

Dealing with debt

A speech delivered to Employers and Manufacturers Association in Auckland

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Introduction

Households, firms, and governments across much of the advanced world have taken on very large amounts of debt in the last couple of decades. In New Zealand, for example, the private sector owes three times what it did in 1998. People and governments are now living with the aftermath; dealing with the debt. Many individual lives will have been irreversibly changed. Even at an aggregate economy level, it looks as though we could be dealing with the aftermath for quite some time yet.

This speech offers some perspectives on what the accumulation of debt means for people, and for our economies. Inevitably some of the material will have quite a provisional flavour: how things will play out remains uncertain, and is being intensely debated by academic researchers and policymakers alike. It matters to us all.

Some context

Debt is not new. In his recent book, *Debt: The First 5000 Years*, the American sociologist David Graeber demonstrates the central role that credit has played in economic and social life stretching back millennia. But some things are newer: for example, the scale and pervasiveness of the public and private debt, the scale of cross-border gross and net debt, and the central role that highly-leveraged financial institutions and wholesale financial markets play in making that debt possible. And what is particularly striking in the last few decades has been the rate at which debt has increased (relative to income).

If debt is not new, neither is it a bad thing. Debt gives borrowers and savers alike additional options. The ability to lend and borrow is an important part of what enables us to enjoy the sort of life we do. To see the point, one has only to try to imagine a world without debt - a world in which entrepreneurs could not borrow to develop fast-growing firms, and where home ownership was restricted to the rich and the over-50s (who had saved the full price of a house).

At a national level, the ability of one country's citizens to borrow from those of another country means that regions that need a lot of new capital to develop (think of the United States or New Zealand in the late 19th century) can borrow from those with a lot of savings (think of the late 19th century United Kingdom). That has huge benefits. Public debt can serve important purposes too. Historically, many of the biggest increases in public debt occurred during wars; debt allowed the huge fiscal costs to be spread across time. Other big increases in public debt were used to fund the expansion of public infrastructure. More mundanely, the ability to borrow enables governments to buffer some of the macroeconomic effects of downturns.

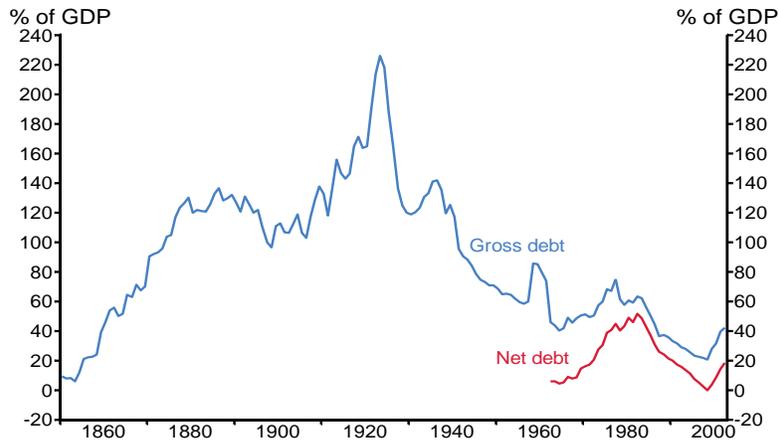
High debt and big swings in public and private debt have featured prominently in New Zealand's modern economic history:

- Central government debt was over 100 per cent of GDP for 70 years from the 1870s (and in excess of 200 per cent of GDP at peak). In 1972 net government debt was as low as 6 per cent of GDP, but was back to 50 per cent by 1992 (Figure 1).
- Private debt data are not as readily available, but total mortgage debt - houses and farms - is estimated to have been around 140 per cent of GDP at the end of the 1920s. It is a little lower than that now, but as recently as 1990 the stock of mortgages was equal to only around 35 per cent of GDP (Figure 2).
- Our net international investment position (the net amount of debt and equity raised from foreign lenders and investors) has gone through similarly wide fluctuations. We were very heavily dependent on international capital prior to World War II, but the net amount outstanding abroad dropped to perhaps as low as 5 per cent of GDP in the early 1970s. Over the 1970s and 1980s, the net reliance on foreign savings increased substantially, settling at levels that are high by international standards and seem uncomfortable (Figure 3).

Over the last couple of decades the main New Zealand story has been about the substantial increase in private debt; taken on by farmers, non-farm businesses, and households alike. For most of the period, government debt was falling and our (net) reliance on international savings has not changed very much.

Figure 1

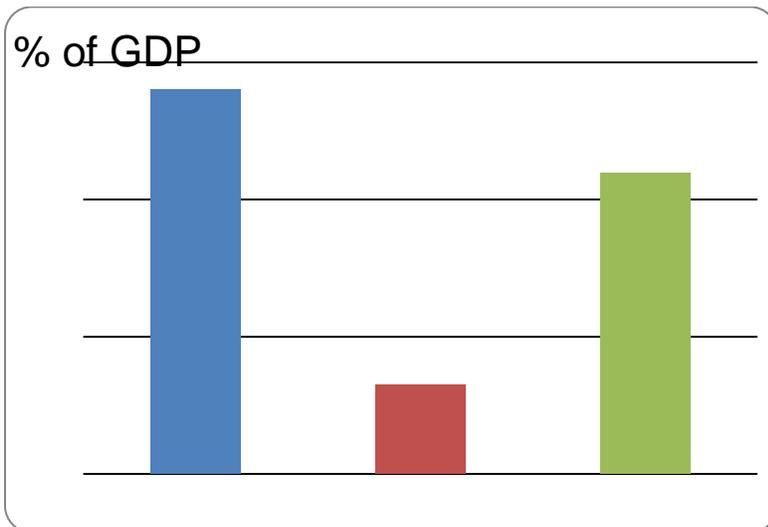
Government debt*



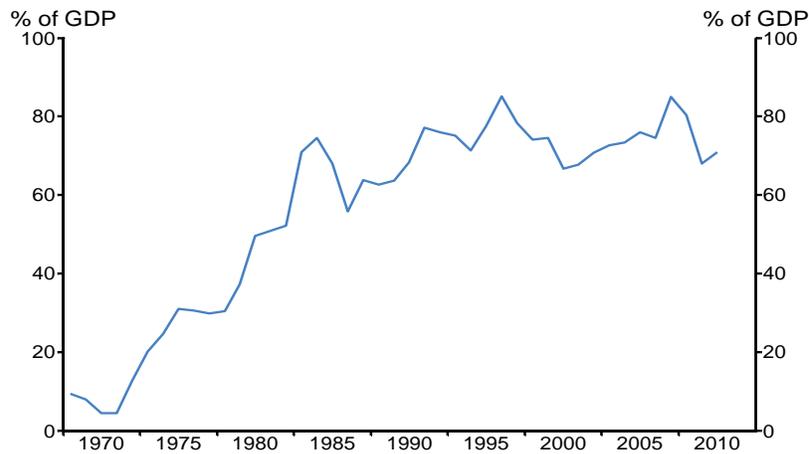
* From 1972, gross sovereign-issued debt and former core Crown net debt.
 Source: NZ Treasury, Statistics New Zealand

Figure 2

Farm and housing mortgage debt



Source: RBNZ, Statistics New Zealand

Figure 3**Net international liabilities**

Source: Statistics New Zealand, Lane & Milesi-Ferretti (for pre-1989 NIIP data)

Rapid growth in debt can foreshadow problems

The phrase “all things in moderation” might well have been invented for debt.

For individuals, circumstances differ hugely. Young people starting out in the housing market probably always will borrow a large proportion of the price of their first house, and a large amount relative to their current income. Such loans are risky for the individual borrower if something goes badly wrong. But for a well-managed bank (and for the economy as a whole) higher risk loans like those will typically be balanced with other loans which have gradually been being repaid for 20 or 30 years.

For whole economies, “too much” debt can cause problems. But researchers are not really sure quite what is “too much” (among other things, measurement and institutional differences complicate things). Historically, a much better indicator to watch out for has been large increases in debt (relative to incomes) for several years in succession.

As Reinhart and Rogoff have documented, financial crises are often followed by tough economic times. But even without a financial crisis, periods of rapid increases in debt tend to be followed by periods of economic stress - recessions that last longer and prove more

troublesome than a “plain vanilla” recession, in which any lost output is recovered very quickly (New Zealand’s mild 1998 recession might have been an example of that sort of recession).

There are good reasons why a large and rapid increase in debt (to GDP) seems to matter. Debt is not taken on in a vacuum. People are readier to take on debt when they are relatively more optimistic than usual about the future. Banks are keener than usual to lend when times feel good. And people make choices, re-organise their balance sheets and their spending patterns on the basis of that heightened optimism.

Any number of factors, often at least a couple in combination, can result in a credit boom getting started. Countries’ experiences differ on that score, even in the most recent boom. But, typically, something causes spirits to lift, and with them spending and business activity. People become more willing to take the risk of buying a house or farm, of consuming more of their incomes than previously, or of expanding a business.

Once credit is growing rapidly, the process tends, for a time at least, to be self-reinforcing. Easy credit tends to lift asset prices (strengthening expectations of further price increases), and people feel wealthier as a result. Experience tends to confirm people’s initial heightened sense of optimism. Expectations of future incomes are revised up and people make plans accordingly. In time, almost inevitably, people tend to be lulled into complacency about downside risks, and become over-optimistic about how long the good times will last. Towards the end, it is often the most optimistic borrowers and most optimistic lenders who are still readiest to borrow and lend.

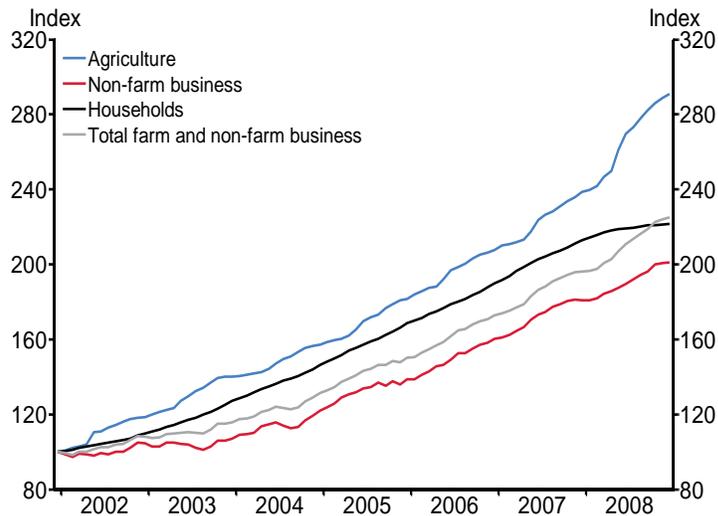
New Zealand’s credit boom was triggered by a number of factors among them the huge unexpected surge in immigration in 2002/03. Potential household borrowers found that jobs were easy to get, wages were rising quite rapidly, and business profits were good. Consumers felt more confident too, and were willing to spend. Population pressure and supply constraints meant that despite a high level of construction activity, house prices doubled. The boom in rural land (and growth in lending to farmers) was even bigger (Figure 4). When credit is growing rapidly, asset prices are rising, and turnover is high, businesses servicing the domestic economy find themselves doing well. They, in turn, invest to take advantage of what look then like sustainably better opportunities. Sustained booms also generate surprising amounts of tax revenue. In New Zealand’s case, as the boom went on, fiscal policy shifted to a substantially looser stance. That shift put more cash into the pockets of many, including families who might otherwise have found buying a house becoming just too expensive.

