MEMORANDUM FOR	Macro-Financial Committee
FROM	Ashley Dunstan and Tony Wolken
DATE	11 December 2012
SUBJECT	**Lessons from housing high-flyers**
FOR YOUR	Discussion

Summary

- We draw lessons from 'housing high-flyers': countries that have experienced strong growth in house prices after the GFC, in the context of low interest rates and relatively strong economic growth.
- Some high-flyers used macro-prudential instruments to counter increased financial stability risks. In Sweden, Norway and Canada, intervention occurred despite a moderation in credit growth after the GFC. Authorities pointed to the build-up in household imbalances prior to the crisis to justify their concerns.
- Credit growth and house prices in NZ have been weaker than in the high flyers in recent years. But some indicators, including household credit growth and debt-to-income, could look very similar if the housing market gathered momentum.

Introduction

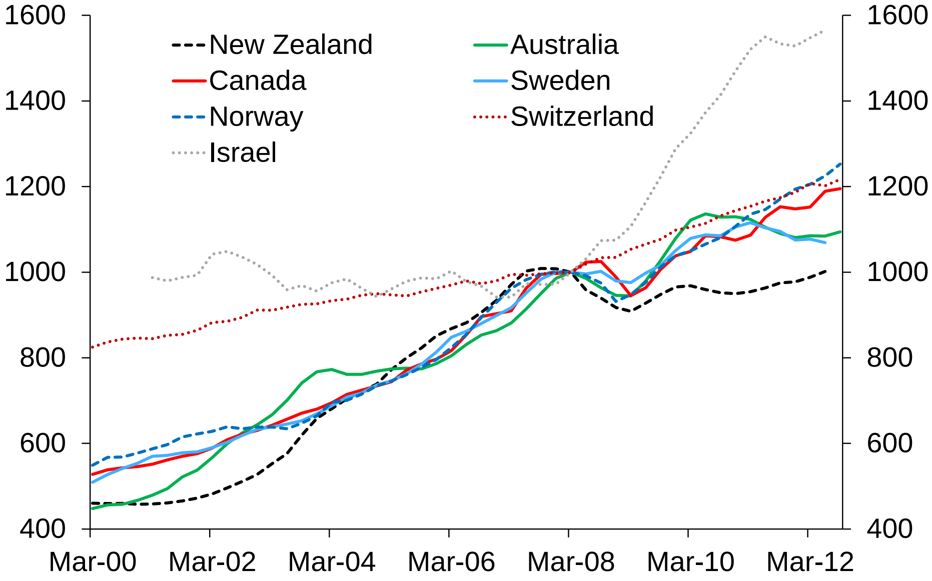
As noted in the macro-prudential indicator report, the housing market has gathered momentum throughout 2012. There are early signs of a recovery in household credit growth, partly driven by a reduction in mortgage rates from already low levels and easing lending standards. These developments have increased the risk that the housing market continues to gather momentum, accompanied by a worsening of household debt imbalances.

To assist in thinking about the implications of a stronger housing recovery, this paper draws lessons from the experience of a number of advanced economies with a strong housing market after the GFC. A recent Goldman Sachs note identified a number of these 'housing high-flyers', including Sweden, Canada, Norway, Australia, Switzerland and Israel (figure 1).[1] Some high-flyers have imposed macro-prudential restrictions in response to the strong increase in house prices and the associated risks to financial stability.

We begin by providing an overview of post-GFC trends in household borrowing and house prices in the housing high-flyers, and how these compare to New Zealand (section I). In Section II, we turn to the policy response to the strong housing market amongst high-flyers. Finally, section III considers how New Zealand might compare to the high-flyers if the housing market continues to gather momentum.

[1] Goldman Sachs (2012) "Just don't look down: Some housing markets are flying again", *Global Economics Weekly,* 12:37.

Figure 1: House price indices (2008Q1=1000)



I. Household debt and house prices

Why are the high flyers up in the air?

