pensionbriefing

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What do New Zealanders own and owe? News from SoFIE 2004-2006

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This *PensionBriefing* reports on one aspect of the second wave of data from the Survey of Family Income and Expenditure (SoFIE). Overall, the composition of New Zealanders' assets and liabilities do not seem irrational, despite other claims to the contrary.

In summary

New Zealanders are frequently castigated for their financial behaviour. For example, Morgan (2010) and the retiring chief executive of AgResearch, Andy West[1] claim New Zealanders have too much invested in property, particularly in their homes and other residential real estate; and they have borrowed too much and don't have much invested in financial or business assets.

These claims do not appear to be supported by the most recent results from the government's longitudinal survey (SoFIE), as discussed in the Treasury's December 2009 report (Scobie & Henderson, 2009).

This report looks at, among other things, New Zealanders' assets and liabilities over the 2004-2006 period. By way of a snapshot as of 2006, and for all New Zealand households:

- Total assets were worth $846 billion.
- Total debt was $117.6 billion (13.9% of total assets).
- Net assets were $728.4 billion.
- Net housing assets were 44.6% of total net assets.
- Net financial assets were 17.99% of total net assets.
- Net business assets were worth 19.78% of total net assets.

Over the two years between 2004 and 2006 (for the same survey group), total net assets for all households rose 22.8%; total debt included in SoFIE grew by 11.9%; net housing assets fell slightly as a proportion of the net total (-0.55%) while net financial and business assets in total grew by 34.1%.

The Treasury's report puts a number of caveats on some of the SoFIE results but the total numbers for all households seem relatively consistent with earlier data. That is not to say that every household has an appropriate asset/liability mix; only that overall, households' balance sheets seem more conservative than many commentators suggest.

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[1] See *AgResearch boss calls for compulsory super*, as reported by the New Zealand Herald 13 May 2010 here.

Background

SoFIE is a longitudinal survey conducted by Statistics New Zealand over an eight year period, 2002-2010. It collects financial data about individual New Zealanders every two years during that period, starting in 2004. Because the same individuals supply information during the whole period, the collection of 'snapshots' at each collection date can be 'joined together' to give a picture of how participants change their position over the period.

The usual surveys, like the *Household Saving Survey 2002*, take only a snapshot of what participants are doing at the time of the survey.

Longitudinal surveys like SoFIE are complex to organise and analyse but can give rich insights into behaviour. For example, although SoFIE was not planned around KiwiSaver, the eight years straddles the period before KiwiSaver started, during its introduction and will cover the first three years of KiwiSaver after it started in 2007.

Scobie and Henderson's (2009) report looks at a net wealth approach to New Zealanders' savings over the period 2004-2006[2]. The net assets of participants are added for 2004 and for 2006 and the difference, adjusted for inflation, represents the increase in net wealth, or 'savings', over the period. This is the 'stock approach'. The alternative 'flow approach' tries to see what individuals earn, what they spend and what, therefore, they have left over. This measure tends to assume that this difference is 'savings'.

Much of the report analyses the results of the 'savings' calculations.

This *PensionBriefing* looks at one aspect of the 2009 report: the financial condition of households' balance sheets in 2004 and 2006: how much did all New Zealanders own and owe? The last time there was a full look at this was with the *Household Saving Survey* (HSS) conducted by Statistics New Zealand and the Retirement Commission in 2002 (Statistics New Zealand, 2002). The *PensionBriefing* compares the HSS data with the data provided in the Scobie and Henderson report.

How does SoFIE work?

SoFIE started in 2002 with a quite large sample of New Zealanders.

> "The survey began in October 2002 with an original sample size of about 11,500 households, amounting to over 22,000 individuals 15 and over. Children younger than 15 who were living in households selected for the survey will also be tracked and will be surveyed from age 15. The survey will be run for a total of 8 years. The core survey collects information on family characteristics and labour market and income spells. An assets and liabilities module and a health module are included in alternate years." (Scobie & Henderson, 2009, p. 20)

For the assets and liabilities module, SoFIE asks participants to list everything they own and owe at two-yearly intervals. The first and second of these (2004 and 2006) have been analysed by Scobie and Henderson. They encountered difficulties with some of the data with assets 'appearing' unexplained in Wave 4 (2006) and other assets disappearing, unexplained, from Wave 2 (2004). Also:

- superannuation assets are not valued properly: survey participants were asked what the value of their entitlements were. By contrast, the 2002 HSS asked the Government Actuary to value particpants' superannuation entitlements.

