerging markets is continuing to outstrip supply and that this is likely to be an enduring theme, especially as Government's around the world look to secure food security. It could be that New Zealand's terms of trade may witness a secular higher average in the next decade compared to the last two decades. We also continue to think that selected hard commodities – coking coal, iron ore, copper and potentially now oil will also witness higher real prices, which may also imply Australia maintains a higher average terms of trade[5].

Geo-political concerns may maintain the commodity price boom – especially in oil and agricultural products for some time. However, to the extent that China raises interest rates and dampens further spending, we could see a pull back in metal prices. We have exited all mid cap metal mining exposure and maintain only a broad-based resource exposure through BHP-Billiton and a focused exposure to high quality hard coking coal through Bathurst Resources. Ideally the portfolio would have a stronger agricultural exposure, but realistically there are no high quality listed names in our Australasian universe.

[5] "We have very strong demand from growing economies like China for our resources. We anticipate there will be strong demand and good prices for a long period of time to come." Australian Prime Minister 5 March 2011.

The Exit from QE2

Ever since Ben Bernanke opened the door for QE2 markets have fretted about the end of rapid monetary base expansion. The world now expects QE2 to finish at the end of June this year. And as we see it, the exit couldn't come sooner, with US business confidence at decade highs, leading indicators of employment strengthening, and the potential as monetary velocity increases, of a normalization in the credit cycle.

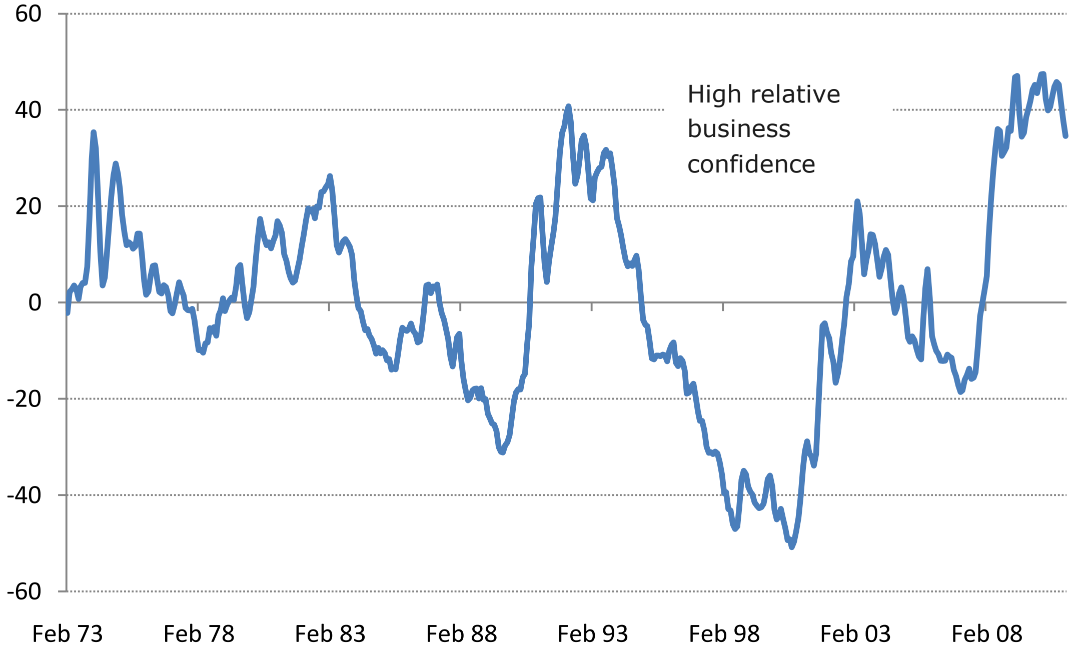
However, not all commentators see it this way. Many ask the question, just who will buy US Treasury bonds when the Fed stops buying them? Surely, they pose; US bond yields will rise precipitously to "clear" the auctions?

Although we are developing our thoughts on the exit from QE2, our current take is this: If unexpected inflation pressures emerge and the Fed fails to act, bonds will sell off further, as will equities, as either the monetary tightening required hits growth, or the rise in inflation expectations requires a re-pricing of all risk assets.

