

Andre, Jean-Pierre

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## Economic Imbalances: New Zealand's Structural Challenge

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# Economic Imbalances: New Zealand's Structural Challenge

Jean-Pierre André

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NEW ZEALAND TREASURY  
WORKING PAPER 11/03

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Economic Imbalances: New Zealand's Structural Challenge

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**AUTHOR**

Jean-Pierre André  
New Zealand Treasury  
PO Box 3724  
Wellington 6015  
NEW ZEALAND  
  
Email           Jean-Pierre.Andre@treasury.govt.nz  
Tel               64-4-917-6134

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**NZ TREASURY**

New Zealand Treasury  
PO Box 3724  
Wellington 6015  
NEW ZEALAND  
  
Email           information@treasury.govt.nz  
Telephone      64-4-472-2733  
Website        www.treasury.govt.nz

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# Foreword

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The Treasury's vision statement focuses on higher living standards for New Zealanders. While a range of factors underpin well-being, raising New Zealand's economic performance is a central driver of permanently higher standards of living. New Zealand faces two key economic challenges that need to be addressed if our economic performance is to lift. These are:

- accelerating productivity growth to raise average incomes per person and to close the income gap with other wealthier countries; and
- reducing imbalances in order to better position us to weather the inevitable economic or financial shocks that will impact our economy in the future.

This paper is one of a suite of four papers that examine key elements of New Zealand's economic performance and the macro- and micro-economic factors that are inhibiting productivity growth and contributing to economic imbalances.

These papers follow on from Treasury's earlier suite of papers examining New Zealand's productivity performance.<sup>1</sup>

The four papers in the series are:

- *Why are Real Interest Rates in New Zealand so High? Evidence and Drivers* (Labuschagne and Vowles, 2010) — examining interest rates in New Zealand, the apparent premium relative to overseas rates, potential drivers of this interest rate differential and the impact this might be having on investment;
- *New Zealand's Exchange Rate Cycles: Evidence and Drivers* (Mabin, 2010) — with a key focus on examining the nature of New Zealand's exchange rate cycle over the medium term and possible drivers for this cycle;
- *New Zealand's Exchange Rate Cycles: Impacts and Policy* (Mabin, 2011) — focusing on the impact that New Zealand's exchange rate cycle has on the tradable sector and wider economic performance and possible policy responses; and
- *Economic Imbalances: New Zealand's Structural Challenge* (André, 2011) — examining the imbalances in New Zealand's economy and their implications for resilience.

Our hope is that these papers will spark debate on these important topics and stimulate further research that advances our collective understanding of New Zealand's economic performance and possible policy change that may lift it.

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<sup>1</sup> <http://www.treasury.govt.nz/publications/research-policy/tprp>

# Abstract

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New Zealand has for a long-time lived with a large and negative international investment position, mainly in the form of private debt intermediated through the banking system. These debts create economic risks. Fortunately New Zealand's good institutional and policy arrangements provide economic resilience to avoid and respond to economic shocks. These include: relatively transparent and prudent fiscal policy; independent monetary policy; and a floating exchange rate. This resilience has also been strengthened by relatively prudent private sector lending and borrowing.

However, this does not mean that New Zealanders can be complacent. History shows that high levels of debt secured against elevated asset prices tend to magnify the negative impacts of economic shocks, or can cause persistent slow growth. This paper departs from typical discussions of debt imbalances by suggesting that New Zealand's private debts could reflect decisions that may have been poorly made for some time. This results from long-term structural and fiscal policy settings that may have discouraged saving. In turn, this may have contributed to tighter monetary conditions than otherwise needed for price stability. This contributed to the stifling of tradables production to the detriment of economic growth.

Like the recent Canterbury earthquakes, the nature of potential macroeconomic shocks and the likelihood of them eventuating are difficult to identify with precision or confidence. The sharp adjustment that should be avoided is where creditors suffer a loss of confidence in New Zealand's debtors. This would force a substantial cut to standards of living, which a policy response designed to pro-actively reduce debt may be able to avoid. Accordingly, New Zealand's government should be vigilant in pursuing fiscal and regulatory policies that continue to build resilience through encouraging individuals to strengthen their financial position.

**JEL CLASSIFICATION** E21, F32, F34, G01

**KEYWORDS** Saving; Current Account Deficit; Economic Imbalances, Financial Crises

# Table of Contents

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<b>Foreword .....</b>	<b>i</b>
<b>Abstract .....</b>	<b>ii</b>
<b>Executive Summary .....</b>	<b>1</b>
<b>1 Introduction .....</b>	<b>3</b>
<b>2 Imbalances: a threat to growth .....</b>	<b>4</b>
<b>3 Imbalances described .....</b>	<b>5</b>
3.1 Concepts .....	5
3.2 New Zealand's imbalances .....	7
3.3 The connection between household/farm and offshore debts .....	12
<b>4 Problem definition .....</b>	<b>16</b>
4.1 Is persistently high and growing private debt a problem? .....	16
4.2 Crisis .....	17
4.3 Slow growth .....	27
<b>5 Assessing New Zealand's resilience .....</b>	<b>28</b>
<b>6 Scenarios .....</b>	<b>30</b>
6.1 Banking crisis .....	31
6.2 "Sudden stop" .....	32
6.3 Combination crisis .....	33
<b>7 Policy response .....</b>	<b>34</b>
7.1 Scale and direction of adjustment .....	34
7.2 Levers .....	35
<b>8 Conclusion .....</b>	<b>37</b>
<b>Appendix: Financial market impacts of a "sudden stop" .....</b>	<b>40</b>
<b>References .....</b>	<b>42</b>

# List of Figures

---

Figure 1 - Household debt and servicing .....	8
Figure 2 - Multiple of house prices to household disposable income and rental income.....	8
Figure 3 - Agricultural debt and farm price to income ratios .....	9
Figure 4 - Composition of net international investment position .....	11
Figure 5 - Net international investment position and current account balance .....	11
Figure 6 - Gross saving and investment flows.....	14
Figure 7 - Competitiveness and production mix .....	15
Figure 8 - New Zealand's relative fiscal and net international investment position (2009).....	21
Figure 9 - Change in structural fiscal balance .....	22
Figure 10 - Composition of current account balance .....	24
Figure 11 - The short-term structure of New Zealand's gross offshore debt .....	25
Figure 12 - New Zealand's house and farm prices .....	26
Figure 13 - Household assets and liabilities .....	27

# Executive Summary

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Like many other countries, New Zealand has seen a significant build up in its offshore and private debts over a long time period. At the same time, farm and house prices have substantially moved away from long-term norms, both historically and internationally. These observed long-term trends are the focus of this Working Paper. In particular, they represent imbalances that may not be sustainable. The recent global financial crisis shows how imbalances can magnify economic shocks and threaten living standards, which is a key concern for the Treasury.

This Working Paper investigates whether the resilience the New Zealand economy has shown to date can endure. It examines the need and possible means for policy to address imbalances. The Working Paper builds on considerable previous Treasury work regarding the link between national savings and imbalances, and adds to other recent publications about New Zealand's contemporary macroeconomic challenges.

Structural imbalances create the risk of a sudden financial crisis when creditors lose confidence in the solvency of the financial system. This would have severe spill-over effects into the domestic economy through disruptions to the credit and exchange rate markets. Alternatively, if collectively debtors become concerned about the sustainability of their financial position, absent other changes in the economy, sharp falls in private consumption and investment growth can slow economic growth for a prolonged period. However, not all imbalances are problematic; it depends on the causes and circumstances. The key issue is the perceived on-going systemic ability of debtors to service liabilities, which depends on enduring inter-related factors such as risk appetite and savings behaviours, as well as economic performance.

Persistently high household and farm debts have reflected a long-term willingness to take on significant debts for property purchases because of an expectation of continuing appreciating prices. In turn, high offshore debt reflects persistently higher investment than saving (income less consumption) at a national level, or a current account deficit. These debts are related through reduced saving from wealth effects, as a result of property price increases leading to higher consumption. Therefore, ultimately offshore creditors are taking a view about the soundness of the domestic property market through their bank-intermediated investments. Higher consumption in a resource constrained economy has another key economic impact, it tends to raise interest rates higher than would otherwise be required to maintain price stability. This elevates the average real exchange rate to the detriment of tradables.

The extent to which higher consumption and debt and a worse performance of tradables represent a problem depends on three key judgements: the degree of rationality of individual decisions and the degree of influence of government policy that inadvertently may lead to later regrets should a shock occur; the degree of capability of the economy to manage the risk created; and the degree to which resources are being skewed to potentially lower productivity activities.

On the first judgement, it is not clear how much government policy is impacting on private decisions, or if changed how that would affect behaviours. Given the general prudence of the government and business sectors, there is no obvious explanation why New Zealand



national saving is so low and household and farm debt so high, but it is unlikely that policy settings play no part in this outcome.

On the second judgement, New Zealand's strong institutions provide considerable resilience and capacity to manage the impact of shocks on high levels of debt that could otherwise cause crisis, or the risk of slow growth. These include relatively strong and transparent fiscal policy, independent monetary policy with a floating exchange rate, and relatively prudent intermediation. However, there are a number of New Zealand-specific factors that detract from resilience. These include reduced fiscal headroom associated with the recent emergence of a structural fiscal deficit (albeit projected to diminish), a current account deficit that is driven by the servicing of prior borrowing rather than high investment that can be expected to generate returns to service the borrowing, and a significant proportion of offshore debt is still in the form of relatively risky short-term wholesale debt. In addition, several studies show that this debt is secured against property prices that are significantly overvalued, and so a substantial fall in price to fair value would cause significant interrelated financial and economic stresses.

On the third judgement, there is some evidence to suggest that exports are associated with greater productivity due to exposure to international competition, so skewing the production mix in the economy towards non-tradables is contributing to a slowdown in long-term economic growth.

Overall, on balance, the judgement of this Working Paper is that the economy does not appear to be in imminent danger of a sudden financial crisis. New Zealand debtors have maintained the confidence of creditors despite the risks associated with large economic imbalances. Moreover, going forward, increased saving further reduces the risk, but does increase the risk of slow growth.

However, high structural debts elevate threats to living standards, especially if New Zealand households and farms were to recommence significant borrowing from current high levels in connection with a resurgent property market, or face a new significant shock. This view is generally consistent with those held by a range of commentators, including credit rating agencies.

Bearing in mind recent overseas experiences about how quickly investor sentiment can change, it does suggest a pro-active policy response would be desirable to reduce the risk of costly adjustment. A "do nothing" approach risks several less benign paths for the economy, including some possible combination of a very costly banking crisis, or "sudden stop". In particular, the government should look at policy settings to remove impediments to saving but also encourage growth. This includes reassessing taxes and transfer settings, the pros and cons of regulatory settings in the housing market, as well as better use of cyclical management tools.

These policy responses have the potential of raising both private and government sector saving. Higher national saving should increase New Zealand's resilience. It would also improve tradables performance through lower interest rates than would otherwise be the case, which in turn should lead to a durable and deep depreciation in the exchange rate. Overall, this should have the impact of raising sustainable per capita growth rates at less risk.

# 1 Introduction

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Increases in New Zealand's offshore and private debts are features of New Zealand's economy going back at least 30 years. This build-up in debt reflects persistently higher investment than saving (income less consumption) at a national and private sector level, particularly households. These trends, together with farm and house prices having moved significantly away from historical long-term average levels, are often represented as indicating that the economy has significant "imbalances".

Despite these imbalances having reached relatively high levels, New Zealand's economy has remained relatively resilient to financial crisis and global economic cycles. Nevertheless, economic imbalances now have a greater profile both in New Zealand and internationally given their relationship with the recent global financial crisis (GFC).<sup>2</sup>

The Treasury is concerned about significant threats to New Zealand's growth prospects. Therefore, of special interest to the Treasury, is that New Zealand shares some of the imbalance characteristics of the economies that fared particularly poorly in the GFC. However, New Zealand has not suffered the same fate through the GFC. The presence of imbalances in New Zealand did not magnify the adverse economic impacts of the GFC as it did for some countries, although they are impacting on how quickly the economy is recovering from the recession. The reasons for this outcome need to be understood to know whether this resilience can endure.

In general, the Treasury has been considering imbalances more over the last few years. Building on work made public in 2005 (Treasury, 2005) and 2007 (Treasury, 2007), in 2010 the Treasury published a discussion document (Treasury, 2010b). The purpose of that document was to assist the independent Savings Working Group in examining options to strengthen national savings (Savings Working Group, 2011). A key issue for the Treasury discussion document was the link between national saving and imbalances, and to discuss the range of policy options to address national saving and imbalances.

This paper is part of a package of Treasury publications that consider a range of contemporary macroeconomic challenges. It examines:

- the nature of New Zealand's imbalances, and their connections and drivers;
- associated risks that stem from the imbalances, and the factors that contribute to, or detract from, New Zealand's resilience;
- whether New Zealand's resilience is sufficient by drawing on parallels with the recent international GFC experiences;
- plausible scenarios that could eventuate if imbalances continue to grow unabated; and
- options to further increase resilience.

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<sup>2</sup> The GFC is marked by on-going economic, financial, and fiscal stresses in many countries around the world starting in July 2007, and continuing to this day.

These are important issues that need to be researched over time. This paper is part of that process. A further exploration of these issues will be likely in the context of the June 2011 joint Treasury, Reserve Bank of New Zealand (RBNZ), and Victoria University of Wellington macroeconomic policy forum “New Zealand’s Macroeconomic Imbalances — Causes and Remedies”.<sup>3</sup>

## 2 Imbalances: a threat to growth

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“Unfortunately a highly leveraged economy can unwittingly be sitting with its back at the edge of a financial cliff for many years before chance and circumstances provoke a crisis of confidence that pushes it off.”

