

# Wealth Disparities in New Zealand: Final Report

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Access to the data used in this study was provided by Statistics New Zealand under conditions designed to give effect to the security and confidentiality provisions of the Statistics Act 1975. The results presented in this study are the work of the authors, not Statistics NZ.

## INTRODUCTION

Over the period 2002 to 2010, Statistics New Zealand carried out a longitudinal survey known as the Survey of Family, Income and Employment (SoFIE). Some eight waves of data were collected. In every second wave (2003/2004, 2005/2006, 2007/2008 and 2009/2010), respondents were asked questions about their wealth holdings.

In 2007 Statistics New Zealand published a paper by Jit Cheung, 'Wealth Disparities in New Zealand', based on data from wave 2 (2003/2004). This paper provided an overview of net worth disparity, giving information by mean and by median, and other distribution information including the Gini coefficient and other percentile-based information. Results were also analysed by age, by major ethnic group, by family type, and also by gender, personal income decile, and region.

In November 2015, we published a paper, 'Wealth Disparities in New Zealand: Preliminary Report Providing Updated Data from SOFIE' (IGPS working paper 15/02), which updated the Cheung 2007 paper to include data from waves 4, 6 and 8 of SoFIE.

As promised in that paper, we have now extended our research on wealth disparities by using the SoFIE data to investigate two further areas:

1. In Part 1, a longitudinal analysis looking at the extent to which survey respondents in specified wealth sub-divisions moved between such sub-divisions over the course of the survey; and
2. In Part 2, an asset class analysis looking at how wealth holdings across the spectrum are divided among the different classes, for both assets and liabilities.

Note that the results presented here for wave 2 differ a little from the original results owing to changes made to SoFIE population weightings after 2007.

## PART 1: LONGITUDINAL ANALYSIS

### 1. DATA

In this first part of the analysis, we are interested in what the data tells us about the mobility over time between different wealth groups. The approach taken here is a “first cut” – as with much research, it provides some partial answers, but also raises further questions.

We began by dividing the wave 8 (2009/2010) respondents into net worth quintiles (a ‘quintile’ representing one-fifth of the population), with quintile 1 the lowest fifth, and quintile 5 the highest. Quintiles were chosen as being reasonably broad groups, and finer division (into deciles or tenths, for example) was not anticipated to provide a great deal more information, particularly through the middle of the distribution. We then ascertained, for each quintile, which quintile the respondent had been in wave 6, in wave 4, and in wave 2.

We repeated this exercise for the wave 6 respondents, ascertaining which quintile the wave 6 respondents had been in wave 4 and in wave 2 according to their wave 6 group. Finally, we ascertained the movement between quintiles according to position in wave 4 and wave 2.

The results consist of 5 by 5 matrices, where a cell in row  $x$  and column  $y$  of the matrix contains the percentage of the end wave that is now in quintile  $x$  and had been in quintile  $y$ . We denote the matrices as **MES**, where **E** indicates the “end” quintile, and **S** the “starting” quintile. The process described above allows us to generate matrices M86, M84, M82, M64, M62, and M42, covering every possible combination of waves. For example, the cell in the 4<sup>th</sup> row and third column of M82 shows as a percentage how many of those in the 4<sup>th</sup> quintile in wave 8 had been in the 3<sup>rd</sup> quintile in wave 2.

To examine demographic effects, wave 8 respondents were further subdivided according to gender, household type, age, and ethnicity, and the process above repeated. Here the sub-groups were not necessarily 20% of the overall population; for example, those of European ethnicity in wave 8 made up around 32% of quintile 5 (the highest) and around 16-18% in each of the four lower quintiles. In some cases, such as higher quintiles for those aged 15-30, there were insufficient numbers for a percentage to be reported and results were suppressed. Nonetheless, we were generally able to review how movement between quintiles from one wave to another progressed over time, making adjustments as required and noted further below.

In section 2 we consider the results for all respondents, looking mainly at the probability of members of a particular quintile in a particular wave remaining in that quintile from one wave to another, and what inferences we can draw from those results.

In section 3 we look at results for the subdivided groups. In this latter case, we have focused on how the distribution of members of a given sub-group (such as Maori, or people aged 30-44) has changed over the six-year period covered by the four waves. We also discuss the extent to which the pattern of transfers between quintiles from wave 2 to wave 8 for the sub-groups differs from the wider pattern for all respondents.

## 2. ALL RESPONDENTS

The initial position is a matrix as follows:

**TABLE 1.1: INITIAL MATRIX**

Start Q	Q1	Q2	Q3	Q4	Q5
End Q	M88/M66/M44/M22				
Q1	100%	0%	0%	0%	0%
Q2	0%	100%	0%	0%	0%
Q3	0%	0%	100%	0%	0%
Q4	0%	0%	0%	100%	0%
Q5	0%	0%	0%	0%	100%

If there were no mobility between quintiles over time, then all MES matrices would remain the same as this; each quintile would remain unchanged in membership. If on the other hand there were complete mobility, then over enough time, one would see all the table cells tending to 20%, since the probability of a respondent being in any particular quintile would be the same. These are of course the two possible extremes, and neither is likely.

At the very least, some movement between quintile boundaries must be expected, since a respondent close to a boundary might easily cross over with little change in net worth. Movement from the three central quintiles can occur across both upper and lower boundary; for the highest quintile, movement can only be down, and for the lowest quintile, movement can only be up. A priori, movement out of the central quintiles would therefore be expected to be rather higher than out of the two end quintiles.

The results in respect of movement over two years, matrices M86, M64, and M42, are shown below.

**TABLE 1.2: PERCENTAGE MOVEMENT OVER TWO YEARS**

Start Q	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5
End Q	M86					M64					M42				
Q1	71%	21%	4%	3%	2%	69%	21%	6%	3%	1%	70%	21%	5%	2%	2%
Q2	19%	52%	19%	7%	3%	19%	53%	19%	6%	4%	21%	54%	17%	6%	3%
Q3	5%	18%	51%	19%	7%	6%	18%	50%	21%	6%	4%	20%	52%	20%	6%
Q4	3%	6%	19%	54%	18%	2%	7%	20%	53%	19%	2%	4%	21%	53%	21%
Q5	2%	3%	7%	17%	71%	3%	2%	7%	17%	71%	2%	3%	7%	21%	69%

The pattern is broadly similar for each two year period:

- For the three middle quintiles, a little over half remain in the same quintile, about 20% move up or down to the quintile on either side over the two years, and another 10% move more than one quintile; and
- For the end quintiles, around 70% remain, about 20% have moved down or up as the case may be over the two years to the next quintile, and the remainder move into the next three quintiles.

The results in respect of movement over four years, matrices M84 and M62, are shown in Table 1.3.

**TABLE 1.3: PERCENTAGE MOVEMENT OVER FOUR YEARS**

Start Q	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5
End Q	M84					M62				
Q1	65%	25%	6%	3%	1%	65%	23%	7%	2%	2%
Q2	22%	46%	21%	8%	4%	22%	46%	20%	8%	4%
Q3	6%	18%	46%	22%	8%	7%	21%	42%	20%	9%
Q4	3%	7%	21%	50%	19%	3%	6%	23%	47%	21%
Q5	3%	4%	7%	18%	68%	2%	4%	7%	22%	65%

The M84 and M62 matrices are similar, and compared to the two-year results in Table 1.2, show only some further diminution of the original quintiles, and a slighter increase in the cross-boundary movement

Table 1.4 shows the average of the two-year matrices M86, M64 and M42; the average of the four-year matrices M84 and M62; and the M82 matrix.

**TABLE 1.4: AVERAGE PERCENTAGE MOVEMENT OVER TWO AND FOUR YEARS AND PERCENTAGE MOVEMENT OVER SIX YEARS**

Start Q	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5
End Q	Average M86/M64/M42 - two years					Average M84/M62 – four years					M82 – six years				
Q1	70%	21%	5%	3%	2%	65%	24%	6%	3%	2%	62%	26%	7%	3%	2%
Q2	20%	53%	18%	6%	3%	22%	46%	20%	8%	4%	24%	43%	20%	9%	4%
Q3	5%	19%	51%	20%	6%	7%	20%	44%	21%	8%	8%	21%	41%	20%	10%
Q4	2%	6%	20%	53%	19%	3%	7%	22%	49%	20%	4%	6%	25%	44%	21%
Q5	2%	3%	7%	18%	70%	3%	4%	7%	20%	66%	2%	4%	7%	24%	63%

Again, observations for a six-year period show a slight further diminution of the original quintiles, and an even slighter increase in the cross-boundary movement, for six years of observation compared to four years. This suggests a degree of stickiness in quintile percentages, rather than fully free movement, but to confirm this, a check can be made as follows.

Looking at the two-year period average movement, the left hand table of Table 1.4, 70% of those who started in Q1 remained; 20% moved up into Q2 after two years, and so on. Of those who started in Q2, 21% moved down into Q1, 53% remained in Q2, 19% moved up into Q3, and so on.