Our central expectation is for the Fed to broadly stay "behind the curve" but not so badly that consumer price inflation jumps. This is in part because the consumer just isn't playing the same game this cycle. The gap between US business and consumer confidence remains at near four decade high and consumers remain in de-leveraging mode.

US Business Confidence less US Consumer Confidence

(Business Confidence remains a lot stronger than Consumer Confidence)



Source: Bloomberg, US ISM (PMI) SA less Conference Board Consumer Confidence SA

At the same time we continue to think that because the Fed are still supportive of growth, the crowded trade of being long global growth assets may extend itself. This is in part because it normally takes months to turn around positive business sentiment and that if anything recent data suggest some pick up in both employment and consumer related indicators.

One key concern we have is the potential for a circuit breaker, such as a spike in the oil price. Including 1973 there have been four occasions when the oil price has risen by 50% or more in a 3 month period. On average US consumer confidence has fallen. Smaller oil price rises, have not necessary impacted severely on growth.

Oil Price (3 month % change)	**US Consumer Confidence Change (3 month change)**
>100%	-19
50-99%	-7
25-49%	0
0-24%	1
<0%	0

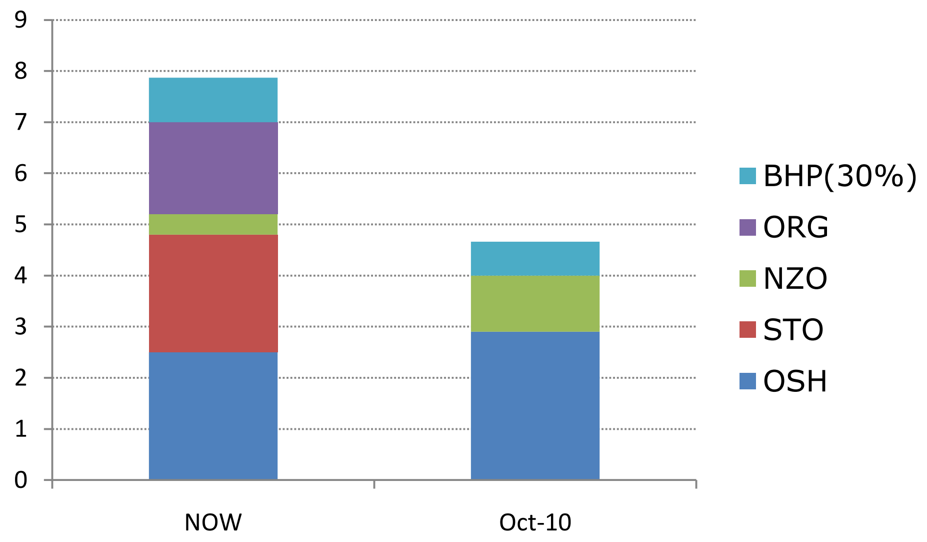
Source: Bloomberg

Our thinking regarding how to invest for the QE2 exit had been relatively straight forward – slowly rotate out of global growth assets. Now, with geo-political concerns and supply constrained commodity price inflation – we are instead maintaining a higher weight in global growth assets (particularly energy stocks) than we had contemplated at this stage of the cycle.[6]

We have continued to elevate energy with further purchases of companies like Santos, and a lift in our Oil Search weighting. In our view both companies had good earnings announcements in February. In addition our large resource weight is biased to BHP-Billiton, in part because BHP has significant oil assets relative to more pure play mineral or other diversified resource companies.

[6] Last month we discussed why we would normally have a higher consumer sector weight at this stage of the cycle, but this cycle is different, with the additional overlay of Earthquakes and Floods.

Energy Weights Have Increased



Source: Positions in a Representative Portfolio. Now is 4 March 2011.

Dutch Disease[7]

New Zealand and Australia have high real exchange rates that are hampering growth non-commodity based net exports. Strong Australasian exchange rates in part reflect poor economic fundamentals in the US, UK, Japan and Europe, but strong commodity prices are also a key factor. Holland experienced a structural growth slowdown as the economy adjusted to their high real exchange rate in the 1980s.

Recently several commentators[8] have questioned whether Australia may experience a lower growth rate as industry adjusts to the higher real exchange rate.