Reinhart and Rogoff, 2009

The Treasury seeks to provide advice to enable higher living standards for New Zealanders. An important part of achieving this goal is raising per capita incomes through higher sustainable economic growth. As succinctly captured by the quote above, threats to this objective are of concern to the Treasury and so are prime motivators for this research.

This paper posits that large imbalances may pose more than a passing threat to economic growth over the long run. Threats come at two levels:

- **A sudden financial crisis** — Large and persistent imbalances over long periods increase the risk of financial crisis. These arise from sudden ruptures in confidence, and have long-term consequences. In particular, financial crisis can have large negative spill-over impacts in the domestic economy, and create fiscal problems from lower tax revenue and higher transfers. The trigger is often unanticipated macroeconomic circumstances or events (i.e. so-called shocks such as an unexpected and large fall in property prices). Crisis is different from periodic but self-rectifying “scares”. Scares can cause costly short-term uncertainty and have distributional consequences through significant asset price shifts, but have little enduring aggregate impacts.
- **Persistent slow growth** — Imbalances can cause a prolonged and marked drag on economic activity if collectively the private sector becomes uncertain about financial prospects, and decides to consume and invest less. Absent increased government investment or consumption (if possible), or other offsetting changes in the economy to grow tradables, the economy can stagnate. In the long term, this can be just as important as crisis for living standards.

However, in pursuing growth opportunities, some degree of exposure to risk is desirable. Growth processes are rarely linear, and tend to be exploratory and involve individuals taking chances, often involving significant step changes in scope and scale of activities

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<sup>3</sup> [www.treasury.govt.nz/publications/research-policy/conferences-workshops/macroeconomicimbalances/](http://www.treasury.govt.nz/publications/research-policy/conferences-workshops/macroeconomicimbalances/)

that require external financing. But these choices can lead to eventual regrets for individuals because of unforeseen events, especially if consumption choices have anticipated higher future incomes that do not eventuate. However, with the benefit of hindsight, if these mistakes are isolated, there are few wider economic consequences. But if repeated across the economy in a persistent way over the long term, these mistakes can lead to pervasive economic costs through systemic failure.

Therefore, this paper is not arguing about minimising imbalances, because to do so would likely sacrifice growth. Indeed, external liabilities may even need to grow temporarily to finance investment that will grow the capital stock in order to accelerate growth. However, as will be discussed later, the cause and composition of imbalances is an important consideration, especially if imbalances mount from many individuals taking on the same risk. An example of this would be higher consumption based on the assumption of property prices continuing to rise.

## 3 Imbalances described

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The following sections describe the nature of imbalances, and applies the concept to the New Zealand context.

### 3.1 Concepts

As discussed earlier in Section 1, economic imbalances generally refer to significant movements of factors in the economy away from historical long-term average levels or trends. Accordingly, there is the connotation of instability, or something that builds up and ultimately cannot be sustained. This could either be because of some sort of externally-imposed financing constraint, or an internal adjustment as a result of expectations of future states of the world turning out to be incorrect.

The focus of this paper is on structural imbalances rather than temporary imbalances. Temporary imbalances by definition will self-rectify through a smooth transition, with little likely long-term detrimental economic effects. While eventually even structural imbalances are rectified, the difference is that absent mitigating policy change, the structural economic changes involved tend to be very disruptive and therefore costly. However, this does not mean structural imbalances cannot intensify and wane over the course of an economic cycle. The key issue is persistence through cycles.

Of particular interest are imbalances that ultimately manifest through growing indebtedness, either offshore or for particular sectors of the domestic economy. Debt levels reflect the saving and investing behaviours of households, businesses, and the government. High levels of debt can be a problem because debt is more reliant on the matching of short-term cash flows, and so default risk to unexpected events can be high.<sup>4</sup>

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<sup>4</sup> This is distinct from equity, which is not as dependent on short-term cash flow matching and therefore fluctuations in financial returns do not create the same financial risks.

In particular, high debt can be a problem if co-incident with assets being mispriced relative to fundamental value drivers. This mispricing produces so-called asset bubbles. Bubbles can be due to market euphoria phenomena arising from market momentum.

Accordingly, the imbalances idea is both a stock and flow concept. They build up from flows (new borrowing) and accumulate to what can be an unsustainable stock level (debt ratio). Therefore, it is the flow that creates the issue. This view is consistent with research regarding financial crises across the globe over 140 years, which showed that credit growth is a key indicator of financial instability (Jordà et al, 2010). However, it is the stock that ultimately determines if there is a problem, since high levels of new borrowing in any given year may not be problematic if initial debt ratios are at a low level.

The recent devastating Canterbury earthquakes have had a significant medium-term impact on the economy, weakening the financial positions of both the private and public sectors. But overall, the earthquakes are not expected to add materially to the long-term structural debt issues facing the country, and so is not a key focus for this paper (Box 1).

#### **Box 1: The impact of the Canterbury earthquakes**

The immediate financial cost of the earthquakes to New Zealand sums to around \$15 billion (Treasury, 2011). The government's share of property-replacement costs, and higher expenses associated with various earthquake-related support and assistance packages is around \$8.8 billion, much of which will have to be borrowed (Treasury, 2011). This is a large one-off impact on the Crown's financial position (equivalent to around 4.5% of GDP (Treasury, 2011)). However, actions taken by the government in Budget 2011 to hasten the return to fiscal surpluses should see that this debt increase is not sustained over the long term.

In addition, as a result of the earthquakes' impacts, the economy is expected to slow in the short term, but in the medium term, reconstruction activity is expected to lift economic activity considerably. In the long term, economic activity is expected to revert back to towards trend with little long-lasting impacts from the earthquakes.

Because of New Zealand's high level of earthquake reinsurance, the other impact that the earthquakes have had is to reduce temporarily the current account deficit and associated net offshore liabilities, as reinsurance money is treated as income and/or offshore assets (Section 3.2.2). Over the medium-term, the earthquake rebuild will increase the current account deficit as higher investment leads to increased imports. This will be partially offset by higher private saving over the medium-term so deficits do not reach levels attained prior to the GFC.

It is possible long-term consumer behaviour will change as result of the earthquakes, raising precautionary saving. However, it is expected that a return to trend economic growth will see private sector saving likely returning back closer to trend, especially as households more generally regain confidence in their financial positions. This means that the current account impacts from private activity may also return closer to trend over the long term.

## 3.2 New Zealand's imbalances

While sovereign debt has risen quickly since 2008 from its previously low level, New Zealand's imbalances have manifested mainly in the form of high household/farm and offshore debt. However, high household debt is not unique to New Zealand; it has risen similarly in many Organisation for Economic Co-operation and Development (OECD) countries (Steenkamp, 2010). Furthermore, like many OECD countries, these debts have been slowly reducing since the start of GFC. Nevertheless, they are still at a high level throughout the OECD and New Zealand. Therefore, the following discussion focuses more on the build-up in the level of New Zealand's debt rather than the impact of the GFC.

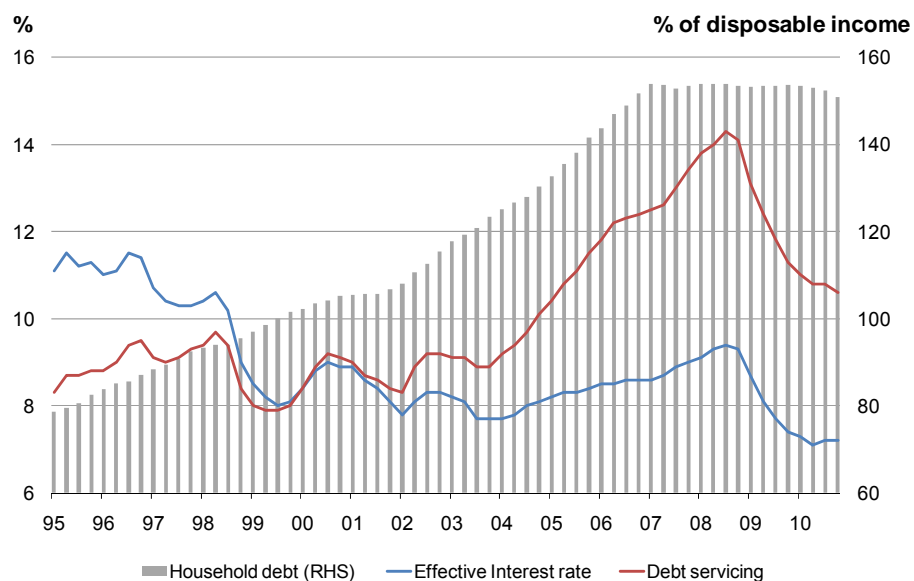
### 3.2.1 High household/farm debt

Figures 1 and 2 together show that New Zealand's households have a high level of debt that is generally secured against property at valuations that exceed incomes by significant multiples. Figure 3 shows that farm debt and prices are also high relative to earnings. In aggregate, as at April 2011, household and farm debts were around 117% of GDP compared to 37% and 32% for business and central government respectively (RBNZ, 2011b and Treasury, 2011).

Household debt is high because most households do not have the savings to buy a house without significant borrowing (typically banks are willing to lend up to around 80% of the value of the home). However, high house prices can only be supported because households are willing to take on large debts ahead of increased savings for property purchases (on average every household directly owes nearly \$100,000). Therefore, there is an issue of causality, are house prices high because of banks' willingness to lend, or because of households' willingness to borrow? This issue is discussed further in Sections 4.1 and 7.

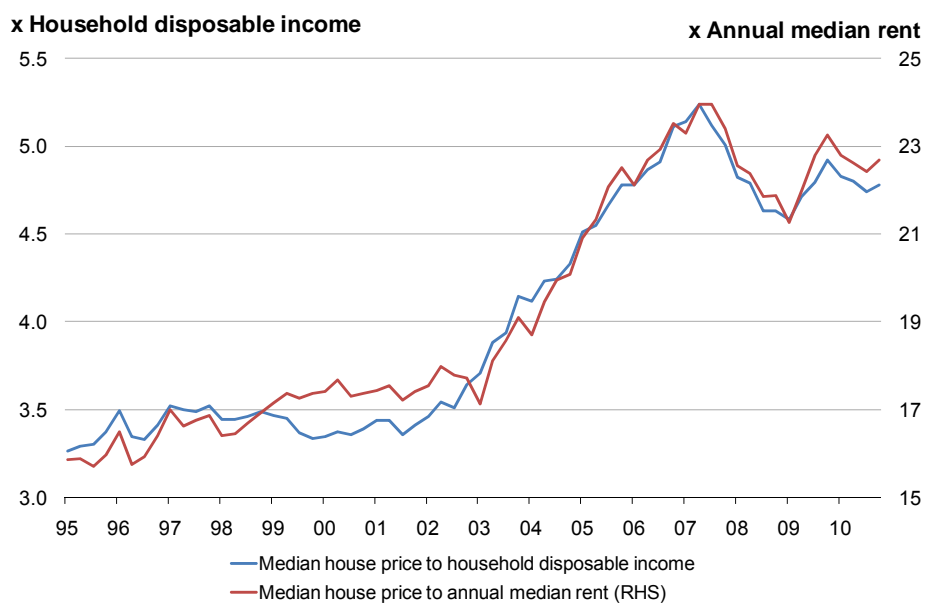
Figure 1 also shows that high debt is expensive to service, so for the average household, housing affordability is low. This is especially the case for first-time buyers who tend to need to borrow more because they have lower savings. However, since 2008, lower interest rates and a softening of house prices after the GFC has helped significantly in this regard.

**Figure 1 - Household debt and servicing**



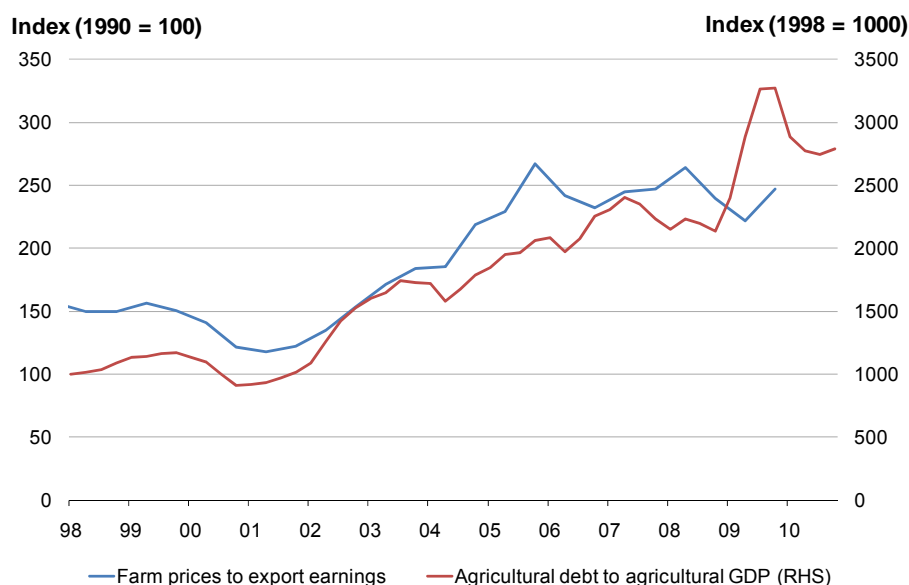
Source: RBNZ

**Figure 2 - Multiple of house prices to household disposable income and rental income**



Source: Real Estate Institute for New Zealand, Statistics New Zealand, Department of Building and Housing, The Treasury

**Figure 3 - Agricultural debt and farm price to income ratios**



Source: RBNZ, Statistics New Zealand, Quotable Value New Zealand

### 3.2.2 High offshore debt

While New Zealand has benefited from access to international capital markets, New Zealand has a high stock of offshore debt.<sup>5</sup> As at 31 December 2010, it stood at \$153.6 billion (79% of GDP) in net terms, and \$248.5 billion (128% of GDP) in gross terms (Statistics New Zealand, 2011a and 2011b). However, the net equity position is near balance (Figure 4). Accordingly, debt is the major contributor of New Zealand's high net offshore liabilities, or net international investment position, at around -82% of GDP as at 31 December 2010 (Statistics New Zealand, 2011a).<sup>6</sup>

This negative international investment position has arisen because of New Zealand's high and persistent current account deficit flows. The current account is the difference between what New Zealanders earn abroad from exports of goods and services and income from offshore financial assets (debt and equities), and what they spend abroad. Since what New Zealand earns abroad is less than what is spent, the current account is in deficit. Figure 5 shows the impact of the current account deficit on net international investment position.