But as booms go on, pressures build up on scarce resources, and policy interest rates tend to be raised to keep inflation in check. Optimistic borrowers shrug off rate rises for a while, but the burden of servicing the debt gradually, but inexorably, begins to mount. Marginal projects become harder to sell and prudent lenders get a little uneasy. Modern credit booms have also often tended to skew the economy, diverting resources away from the tradables sector towards the more domestically-oriented parts of the economy (construction, consumption and government spending). Productivity growth - the basis of sustained future income growth - tends to erode when that happens.

Figure 4

Credit growth: the boom by sector

(Dec 2001 = 100)



Source: RBNZ

The more leveraged a borrower is, the smaller the adverse change in circumstances that is needed for the loan to become a problem. Perhaps a firm's sales growth slows or asset prices do not rise quite as much as had been expected, the risk of losing one's job rises, it takes a little longer to fill vacancies in rental properties, or the servicing burden becomes just too heavy. By the peak of New Zealand's boom, for example, many highly-leveraged owners of investment properties faced weekly outgoings (interest and other expenses) well in excess of rental income.

Of course, the quality of the debt, and the purpose for which it is taken on, matter. New Zealand was probably fortunate that the small amount of very high risk lending was mostly

undertaken by finance companies and other lenders who were outside our core banking system. But the nature of credit booms is that some of what initially looked to be good sound borrowing - whether to finance personal consumption or to undertake productive business investment - turns out not to be. That debt can then hang heavily: on the borrowers or (if borrowers fail to pay) the lenders.

During credit and asset price booms, not everyone borrows. For every buyer of a higher-priced asset, there was a seller. And both probably felt good about the deal done in good times. Older people who managed to downsize and sell the family home or farm secured a larger retirement nest-egg. As a result, they can consume more for the rest of their lives. A downturn in house or farm prices does not directly affect them. But the people who optimistically paid a very high price for assets, and who borrowed to finance the purchase (or who perhaps drew down some of the apparent increase in equity in their existing home) are now stuck with the higher debt. Time cannot simply be turned backwards. Having belatedly realised that we had become over-optimistic, we cannot just go back to 2001. For better or worse, people have to live with, and work through, the consequences of past choices.

That means many people have to reassess their plans, which typically means less spending and less investment. An atmosphere of caution takes hold, and affects everyone's behaviour to some extent. For some it might just mean eating out less often, or cancelling an overseas holiday. Employers become more cautious about hiring, so those who lose their jobs face longer spells out of work. For some it might mean postponing retirement; for others delaying having (or cutting back the number of) children.

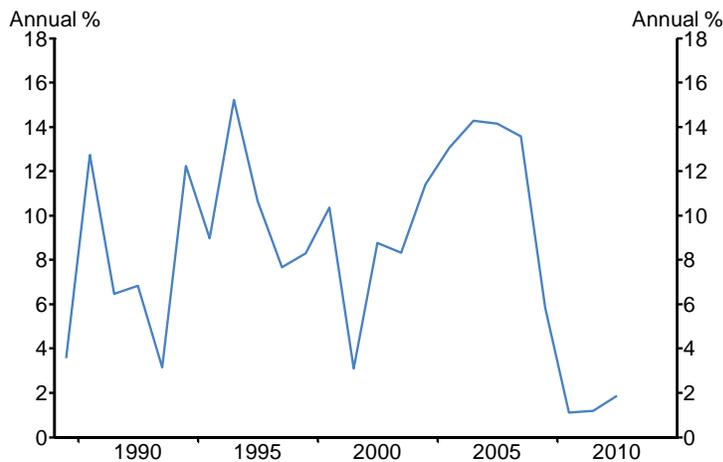
On the other side, potential house buyers can now bide their time - no longer worrying about being priced out of the market if they wait a few more months or bid a little less aggressively. Lenders, quite rationally, become more cautious too: collateral values are not rising any longer, and many business borrowers find their cash-flows lagging behind what the banks had counted on. On the fiscal side, when times get tougher governments also have to revise their plans, reassessing the level of tax revenue they can count on, no longer putting substantially more new money into the economy each year. The flow of new programmes tails off; existing provisions are wound back and the private sector has to adjust to that change too.

Adjusting after a credit boom

During the last three years of the boom, private sector credit in New Zealand rose by around 14 per cent each year (Figure 5), when (nominal) GDP was rising at about 6 per cent. As we noted in our review of monetary policy, published recently in the *Bulletin*, we probably put less weight on this gap at the time than we should have, or than we would do today. And that last phase came after a decade or more when private debt as a share of GDP had already steadily and substantially increased: private sector credit was about 70 per cent of GDP in 1990 and was 160 per cent at peak in 2009. The end of the credit boom came rapidly: annual credit growth fell from 15 per cent to 2 per cent in only 18 months.

Figure 5

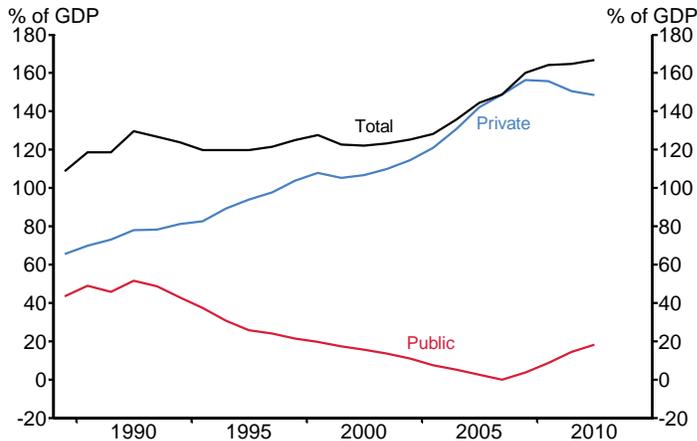
Private sector credit* growth



* Private sector credit to resident borrowers, excluding repos

Source: RBNZ

Figure 6

*Public and private sector credit**

*Private sector credit to residents, ex repos, and former core Crown net debt

Source: RBNZ, Statistics New Zealand

New Zealand's credit growth was not so different from that in a variety of other countries. In one form or another, the United Kingdom, the United States, Australia, Spain, Denmark, Ireland and a swathe of other small OECD countries all saw historically large increases in private debt, and typically in asset prices too. The only major countries to avoid such booms were Japan and Germany. Japan, of course, was still adjusting to its own earlier private debt boom and bust.

If we had been asked a decade ago about how New Zealand might have coped in the aftermath of a rapid build-up in debt and asset prices, we might have been relatively sanguine, especially if we had been told that the boom would end without a systemic banking crisis in either New Zealand or Australia.

If asked, we would have talked in terms of a few years of relatively low actual growth, as the pressures on resources that had built up during the credit boom years dissipated. We would have looked towards a fall in the exchange rate, which would have raised both the cost of consumption and the returns to production. That, in turn, would have prompted productive resources to shift back towards the tradables sector. Consumer spending would no doubt have been expected to weaken but we would have expected materially stronger exports. That sort of view underpinned, and is reflected in, the economic projections we published in the years just before the global recession.

In this, entirely conventional, textbook resource-switching story the economy would have emerged better-balanced. We would not have expected any material or sustained interruption in the incomes the economy could sustainably generate over time. If anything, the rate of potential GDP growth might have been expected to accelerate.

In many ways, in fact, it was New Zealand's story in the early 1990s, when we had had corporate and government debt excesses, and a financial crisis of our own, to work through. Then, markedly lower real interest rates and a lower exchange rate facilitated a step-up in economic growth, exports, and productivity.

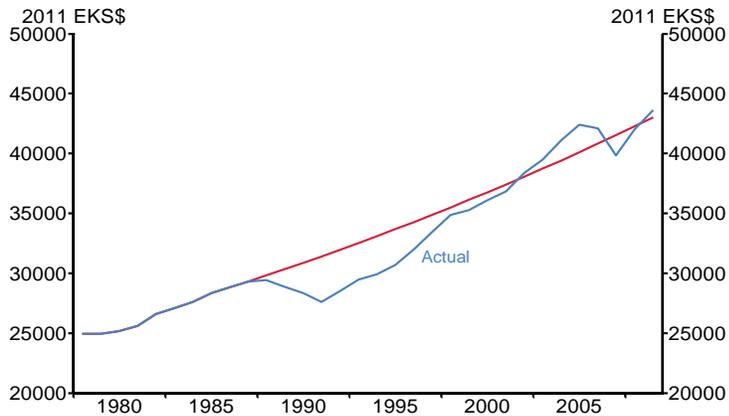
Over the longer term, the prosperity of a country and its people depends largely on the quality of the country's institutions, and the product and market innovations which firms operating here can generate or draw on. The terms of trade - the value of what the world will pay for what we sell - also matters. Neither the quality of our institutions, nor the scope for generating or adopting innovative products and practices, should be materially adversely affected by an overhang of debt and somewhat overvalued house and farm prices.

As just one stark example, the economic historian Alexander Field's new book *A Great Leap Forward* demonstrates that, despite the grim American experience of the Great Depression, underlying total factor productivity growth remained strong through the 1930s, laying the foundations for renewed American prosperity in the post-war era.

Sweden's experience in the 1980s and 1990s is also widely cited. Household and corporate debt rose markedly in the boom years following liberalisation (though by less so than New Zealand and other countries experienced in the last decade). That culminated in a severe recession and banking crisis in the early 1990s. But a sharp fall in exchange rate in 1992, and a strong recovery in the rest of the world, underpinned a substantial rise in Swedish business investment and export incomes. A few years further on, the level of per capita GDP was right back at the trend level one might have expected to have seen if the crisis had never happened (Figure 7). In another example, Korea experienced a very large credit boom in the 1990s and then a severe financial and economic crisis in 1997/98. But per capita incomes were quite quickly back on the previous rapid growth path once the crisis passed (Figure 8).