There is a stark contrast between the housing markets of the high-flyers compared to the low-lyers such as the UK, US and PIIGS European economies. Although the two groups defy a simple geographical or economic classification, generally the countries used for this note are small open economies, and/or commodity producing countries. High-flyer housing markets have been boosted by the relative strength of the economic recovery across these countries. The Goldman piece also notes that the housing markets in these countries have benefitted from easy financial conditions. In addition to a stronger recovery, high-flyers also experienced a more modest house price correction immediately after the crisis.

Prior to GFC, many high-flyers had similar household imbalances to NZ

Many high-flyers experienced a similar rise in household imbalances to New Zealand prior to the GFC. Australia, Canada, Norway, and Sweden all experienced a sharp increase in house prices between 2000 and 2008. Alongside booming house prices, household debt increased as a percent of disposable income (figure 2(a)). House prices have also increased relative to rents and incomes in these economies since 2000. In contrast, house prices and household debt were relatively stable in the years prior to the crisis in Switzerland and Israel. Israel has low levels of mortgage debt compared to other high-flyers.

Low interest rates have contributed to strong housing market activity…

Policy rates were cut sharply in the wake of the GFC in all high-flyers. As in New Zealand, loose policy rates have led to lower mortgage rates, reducing interest servicing costs for households (figure 2(b)). All economies have also experienced a sharp drop in long-term (10-year) interest rates, suggesting that easy monetary conditions may have been imported from the major advanced economies. Favourable interest rates have likely contributed to the sharp pick-up in house prices for these economies during 2009.

…and elevated credit growth

Increasing house prices and a stronger economic recovery have seen household credit growing at relatively elevated rates after the GFC, compared to New Zealand (figure 2(c)). In Sweden, Canada, Australia and Norway, household credit growth has still been noticeably slower than prior to the crisis, at around 6-8 percent. In Switzerland and particularly Israel, household credit growth has picked up from fairly modest rates prior to the GFC.

Household vulnerabilities have worsened in many high flyers

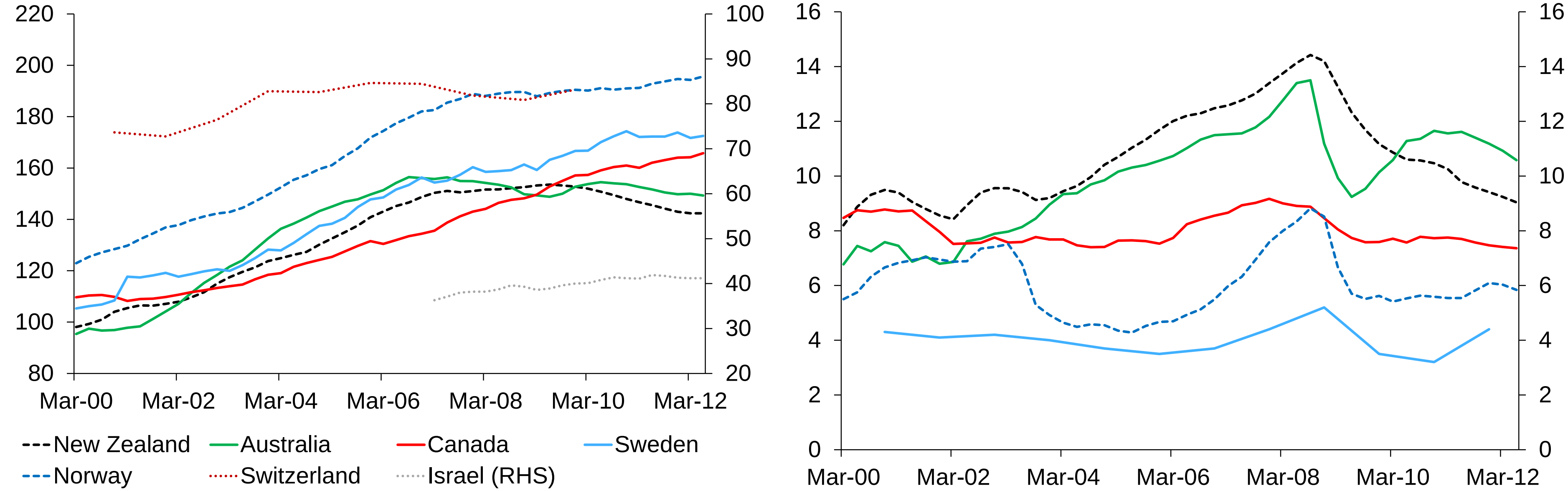
Elevated credit growth has led to modest increases in household debt-to-income ratios in Norway, Sweden, and Canada, on top of the build-up in debt that occurred prior to the GFC (figure 1(a)). Despite relatively strong household credit growth, debt-to-income has stabilised in Australia due to strong growth in household incomes. Household credit growth in New Zealand has tracked below the high-flyers, and this has resulted in a decline in the household debt-to-income ratio in recent years.