One key feature of New Zealand's net international investment position is that gross offshore debts as a proportion of GDP are not high relative to other countries, reflecting New Zealand banks' domestic focus. Countries with financial institutions that have a high degree of international business such as Switzerland, the United Kingdom, and Iceland

<sup>5</sup> Offshore finance can facilitate investment beyond the limitations of national saving and therefore the investment may not have otherwise occurred without open capital markets.

<sup>6</sup> This is a measure of what New Zealand owes the world compared to what New Zealand is owed (both debt and equity).



tend to have high gross offshore debts to fund international lending activities (e.g. for the United Kingdom in 2008 it was over 400% of GDP). As discussed in Section 5, this is one of many important considerations in assessing the overall vulnerability of a country. This is because material losses in overseas assets for a highly leveraged economy could create significant solvency issues for the country as a whole.

Since 2009, the improvements in the current account deficit reflect a combination of the recent recession reducing imports, and profits of foreign-owned companies, lower interest rates paid to offshore creditors, as well as significant one-off factors. These one-off gains are mainly associated with the offshore reinsurance money from the earthquake claims, and tax settlements with Australian-owned banks. The underlying current account deficit for the December year 2010 excluding one-off gains was \$7,940 million (4.1% of GDP) compared to the headline number of \$4,380 million (2.3% of GDP) (Statistics New Zealand, 2011a).

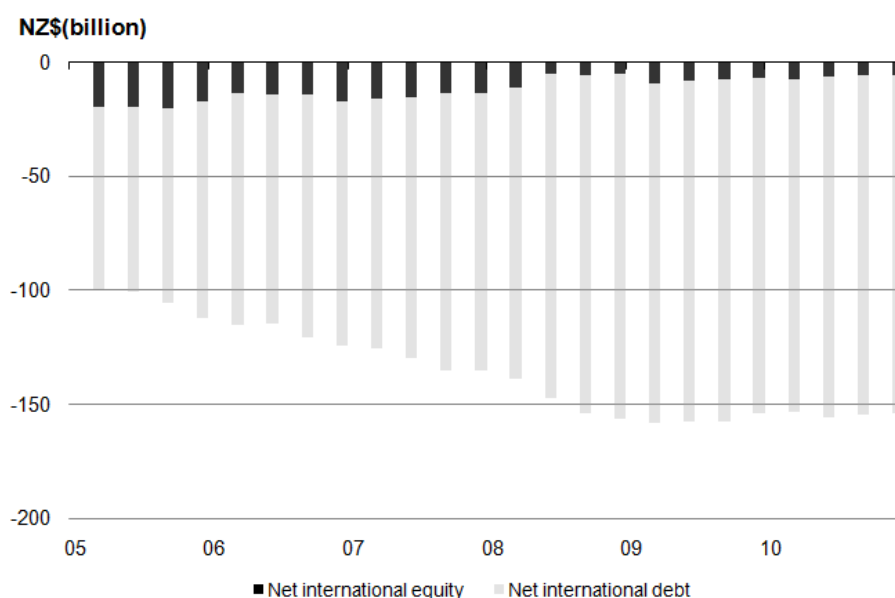
Notwithstanding the current account impacts, reinsurance results in the earthquakes having a favourable impact on net the international investment position, as reinsurance claims are an asset until paid. The September earthquake improved the net international investment position by 1.8% of GDP as 31 December 2010 (Statistics New Zealand, 2011a). Valuation impacts more generally are also a factor for net international investment position. However, these valuation and one-off impacts are not the key driver of the trend, unlike the underlying current account deficit, which is forecast to improve in the short term before deteriorating again with the improvement in the economy.<sup>7</sup> While there is some uncertainty around the precise level of the net international investment position, any future revisions are unlikely to change the trend in direction, or the view that it is at a high level both historically for New Zealand and internationally.<sup>8</sup>

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<sup>7</sup> Forecasts used in this paper are from the *Budget Economic and Fiscal Update 2011*.

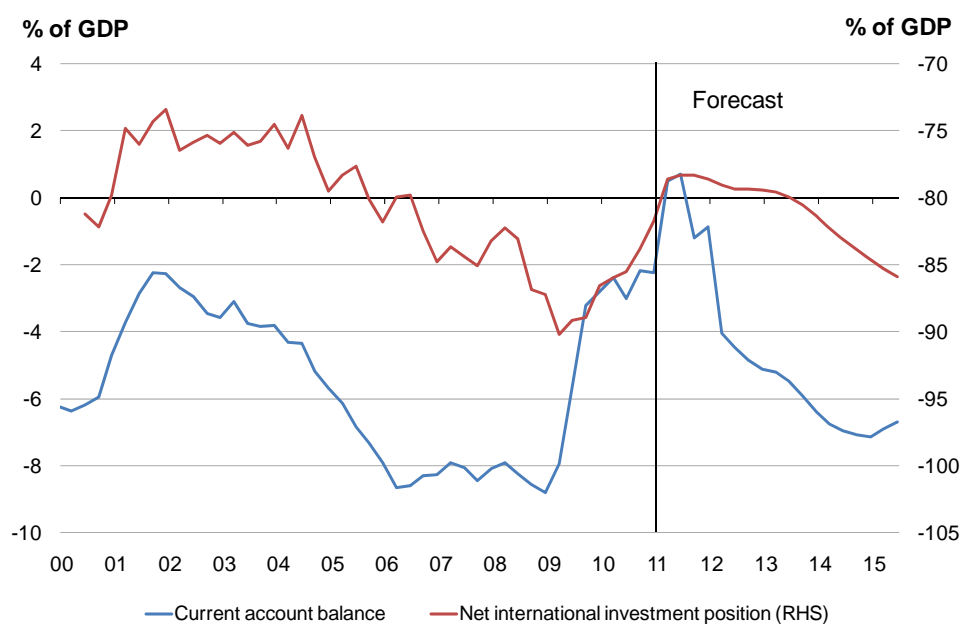
<sup>8</sup> In September 2010 Statistics New Zealand revised their historical estimates of the current account deficit down, which improved the level of the net international investment position. Work is ongoing with a general expectation that it will result in further improvement in the position level.

**Figure 4 - Composition of net international investment position**



Source: Statistics New Zealand

**Figure 5 - Net international investment position and current account balance**



Source: Statistics New Zealand, The Treasury

### 3.3 The connection between household/farm and offshore debts

Household/farm and offshore debts are connected through the property market, facilitated by the banking sector. The following sections of the paper explain how property market outcomes affect consumption and investment patterns.<sup>9</sup> These have financing and trade implications that mirror each other.<sup>10</sup>

#### 3.3.1 Financing

Households are a heterogeneous group with respect to debt and assets. Some households are savers, while others are dis-savers; some are buying assets while others are selling assets.<sup>11</sup> Rather than dealing directly with each other for their funding needs, households generally transact through banks (intermediation).

One household borrowing domestically to buy an existing house can be offset by a bank deposit from another household. Therefore, borrowing for this purpose does not impact on national saving or, by implication, the current account deficit.<sup>12</sup> The mortgage finance ends up with the vendor as cash who can then repay debt or deposit the money with a bank, substituting for other forms of bank borrowing. Therefore, buying an existing house is a financial transaction like a purchase of company shares with no implications necessarily on consumption or investment.

However, typically a vendor is unlikely to deposit the whole proceeds from sale. The way property transactions impact on the current account is to the extent that saving and investment decisions of property owners and/or vendors are changed. For example, a rapidly appreciating property market boosts wealth, which can stimulate further investment (gross fixed capital formation), and/or consumption through allowing and encouraging households to extract equity in the home (directly or passively).<sup>13</sup> This demand for funds by households is facilitated by the banking sector, as higher property prices can also encourage bank lending because the value of collateral is enhanced. If this demand for funds cannot be met domestically, it is met by banks borrowing offshore.

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<sup>9</sup> Investment means gross fixed capital formation.

<sup>10</sup> Mathematically, from rearranging national income identities, the difference between national saving and domestic investment (national net lending) is equal to the sum of the trade balance (exports less imports) and investment income balance (the net cost of servicing net offshore obligations), or the current account balance. The variables in this equation are simultaneously determined, along with prices within the economy that influence the underlying relationships between the variables.

<sup>11</sup> Saving is defined as income less consumption; specifically, it excludes asset revaluations and borrowing to buy assets or invest. This means a household can be dis-saving but still see its net worth rise if its assets are rising in value by more than the borrowings, and a household that borrows to invest or buy assets can still be saving.

<sup>12</sup> However, building a new house constitutes investment (gross fixed capital formation) that, if not offset by higher saving, will necessarily raise the current account deficit.

<sup>13</sup> Investment could be in property or in other business activities owned by the property owner that otherwise would have difficulty raising finance at competitive rates.

Work by the Reserve Bank of New Zealand (RBNZ) in 2008 estimated that a one dollar increase in housing wealth led to an annualised short-run increase in consumption of 0.9 cents to 2.4 cents, and a long-run effect of 5.4 cents to 7.5 cents (De Veirman, 2008). Other work in 2006 found that yearly home equity withdrawals averaged around \$7 billion per annum from 2003 to 2005 (\$14.5 billion if farms are included from March 2002), and 40% to 70% of equity withdrawals were consumed over the short term (Smith, 2006).

Active equity withdrawal has been an important driver of falling household saving, and according to some measures of saving, has led to significant household dis-saving. In addition, in response to rising wealth from higher house prices, some households may have chosen to passively reduce their saving rate rather than actively draw down on home equity. However, since 2009 it appears that the weak housing market has led households to save more by repaying mortgages, injecting more than \$3 billion a year into housing equity (Treasury, 2010a).

It is this wealth effect from rising property prices that may have been a significant driver of national saving falling short of what is required to finance domestic investment.<sup>14</sup> This shortfall in saving means banks borrow offshore to, in effect fund the current account deficit, which is adding to the net stock of New Zealand's offshore liabilities (Hunt, 2008). Figure 6 shows that, during the housing boom of 2002 to 2007, while investment lifted somewhat, lower national saving played a significant role in the increased current account deficit. Since the GFC, the current account deficit has narrowed significantly, as national saving increased and investment decreased markedly. This has been amplified in the short term from the one-off gains from offshore reinsurance money and the Australian-owned banks' tax settlements, which has increased national saving.

An alternative hypothesis for the same set of observations from a financing perspective is that, for a time, the supply of relatively cheap offshore capital drove the current account deficit by lowering the domestic cost of capital, thereby encouraging investment, discouraging saving, and leading to inflation pressures and an appreciating exchange rate (Section 3.3.2).

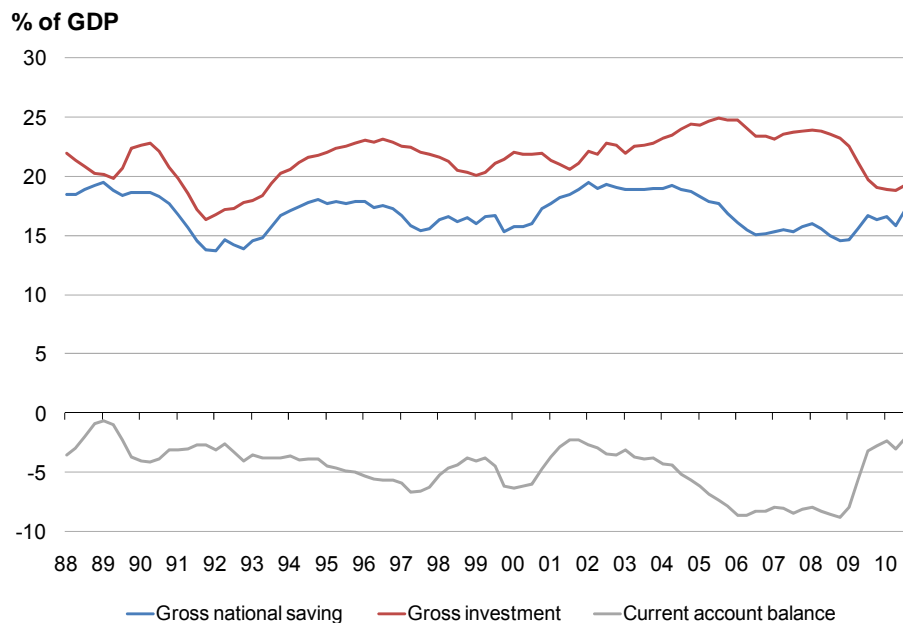
However, irrespective of cause, because banks' funding of property lending is the primary vehicle for capital inflows, a chain of borrowing exists. This interconnects offshore creditors, New Zealand's banks and households. Since this offshore financing has been primarily used by banks to fund property lending (particularly houses and dairy farms), it suggests that offshore creditors are also ultimately secured against the soundness of New Zealand's property market. As at 31 December 2010, household mortgages and agricultural lending, most of which would be property-related, summed to 88% of gross

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<sup>14</sup> The business sector has generally been a net saver and until 2009 so was the Government, but together it was insufficient to make up the shortfall from household saving.

offshore debt. However, property lending could have been used for purposes unrelated to property.<sup>15</sup>

**Figure 6 - Gross saving and investment flows**



Source: Statistics New Zealand

### 3.3.2 International competitiveness

Persistent wealth effects from extended periods of high property prices can also contribute to the economy growing faster than its potential for an extended period, i.e. aggregate demand persistently exceeding aggregate supply. This can be exacerbated by expansionary fiscal policy, fuelled by rising tax revenues during the upturn in economic activity (Brook, 2011). High aggregate demand relative to supply, combined with resource constraints, leads to inflation pressures.

