BEYOND REASONABLE DEBT

A background report on the indebtedness of New Zealand families

A Families Commission and Retirement Commission report
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Contents

Acknowledgements ... **3**

Preface ... **4**

Summary ... **5**

Purpose and scope of report ... **7**

Introduction ... **8**
- Our definitions ... 8
- Our approach: the theory of saving ... 8
- Our structure ... 10

Part 1: New Zealand families' debt situation ... **11**
- Proportion of families with debt ... 11
- Amount of debt held by families ... 11
- Changes over time ... 12
- International comparison ... 14
- Summary ... 14

Part 2: Families' characteristics and circumstances ... **16**
- Age and cohort effects ... 16
- Relationships, children and transitions ... 20
- Wealth and home ownership ... 23
- Income, education and employment ... 25
- Ethnicity ... 27
- Economic and social climate and policy ... 28
- Summary ... 29

Part 3: Families' behaviour ... **31**
- Locus of control ... 32
- Aspirations ... 34
- Self-control ... 36
- Context relativity ... 37
- Influence of socio-economic group ... 38
- Family decision-making ... 38
- Consumer socialisation ... 39
- Aggressive advertising and lending ... 40
- Summary ... 40

Part 4: Problem debt ... **42**
- Standard of living ... 42

Stress and poor health 43
Who is vulnerable? 43
Summary 45

Definitions 47

References 50

Acknowledgements

The Families Commission was established under the Families Commission Act 2003 and commenced operations on 1 July 2004. Under the Crown Entities Act 2004, the Commission is designated as an autonomous Crown entity.

The main role of the Families Commission is to act as an advocate for the interests of families generally (rather than individual families).

The Families Commission's specific functions under the Families Commission Act 2003 are to:

- encourage informed debate about families
- increase public awareness and promote better understanding of matters affecting families
- encourage and facilitate the development and provision of government policies that promote and serve the interests of families
- consider any matter relating to the interests of families referred to us by any Minister of the Crown
- stimulate and promote research into families, for example by funding and undertaking research.

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Disclaimers

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The results presented in this study are the work of the authors, not Statistics New Zealand or The Treasury.

Preface

Until fairly recently, indebtedness has not been considered a problem worth exploring on its own merits. Indebtedness is often regarded as a symptom of a much bigger problem, such as inadequate income or inadequate savings, or a combination of the two.

Increasing levels of household indebtedness (in New Zealand and abroad), however, have prompted a closer examination – is the way in which families use debt something we should be concerned about?

Increasing indebtedness is largely a modern phenomenon: deregulation, coupled with technology, has made access to debt widely available. In many cases, little or no financial security is required to access funds. This provides opportunities that might not otherwise have existed for many people to get ahead financially or 'weather storms'. However, the cost of this access is greatest for those who can least afford it, creating a potential debt trap if unexpected events occur.

This is an area in which the Families and Retirement Commissions share a mutual interest. Both agencies want to ensure families are aware of the risks of using debt and recognise the warning signs before debt becomes a problem.

In order to use indebtedness as an indicator of financial strain, however, we need to be able to isolate those who use debt well from those who do not. This report provides a preliminary examination of a range of factors that may help us distinguish these two population groups.

This paper does not undertake any multivariate analysis of families' indebtedness, but recognises that the way in which variables interrelate is critically important. The Commissions plan to undertake some multivariate analysis with the Livings Standards Survey dataset to examine this further, and are also considering some primary research to improve our understanding of families' knowledge of, attitudes to and behaviours around debt.

Our intention with this report is to raise awareness of the complexity of families' financial decision-making and the fact that families have more financial responsibility in a deregulated financial environment. We want to be able to address the following questions:

- How can families operate better in a financial environment with fewer borrowing constraints?
- What lessons can we learn or have we already learnt from recent market fluctuations?

Dr Jan Pryor
Chief Commissioner
Families Commission

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Summary

Many families in New Zealand are in debt (64 percent of single families and 82 percent of couple families).[1] In many cases this is non-mortgage debt (including student loans, bank loans and credit cards). Relatively few families have mortgages (26 percent of single families and 55 percent of couple families). Mortgages, nevertheless, are much larger in dollar terms than other debts and account for the majority of the total value of debt held by each group (69 percent for single families and 82 percent for couple families). Aggregate figures, however, do not tell us much about how individual families are faring.

This report examines the indebtedness of New Zealand families and explores factors that might distinguish families who use debt well from those who do not. It examines both circumstances and behavioural factors. Our review of international literature and New Zealand data has revealed that these factors operate together in quite complex and potentially confounding ways and that further work is required to tease them out.