Figure 7

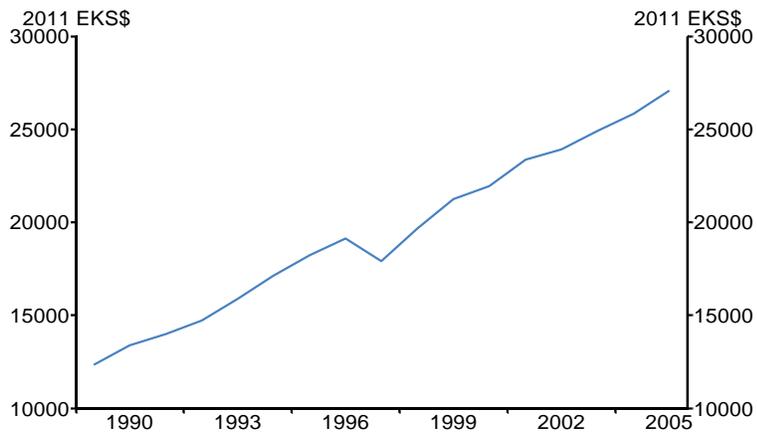
Sweden: per capita real GDP



Source: Conference Board Total Economy Database

Figure 8

Korea: per capita real GDP



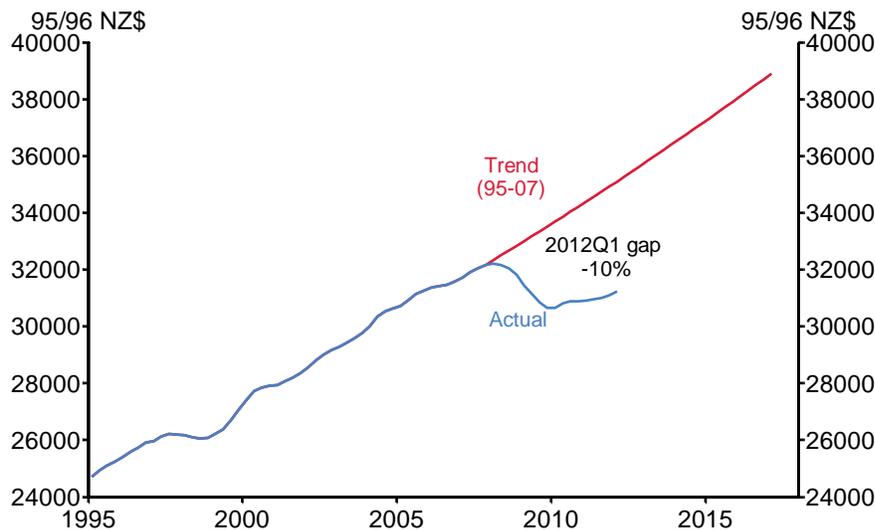
Source: Conference Board Total Economy Database

Experience suggests that the aftermath of a debt and asset price boom need not materially hold back a country's economic performance for long. But this time it looks as if the accumulated debt is, in fact, acting as quite a sustained drag, in New Zealand and other advanced economies.

In mid 2012, New Zealand's GDP per capita is still around 3 per cent below its previous peak (reached back in December 2007). Even allowing for the froth at the peak of the boom (in the jargon, the output gap we think existed in 2007); if the growth rate of the previous decade or so been sustained, per capita GDP would now be substantially higher than it is (Figure 9). But there is nothing in our forecasts - or those of other agencies - to suggest we are likely to get back to previous trend any time soon. To do so by 2017, 10 years on from the peak of the last boom, New Zealand's economy would have to grow by perhaps 5 per cent each and every year from here on. Perhaps it will happen, but it does not look very likely at this stage. Indeed, we recently revised down our view of New Zealand's sustainable rate of growth.

Figure 9

New Zealand: per capita real GDP



Source: Statistics New Zealand, RBNZ

Looking at per capita GDP growth across countries since 2007, New Zealand's growth appears to be around the middle of the pack: some advanced countries have done quite a lot better, and some considerably worse. Our experience on that count is not much different from that of the United States (and while we have done a little better on employment they have done better on productivity). In many countries, we have to deduce or infer an important role for debt, but in the United States, where much more detailed data are available, it is clear that the recent economic performance of states and counties where people took on relatively more debt has been worse than the economic performance in the rest of the country.

There are, however, important differences. A crucial difference from, say, the American (or Spanish and Irish) experiences so far is that New Zealand house prices have not come down very much, or for very long. The Federal Reserve recently released data suggesting that median household wealth in the United States fell 40 per cent in the three years to 2010 - and was back to 1992 levels. Most of the drop in wealth resulted from a fall in house prices - and house prices in the United States had not risen as much those in New Zealand. Sharp falls in nominal house prices tend to be much more disruptive, especially to the financial system, than the same fall in real house prices that occurs gradually through a prolonged period of house price inflation running a little lower than general inflation.

Another important difference is that the government's debt as a share of GDP is still materially lower in New Zealand than in many advanced countries. Public debt here, and in most advanced countries, has increased substantially since 2008, but our starting point was so much lower than most. New Zealand avoided the sort of systemic financial crisis, and associated bank bailout costs, that has resulted in significant additional public debt being taken on in a growing number of countries. It is, however, widely accepted, here and abroad, that ongoing fiscal deficits are now mostly structural in nature. Authorities cannot just wait for time and normal economic recovery: only concrete policy choices will close the deficits, although of course there is lively debate as to just how rapidly that should be done.

Factors that help explain the tepid recovery

Why, then, are so many countries, even ones like New Zealand that avoided both a systemic financial crisis and the difficulties of a common currency area, still experiencing such a tepid recovery?

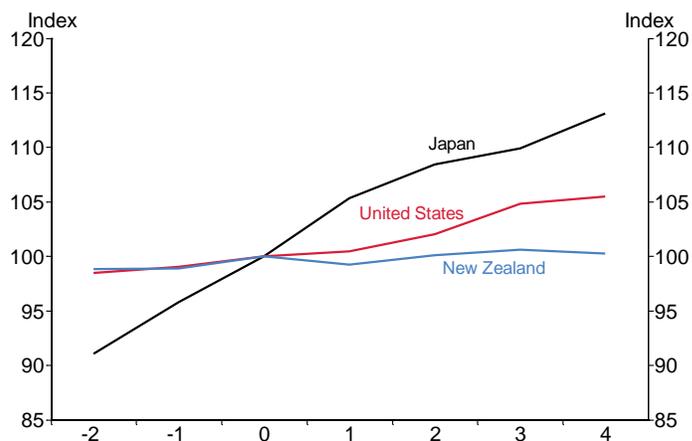
We cannot be definitive but, in addition to the current idiosyncratic pressures in Europe, three factors seem to be at least part of the story:

- First, the very widespread nature of the 2000s credit boom and the resulting overhang. Consider, by contrast, the experience after Japan’s credit and property boom in the 1980s. Many talk of Japan’s “lost decade” - but per capita GDP in Japan fell only slightly and briefly in the early 1990s, and its per capita growth and productivity (GDP per hour worked, or per person of working age) performance since the end of the boom far outstrips anything New Zealand or the United States (let alone the United Kingdom) have seen in the last few years (Figure 10). When Japan had to adjust, it was able to do so partly by exporting more. The world economy was performing strongly, and lots of borrowers in other countries were very ready to increase their own debts. When a single country experiences weak domestic demand, resources can switch relatively readily into sectors more reliant on external demand. But it is hard for that to happen in a large chunk of the advanced world all at the same time, especially when many of those countries cannot cut official interest rates further, given the effective near-zero bound on nominal interest rates.

Figure 10

GDP per hour worked following credit booms*

(1989 = 100 for Japan; 2007 = 100 for New Zealand and the United States)



*Horizontal axis shows years before and after 1989 for Japan, and 2007 for New Zealand and the United States. In each case, GDP per hour worked is set equal to 100 in the base year.

Source: Conference Board Total Economy Database, Statistics New Zealand

- Second, the sharp rise in New Zealand's terms of trade in recent years appears to have complicated our adjustment. Such a lift in the terms of trade, if expected to last, would typically trigger an investment boom as firms in the tradable sector sought to take full advantage of the much-improved product prices and higher expected profits. The Australian investment boom of the last few years is an example. Nothing similar has happened here since the global recession. Whether that is because of the overhang of existing rural debt (and the illiquidity of the rural property market) or because the high terms of trade are not expected to last, or some other reason altogether, is not clear. But, for now, high export prices have tended to hold up the exchange rate, but private business investment, even in sectors benefiting directly from the high terms of trade, has remained subdued.
- Third, there is the economic position of the advanced world as a whole relative to the emerging world as a whole. Once, fast-growing emerging countries ran balance of payments current account deficits and slower-growing advanced countries ran surpluses. That was as true of 19th century New Zealand and the United States as it was of 20th century Singapore and Korea. For the decade or more, the pattern has been the other way round. Many emerging economies, some globally significant, have been running large surpluses or even balanced current accounts, when one might reasonably have expected that they would be running deficits, and thus supporting demand in the rest of the world. That might have been tenable, and consistent with strong widespread global growth, while the West was in a position to run up public and private debt rapidly. But advanced economy debt already appears too high, especially against a backdrop of rapidly ageing populations. A more balanced pattern of global growth would be likely to provide medium-term benefits to all regions of the world.

Prospects for lower debt ratios

Some of the big historical swings in domestic and external debt ratios New Zealand has experienced were highlighted earlier. There is nothing self-evidently permanent about the sorts of debt ratios we and other countries have seen in recent years. Indeed, there is good

reason to think that over time debt to income ratios will fall back somewhat. But no one has a good sense of when or how much. History and theory offer no more than tentative pointers.

For now, it is sobering that across whole economies, including New Zealand, debt to income ratios have still been edging up. In many countries, including New Zealand, private (business and household) debt to income ratios having fallen back a little - and that is typically what people have in mind when they talk about deleveraging. But the rising public debt has typically been at least offsetting any reduction in private debt ratios, and in New Zealand private debt itself is now growing at around the same rate that nominal GDP is increasing.

(Of course, private and public debt are connected, although not tightly or mechanically. The private sector tends to respond to big government deficits by saving a little more than otherwise. In the same way, big government surpluses in the boom years probably led the private sector to save a bit less (and take on more debt) than it otherwise would have.)

Debt to income ratios can fall, broadly, in three ways: bad debt write-offs; income growth; and by borrowers, in aggregate, making net repayments of their loans.

In the United States, some of the (not insignificant) reduction in household debt to date has been in the form of bad debt write-offs. Those losses on housing lending have had obvious consequences for the financial sector. In New Zealand, there have been few significant losses on lending to households and, outside the finance company sector, total loan write-offs have been relatively modest. Banks' non-performing loans rose materially, but peaked at not much more than 2 per cent of total loans outstanding - well below the very substantial losses after 1987, in turn no doubt partly reflecting the much better quality of lending this time round. Most private lending is secured on property, so large loan losses tend to occur when there is both a substantial fall in property values and a high unemployment rate. In most areas, New Zealand property prices did not fall very much or for long. And painful as it is for those directly affected, New Zealand's unemployment rate in the last few years has risen to only around the average for the last 25 years.

Income growth is the most attractive path to lowering debt to income ratios. It has often been an important part of successful adjustments. But, so far, incomes are still well **below** previous expectations. Across the economy, most borrowers in the middle years of the last decade probably expected that incomes would keep rising reasonably fast - not to find that average real incomes have not grown at all since 2005. Faster sustained growth remains very attractive, if only we were able to achieve it. For New Zealand, it is difficult to envisage the sort of resource-switching that seems likely to be required occurring without a sustained fall in the

(real) exchange rate. That, in turn, probably involves structural change in the real economy and some improvement in the international situation: it is certainly not something New Zealand monetary policy can bring about.

What about prospects for net repayments of debt? Business credit rose rapidly during the boom, although in a more disciplined way than during the property and equity boom of the mid-late 1980s. The stock of this debt fell for a time after 2008, partly because during the recession a number of highly-indebted firms had no choice but to raise additional equity or sell assets to get their debt back to levels acceptable to their bankers. Looking ahead, if business savings (retained earnings) increased further, those savings might be devoted partly to repaying debt. But sustained growth is likely to require increased investment and that is more likely to require some additional external finance. As it is, non-property-related business lending once again appears to be rising at a reasonably healthy pace.