Inflation pressures typically lead the RBNZ to set interest rates higher than would otherwise be required to maintain price stability (Labuschagne and Vowles, 2010). This helps temper the property market and consumption activity, as well as reducing investment. Both these impacts are of benefit to the current account position. But at the same time higher interest rates attract international financial capital, which elevates the average real exchange rate level to the detriment of the performance of the tradables sector.<sup>16</sup> In turn, lower exports (less national income) and higher imports (more

<sup>15</sup> Lending is fungible in the sense that a home equity loan to finance an imported consumption or capital good is indistinguishable from a loan used in the property market. In economic effect, the lending against the house substitutes a personal loan for consumption.

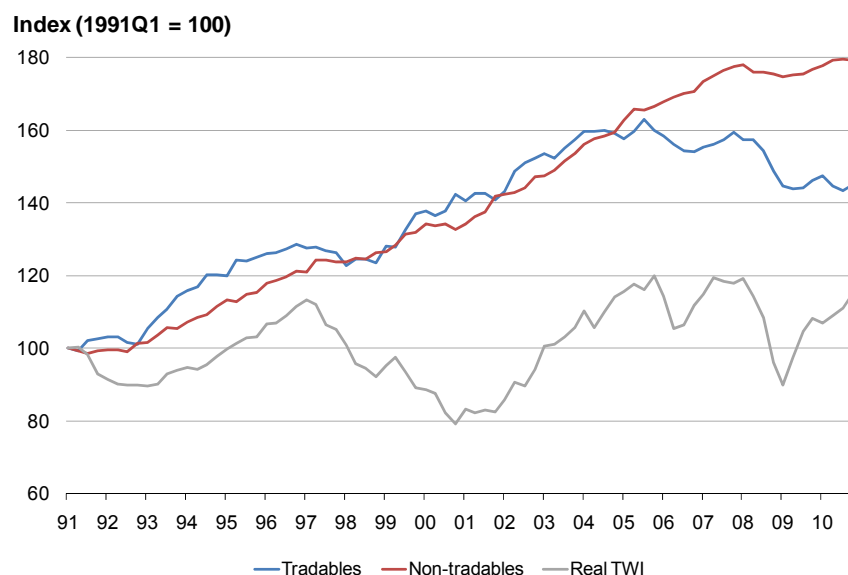
<sup>16</sup> The tradable sector is estimated as the volume of output (i.e., real GDP) in primary and manufacturing industries combined with the volume of services exports (as it is difficult to estimate what services are tradable). Non-tradable output is estimated as a residual with total real GDP.

consumption and so less saving) impact on the current account deficit to some extent in the opposite direction, i.e. there are ambiguous second-round impacts that need to be considered.

As noted earlier, there is an alternative explanation for the same set of observations. This time from a competitiveness perspective, it is that offshore capital seeking higher returns is attracted to New Zealand where real interest rates are typically higher than in source countries. Higher demand for New Zealand dollar assets pushes up the exchange rate and reduces competitiveness for tradables. This imported capital is then intermediated by the banking sector to households and businesses who use it to invest and bid up house prices co-incident with higher consumption, which leads to inflation pressures and higher interest rates.

Regardless of the explanation for capital inflows, production in New Zealand has become progressively skewed towards non-tradables from 2004 (Figure 7). In particular, manufacturing and tourism have performed poorly since this time. This is co-incident with a fall in saving and a related higher real exchange rate. In particular, the real exchange rate has stayed at a relatively elevated level since 2005, only falling briefly during the height of the GFC, when global risk aversion was at a peak. However, the impact of the GFC and drought in 2008 saw a sharp fall in tradables output as well as the exchange rate, illustrating that exchange rates are only one of many factors that can impact on production mix. A particular concern from the change in production mix in the economy towards non-tradables is the extent to which it skews resources to lower productivity activities, contributing to a slowdown in long-term economic growth.

**Figure 7 - Competitiveness and production mix**



Source: RBNZ, Statistics New Zealand, The Treasury

## 4 Problem definition

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To be able to identify possible policy responses to a problem, an understanding of the causes is necessary. The following section considers possible policy-related reasons why debt imbalances may have arisen, and discusses mitigating and aggravating factors associated with private debt in New Zealand.

### 4.1 Is persistently high and growing private debt a problem?

#### 4.1.1 Opposing the proposition

The previous section has identified offshore and related household/farm debts to be key imbalances facing New Zealand. However, to a large extent there are good arguments why private debts should not necessarily be a concern or require a policy response. New Zealand is a relatively young economy with good income prospects to pay back its offshore debts. Indeed, some go further and consider current account deficits are generally not a problem because of New Zealand's floating exchange rate and open markets (Pitchford, 1989 and Corden, 1991). This idea became an important part of the New Zealand macroeconomic thinking (Collins et al, 1998)

The Pitchford view is that, unless individual entities are ill-informed, short-sighted, or unduly influenced by government policies, or that lenders are not providing enough scrutiny on borrowers, there is little reason for concern about current account deficits. This is because, as long as these conditions hold, economic agents have the incentives and information to make the correct decisions, so the current account is just an aggregation of a number of rational private lending and borrowing decisions. The corollary is that, if individual decisions are justifiable, so then is the aggregation of these decisions. This view is often referred to as the “consenting adults” model.

Consistent with “consenting adults”, the response of debtors to the GFC has been rational, given the uncertainty around incomes, the property market and funding. Private saving has risen, the use of debt has been tempered, and existing mortgages are being repaid in preference to withdrawals of equity. This is helping to reduce financial risk and is reflected in a declining current account deficit and household debt ratios, but it is also contributing to a significant slowing of the economy (Section 4.3).

#### 4.1.2 In favour of the proposition

Private saving decisions are not made in a contextual void. Decisions are influenced by circumstances, and in particular the policy environment set by government. Accordingly, New Zealand's private saving decisions can be influenced by tax and transfer policies, or regulatory settings. As noted earlier in 3.3.2, government actions can also have current account impacts through engaging in pro-cyclical fiscal policy.

The overall impact of government on the economy therefore raises questions about the quality of private saving decisions, and therefore consistency with the Pitchford “consenting adults” model. It can be argued that government policy over a long time has

unduly influenced household decision-making, which may have led to ill-informed and short-sighted private sector decisions that are later regretted. For example, this may explain the general willingness of households to continue to support a rapidly rising property market and to draw down on housing equity, leading to higher aggregate consumption between 2002 and 2007.<sup>17</sup>

Moreover, there are further possible dynamic effects, in that the sum of many household consumption decisions that may be biased has created its own larger distortions. This is because higher aggregate consumption required even tighter monetary conditions than otherwise to restrain demand, which led to the currency appreciating to the detriment of tradables production.

High private debt co-incident with a shock could lead to sharp adjustments in private consumption and investment to the detriment of economic activity, as households and creditors try and rectify balance sheet stresses. Iceland, Ireland and Spain are examples of countries where a financial crisis arose from the co-incidence of the GFC and private debt growing too quickly because of poorly co-ordinated economic policy frameworks.<sup>18</sup> Government responses may have exacerbated the crisis in these countries, as they too now face balance-sheet stresses from responding to the financial crisis and associated private debt problems.

## 4.2 Crisis

Irrespective of cause or rationality, high household/farm and offshore debts create risk that creditors are sensitive to. Creditors, offshore or domestic, are particularly concerned about debt reaching levels that raises the possibility of widespread default through insolvency. While individuals can face financial pressures with few wider ramifications, it is only when many individuals are under financial stress that there are risks to the economy as a whole and so to creditors.

Insolvency can occur for a number of reasons. Some can be New Zealand-specific problems due to imprudent intermediation. Alternatively, insolvency can be due to global developments. Unhedged offshore creditors would also be concerned about the level of the exchange rate, which would likely fall as insolvency threatens and thus reducing their investment returns.

Indeed, significant creditor concern could precipitate financial crisis, if it were to lead to a rapid withdrawal of financial support. Given the highly bank-intermediated nature of New Zealand's debt markets, creditor concerns about default would therefore mainly reflect a judgement about the solvency of New Zealand's banking system, and its ability to continue to access funding in an uncertain global funding environment. Because the solvency of the banking system is so integrated with the property market, this judgement

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<sup>17</sup> This could arise because some combination of regulatory and tax settings could be contributing to the persistent bidding-up of house prices (i.e. housing tax preferences and costly processes for constructing new housing).

<sup>18</sup> This contrasts with Greece where government debt was the main issue.



is in essence then a view about the prospects for New Zealand's property market, and ultimately the ability of property owners to service property debt.

#### 4.2.1 Factors contributing to resilience

While New Zealand has high offshore debt and high household/farm indebtedness, there are a number of factors that diminish the risk of financial crisis. This may help explain why New Zealand did not suffer the same degree of difficulties that other countries faced with similar imbalances during the GFC.

First, there is no obvious limit or "target" for the net international investment position. It depends on the quality of investment opportunities, the prudence of intermediation to fund them. Together, these factors impact on economic growth prospects and so future incomes to service debt. In addition, it depends on the saving decisions by New Zealanders, and the attitude of creditors to continue to support debtors in the belief that liabilities will be serviced at face value over the long run. All this suggests that a judgement about whether New Zealand's debt position is too high is not straightforward.

#### **Quality of intermediation**

Private sector borrowing intermediated by banks accounts for around 76% of New Zealand's net offshore debt. Apart from finance companies, which are relatively small in the overall context of New Zealand's intermediation activities, New Zealand's main financial lenders appear to have been relatively prudent. Evidence for this includes that bad debt provisions, while rising during the GFC, have remained relatively low compared to bank operating profits, and are now falling again. This is consistent with the "consenting adults" view.

New Zealand's banks have largely avoided uninsured high loan-to-value ratio lending to customers who have limited abilities to service the debt (RBNZ, 2006b). In contrast, lending has generally been in the nature of well diversified recourse loans that were relatively small (compared with asset values), which customers could service comfortably.<sup>19</sup> Therefore, banks are not relying overly on the value of collateral to recoup loans, which can be questionable in generalised property downturns.

In support of this view about the soundness of New Zealand's bank lending, at the peak of the GFC the International Monetary Fund (IMF) stress-tested the balance sheets of New Zealand's banks against a range of plausible shocks (including property) without raising any significant concerns (IMF, 2009). This view has been sustained by the IMF in subsequent analysis (IMF, 2011), and the RBNZ's Financial Stability Report (RBNZ, 2011a). Supporting factors for the property market include continuing positive net immigration inflows, the extended period of low forecast interest rates, and the fall over the last three years in residential property building. This fall in building activity is despite

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<sup>19</sup> "Recourse" means that, in case of a default, the mortgagee can seize and sell the security held against the mortgage as well as the mortgagor's un-pledged assets and properties. If this is insufficient, then redress can be also sought from the mortgagor's future income.

there being no obvious excess of supply. Instead, recent weakness in the housing market to date has tended to be characterised by falling turnover rates and a relatively slow fall in real prices, with nominal prices showing only a mild decline (Section 4.2.2). Moreover, in the short term, the Treasury is forecasting a stable-to-rising property market (Section 6).

The prudence of the banking sector can also be seen in bank capital, which provides banks with a buffer against downturns. This has been maintained well above regulatory minimums over time, thus helping to keep down leverage ratios. As a result, bank credit ratings still remain strong, helping with liquidity. In addition, bank prudence has been encouraged by the vigilance of prudential supervisors and regulatory controls in both New Zealand and Australia. This is important given the Australasian integration of banks.<sup>20</sup> Nevertheless, prudence is a relative concept based on outcomes conforming to expectations. The scenarios set out in Section 6 of this paper consider what could happen, should intermediaries be subject to extreme levels of duress beyond expectations.

On the liabilities side, for the year ended 31 March 2010, around 93% of offshore bank debt was hedged or raised in domestic currency to avoid currency risk (Statistics New Zealand, 2010). This means that the value of this debt is largely unaffected by currency movements. This is important in times of crisis as the currency would likely depreciate.<sup>21</sup> In the absence of hedging, this would increase the value of bank's foreign liabilities, putting solvency at risk.

Moreover, a significant proportion of offshore liabilities (equity and debt) is to Australia, through ownership of New Zealand's major corporations including the major banks. Edwards (2006) has argued that this is relevant to assessing New Zealand's risk. This could be because parent funding is likely to exhibit some equity-type characteristics irrespective of form. This high Australian ownership means a significant proportion of the current account deficit is also attributable to Australia. Australian net investment in New Zealand for the year ended 31 March 2010 was around \$64 billion (33% of GDP) (Statistics New Zealand, 2010). Assuming that net Australian investment in New Zealand has not materially changed as at 31 December 2010, if Australian investment in New Zealand is excluded, New Zealand's net international investment position would be around -49% of GDP.

In particular, assuming that Australian banks retain their current financial strength, it could reduce the magnitude of risks involved with New Zealand's high bank-related net offshore debt. This is because, while debt owed to an Australian parent bank is still offshore debt, it may have a different risk profile to offshore debt owed to portfolio investors, as it may be less prone to refinancing risk and so is a more stable portion of net offshore debt. In

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<sup>20</sup> Amongst other prudential regulations, the RBNZ publishes a six-monthly Financial Stability Report to gauge the overall soundness and efficiency of the financial system, and help identify economy-wide concerns that may require a response. These reports have consistently reported that New Zealand's banking system is financially sound.