Some circumstances (notably being young, having children and separation) and some behavioural traits (basing aspirations on comparisons with others or being impulsive) appear to be important in determining who gets into debt. Other circumstances (notably having low income) and behavioural traits (having an external locus of control) appear to be important in determining who gets into problem debt. Having an external locus of control means that you believe your environment, some higher power or other people control your decisions and your life, rather than believing that you control yourself and your life (internal locus of control). The family and wider culture is also recognised in the literature as having an important role to play in financial decision-making.

In this paper we have singled out several areas for future research:

1. Define and identify families who are in or close to a problem debt situation. The Livings Standard Survey (LSS) dataset offers the most potential for determining both outcomes and explanatory variables. (Note that multivariate analysis of the LSS dataset for this purpose will be undertaken by the Families and Retirement Commissions in 2008/09.)

2. Mortgage debt of older people has noticeably increased in the past decade. It would be worth exploring whether this is because they are borrowing more, or because more older people are entering (or re-entering) the mortgage market. Data from the Household Economic Survey (HES) or the Survey of Family, Income and Employment (SoFIE) should shed some light on this research question.

3. There is evidence in the United Kingdom of a positive, causal relationship between relationship breakdown and over-indebtedness. It would be interesting to explore whether this is the case in New Zealand. LSS and SoFIE data may be useful for exploring this research question.

4. Determine whether income is also a strong indicator of problem debt in New Zealand. LSS and SoFIE data should be suitable for this analysis.

5. There is little evidence linking ethnicity with indebtedness or over-indebtedness. In New Zealand, however, Māori and Pacific families have high debt-asset ratios compared to European families. This relationship would be worth exploring further if the effects of significant confounding factors like age and income could be held constant.

[1] For the purposes of this report, ‘family’ has been defined as a single individual with or without dependent children (‘single families’) or two individuals in a social-marital relationship with or without dependent children (‘couple families’).

6. Evidence suggests that savings and debt decisions are influenced by various personality and environmental variables, which may result in the development of habits, heuristics and coping mechanisms. Identifying these variables and understanding what influences them may help us predict and influence financial behaviour. Environmental variables are particularly appealing because they may be more amenable to change. The role that family, parenting and communication styles play in consumer socialisation, and in family decision-making more generally, has emerged as a significant research gap.

7. Having an external locus of control, basing aspirations on comparison with others or having poor self-control (a tendency to be impulsive) tend to make a person more likely to have a spending than a saving habit. These traits may be significant factors influencing whether a family becomes financially better or worse off over time. Further research is required, however, to determine whether these relationships hold ex ante – that is, before people become indebted. Further research on gender and age differences in these variables is also required, as is an understanding of the interplay between these variables in a group or family decision-making setting. For example, where in a two-parent family one partner has an internal locus of control and the other an external one, it may be in the family's long-term interests for each to be aware of their tendencies, strengths and weaknesses and to empower the partner with the internal locus of control to make decisions about the family's finances.

Purpose and scope of report

The purpose of this report is to provide the Families Commission and the Retirement Commission with a sound basis for any future work on the issue of families' indebtedness. Neither Commission wants to discourage the positive use of debt. Both want to understand how New Zealand families approach debt and determine factors that influence whether the experience will be positive or negative.

Both Commissions are broadly interested in the financial wellbeing of New Zealanders. The Families Commission has a particular interest in their ability to 'make ends meet', while the Retirement Commission has a particular interest in individuals' ability to save for their retirement.

As a group, New Zealand households have been spending more than they have been earning for some time and the Reserve Bank has cautioned that this may not be sustainable in the long term. Increasing household indebtedness is a trend amongst developed countries and New Zealand is no exception (Goh, 2005).

Aggregate figures, however, do not tell us much about how individual New Zealand families or households are faring. Anecdotal evidence, which is receiving considerable media attention at the time of writing, suggests that increasing numbers of New Zealand families are using debt to 'make ends meet'. There is also some anecdotal evidence that the use of debt may be contributing to the growing gap between rich and poor (Skilling & Waldegrave, 2004). The Reserve Bank has speculated that there may even be a net transfer of wealth from young to old (Bollard, Hodgetts, Briggs & Smith, 2006).

These issues are complex and require considerable research effort to validate, which is well beyond the scope of this report. This report does not attempt to measure problem debt or to define families who are in or close to a problem debt situation. However, the report does provide a framework for doing this in the future.

This report reviews a range of New Zealand and international literature and New Zealand data sources for the theory and evidence about why people use debt and why indebtedness might be a problem for some New Zealand families. The report identifies avenues for further work.

