
Recent developments in New Zealand's financial stability

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This article assesses the current state of, and threats to, financial stability in New Zealand. It does this against the backdrop of a particularly uncertain external environment. It concludes that, despite the current slowdown in global activity, substantial falls in international share prices, and high profile corporate failures, there do not appear to be any immediate concerns for financial stability locally: banks are well capitalised, corporate balance sheets appear healthy, and although household leverage is high by international standards, it has been stable recently.

1 Introduction

This article discusses recent developments in international and domestic markets, and the implications that these developments have for financial stability in New Zealand. The article is the first in a series of annual articles that will assess the current state of New Zealand's financial stability, emerging points of vulnerability, and future prospects, by using a variety of macroprudential indicators.²

The article:

- briefly discusses developments in international markets and their possible impact on New Zealand. The focus is on the current downturn in the United States and Europe, with an emphasis on growing vulnerabilities in the telecommunications sector, the deteriorating prospects for the major Latin American economies, and a brief overview of the state of the international banking system;
- assesses New Zealand financial market developments in the light of global trends;
- examines the composition of New Zealand aggregate household indebtedness, much of which is related to housing consumption and investment, and compares house prices across several countries. It also draws attention to the more disaggregated data available on

households' indebtedness from the new Statistics New Zealand "Household Savings Survey";

- examines corporate credit quality, with an emphasis on sectoral leverage and liquidity of New Zealand firms, and compares these measures across countries; and
- assesses the condition of banks in New Zealand against the backdrop of external market turbulence and some high profile failures in the United States and Australia, but continued solid performance domestically (and in export markets).³

The developments in financial markets and sectoral balance sheets that are discussed in this article, collectively, and in the context of the longer-term trends, reflect a period of heightened uncertainty. On one level the uncertainty relates to questions about the state of, and prospects for, economic conditions in the United States, Europe, and more seriously, Latin America.

On another level, however, there are broader uncertainties that relate to longer-term trends and positions in global financial markets and the world economy that go beyond mere cyclical macroeconomic trends. Indeed, one of the distinguishing features of the current downturn abroad is the continued 'leveraging up' of already highly-g geared household balance sheets, facilitated in part by the record low interest rates in many countries. While the associated consumption and housing investment helps underpin growth

¹ We would like to thank David Archer, Geof Mortlock, and Michael Reddell for comments.

² In an article one year ago, Woolford (2001) discussed the rationale for, and history behind, the establishment of the Macro-Financial Stability section in the Reserve Bank, described macroprudential indicators relevant for New Zealand, and the role that macroprudential analysis plays at the Reserve Bank of New Zealand.

³ Two important dimensions of financial stability analysis not covered in detail in this article are those of New Zealand's external debt position and capital flows. These issues have been covered in detail in a recent *Bulletin* article and in a speech – see, respectively, Woolford, Reddell, and Comber (2001) and Brash (2002).

in New Zealand, just as it is does in the United States and elsewhere, it is an open question as to whether household indebtedness may have overshot, especially if the downturn is sustained.

At the same time, other factors have contributed to the unusually uncertain situation. Over much of the 1990s, the global tolerance for risk grew, and with it the pursuit of higher yielding instruments at a time when interest rates on core government bonds were much lower than they had been in the previous decade. Lower rated corporates, in particular, benefited from this during the upswing, although many now find access to capital difficult (especially those that had embedded rating clauses in their credit contracts). The tolerance for risk, and the development of financial (derivative) instruments, helped facilitate the transformation of risk and greater leverage. Of course, not only corporates benefited as capital account liberalisation in many emerging market countries opened new markets to capital flows. Similarly, countries such as Australia and New Zealand funded their current account deficits with relative ease. Taking all of these developments together, as noted above, the current situation looks somewhat different from earlier economic cycles.

Notwithstanding these pressures and shocks, the world financial system has proved remarkably resilient. This is particularly so in New Zealand, where our assessment is that the financial system remains in good health, with few dark clouds on the horizon. However, there is a risk that the unwinding in some of the positions and the reduction in some of the imbalances may not adjust in a smooth, orderly fashion. History has often shown, unfortunately, that in the aftermath of bubbles, markets can over-correct for quite some time, and this can have an adverse impact on the real economy and financial stability. It is therefore useful, in monitoring financial stability developments, to assess the longer-term trends and vulnerabilities in global financial markets and possible implications for New Zealand.

2 Global financial market developments

The state of international financial markets can heavily influence the economic performance of, and the financial system in, an economy as small, open, and heavily dependent on foreign capital as New Zealand's. The increasing integration of global markets has led to an increase in the co-movement of both interest rates and equity prices across different countries. This directly affects the cost of capital for the individual firms that rely on capital market financing. Furthermore, as New Zealand is highly indebted, and we continue to run current account deficits and borrow from abroad, international financial market conditions directly affect our financing and hedging costs. They can also influence banks' willingness to participate in international lending, with flow-on effects to the quantity and price of the international capital flows occurring in the form of bank loans – a channel of capital inflows on which New Zealand currently relies.⁴

Besides direct financial market channels, global market conditions also reflect – and influence – the underlying real activity of the world economy. Through these indirect channels, global market conditions can have an impact on international trade, which in turn may influence the demand for New Zealand's exports and the financial health of the exporting firms.

United States and global financial market trends

After the prolonged period of optimism and growth in market valuations over the 1990s, by the middle of 2000 several congruent factors resulted in the beginning of a trend decline

⁴ Although capital inflows through banks play an important role in financing New Zealand's persistent current account deficit, it is by no means the exclusive source of capital. New Zealand has a good track record of accessing international capital through various channels, which suggests the ability to source foreign funds by using other sources than bank borrowing, if needed. See Woolford, Reddell, and Comber (2001) for more detail on the channels of foreign funding and the potential vulnerabilities associated with them.

in many equity markets. The sharp unwinding of the 'technology bubble', and the perception that there had been a permanent shift in the pace of productivity growth in the American economy, led investors to question valuations in other sectors as well. Around the same time, macroeconomic data suggested a slowdown in economic growth, and by the second quarter of 2001 the United States entered into a recession.

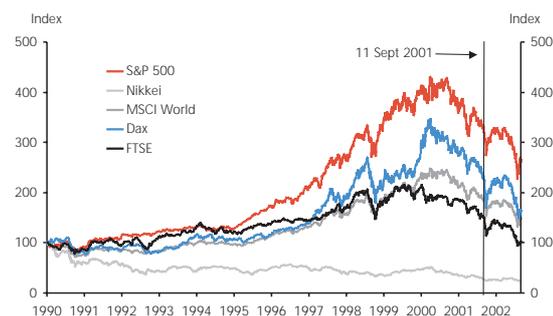
The world's financial markets recovered quickly from the large shock caused by the terrorist attacks against United States targets on 11 September 2001. After an initial average fall of 12 per cent, equity prices in the United States climbed above the pre-attack level by the end of the year. The pattern followed by the corporate bond markets was similar: after the increase induced by the attacks, bond spreads fell back to a significantly lower level by January 2002. However, the trend decline from the peak in equity markets in 2000 is still evident (see figure 1), and there is considerable uncertainty about the short- to medium-term prospects for share prices.

The quick reversal was somewhat surprising in the light of the series of negative events unfolding over the last quarter of 2001. Argentina, a major international borrower, defaulted on its government bonds worth USD 95 billion. Enron, the Texas-based energy trading giant, filed the largest corporate bankruptcy of United States history (since surpassed by WorldCom), bringing corporate governance problems and dubious financial reporting practices into focus. Despite these developments, however, the consensus view of the markets at that time was characterised by cautious optimism, and expectations about the world economy were leaning towards a fast recovery from the recession.

