Westpac Institutional Bank

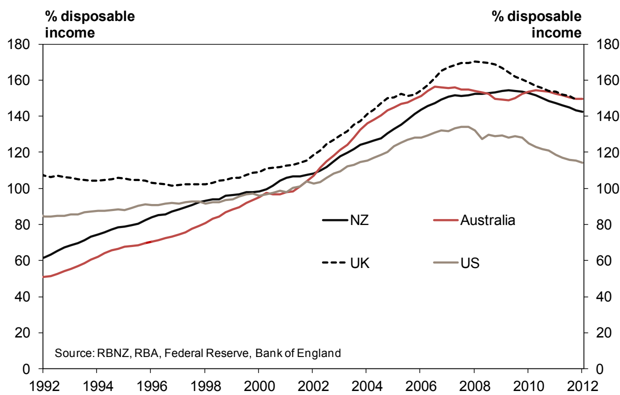
# Delever me?

## A closer look at household debt

- **Household borrowing has slowed considerably since the Global Financial Crisis, though the level of debt remains high.**
- **Most of this slowdown can be attributed to the softer housing market. Correspondingly, we expect household borrowing to accelerate as the housing market continues to warm up – albeit not on the scale of last decade.**
- **There is also some evidence of a broader decline in the appetite for debt. But even taking that into account household debt levels are likely to stay historically high.**

One sign of just how much the domestic economic landscape has changed since the 2008/2009 recession is the remarkable decline in the pace of household borrowing. In the decade before the Global Financial Crisis, household debt grew at an average pace of about 10% a year; by 2011 growth had slowed to a low of 1%, from which it has only just started to recover. Even so, the level of household debt isn't far below historic peaks, as a share of both household income and assets: much as in other countries that experienced housing booms before 2008, there hasn't been that much actual 'deleveraging'.

**Figure 1: Household debt (% disposable income)**




There's been widespread concern about both the level of household debt, and about whether we're seeing new 'consumer caution' in the wake of the recession. In this article – the second in a series on New Zealand's household sector – we look at what drove the pre-financial crisis debt blowout, and how much further a correction might have to run. (In our first article, 'Save us!', we looked at some of the measurement issues around household saving; in a forthcoming article, we'll sum up what this all means for household spending in the years ahead.[1])

We find that we can attribute most of the ramp-up in household borrowing before 2008, and the slowdown since then, to what's happened to the housing market – primarily to a collapse in housing turnover. We do find evidence of a broader decline in the appetite for debt in recent years, but it seems to have played a secondary role.

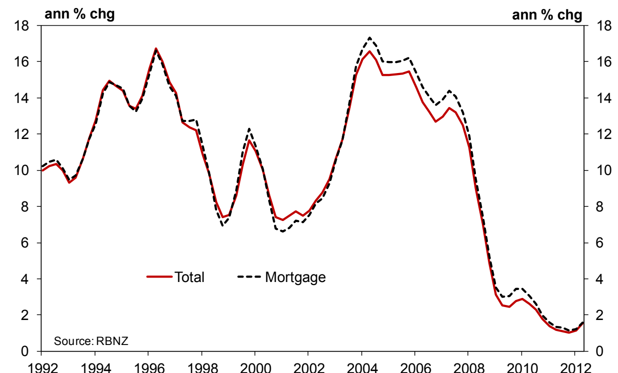
More recently, of course, the housing market has shown renewed signs of life, and with interest rates set to stay at historically low levels well into next year, we expect it to warm up further. History therefore points to household debt growth picking up as well. Even taking into account households' more cautious attitude to debt, our forecasts imply a fairly gentle pace of further 'deleveraging'.

That seems reasonable to us: unless we see a return to the high interest rates, constrained credit, and much lower house prices of the 1980s and 1990s, the level of household debt is likely to stay high by historical standards. Equally, though, a repeat of the mid-2000s, when house prices more than doubled and housing turnover was almost twice as high as it is now, looks very unlikely. We may not be in for large-scale debt reduction, but nor is another ramp-up in household debt on the scale of the last decade on the cards.