<sup>21</sup> In particular, this would be accentuated if significant increases in central bank domestic liquidity were needed to help manage global funding interruptions.

addition, the current strength of Australian banks means that New Zealand subsidiaries have access to a significant and reliable source of funding. However, this does assume that Australian banks do not face their own major risks peculiar to themselves, or regulatory constraints that adversely impact on their ability to manage and support their New Zealand's bank investments. The risks facing Australian banks are beyond the scope of the paper, but by definition a global shock could be expected to impact on New Zealand's banks as well as their Australian parents.

### **Strong macroeconomic institutions and other economic factors**

New Zealand has strong macroeconomic institutions<sup>22</sup> in place that can help mitigate shocks like the GFC. Despite the emergence of a significant structural fiscal deficit from 2008, New Zealand still has relatively strong and transparent fiscal policy with low sovereign debt and plans to maintain this (Mears et al, 2010). This position allows the government to borrow on reasonable terms, albeit at higher rates than many other OECD countries. A strong fiscal position enables a government to let fiscal stabilisers operate more fully in response to a shock, as well as taking discretionary fiscal policy actions that can help to further cushion the economy in times of weakness. A strong fiscal position also allows the government to provide credible guarantees, should it be necessary to support bank funding activities again in the face of severely interrupted funding markets.<sup>23</sup>

Monetary policy credibility also helps through anchoring inflation expectations in New Zealand (RBNZ, 2007). This allows policy interest rates to fall considerably when needed to stimulate domestic demand without risking raising inflation expectations. In combination with a floating exchange rate, lower interest rates can also be expected to have an exchange-rate effect that will enhance competitiveness, especially if commodity prices are under pressure. The capacity for a lower dollar, in combination with widespread hedging or swapping by banks of their offshore exposures into New Zealand dollars, also helps to spread the burden of adjustment from a shock with offshore creditors.

While these macroeconomic institutional arrangements added up to provide resilience during the GFC, New Zealand's industrial structure also helped prevent the GFC from disproportionately impacting on GDP compared with other OECD countries.<sup>24</sup> New Zealand's flexible labour markets responded to the downturn more with lower hours worked and wage restraint, and less with higher jobs losses. This was further aided by

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<sup>22</sup> This covers organisations tasked with managing the macroeconomy, the legislation underpinning them, and management and operational practices.

<sup>23</sup> In 2008, New Zealand's relatively low level of sovereign debt enabled the government to credibly backstop the banking system during the global funding crisis.

<sup>24</sup> For the total OECD, the percentage change in real annual average expenditure GDP for the calendar year in 2009 was -3.5%, but in 2010 it was estimated to have been 2.9%. This compares to 0.0% and 2.5% respectively for New Zealand. However, measured from the peak of economic activity to the trough, the decline in New Zealand is substantial at -2.5%, or on a production GDP basis -3.8%.

New Zealand's export volumes generally not being too adversely affected by the immediate impact of the GFC before growing again.<sup>25</sup>

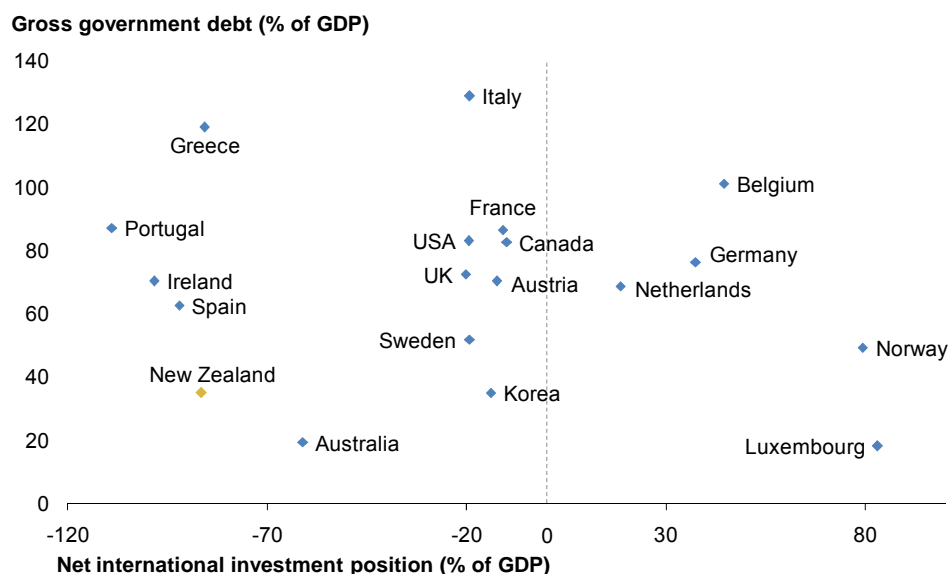
#### 4.2.2 Factors detracting from resilience

The causes of New Zealand's current account deficit and its financing have features that raise particular concerns. In particular, the global economy after the GFC is more volatile and wary of imbalances, leading to less tolerance for imbalances by international creditors and monitoring agencies because of heightened awareness of the risks involved.

#### Reduced fiscal headroom to respond to shocks

Figure 8 shows that New Zealand has a similar net international investor position to a number of countries, which are currently facing enforced adjustment paths by creditors. However, to date, credit rating agencies like Standard & Poors have generally taken comfort in New Zealand's strong fiscal position, institutions, and track record of previous fiscal consolidations (Interest.co.nz, 2011).

**Figure 8 - New Zealand's relative fiscal and net international investment position (2009)**



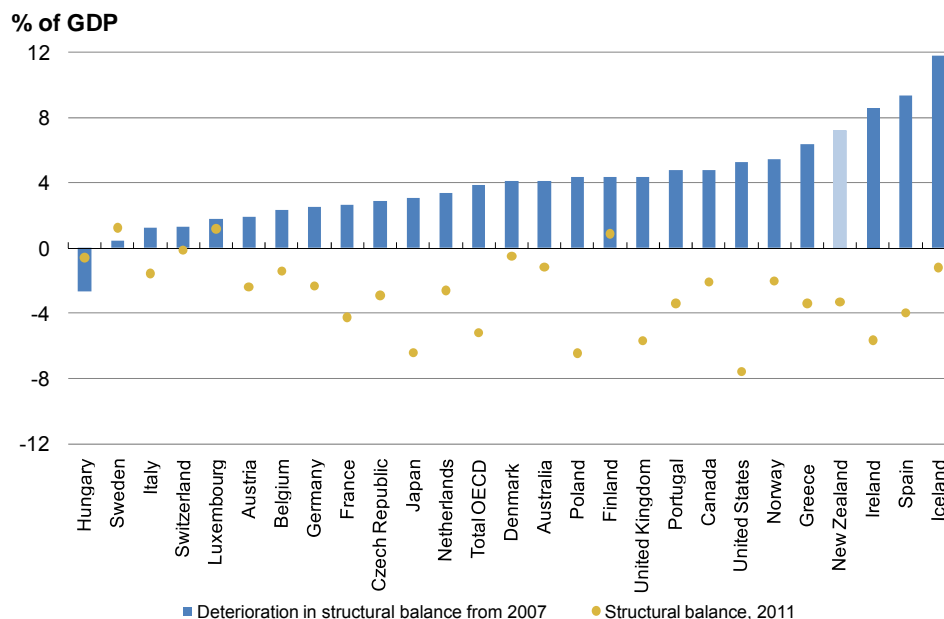
Source: OECD, IMF, RBNZ, The Treasury

However, New Zealand's fiscal strength is now less compelling than it was during the early to mid-2000s. Since 2008, the Government has moved from being net saver to being a dis-saver with large structural operating deficits. The structural fiscal deficit is

<sup>25</sup> New Zealand's exports are mainly commodities that have relatively stable sales volumes, and so unlike manufactured exports like machinery, changes in supply and demand tend to be marginal, but have bigger impact on prices rather than volumes sold. Continuing strong growth in China probably explains the quick recovery and continuing global strength of commodity prices from their initial short, but sharp, dip during the GFC. Also, the strength of Australia has helped underpin tourism and manufacturing.

currently high by international standards (Figure 9), and is now a significant contributor to the current account deficit, as it drags down national savings short of domestic investment. The Government is forecast to return to operating surplus by 2014/15. This will help rebuild the fiscal buffer against future shocks, increase national saving to reduce vulnerabilities and pressures on interest and exchange rates, as well as to reduce future borrowing and finance costs to lessen the risk of a credit rating downgrade.

**Figure 9 - Change in structural fiscal balance**



Source: OECD, The Treasury

New Zealand's rising sovereign debt ratios tend to reduce the flexibility of the government to respond to shocks that can cause financial crisis, despite still being relatively low compared to other OECD countries. This reflects that tax revenues rely on the state of the economy, and so indirectly on the banking system that supports the functioning of the economy (Fookes, 2011). So at a time when the government would be supporting the economy through a financial crisis that materially impairs the banking system, the private sector would be contributing less to supporting the government, thus diminishing its support capacity. Hence there is a need to have a very strong fiscal position prior to crisis.

Less fiscal flexibility to respond to shocks raises New Zealand's risk profile for creditors, who will be more focussed on debtors' ability to pay given the government's reduced capability to mitigate debtors' exposure to shocks. In particular, this would be the case if private debt ratios were to rise quickly from present levels. This could happen through a more pronounced and unbalanced economic cycle, such as occurred between 2002 and 2008 when private sector debt in the economy grew faster than nominal GDP. In this instance, given a large enough shock to the banking system, government solvency could also become a concern because of the two-way relationship between the government and the private sector.

## Composition of the current account deficit

New Zealand is an average investor by OECD standards but a lower saver than average.<sup>26</sup> It is therefore reasonable to say that New Zealand's current account deficits are more due to low saving than to high investment. As a result, the economy is less well placed to meet its future rising obligations. Typically higher investment would likely have been associated with higher future earnings, which would have enabled the obligations to be better serviced. This outcome is based primarily on the assumption that investment can be expected on average over time to more than cover its funding costs.

Moreover, New Zealand's net international investment position has now reached such a level that requires a balance of trade surplus of typically around 6% of GDP just to cover the cost of servicing its outstanding liabilities. However, New Zealand's balance of trade has been, until 2009, negative for some time, meaning we have been borrowing to service old debts as well as to cover current shortfalls in export earnings. This is an additional factor pointing to the problematic nature of New Zealand's current account deficit. However, while trade surpluses of less than 6% of GDP imply higher liabilities for New Zealand, it does not necessarily mean a worsening ratio to GDP, as this depends on the overall growth in the nominal economy.<sup>27</sup>

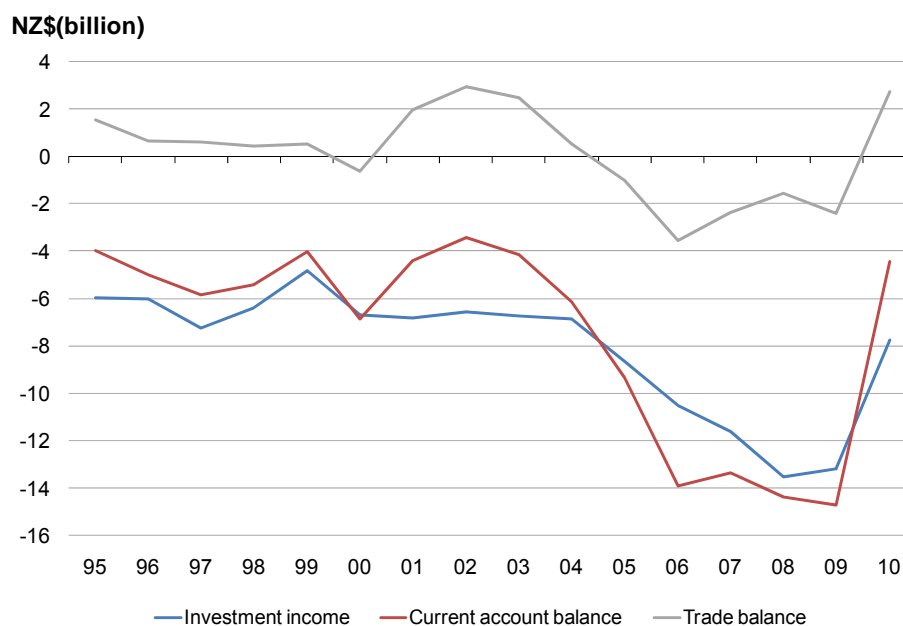
Figure 10 decomposes the current account into investment income and trade balances, illustrating that the deteriorating trend in the current account is largely due to the rising cost over time of servicing the stock of liabilities.

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<sup>26</sup> The OECD average for the investment to GDP ratio is 21% compared to 21.1% in New Zealand since 1990, while for Australia it is 24.2%. The New Zealand average saving rate to GDP is around 4% lower than the OECD average.

<sup>27</sup> If net foreign liabilities are 100% of GDP and nominal growth in the economy is 4.5%, the current account deficit needs to exceed 4.5% for the liabilities-to-GDP ratio to increase.

**Figure 10 - Composition of current account balance**



Source: Statistics New Zealand

This combination of high offshore debt and structural current account deficits may also constrain New Zealand's ability to close the income gaps with richer economies. This is because significantly lifting trend economic growth is likely to involve a prolonged period of higher investment that raises labour productivity. High offshore debt may make it more difficult to increase domestic investment, as given New Zealand's low saving, higher investment would require more offshore funding, exacerbating the stock of offshore debt.

### Short-term debt funding

A high proportion of New Zealand's offshore liabilities are in the form of short-term wholesale debt intermediated through the banking system. Short-term wholesale offshore debt is a riskier form of funding compared to equity, deposits, related-party or long-term debt (Allen et al, 2002). It needs to be rolled over regularly, and so faces risk from dramatic shifts in investor sentiment creating refinancing risk, particularly in times of international financial markets turmoil like the GFC. However, interest rate risks associated with short-term debt can be hedged.