[2] The complexity of the analysis explains why, only now, we are seeing the 2006 results. It will probably take another year before the 2008 financial data are available.

- SoFIE largely ignored family trusts' asset holdings though counted any loans by the family to the trust as assets of the household.
- Respondents were asked for the *net* value of business assets. This means we cannot be confident of the 'total debt' figure (that may not count all borrowing in respect of business investments); nor the gross value of business assets.

With those reservations, the survey's results for the sample group are then scaled up from the sample group to reflect the population as a whole.

The report's core conclusion was:

> "…. this paper presents initial estimates derived from SoFIE. … The estimates were made by comparing net wealth in 2004 with that in 2006 at the individual level and computing the implied real saving rate on an annual basis. This yielded an overall median estimate of 16% of gross income. This is of the same order of magnitude as the long run average annual saving rate measured from the aggregate household balance sheet from [the Reserve Bank of New Zealand], which was 16% of disposable income, equivalent to about 12% of gross income." (Scobie & Henderson, 2009, p. 55)

However, the report also found that, taking housing out of the equation, the annual saving rate of 16% rate fell to 5%. As the report noted "Asset revaluations are therefore a potentially large contributor to changes in household net wealth." (*ibid*, p. 56)

Overall assets and liabilities

The report also looked at all the assets and liabilities of all New Zealand's households as a group. In part, this was to allow comparisons with the RBNZ's annual survey[3]: more on this below. This analysis allows an overall (or 'aggregate') look at what all New Zealanders were doing at 2004 and 2006. This approach was also used in the HSS 2002.

Table 1 puts the three sources of information together – the HSS 2002 and both waves of SoFIE data (2004 and 2006).

Table 1: Recent surveys of New Zealand households' wealth

	HSS 2002 (Note 1)	**SoFIE 2004**	**SoFIE 2006** (Note 2)
Total assets	$444 billion	$698 billion	$846 billion
Net assets	$376 billion	$593 billion	$728 billion
All housing - net	35.11%	45.19%	44.64%
Financial assets - net	23.40%	15.85%	17.99%
Business assets - net	22.34%	18.72%	19.78%
Total debt (Note 5)	15.37%	15.06%	13.91%

Notes:

1. The data for the HSS were actually from 2001.
2. Scobie & Henderson (2009) adjusted the 2004 SoFIE data by inflation to 2006 values for comparison purposes. The HSS 2002 and SoFIE 2006 numbers are contemporary values.
3. The percentage values are in all cases a proportion of total net assets.
4. There are comparability issues between the HSS and SoFIE. This *PensionBriefing* has also allocated HSS assets on a basis that attempts some consistency with the broader categories used by the report in summarising SoFIE data.
5. Some business debt may be included (if secured on housing or as a personal loan) but there will be separately debt raised directly by the business that is not included.

New Zealanders have a high proportion of their total assets in housing of all kinds: home, rental investments, bach, timeshare, but probably less than most might expect.

[3] Available on the RBNZ's website here.

Across the three sources of data, the proportion of net total assets that comprised net (after debt) housing was between 35-45% of the total.

In more detail

Tables 2-5 below look at the data behind Table 1 in more detail.

(a) Housing:

Table 2: More on housing assets

	HSS 2002	SoFIE 2004	SoFIE 2006
Total housing assets	$187 billion	$349 billion	$420 billion
Housing debt (note)	$55 billion	$81 billion	$95 billion
Net housing assets	$132 billion	$268 billion	$325 billion
Net housing as % net all	35.10%	45.19%	44.64%
Net housing $ value increase	n.a.	+103%	+21%
Housing debt as % all debt	79.88%	77.08%	80.93%

Note: 'Housing debt' includes loans that are secured on the home but that are used to provide capital in respect of businesses. That may not be all 'business debt'.

Over the five year period covered by the three sets of data, the total value of housing (before debt) grew spectacularly (+125%). Because housing debt grew at a slower rate (+73%), net housing grew at an even greater rate (+146%). Despite this, net housing assets remained at somewhat less than half of all net assets over the period because those also grew substantially (+94%: see Table 1).

The growth in net housing assets (+$193 billion in Table 2) contributed about half (55%) of the growth in total net assets (+$352 billion: see Table 1).