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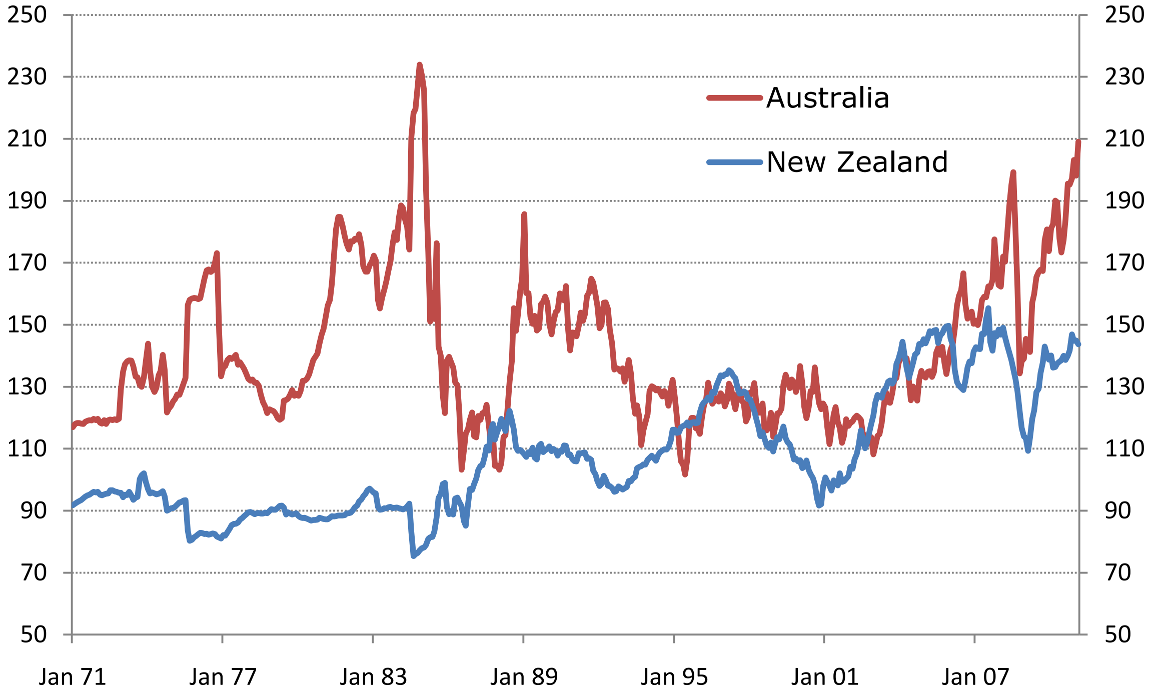
[7] In the 1970s Netherlands experienced a surge in growth associated with its energy industry that drove up its currency and hit its manufacturing industry. Dutch disease or the resource curse refers to the tendency for mining and resource booms to drive up prices and increase the value of the local currency, damaging non-resource export industries. The "Dutch disease" term was coined in the 1970s after the Netherlands experienced significant inflation and low growth in manufacturing after the development of that country's massive North Sea oil fields.

[8] eg Tom Vosa, National Australia Bank, March 2011.