Were these percentages expected to represent the movement for a further two years, we would expect Q1 after four years to contain:

- The 70% of starting Q1 respondents at the two-year point would be subject to a 70% further decrease, i.e. 49% of the original starting respondents;
- The 20% of starting Q1 respondents now in Q2 would be subject to a 21% movement back to Q1, i.e. 4.2% of starting Q1 respondents back to Q1;
- The 5% of starting Q1 respondents now in Q3 would be subject to a 5% movement back to Q1, i.e. 0.25% of starting Q1 respondents back to Q1;
- The 2% of starting Q1 respondents now in Q4 would be subject to a 3% movement back to Q1, i.e. 0.06% of starting Q1 respondents back to Q1; and

- The 2% of starting Q1 respondents now in Q5 would be subject to a 2% movement back to Q1, ie 0.04% of starting Q1 respondents back to Q1.

In total this gives 54% remaining in Q1 after four years, whereas the average shown in the middle table in Table 1.4 shows a much higher 65%. Carrying out the exercise above for all quintile positions, we get the following comparison:

**TABLE 1.5: AVERAGE PERCENTAGE MOVEMENT OVER TWO YEARS, PREDICTION BASED ON PERCENTAGES, AND ACTUAL FOR FOUR YEARS' MOVEMENT**

Start Q	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5
End Q	Average M86/M64/M42 - two years					Predicted for four years					Actual four-year average				
Q1	70%	21%	5%	3%	2%	54%	27%	11%	6%	4%	65%	24%	6%	3%	2%
Q2	20%	53%	18%	6%	3%	25%	36%	22%	12%	7%	22%	46%	20%	8%	4%
Q3	5%	19%	51%	20%	6%	10%	22%	34%	23%	12%	7%	20%	44%	21%	8%
Q4	2%	6%	20%	53%	19%	5%	11%	23%	36%	25%	3%	7%	22%	49%	20%
Q5	2%	3%	7%	18%	70%	5%	6%	13%	24%	54%	3%	4%	7%	20%	66%

*NB: Predicted results use percentages to five decimal places.*

This confirms the intuition that movement between quintiles is confined to only a portion of respondents. Carrying out the exercise with six-year period results shows a similar position.

In summary, therefore, the results from two, three and four waves show some increase in dispersion, but much less than would result from movement between quintiles being the effect of totally random influences. To focus on the main characteristics, and ignoring the movements over more than one boundary, these results can be summarised as follows.

**TABLE 1.6: PERCENTAGE OF QUINTILE MOVING OVER BOUNDARY: 2, 4, 6 YEARS**

	Two years			Four years			Six years		
	Down	Stay	Up	Down	Stay	Up	Down	Stay	Up
Q1	-	70%	20%	-	65%	22%	-	62%	24%
Q2	21%	53%	19%	24%	46%	20%	26%	43%	21%
Q3	18%	51%	20%	20%	44%	22%	20%	41%	25%
Q4	20%	53%	18%	21%	49%	20%	20%	44%	24%
Q5	19%	70%	-	20%	66%	-	21%	63%	-

With just three data points per quintile for the percentage remaining in the quintile, projection forward is necessarily subjective. There does, however, appear to be a diminishing decay, and hence it seems reasonable to consider a power series. Averaging the top and bottom quintiles gives an equation  $y = .7032 * x^{-.104}$ , and averaging the three central quintiles gives  $y = .5253 * x^{-.191}$ . Projected to 10 observations, i.e. forward by 20 years, this suggests something like 55% of the top and bottom quintile respondents not moving over two decades, and 35% of the three central quintile respondents not moving.

Beyond 20 years, some further decay is predicted by this power series, but its applicability will diminish over time, not the least as respondents age. What we can say with some certainty is that there is evidence of movement back and forth across quintile boundaries, but also that there is a substantial core that does not move; the rich, as well as the poor, are always with us.

### 3. GROUPING BY AGE, ETHNICITY, HOUSEHOLD TYPE, AND GENDER

#### Overview

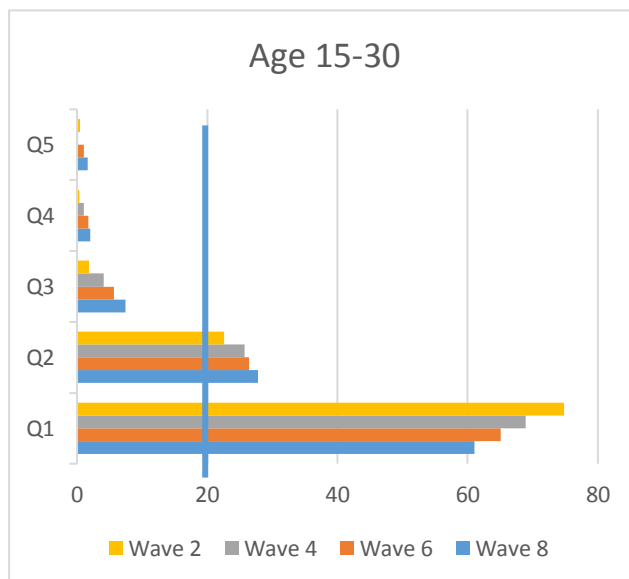
For each group, a table was constructed of the percentage of each sub-group in each quintile in each wave. For instance, in the first table below, around 75% of respondents aged 15-30 were in the poorest fifth of all respondents in wave 2, but this had decreased to just over 60% by wave 8.

Where the total did not add up to 100%, due to some cells being suppressed through insufficient data for anonymization criteria to be met, results were pro-rated if possible, or otherwise excluded. For each such table a graph has been constructed. The quintile marker, 20%, with which all the bars would line up if the distribution of the sub-group was uniform over the wealth spectrum, is shown as a blue line.

To compare sub-group transfers between quintiles over the full six-year period for sub-groups, the difference from the reference position for all respondents (“the average”) was calculated. Some comment on these is included (except in the case of the Gender group, where differences were negligible), although none of the results were especially significant.

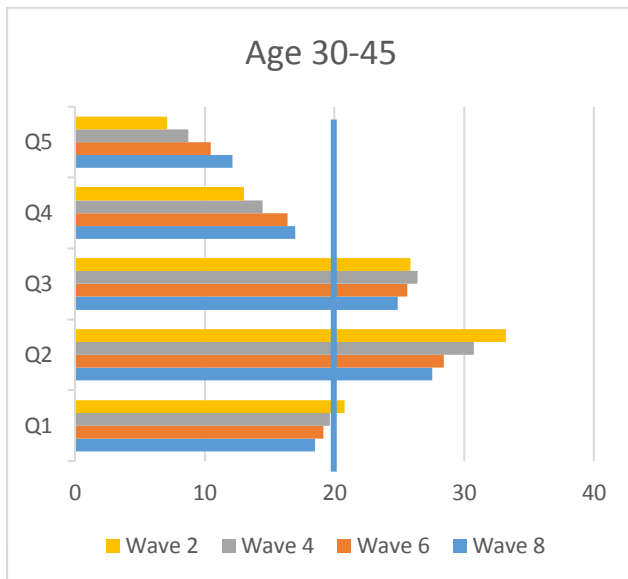
It is worth noting that an increase in the number of respondents in, say, the poorest quintile may not indicate that they have become *actually* poorer but simply that their wealth has grown less quickly (*relatively*, in other words) than that of other groups.

#### Age

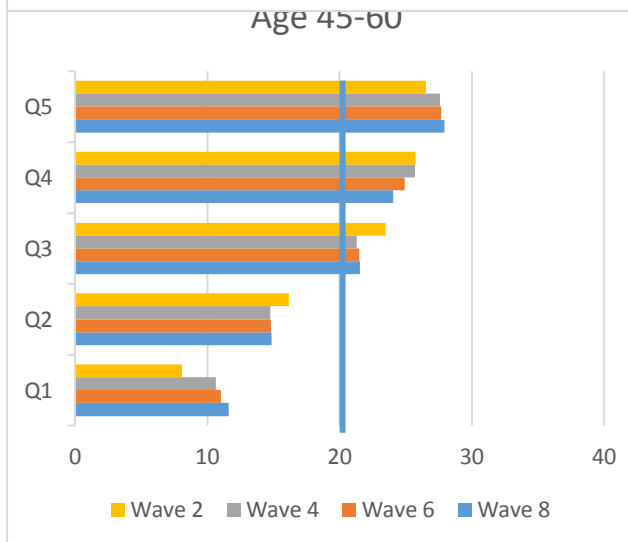


The sub-group age 15-30 shows respondents principally clustered within quintile 1, which is not surprising as at this age they are on the whole unlikely to hold much wealth, other than by inheritance (with some possible exceptions). The extent is greatest in wave 2, and by wave 8 there has been movement out of quintile 1 into quintiles 2 and 3, again as one would expect as respondents age.