The credit-to-GDP gap is a key indicator of financial stability considered in the macro-prudential report. In New Zealand, the ratio of private sector credit to GDP has declined modestly in recent years, which has led to a large negative credit gap (figure 1(d)). For each of the high-flyers we have collected together the same indicator:

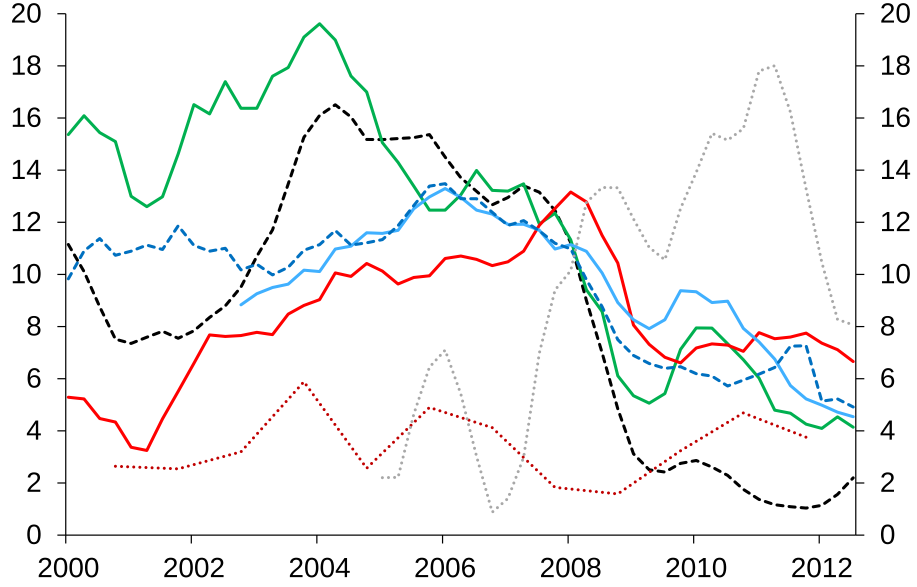
- Despite higher credit growth, exceptional GDP growth in Australia has resulted in a similar sized decline in the credit-to-GDP ratio relative to New Zealand, and a similar sized negative gap.
- Other high-flyers have a more elevated credit-to-GDP gap. However, the size of the credit-to-GDP gap has moderated since the crisis as the level of credit as a share of GDP has stabilised.
- The BIS suggest that authorities should consider implementing a counter-cyclical capital buffer (CCB) when the credit-to-GDP gap exceeds 2 percent, with the size of the buffer increasing to its maximum when the gap reaches 10 percent. Based on this indicative metric, most high-flyers would be above the threshold for imposition of a CCB, but should not be setting it at the maximum level.
- Results presented in the FSRs of Norway, Sweden and Canada suggest that household, rather than business, credit is causing the credit-to-GDP gap to be elevated.