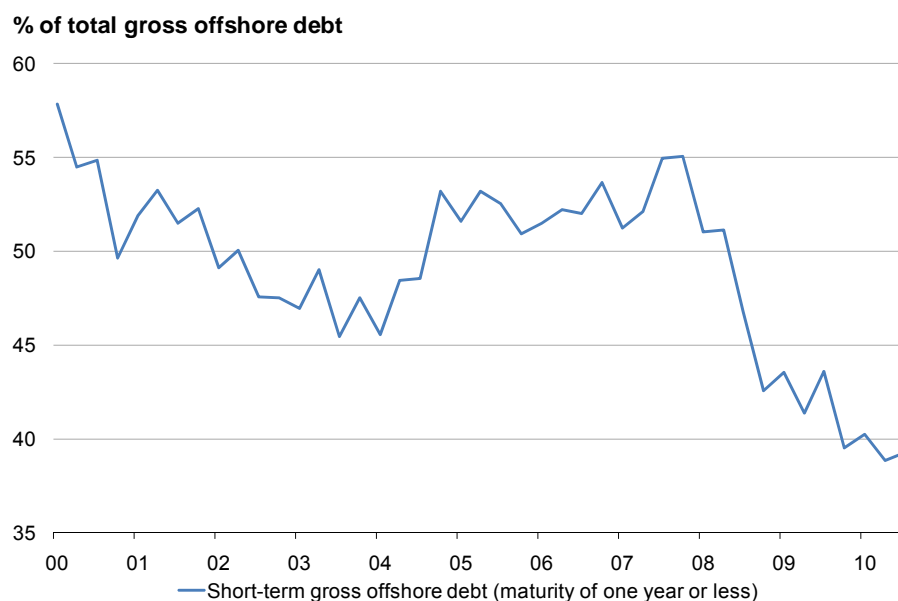
The combination of the RBNZ's new core funding ratio policy and funding market and rating agency pressures since the GFC is forcing New Zealand's banks to pay more attention to the term structure of their liabilities (Hoskin, 2009).<sup>28</sup> For example, as at

<sup>28</sup> A new liquidity policy was put in place by the RBNZ, as prudential supervisor, in 2009. It requires banks to over time progressively decrease the proportion of their funding from short-term wholesale funds to 25%, and match likely week and month ahead cash inflows and outflows. This is progressively further reducing funding risks for banks by reducing their dependence on short-term funding and helping to avoid cash-flow mismatches.

30 December 2010, very short-term debt (less than 91-days) accounted for 29% of gross offshore debt and 21% of net offshore debt. This compares to 37% and 28% respectively at June 2008, just before debt roll-over became problematic with the international financial turmoil after the failure of Lehman Brothers.

While there has been an improvement in the structure of New Zealand's debt, increasing the resilience of the banking sector, nevertheless short-term debt is still high by international standards (IMF, 2010). Figure 11 shows the proportion of New Zealand overseas debt that matures in less than a year.

**Figure 11 - The short-term structure of New Zealand's gross offshore debt**



Source: Statistics New Zealand

## Property market risks

New Zealand's property prices increased rapidly from 2002 to 2007. In particular, house-price increases are at the upper end of OECD experiences. Structurally lower nominal interest rates and a rise in the proportion of two-income families may justify some long-term rise in real property prices, and price-to-income ratios over the last 20 years. However, the price increase seems beyond what can be reasonably attributed to these factors. An explanation could be partly due to the favourable tax treatment of housing, immigration policy that has expanded the population, and planning laws that impact on housing supply.

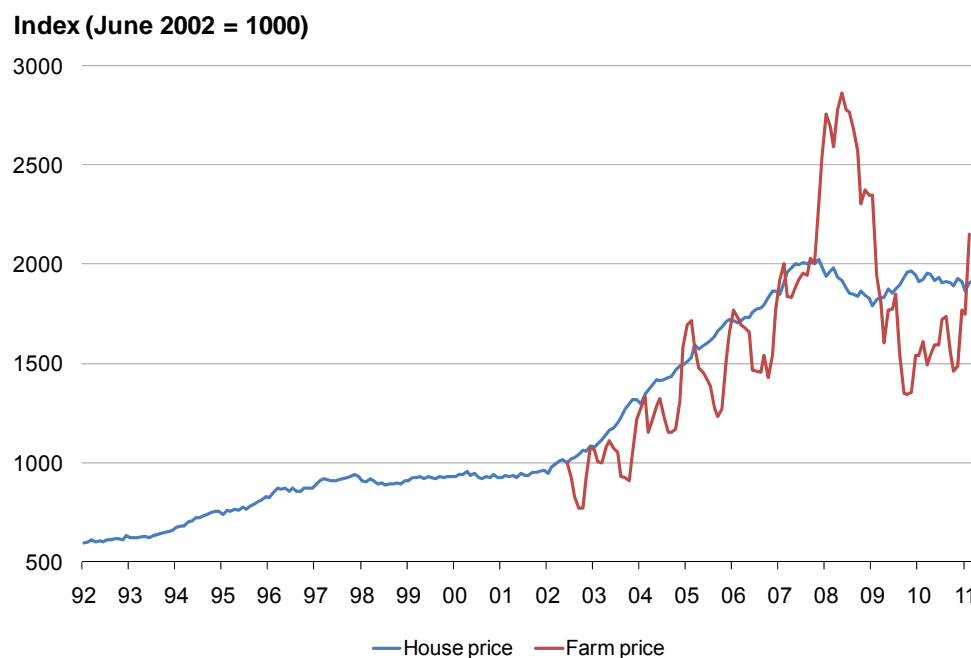
Studies of New Zealand house prices tend to indicate they are significantly overvalued. Fraser et al. (2008) estimated New Zealand's houses were overvalued by 25%. Since the peak of the housing market in 2007, Quotable Value New Zealand estimates that nominal houses prices have fallen around 5.8%. Meanwhile during this period, the CPI has risen by around 10.5%. This fall in real prices is partially reflected in the IMF's estimate that New Zealand houses are 15% to 25% overvalued (IMF, 2011).



In addition, New Zealand's farm prices have also risen quickly. Some of this increase can be justified by the strong growth in farm earnings to 2011.<sup>29</sup> However, estimates show that price-to-earnings ratios for farms doubled over the last decade from peak to trough (Figure 3). A special case is rural land waiting to be rezoned to residential. This is especially expensive, reflecting more the expected change in value associated with the change of use rather than overvaluation as a going concern.

Figure 12 shows the increase in New Zealand's house and farm prices. It suggests that since 2002 house prices have been above trend, while farm prices have been rising at a similar rate to house prices, but with greater volatility.

**Figure 12 - New Zealand's house and farm prices**

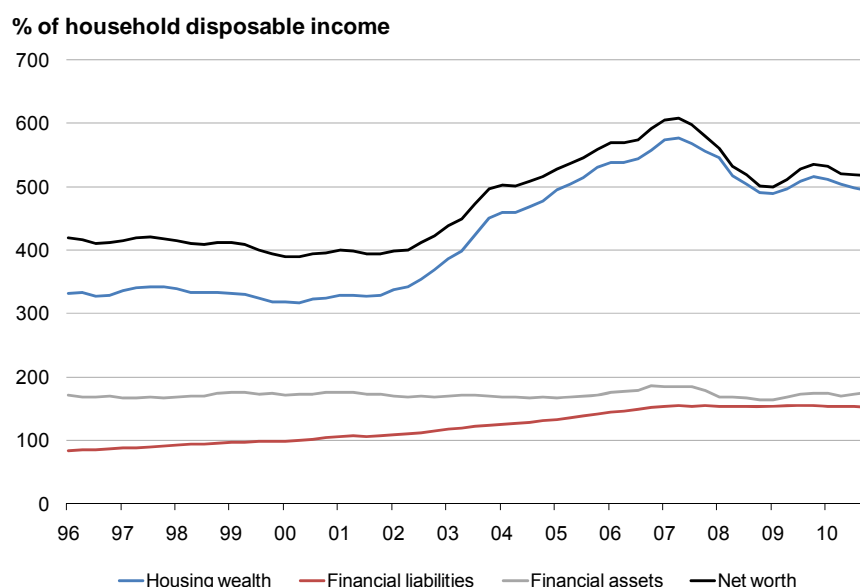


Source: Real Estate Institute of New Zealand

Figure 13 shows the importance of housing to household balance sheets. Property is not an ordinary asset class because of the high level of debt secured against it. A key risk is that some large shock impacting on all households could cause a self-reinforcing downward spiral between asset values and economic activity, causing financial stresses for households and banks as a result of the close interdependencies. The fall in New Zealand's housing markets since the GFC is small compared to the significant falls that some countries are experiencing (Steenkamp, 2010). This suggests that there remains considerable scope for house prices to fall (Section 6).

<sup>29</sup> Industrial and commercial property prices have also risen in price considerably, but do not pose the same level of risk to the banking sector and so are not considered in detail in this paper (this is not where New Zealand's most significant imbalances reside). This is because over the last decade household and farm debt has roughly tripled and quadrupled respectively, while business lending has roughly doubled and so now represents a reduced proportion of overall bank lending. This makes business lending relatively less of a threat if industrial and commercial property prices were to fall considerably.

**Figure 13 - Household assets and liabilities**



Source: RBNZ, The Treasury

### 4.3 Slow growth

Even in the absence of financial crisis, high levels of debt can still be a cause for concern. A specific shock in the property market, or more general concerns about the economic environment, could cause households to become apprehensive about their financial position. This could lead to a sharp reduction in private consumption to facilitate faster debt repayment, which if widespread enough would be associated with sustained slower economic growth from less private consumption. Furthermore, slower growth could also lower private investment as profitable opportunities reduce, feeding through into lower potential growth as labour productivity growth attenuates.

With this overall economic slowdown, unemployment could rise because growth may fall below potential for a sustained period. The cost of higher unemployment could be exacerbated if certain sectors of the economy associated with specialised skills shrank particularly quickly, creating a pool of unemployed that may find economic reintegration challenging (hysteretic-type effects). However, large-scale voluntary debt repayment reduces the likelihood of a sudden financial crisis.

It is possible, that through the stalling of domestic activity, less inflationary pressures could lead to an easing of monetary conditions that would be beneficial to growth in tradables and private investment. This could help offset the fall in private consumption. However, this may not be possible because of persistently poor international competitiveness from an unresponsive high real exchange rate. This may be due to atypical global factors that effectively prevent a deep and durable fall in the exchange rate and so reducing growth opportunities. Moreover, New Zealand's ability to quickly expand tradables as competitiveness improves is limited. The dominance of agriculture to New Zealand's export base means growth is driven more by biological and resource constraints than opportunity. This would leave government consumption or investment as the remaining source of demand, the feasibility of which is currently limited given the structural fiscal deficit.

## 5 Assessing New Zealand's resilience

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This part of the paper makes an on-balance overall judgement about New Zealand's on-going resilience. It is important to understand whether New Zealand can avoid the difficulties from economic imbalances that beset some countries from the GFC. The assessment is achieved by weighting the relative importance of the factors that contribute to and detract from resilience in Section 4.

The impact of the GFC across countries has not been uniform. The extreme outcomes generated by the GFC for some countries show how crisis can manifest. Lane and Milesi-Ferretti (2010) look at the impact of the GFC across the world economy and examine factors that may have led to differential impacts. They conclude that large current account deficits and domestic credit booms are important factors in explaining the severity of crisis outcomes. In addition, institutions and industrial structure matter. Countries with fixed exchange rates tended to fare more poorly, as did countries with greater trade openness and a greater reliance on the manufacturing sectors.<sup>30</sup>

To date, New Zealand debtors have maintained the confidence of creditors in spite of high structural private debts that may have been encouraged by policy settings, and deterioration in the fiscal position. While this can be partly attributed to a relatively low gross national debt position (Section 3.2.2), the quality of New Zealand's institutions and its economic structure have played a significant role. Together they appear to have created robust buffers that can absorb shocks, and thus shelter debtors from income and asset price volatility that would otherwise have affected their ability to meet obligations (Section 4.2.1). Moreover, over the short term, more cautious private saving and lending behaviours since the GFC may have further reduced the risks associated with large private debts. However, absent policy change, a transition to higher private saving could signal a sustained period of slow growth as the economy unwinds the past build-up of debt.

Nevertheless, irrespective of cause or rationality, the risks associated with large structural private debts remain. There is considerable uncertainty around the long-term behaviour of debtors and attitudes of creditors, in combination with a less robust fiscal position to manage inevitable future shocks. International experience over time shows that New Zealand's international investment position is at the upper end of the risk spectrum and is now at a level that has previously proved unsustainable. Therefore, it is conceivable that a New Zealand specific shock, or wider global disruption, could expose New Zealand's high debt level and lead to sharp adjustment (Section 4.2.2).

This intuition about the balance of risk is supported by external assessments from commentators and credit rating agencies like Standard & Poors. They recognise New Zealand's debt risks, but are generally sanguine about New Zealand's immediate

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<sup>30</sup> Short-term economic activity initially fell quickly in some Asian countries during the height of the GFC, but only to bounce back very quickly (e.g. Taiwan). This reflects the composition of their economic activity, which is dominated by goods with greater volatility of demand compared to commodities.

prospects despite increasing global-wariness of risk (i.e. risks are considered material but not acute). For example, in UBS's cross-country risk assessment, New Zealand ranks amongst the middle of its country balance sheet risk index (UBS, 2010). Using an array of financial statistical metrics, this level of risk was similar to Germany and Canada. The riskiest countries are the European countries currently under financial stress (Portugal and Greece), while the least risky tend to be the East Asian economies with high national saving rates (Taiwan and China).

Edwards (2006) estimated that New Zealand faced a 0.6% probability of a significant current account adjustment (defined as a reversal in the current deficit of 5% of GDP representing a difficult economic adjustment process) with a current account deficit of 3% of GDP. This probability rose to 5% at a current account deficit of 9% of GDP. These estimates were done at a time when offshore indebtedness was at similar levels as at present, but do not account for New Zealand's more stable Australian funding, which would likely reduce the risk. However, this assessment does predate the GFC and the adverse changes to the government's fiscal position, so is subject to some extra uncertainty.