### Why has household debt growth slowed?

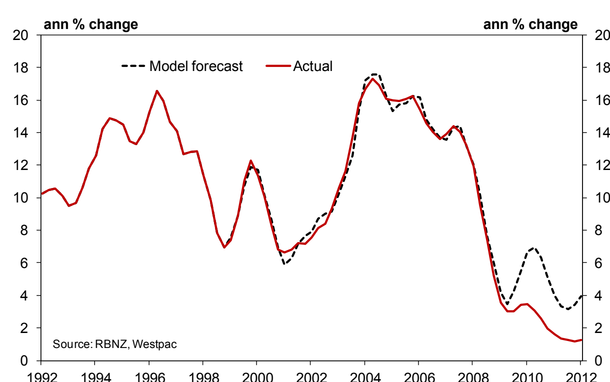
In New Zealand, household debt by and large means mortgage debt. While credit card and other consumer credit also saw strong growth for much of the 2000s, and a steep retrenchment in the years after 2008, the vast bulk of household debt (over 90%) is secured on housing, and mortgage debt has been responsible for most of the ups and downs in household borrowing over the past two decades.

**Figure 2: Total and mortgage-related household debt**




1 These articles are all available from our website, at http://www.westpac.co.nz/business/economic-updates/economic-research-and-strategy/.

**Figure 3: Forecast and actual mortgage debt**




That suggests that household borrowing is intimately tied in with developments in the housing market. As we explain in the box below, those links are complex and may well change over time. In practice, though, we find that a remarkably large part of the slowdown in mortgage borrowing over the past few years can be explained by the massive decline in housing turnover, and to a lesser extent the fall in house prices, that we've seen over that time.

That's shown in figure 3, which compares growth in actual mortgage debt since 2008 to a forecast based on the level of house sales, the detrended mortgage rate, and the value of the housing stock. The model is estimated using pre-recession data, and fits well over that period (with house sales by far the most important driver). Since 2008, these pre-recession relationships would have predicted slower housing credit growth than at any time over the preceding 15 years.[2]

## Other factors

While figure 3 attributes the lion's share of the debt downturn we've seen to a slower housing market, it does suggest that that there's been a persistent 'extra' slowdown in household

2 Specifically, the model is estimated over the period 1999-2007, to focus on data post-dating the financial liberalisation of the 1980s and 1990s. We also attempted to control for a variety of factors that might affect the appetite for debt, such as interest rates, unemployment, and confidence, but of these only interest rates turned out to be statistically relevant (with lower interest rates boosting debt growth).

## Housing turnover and mortgage debt

One way to think about the link between mortgage debt and the housing market is to consider how the sum of housing market transactions affects mortgage debt. Clearly, not all house sales are created equal: many will simply be churn, where home-owners swap houses of similar value with little net change in debt.

But for everyone trading up, there will be someone trading down, and for every entrant to the market (first home buyers, migrants, or those adding to their rental property investment portfolio) there must, somewhere down the line, be someone either exiting the market (e.g. estate sales), or adding to the housing stock (e.g. property developers). On net these transactions will add to total mortgage debt provided the buyer takes on more debt than the seller pays down. This will depend on factors such as:

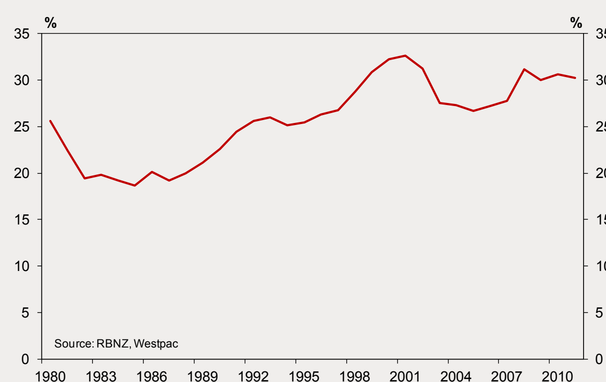
- the prevalence of first home buyers and rental property investors (who are likely to have relatively low equity in their purchase);
- the extent to which demand is being met by investment in new housing;[1]
- the size of buyers' down-payments (due to changing lending standards or a greater or lesser appetite for debt);
- whether house prices have been rising or falling (rising house prices raise the amount that new buyers or those trading up have to borrow, without affecting the debt owed by sellers who bought when prices were lower).

Importantly, the link between housing market transactions and debt implies that changes in house prices, or buyers' ability and willingness to 'gear up', will affect mortgage credit growth over a long period of time, as the housing stock gradually turns over. For example, in 2006 (the last Census) the total number of house sales was about 100,000, or 6% of the total number of houses in New Zealand at the time. With that rate of turnover it would take 16 years for a house price shift to fully work its way through the system to a higher level of debt. With the lower rate of turnover we've seen since the 2008/2009 recession, it would take even longer.

1 Note that mortgage debt doesn't include funding for property developers, which is classified as business debt. But the sale of a new development to a first-home buyer would increase mortgage debt by the total amount borrowed by that buyer.