As an aside, the 2006 SoFIE data on housing assets add to the picture of the amount New Zealanders have invested in residential rental properties. Our *PensionBriefing 2010-1*[4] questioned the Tax Working Group's estimate of $200 billion in that type of investment. Based on data from other sources, we suggested the amount was more likely to be in the $60-100 billion range.

The value of all investment property in SoFIE in 2006 was $93.47 billion, including $48 billion in residential rental property.

Updating the $48 billion in 2006 by property price changes from, say, September 2006 to April 2010 (assuming no change to the 2006 ownership patterns and using the REINZ house price index[5]) the estimated 2010 value of residential rental investments would be about $52 billion, below the lower bound of our earlier estimate.

(b) Financial assets:

New Zealanders also have steadily increasing amounts held in 'financial assets'. These must be reduced by 'financial debt' that covers credit card debit balances, student loans, finance company debt etc.

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[4] Available from the RPRC's website here.
[5] The REINZ index data are available here.

Table 3: More on financial assets

	HSS 2002	SoFIE 2004	SoFIE 2006
Total financial assets	$102 billion	$118 billion	$153 billion
Financial debt (Note)	$14 billion	$24 billion	$22 billion
Net financial assets	$88 billion	$94 billion	$131 billion
Net financial assets as % net all	23.40%	15.85%	17.99%
Net financial assets' increase	n.a.	+7%	+39%
Financial debt as % all debt	20.12%	22.92%	19.06%

Note: 'Financial debt' includes bank debts some of which will be incurred in respect of businesses. In the HSS 2002, bank overdrafts were $6.7 billion (10% of all debt and 48% of all financial debt). Equally, some 'housing debt' in Table 2 will be incurred for business purposes.

Net financial assets grew by 49% over the five years; somewhat less than the growth in total net assets (+94%: see Table 1).

(c) Business assets:

Table 4: More on business assets

	HSS 2002	SoFIE 2004	SoFIE 2006
Total business assets	$84 billion	$111 billion	$144 billion
Business assets' increase	n.a.	+32%	+30%
Business assets as % net all	22.34%	18.72%	19.78%

Note: SoFIE participants were asked for the net value of 'business assets'. There is therefore no record of their gross (before business debt) value; nor of the amount of debt raised directly by the business[6].

Business assets grew by 71% over the period. There is no information on how much households have borrowed for business purposes so the net business asset position is unknown.

(d) **Debt:**

Table 5: More on debt

	HSS 2002	SoFIE 2004	SoFIE 2006
Housing debt	$54 billion	$81 billion	$95 billion
All other debt	$14 billion	$24 billion	$23 billion
Total debt	$68 billion	$105 billion	$118 billion
Debt as % all assets	15.37%	15.06%	13.91%

Total household debt grew over the five years by 74%.

The distinction in the data between 'housing debt' and all other debt (including 'business debt') is arbitrary. There are no published data on money that is borrowed by households purely for business purposes. Each of the surveys classifies the debt on the basis of how the loan has been organised rather than the purpose for which it was organised. There is also no record of any borrowing by the business itself rather than by the household in respect of the business.

[6] Thanks to Lisa Meehan (Policy Analyst at the Treasury) for drawing our attention to the fact that SoFIE data include only net business assets. This forces the comparisons by asset category into using only net values and explains the changes in the tables from the earlier version of this *PensionBriefing*.

Comments on overall assets and liabilities

Tables 1 to 5 show the position for all households. They do not demonstrate, for example, that every household has less than half of all assets in housing, only that all households as a group do. It is as though we are looking down on the whole of New Zealand from an 'economic helicopter'.

Scobie & Henderson (2009) look in more detail at how assets and debt looked for different types and groups of households at both 2004 and 2006; also how they had changed between those years.

In fact, they had difficulties even with reconciling changes between 2004 and 2006 when their analysis moved too far away from numbers at the median. Some of those difficulties derive from inconsistent answers given by respondents; others from design difficulties in the SoFIE survey. For example, the way in which assets held by family trusts and the ownership relationships between the family and the family trust appear not to have been thought through by SoFIE's designers.