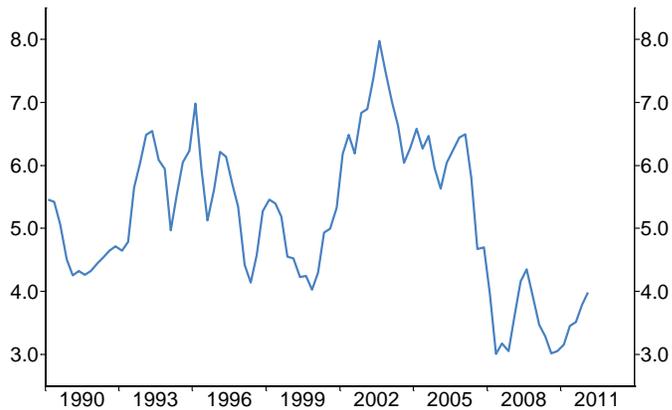
A return to sustained fiscal surpluses will, over time, mean a fall in the level of net public debt. But as governments do not generate much of their own income, returning to surpluses, from the current position of significant structural deficits, involves some mix of discretionary spending cuts, or increased taxes. In the transition, either route will tend to reduce income in the hands of firms and households.

And what about households? There is no simple single story. The very low level of activity in the housing market in recent years (Figure 11) has tended to dampen household debt slightly artificially. That happens because existing borrowers go on repaying their mortgages, but not much new debt is being taken on. But such low levels of turnover (and despite the recent rise, turnover is still very low by historical standards) and low house-building activity are not expected to continue. Sharply higher house prices were a significant channel through which household debt rose: young buyers had to take on a lot more debt to buy out older sellers who had taken on their debt when house prices were much lower. If house prices are not changing much now, the typical young new buyer will still be taking on more debt than the typical older sellers will have been repaying. But if real house prices were to fall over time, perhaps as the evident supply constraints were eased, that would be likely to lead to materially lower aggregate household debt to income ratios.

Figure 11

House sales to population ratio

(quarterly sales per thousand of population)



Source: Real Estate Institute of New Zealand, Statistics New Zealand

Higher household savings rates raise household wealth, but whether they alter gross household debt very much depends on who is doing the increased saving. For example, if people with large debts are now feeling overburdened then any increase in their savings will typically reduce the aggregate level of household debt. Many of the most indebted households are already quite cash-constrained. On the other hand, most households have little or no debt and if it is predominantly those people who are saving more, whether because the economic climate encourages greater caution or perhaps because lower interest rates (and lower expected asset returns more generally) makes building up adequate retirement savings a bigger challenge, household financial assets may rise, but with little observed change in household debt.

Whatever the precise pattern, it seems likely that the experience of recent years will change the nature of conversations in New Zealand families. For decades, it has seemed attractive for households to borrow - first as a hedge against a couple of decades of high inflation, and more recently as real house prices rose more dramatically than at any time in our history. High inflation is a thing of the past. And a repeat of the house price boom not only seems unlikely but would be very damaging and risky if it were to occur.

Few of us have the luxury of simply observing or waiting for history. Businesses and households face real spending and savings decisions each day and New Zealand's economic performance in the next few years will depend in part on the way in which firms and household respond to the changing circumstances and risks, in a climate of considerable uncertainty.

Implications for the Reserve Bank

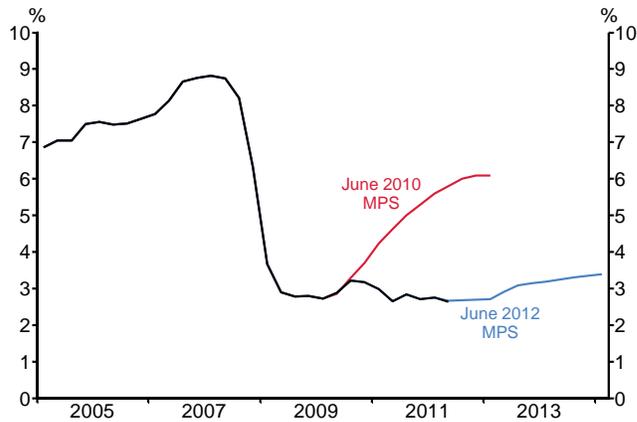
What does all this mean for us specifically as New Zealand's central bank, charged with running monetary policy to maintain price stability and conducting prudential supervision to promote the soundness and efficiency of the financial system?

When recessions happen, central banks typically cut policy interest rates quite a lot. In 2008/09 we cut the Official Cash Rate (OCR) by nearly six percentage points, more than almost any other central bank cut. But like most other central banks we have been surprised at the way policy rates have needed to, and been able to, remain so low for so long.

We expected that most of the OCR cuts would be relatively short-lived, while the economy regained its footing. Financial market prices suggest that the private sector typically shared that sort of view. Two years ago, for example, we thought the OCR would be around 5.75 per cent by now (Figure 12). It is still 2.5 per cent, and financial markets have recently been toying with the idea that the OCR might yet need to go lower (albeit mainly because of global risks). Even our counterparts across the Tasman, dealing with Australia's record terms of trade, have been cutting their policy rate back towards 2009 lows.

It begins to look as though something is going on now that we have not seen before. It is still too early to know quite what the nature and scale of the change is, and how enduring it might be. Among the challenges policymakers face is getting a better understanding of why, given how weak GDP has been in many countries, there is not more excess capacity evident in our economies. Fortunately, few monetary policy decisions are set in stone: we get to review the OCR, in light of all the emerging data, murky as they often are, every six weeks or so.

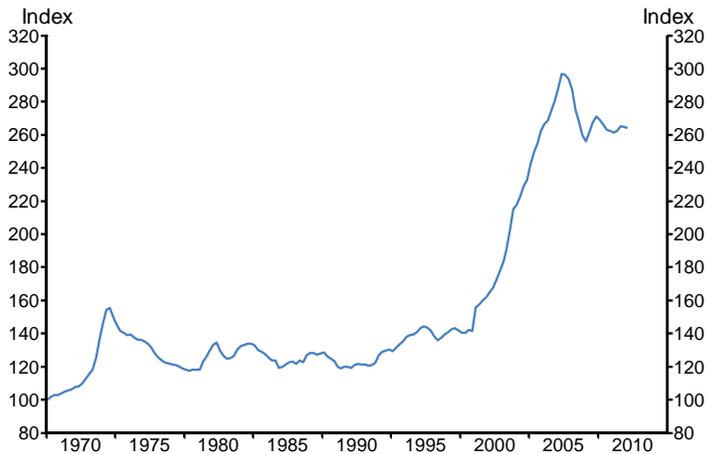
Figure 12

90-day interest rate projections

Source: RBNZ estimates

Wearing our other (financial stability) hat, we are conscious of the risks financial institutions (the lenders) face. On the one hand, our banks (and their Australian parents) are still heavily reliant on foreign wholesale funding (and, of course, more than half of New Zealand government bonds are also held by foreign lenders). Over the course of New Zealand's history, dependence on foreign funding has repeatedly proved an Achilles heel. The position is less risky than it was in 2008, but the risks certainly have not disappeared. If anything, the climate for cross-border lending, and for wholesale funding of banking systems, is probably less favourable than it has been for decades.

New Zealand banks are well-capitalised and credit risk is measured conservatively. The quality of New Zealand bank assets looks reasonably good, even in the face of some fairly demanding stress tests. But we will need to keep watching that situation closely, especially if incomes continue to lag behind what was expected when much of the debt was taken on. Our sense is that real house prices are still somewhat overvalued: they are certainly well above historical levels (Figure 13), and look expensive by international standards (relative to incomes or rents). If house prices were to fall, debt to asset ratios (the traditional measure of leverage) would worsen (as they have done in the United States), even if debt to income measures were still gradually falling.

Figure 13**House price to rent ratio**
(1970=100)

Source: OECD (to 2010Q3), QVNZ, Statistics New Zealand

Farm debt grew very rapidly during the boom. Dairy farmers, for example, have taken on almost \$20 billion of net new debt since 2003, and (real) farm prices are well above where they were. Banks have taken some significant losses on loans to the dairy sector over recent years: for some borrowers things did not turn out anywhere near as well as expected. In aggregate, the debt stock will probably be sustainable if commodity prices stay strong. But whatever the medium-term prospects, we know that commodity prices go through very big cycles. When product prices are very volatile, high leverage can be a recipe for a nerve-racking ride for borrowers, lenders, and bank regulators alike. We have taken steps to require banks to hold more capital against rural loans than they were doing previously.

Concluding comments

Standing back from the details, five years on from the beginnings of the global crisis, the picture is still far from clear. Some things about dealing with debt have unfolded as expected: what cannot go on forever does not do so, and effortless adjustments after several years of rapid credit growth are rare. But other things have been less expected, not just here, but across the advanced economies. In particular, the persistently tepid recoveries remain a surprise. At present, none of the various hypotheses to explain what is going on seem fully adequate.

The accumulation of debt within New Zealand itself, and the disappointed expectations of borrowers who paid very high prices for assets, is clearly playing some role in our low rates of growth of productivity and GDP. Quite how large that contribution is may be something economic historians still debate decades hence. But the global nature of the adjustment is clearly also an important part of the New Zealand story. Whatever the precise channels, as yet not much of the expected rebalancing of the New Zealand economy (particularly towards exports) seems to have happened. Perhaps this should not be too surprising in view of the persistently high real exchange rate, itself partly influenced by the adverse international climate.

Looking ahead, we suspect that sustainable long-term ratios of household and farm debt, in particular, are likely to be below current levels. We also suspect that our net international investment position as a share of GDP (our net reliance on foreign debt and equity finance) will, in time, settle at a level lower than it has been for much of the last two decades (although a sustained improvement in our productivity prospects could, at least temporarily, mean a further increase in our use of foreign savings, to finance the investment needed to take advantage of the improved prospects).

But it is also fair to note that we have suspected for a long time that New Zealand's private and external debts were, in some sense, too high to be sustained. Towards the end of his term, the previous Governor Don Brash gave a thoughtful speech on debt issues in early 2002, in which he noted that New Zealand then looked as if it was dealing with the aftermath of a long accumulation of private and external debt and adjusting accordingly. The exchange rate, for example, had been quite low for a couple of years. But that period turned out to be just a pause before the latest and largest wave of borrowing and asset price growth. Some things make this time look different - in particular the wide range of countries undergoing similar experiences - but it pays to be cautious about drawing strong conclusions. Looking ahead, we will need to be open to revising our hypotheses as events unfold.

History is littered with booms and busts, some of which seem to have gone on for a very long time. But these things pass. When New Zealanders today look at Australia's prosperity, who remembers the searing financial and economic crisis Australia itself endured in the 1890s and early 1900s? Even severe overshoots in credit and asset prices, which can be costly and disruptive at the time, and which may permanently change the lives of some borrowers, are likely to throw our overall economic performance off course only temporarily. Our history, and the experience of other countries, attests to that.