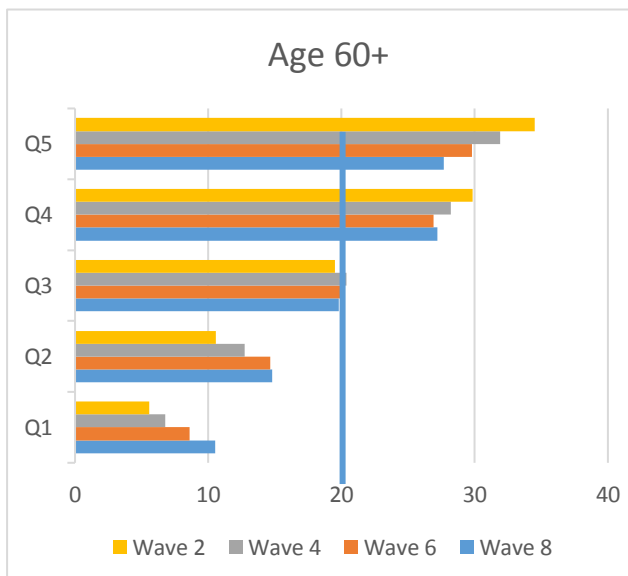




This next sub-group shows greater than 20% of respondents consistently in quintiles 2 and 3, again not surprisingly. The proportion in quintile 1 drops marginally from wave 2 to wave 8, whereas it drops more obviously for quintile 2 over the same period. There is little change in proportions for quintile 3, but an increase in the proportions in quintiles 4 and 5.



The proportion of respondents in the higher quintiles increases for this age group, as expected. There appears however to be slightly more movement out of the fourth quintile than movement into the fifth quintile here; there is also a small increase in the proportion in the lowest quintile over the six years.

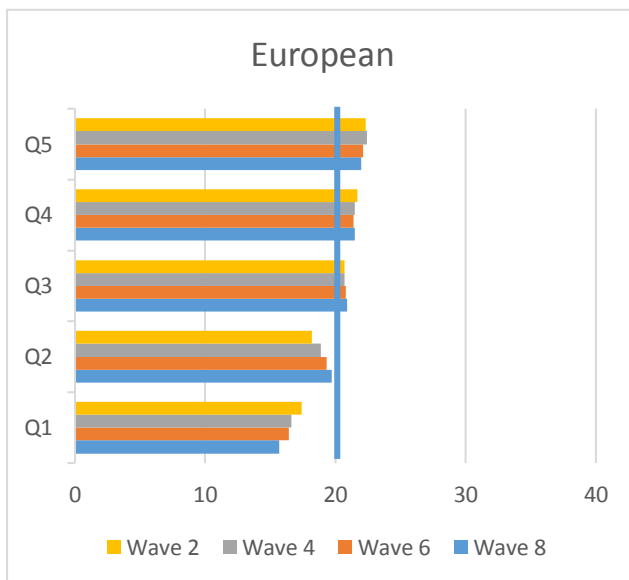


For the oldest age group some fall-off in wealth might be expected, and this appears to be the case here. Although generally over-represented in the two highest quintiles, this group shows a falling-off of proportions in the highest quintile between wave 2 and wave 8, and an increase in the proportion in the lower quintiles. Interestingly, proportions in the middle quintile appear static.

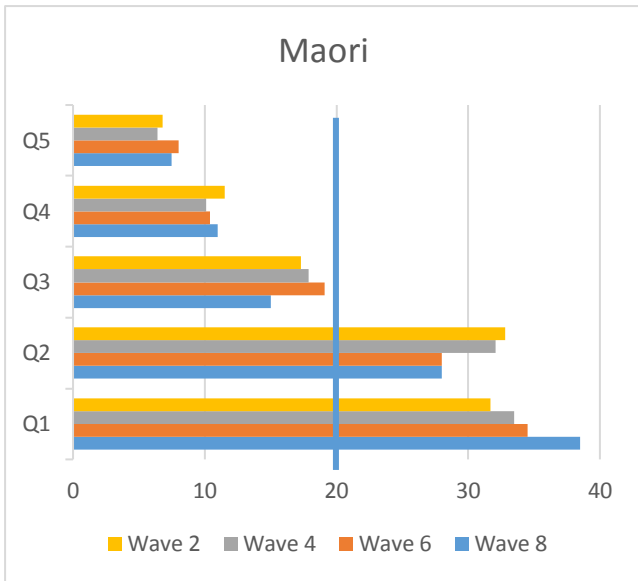
Turning to the characteristics of movement between quintile between wave 2 and wave 8 for the age sub-groups, the only notable points here look to be fewer respondents in the age 30-45 sub-group remaining in quintile 1 over the period than the average, and a tendency in the over-60 sub-

group for movement up a quintile to be consistently less than the average, in conjunction with a slight tendency for movement down a quintile to be marginally higher than average. This corresponds with an intuition that the youngest group will increase their comparative wealth holdings, and that the oldest group will run theirs down.

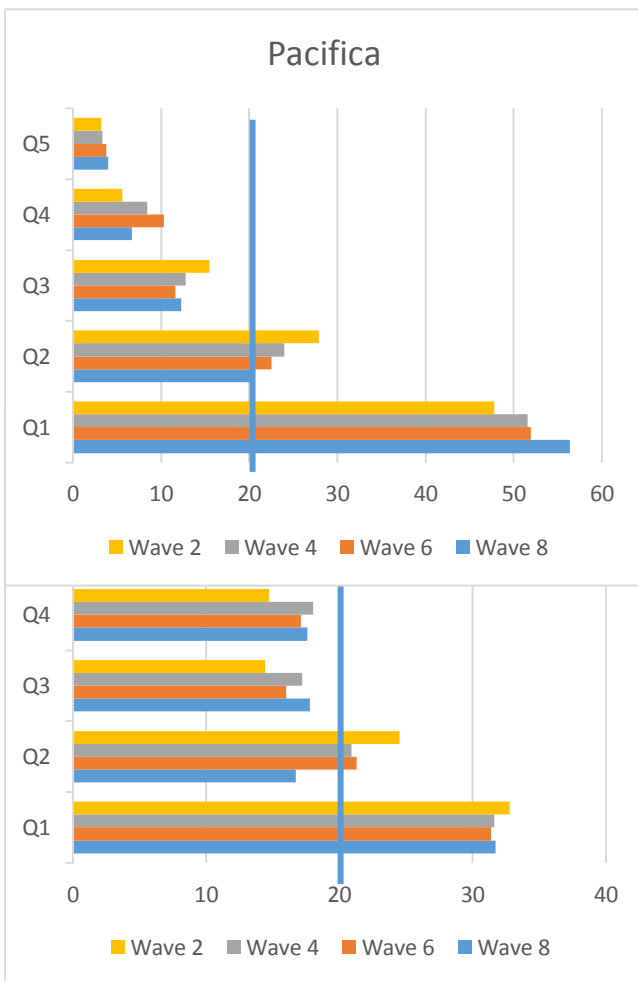
### Ethnicity



The European subgroup is numerically the largest of the ethnicity sub-groups by a large margin, and hence it is unsurprising that there is not much difference between quintiles, nor between waves. One may at most note a slight decrease in the proportion in quintile 1 and increase in quintile 2 over the six years between waves.



For Maori, under-representation at the higher quintiles is not a surprise, but interestingly there is little movement in proportions over the 4 waves. For the 3<sup>rd</sup> and 2<sup>nd</sup> quintiles however there is a diminution in the proportion over the period, and a marked increase in the proportion in the bottom quintile. All other things being equal, this may indicate some worsening of comparative wealth holdings by Maori.



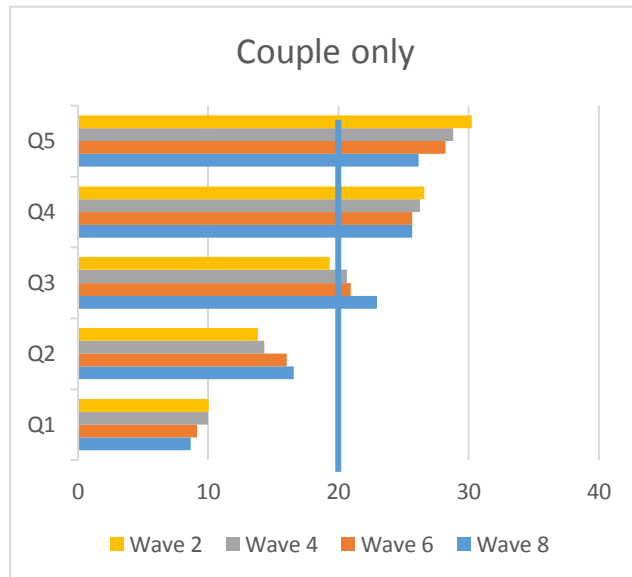
The position for the Pacifica sub-group is similar to that of Maori.

The position shown for the Asian sub-group is next to no change in the (over-represented) bottom quintile proportions, but some slight increase in the top quintile proportion along with a decrease in the quintile 2 proportions. The indication would seem to be that the fall in quintile 2 is matched by increases in quintile 5, and to a lesser extent, quintile 3.

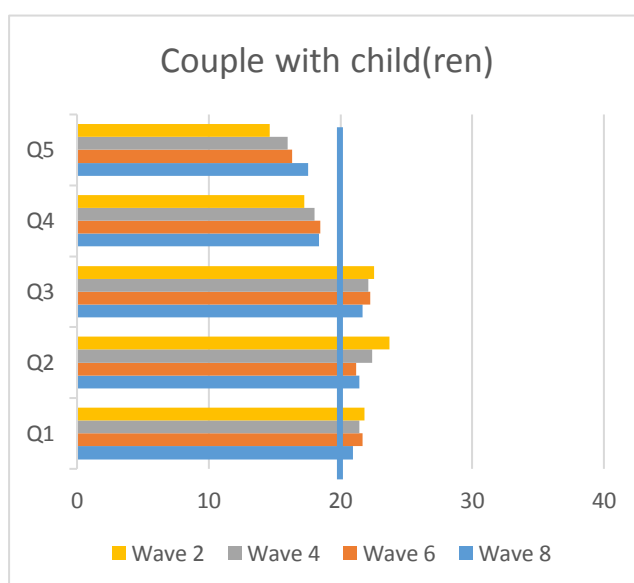
In summary, the Maori and Pacifica sub-groups both show greater than average proportions remaining put in the bottom quintile than the overall average, and greater than average moving

down across boundaries for quintile 2, especially Pacifica. The Asian sub-group shows consistent lower than average remaining in quintiles 2 to 5, but mostly higher movement up out of quintiles.