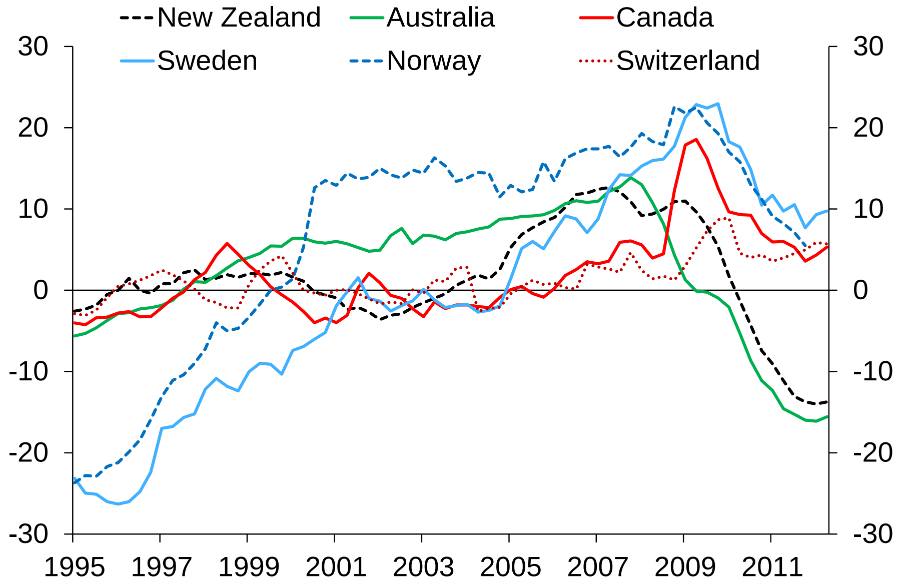
Figure 2: Selected indicators for housing high-flyers

(a) Household debt as a percent of income **(b) Household interest servicing, % of income**



(c) Household credit growth (annual percent change) **(d) Credit-to-GDP gap (% GDP)**





Notes: Data on interest servicing not available in Switzerland or Israel. For 2(a), Israel is debt as a % of GDP, not household income.
Source: Haver, central bank websites

II. Policy response

Some high-flyers have introduced macro-prudential measures

Some high-flyers have imposed macro-prudential restrictions after the GFC in order to counter increased financial stability risks associated with the household sector (table 1). Norway, Sweden, Canada and Israel have all imposed some form of restriction on high LVR and/or other risky lending by banks. As outlined in the table, the details of the restrictions vary. For example, the restrictions appear much less binding in Norway than in Israel.

Table 1 Macro-prudential actions by 'housing high-flyers'

Country (Authority)	Description of policy	How binding?
Norway (Micro-prudential regulator)	Maximum LVR of 85% to comply with guidelines for prudent lending since 2010. Allowance for a 5% rise in interest rates when computing DSR.	Lending that does not meet these guidelines must come with a special prudential assessment, or additional collateral from borrower. Fairly soft limit.
Canada (Ministry of Finance)	Tightened requirements for govt. insured mortgages since 2008. Reduced maximum term from 40 to 25, introduced DSR cap, LTV cap of 80% for homes > 1m or refinancing.	Lending with an LVR above 80% must be insured, and mortgages must comply with tightened regulations to qualify for govt. insurance. First-time buyers can still have high LVRs as long as they meet requirements for term and DSR.
Sweden (Micro-prudential regtuator)	Maximum LVR ratio of 85% introduced in 2010.	Lending with an LVR above 85% can occur at unsecured interest rates, usually with additional collateral. Restrictions thought to be binding as households with LVRs above 85 has halved since 2009.
Israel (Central Bank)	Higher risk weights and provisioning on high LVR lending in 2010. Maximum LVR restrictions introduced in 2012. 70% restriction on refinancing, 75% for first-time buyers, 50% for investors.	Restrictions are tighter than in other high flyers, but not necessarily more binding given high LVR lending is less prevalent in Israel.