Real Effective Exchange Rates for Australia and New Zealand

More of a problem for Australia than New Zealand at the moment …



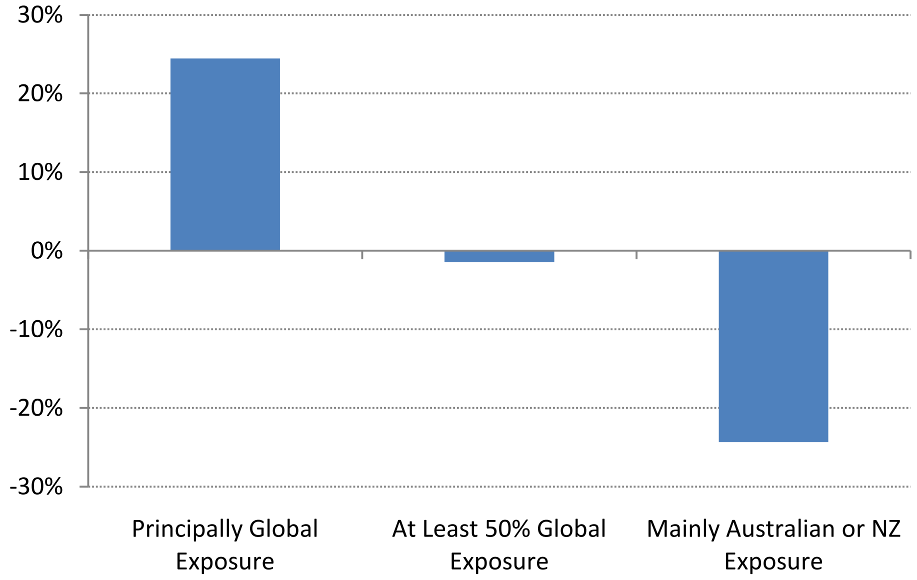
Source: Bloomberg, JP Morgan, Based at 100 in 1990

Our take on this is that the New Zealand and Australian economies are generally more flexible and have better mechanisms in place to adjust resources between the tradeable and non-tradeable sectors compared to Holland in the 1970s. However, Australia's real exchange rate is meaningfully higher than New Zealand's and it does create a policy dilemma and may imply a continuation of a sharply two speed economy. Facing the same pressures, Norway introduced the State Petroleum Fund, and the policy debate in Australia has started to consider expanding the role of the Future Fund.

From an equity perspective the strength of both the Australian and New Zealand dollars continues to hollow out the manufacturing base. Many companies have dealt to this by either transferring manufacturing offshore or merging/buying global manufacturing capacity. Good examples in our portfolio are Rakon (electronics), Nuplex (global chemicals) and Amcor (global packaging).

Australia had developed significant export industries like tourism, pharmaceuticals and higher education in the 1980s and 1990s, but many of these success stories are beginning to fade. A key risk is what happens if the resource boom pulls back. From an investment perspective this is why we are so attracted to those companies that have embraced globalization.

Relative Portfolio Positions "Global" versus "local" exposure



Source: Harbour Asset Management. From a representative Portfolio as at End February 2011. Positions are expressed against the Russell JB Were Tradeable Index.

Global Exposure Companies Include = AMC, CSL, BHP, NWS, OSH, STO, FPH, BTU etc

50% Global Exposure Companies Include = NPX, DGL, AIO, MFT, AIR etc

Mainly Australian or NZ Companies Include = SEK, MHI, FPA, AMP, WBC, CBA, FBU, TEL, CEN, VCT etc

The Christchurch Earthquake - investment implications

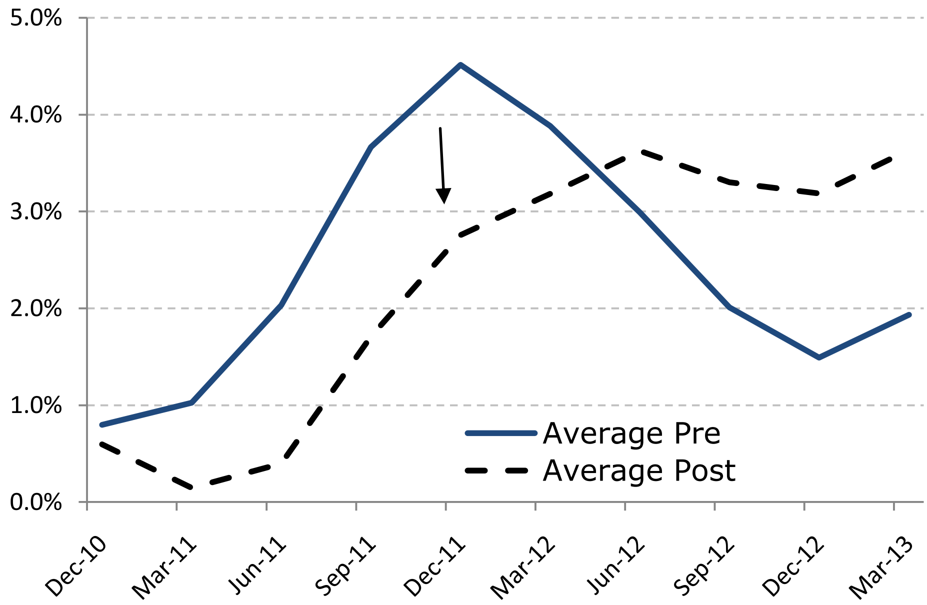
Once again we preface these thoughts by saying that we remain deeply shocked by the tragic event of 22 February and that by considering the economic and investment implications we are in no way belittling the human suffering.