Taken all together, these converging views suggest that New Zealand's private debt imbalances are significant, but not extreme. They do not point to an imminent crisis of confidence, particularly given that private debt positions have been generally showing some improvement since 2008. However, this rebalancing may not last if changes in private saving behaviours are not sustained. Moreover, the world is generally more fragile than it was, and New Zealand's high debts may mean it is disproportionately affected by future global shocks. Investor sentiment can change quickly as clearly illustrated in Europe over the past year. Such changes in sentiment can quickly become very costly and ultimately lead to forced economic adjustment.

Accordingly, it is desirable and prudent not to be complacent, and to build on the improving imbalance position in the near term, especially given the weaker fiscal position. To this end, it would be desirable for the government and individuals to take actions, to the extent they can, to further reduce the risk of financial crisis through reducing debt. However, the desired speed for the reduction in imbalances, and what constitutes an upper bound that needs to be avoided, is not clear.<sup>31</sup>

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<sup>31</sup> William Cline (2006) on Sebastian Edwards at the 2006 New Zealand macro policy forum – "Finally, New Zealand's economic policymakers could usefully seek to arrive at some consensus about the ceiling net international liabilities relative to GDP they consider safe, and begin to integrate a serious intention of staying within this limit into their overall economic policies. It is implausible that net liabilities should be allowed to rise indefinitely in the name of sole reliance on inflation targeting as the macroeconomic framework. For most countries a 100% of GDP level for net international liabilities would be risky. It is probably safe for New Zealand, but it would seem dangerous for policy makers to sit idly by if the ratio begins to rise much beyond this level."

## 6 Scenarios

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The Treasury's central expectation for the economy is set out in the economic and fiscal outlook section of the Budget Economic and Fiscal Update 2011. It is consistent with a view of continuing economic resilience, with incomes rising and some improvement in balance sheets.

The five-year forecasts show that economic activity is expected to steadily pick up from its current subdued levels following the earthquakes. Economic growth is expected to rise to around 4% in the March 2013 year before falling back closer to 3% in subsequent years. This economic pickup is expected to reflect earthquake-related investment, together with higher tradable activity and the current buoyancy in commodity prices expected to continue. Private consumption growth is expected to become a more important growth driver later in the forecast period, as household saving falls back towards historic norms. Underpinning private consumption growth, house prices are expected to start increasing by around 2% to 3% per annum from 2013 following a period of virtually no change. This compares to nearly 15% on average during the housing boom prior to the GFC.

Higher investment driven by the reconstruction of Christchurch will see a return to larger current account deficits of around 6% over the medium term. However, this is considerably less than before the GFC (around 8% of GDP). This is because there is an improvement in national savings. This is driven by higher household saving rates compared with prior to the GFC because of their current balance sheet concerns (albeit a diminishing driver over the forecast period), and higher government savings as the fiscal balance continues to improve. An expected fall in the exchange rate will also benefit tradables in the latter half of the forecast period. Higher expected current account deficits will see the net international investment position slowly tracking back towards its level prior to the GFC (Figure 5).

However, less benign paths for the economy are possible if “nothing” is done to reduce the threats to the economy. The following scenarios set out in more detail more extreme versions of the crisis risk identified in Section 4.2 from high debt imbalances. It is important to note that these are illustrative scenarios, rather than forecasts, and they should not be interpreted as describing the normal upside and downside risks that reflect variance around the central economic outlook.

It is difficult to predict or second-guess exactly how a financial crisis could unfold because of New Zealand's unique institutions and circumstances. While, in the first instance, a sovereign-debt crisis is unlikely in New Zealand, financial crisis could take the form of a domestic banking financial crisis. This could happen, if for example, a widespread bad property debt problem were to develop to the point that threatened banking solvency. Alternatively, it could take the form of a “sudden stop” in offshore capital inflows, if global capital markets were to seize up again, or if foreign investors were to reconsider

New Zealand as an investment destination.<sup>32</sup> Or it could be some combination of a “sudden stop” and a banking crisis.

## 6.1 Banking crisis

The majority of bank lending in New Zealand is based more against an assessment of future income, and so ability to service debt, rather than the value of collateral. This reflects that mortgage lending to households and farms in New Zealand is generally recourse to a mortgagor’s total assets and future income. It means banks’ greatest risk exposure is to sharp economic contractions rather than falls in the value of property that can cause wide spread negative equity. A sharp economic contraction would cause widespread unemployment, reduced incomes, or increased debt-servicing costs, which in turn would cause nationwide financial stresses leading to defaults.

However, lending mainly against income instead of asset values does not mean the solvency of New Zealand’s banking system is immune to declines in the property market, especially given the relationship between the property market and economic activity. A combination of liquidity and solvency problems in the property market caused by some shock can compound one another with aggravating economic consequences.<sup>33</sup> For example, forced property sales can lead to lower asset prices, setting off further solvency concerns, and so even tighter lending and economic conditions, reducing liquidity even more, which compounds soft prices (i.e. a downwards self-reinforcing spiral). This type of phenomena is often described as a “Minsky moment” after the economist who analysed asset and credit market cycles (Whalen, 2008).

Given New Zealand’s currently high property prices relative to trend, a fall in prices below some notion of “fair valuation” would necessarily involve a very significant fall in price. This would have large associated economic-activity consequences, and would likely cause extreme banking stresses that required remedial actions by shareholders to the further detriment of the wider economy.<sup>34</sup> If bank losses were large enough and widespread, it could pose a significant risk to the whole banking sector. This could feed back again into lending behaviour, confidence, and so the macro economy, as well as the fiscal position. This has been the case in Ireland, where house prices have fallen by around 40%, and in the United States, which has seen house prices fall by around 30%.

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<sup>32</sup> Liquidity crises often occur in anticipation of a solvency crisis, as funding lines are withdrawn so creditors can avoid exposure to at risk institutions. Pure liquidity crises arise from systemic disruptions to funding markets and are generally short-lived and can be mitigated through the RBNZ providing liquidity in the interim. Accordingly, the focus is on solvency and attendant liquidity problems.

<sup>33</sup> Property market shocks can come from a variety of sources, but common causes include significant shifts in:

- property investor sentiment due to a change in perception of returns;
- bank credit criteria as a result of concerns about the property market and/or bank funding concerns; and
- economic activity and/or interest rates due to some macroeconomic shock.

<sup>34</sup> This could include proactively shrinking balance sheets (deleveraging) in anticipation of expected funding and bank capital constraints.

In Ireland, the combination of the housing and banking crisis has resulted in its GDP falling by around 14.5%. This has recently led to international financial assistance being required to help the Irish government manage the economic and financial consequences. Unlike Ireland, which has a large banking sector relative to the size of its domestic economy, the smaller size of New Zealand's banking sector means a widespread systemic banking crisis is likely to be more manageable within New Zealand's financial resources.

## 6.2 “Sudden stop”

Debt-raising activities by rational individuals should not pose a risk to the wider economy. However, a key risk for New Zealand arises if debt, even where driven by rational individuals, accumulates economy-wide to the point that it leads to global markets reassessing New Zealand's credit worthiness (i.e. national solvency risk).<sup>35</sup> In particular, investor attitude could reach some tipping point if offshore debts were to increase rapidly again, encouraged by some combination of government policy settings, property boom and high real exchange rates.

Such a tipping point may be preceded by warning signs pointing to international creditor unease. For example, because the majority of New Zealand's offshore debt is funded through the banking sector, a trigger could be associated with growing risk around a particular systemically-important intermediary.<sup>36</sup> Another trigger could initially manifest in the form of a lower sovereign credit rating, which would also lead to less favourable funding terms across the economy. Typically sovereign credit ratings represent the best credit rating in the country, and credit rating agencies take into account external indebtedness in assessing sovereign credit risk. This is because the sovereign is seen as the residual risk carrier in the economy.

Whatever the trigger, a global reassessment of New Zealand's risk profile or general fall in global risk appetite would likely raise the New Zealand's risk premium in the first instance. In the absence of a countervailing monetary policy response, this would lead to a significant increase in the cost of credit for new lending, and/or lead to severe credit restrictions (i.e. some sort of credit rationing).

In the extreme, this process could result in a “sudden stop” on New Zealand international funding, as international investors sought to reduce exposure to New Zealand-denominated investments. The impact of a “sudden stop” would be through two main

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<sup>35</sup> New Zealand's pure liquidity risk is not discussed for similar reasons as discussed in footnote 32. However, as seen in the last quarter of 2008, global liquidity crises are possible and New Zealand was impacted like all other countries. Lower offshore debt would have lessened the impact of this crisis, but it would not have prevented New Zealand being affected, as it was not a New Zealand-specific problem, i.e. even creditor economies were impacted.

<sup>36</sup> A poor credit assessment of New Zealand is effectively an adverse assessment of these institutions, the credit downgrading of which would have impacts transmitted to the rest of the economy through higher funding costs.



channels, interrupted funding markets and a lower exchange rate.<sup>37</sup> These are discussed further in the Appendix to this paper.

Overall, the combination of interest rate and exchange rate effects in a “sudden stop” scenario could be expected to significantly reduce GDP in the short term. However, encouraged by a competitive exchange rate, eventually new exporters would come on stream in sufficient scale to offset domestic weakness, but this would take some time. Experience overseas shows that a financial crisis can depress an economy for many years (Reinhart and Reinhart, 2010).

Although the actual initial GDP fall would depend on financial conditions in the rest of the world, a 10% fall in actual GDP over a two-year period, or 15% relative to potential GDP, would certainly not be unprecedented looking at overseas experiences from country specific episodes. According to Okun’s law there is a relationship between output and unemployment. For example, a 15% reduction in GDP from potential could imply an increase in the unemployment rate to around 12%, i.e. around 7.5% above the natural rate. A fall in GDP of that magnitude would have a significant impact on the fiscal position, which could lead to an aggravating fiscal policy contraction should fiscal sustainability come under threat (Fookes, 2011). Moreover, the large fall in domestic activity and rise in unemployment could well begin to raise serious issues about the soundness of the assets of the banking system itself, which would further exacerbate the downturn. In that sense, problems and risks can feed on themselves.

### 6.3 Combination crisis

A large enough banking crisis precipitated by internal events could also trigger a further aggravating “sudden stop”, as foreign creditors are likely to be concerned about their exposures. Similarly, a “sudden stop” could cause a banking crisis from falling economic activity and growing unemployment causing bad debts.

Crisis can, therefore, cascade down from offshore credit markets to New Zealand’s banks and then individuals, or cascade up the debt chain from individuals. This interrelationship is not unexpected, as creditors no matter where they are located (offshore or domestic) have the same motivation to be repaid. Therefore, it is not surprising they can act in unison in response to pervasive threats. A quote from Martin Wolf, a journalist for the Financial Times, captures this sentiment well; “... bad things go together. In a boom, property prices jump, current account deficits explode, fiscal receipts soar and governments borrow easily; then, in the slump, property prices tumble, the financial system implodes, capital flows out, the currency falls, the fiscal deficit soars and inflation jumps” (Wolf, 2009).

A combined “sudden stop” and banking crisis would have severe consequences for the economy, as the ripple effects work through the economy and aggravate and reinforce

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<sup>37</sup> Edwards (2005) found current account reversals are historically associated internationally with a 15% to 45% depreciation, 240 to 570 basis point interest rate increases and GDP per capita declines of 2.5% to 5.5%.



each other. It was this combination of factors that ultimately required the Irish government to seek funds from the European Union and International Monetary Fund.

## 7 Policy response

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Reducing the size of New Zealand's macroeconomic imbalances is likely to increase New Zealand's resilience and economic growth prospects. Therefore, it is worthy of consideration whether there are policy changes that could support this. Accordingly, this section looks at the scale of adjustment, and the possible policy levers to this end.

In order to make policy recommendations about how to mitigate imbalances, knowledge about causality is important to be able to properly identify possible rectifying policy interventions. In Section 3.3, alternative hypotheses were put forward to explain what has been causing high debts, either:

- persistent wealth effects from property that encourage private consumption, which leads to tighter monetary conditions and banks intermediating capital inflows that passively respond to finance the current account deficit; or
- more active capital inflows that drive the exchange rate, current account, and bank intermediation that together lead to higher consumption and tighter monetary conditions.

While it is possible for both explanations to hold to some extent, the passive capital inflow hypothesis in response to New Zealand households' relatively low saving rate appears to be the most likely. This is because capital will only be attracted to New Zealand if risk-adjusted interest rates are relatively attractive compared with global alternatives. Because of New Zealand households' propensity to over-consume at any given interest rate, the RBNZ needs to set interest rates relatively high to achieve price stability.

As a crosscheck on this logic, the following alternative perspective yields the same result. If households did not have this high propensity to consume at any given interest rate, then banks would respond to strong capital inflows beyond what is needed to satisfy household demand for funds by lowering deposit interest rates to the point that discouraged capital inflows. Assuming fixed intermediation margins, so the benefit of lower deposit rates are passed through to borrowers, the fact that this does not happen suggests that household demand for funds is highly elastic to interest rates. This is precisely because of households' high propensity to consume. Either way, the result is policy needs to address why national saving is so low, and thus interest rates so high.

### 7.1 Scale and direction of adjustment

A rebalancing economy would see a reversal of long-term trends involving: debt repayment to improve New Zealand's net international investment position, or at least an improvement in debt ratios with a closing of the gap between national saving relative to investment; and property-related ratios returning to long-term averages. This is likely to

involve policies that promote a relative shift away from domestic consumption to export-led growth. This would provide room for the economy to reduce debt without putting growth at risk through a rebalancing of the economy from domestic activity to tradables. This could even provide an opportunity for higher sustainable growth. This is because a shift towards tradables could improve economic performance more generally, if exports are associated with greater productivity due to exposure to international competition (Fabling and Sanderson, 2010).