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Introduction

Households, firms, and governments across much of the advanced world have taken on very large amounts of debt in the last couple of decades. In New Zealand, for example, the private sector owes three times what it did in 1998. People and governments are now living with the aftermath; dealing with the debt. Many individual lives will have been irreversibly changed. Even at an aggregate economy level, it looks as though we could be dealing with the aftermath for quite some time yet.

This speech offers some perspectives on what the accumulation of debt means for people, and for our economies. Inevitably some of the material will have quite a provisional flavour: how things will play out remains uncertain, and is being intensely debated by academic researchers and policymakers alike. It matters to us all.

Some context

Debt is not new. In his recent book, *Debt: The First 5000 Years*, the American sociologist David Graeber demonstrates the central role that credit has played in economic and social life stretching back millennia. But some things are newer: for example, the scale and pervasiveness of the public and private debt, the scale of cross-border gross and net debt, and the central role that highly-leveraged financial institutions and wholesale financial markets play in making that debt possible. And what is particularly striking in the last few decades has been the rate at which debt has increased (relative to income).

If debt is not new, neither is it a bad thing. Debt gives borrowers and savers alike additional options. The ability to lend and borrow is an important part of what enables us to enjoy the sort of life we do. To see the point, one has only to try to imagine a world without debt - a world in which entrepreneurs could not borrow to develop fast-growing firms, and where home ownership was restricted to the rich and the over-50s (who had saved the full price of a house).

At a national level, the ability of one country's citizens to borrow from those of another country means that regions that need a lot of new capital to develop (think of the United States or New Zealand in the late 19th century) can borrow from those with a lot of savings (think of the late 19th century United Kingdom). That has huge benefits. Public debt can serve important purposes too. Historically, many of the biggest increases in public debt occurred during wars; debt allowed the huge fiscal costs to be spread across time. Other big increases in public debt were used to fund the expansion of public infrastructure. More mundanely, the ability to borrow enables governments to buffer some of the macroeconomic effects of downturns.

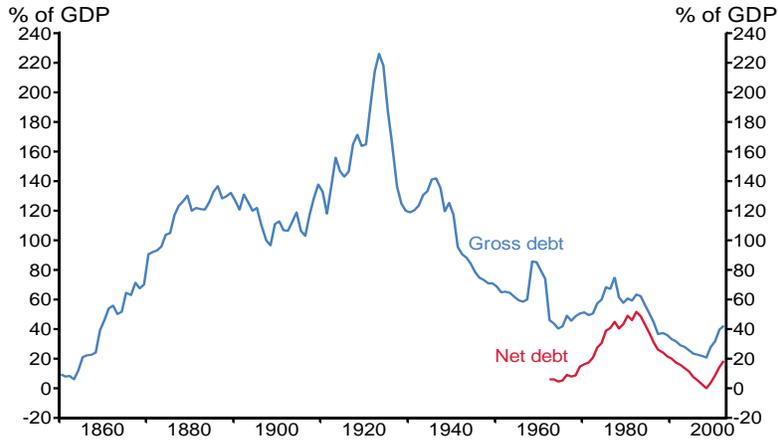
High debt and big swings in public and private debt have featured prominently in New Zealand's modern economic history:

- Central government debt was over 100 per cent of GDP for 70 years from the 1870s (and in excess of 200 per cent of GDP at peak). In 1972 net government debt was as low as 6 per cent of GDP, but was back to 50 per cent by 1992 (Figure 1).
- Private debt data are not as readily available, but total mortgage debt - houses and farms - is estimated to have been around 140 per cent of GDP at the end of the 1920s. It is a little lower than that now, but as recently as 1990 the stock of mortgages was equal to only around 35 per cent of GDP (Figure 2).
- Our net international investment position (the net amount of debt and equity raised from foreign lenders and investors) has gone through similarly wide fluctuations. We were very heavily dependent on international capital prior to World War II, but the net amount outstanding abroad dropped to perhaps as low as 5 per cent of GDP in the early 1970s. Over the 1970s and 1980s, the net reliance on foreign savings increased substantially, settling at levels that are high by international standards and seem uncomfortable (Figure 3).

Over the last couple of decades the main New Zealand story has been about the substantial increase in private debt; taken on by farmers, non-farm businesses, and households alike. For most of the period, government debt was falling and our (net) reliance on international savings has not changed very much.

Figure 1

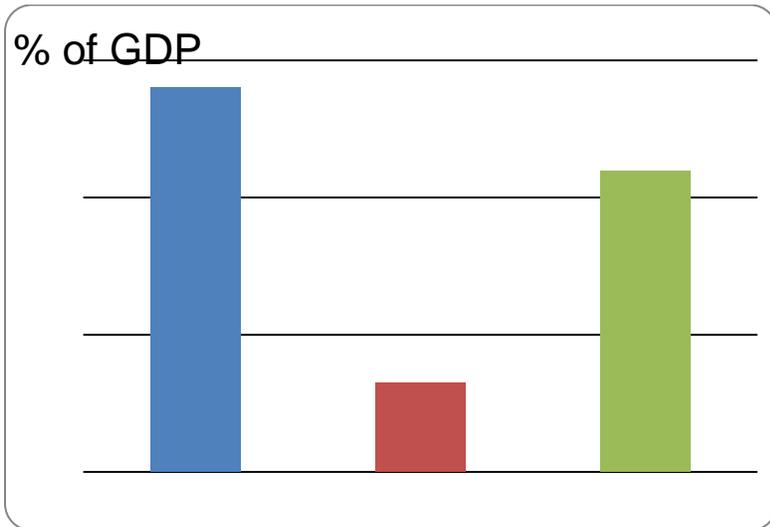
Government debt*



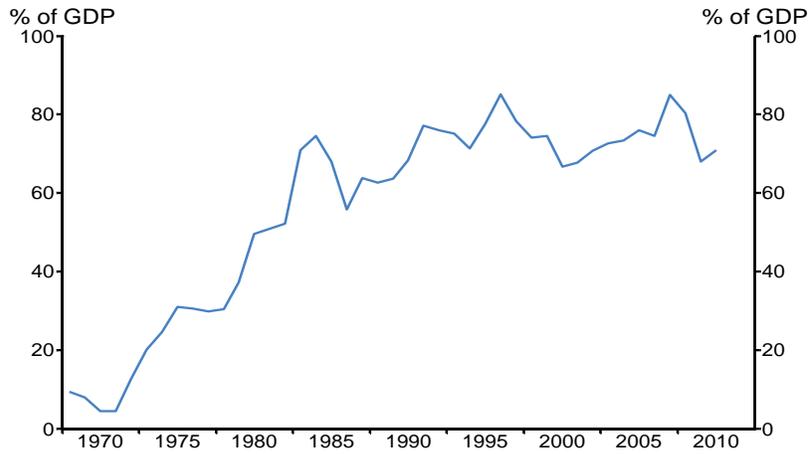
* From 1972, gross sovereign-issued debt and former core Crown net debt.
Source: NZ Treasury, Statistics New Zealand

Figure 2

Farm and housing mortgage debt



Source: RBNZ, Statistics New Zealand

Figure 3**Net international liabilities**

Source: Statistics New Zealand, Lane & Milesi-Ferretti (for pre-1989 NIIP data)

Rapid growth in debt can foreshadow problems

The phrase “all things in moderation” might well have been invented for debt.

For individuals, circumstances differ hugely. Young people starting out in the housing market probably always will borrow a large proportion of the price of their first house, and a large amount relative to their current income. Such loans are risky for the individual borrower if something goes badly wrong. But for a well-managed bank (and for the economy as a whole) higher risk loans like those will typically be balanced with other loans which have gradually been being repaid for 20 or 30 years.

For whole economies, “too much” debt can cause problems. But researchers are not really sure quite what is “too much” (among other things, measurement and institutional differences complicate things). Historically, a much better indicator to watch out for has been large increases in debt (relative to incomes) for several years in succession.

As Reinhart and Rogoff have documented, financial crises are often followed by tough economic times. But even without a financial crisis, periods of rapid increases in debt tend to be followed by periods of economic stress - recessions that last longer and prove more

troublesome than a “plain vanilla” recession, in which any lost output is recovered very quickly (New Zealand’s mild 1998 recession might have been an example of that sort of recession).

There are good reasons why a large and rapid increase in debt (to GDP) seems to matter. Debt is not taken on in a vacuum. People are readier to take on debt when they are relatively more optimistic than usual about the future. Banks are keener than usual to lend when times feel good. And people make choices, re-organise their balance sheets and their spending patterns on the basis of that heightened optimism.

Any number of factors, often at least a couple in combination, can result in a credit boom getting started. Countries’ experiences differ on that score, even in the most recent boom. But, typically, something causes spirits to lift, and with them spending and business activity. People become more willing to take the risk of buying a house or farm, of consuming more of their incomes than previously, or of expanding a business.

Once credit is growing rapidly, the process tends, for a time at least, to be self-reinforcing. Easy credit tends to lift asset prices (strengthening expectations of further price increases), and people feel wealthier as a result. Experience tends to confirm people’s initial heightened sense of optimism. Expectations of future incomes are revised up and people make plans accordingly. In time, almost inevitably, people tend to be lulled into complacency about downside risks, and become over-optimistic about how long the good times will last. Towards the end, it is often the most optimistic borrowers and most optimistic lenders who are still readiest to borrow and lend.

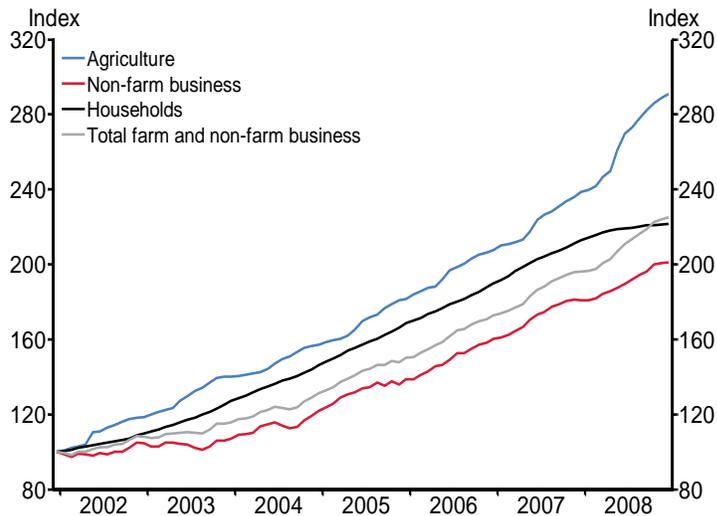
New Zealand’s credit boom was triggered by a number of factors among them the huge unexpected surge in immigration in 2002/03. Potential household borrowers found that jobs were easy to get, wages were rising quite rapidly, and business profits were good. Consumers felt more confident too, and were willing to spend. Population pressure and supply constraints meant that despite a high level of construction activity, house prices doubled. The boom in rural land (and growth in lending to farmers) was even bigger (Figure 4). When credit is growing rapidly, asset prices are rising, and turnover is high, businesses servicing the domestic economy find themselves doing well. They, in turn, invest to take advantage of what look then like sustainably better opportunities. Sustained booms also generate surprising amounts of tax revenue. In New Zealand’s case, as the boom went on, fiscal policy shifted to a substantially looser stance. That shift put more cash into the pockets of many, including families who might otherwise have found buying a house becoming just too expensive.