Economic leading indicators for New Zealand now take a back seat, although we would say that we were becoming far more comfortable with the recovery in the weeks before the earthquake. We can only ponder now whether the rest of New Zealand can continue to find a firmer footing and provide some offset to the dislocation and cessation of production that is hitting about 10-15% of the economy right now.

Many economists have done their best in trying to estimate the economic consequences. The key take out has been that the risk of cutting interest rates to prop up demand nationwide seems low, and most forecasters expect the Reserve Bank to cut rates by 0.25% or 0.5% on 10 March, with the market implying something between. Already the major banks have lowered 6 month to 3 year mortgage rates following the yield curve lower. It seems to us that the exchange rate has already anticipated an easing of rates, however a cut in rates may have a further positive influence on risk asset classes such as equities.

The following chart shows current and previous forecasts of the key economists we have been able to survey.

GDP Forecasts: Pre and Post Earthquake



Source: UBS, BNZ, First NZ Capital

The BNZ team, like most, agree that forecasting is "very rubbery" at the moment and suggest activity could be 1.0-1.5% lower in 2011 than originally forecast. They have released a business confidence survey – the first since the quake – which shows a significant drop in expected activity.

UBS economist Robin Clements who is based in Christchurch says[9]:

- perhaps 70,000 people have left Christchurch, with up to 25,000 homes severely or moderately damaged
- 755 out of 2300 buildings in the CDB inspected have been red-stickered and
- a further 909 buildings have been yellow stickered
- the combined disaster will cost $20bn.
    - EQC will meet $6-$8bn (this includes the first earthquake and reinsurance)
    - Private reinsurers will meet $6-$7bn
    - This leaves $5-$6bn for the Christchurch council and the government
- coming at a peak shoulder season for tourism this will have a larger economic impact
- the global coverage and loss of life by foreigners will amplify the impact on tourism

Clements expects to lower his NZ GDP forecasts by more than 1%.

The cost of the September and February earthquakes is now put by Government estimates as NZ$20bn. Previously we had compared the September earthquake to that of Newcastle, Australia. However, we now need to go further abroad to find a

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[9] 5 March 2011 UBS

comparison to the destructive force of the February quake. How does this compare with other global natural disasters in developed countries? And what can we learn?

Matt Henry of Goldman Sachs found some very interesting data on three major earthquakes (with two involving liquefaction):

- **1989 Loma Prieta earthquake (San Francisco)** The earthquake caused severe damage in some very specific locations in the San Francisco Bay Area, most notably on unstable soil in San Francisco and Oakland Major property damage in San Francisco's Marina District 60 mi (97 km) from the epicentre resulted from liquefaction of soil used to create waterfront land. Other effects included sand volcanoes, landslides, and ground ruptures. Some 12,000 homes and 2,600 businesses were damaged. In Santa Cruz, close to the epicentre, 40 buildings collapsed, killing six people. The quake caused an estimated **$6 billion (US$11 billion in current value)** in property damage, becoming one of the most expensive natural disasters in U.S. history at the time. It was the largest earthquake to occur on the San Andreas Fault since the great 1906 San Francisco earthquake. Private donations poured in to aid relief efforts and on October 26, President George H. W. Bush signed a **$3.45 billion earthquake relief package for California.**

- **1994 Northridge Earthquake (Los Angeles)** The Northridge earthquake struck the San Fernando Valley region of Southern California with a moment magnitude measured at 6.7 and focal depth of 19 km. The earthquake was centred 32 km west-northwest of Los Angeles along a south-dipping, blind thrust fault. Little if any surface faulting was produced. The earthquake resulted in 57 deaths, more than 5,000 injuries and structural damage including instances of partial or complete structural collapse. Estimates of more than **US$20 billion** in property damage make this earthquake the costliest seismic disaster in U.S. history.