From the beginning of 2002, actual market developments and economic forecasts became increasingly incongruent. Despite the optimism about the global economic recovery, equity prices slowly started to decline again. More major corporations, such as Global Crossing, KPNQwest, and WorldCom defaulted on their debt obligations, while a significant set of other companies were involved in reporting scandals, further eroding the investors' confidence in published corporate earnings. Highly leveraged telecommunications companies both in Europe and the United States reported severe losses and doubts emerged

about their ability to meet their debt obligations. Also, the market's optimistic expectations about the pick-up in corporate earnings have not been met. From June, the decline in equity prices became more pronounced, and by mid-July 2002 major global stock indices were 10 per cent below their post-September 11 trough, although most have rebounded slightly since then (see figure 1).

Figure 1
Equity markets
(January 1990 = 100)



Source: Datastream

Alongside the deterioration in financial markets, recent data about economic activity also indicate a loss of momentum in the United States economy. Consumer confidence fell sharply in July, raising fears about a potential slowdown in households' spending – the main driver of economic activity in the last year. Similarly, there is little evidence of renewed growth in capital expenditure, which would give an additional boost to the economy, as corporates are still running with significant excess capacity and are able to delay investment plans. At the same time, there are concerns about the extent of the over-valuation of the United States dollar, the size of the United States current account deficit, and the growth in the fiscal deficit.

All in all, the tentative optimism of the beginning of the year has waned, and more observers raise the possibility of a further economic downturn (a "double-dip" recession) - or even extended stagnation, although the latter is seen as less likely. As a consequence of the deteriorating economic conditions, expectations of a monetary policy tightening by the United States Federal Reserve have dissipated, leaving the economy with unusually low interest rates, while overall business activity remains weak. Despite the low level of policy interest rates, however, corporate credit is contracting, partly as a consequence of the rising spreads between low-risk

Box 1 Monetary policy and financial stability

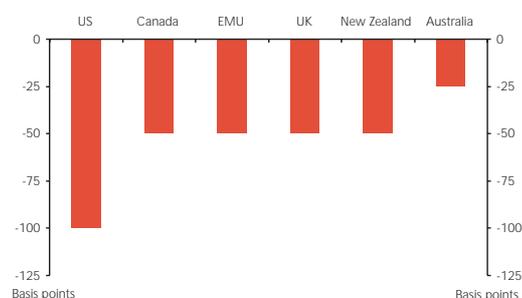
The terrorist attack against the World Trade Center on 11 September 2001 initiated an acute challenge for the stability of, and confidence in, the international financial system – a challenge that was met swiftly and decisively. The attack struck at the heart of the United States financial system, and therefore also the backbone of the global financial infrastructure. Much has been written about the event, and the actions the United States authorities undertook to ensure that the financial market could function despite the damage.⁵

To minimise risks to confidence and the global economy the Federal Reserve and other central banks around the world eased the stance of their monetary policies immediately after the attacks (see chart below), and many also made available additional short-term liquidity to their banking systems.

Over recent years there has been an ongoing discussion among academics and practitioners about defining the way in which, and the extent to which, monetary policy-makers should react to signs of financial instability.⁶ Some have argued that on rare occasions monetary policy may

be unable to deliver on the two simultaneous objectives of price stability and financial stability, and that at times contradictory policy reactions may be appropriate. For example, inflation concerns may suggest monetary policy should be tightened, at a time when higher interest rates may place corporate and household balance sheets under stress. This will not be the case more generally, and in the aftermath of the September 11 attack monetary policy-makers in a number of developed countries judged that swift and extensive policy action was required to preserve financial stability and to re-establish confidence in financial markets.

Monetary policy after 11 September



Source: Datastream

⁵ The Federal Reserve responded in several ways. A large amount of additional liquidity was injected into the banking system, allowing the federal funds rate to fall well below the target, and the restrictions on lending against certain securities were relaxed. These measures proved to be highly effective in mitigating the liquidity shortage caused by the infrastructural damage. By the end of September, the Fed had lent USD70 billion by taking less liquid securities as collateral. To alleviate the shortage of US dollars available for financial institutions

offshore, the Federal Reserve arranged special swap agreements with monetary authorities in other countries. For a more detailed discussion of the actions undertaken see Board of Governors of the Federal Reserve System (2002) and BIS (2002).

⁶ This is analytically distinct from the issue of whether monetary policy should respond to various asset price movements (equity markets, housing or commercial property price booms and so on) for the purposes of controlling inflation – although it is, of course, related.

government bonds and corporate debt. In contrast, even though households' wealth has been eroded by the equity market corrections, continued demand for credit by the household sector means that the overall indebtedness of the United States economy keeps rising. At some stage however, it is probable that the loss of wealth caused by the fall in equity prices will cause households to moderate their consumption and saving decisions.

Europe: vulnerable telecommunications sector

Equity markets in Europe have also been heavily affected by the global market trends: the decline in German stock prices, for example, has been more severe than the fall in US

equities.⁷ As in the United States, a slowdown in the pace of European economic activity seems possible despite the pick-up in the first half of 2002. Exacerbating the mediocre external and internal demand for consumption and investment goods, the appreciation of the euro is weakening the competitiveness of European exports, with consequential flow-on effects to domestic demand conditions.

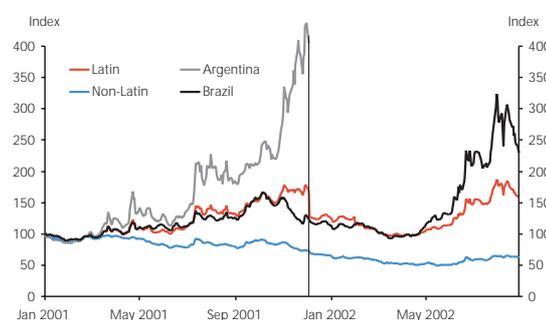
One particular source of financial vulnerability in Europe is the media and telecommunications industry. After being the fastest growing sector in recent years, the telecom industry is experiencing increasing financial difficulties, as the heavily leveraged companies face rising financing costs in a time of weak earnings. The weakness of the sector is reflected in corporate credit ratings.⁸ A recent study by the rating agency Standard and Poor's revealed that telecommunications and media companies account for about 44 per cent of the list of weakest debt and equity issuers, which include companies with ratings below CCC and a negative credit outlook.⁹ Besides media and telecommunications, some concerns have been raised about the financial performance of the European banking and insurance sectors as well. These concerns are reflected in their share prices significantly underperforming in the already weak continental equity market indices.

Growing concerns about Latin America

Although Argentina's default on its sovereign debt and the subsequent depreciation of the Argentine peso did not lead to regional financial contagion similar to that seen during the Asian crisis in 1998, there has been some spill-over, and market analysts are increasingly concerned about other Latin American economies. Sovereign bond spreads – yields relative to those on US government bonds – for some in the region have been steadily increasing from mid-April this year, compared to other emerging market countries.

Despite the relatively favourable macroeconomic data for Brazil, fears about sovereign default have led many investors to withdraw from Brazilian financial markets. The capital outflows resulted in a steep increase in Brazil's sovereign spreads (figure 2). In response, the Brazilian government drew down USD 10 billion from its augmented International Monetary Fund (IMF) programme to buy back its obligations, in an attempt to calm markets. Notwithstanding these actions, the largest Latin American economy is likely to continue to be a point of vulnerability, at least until the presidential elections in October. In August, a new IMF stand-by credit facility of USD 30 billion was provided to Brazil, which, as the largest ever IMF programme, highlights the international concern about the potential for crisis contagion. The IMF programme appears to have settled market nervousness somewhat, although considerable uncertainty persists.

Figure 2
Emerging market sovereign spreads
(relative to US government bonds, Jan 2001 = 100)



Source: J P Morgan

Mexico, the second largest economy in the region, has been relatively resilient in the face of the deteriorating economic conditions in the United States, Argentina, and Brazil. This provides some measure of comfort, as several analysts have highlighted the important role Mexico plays in underpinning stability for the Latin American region as a whole. However, markets are increasingly uneasy about the economic and financial prospects of other Latin American economies. Venezuela is suffering from political turmoil, and falling economic activity and tax revenues. Taken together, these developments suggest the possibility of debt servicing problems in the future. Uruguay has been in a difficult situation since 1999, which has recently deteriorated into a

⁷ See box 1 in the August 2002 *Monetary Policy Statement* for a cross-country and historical comparison of the significance of recent equity market movements.