In particular, raising national saving would reduce demand in the economy and this would have the outcome of creating an environment conducive to a durable and deep depreciation in the exchange rate, which would enhance competitiveness and growth in tradables. While there is no explicit exchange-rate target (rather it is an outcome of a range of factors) IMF analysis estimates that in order to stabilise the net international investment position at its pre-housing boom level (i.e. around -75% of GDP, which is still high by international standards), the real exchange rate would need to depreciate by around 25% (IMF, 2010). The New Zealand: 2011 Article IV Consultation – Staff Report updated this estimate, the real exchange rate would now need to depreciate by around 15%.

Research by the New Zealand Institute of Economic Research (2010) found that an effective increase in national saving (a decrease in the average propensity to consume from 84% to 80%) would reduce the negative net international investment position from to -60% of GDP by 2025. This would lower offshore interest payments by \$10 billion and the cost of capital by 10%. All else equal, this would have overall economy-wide beneficial impacts by 2025 of raising investment by 13%. This positively impacts on GDP by 4% by 2025, national disposable income by 9%, and would raise real wages and consumption by 7%. The Treasury (2010) *Saving in New Zealand – Issues and Options* shows that a 4% of GDP increase in national saving would improve the net international investment position to -70% by 2020, while a 2% improvement would be necessary to hold the level at that time constant.

## 7.2 Levers

This section briefly canvasses possible policy mechanisms or levers to reduce economic imbalances. For a more detailed discussion, refer to *Saving in New Zealand – Issues and Options* (Treasury, 2010). The Treasury Paper took the approach that reducing imbalances will require a consistent policy framework that first encourages economic growth (and so has merit in its own right), while also addressing national saving. The main lever was through raising government savings more quickly, but doing this in a way that also encourages private saving by removing the disincentives to higher national saving.<sup>38</sup>

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<sup>38</sup> Secretary for the Treasury John Whitehead said in a speech of 18 November 2010 “A faster exit from expansionary fiscal policy settings over the next few years would mean interest rates will not need to rise as fast as they otherwise might, which will in turn assist to dampen the exchange rate cycle in the economic upturn. For those of you with any doubt what facilitating an easier monetary stance can do for the exchange rate may I point you to the recent US experience.”

In particular, this involves looking at transfers and tax policies to encourage saving over consumption.<sup>39</sup>

Given the role of property in excessive domestic consumption, it would be desirable to reassess the pros and cons of regulatory settings in the housing market that artificially raise property prices. Possible structural changes to the property market to lessen deviations away from trend include: increasing the availability of land for development; reducing the preferential tax treatment of property, and reducing the costs and constraints associated with the regulations governing property development (Department of Prime Minister and Cabinet, 2008). However, this would need to be staged carefully to avoid crystallising a crash in property values from a sudden supply increase, and conflicting too greatly with environmental objectives.

Moreover, it is important to have the ability to generally mitigate debt-driven asset booms, without resorting to higher interest rates as the only tool. This helps to avoid damaging tradables through an overvalued exchange rate. There are two main policy levers to this end. First, employing instruments designed to encourage prudent lending over the economic cycle, so called “macroprudential policy”. Macroprudential policy goes beyond traditional prudential policies employed by authorities to regulate financial intermediaries through its dependency on macroeconomic conditions. For example, in a situation of rapid credit growth, coincident with quickly rising property markets, macroprudential policy would involve more stringent prudential requirements once pre-determined economy-wide thresholds had been breached. This would help temper asset cycles over the long term, which may also have ancillary benefits for monetary and economic development (RBNZ, 2006). However, how this could be achieved is still a matter of some ongoing debate (Bollard, 2011). Second, better fiscal management and institutions may prevent pro-cyclical increases in government spending during economic upturns. This would also reduce the work monetary policy needs to do to dampen activity (Brook, 2011).

The government has already in place a policy agenda to raise New Zealand’s sustainable growth rate. This includes what it has articulated as the six key drivers of stronger economic performance – removing red tape and unnecessary regulation; lifting education and skills; investing in productive infrastructure; improving performance across science, innovation and trade; providing better, smarter public services; and strengthening the tax system. These jointly form a programme to lift growth through higher productivity in a more balanced way (Budget, 2011).

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<sup>39</sup> Ricci et al (2008) found that a 1% increase in government consumption as a percentage of GDP can raise the exchange rate by 3%.

## 8 Conclusion

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The main findings of this paper are that large imbalances arise from significant movements in factors of the economy away from long-term norms. Imbalances can impact on growth, but are not necessarily inconsistent with growth. Much depends on the causes of those imbalances and whether they are temporary or structural in nature. New Zealand's structural imbalances manifest mainly in the form of high and sustained household/farm debt. In turn, these debts are related to New Zealand's high and sustained offshore debt.

The recent devastating Canterbury earthquakes will have a significant medium-term impact on the economy. They have weakened the financial positions of both the private and public sectors. However, given the forecast recovery, these earthquakes are not expected to materially add to the long-term trend of structural increases in debt in the economy. It is the long-term propensity of the private sector to borrow that is the main issue.

While debt is not necessarily bad, it does carry risk if overly employed. In particular, between 2002 and 2007 domestic and offshore debts increased significantly and rapidly. That increase was driven primarily by banks borrowing offshore to fund property market activity of households and farmers, coincident with increases in private consumption and investment associated with the wealth effects from rising property prices.

Strong demand for resources led to inflation pressures, which resulted in tighter monetary conditions than would otherwise have been required to achieve price stability. While tempering private consumption and investment, the resulting elevated real exchange rate has been detrimental to the performance of the tradables sector.

These high private sector debts create risk for New Zealand's economy through the possibility of a sudden financial crisis or period of prolonged slow growth. Financial crises can arise when creditors act on solvency concerns about systemically important institutions like major financial intermediaries. This can lead to sustained and reduced economic activity as financial intermediaries work through bad debt and funding related difficulties, resulting in wider macroeconomic disruptions. Alternatively, should household/farm debtors collectively make the balance sheet adjustment before significant creditor concerns arise, the outcome could be a period of slower economic growth because of lower consumption.

While the private sector can generally be relied upon to exhibit rational borrowing behaviours (the so-called "consenting adults" view of the world), because of imperfect information and markets this cannot always be assured. Private decisions can be strongly influenced by government tax/transfer and spending policies, or regulatory settings that inadvertently encourage borrowing. In particular, the general willingness of the private sector to continue to borrow against property at prices at substantial multiples of disposable income suggests that it is unlikely that policy has had no part to play. High property-related leverage puts a spotlight on shocks that can impact on the property market. Such a shock would adversely impact on balance sheets throughout the economy, including New Zealand's banks. Because of banks' relatively high level of exposure to property-related debt, solvency is tied to the ability of property owners to

service their debt. Ultimately the government's balance sheet would be affected, as economic activity and tax revenue is adversely impacted in this situation.

However, there are a number of favourable factors that add to New Zealand's resilience against shocks and reduce risk. Excluding finance companies that undertook very risky property-development financing, banking practices were generally prudent and limited to domestic operations, so reducing debt exposure to risky offshore assets. In particular, banks have avoided significant bad debts by largely only making loans to property owners that can generally afford them. This has been helped further by these borrowers being responsive to risk and financial circumstances having tempered debt use since the GFC. On the liabilities side, hedging of currency risk from offshore debt and using offshore parent banks as a reliable source of funding has helped with the financial stability of banks. Moreover, since the GFC, banks have reduced the proportion of their funding from relatively risky sources such as short-term wholesale debt. In addition, New Zealand's stable macroeconomic environment of relatively strong public finances and fiscal flexibility, credible monetary policy focussed on price stability, and flexible exchange rate provide considerable scope to respond to, and dampen, economic shocks.

The sum total of New Zealand's institutional arrangements acts to create robust macroeconomic buffers that generally work very well individually, but also combine well to provide higher resilience relative to many other countries that share similarly significant imbalances. This means, given New Zealand's present level of high but relatively stable private debt imbalances, the likelihood of imminent financial crisis is low.

Despite New Zealand's economic resilience to date, and short-term improvements in the current account deficit and property exposures, New Zealanders should not be complacent. Overseas experiences show how doing "nothing" has risks that could have long-term adverse implications for living standards through poor economic performance. In particular, debt resilience has its limits in a more risk averse world, which may see New Zealand close to the limits of prudence when current debt-related improvements in financial position may not be viewed as structural. This is especially the case given the recent emergence of significant structural fiscal deficits. The government's weaker post-GFC fiscal position would limit its ability to respond to a fresh crisis.

While the fiscal position is expected to improve, there is the possibility that household consumption accelerates quickly as the economy recovers, resulting in offshore liabilities continuing to grow in an unsustainable way. Moreover, a significant proportion of offshore debt is still short-term, and overall debt levels are still high and remain secured against elevated property prices. This means that any significant shock could cause an adverse self-reinforcing dynamic between asset values, economic activity, and financial stresses for households and banks.

Like the recent Canterbury earthquakes, the nature of potential macroeconomic shocks and the likelihood of them eventuating are difficult to identify with precision or confidence. The wakeup call from recent adverse experiences in the world economy shows there is a range of low probability, but high impact, scenarios that could have very significant long-term adverse implications for New Zealand's living standards. These could involve international creditors' unwillingness to lend to New Zealand institutions virtually at any price, a so-called "sudden stop" and/or a banking crisis that threatens banking solvency.

Accordingly, to the extent that it can, it would be desirable for government along with individuals to be vigilant and take actions that continue to build resilience, and so reduce the risk of costly economic adjustments from imbalances. These actions may carry some level of short-term costs to living standards, but they are likely to be less than in a crisis situation when debtors are forced quickly to live within their means. Moreover, if carefully designed, a policy response could aid in the transition to lower debt levels, while also avoiding slow economic growth (successful rebalancing). This is more likely if the policy prescriptions can be justified on their own merits as growth enhancing.

To maximise the chance of successful rebalancing, actions need to boost national saving relative to investment, as well as incomes. This would see debt ratios fall across the economy and incomes catch up with property prices. Higher saving would also likely help produce a deep and durable exchange rate adjustment through lower interest rates, as slower domestic demand growth would reduce inflationary pressures. This would enhance competitiveness and facilitate resources shifting from consumption activities into tradables production and investment, which would be beneficial to maintaining economic activity levels. Moreover, a change in the composition of economic activity could provide an opportunity for higher sustainable growth provided the increased exports are associated with greater productivity.

To the extent that persistent excessive demand underpins the national saving problem, then specific solutions should involve examining the drivers of over-consumption as well as the impediments to saving. The government could first lead by reducing its own demands on economic resources through means that also encourage private saving (i.e. returning to surplus sooner through constraining spending). Other structural policy changes for consideration include: adjusting policy settings that have been encouraging private consumption relative to saving; considering new macroprudential tools that maybe able to temper long-run asset and credit cycles; and examining structural changes to the cost and availability of houses.



# Appendix: Financial market impacts of a “sudden stop”

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## Interrupted funding markets

Under a worst case scenario, the rising cost of servicing offshore debt would further increase the level of borrowing required to meet the higher servicing cost. This could precipitate a dynamic of spiralling debt. In this situation, demand for New Zealand dollars could completely dry up, as investors sought to reduce exposure to New Zealand-denominated investments because of insolvency fears. This is a so called “sudden stop” on New Zealand international funding. National solvency risk would therefore first present as liquidity risk with banks not being able to roll over their New Zealand denominated/hedged offshore loans. In this instance, banks would have to rely heavily on the RBNZ to bridge the funding gap.<sup>40</sup>

Although New Zealand never fully reached this scenario, except but for a brief period at end of 2008, it was still necessary for Crown guarantees to be put in place to assist banks in raising offshore funds. However, bank recapitalisation was not required as banks remained solvent throughout the period.

A seriously damaged banking sector would severely restrain domestic credit availability, which would have long-term consequences for GDP levels. But also demand for credit would be low, as eventually individuals would face default as result of the financial crisis. This would further add to banks financial stresses.

## Lower exchange rates

With international investors avoiding New Zealand currency assets together with considerable monetary stimulus, the currency would likely come under pressure. Current buying pressure would turn into selling pressure. The result would be offshore creditors taking currency losses. This is the very risk that international creditors would have been concerned about and trying to avoid. Therefore, paradoxically, in trying to avoid losses, first movers taking remedial actions to reduce New Zealand dollar exposure would be the cause of the losses that late movers are likely to incur. This is particularly relevant to New Zealand, as a significant portion of New Zealand’s offshore funding remains short-term wholesale debt that has to be regularly rolled over.

A large fall in the currency would have little direct financial impact on New Zealand’s banks because most foreign-currency debt is hedged. However, the fall could be quite

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<sup>40</sup> Domestic currency funding can always be met through the creation of money. This would be more feasible in the low inflation environment associated with a sudden stop, when non-conventional monetary policy easing as well as low policy interest rates could be part of the policy mix.

disorderly at times, and require some intervention to maintain a functioning market.<sup>41</sup> The currency could fall well below the low recorded in 2000 of a TWI around 46; well below what is likely to be necessary for achieving external balance (New Zealand currently has a TWI around 70).

Very large exchange-rate movements, if sustained for any length of time, would have large redistributive effects across the economy. This would have substantial real economic costs weighted to the short term, as the domestic economy contracted in the transition to a lower equilibrium exchange rate level. This is because import prices would be pushed sharply higher to the detriment of consumption. But, a very low exchange rate would also provide a large income boost to exporters, which would encourage a switch to further tradables production, notwithstanding the natural time lags in growing further agricultural output.

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<sup>41</sup> Previous significant falls in the exchange rate in 1997/98 and 2008/09 are not examples of disorderly adjustments. These episodes were not New Zealand-specific, but were part of a broader global adjustment to global shocks. A New Zealand-specific event could be expected to be more rapid and larger.



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