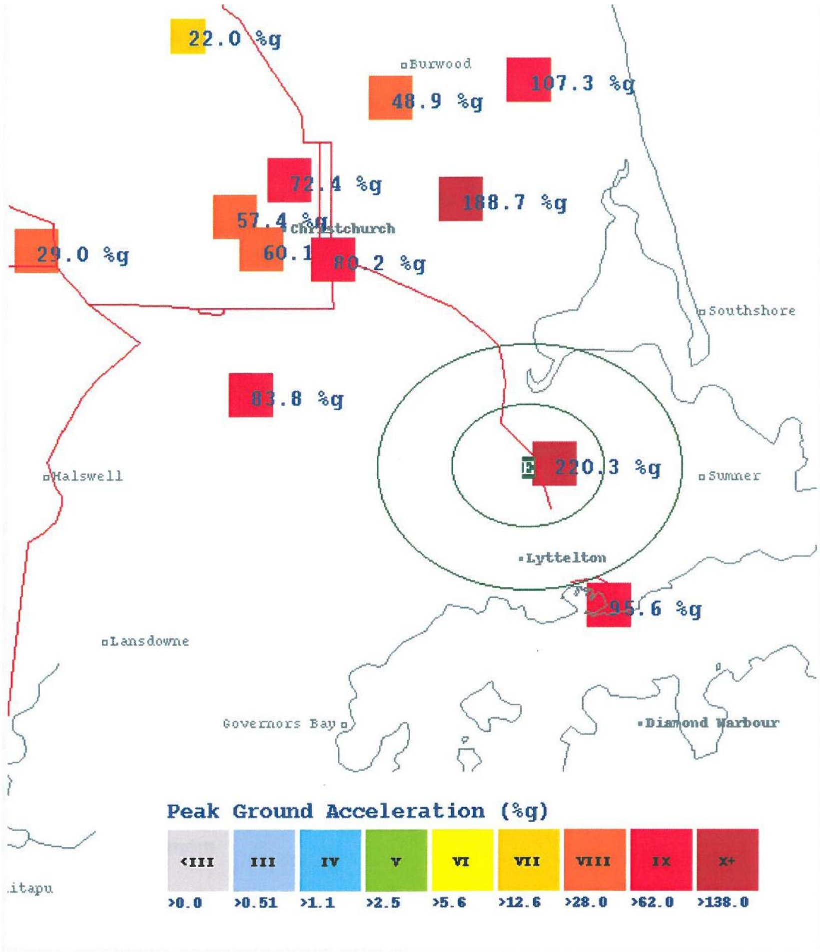
- **1995 Kobe Earthquake** The Great Hanshin earthquake, or Kobe earthquake, was an earthquake that occurred on Tuesday, January 17, 1995, at 05:46 JST in the southern part of Hyōgo Prefecture, Japan. It measured 6.8 on the Moment magnitude scale. The tremors lasted for approximately 20 seconds. The focus of the earthquake was shallow, located 16 km beneath its epicentre, on the northern end of Awaji Island, 20 km away from the city of Kobe. **Liquefaction was widespread**. Approximately 6,434 people lost their lives (final estimate as of December 22, 2005); about 4,600 of them were from Kobe. Among major cities, Kobe, with its population of 1.5 million, was the closest to the epicentre and hit by the strongest tremors. It caused approximately ten trillion yen in damage, 2.5% of Japan's GDP at the time. This is about **US$102.5 billion in damage**.

In terms of the impact on the economy it seems that all three of the above earthquakes provide some insights. The 1989 Loma Prieta earthquake destroyed a similar number of homes and probably businesses and was estimated to cost about US$11bn~ circa NZ$14bn. The fiscal package also seems similar to that promoted for Christchurch some commentators.

The 1994 Northridge Earthquake (Los Angeles) destroyed the CBD of Northridge and has been the US's most expensive property damage earthquake. One reason the 6.7 quake was so destructive was that at the time the **ground acceleration was one of the highest ever instrumentally recorded** in an urban area in North America measuring 1.7*g*[10]. This quake resulted in a major change in legislation and building codes to deal with such a g force and has implications that are still being felt in building design.