⁸ See box 2 in this article for more information about ratings.

⁹ See Standard and Poor's (2002a).

severe banking crisis – partly as a consequence of the collapse of the Argentine banking system.

Asia-Pacific region: relatively robust market performance

Overall, it appears that the Asia-Pacific region, and Australia in particular, has been relatively resilient in the face of the global slowdown, despite the fragile condition of some countries in the region such as Japan, where the banking system has been struggling with its accumulated bad loans for more than a decade now. The deterioration in export receipts in the region as a result of, amongst other things, the United States slowdown, was somewhat offset by strong domestic demand, and the region recorded a pick-up in economic growth from around the beginning of 2002. Financial conditions in these countries have been relatively stable. Local equity markets, having recovered from the 1997-98 crisis, have substantially out-performed United States and European markets, and the increase of sovereign spreads observed in Latin America left Asian sovereign bonds mainly unaffected.

Despite Australia's robust performance relative to the rest of the world, a recent report by Standard and Poor's notes some deterioration of credit quality across the Tasman.¹⁰ They found that from June 2001 to April 2002 the number of companies being downgraded exceeded the credit rating upgrades by more than five times in both Australia and New Zealand. Also, some high-profile companies, such as HIH, Pasmenco, and Ansett collapsed, leaving a number of creditors in difficult positions. Nevertheless, besides these particular events, the solid overall economic performance of the region, and particularly of Australia, has been crucial for New Zealand. With a large proportion of our trading partners performing relatively well compared to the rest of the world, New Zealand has been partially shielded from the global shocks.

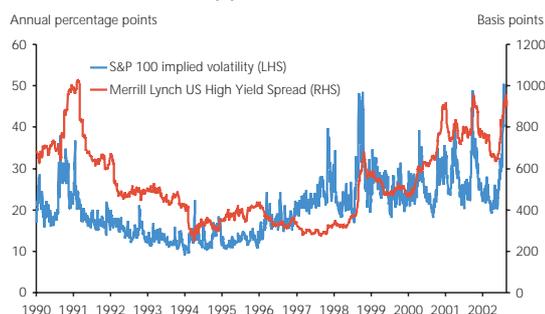
Declining appetite for risk

The overall negative sentiment of global financial markets is reflected in commonly used indicators of market uncertainty,

¹⁰ See Standard and Poor's (2002b).

such as options-implied stock market volatility, and high-yield corporate bond spreads.¹¹ An increase in these indicators is generally considered to be a sign of investors becoming more cautious about potential sharp movements in financial market prices, a phenomenon often referred to as a decline in the "appetite for risk".

Figure 3
Measures of risk appetite



Source: Datastream and Chicago Board Options Exchange

Over the longer term, both indicators have been rising since the second half of the 1990s relative to their previous levels, which may be a sign of investors' gradually increasing concerns about the sustainability of the market bubble. Since last June, volatility increased in corporate spreads and implied equity prices, reaching levels similar to those seen during the Russian-LTCM crisis and the 11 September attack (see figure 3).

In periods characterised by such low levels of risk appetite, companies usually find it harder to raise funds, both through equity or debt, as preferences shift from high-risk investments (such as equities, corporate bonds and emerging market debt securities) to low-risk assets (such as highly rated government bonds). Decreasing risk appetite will also usually cause a shift from foreign to domestic investment opportunities, as investors try to minimise their exposure to exchange rate fluctuations. The capital outflows that result – or the expectations of such outflows – can lead to the currencies of net debtor countries depreciating.

¹¹ Corporate bond spreads are yields on corporate bonds relative to yields on United States government debt instruments. For more detail on implied volatility and other indicators derived from option prices see Gereben (2002).

International banking system

The international banking system, as a whole, has been relatively sound in the face of the corporate sector and the financial market turmoil in the major economies – at least to date. However, there are some banking systems in a less favourable condition. For example, banks in Japan, China, and elsewhere in the region continue to operate under the weight of poor quality assets, non-performing loans, and under-capitalisation. While the Japanese government had proposed a plan to remove the full government insurance on bank deposits, in order to create a stronger incentive for banks to tackle the problem of non-performing loans, it has recently delayed the implementation of the plan. In Argentina and Uruguay, the banking systems have become almost completely dysfunctional in the face of severe currency and credit losses, and the collapse in public confidence in the banking system (in the face of frozen accounts, weekly limits on withdrawals, forced bank holidays and the like).

Although most banking systems are in relatively good health on the whole, the global adjustment does not appear to be over yet, and there are signs that highlight possible further stress points for the United States and European banking systems. The large number of corporate bankruptcies inevitably led to a deterioration in the quality of banks' credit portfolios, which increased the risk of lending operations and caused a decline in profits. Moreover, a large number of international banks have significant, potentially vulnerable exposures towards Latin America. The vulnerability of the banks is probably more pronounced in Europe than in the United States, as European corporates rely on bank financing quite heavily, whereas their United States counterparts tend to borrow more extensively from financial markets directly. Also, some European financial institutions have significant holdings of corporate equities.

New Zealand financial markets

Despite our openness in trade and strong reliance on overseas borrowing, the current weak performance of global financial markets has had only limited impact on New Zealand so far. The domestic banking system has remained healthy and continues to be well placed to meet the credit needs of the business and household sectors – we have not seen any

significant credit constraints or material tightening in credit standards recently. The channels of international capital flows to (and from) New Zealand have been relatively stable, and most market indicators, such as equity prices and swap spreads, have not reflected the global market turmoil to any great extent. Similarly, there haven't been any noticeable problems in either financing our current account deficit or hedging the exchange rate exposure on foreign liabilities. While this suggests that foreign investors continue to be comfortable with holding New Zealand dollar investments, and they are also willing to take the associated exchange rate exposure, this does not necessarily mean that New Zealand is invulnerable to future external market turbulence.

As things stand now, however, on the asset side of our international investment position, our domestic financial system appears to have little direct exposure to those regions and markets most affected by financial stresses over the last few quarters. Several factors, such as the weak exchange rate and the relatively high commodity export prices experienced until recently, have protected the New Zealand economy from the slowdown in economic activity in the rest of the world. Furthermore, the flow of immigrants during the last year helped maintain reasonably strong domestic demand, as did the robust growth in export earnings.

From January to June 2002, the New Zealand dollar strengthened by 20 per cent relative to the US dollar, and gained significant ground against other developed country currencies as well (see figure 4). The appreciation was partly a reflection of our good economic performance relative to the rest of the world, and was partly a result of some unwinding in the over-valuation of the US dollar relative to other currencies all over the world. Since July, measured global risk appetite has been falling, and consequently the exchange rate has depreciated somewhat.

Exchange rate fluctuations relevant to New Zealand have been relatively more pronounced in recent months: over this year we have experienced two of the most volatile quarters since the exchange rate was floated in the mid-1980s. In itself, exchange rate volatility is unlikely to adversely affect the stability of the New Zealand financial system, as most of the foreign exchange exposures of the banks and corporate

Figure 4
The New Zealand dollar exchange rate



Source: RBNZ

sectors are hedged against foreign currency risk. However, an appreciating exchange rate may affect the competitive position of exporting companies, which may, in turn, cause a decline in these companies' profitability and their ability to meet debt obligations. In our view, it is unlikely to be a source of fragility over the near term: New Zealand's real exchange rate is still below the long-term average, and it would take a substantial appreciation before declining export competitiveness would start to affect significantly the credit quality of most New Zealand exporters. Nonetheless, should external demand continue to weaken, and along with it export prices and the terms of trade, the export sector could come under more pressure.

Figure 5
NZ, US, and Australian equity prices
(January 2001 = 100, USD value)



Source: Datastream

The New Zealand equity market has been performing comparatively well: the US dollar value of the NZSE30 increased by 5 per cent between January and August, while world equity prices declined by almost 20 per cent over the same period (see figure 5). The good relative performance partly reflects the fact that share prices in New Zealand had

not appreciated strongly like those in the United States and Europe over the late nineties, but also that domestic corporate profitability has remained robust.