In actual fact, household leverage (the ratio of mortgage debt to the housing stock) has been pretty stable over the past decade (figure 4), meaning that debt levels have been adjusting to changes in house prices faster than housing turnover alone would imply. That suggests that the increase in mortgage debt over the 2000s hasn't just been the 'passive' result of house sales, but there has also been a substantial amount of 'active' levering up going on (i.e. topping up the mortgage as prices have risen).[2]

**Figure 4: Mortgage debt (% housing wealth)**




The model used to generate the forecast in figure 3 abstracts from some of these issues: it simply relates growth in mortgage debt to the level of house sales, and assumes that the level of debt adjusts to a constant ratio to the value of the housing stock, at historically average speeds. It's therefore best regarded as a snapshot of how the housing market and mortgage growth interacted in the decade before the financial crisis – not of relationships that we'd always expect to hold true.

2 This is supported by evidence from overseas. A survey of Australian households in 2004 found that about 30% of the total housing equity withdrawn that year was of this 'active' kind (see Schwartz et al., 2006, http://www.rba.gov.au/publications/rdp/2006/pdf/rdp2006-08.pdf). For the UK, the Bank of England (using banking sector data) comes up with a similar proportion during the UK housing boom, and estimates that it fell sharply - by about two-thirds - after 2007 (Reinold, 2011, http://www.bankofengland.co.uk/statistics/Documents/hew/qb110205.pdf).

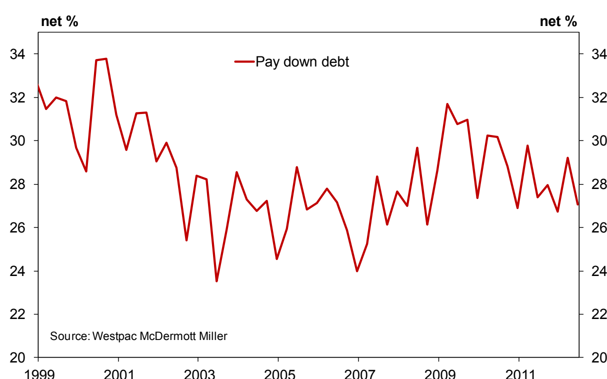
borrowing in recent years that our model can't explain. The gap is material, cumulating to about 9% by early 2012. What's behind this gap, and how long might it last?

**Credit conditions:** One possible explanation is that the supply of credit – lending conditions – tightened in the aftermath of the Global Financial Crisis. However, the evidence is that this is steadily becoming less of an issue. For example, according to the RBNZ's Credit Conditions Survey, lending standards for mortgages have eased back substantially since 2011. And the BNZ-REINZ Residential Market Survey has been showing a steady increase in interest from both investors and first-home buyers over the past year, suggesting a return of more leveraged buyers to the market.[3]

**Slower house-building:** Since the recession, the level of residential building consents has been unusually low compared to housing transactions. More than usual, demand has had to be met through existing rather than new houses - suggesting that we may have seen a greater degree of 'churn' in the market, with a correspondingly smaller net impact of turnover on debt. Given how closely house building and turnover usually move together, this factor is hard to isolate. But as the housing market continues to pick up, we'd expect recent 'underbuilding' to gradually diminish.

**Faster debt repayment:** It's not clear that there has been a sea change in attitudes to repaying debt. According to the Westpac McDermott Miller consumer confidence survey more households are now saying they would use a lump-sum windfall to pay down debt than in the mid-2000s – but that looks more like a return to pre-housing boom conditions than a major shift.

**Figure 5: How would you use a $10,000 windfall?**




That said, one major 'windfall' has come in the form of lower interest rates. The average mortgage rate on outstanding loans has fallen by about a third since late 2008, and as a result borrowers have been able to pay off principal faster without making any changes to their debt payments. A recent survey of Australian households found that about 50% of households kept their interest payments unchanged when interest rates fell in 2008-2009. We estimate that 'passive' repayment on that scale would account for less than a third of the gap in figure 3.[4]

It's also possible that some quake-related insurance payouts have been used to reduce mortgage debt – though we don't know how much. The sum total is certainly substantial: about $4.5bn worth of insurance claims for the Canterbury earthquakes have been settled to date. But a decent chunk is likely to have simply been deposited.[5]

**Appetite for debt:** By a process of elimination, it seems likely that a decent chunk of the unexpectedly weak credit growth that we've seen is a sign of a more cautious attitude to debt. That would be in keeping with people's continued downbeat assessment of their family finances in the Westpac McDermott Miller consumer confidence survey. It's impossible to say how long it will last, but given ongoing volatility in global financial markets it could well be for some years yet.