We note that the peak ground acceleration measured in the Christchurch earthquake was 2.2g in and around Heathcote Valley Primary School, and 0.8g in the CBD, with values in the Eastern suburbs toping 1.8g.[11]

Peak Ground Acceleration (%g) 12:51 22 February 2011



PGA values for Lyttelton Feb 22nd, 2011 earthquake; map from GNS GeoNet website (cropped, with legend moved)

Source: SciBlogs, 27 February 2011

[10] Source: Wikipedia
[11] Sciblogs, February 27th, 2011.

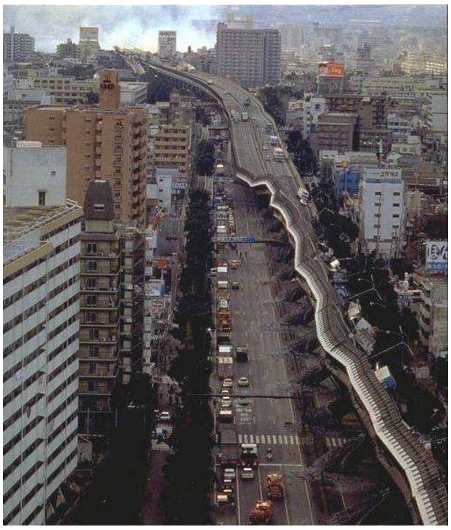
Lessons from Kobe:

In terms of national relevance the **1995 Kobe earthquake** seems the most relevant for New Zealand. Although over 200,000 homes were destroyed, this has to be scaled by the fact that Kobe and the districts had a population of over 1.5mn and the Port of Kobe was one of Japan's largest ports at the time. The slowness of the redevelopment was brought about by a building moratorium for urban redesign which lasted 2 yrs and the fact that there was a reliance on government funding – only 7% of homeowners had earthquake insurance. However, once building got going the rebuild was large & prolonged – over 165,000 homes were built in the first 6 yrs – this was twice the target. Perhaps the best report is the publication *Kobe Earthquake 10-year Retrospective*[12].

Like the Christchurch earthquake, ground accelerations in the Kobe CBD were as high as 0.8g, not as dramatic as Northridge or Heathcote, but equally destructive in the old Kobe city centre.

More than 845,000 households lost gas service for as much as 3 months. Restoration of water and wastewater systems to nearly 1.27 million households took as long as 4 months in some parts of the region. Moreover at the time of the quake, Japan was in recession and the economy was in the process of transforming from a manufacturing export hub to a domestic demand and a tourism based economy. This was in part due to the recent 40% rise in the value of the yen in the prior 2 years. The Port of Kobe had been Japan's largest container port. The Port took over a year to become operational and by that time Kobe had lost this status and has never re-gathered its national significance.

Collapsed Freeway in Kobe



[12] Risk Management Systems 2005

Kobe had been a strongly centralized city, however the rebuild focused on areas that had not experienced liquefaction, and some of the population and businesses moved permanently to both the suburbs and nearby towns and cities. Over 50,000 temporary houses were built and these were occupied for 4 years, creating themselves social and development issues. The central Government spent US$58mn in infrastructure redevelopment in 3 years, after implementing a 2 month moratorium on all building so an intensive planning phase could prioritize projects.

There was a significant effective nationalization of land to widen roads, create new parks and open areas, and to modernize to attract new business. Creating mixed use commercial and residential buildings with open park areas was a key focus to reinvigorate the city. Private finance was also important and local banks put together a $9bn fund to provide long term loans. The Government effectively matched this fund with a similar structure, although this fund effectively became interest free and still runs today.

At a macro-economic level, 4 years later in 1999, it is estimated that Kobe was back to about 75%-90% of pre-earthquake activity. The key exception was the Port which lost a lot of business.

A lesson here for Canterbury is not to lose a key business (eg Tourism or Education).

Eight years later in 2003, Kobe reached peak construction levels. Eight years is much longer than many imagine at the moment for Christchurch, but is probably realistic. It has been reported that Kobe over-built its residential requirements and many former residents did not return to the inner city.

We look forward to reporting further portfolio matters in the next monthly report.