3 Households

Households play a large role in the economy, and, therefore, it is important to monitor this sector for growing imbalances or signs of instability. Household consumption, investment, and saving decisions together account for a significant proportion of the New Zealand economy. Consumption alone represents roughly 60 per cent of gross domestic product (GDP), and residential investment, which largely comprises the purchase and construction of houses, makes up an additional 5 per cent of GDP.

Households are an important part of the financial sector as well. Over the last couple of years M3 data suggest that households provide approximately only one quarter of banks' total funding through deposits, but account for over 40 per cent of bank claims.

Table 1 shows that the household share of bank funding declined over the decade, while the household share of total bank claims increased. The banks have met the shortfall between household funding and claims by borrowing offshore (meaning that the household sector is also a contributor to New Zealand's external debt position). Moreover, deterioration in the household sector's financial position can have a detrimental effect on banks' asset quality. As a result, the Reserve Bank takes an interest in developments in the housing sector, especially the saving rate, the extent of leverage, the debt servicing capacity of the household sector, and the composition of household assets.

New Zealand's household saving rate declined over the 1990s, from around 3 per cent in 1990 to around minus 4 per cent (ie dissaving) in 1995, and has stabilised around this rate. While a similar trend was observed in other developed economies (often following periods of financial liberalisation), this is not necessarily a source of comfort. For example, the fall in household saving rates in the United States was accompanied by large equity market gains that added to households' perceived wealth. As the equity market

Table 1
Households' share in bank funding and claims (%)

	December 1991	December 2001
Funding	39.7	27.2
Claims	35.3	41.3

Source: RBNZ

weakness continues, it is probable that United States households will moderate their consumption and increase their rate of saving. In the New Zealand case, saving rates fell even without the wealth effects of growing financial assets.

In the current global slowdown a number of other central banks have raised concerns about household balance sheets in the wake of house price booms, or the 'tech boom'.¹² Unlike some other countries, New Zealand households have not invested heavily in equities (thereby avoiding the subsequent collapse in values), nor have we seen problematic house price inflation.¹³ However, years of low or negative saving mean balance sheets may be weaker than desired in the current environment, exposing households to greater vulnerability to a fall in asset prices or income.

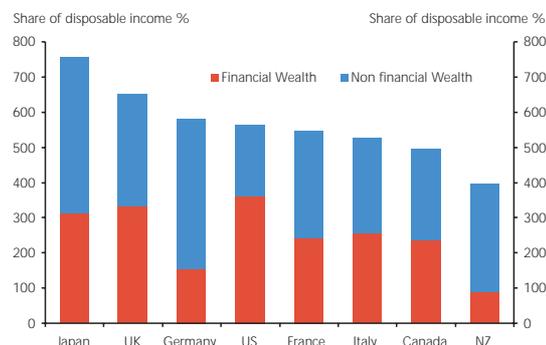
Compared to other developed countries, New Zealand households tend to be less financially diversified, and hold the bulk of their assets in housing – with debt typically held in the form of bank mortgages – with far fewer assets held in the form of equities or bank deposits (see figure 6).

The global phenomenon of high and increasing household indebtedness in recent decades is largely without precedent, so it is difficult to draw firm conclusions about its implications. However, increased leverage makes households more vulnerable in economic downturns. If consumers are fully leveraged, their ability to tap into savings in the event of, for example, a job loss will be significantly reduced. They also may face difficulties in making repayments on their high level of debt. Moreover, households who take on more debt when interest rates are low, face increasing loan repayments when rates rise in the future.

¹² See, for example, the Bank of England's *Financial Stability Review*, the Swedish Riksbank *Financial Stability Report* and the Bank for International Settlements *Annual Report* (2002).

¹³ See Brash (2002) "An Indebted People" for a cross-country comparison of household financial wealth estimates.

Figure 6
Household net wealth in New Zealand and G7 countries (1995-2000 average, Italy and Japan 1995-1999 average)



Source: OECD, RBNZ

High household leverage can also lead to vulnerabilities in the banking system. House prices determine the amount of equity available to homeowners, and increasing house prices enable homeowners to access additional equity. If the increase in house prices was temporary, such that house prices subsequently decline (often in the environment of a slowing economy and concerns about income and employment), this can put pressure on households' willingness and capacity to service higher debt levels. As banks must maintain a reasonable degree of capital adequacy, in a situation such as this, the banks may deem it prudent to increase their provisioning against the prospect of higher rates of default.¹⁴ This may also mean that banks will contract lending in order to restore capital adequacy. Moreover, if households do default, banks may face large losses as the collateral value of houses may not cover the loans outstanding. In extreme cases, banking crises have been precipitated by real estate booms and busts. The Asian crisis was exacerbated by loans secured on overvalued real estate. When the real estate bubble burst, banks were left with collateral that didn't cover the value of the outstanding loan.

New Zealand house prices have not risen in real terms in the last few years, and hence the vulnerability arising from a house price bubble is less in New Zealand than in the United States, the United Kingdom and Australia. It is widely

¹⁴ Provisioning for loan defaults leads to a reduction in banks' assets. When banks are faced with an unexpected deterioration in credit quality that leads them to expect a higher rate of default they hold more capital to provide a cushion for the loss provision.

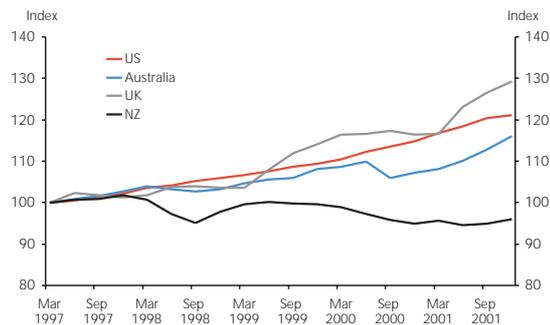
believed that the housing market in the United Kingdom is over-valued, and there has been strong growth in United States house prices as well. The real United Kingdom house price index increased year-on-year at an average of 5 per cent from the second quarter of 1996 to the first quarter of 2002. Real United States house prices were fairly flat through the 1990s but began to pick up in the third quarter of 1997. Since then, real house prices have increased year-on-year at an average rate of 4 per cent.

Real house price increases in Australia have also been strong over recent years, in part as a result of a surge in demand before the introduction of GST, in part because of the tax credit scheme, as well as because of generally favourable economic conditions and low interest rates. House prices in some of the main urban areas in particular – Sydney, Melbourne and Brisbane – have been noted as a potential source of concern in recent times. Figure 7 clearly shows that New Zealand's housing market has not experienced the strong growth that the United States and the United Kingdom, and Australia to a lesser extent, have experienced. On the contrary, since the mid-1990s house price increases have not kept up with inflation, so real house prices have fallen a little.

Of course, house prices in isolation don't tell the whole story. Strong growth in household incomes can be a fundamental factor driving house prices. Moreover, household income figures indicate the ability for households to service their debt. Over the past three years, annual household disposable income growth has been broadly similar between New Zealand, Australia, the United States and the United Kingdom, so divergent income growth does not explain the difference in house price performance. In the United States and the United Kingdom, house price increases have outpaced increases in disposable income. Overall, New Zealand's house prices have not performed as strongly as those of other countries. Thus, the risk of a rapid decline in house prices, causing the collateral value of loans to decline significantly, does not appear to be a risk for the New Zealand economy at this time.

Despite flat real house prices, household indebtedness has continued to increase. From 1989, the ratio of household financial liabilities to disposable income has more than

Figure 7
Real house price index

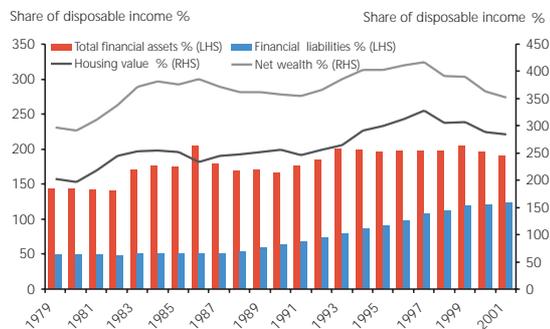


Source: Datastream, OFHEO, QNZ

doubled, reaching over 100 per cent in 1997 and 123 per cent in 2001. The growth rate in household liabilities has fallen significantly over the last three years, however. The sharp increase in household liabilities could reflect a decade-long adjustment to financial deregulation and new products in the finance industry making access to wealth easier. In addition, some proportion of the liabilities can be attributed to small business lending.