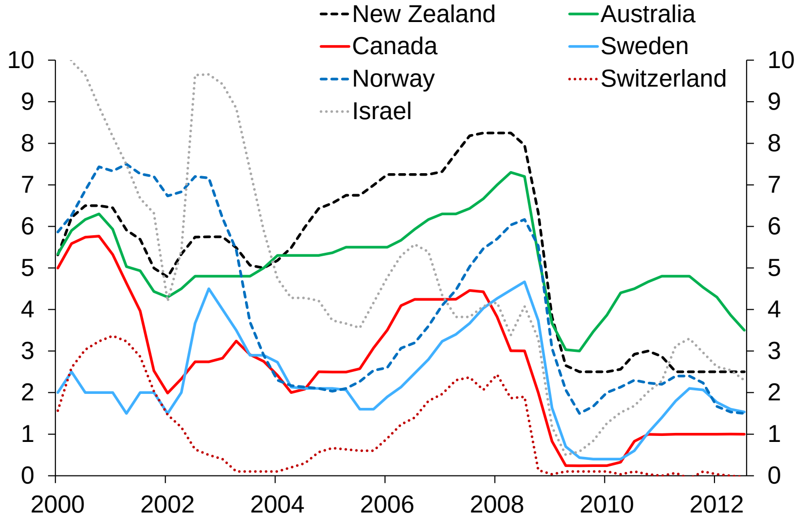
In Norway, Sweden and Canada, intervention has occurred despite the fact that household credit growth has moderated significantly since the global financial crisis to around 6-8 percent. The FSR's produced in these economies all repeatedly refer to the household vulnerabilities built up prior to the GFC in order to justify their concern about household debt. Rising household debt to income and an increasingly over-valued housing market prior to the crisis were noted as key vulnerabilities that had not reduced since the GFC.[2] In the case of Israel, the authorities were more concerned about rapid growth in household credit post-GFC.

Australia has not imposed macro-prudential restrictions to cool their housing market. This partly reflects that there is stronger evidence of rebalancing in Australia: in contrast to other high flyers, household debt-to-income has stabilised and the ratio of private-sector credit-to-GDP has declined. It is also fair to say that the Australian authorities have little appetite for macro-prudential policy and, similar to New Zealand, have a history of intervening less in the mortgage market than other high flyers (at least since the 1990s). For example, the restrictions on high LVR lending in Canada reverse a liberalisation of mortgage markets that occurred as late as 2006. Australia has also increased interest rates more aggressively after the GFC than other high flyers.

Monetary policy response to strong housing market has been limited

Despite the potential for low interest rates to underpin the housing market, many high-flyers have held interest rates at low levels since 2009 (figure 3). Although the high-flyers have out-performed other advanced economies, spill-over from other troubled economies onto exports and funding costs has led many to keep interest rates low. Sweden, Australia and Israel increased interest rates more than other high-flyers, reflecting a stronger-than-expected growth recovery and signs of emerging inflation pressures during 2009/2010. Slower-than-expected global growth and weakening commodity prices have seen these economies reduce interest rates since 2011.

Figure 3: Overnight interest rates

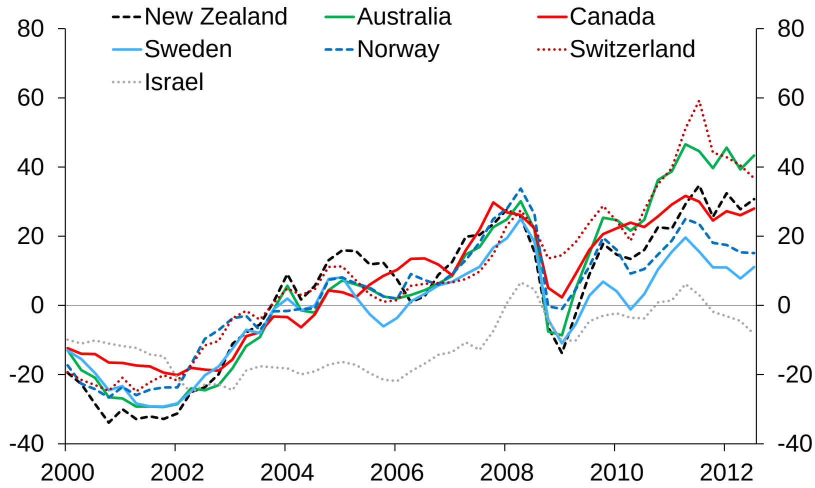


All high-flyers have also experienced a sharp rise in exchange rate since 2009, due to relatively strong economic growth and monetary easing in the major advanced economies (figure 4). The high exchange rate has helped to reduce inflation pressures after the crisis, effectively acting to tighten monetary policy. Some authorities may have had concerns about worsening the collateral damage on the export sector from a high exchange rate by tightening interest rates. The potential trade-off between inflation/growth and financial