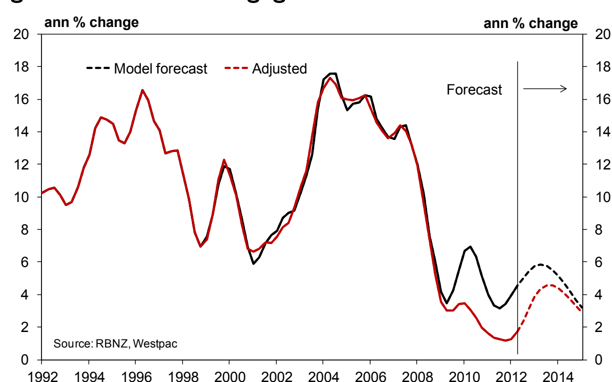
## Where to from here?

Over the past year or so the housing market has begun to show new signs of life: house sales are nearly 20% higher than a year ago, and prices have recovered to only a little below their 2007 peaks. With mortgage rates at historic lows, we expect prices to rise by a total of 15% this year and next, with a corresponding rise in housing turnover.

Even so, this doesn't come close to the overheated conditions of last decade, and the implied increase in mortgage borrowing is fairly modest as well. That's shown by Figure 6, which extends the model-based forecast we used in figure 4 over the next three years.[6]

We have little to go on to assess how long the 'extra' slowdown in debt that we've seen will last. However, it seems likely that credit growth will stay unusually weak for a while yet, as low interest rates continue to facilitate debt amortisation, and a more cautious attitude to debt feeds through the system. In figure 6 we've assumed that the gap closes slowly over the next couple of years, but we acknowledge that this is just an educated guess.

**Figure 6: Forecast mortgage debt**




Even so, it's worth noting that our forecasts in figure 6 imply a fairly gentle pace of 'deleveraging', with debt-to-income and debt-to-asset ratios not falling too much further from here. That doesn't strike us as unrealistic. As shown in figure 4, the ratio of mortgage debt to housing wealth has been fairly stable since the late 1990s (well before the last housing boom), and it's unlikely to fall back much further unless we return to the much tighter credit conditions, and lower house prices, of earlier

3 See chapter 4 of the RBNZ's Financial Stability Report from November 2011 and May 2012.

4 Based on our modelling, it would represent a change in behaviour compared to before the financial crisis, when lower interest rates generally boosted credit growth.

5 See http://canterbury.eqc.govt.nz/news/release/2012/04/eqc-payments-canterbury-top-3-billion and http://www.icnz.org.nz/news/270712.php.

6 Our measure of the housing stock, from Quotable Value, only accounts for houses destroyed by the Canterbury earthquake as they get demolished, and hasn't been adjusted for other quake-related damage. In recognition of this, we've projected forward the housing stock using our forecast for house prices and 'ex-earthquake' residential investment.

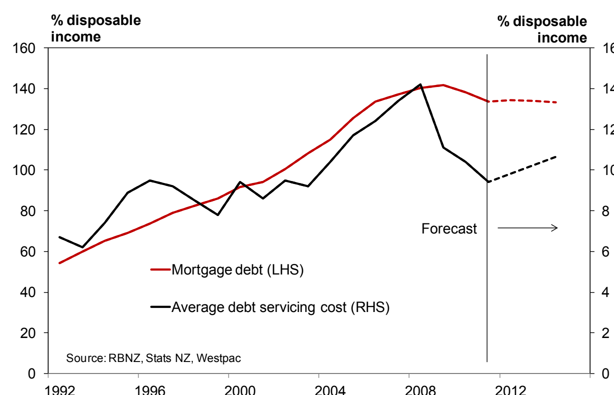
decades – or unless the appetite for debt contracts much more than we've already seen. What's more, with some people still living in houses they bought when prices were lower than they are now, there's still scope for mortgage debt to increase once they eventually sell.

With interest rates having trended down since the early 1990s (partly a result of lower inflation) – and house prices correspondingly higher – debt is also likely to stay high as a share of incomes. In fact, with mortgage rates currently at historic lows, interest costs (as a share of income) are already back to where they were in 2003, before the housing and credit boom got going. Even if (as we expect) mortgage rates eventually rise back to around 8%, this would still imply debt servicing costs well below their 2007 peak (figure 7).[7] That means that debt can continue to be sustained at higher levels than in previous decades.

**Felix Delbrück**
Senior Economist

7 Our forecasts in figure 8 assume that disposable income will grow at the same rate as overall GDP.

**Figure 7: Forecast mortgage debt and debt servicing costs**

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