Household net wealth as a share of disposable income declined from over 400 per cent in 1997 to just over 350 per cent in 2001. Both the asset side and the liability side of the balance sheet drove this decline. The ratio of household liabilities to disposable income increased by almost 20 per cent over the period, while the ratio of housing value to

Figure 8
Household net wealth



Source: RBNZ

Box 2 Household net worth

Between August and November 2001, Statistics New Zealand conducted a detailed survey of household saving, indebtedness, and assets for 5,374 households. It was a one-off survey commissioned by the Retirement Commission. The Household Savings Survey differentiates between couples (married and de facto) and individuals (where both individuals and couples may be responsible for children) and asks a range of questions relating to assets and liabilities of household units.

While aggregate household balance sheet data (such as that contained in figure 8) gives us a perspective of the indebtedness of the household sector as a whole, the distribution of indebtedness over various income and net worth levels can identify points of vulnerability at more disaggregated levels.

Couples follow a similar trend. Couples in quartile one generally have net worth that ranges from negative to \$20,000, with the majority of these couples earning between \$15,000 and \$50,000 per year. Debt ratios for these couples are much higher than the overall average for couples. Like individuals, couples in net worth quartile one also have a large share of unsecured liabilities, such as credit card debt and bank loans. However, couples have a much smaller degree of student debt than individuals and a larger share of mortgage debt. Fourteen per cent of couples have student loans and the median value is \$8000, and 14 per cent have mortgages, as compared with 6 per

cent of individuals. As in the case of individuals, a bank deposit is the most common asset for couples, and balances are quite low. Home ownership is moderate, with 16 per cent of couples in the lowest net worth quartile owning property.

High-income households have much lower debt ratios, as few have unsecured debt liabilities, and those that do generally have lower balances than do low-income households. In addition, they have relatively highly valued property assets (the median value for the top quartile is \$331,000) as well as other highly valued assets, such as businesses and trusts. Thus, higher income households tend to be better placed in times of stress.

The composition of indebtedness is expected to change as demographics change, with, for example, ageing in the New Zealand population. Also, there is a life-cycle pattern to saving and indebtedness, with younger adults taking on a higher level of debt relative to assets, in the form of student loan debt. From a financial stability perspective, it is external and private sector debt that is important. Therefore, student loan debt – which is owed to the government – is not as much a concern as bank borrowing and external debt. Moreover, as younger people subsequently enter the workforce, they will build up financial assets. Indeed, both individuals and couples in the 18-24 age group have a much higher debt-to-assets ratio than the overall average.¹⁵ The debt ratio declines with age – people aged 65 years and older have very low debt ratios. Therefore, indebtedness tends to fall over an individual's lifecycle.

Debt ratio – Debt as a percentage of assets, 2001¹⁶

Net Worth quartiles	Individuals	Couples
1 (<i>lowest</i>)	234	85
2	62 *	41
3	40	17
4 (<i>highest</i>)	7	6
Total	17	15

* Moderate degree of sampling error.

¹⁵ People in the younger age group have more debt *relative* to assets, but higher income earners in older age groups have much more debt in an absolute sense.

¹⁶ Assets include all financial, property, business, farm, and Maori assets, as well as motor vehicles, collectibles, and any other assets valued over \$1,000.

disposable income fell by about 13 per cent.¹⁷ More recently, however, house prices have been rising quite strongly, which will help to increase net worth in the coming year.

While not a quantitatively significant part of the increasing indebtedness story, changes in credit card use are a good illustration of financial innovation affecting behaviour through air mileage reward schemes. The annual percentage change in credit card advances outstanding peaked in early 2001 at 22 per cent per annum and the latest growth rate was 12.9 per cent per annum. While advances outstanding have declined significantly over the last year, they are still growing much faster than disposable income, thereby adding to household indebtedness. This increase doesn't appear to be driven solely by convenience or rewards use. Reserve Bank data on personal credit cards show that on average over the past 21 months for which we have data, non-interest bearing balances increased 1.2 per cent per month, while interest-bearing balances increased 1.7 per cent, possibly suggesting a slight decrease in debt servicing ability.

The table in box 2 illustrates that debt ratios range widely between individuals and couples with different net worth. However, net worth figures alone do not give the full picture – income is also very important. For individuals in net worth quartiles one (who generally have negative net worth – ie more debt than assets) and two (with net worth between zero and \$20,000), about 45 per cent make between zero and \$15,000 per year and about 45 per cent make between \$15,000 and \$50,000 per year. These individuals have very high debt ratios and the composition of their debt is heavily weighted towards unsecured loans, such as credit cards and hire purchase, and to a large degree, student loans. In fact, 62 per cent of individuals in quartile one have student loans and the median balance outstanding is \$10,000. Bank deposits are the most widely held asset for this group of individuals, but the median value of their deposits is only about \$300. There is some ownership of superannuation and property, but relative to those in the top half of net worth, ownership rates for these categories is very low.

¹⁷ See Thorp and Ung (2000, 2001) and Thorp (2002) for detailed discussions about household liabilities, investment, and financial deregulation.

4 Corporates

Instability in the corporate sector can result in a decline in output, higher unemployment and corporate defaults on debt (with an associated impact on bank balance sheets), and may be reflected in equity market weakness.¹⁸ In New Zealand and Australia – where many New Zealand firms trade and have branches and other affiliations, as well as head offices - corporate credit quality deteriorated in 2001. In a recent report, Standard and Poor's concluded that despite the relatively difficult credit conditions, the corporate sector has been resilient (despite some high profile failures), the negative pressures will moderate over the coming year, and credit quality in the corporate sector should improve.¹⁹ Weak global demand, a high degree of leverage, and liquidity pressures contributed to the 23 ratings downgrades over the year, while there were only four upgrades for the 120 rated firms. Standard and Poor's pointed to an increased appetite for risk by corporates in the late 1990s, which contributed to corporate sector weakness as they expanded into non-core business areas. Also, some companies appear to have had highly optimistic growth plans, and have taken on a high degree of debt as a result.

This analysis appears to be focused mainly on the situation in Australia, as the situation in New Zealand is somewhat more comfortable. While there have been several high profile corporate failures in New Zealand also, company liquidations for 2001 were, at 521, the lowest level in over a decade, and were well down from the 831 liquidations initiated in 2000.²⁰

Because of significant trade and economic linkages with Australia, financial instability that arises in Australia could spill over to New Zealand. New Zealand relies on Australia as a significant destination for its exports. Moreover, four of the five major banks in New Zealand are Australian-owned:

¹⁸ In the following analysis, information about the corporate sector is drawn from several sources, which include publicly listed firms as well as a broad range of corporate entities of varying sizes surveyed by Statistics New Zealand.

¹⁹ See Standard and Poor's (2002b) for more detail.

²⁰ See the Ministry of Economic Development website www.med.govt.nz for details.

Box 3 Credit ratings

A credit rating is an opinion on the creditworthiness of a company or other entity. Ratings are designed to measure the risk of default: they indicate the likelihood of the company becoming unable to meet its debt obligations. Corporate credit ratings are provided by specialised private agencies – such as Moody's, Fitch, and Standard and Poor's – who use a standardised methodology to assess the risks associated with lending to a particular company or sovereign.

The most important factors that rating agencies consider during the rating process are:

- the risks associated with the country where the company is domiciled;
- the specific features of the industry or the sector;
- the company's size;
- the skills of the management;
- profitability; and
- indebtedness and other financial ratios.