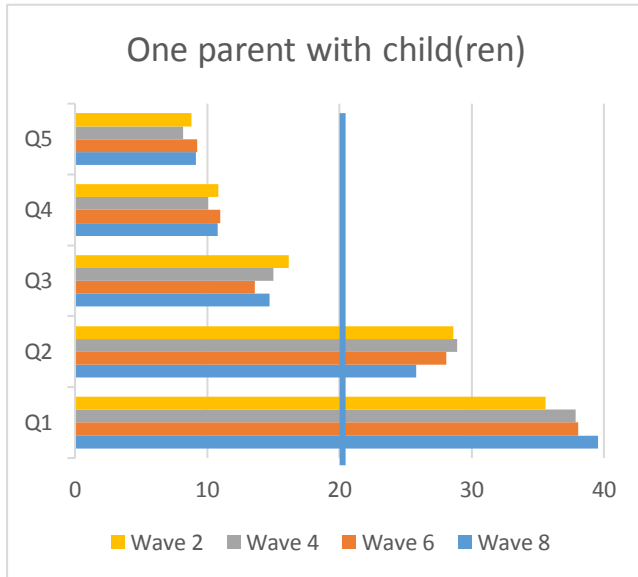
### Household type



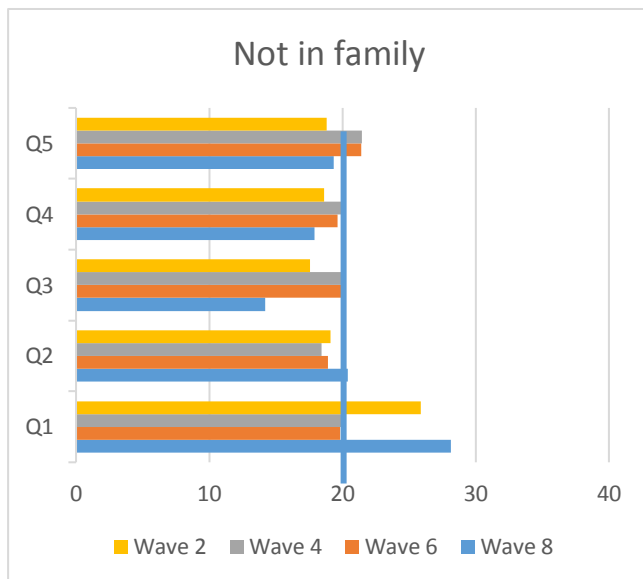
The couple-only sub-group graph shows some similarity to the age 60+ graph, as might be expected; there is likely, however, to have been some respondents in the age 15-30 sub-group, increasing the proportions in the lower quintiles. As with the age 60+ sub-group, there is a lower proportion in quintile 5 by wave 8 than at the start. Except for some increase in the proportion in quintiles 3 and 2 by the end, though, there is not a great deal of movement.



There is not much evidence for this sub-group of movement in proportions in each quintile over the period, except possibly some increase in the proportion in the fifth quintile and some movement out of the second quintile.



The sub-group of one-parent families with a child or children shows over-representation in the lower quintiles as expected. There is a minor increase in the bottom quintile over the period, and a decrease in the second quintile, suggesting perhaps a worsening of position. Proportions in the higher quintiles appear stable.

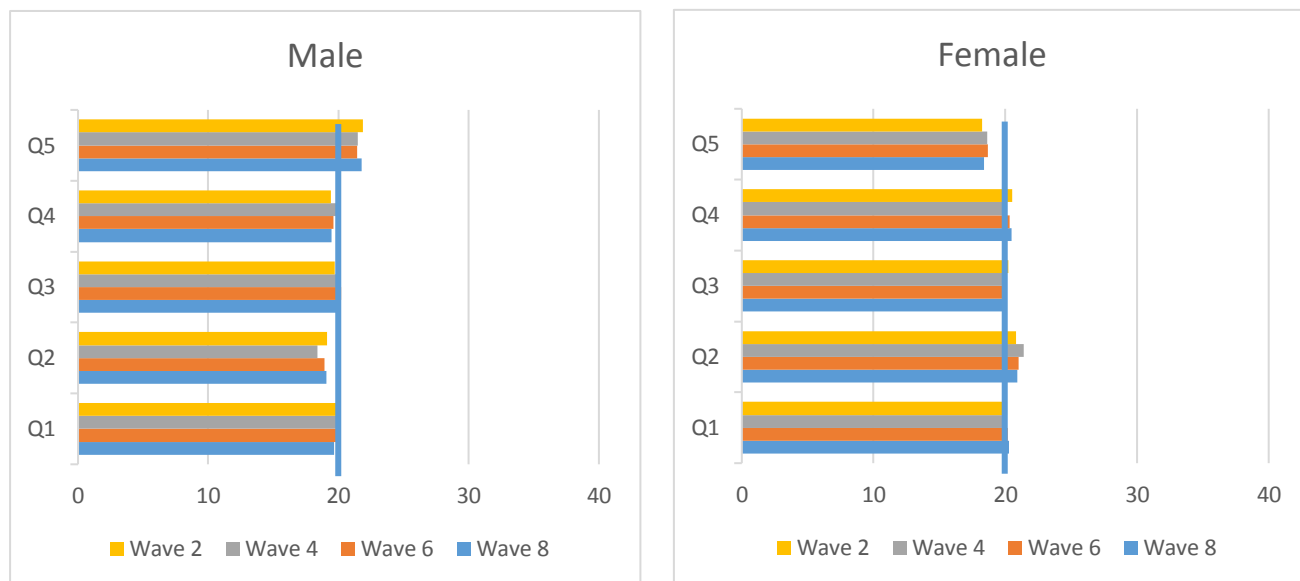


There are not a lot of respondents in this category, and hence variable results from wave to wave are to be expected. Absent the shortfall in quintile 3 and excess in quintile 1 for wave 8, the results for this sub-group seem remarkably uniform.

In summary, for the couple-only sub-group there is a markedly lower percentage remaining in quintile 1 than average. The not-in-family sub-group shows some general variability from the standard, but this may be the result of small numbers of respondents in this sub-group.

## Gender

The graphs indicate some minor differences in distribution. Males are slightly over-represented in the top quintile, quintile 5, and under-represented in quintile 2, and conversely for females. There has been very little difference in the proportions over the four waves.



## Summary

The results shown here for groups mostly confirm what would be expected in terms of the distribution of net worth in the various sub-groups. Older people have more wealth, but the very oldest have slightly down-sized over the period. Perhaps less expected is that the downsizing seems concentrated into the lowest quintile, rather than more evenly. Maori and Pacifica both show a falling-off of proportions in quintile 2 and an increase in quintile 1, while proportions in the higher quintiles are relatively stable. This pattern also shows up with the household type sub-group one parent with child(ren). Couples with children appear more stable, suggesting that child poverty in one-parent families requires particular attention.

## 4. DISCUSSION

The period over which the SoFIE survey was taken, 2002 to 2010, included the 2008 financial crisis, and is in any case too short for any strong conclusions to be made as to mobility within relative wealth holdings. However, tentatively one can observe:

- There is clearly some movement in relativities occurring, and the movement between quintile boundaries is clearly more than would happen for very small changes in relative wealth
- However, there appears to be a core within each quintile which does not move; there are insufficient waves to reach a firm conclusion, but from the three data points available (movement from wave 2 to wave 4, from wave 4 to wave 6, and wave 6 to wave 8), the data is suggestive of something like 55% of those in the top and the bottom quintile not moving, and the position of about a third of those in the three middle quintiles remaining unchanged.

This could be interpreted as indicating at least some rigidity in relative wealth holdings; while a reasonable number of people are able to improve their standing relative to others, there is a solid core, both at the top end and at the bottom end, who appear not to change. From a social cohesion perspective, this may be a cause of some concern. Some research into the drivers of these results would appear desirable; what is holding back the poorest from improving their wealth, and are there anti-competitive mechanisms which allow the wealthy to maintain their wealth, for example.

Demographic characteristics will naturally have an impact on results. The analysis by demographic characteristics does not provide any real surprises:

- Increase in age is associated with increased wealth, and at the oldest age there is some fall-off over time in relative position (although the movement seems to be from the top to the bottom quintile to a larger extent than one might expect)
- In terms of ethnicity, Maori and Pasifika show some deterioration in relative wealth, with more in the bottom quintile by the end of the survey; however, although those in the top quintile are under-represented in terms of the whole population, there appears to be little movement in their relative position over time
- Those of Asian ethnicity are showing movement from being in the second to bottom quintile into the three upper quintiles, while there is stability in the bottom quintile; this may be the result of differences of composition in this population
- The one parent with child group shows movement in relative standing very similar to that of Maori and Pasifika
- There is no significant movement in the wealth distribution by gender over the period, with males continuing to be a little wealthier than females

The similarity between results for Maori and Pasifika on the one hand and one parent households on the other is unlikely to be a coincidence, and may be evidence that more support for one parent households will also improve some of the differences shown based on ethnicity.