But as booms go on, pressures build up on scarce resources, and policy interest rates tend to be raised to keep inflation in check. Optimistic borrowers shrug off rate rises for a while, but the burden of servicing the debt gradually, but inexorably, begins to mount. Marginal projects become harder to sell and prudent lenders get a little uneasy. Modern credit booms have also often tended to skew the economy, diverting resources away from the tradables sector towards the more domestically-oriented parts of the economy (construction, consumption and government spending). Productivity growth - the basis of sustained future income growth - tends to erode when that happens.

Figure 4

Credit growth: the boom by sector

(Dec 2001 = 100)



Source: RBNZ

The more leveraged a borrower is, the smaller the adverse change in circumstances that is needed for the loan to become a problem. Perhaps a firm's sales growth slows or asset prices do not rise quite as much as had been expected, the risk of losing one's job rises, it takes a little longer to fill vacancies in rental properties, or the servicing burden becomes just too heavy. By the peak of New Zealand's boom, for example, many highly-leveraged owners of investment properties faced weekly outgoings (interest and other expenses) well in excess of rental income.

Of course, the quality of the debt, and the purpose for which it is taken on, matter. New Zealand was probably fortunate that the small amount of very high risk lending was mostly

undertaken by finance companies and other lenders who were outside our core banking system. But the nature of credit booms is that some of what initially looked to be good sound borrowing - whether to finance personal consumption or to undertake productive business investment - turns out not to be. That debt can then hang heavily: on the borrowers or (if borrowers fail to pay) the lenders.

During credit and asset price booms, not everyone borrows. For every buyer of a higher-priced asset, there was a seller. And both probably felt good about the deal done in good times. Older people who managed to downsize and sell the family home or farm secured a larger retirement nest-egg. As a result, they can consume more for the rest of their lives. A downturn in house or farm prices does not directly affect them. But the people who optimistically paid a very high price for assets, and who borrowed to finance the purchase (or who perhaps drew down some of the apparent increase in equity in their existing home) are now stuck with the higher debt. Time cannot simply be turned backwards. Having belatedly realised that we had become over-optimistic, we cannot just go back to 2001. For better or worse, people have to live with, and work through, the consequences of past choices.

That means many people have to reassess their plans, which typically means less spending and less investment. An atmosphere of caution takes hold, and affects everyone's behaviour to some extent. For some it might just mean eating out less often, or cancelling an overseas holiday. Employers become more cautious about hiring, so those who lose their jobs face longer spells out of work. For some it might mean postponing retirement; for others delaying having (or cutting back the number of) children.

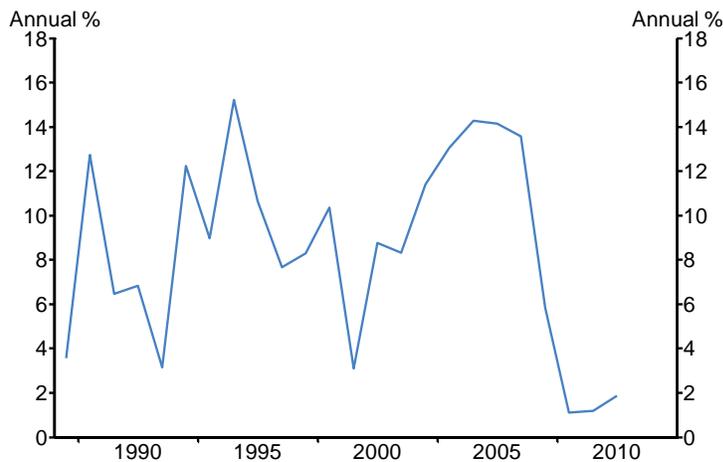
On the other side, potential house buyers can now bide their time - no longer worrying about being priced out of the market if they wait a few more months or bid a little less aggressively. Lenders, quite rationally, become more cautious too: collateral values are not rising any longer, and many business borrowers find their cash-flows lagging behind what the banks had counted on. On the fiscal side, when times get tougher governments also have to revise their plans, reassessing the level of tax revenue they can count on, no longer putting substantially more new money into the economy each year. The flow of new programmes tails off; existing provisions are wound back and the private sector has to adjust to that change too.

Adjusting after a credit boom

During the last three years of the boom, private sector credit in New Zealand rose by around 14 per cent each year (Figure 5), when (nominal) GDP was rising at about 6 per cent. As we noted in our review of monetary policy, published recently in the *Bulletin*, we probably put less weight on this gap at the time than we should have, or than we would do today. And that last phase came after a decade or more when private debt as a share of GDP had already steadily and substantially increased: private sector credit was about 70 per cent of GDP in 1990 and was 160 per cent at peak in 2009. The end of the credit boom came rapidly: annual credit growth fell from 15 per cent to 2 per cent in only 18 months.

Figure 5

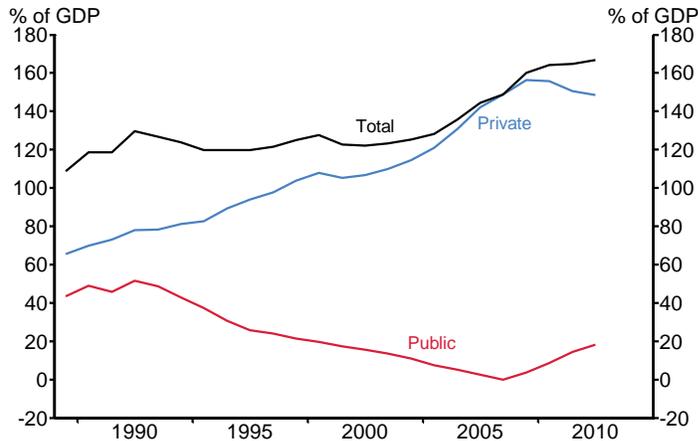
Private sector credit* growth



* Private sector credit to resident borrowers, excluding repos

Source: RBNZ

Figure 6

*Public and private sector credit**

*Private sector credit to residents, ex repos, and former core Crown net debt

Source: RBNZ, Statistics New Zealand

New Zealand's credit growth was not so different from that in a variety of other countries. In one form or another, the United Kingdom, the United States, Australia, Spain, Denmark, Ireland and a swathe of other small OECD countries all saw historically large increases in private debt, and typically in asset prices too. The only major countries to avoid such booms were Japan and Germany. Japan, of course, was still adjusting to its own earlier private debt boom and bust.

If we had been asked a decade ago about how New Zealand might have coped in the aftermath of a rapid build-up in debt and asset prices, we might have been relatively sanguine, especially if we had been told that the boom would end without a systemic banking crisis in either New Zealand or Australia.

If asked, we would have talked in terms of a few years of relatively low actual growth, as the pressures on resources that had built up during the credit boom years dissipated. We would have looked towards a fall in the exchange rate, which would have raised both the cost of consumption and the returns to production. That, in turn, would have prompted productive resources to shift back towards the tradables sector. Consumer spending would no doubt have been expected to weaken but we would have expected materially stronger exports. That sort of view underpinned, and is reflected in, the economic projections we published in the years just before the global recession.

In this, entirely conventional, textbook resource-switching story the economy would have emerged better-balanced. We would not have expected any material or sustained interruption in the incomes the economy could sustainably generate over time. If anything, the rate of potential GDP growth might have been expected to accelerate.

In many ways, in fact, it was New Zealand's story in the early 1990s, when we had had corporate and government debt excesses, and a financial crisis of our own, to work through. Then, markedly lower real interest rates and a lower exchange rate facilitated a step-up in economic growth, exports, and productivity.

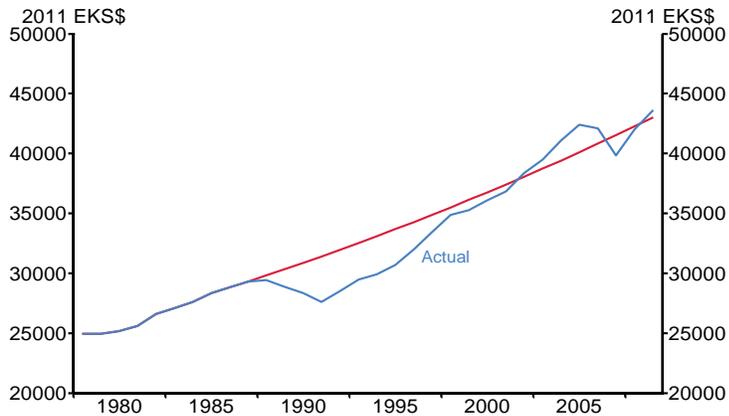
Over the longer term, the prosperity of a country and its people depends largely on the quality of the country's institutions, and the product and market innovations which firms operating here can generate or draw on. The terms of trade - the value of what the world will pay for what we sell - also matters. Neither the quality of our institutions, nor the scope for generating or adopting innovative products and practices, should be materially adversely affected by an overhang of debt and somewhat overvalued house and farm prices.

As just one stark example, the economic historian Alexander Field's new book *A Great Leap Forward* demonstrates that, despite the grim American experience of the Great Depression, underlying total factor productivity growth remained strong through the 1930s, laying the foundations for renewed American prosperity in the post-war era.

Sweden's experience in the 1980s and 1990s is also widely cited. Household and corporate debt rose markedly in the boom years following liberalisation (though by less so than New Zealand and other countries experienced in the last decade). That culminated in a severe recession and banking crisis in the early 1990s. But a sharp fall in exchange rate in 1992, and a strong recovery in the rest of the world, underpinned a substantial rise in Swedish business investment and export incomes. A few years further on, the level of per capita GDP was right back at the trend level one might have expected to have seen if the crisis had never happened (Figure 7). In another example, Korea experienced a very large credit boom in the 1990s and then a severe financial and economic crisis in 1997/98. But per capita incomes were quite quickly back on the previous rapid growth path once the crisis passed (Figure 8).