Moody's uses a scale of nine rating categories from Aaa (the most creditworthy) to C (the lowest), while Standard and Poor's uses ten categories from AAA to D. Besides private companies, credit rating agencies also provide ratings for debt issued by public sector entities, such as sovereign states or local municipalities and for special purpose financial entities.²¹

The credit rating heavily affects a company's cost of capital. Entities with a high credit standing have low risk associated with their debt, and therefore they are eligible for relatively low interest rates. Investors, however, ask for a higher reward when they invest in low-rated issuers' debt to compensate for the higher default risk, which manifests in higher interest rates. As the rating is an assessment of credit standing, it is a very important determinant of the level of interest rates a company is obliged to pay on its debt.

Credit ratings also influence a company's ability to access external capital. Banks usually limit the amount they are willing to lend to a particular debtor, and the limits are often linked to the credit rating. Also, if a company issues debt securities, such as bonds or commercial paper, a higher credit rating helps to access a wider range of potential investors. Major institutional investors, such as insurance companies or superannuation funds, usually have rules that specify that the debt securities they hold must be above a certain rating limit – as indeed the Reserve Bank does in its own dealings. Companies below those rating limits are unable to raise capital on these markets. Hence the credit rating influences the quantity and the structure of a company's capital. A deterioration of its credit rating, therefore, may undermine a company's access to certain credit sources; downgraded entities often have to rethink and reformulate their debt structure.

Besides the cost, quantity, and structure of debt, ratings may also influence a company's access to financial services. Banks generally require a specific credit rating before they are willing to engage in certain transactions with a counterparty. This is a widespread practice for derivative transactions, such as swaps or currency derivatives. As a consequence, an entity with an insufficient rating may not be able to hedge its exposures to market risk properly, or may do it only at a higher cost.

When a company's credit rating is downgraded, it may lose access to certain markets and instruments, and this may involve significant restructuring and costs. A downgrade can be particularly damaging if the company's existing contracts include "rating triggers". Rating triggers are clauses in debt and hedging contracts that make the contract subject to a certain rating level. If the company's rating falls below this pre-specified level, the triggers come into action. Rating trigger clauses may be relatively harmless – sometimes they simply increase the cost of the particular debt or hedging contract – but in some cases they are much more damaging: they may require the immediate repayment of the existing debt or they may cancel the hedge. The most important risk associated with rating triggers is that they may significantly accelerate the decline in the creditworthiness of a company, at a

²¹ For a more detailed discussion of credit ratings see Motadel (1996).

time when accessing new capital is particularly hard.

Rating triggers came into focus recently, as such clauses in debt, derivative and other agreements played an important role in the fall of Enron Corp., and have been a key issue in other corporate defaults since then. In August 2002, Standard and Poor's published a report about rating triggers in Australia and New Zealand, as a part of a global initiative aiming to increase the awareness of these potentially harmful clauses in financial contracts.²² The survey found that rating triggers are prevalent in our region, and they represent a cause for concern in five per cent of the surveyed investment grade companies.

The Reserve Bank also carried out an assessment of such triggers, aiming to identify their prevalence in the practice of the major New Zealand banks. Our inquiry found that

banks often use contingent clauses in corporate lending contracts that are linked to the borrowers' credit rating or other indicators of financial soundness. When triggered, these clauses may affect the charged interest rate, the amount of collateral required, or the overall availability of credit. As these clauses represent a contingent claim on the borrowers, not the banks, they are not a cause of direct concern from the point of view of the bank regulator and supervisor. Triggers that may represent a claim on the banks themselves appear to be relatively rare in New Zealand. They are occasionally present in derivative contracts, such as generic swap agreements. However, as the amounts involved appear to be minor, they seem unlikely to influence either the stability of the individual banks or the banking system as a whole.

the credit ratings of the New Zealand subsidiaries are highly dependent on the credit ratings of the parents, and New Zealand banks rely on their parents for funding. A downgrade in a parent bank's credit rating will therefore have negative implications for New Zealand's access to capital and the cost of borrowing,²³ as it can be more difficult or costly to raise capital internationally and can therefore inhibit investments that require funding.

Corporate balance sheet data can provide us with a perspective on the health of New Zealand corporates. Two measures of importance are liquidity and leverage. Liquidity measures indicate the ability of corporates to service outstanding liabilities. Leverage provides a measure of the overall indebtedness of the corporate sector.²⁴

Liquidity

A common measure of liquidity is the 'quick ratio', which is defined as the ratio of current assets (less closing stocks) to current liabilities. Current assets are liquid assets and include cash, accounts receivable, marketable securities, and other assets that are easily converted to cash. A higher quick ratio implies a more liquid firm, and a more liquid firm – subject to good, efficient, financial management practices – means a firm less reliant on external financing and credit conditions. An individual firm may find that, in times of stress, credit conditions can tighten for reasons not directly related to their specific circumstances, but that nevertheless affect them adversely. Tighter conditions may manifest in any of the markets in which firms normally access resources – the commercial paper market, the share market, or through bank borrowing.

The aggregate quick ratio for all New Zealand firms captured by the SNZ survey, ranged between 62 per cent and 71 per cent between 1995 and 2000, and was 66.1 per cent for 2000. Naturally, there is a lot of variation in the quick ratio by sector. Some sectors (finance, manufacturing, and construction) have a large share of current assets in total assets, but these are offset by a high share of current liabilities. Other sectors, such as wholesale and retail trade, also have

²² See Ward (2002).

²³ See Hull (2002) for more details on this issue.

²⁴ Statistics New Zealand provides this information in aggregate and by sector in the Annual Enterprise Survey (AES) which is an annual survey of over 200,000 economically significant businesses in New Zealand. Data for 2000 is provisional.

Table 2
Quick ratios by country
 as at 2 September 2002

	Quick Ratio	Coverage (%)
NZSE 40	0.67	92
Australian ASX 200	0.70	56
S & P 500	1.05	79
MSCI Europe	0.63	74

Source: Bloomberg

a large share of current assets, while current liabilities are relatively low, resulting in a high liquidity measure. However, because firms involved in retail trade typically carry more inventory than those in wholesale trade, liquidity for retail trade is lower.

Fixed assets are not included in current assets, so sectors with a high share of fixed assets relative to liquid assets (including mining, electricity, water and gas supply, accommodation, cafes and restaurants, and transport, storage and communications) would generally have a lower liquidity ratio. However, a mitigating factor is the low level of inventory carried by some of these sectors (such as electricity and transportation). The quick ratio for agriculture is currently quite high, reflecting a high degree of current assets arising from high agricultural prices, particularly in livestock and cropping farming, and dairy cattle farming sectors.

As expected, we see disparate rates of liquidity across industries. However, it is also useful to compare the aggregate liquidity ratio of New Zealand firms against other countries.²⁵ Table 2 provides aggregate quick ratios for firms in share markets in New Zealand (NZSE40), Australia (ASX200), the United States (S&P500), and Europe - including the United Kingdom - (MSCI Europe) respectively, as at August, 2002. The figure is calculated by individually weighting a firm's quick ratio by the share of the firm's market capitalisation in the total market capitalisation of all firms for which data is available. Data was not available for firms in the financial sector, and because of the high share of financial firms in the share markets, overall coverage was somewhat restricted. Following these adjustments, the final

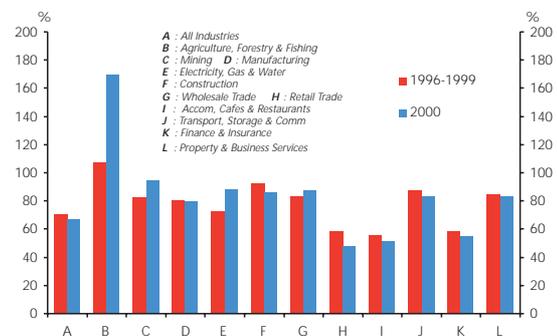
share market coverage is given in the third column of the table.

Aside from the firms represented in the S&P500, which display a high level of aggregate liquidity, New Zealand corporates are generally as liquid as those in Australia and Europe. This is in part due to the compositional nature of listed firms. Table 3 gives a sectoral comparison of liquidity across countries, as at August, 2002. Industries are categorised according to the Global Industry Classification Standards and the figures reported are weighted-median quick ratios.²⁶ There are some very large outliers in some industries, and weighted-median values give a better overall picture of leverage than do industry averages.