Despite these misgivings, the 'helicopter view' of New Zealanders' assets and liabilities is useful because that is how the annual analysis carried out by the RBNZ compiles its results. Scobie & Henderson (2009) analysed the differences between their top-down look and the RBNZ surveys' results for both 2004 and 2006 and concluded:

> "However, it is striking that the initial estimates of the aggregate household saving rate between 2004 and 2006 are remarkably similar when using the stock method applied to two totally independent data sources: one at the sector level [RBNZ]; and the other based on unit record data [SoFIE] from a large national survey." (Scobie & Henderson, 2009, p.23)

Reserve Bank's annual survey

The RBNZ compiles its annual summary of household assets and liabilities as of 31 December. The RPRC has looked at the 2007 results (Retirement Policy and Research Centre, 2008) and the 2009 results have just been released (Reserve Bank of New Zealand, 2010).

PensionBriefing 04/08[7] concluded that the gaps in the RBNZ's data meant it was not possible to measure what proportion of New Zealanders' total assets were held in housing-related assets. However, many commentators use the RBNZ data for just that purpose: for example, see Gaynor (2010). Any suggestion that New Zealanders have, say, 75% or more of their assets in housing, probably has its ultimate source with the RBNZ survey.

Scobie & Henderson's (2009) report on SoFIE sheds some light on the main set of data missing from the RBNZ's financial numbers: the value of business assets[8]. The RBNZ itself acknowledges the information gap but has not so far estimated its scale. Because Scobie & Henderson roughly reconciled SoFIE's data with equivalent RBNZ numbers, the SoFIE numbers on business assets can, with considerable caution, conditionally fill the RBNZ's information gap[9].

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[7] Available from the RPRC's web site here.

[8] The RBNZ also misses what SoFIE categorises as 'durables' – things like vehicles, machinery, home contents, leisure equipment etc. In 2006 as measured by SoFIE, durables were in aggregate 15.2% of total assets, down from 17.1% in 2004. (Scobie & Henderson, 2009 p.24)

[9] As the report points out, however, there are some significant differences between SoFIE and the RBNZ's numbers. Most significantly, because of their 'top down' nature, the RBNZ effectively includes all assets in

Business assets comprise direct ownership of businesses that are not listed shares (listed shares are included in SoFIE's and the RBNZ's 'financial assets'). Business assets also include the direct ownership of commercial property, farms, horticultural ventures and forestry investments. These rural assets are significant in New Zealand.

However, any debt that has been incurred by households to acquire or provide working capital for those businesses is included in the RBNZ numbers. It would be helpful to know what proportion of 'household debt' is, in fact, 'business debt' but that breakdown is not available: even the lenders themselves may not know a loan's purpose.

As Table 4 above shows, New Zealanders as a whole owned business assets in 2006 valued at $144 billion. That figure exceeds the total of all household debt in the same year ($118 billion according to SoFIE) and is slightly less that the total of all debt noted by the RBNZ survey: $152 billion for 2006. Over the five years covered by the HSS and SoFIE surveys, business assets comprised between 20% to 22% of all household assets.

This analysis is not a criticism of the RBNZ's annual survey. The RBNZ collects the aggregate information presented in the summaries for its own regulatory purposes. However, the RPRC suggests that the users of the RBNZ data should be alert to the limitations of that data.

Conclusion

Based on the three sets of data covered here, it is difficult to conclude that all New Zealanders have overly distorted balance sheets during the five year period between 2001-2006. Whether 35-45% of assets in all types of housing is suitable may be another question but New Zealand is apparently not very different in this regard from other countries' experiences. For example, during 2003-04, Australians had about 55% of their assets in housing[10].

Even though net housing assets increased markedly in New Zealand over the five year period (+146%) and debt by a somewhat lesser proportion (+74%), net financial assets grew by 49% and business assets by 71%.

What will really matter eventually is whether the incomes of New Zealanders grew by a sufficient extent to service the increased debt of $13 billion over the 2004-2006 period covered by SoFIE (+12%). The RBNZ surveys show an increase in incomes between 2004 and 2006 of only 6.7%. It will matter to the sustainability of debt servicing if that gap persists.

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family trusts (business assets aside) and ignores any debt between the family and the trust. SoFIE counts only the debt as a family asset and ignores the assets held by the trust.

[10] See http://www.springerlink.com/content/y7217122g8k62637/

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[11] [11] Thanks to Dr M.Claire Dale, Research Fellow at the Retirement Policy and Research Centre, for her help in putting this *PensionBriefing* together.