## PART 2: ASSET CLASSES

### 1. INTRODUCTION

In our first paper (IGPS working paper 15/02), we analysed the distribution of net worth in New Zealand, replicating Cheung's 2007 analysis of how wealth is divided among the wealthiest 1%, the next 4%, and so on. This distribution is interesting for reasons relating to the role of wealth in determining individual well-being, the implications of wealth concentrations for democracy and urban form, and the long-term dynamics of wealth and inequality discussed by Thomas Piketty.<sup>1</sup>

However, this analysis does not tell us much about the characteristics of that wealth – in particular, the kinds of asset classes in which it is held. This is relevant because different asset holdings have different implications for individual well-being and social dynamics. A concentration of asset holdings in housing, for instance, may indicate a tax bias towards housing investment and a distortion away from more productive investment in other areas. Holdings of assets beyond housing, in contrast, indicate the extent to which households have liquid assets that could be used to generate further opportunities.

To that end, this paper analyses the wealth holdings of individuals in SoFIE's wave 8 (2009/10). It does this by looking at wealth holdings both broken down by different groups and across the whole population. In addition, some descriptive material is presented on the boundaries between different groups, showing how much is required to be a member of a given wealth group. There is also a brief discussion of the asset holdings of the wealthiest 1%.

### 2. ASSET HOLDINGS – WHOLE POPULATION

Assets and liabilities in SoFIE were reported in 15 classes for assets and seven for liabilities, as follows:

<b>Asset code</b>	<b>Description</b>
TrustAss	Assets placed in trusts of which the respondent was a beneficiary
OwnHome	The respondent's own home
ResProp (excluding own home)	Property investments excluding the respondent's own home
CredCardAss	Positive credit card balances
BankAccAss	Positive bank account balances
MvAss	Motor vehicles
LeisAss	Leisure and sports equipment
HHItems	General household items such as furniture
SuperAss	Superannuation assets, including KiwiSaver and pensions
LifIns	Life insurance policies
BusinessAss	Equity in companies controlled by the respondent
FinAss	Financial assets in the form of shares, bonds and other instruments
CashAss	Cash on hand
CollAss	Collectables such as artworks
OthAss	All other assets

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<sup>1</sup> For a discussion of these issues, see Max Rashbrooke, *Wealth and New Zealand*, Bridget Williams Books, Wellington, 2015.



<b>Liability code</b>	<b>Description</b>
MortDebt	Mortgage debt
CredCardDebt	Credit card debt
BankAccDebt	Bank overdrafts
BankLoan	Bank loans for purposes other than mortgages
StudLoan	Student loan value
HPDebt	Hire purchase debt
OtherDebt	All other debts

<b>Summary code</b>	<b>Description</b>
TotalAss	Total assets
TotalLiab	Total liabilities
NetWorth	Net Worth

Table 2.1 below shows how the net worth of the New Zealand population was divided among these different asset and liability classes in wave 8.

**TABLE 2.1: ASSETS OF THE WHOLE POPULATION**

<b>Code</b>	<b>Mean (\$)</b>	<b>Median (\$)</b>	<b>Total (\$ million)</b>	<b>% of total</b>
<b>Assets</b>				
TrustAss	21,700	0	73,437	7.6
OwnHome	103,300	0	349,753	36.3
ResProp_excl_OwnHome	25,700	0	87,056	9.0
CredCardAss	0	0	35	0.0
BankAccAss	14,200	800	48,001	5.0
MvAss	6,800	3,000	22,937	2.4
LeisAss	3,000	0	10,003	1.0
HHItems	32,300	25,000	109,328	11.3
SuperAss	5,800	0	19,525	2.0
LifeIns	7,500	0	25,484	2.6
BusinessAss	53,200	0	180,165	18.7
FinAss	9,300	0	31,612	3.3
CashAss	0	0	153	0.0
CollAss	900	0	2,970	0.3
OthAss	900	0	3,174	0.3
<b>Liabilities</b>				
MortDebt	35,500	0	120,253	81.2
CredCardDebt	900	0	3,164	2.1
BankAccDebt	1,800	0	5,928	4.0
BankLoan	2,700	0	9,111	6.2
StudLoan	2,100	0	7,252	4.9
HPDebt	200	0	715	0.5
OtherDebt	500	0	1,626	1.1
<b>TotalAss</b>	<b>284,700</b>	<b>153,800</b>	<b>963,630</b>	<b>100</b>
<b>TotalLiab</b>	<b>43,700</b>	<b>3,000</b>	<b>148,049</b>	<b>100</b>
<b>NetWorth</b>	<b>240,900</b>	<b>95,000</b>	<b>815,581</b>	<b>100</b>

For assets, the largest item by far is the respondent's own home, making up 36.3% of all gross assets. Combined with other investment in housing (9%), property makes up just over 45% of all assets. This is very close to the figure given in a similar survey in 2001, the Household Savings Survey (HSS), where property made up 46% of assets.<sup>2</sup> It is considerably larger than investment in the next largest class, business assets, which make up 18.7%, or in financial assets, at 3.3%.

This could be taken as supporting the arguments that New Zealanders over-invest in property, at the expense of investments regarded as being more productive, that is, contributing more to GDP growth.<sup>3</sup> However, analysis of previous SoFIE data by Trinh Le et al argued that such levels of property investment were not unusual by international standards.<sup>4</sup>

Other than general household assets (11.3%), the only other notable asset class is wealth held in trusts, at 7.6%. This is noteworthy because of long-standing concerns that trusts may be used to avoid tax or otherwise circumvent the law.<sup>5</sup> The figure for wealth held in trusts, \$73 billion, is lower than that reported in the HSS (\$93 billion), but trust wealth is relatively difficult to estimate, and such figures should be treated with some caution.

When it comes to liabilities, mortgage debt is by far the largest category, at 81.2%. Again, this is line with the HSS, and is to be expected, given the dominance of property as an asset class.

### 3. ASSET HOLDINGS – BREAKDOWN

Wealth holdings matter both for individuals and for society as a whole. Conceptually, while income allows individuals to make ends meet day-to-day or week-to-week, wealth allows for longer-term planning. Asset ownership allows individuals the security to plan for the future, confident that they have something to borrow against or use to ride out periods of low income. Asset ownership also provides people with a 'stake' in society, an effect seen, for instance, in the way that house owners are more committed to their local communities than renters.<sup>6</sup>

At the social level, given the above arguments, it may be of concern if wealth – and ownership of particular types of asset – is highly concentrated at one end of the spectrum. Concentrations of wealth may also lead to some groups having greater influence on politics than others, and to neighbourhoods becoming increasingly stratified by wealth. Finally, ideas of a 'stakeholder society', in which ownership of the economy is believed to be widely shared, are sometimes invoked, for instance in support of policies such as the recent sell-off of stakes in New Zealand's power companies. For that reason it is worth looking at how widely ownership of some asset classes is distributed.

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<sup>2</sup> Rashbrooke, *Wealth and New Zealand*, p.59.

<sup>3</sup> For arguments of this kind, see, for instance, Gareth Morgan, 'New Zealand Income Tax: Unfair and favours the rich', Morgan Foundation, Wellington, June 2016, available at: [http://morganfoundation.org.nz/wp-content/uploads/2016/06/CCIT\\_V16.pdf](http://morganfoundation.org.nz/wp-content/uploads/2016/06/CCIT_V16.pdf) (accessed 27 June 2016).

<sup>4</sup> Trinh Le, John Gibson and Steven Stillman, 'Household Wealth and Saving in New Zealand: Evidence from the Longitudinal Survey of Family, Income and Employment', Motu Working Paper 10-06, Wellington, September 2010, p.8.

<sup>5</sup> Rashbrooke, *Wealth and New Zealand*, pp.73-74.

<sup>6</sup> *Ibid.*, pp.22-25.