The size of our market throws up some analytical differences – we are, of course, comparing 40 of New Zealand's largest firms against the 500 in the S&P 500. In addition to the lack of coverage of financial firms, the NZSE 40 does not have any firms categorised as Energy or Utilities.

As the financial sector is not included, after the re-weighting, the already significant communications sector encompasses a very large share (33.8 per cent) of the NZSE 40 and hence

Figure 9
Quick ratio for New Zealand business sectors



Source: SNZ

²⁵ For the cross-country comparisons of liquidity and leverage and price earning ratios, a number of assumptions were made - for example, on how to handle missing data observations. Contact the authors for further details.

²⁶ The liquidity figure for each firm is weighted by the firm's relative weight within the sector based on market valuation of firms with data available.

Table 3
Liquidity ratios by market and sector
as at 28 August 2002

	New Zealand	Australia	USA	Europe
Materials	0.87	0.56	0.72	0.63
Communications	0.31	1.10	0.58	0.48
Consumer Cyclicals	0.40	0.33	0.50	0.40
Consumer Non-cyclicals	0.56	0.71	0.74	0.55
Energy	n/a	0.58	0.87	0.60
Industrials	0.54	0.67	0.60	0.58
Technology	n/a	1.01	2.15	1.08
Utilities	0.93	0.40	0.37	0.52

Source: Bloomberg

the aggregate liquidity figure for New Zealand. This sector is significantly less liquid than that of the other countries. One explanation may be that three firms comprise the sector, all with a very high degree of fixed assets relative to total assets. In the remaining sectors, New Zealand firms' liquidity ratios are comparable, with a high degree of liquidity in utilities compared with the other countries primarily due to one highly liquid firm that represents more than half of the market capitalisation in New Zealand's utilities sector.

Leverage

Leverage shows a firm's relative indebtedness, and is usually calculated as debt relative to equity, or sometimes as debt relative to assets. From a financial stability perspective, a high degree of leverage can be perceived as relatively risky, given that debt financing usually requires fixed repayment irrespective of economic conditions and income flows, whereas equity investors receive residual profits. Thus, if a

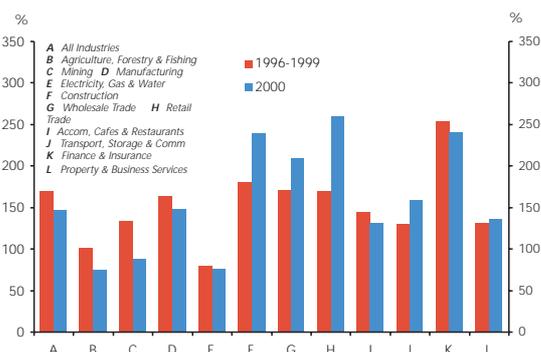
firm faces financial difficulties, a high degree of debt may increase the likelihood of default.

Figure 10 shows leverage across industries in New Zealand. Aggregate leverage in New Zealand for 2000 was about 150 per cent, and as with measures of liquidity, varies significantly by industry. The increase in leverage in the construction industry is due to both a steady increase in liabilities (averaging an 8 per cent increase per annum since 1996), and a higher than usual decline in owners' equity.

In order to see how New Zealand firms compare with other countries, leverage (as measured by total debt to common equity) was calculated for Australia, Europe, and the United States. As with liquidity, the figures were calculated by weighting firm-specific leverage by each firm's market capitalisation share in the total capitalisation of all firms for which data was available.

The banking and telecommunications industries have both a high degree of leverage and a high share in the share market indices. As a result, their inclusion increases the overall leverage calculations by a large extent. Removing these sectors does not change the relative degree of leverage. New Zealand's leverage ratio is 132 while the US ratio is 115, Australia's is 92 and Europe's is 99. The compositional nature of the share market indices have a large effect on the aggregate numbers. Therefore, an industry comparison gives a clearer picture of the sectoral nature of New Zealand's leverage compared with other countries. Table 4 shows weighted-median leverage by industry categorised by the Global Industry Classification Standards, as at August, 2002.

Figure 10
Leverage (debt as a percentage of shareholder funds or owners equity)



Source: SNZ

Table 4
Leverage (debt as a percentage of equity) by market and sector
as at 28 August 2002

	New Zealand %	Australia %	USA %	Europe %
Materials	38.3	65.7	79.8	59.5
Communications	274.5	65.9	67.5	119.7
Consumer Cyclicals	88.8	56.7	62.3	233.1
Consumer Non-cyclicals	14.7	89.6	48.5	99.8
Energy	n/a	65.1	43.4	43.4
Finance	111.4	217.1	324.9	787.9
Industrials	59.5	71.2	113.3	53.0
Technology	n/a	49.6	4.9	15.2
Utilities	47.5	140.7	177.9	113.2

Source: Bloomberg

One feature of the data is New Zealand's relatively high degree of leverage in the communications sector. Communications represent 29.3 per cent of the value of the NZSE40 for which leverage data is available and, as a result, this sector plays a large role in the overall leverage figures. New Zealand's communications sector is dominated by large networks that have high leverage, whereas in other countries, such as the United States, this category includes 'dot-coms', which generally carry very little debt, as well as newspapers that are not highly leveraged.

New Zealand's materials and utilities sectors have lower leverage than the corresponding sectors in the other indices. In each case, one firm with low leverage dominates the sector for New Zealand, resulting in a low measure of leverage. This is also the case for the United States industrial sector. Europe's consumer cyclical sector has a very high leverage measure that is driven by a large share of automotive and airline companies relative to the other indices. Similarly, a large share of banks in that sector causes Europe's high leverage in the financial sector. Banks generally have higher leverage than insurance and funds management firms do. Overall, these figures show that New Zealand's corporate sector (as characterised by listed firms) is no more highly leveraged than corporates in other countries. On the basis of this indicator alone, therefore, New Zealand firms do not appear any more vulnerable to economic downturns than those in Australia, the United States or Europe.²⁷

²⁷ The figures for New Zealand are less representative than for the other countries. One reason for this is that the share market capitalisation relative to GDP is much lower for New Zealand, reflecting the high direct foreign ownership and economic activity that is not represented in the NZSE 40 (including New Zealand's largest company, Fonterra).

Over the last year in New Zealand, there have been several specific examples of how high levels of indebtedness played a role in the deterioration of corporate credit quality. The government rescued Air New Zealand after instability arising from the purchase of Ansett Airlines. Telecom's credit rating was downgraded after several ratings agencies were concerned about the debt taken on to finance expansion into Australia. Tranz Rail, whose credit rating was placed on negative credit watch by Standard and Poor's in July and downgraded by Moody's in August, is subject to two different ratings triggers. One is in the form of a \$250 million bank credit facility and another, in excess of \$100 million, on its lease of a ferry.

Australia has had several high profile corporate failures. These failures include most prominently Ansett Airlines with A\$2 billion in liabilities, Pasmenco with liabilities of A\$2.9 billion, HIH Insurance Ltd. who had liabilities of around A\$5 billion, and telecommunications company One.Tel Ltd. with about A\$800 million in liabilities. While not an apparent threat to financial stability *per se*, these nonetheless represent financing constraints that tend not to be an issue in a boom period when the appetite for risk is strong, asset values are rising, and economic optimism is high.

Market valuations

While corporate indebtedness has implications for financial stability, the state of equity markets is important as well. Over-valued share markets can result in a reduction in market scrutiny and prudent management by shareholders and other market participants. Moreover, a large correction in share market prices may result in firm failures, which can result in

Table 5
Price to earnings ratios by country (percentage distribution)
as at 31 July 2002

PE Ratio	NZSE40 %	AORD %	S&P 500 %
Less than 10	6.3	19.3	7.6
10-15	25.0	27.5	24.6
16-20	25.0	18.5	23.3
21-25	9.4	13.3	17.2
26-30	9.4	5.8	8.7
Over 30	25.0	15.7	18.6

Source: Bloomberg

negative real effects such as higher unemployment and a contraction in investment and output. The associated negative wealth effects can hurt consumer and investor confidence as well.