Introduction

Our definitions

In this report we define debt as any financial obligation, leveraged against an asset (secured debt) or against future income (unsecured debt). For our purposes, debt includes mortgages, student loans, bank loans, hire purchase, credit cards, store credit, being in arrears and use of fringe lenders. Indebtedness refers to the act or situation of being in debt. Over-indebtedness refers to the act or situation of being in 'too much' debt (also referred to as 'problem debt'). In practice this can be difficult to measure because debt repayments may be prioritised over other expenditure items (even necessities). Further explanations are provided in the Definitions section.

We define saving as the process of putting money aside. Saving (singular) is a flow-concept and should be distinguished from savings (plural), which is another term for wealth (assets net of liabilities). However, we recognise that there are two valid approaches to measuring saving: measuring the difference between what people earn and spend in a given period (the 'flow' approach) and measuring the difference between people's wealth over two periods (the 'stock' approach). These approaches can lead to different results if wealth changes as a result of a rise or fall in the price of assets, which would be picked up by the stock approach but not necessarily by the flow approach.

We are primarily interested in the population of New Zealand families who use debt, although there are practical issues with defining 'family' the way we would like. For the purposes of this report, 'family' has been defined as a single individual with or without dependent children ('single families') or two individuals in a social-marital relationship with or without dependent children ('couple families'). Under this definition, multiple families may be living in one household or a single family may be living across more than one household – family has not been defined by living arrangement. We consider that this definition of family by relationship best captures key financial interdependencies in families and is best suited to available data sources. We acknowledge, however, that this definition is narrow and excludes finance-sharing arrangements among family members that may be quite common, such as between parents and non-dependent or adult children, siblings and children and grandparents.

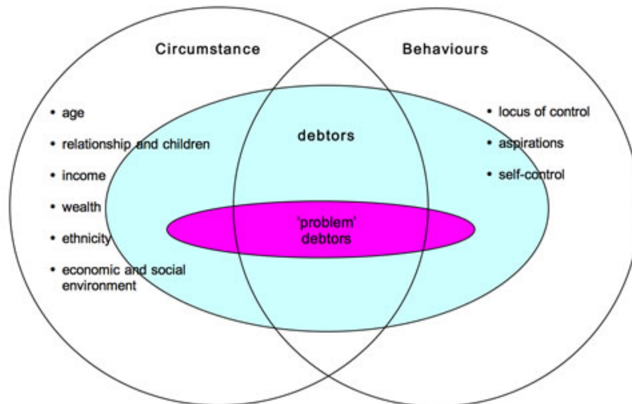
Our approach: the theory of saving

Understanding families' decisions to take on debt is difficult, as such decisions are likely to be based on different levels of financial knowledge and security as well as experience and comfort with risk and debt. Families' decisions are also likely to be influenced by the types of debt available, when and how the debt is to be repaid and potentially conflicting financial needs.

The theory of saving provides a simple framework for thinking about why and how families use debt: debt is a means of bringing consumption or investment forward. The concept of indebtedness generally carries negative connotations but, in reality, indebtedness has become an increasingly important mechanism for families to smooth their income and effectively insure against unforeseen events.

Figure 1 illustrates how we apply the theory of saving to the issue of indebtedness. The inner ovals represent the different populations of families we are interested in, and the two large overlapping circles represent the potential variables (many of which are suggested by savings theory) that may help distinguish the two population groups. A shortcoming of this diagram is that it does not capture the dynamic way in which people may use debt.

Figure 1: Factors that may influence debt behaviour



There may be some important differences between circumstances and behaviours to help us distinguish:

- non-debtors and debtors
- those who use debt well and those who get into difficulties
- temporary from recurrent and long-term debtors (such as those who pay off credit cards on time and those who do not).

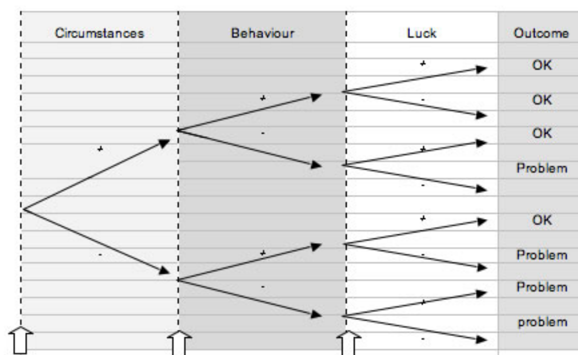
We acknowledge that debt behaviour and debt outcomes are not attributable to single causal factors – hence the overlapping circles. For example, while it may be tempting to attribute unmanageable debt to having a low income, this can never be the sole reason, since not all low-income individuals or families have unmanageable debt.