Figure 7

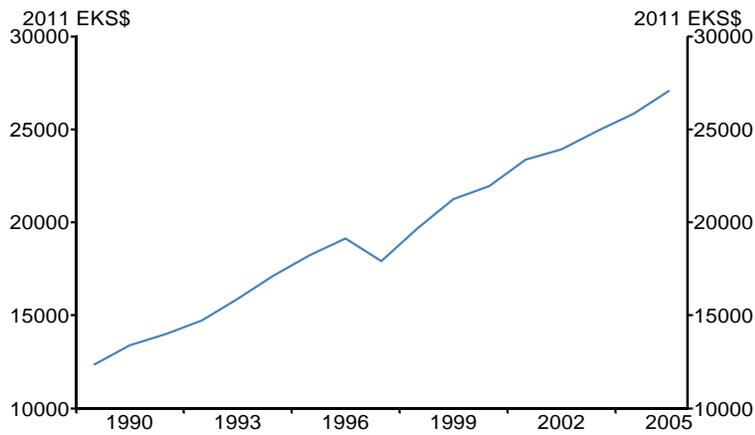
Sweden: per capita real GDP



Source: Conference Board Total Economy Database

Figure 8

Korea: per capita real GDP



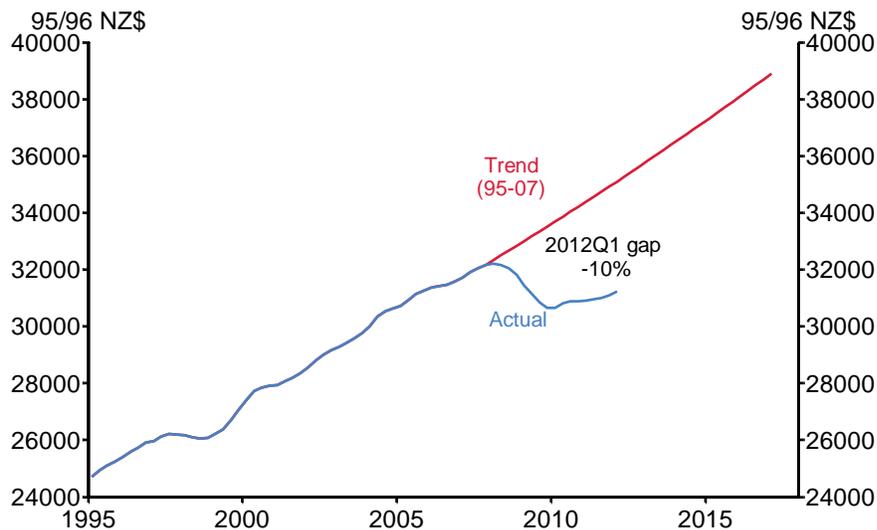
Source: Conference Board Total Economy Database

Experience suggests that the aftermath of a debt and asset price boom need not materially hold back a country's economic performance for long. But this time it looks as if the accumulated debt is, in fact, acting as quite a sustained drag, in New Zealand and other advanced economies.

In mid 2012, New Zealand's GDP per capita is still around 3 per cent below its previous peak (reached back in December 2007). Even allowing for the froth at the peak of the boom (in the jargon, the output gap we think existed in 2007); if the growth rate of the previous decade or so been sustained, per capita GDP would now be substantially higher than it is (Figure 9). But there is nothing in our forecasts - or those of other agencies - to suggest we are likely to get back to previous trend any time soon. To do so by 2017, 10 years on from the peak of the last boom, New Zealand's economy would have to grow by perhaps 5 per cent each and every year from here on. Perhaps it will happen, but it does not look very likely at this stage. Indeed, we recently revised down our view of New Zealand's sustainable rate of growth.

Figure 9

New Zealand: per capita real GDP



Source: Statistics New Zealand, RBNZ

Looking at per capita GDP growth across countries since 2007, New Zealand's growth appears to be around the middle of the pack: some advanced countries have done quite a lot better, and some considerably worse. Our experience on that count is not much different from that of the United States (and while we have done a little better on employment they have done better on productivity). In many countries, we have to deduce or infer an important role for debt, but in the United States, where much more detailed data are available, it is clear that the recent economic performance of states and counties where people took on relatively more debt has been worse than the economic performance in the rest of the country.

There are, however, important differences. A crucial difference from, say, the American (or Spanish and Irish) experiences so far is that New Zealand house prices have not come down very much, or for very long. The Federal Reserve recently released data suggesting that median household wealth in the United States fell 40 per cent in the three years to 2010 - and was back to 1992 levels. Most of the drop in wealth resulted from a fall in house prices - and house prices in the United States had not risen as much those in New Zealand. Sharp falls in nominal house prices tend to be much more disruptive, especially to the financial system, than the same fall in real house prices that occurs gradually through a prolonged period of house price inflation running a little lower than general inflation.

Another important difference is that the government's debt as a share of GDP is still materially lower in New Zealand than in many advanced countries. Public debt here, and in most advanced countries, has increased substantially since 2008, but our starting point was so much lower than most. New Zealand avoided the sort of systemic financial crisis, and associated bank bailout costs, that has resulted in significant additional public debt being taken on in a growing number of countries. It is, however, widely accepted, here and abroad, that ongoing fiscal deficits are now mostly structural in nature. Authorities cannot just wait for time and normal economic recovery: only concrete policy choices will close the deficits, although of course there is lively debate as to just how rapidly that should be done.

Factors that help explain the tepid recovery

Why, then, are so many countries, even ones like New Zealand that avoided both a systemic financial crisis and the difficulties of a common currency area, still experiencing such a tepid recovery?

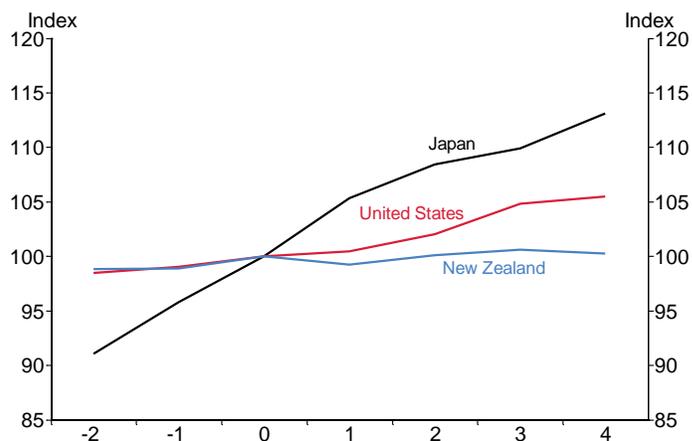
We cannot be definitive but, in addition to the current idiosyncratic pressures in Europe, three factors seem to be at least part of the story:

- First, the very widespread nature of the 2000s credit boom and the resulting overhang. Consider, by contrast, the experience after Japan’s credit and property boom in the 1980s. Many talk of Japan’s “lost decade” - but per capita GDP in Japan fell only slightly and briefly in the early 1990s, and its per capita growth and productivity (GDP per hour worked, or per person of working age) performance since the end of the boom far outstrips anything New Zealand or the United States (let alone the United Kingdom) have seen in the last few years (Figure 10). When Japan had to adjust, it was able to do so partly by exporting more. The world economy was performing strongly, and lots of borrowers in other countries were very ready to increase their own debts. When a single country experiences weak domestic demand, resources can switch relatively readily into sectors more reliant on external demand. But it is hard for that to happen in a large chunk of the advanced world all at the same time, especially when many of those countries cannot cut official interest rates further, given the effective near-zero bound on nominal interest rates.

Figure 10

GDP per hour worked following credit booms*

(1989 = 100 for Japan; 2007 = 100 for New Zealand and the United States)



*Horizontal axis shows years before and after 1989 for Japan, and 2007 for New Zealand and the United States. In each case, GDP per hour worked is set equal to 100 in the base year.

Source: Conference Board Total Economy Database, Statistics New Zealand

- Second, the sharp rise in New Zealand's terms of trade in recent years appears to have complicated our adjustment. Such a lift in the terms of trade, if expected to last, would typically trigger an investment boom as firms in the tradable sector sought to take full advantage of the much-improved product prices and higher expected profits. The Australian investment boom of the last few years is an example. Nothing similar has happened here since the global recession. Whether that is because of the overhang of existing rural debt (and the illiquidity of the rural property market) or because the high terms of trade are not expected to last, or some other reason altogether, is not clear. But, for now, high export prices have tended to hold up the exchange rate, but private business investment, even in sectors benefiting directly from the high terms of trade, has remained subdued.
- Third, there is the economic position of the advanced world as a whole relative to the emerging world as a whole. Once, fast-growing emerging countries ran balance of payments current account deficits and slower-growing advanced countries ran surpluses. That was as true of 19th century New Zealand and the United States as it was of 20th century Singapore and Korea. For the decade or more, the pattern has been the other way round. Many emerging economies, some globally significant, have been running large surpluses or even balanced current accounts, when one might reasonably have expected that they would be running deficits, and thus supporting demand in the rest of the world. That might have been tenable, and consistent with strong widespread global growth, while the West was in a position to run up public and private debt rapidly. But advanced economy debt already appears too high, especially against a backdrop of rapidly ageing populations. A more balanced pattern of global growth would be likely to provide medium-term benefits to all regions of the world.

Prospects for lower debt ratios

Some of the big historical swings in domestic and external debt ratios New Zealand has experienced were highlighted earlier. There is nothing self-evidently permanent about the sorts of debt ratios we and other countries have seen in recent years. Indeed, there is good

reason to think that over time debt to income ratios will fall back somewhat. But no one has a good sense of when or how much. History and theory offer no more than tentative pointers.

For now, it is sobering that across whole economies, including New Zealand, debt to income ratios have still been edging up. In many countries, including New Zealand, private (business and household) debt to income ratios having fallen back a little - and that is typically what people have in mind when they talk about deleveraging. But the rising public debt has typically been at least offsetting any reduction in private debt ratios, and in New Zealand private debt itself is now growing at around the same rate that nominal GDP is increasing.

(Of course, private and public debt are connected, although not tightly or mechanically. The private sector tends to respond to big government deficits by saving a little more than otherwise. In the same way, big government surpluses in the boom years probably led the private sector to save a bit less (and take on more debt) than it otherwise would have.)

Debt to income ratios can fall, broadly, in three ways: bad debt write-offs; income growth; and by borrowers, in aggregate, making net repayments of their loans.

In the United States, some of the (not insignificant) reduction in household debt to date has been in the form of bad debt write-offs. Those losses on housing lending have had obvious consequences for the financial sector. In New Zealand, there have been few significant losses on lending to households and, outside the finance company sector, total loan write-offs have been relatively modest. Banks' non-performing loans rose materially, but peaked at not much more than 2 per cent of total loans outstanding - well below the very substantial losses after 1987, in turn no doubt partly reflecting the much better quality of lending this time round. Most private lending is secured on property, so large loan losses tend to occur when there is both a substantial fall in property values and a high unemployment rate. In most areas, New Zealand property prices did not fall very much or for long. And painful as it is for those directly affected, New Zealand's unemployment rate in the last few years has risen to only around the average for the last 25 years.

Income growth is the most attractive path to lowering debt to income ratios. It has often been an important part of successful adjustments. But, so far, incomes are still well **below** previous expectations. Across the economy, most borrowers in the middle years of the last decade probably expected that incomes would keep rising reasonably fast - not to find that average real incomes have not grown at all since 2005. Faster sustained growth remains very attractive, if only we were able to achieve it. For New Zealand, it is difficult to envisage the sort of resource-switching that seems likely to be required occurring without a sustained fall in the

(real) exchange rate. That, in turn, probably involves structural change in the real economy and some improvement in the international situation: it is certainly not something New Zealand monetary policy can bring about.

What about prospects for net repayments of debt? Business credit rose rapidly during the boom, although in a more disciplined way than during the property and equity boom of the mid-late 1980s. The stock of this debt fell for a time after 2008, partly because during the recession a number of highly-indebted firms had no choice but to raise additional equity or sell assets to get their debt back to levels acceptable to their bankers. Looking ahead, if business savings (retained earnings) increased further, those savings might be devoted partly to repaying debt. But sustained growth is likely to require increased investment and that is more likely to require some additional external finance. As it is, non-property-related business lending once again appears to be rising at a reasonably healthy pace.