## The net worth deciles

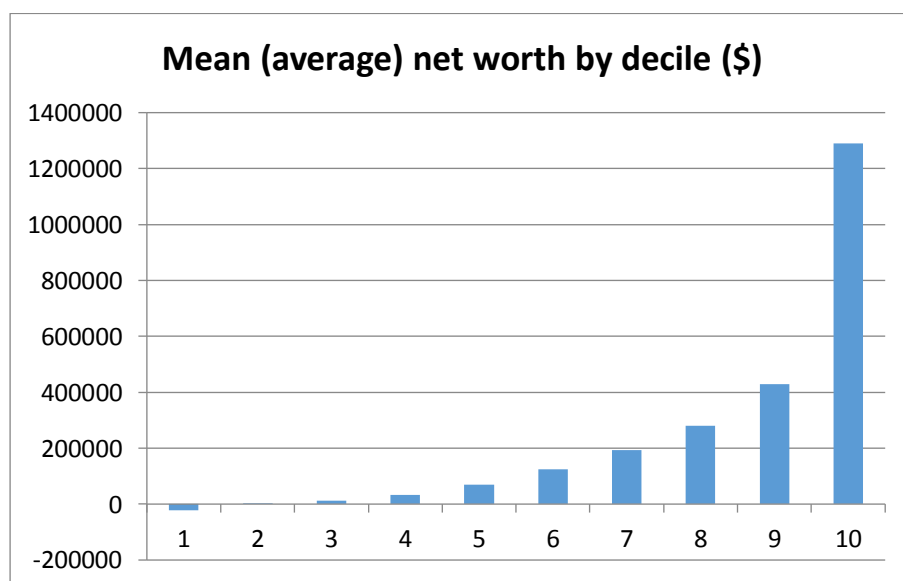
For this analysis, the population is divided into deciles (groups of ten) by net worth, with characteristics as set out in Table 2.2, which for each decile gives the mean and median value, the total net worth, and the net worth of the individual at the upper and lower bound. The latter figures show how much is needed for an individual to gain entry to a given decile. Figures are not available in some categories because of Statistics New Zealand data restrictions, as publishing these figures could compromise the privacy of individuals who took part in SoFIE.

**TABLE 2.2: THE NET WORTH DECILES – BOUNDARIES AND AVERAGES**

Decile	Mean	Median	Minimum	Maximum	Total net worth
1	-23,000	-6,500	-	-	-7,871,472,922
2	3,200	3,000	-	6,300	1,057,312,420
3	12,300	11,700	6,300	20,000	4,168,483,760
4	32,000	31,600	20,000	46,500	10,851,799,283
5	68,700	67,500	46,600	95,000	23,210,963,311
6	124,800	124,200	95,100	157,700	42,237,654,088
7	193,600	192,500	157,700	232,600	65,543,699,671
8	280,600	279,800	232,600	334,000	94,973,768,669
9					144,936,414,29
	428,300	420,500	334,100	552,800	5
10					436,471,879,50
	1,289,700	850,500	552,800	-	6

As Figure 2.1 below demonstrates, decile 1 is in net debt; after that mean net worth increases steadily across the spectrum before increasing sharply for the wealthiest decile.

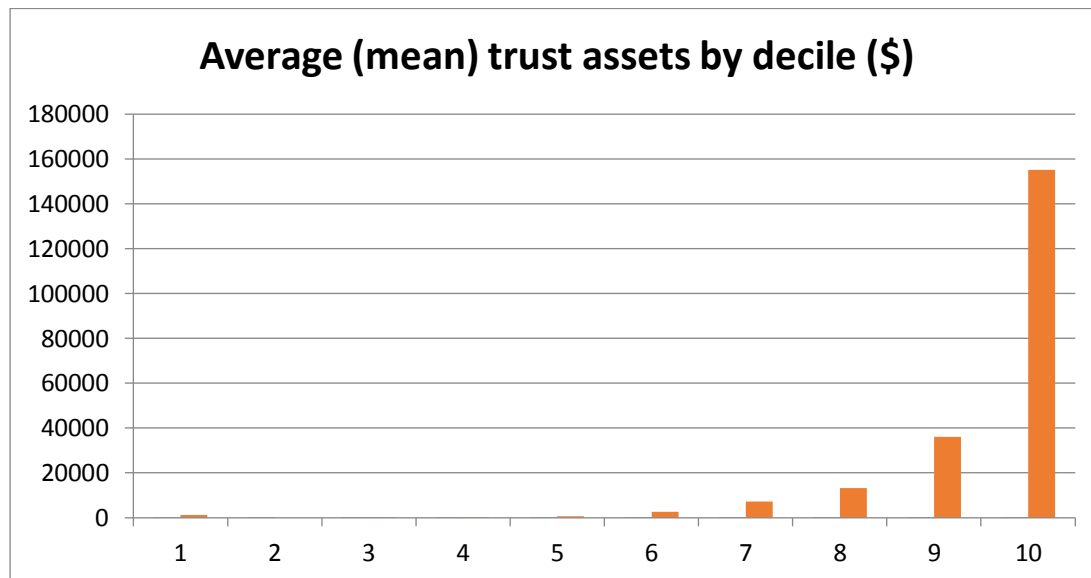
**Figure 2.1**



## How different asset classes are distributed across the deciles

Many of the asset class distributions match the pattern for overall wealth. Trust assets, for instance, are strongly concentrated among the wealthiest decile, which has a mean trust ownership of \$155,000 and a total trust wealth of \$52.6 billion.

Figure 2.2



Cash in the bank (Figure 2.3) follows a similar pattern, with negligible amounts for the poorer deciles, figures in the single thousands for the middle deciles, and a mean of \$69,000 for decile 10. So too do the figures for collectables such as artworks (Figure 2.4), which, given their relatively small proportion of total wealth, are presented as totals for each decile rather than means, as is done for the other asset classes. The poorer deciles have virtually no collectables, whereas the wealthiest decile have \$1.5 billion in this category between them.

Figure 2.3

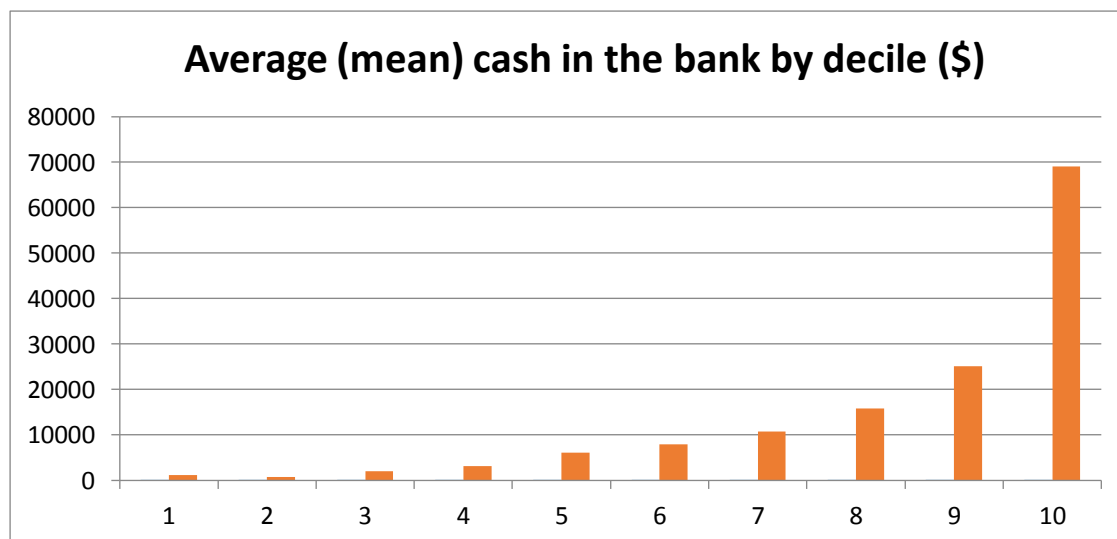
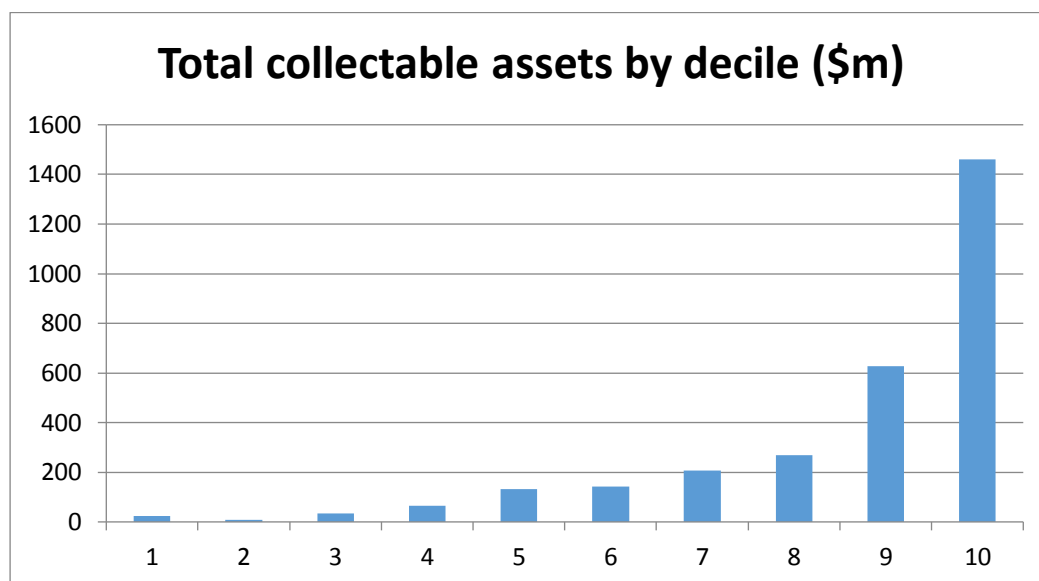
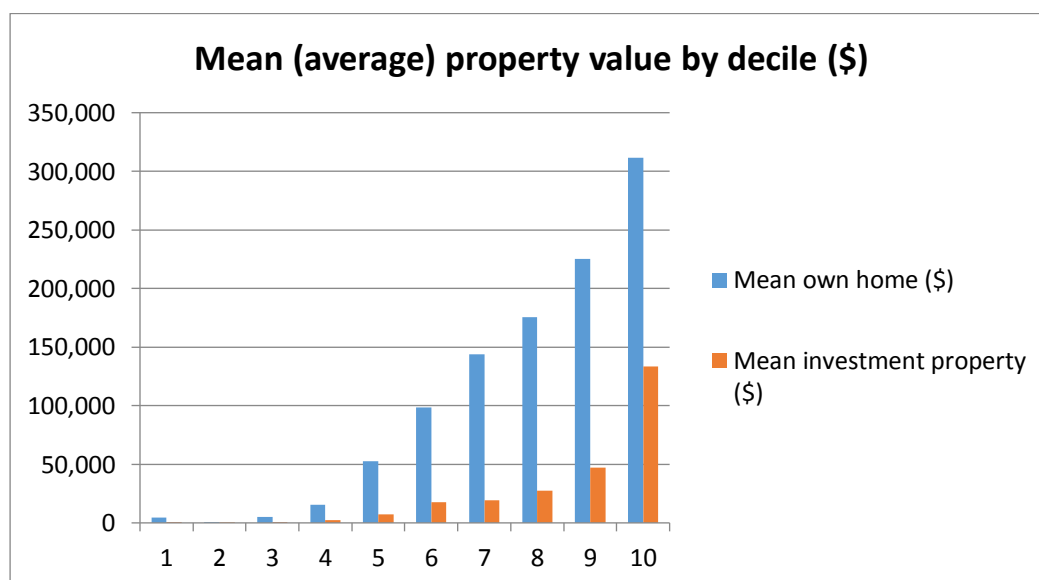