Our working assumption: circumstances, behaviour and luck interact to determine debt decision-making and outcomes.

In addition to gauging the scale and distribution of private debt amongst New Zealand families, this report examines international theory and evidence on the role that circumstances and behaviour (and the relationship between them) play in explaining why some families use debt better than others. Luck (or unanticipated events) can also be a factor in families' financial fortunes.

Figure 2 illustrates several pathways that different New Zealand families may take (note that the ordering of the columns is illustrative only). The diagram suggests that even if one's financial behaviour is prudent, poor circumstances and poor luck can mean ending up with problem debt. By the same token, good circumstances and good luck may forgive poor financial decision-making.

Figure 2: How factors may influence pathways to problem debt



Our structure

This report is organised as follows:

Part 1 outlines some basic facts about New Zealand families' indebtedness – how many families are in debt, what type of debt do they have and what is the average size of that debt?

Part 2 outlines the theory and evidence about the impact of circumstances on families' indebtedness.

Part 3 outlines the theory and evidence about the impact of behaviour on families' indebtedness.

Part 4 pulls together what we know about the way circumstances and behaviour interact to distinguish those who manage debt well, and those who do not – and thus to understand who is vulnerable to problem debt. This part does not attempt to measure problem debt or identify those in or close to problem debt. Rather, it attempts to define problem debt for measurement purposes, provide data or evidence and present hypotheses that are worth testing with future research.

Part 1: New Zealand families' debt situation

Part 1 briefly outlines the scale of the debt market in New Zealand, including the proportion of families with debt, the amount of debt held, changes over time and how New Zealand compares internationally.

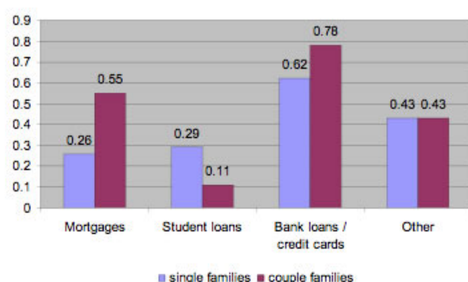
Note that Part 2 provides more insight into how debt is distributed. It explores the theoretical and empirical relationship between debt and various family characteristics including age, relationship and children, income, assets and ethnicity.

Proportion of families with debt

According to SoFIE wave 2 2003/04 data[2] 64 percent of single families with or without children and 82 percent of couple families with or without children have some form of debt.

Figure 3 shows that of single families with debt, 26 percent have mortgage debt, 29 percent have student loan debt, 62 percent have bank loans or credit card debt and 43 percent have other types of debt. Of those couple families with debt, these percentages are 55 percent, 11 percent, 78 percent and 43 percent respectively.[3] These differences are not too surprising given the age differences between these two groups, which is discussed further in Part 2.

Figure 3: Proportion of indebted single and couple families with different types of debt



Source: Statistics New Zealand SoFIE data, wave 2 2003/04

Amount of debt held by families

In terms of the amount or total value of debt, however, the proportions are quite different, as illustrated in Figure 4.

For single families, the total amount of debt owed is $21,371 million, of which 69 percent represents mortgage debt, 12 percent represents student loan debt, seven percent represents loans and credit card debt and 13 percent represents other types of debt.

For couple families, the total amount of debt owed is $71,032 million, of which 82 percent represents mortgage debt, two percent represents student loan debt, six percent represents loans and credit card debt and 10 percent represents other types of debt.

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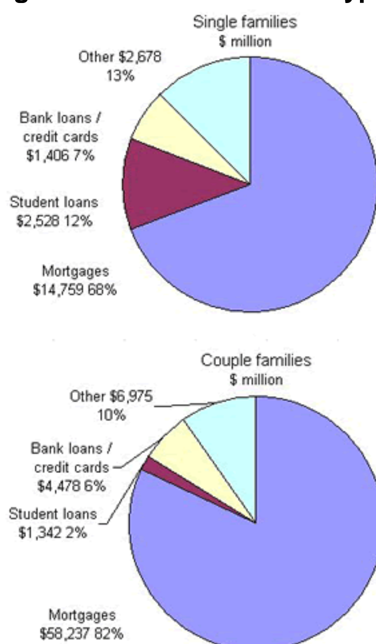
[2] SoFIE data presented in this report is based on analysis of the second wave, generated by the Treasury on 28 March 2008, unless otherwise stated. [Return to reference]

[3] Note these percentages exceed 100 percent because some people have more than one type of debt. They also may disguise what people use debt for.