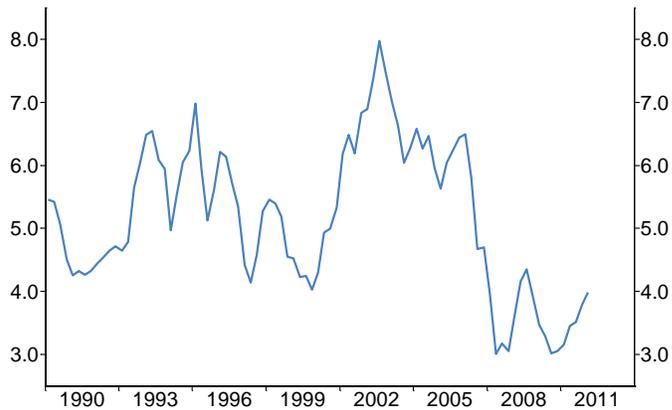
A return to sustained fiscal surpluses will, over time, mean a fall in the level of net public debt. But as governments do not generate much of their own income, returning to surpluses, from the current position of significant structural deficits, involves some mix of discretionary spending cuts, or increased taxes. In the transition, either route will tend to reduce income in the hands of firms and households.

And what about households? There is no simple single story. The very low level of activity in the housing market in recent years (Figure 11) has tended to dampen household debt slightly artificially. That happens because existing borrowers go on repaying their mortgages, but not much new debt is being taken on. But such low levels of turnover (and despite the recent rise, turnover is still very low by historical standards) and low house-building activity are not expected to continue. Sharply higher house prices were a significant channel through which household debt rose: young buyers had to take on a lot more debt to buy out older sellers who had taken on their debt when house prices were much lower. If house prices are not changing much now, the typical young new buyer will still be taking on more debt than the typical older sellers will have been repaying. But if real house prices were to fall over time, perhaps as the evident supply constraints were eased, that would be likely to lead to materially lower aggregate household debt to income ratios.

Figure 11

House sales to population ratio

(quarterly sales per thousand of population)



Source: Real Estate Institute of New Zealand, Statistics New Zealand

Higher household savings rates raise household wealth, but whether they alter gross household debt very much depends on who is doing the increased saving. For example, if people with large debts are now feeling overburdened then any increase in their savings will typically reduce the aggregate level of household debt. Many of the most indebted households are already quite cash-constrained. On the other hand, most households have little or no debt and if it is predominantly those people who are saving more, whether because the economic climate encourages greater caution or perhaps because lower interest rates (and lower expected asset returns more generally) makes building up adequate retirement savings a bigger challenge, household financial assets may rise, but with little observed change in household debt.

Whatever the precise pattern, it seems likely that the experience of recent years will change the nature of conversations in New Zealand families. For decades, it has seemed attractive for households to borrow - first as a hedge against a couple of decades of high inflation, and more recently as real house prices rose more dramatically than at any time in our history. High inflation is a thing of the past. And a repeat of the house price boom not only seems unlikely but would be very damaging and risky if it were to occur.

Few of us have the luxury of simply observing or waiting for history. Businesses and households face real spending and savings decisions each day and New Zealand's economic performance in the next few years will depend in part on the way in which firms and household respond to the changing circumstances and risks, in a climate of considerable uncertainty.

Implications for the Reserve Bank

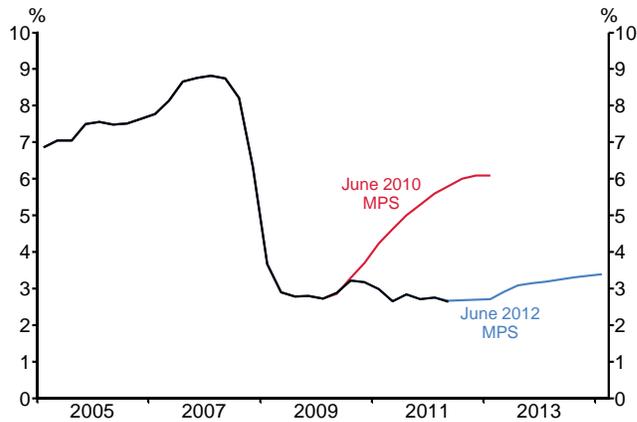
What does all this mean for us specifically as New Zealand's central bank, charged with running monetary policy to maintain price stability and conducting prudential supervision to promote the soundness and efficiency of the financial system?

When recessions happen, central banks typically cut policy interest rates quite a lot. In 2008/09 we cut the Official Cash Rate (OCR) by nearly six percentage points, more than almost any other central bank cut. But like most other central banks we have been surprised at the way policy rates have needed to, and been able to, remain so low for so long.

We expected that most of the OCR cuts would be relatively short-lived, while the economy regained its footing. Financial market prices suggest that the private sector typically shared that sort of view. Two years ago, for example, we thought the OCR would be around 5.75 per cent by now (Figure 12). It is still 2.5 per cent, and financial markets have recently been toying with the idea that the OCR might yet need to go lower (albeit mainly because of global risks). Even our counterparts across the Tasman, dealing with Australia's record terms of trade, have been cutting their policy rate back towards 2009 lows.

It begins to look as though something is going on now that we have not seen before. It is still too early to know quite what the nature and scale of the change is, and how enduring it might be. Among the challenges policymakers face is getting a better understanding of why, given how weak GDP has been in many countries, there is not more excess capacity evident in our economies. Fortunately, few monetary policy decisions are set in stone: we get to review the OCR, in light of all the emerging data, murky as they often are, every six weeks or so.

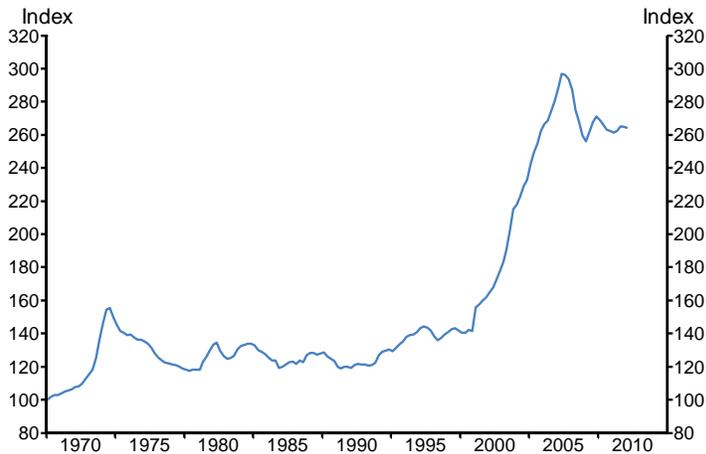
Figure 12

90-day interest rate projections

Source: RBNZ estimates

Wearing our other (financial stability) hat, we are conscious of the risks financial institutions (the lenders) face. On the one hand, our banks (and their Australian parents) are still heavily reliant on foreign wholesale funding (and, of course, more than half of New Zealand government bonds are also held by foreign lenders). Over the course of New Zealand's history, dependence on foreign funding has repeatedly proved an Achilles heel. The position is less risky than it was in 2008, but the risks certainly have not disappeared. If anything, the climate for cross-border lending, and for wholesale funding of banking systems, is probably less favourable than it has been for decades.

New Zealand banks are well-capitalised and credit risk is measured conservatively. The quality of New Zealand bank assets looks reasonably good, even in the face of some fairly demanding stress tests. But we will need to keep watching that situation closely, especially if incomes continue to lag behind what was expected when much of the debt was taken on. Our sense is that real house prices are still somewhat overvalued: they are certainly well above historical levels (Figure 13), and look expensive by international standards (relative to incomes or rents). If house prices were to fall, debt to asset ratios (the traditional measure of leverage) would worsen (as they have done in the United States), even if debt to income measures were still gradually falling.

Figure 13**House price to rent ratio
(1970=100)**

Source: OECD (to 2010Q3), QVNZ, Statistics New Zealand

Farm debt grew very rapidly during the boom. Dairy farmers, for example, have taken on almost \$20 billion of net new debt since 2003, and (real) farm prices are well above where they were. Banks have taken some significant losses on loans to the dairy sector over recent years: for some borrowers things did not turn out anywhere near as well as expected. In aggregate, the debt stock will probably be sustainable if commodity prices stay strong. But whatever the medium-term prospects, we know that commodity prices go through very big cycles. When product prices are very volatile, high leverage can be a recipe for a nerve-racking ride for borrowers, lenders, and bank regulators alike. We have taken steps to require banks to hold more capital against rural loans than they were doing previously.

Concluding comments

Standing back from the details, five years on from the beginnings of the global crisis, the picture is still far from clear. Some things about dealing with debt have unfolded as expected: what cannot go on forever does not do so, and effortless adjustments after several years of rapid credit growth are rare. But other things have been less expected, not just here, but across the advanced economies. In particular, the persistently tepid recoveries remain a surprise. At present, none of the various hypotheses to explain what is going on seem fully adequate.

The accumulation of debt within New Zealand itself, and the disappointed expectations of borrowers who paid very high prices for assets, is clearly playing some role in our low rates of growth of productivity and GDP. Quite how large that contribution is may be something economic historians still debate decades hence. But the global nature of the adjustment is clearly also an important part of the New Zealand story. Whatever the precise channels, as yet not much of the expected rebalancing of the New Zealand economy (particularly towards exports) seems to have happened. Perhaps this should not be too surprising in view of the persistently high real exchange rate, itself partly influenced by the adverse international climate.

Looking ahead, we suspect that sustainable long-term ratios of household and farm debt, in particular, are likely to be below current levels. We also suspect that our net international investment position as a share of GDP (our net reliance on foreign debt and equity finance) will, in time, settle at a level lower than it has been for much of the last two decades (although a sustained improvement in our productivity prospects could, at least temporarily, mean a further increase in our use of foreign savings, to finance the investment needed to take advantage of the improved prospects).

But it is also fair to note that we have suspected for a long time that New Zealand's private and external debts were, in some sense, too high to be sustained. Towards the end of his term, the previous Governor Don Brash gave a thoughtful speech on debt issues in early 2002, in which he noted that New Zealand then looked as if it was dealing with the aftermath of a long accumulation of private and external debt and adjusting accordingly. The exchange rate, for example, had been quite low for a couple of years. But that period turned out to be just a pause before the latest and largest wave of borrowing and asset price growth. Some things make this time look different - in particular the wide range of countries undergoing similar experiences - but it pays to be cautious about drawing strong conclusions. Looking ahead, we will need to be open to revising our hypotheses as events unfold.

History is littered with booms and busts, some of which seem to have gone on for a very long time. But these things pass. When New Zealanders today look at Australia's prosperity, who remembers the searing financial and economic crisis Australia itself endured in the 1890s and early 1900s? Even severe overshoots in credit and asset prices, which can be costly and disruptive at the time, and which may permanently change the lives of some borrowers, are likely to throw our overall economic performance off course only temporarily. Our history, and the experience of other countries, attests to that.