The recent decline in the United States sharemarket came after a large run-up of share prices. Price to earnings ratios (PE ratios) rose to extraordinary highs, indicating a largely over-valued share market. PE ratios between 15 and 20 per cent are generally considered to be indicative of a sustainable valuation on the basis of historical norms. Table 5 shows the distribution of PE ratios for the NZSE40, Australian All Ordinaries Index, and the S&P 500 as of the end of July 2002. The figures represent the share of firms (in total) with PE ratios in the respective ranges. One caveat is that these figures are based on 2001 earnings, some of which, for the United States, have been revised downwards, which would result in increased PE ratios.

Since July, the distribution of New Zealand firms' PE ratios is similar to that of the United States, now that share prices in United States sharemarkets have fallen, by around 25 per cent in the case of the S&P 500 index. Corporate profitability in New Zealand has, of course, been particularly strong recently, in contrast to the United States. While real effects from the United States sharemarket decline could spill over to New Zealand through trade and wealth linkages and through consumer and business confidence, there are no indicators of impending problems on the basis of our earnings ratios alone. That is, there is little to suggest an inherent over-valuation of New Zealand's sharemarket at this stage that could precipitate a large decline here, although in uncertain times, assessments about equity market valuations are difficult. Also, asset price bubbles aren't usually followed by a smooth return to equilibrium, but rather by over-

shooting on the downside, so there remains some uncertainty regarding United States equity markets going forward.

5 New Zealand banks

The banking system in New Zealand has remained sound despite global weaknesses over the last year.²⁸ Profitability is robust, as is capital adequacy and asset quality. However, foreign currency funding rose at a rapid pace between 1997 and 2000, with its share relative to New Zealand dollar funding rising from 10.9 per cent in June 1996 to 28.0 per cent in November 2000.

Figure 11
Foreign currency funding of banks in
New Zealand



Source: RBNZ

While foreign currency denominated debt has increased significantly, 99 per cent of banks' foreign currency denominated debt is hedged against currency risk. Hedging these exposures insulates the banks from exchange rate fluctuations, but the continuing ability to hedge requires investors that are willing to hold New Zealand dollar risk. Should a shift in preferences reduce the appetite for New

²⁸ See Bruce (2002) for a discussion of developments in the New Zealand banking sector.

Zealand dollar risk, the banks would most likely shift to rely more on local funding, given that banks tend to be conservative risk managers. In such a case, we would expect a contraction in lending, as New Zealand's low saving rate makes it difficult to raise local funding at prevailing interest rates.²⁹

The ability to hedge efficiently requires liquid derivatives markets. Markets with a very small number of dealers potentially face inter-dealer liquidity problems, as there are fewer counterparties with whom to make a trade. In Australia and New Zealand, 40 banks book New Zealand dollar foreign exchange derivative contracts. The five most active banks hold about 70 per cent of the notional amounts outstanding and 13 banks hold 90 per cent of the notional amounts outstanding. A lower degree of concentration should mean that markets are relatively more robust. Still though, the New Zealand dollar market is very small and liquidity can be an issue.³⁰ Moreover, the broader issue of why foreign and domestic entities choose to hold New Zealand dollar risk, and what might happen should that risk appetite change or diminish, remains.³¹

Australian parent banks own four of the five major banks in New Zealand. Foreign bank ownership generally provides benefits such as a high degree of diversification of banking system assets and improved accessibility to international capital. While it is preferable to have strong parents located in well-regulated economies, foreign bank ownership also provides additional linkages by which instability in Australia can spill over to New Zealand's economy.³² Specifically, because a significant amount of New Zealand banks' funding is sourced through the parent, any shock to the parent that inhibits its ability to access funds could result in a reduction of funds available for lending in New Zealand. A large increase in impaired assets arising from exposures to

corporate defaults will force banks to provision capital for the impaired assets.

The capital adequacy of both New Zealand and Australian banks has been strong and stable in recent years, and in our assessment, will remain so in the near future.

As highlighted in the previous section, corporate quality in Australia, and to a lesser extent New Zealand, did deteriorate over 2001. There were also, of course, large failures elsewhere in the world, such as the bankruptcies of Enron and Worldcom, and these exposures were felt to some degree in the banking sector. Each of the Australian parents of New Zealand banks had exposures to Enron. National Australia Bank's (NAB) exposure was approximately A\$200 million, Australia and New Zealand Banking Group's (ANZ) was A\$138 million, Commonwealth Bank of Australia's (CBA) was below A\$150 million and Westpac Banking Corporation's (WBC) was A\$102 million. In addition to Enron, Australian banks had exposures to other corporate defaults. A few examples are listed in table 6.³³

Table 6
Australian banks' exposures to selected defaults

Bank	Debtor	AUD millions	% of bank's total assets
ANZ	Marconi	262	0.14
CBA	Pasminco	340	0.15
NAB	Ansett	70	0.02
WBC	Worldcom	50	0.03

Source: Fitch, National Australia Bank, and Commonwealth Bank of Australia.

Table 7
Australian banks' assets

Bank	AUD billions
ANZ	186
CBA	230
NAB	375
WBC	190

Source: 2001 Annual Reports.

These exposures do not threaten the viability of any of the banks, as the sums involved are small viewed against the total assets of the four major Australian banks (see table 7).

²⁹ See Brash (2002), Woolford, Reddell and Comber (2001) and Thorp (2002) for recent discussions about the role and significance of external debt in the New Zealand context.

³⁰ See Rosborough (2001) for a discussion of liquidity issues.

³¹ See Woolford, Reddell, and Comber (2001) for a more detailed discussion of this issue.

³² See Hull (2002) for a more detailed discussion of the link between foreign bank ownership and financial stability.

³³ See Bruce (2002), for a discussion of New Zealand banks' exposures to corporate credit quality deteriorations.

Each of the individual exposures listed above represents a small part of each bank's assets. For example, CBA's exposure to Pasmenco represents less than 0.2 per cent of total assets, and these banks employ dynamic provisioning³⁴ so that reserves for problem loans are built up over time. Moreover, loan portfolios are diversified across many industries to minimise industry-specific risk. Strong capital adequacy and diversified portfolios have meant that banks have weathered financial pressures well thus far.

Like other countries, the New Zealand corporate sector is facing pressures from the global economic downturn. Global equity market weaknesses can affect New Zealand firms through wealth effects of consumers exposed to foreign share markets as well as through declines in business and consumer confidence. The New Zealand corporate sector, however, does not appear particularly vulnerable at present, and is not experiencing the deterioration in credit quality that is seen in other countries. New Zealand banks, and their Australian parents (and head office in the case of Westpac) remain in good health, despite some exposures to corporate defaults. Because of household borrowing behaviour, it is increasingly the case that the health of Australasian banks depends on the health of the housing market.

6 Conclusion

This paper has discussed the current state of financial stability in New Zealand, and concluded that there are no immediate signs of financial instability.

However, the external situation is particularly uncertain. Concerns over recent months about a 'double-dip' recession in the United States remain, Europe is not currently acting as an engine of global growth, and the situation in Latin America is deteriorating (although New Zealand is less exposed, directly and indirectly, to developments in that region). In the aftermath of a decade of strong growth and buoyant asset prices there are some risks to financial institutions internationally with credit quality deteriorating.

Notwithstanding the external situation, New Zealand financial stability does not appear to be under pressure at this stage. While we do not anticipate that the current downturn abroad will turn into a sustained economic malaise, were that to happen, households in particular may find themselves under somewhat more pressure, given their high levels of indebtedness. For the Australasian banks, and the two financial systems more generally, the health of the household sector is likely to remain one of the most important considerations in the years ahead.

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³⁴ Firms that dynamically provision, supplement bad debt provisions according to changes in expected future losses, thereby avoiding deterioration in capital adequacy in economic downturns.

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