[2] Quotes from the FSRs of Norway and Canada suggest authorities were concerned about the level of household debt to income and over-valuation of house prices, while the Riksbank emphasised vulnerabilities created by the increase in debt levels and house prices that occurred prior to the GFC.

stability objectives was highlighted by the recent policy action in Israel, where macro-prudential tightening was accompanied by a cut in interest rates.

Figure 4: Exchange rate versus USD (% deviation from 1990-2012 average)



Micro-prudential policy is also being tightened in most high flyers

It is important to note that a number of high flyers have introduced stricter prudential regulations which will apply in coming years, although these are not directly designed to counter strong household borrowing and is intended to feature as a permanent tightening of prudential policy. Most high-flyers are adopting the stricter Basel III capital requirements well ahead of the international deadline for Basel committee members. Switzerland and Sweden have both announced that their systemically important banks will need to meet even stricter capital requirements, and Norway has announced plans along similar lines. Sweden recently increased risk weights on housing significantly from around 5 to 15 percent.

III. Lessons for New Zealand

There is a risk that NZ credit growth could turn out similar to high-flyers…

Although credit growth and house prices in NZ have been weaker than in the high flyers in recent years, there is a risk that New Zealand could end up in a very similar position in coming years. Household credit growth has recently increased to around 3 percent over the past year, from 1 percent at the start of the year. Household credit growth might remain around current levels if, as assumed in the MPS projections, house price growth has peaked and households maintain higher savings rates. However, in a scenario where lending conditions eased further and the housing market continued to gather momentum, it is easy to imagine credit growth reaching 6-8 percent. Many high-flyers imposed macro-prudential restrictions with credit growth in that range.

...resulting in growing household imbalances.

Our current thinking is that credit growth around 6-8 percent could warrant further investigation of macro-prudential policy measures. This reflects our view that, despite some progress in recent years, many of the vulnerabilities built up prior to the GFC remain. House prices remain over-valued, with little progress in reducing the degree of over-valuation since

2009. Debt levels are also elevated relative to incomes, and under MPS projections for household income would be rising once more if credit growth exceeded 4 percent. Further growth in house prices and household debt would increase the risk of a correction in prices in the future which could result in a sharp rise in household non-performing loans.

How much comfort can be drawn from weaker post-GFC credit growth?

A key difference with the housing high-flyers is that New Zealand has experienced weaker credit growth in recent years. As noted in the macro-prudential indicator report, the period of weak credit growth since the crisis has resulted in the credit-to-GDP gap currently being in negative territory. It would take very elevated credit growth rates (exceeding 12 percent) for more than 3 years to turn this indicator ‘on’.

The credit-to-GDP gap may be unduly influenced by the statistical assumption that the credit-to-GDP gap can continue to trend upwards indefinitely. In our view, this provides reason to be cautious in drawing to much comfort from the negative credit-to-GDP gap, until there is firmer evidence that pre-crisis vulnerabilities have reduced. That said, it is worth noting that the credit-to-GDP gap has historically been the most successful early warning indicator for financial crises across countries, which reflects that most financial crises in the past have occurred within a few years of the build-up in debt.

Conclusion

The housing market in New Zealand may be gathering momentum, risking an increase in household imbalances. This paper drew lessons from a number of advanced economies that have experienced buoyant housing markets after the GFC. Sweden, Norway and Canada in particular have imposed macro-prudential restrictions in spite of some moderation in credit growth since the GFC. In the event that the housing market continues to gather momentum in New Zealand, many of our macro-prudential indicators are likely to look very similar to these economies.