Figure 2.4



However, not all kinds of assets are distributed in the same pattern. Housing wealth displays differing characteristics: own-home wealth is slightly more evenly distributed than other assets, reflecting the fact that home ownership is still relatively widespread (although falling in recent years); but significant ownership of rental and investment property is very much the preserve of the wealthiest 10%.

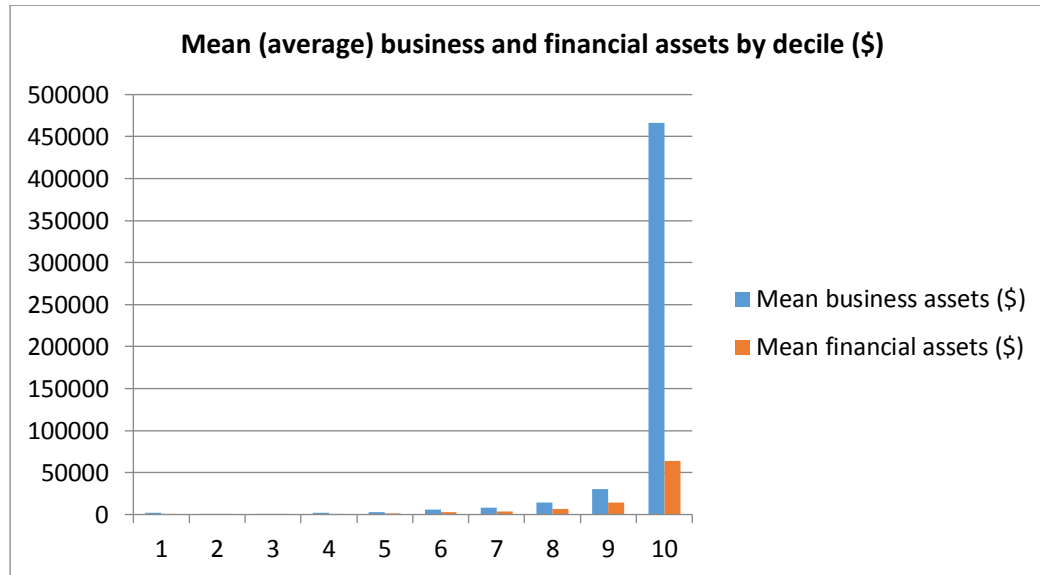
Figure 2.5



Business and financial assets are perhaps the most concentrated of all, however. Business assets, as Figure 2.5 shows, are highly concentrated in decile 10, where the mean value of \$466,000 is ten times greater than that of the nearest decile. These assets are equity stakes in companies owned by the individual respondent. These figures may indicate that, despite high levels of small business ownership in New Zealand, significant wealth is generated only by a very small number of businesses. Financial assets, meanwhile, are investments – such as shares, bonds and other financial

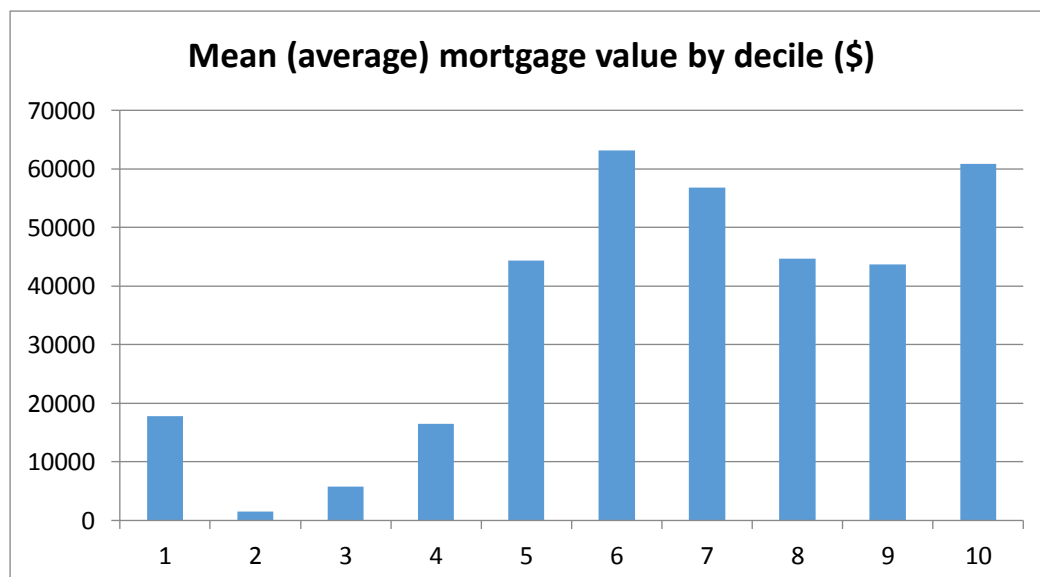
instruments – in companies and other organisations not majority owned by the individual. They too are concentrated among the wealthiest decile, suggesting that, contrary to claims about the ownership society, significant share ownership is also relatively limited in its extent.

**Figure 2.6**



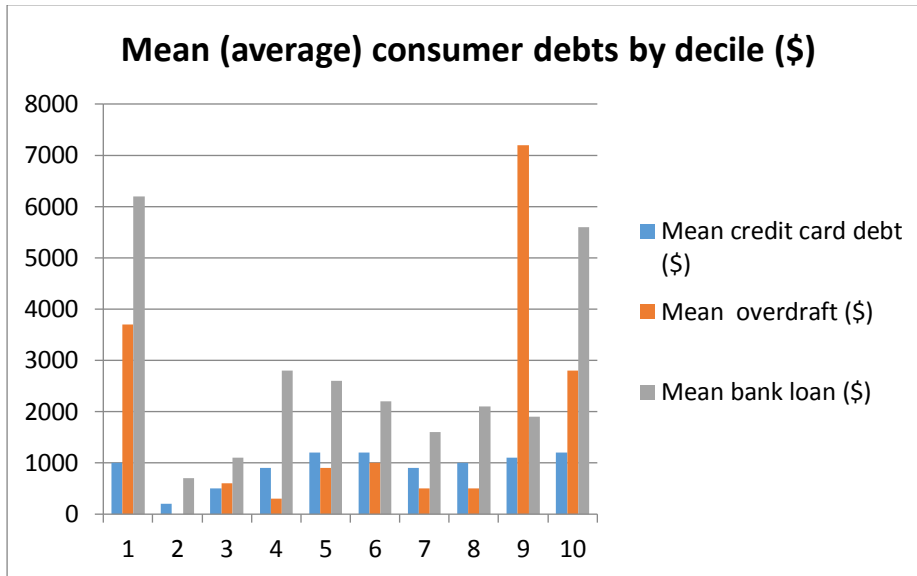
When it comes to liabilities, the patterns are strikingly different: liabilities do not increase steadily, let alone exponentially, with net worth. This partly explains why net worth increases so strongly across the spectrum. As Figure 2.6 shows, mean mortgage debt varies unpredictably across the deciles, with relatively little to distinguish decile 5 from decile 10, although deciles 2-4 have noticeably less in mortgage debt, perhaps reflecting falling home ownership in these classes as housing becomes increasingly expensive. The presence of relatively high mortgage debt in decile 1 indicates that this decile may not be conventionally ‘poor’, as would be the case of decile 1 for income; some of its members may be high income earners borrowing large sums to buy a home.

**Figure 2.7**

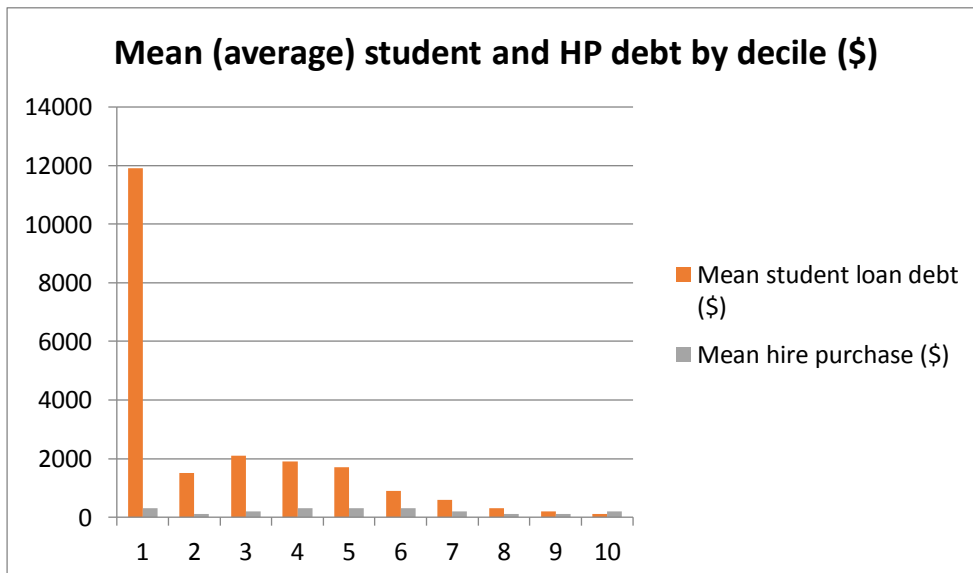


Two final liabilities charts present a yet more complex picture. Looking at credit card, bank overdraft, and loan values together (Figure 2.8), we see no clear pattern. Mean credit card debt is evenly distributed across the deciles, and in any case makes up just 2.1% of all liabilities (see above). Overdrafts and bank loans show no particular pattern, though they are more significant for deciles 9 and 10 respectively. In Figure 2.9, meanwhile, we see that while hire purchase debt is fairly evenly distributed, student loan debt is highly concentrated in the poorest decile.

**Figure 2.8**



**Figure 2.9**



#### 4. WEALTH AND POVERTY

Another method of analysing wealth inequality is to contrast the fortunes of the poorest and wealthiest SoFIE respondents. This can be done by looking at the asset and wealth profile of the poorest decile and of the wealthiest 1%, which we have not previously looked at in detail. (This 1% sits within decile 10, and its figures are therefore a subset of those for that decile.) Their contrasting profiles are presented below in Table 2.3. These two groups are not directly comparable, as one represents one-hundredth of the population and the other represents one-tenth. Nonetheless it is instructive to consider how asset holdings vary at the opposite ends of the spectrum and draw some broad conclusions.

**Table 2.3**

##### **The wealth of the wealthiest 1%**

<b>Type</b>	<b>Mean (\$)</b>	<b>Median (\$)</b>	<b>Total (\$m)</b>
<b>Assets</b>			
Trusts	514,500	0	17,508
Own home	473,100	150,000	16,101
Property (other)	246,100	0	8,376
Credit card	0	0	0
Bank account	162,400	6,600	5,526
Motor vehicles	22,900	15,000	779
Leisure items	40,900	1,000	1,392
Household items	91,400	56,300	3,110
Superannuation	11,700	0	398
Life insurance	42,100	0	1,431
Business assets	2,670,300	2,000,000	90,877
Financial assets	171,000	0	5,819
Cash	300	0	11
Collectables	10,400	0	356
Other assets	34,700	0	1,180
<b>Liabilities</b>			
Mortgage	138,900	0	4,728
Credit card debt	1,200	0	40
Overdraft	7,600	0	257
Bank loan	6,200	0	213
Student loan	0	0	0
Hire purchase	0	0	2
Other debt	0	0	0
<b>Total assets</b>	<b>4,491,700</b>	<b>3,412,000</b>	<b>152,864</b>
<b>Total liabilities</b>	<b>154,000</b>	<b>1,000</b>	<b>5,240</b>
<b>Total net worth</b>	<b>4,337,800</b>	<b>3,335,300</b>	<b>147,624</b>

##### **The wealth of the poorest tenth**



Type	Mean (\$)	Median (\$)	Total (\$m)
<b>Assets</b>			
Trusts	1,400	0	479
Own home	4,500	0	1,528
Property (other)	700	0	226
Credit card	0	0	0
Bank account	1,200	0	401
Motor vehicles	1,900	0	660
Leisure items	600	0	221
Household items	7,200	2,000	2,473
Superannuation	800	0	278
Life insurance	0	0	7
Business assets	2,100	0	723
Financial assets	400	0	128
Cash	0	0	6
Collectables	100	0	25
Other assets	0	0	14
<b>Liabilities</b>			
Mortgage	17,800	0	6,101
Credit card debt	1,000	0	356
Overdraft	3,700	0	1,262
Bank loan	6,200	0	2,132
Student loan	11,900	7,000	4,076
Hire purchase	300	0	113
Other debt	2,900	0	1,000
<b>Total assets</b>	<b>21,000</b>	<b>5,000</b>	<b>7,168</b>
<b>Total liabilities</b>	<b>44,000</b>	<b>14,600</b>	<b>15,040</b>
<b>Total net worth</b>	<b>-23,000</b>	<b>-6,500</b>	<b>-7,871</b>

The mean assets of the wealthiest 1% are dominated by business assets, which at \$2.67 million make up more than half the total, an extension of the concentration seen among decile 10. Also noticeable are high levels of trust assets (a mean of \$514,000), own home wealth (\$473,000), financial assets (\$171,000) and cash in the bank (\$162,000). These contribute to total gross assets of nearly \$4.5 million. In contrast, liabilities are relatively low: around \$150,000, almost all of it in mortgages. As a result, mean net worth is \$4.3 million.

In contrast, the poorest decile's register is dominated by debt. Its total liabilities are over \$15 billion, and its overall net worth position is -\$7.9 billion. However, as discussed above, this does not imply that every member of this decile is poor in the sense of popular discourse – that is, experiencing a severely substandard way of life. The decile has nearly \$1.8 billion in housing assets, albeit matched with \$6.1 billion in mortgage debt, and \$480 million in trust assets. Some \$2.5 billion in household assets and other wealth adds up to \$7.2 billion in total gross assets.

In addition, the second largest class of debt is in student loans (\$4 billion). While student loan debt can have negative effects on its possessors, it is also true that those with tertiary qualifications can expect to earn significantly more over their lifetimes than those without. These people are, therefore, less likely to remain lifetime poor or in debt, though some of course will. Some of this

debt may be regarded as investments in future prosperity, rather than debt incurred purely because of an inability to meet current needs – a form of debt generally regarded as more troubling.

However, Table 2.3 also shows significant amounts of other forms of debt: \$2.1 billion in bank loans, \$1.3 billion in overdrafts, \$360 million in credit card debt and \$1 billion in ‘other’ debt, inter alia. This, on top of the student and mortgage debt, suggests very high levels of overall indebtedness, at least for some members of this decile. This also chimes with Reserve Bank figures showing that household debt is around 150% of income: overall New Zealand’s private debt levels are high, in contrast to our public (government) debt levels, which are low by international standards.

## 5. DISCUSSION

Our analysis shows sharp differences in the level and nature of wealth holdings across the spectrum. Other evidence shows that these trends are not unusual internationally; wealth is very unequally divided, and made up largely of housing, in most other developed countries. Yet these figures pose particular questions for a country that regards itself as particularly egalitarian, as New Zealand has done for much of its history.

Our previous work has shown significant overall wealth inequality: the wealthiest 1% has 18% of all assets, and the wealthiest decile over half; in contrast the poorest half of the country has less than 5%. This paper shows that only housing has a mildly equalising effect in terms of the asset distribution. Other asset classes, notably equity stakes in businesses, are very largely restricted to the wealthiest tenth. This fits with previous research on the subject.<sup>7</sup>

This is relevant because it is the much higher levels of wealth, and ownership of financial and business assets, that are more likely to unlock the opportunities – such as business start-ups – that people need to achieve their life goals. Moreover, in the poorer deciles, the very small amounts of liquid assets, such as cash in bank accounts, indicate that many New Zealanders have little to draw on in case of major life shocks. There is little evidence to support the view that ownership of the economy is widely distributed.

The high levels of debt in the poorest decile, which includes a wide range of different kinds of liabilities, may also raise concerns, given that debt is well-established as one of the major forces keeping people trapped in poverty (albeit, as noted above, that this finding will not apply to all respondents in the poorest decile).

In many respects, our analysis chimes with a growing body of research. The country’s significant economic inequality – of income and of wealth – is not new; for income it has been present since the late 1980s, while for wealth it has presumably been in place almost as long. (We lack long-term data on this question.) But the growing public debate appears to be fed by concerns that these inequalities have strong social consequences, with those at one end of the spectrum having significantly more opportunities and advantages than others. Our findings suggest that these concerns may be justified.

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<sup>7</sup> Policy Advice Division of the Inland Revenue Department and the New Zealand Treasury, ‘The Taxation of Capital Gains: Background Paper for Session 3 of the Victoria University of Wellington Tax Working Group’, Wellington, September 2009, p.22.