Figure 4: Value of different types of debt held by single and couple families



Source: Statistics New Zealand SoFIE data, wave 2 2003/04

Unsurprisingly, mortgages represent the single largest source of debt for both single and couple families. While only 26 percent of single families with debt and 55 percent of couple families with debt have mortgage debt, that debt represents 69 percent and 82 percent respectively of the total value of debt held. By contrast, 62 percent of single families and 78 percent of couple families hold either or both credit card and bank loan debt, but this represents only six percent of the total value of debt held by each group.

The type of debt people use, however, may disguise the purpose for which they borrow:

> Given that a large share of New Zealand's household debt is in the form of mortgage debt, much of the increase in debt would have been used to fund investment in housing… From mid-2003 [until 2005, however], the increase in mortgage debt exceeded the value of new residential investment, suggesting households were accessing the increased equity in their properties for general consumption or investment purposes (for example, investment in a small business) (Goh, 2005, p 17).

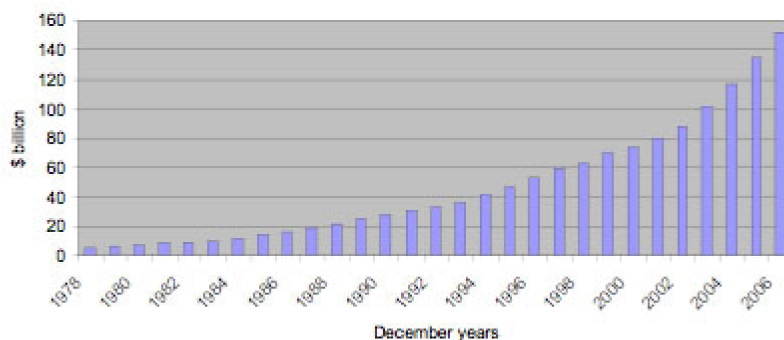
Changes over time

According to aggregate National Accounts data,[4] New Zealand has had a current account deficit since 1973 (Reserve Bank of New Zealand, 2007). This means that, *collectively*, New Zealanders are spending more than they are earning (Bollard, Hodgetts, Briggs, & Smith, 2006). New Zealanders are reliant on overseas investors providing the money for their borrowing.

[4] The National Accounts are produced by Statistics New Zealand. They record the nation's financial transactions in the form of a quarterly snapshot of the country's economic performance, including businesses buying and selling goods, the Government collecting taxes and transferring money to beneficiaries, and people earning and spending money. Aggregate data do not capture a number of types of debt, including government debt, fines and bill arrears (Valins, 2004). There is also little or no data on non-status lending (see Definitions) (Valins, 2004), although presumably some of the debt captured by aggregate data is re-lent at higher rates by so-called 'fringe' lenders (see Definitions) (Ministry of Consumer Affairs, 2006).

The household sector,[5] in particular, has rapidly accumulated debt since the early 1990s and has been blamed for the recent deterioration in New Zealand's current account balance (Bollard et al, 2006). Between 1991 and 2006, financial liabilities (comprising housing and consumer loans) have increased almost five-fold, from $31 billion to $152 billion (an increase of $121 billion or 490 percent), as illustrated in Figure 5 (Reserve Bank of New Zealand, 2006).

Figure 5: Total New Zealand household financial liabilities



Source: http://www.rbnz.govt.nz/statistics/monfin/HHAandL2006webcopy.xls

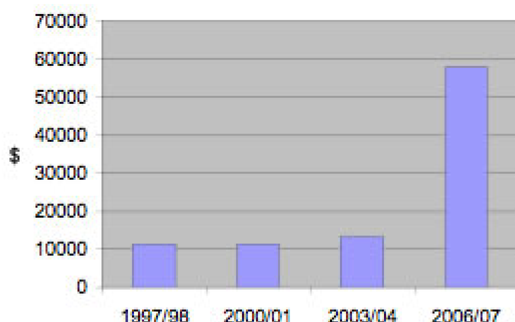
According to aggregate data, much of the increase in household debt has been for mortgages. There has been a slight increase in credit card debt between 2001 and 2006, from four percent to five percent of aggregate disposable income (Reserve Bank of New Zealand, 2006).

Similar trends can be seen in Australia. The Reserve Bank of Australia has observed that while owner-occupier housing debt has accounted for much of the increase in total household debt, this debt is concentrated in less than a third of all Australian households, and this proportion had not changed significantly in the previous decade:

> …the rise in housing debt is not due to a higher proportion of households acquiring debt, but is primarily due to an increase in the average level of debt per debtor household (Reserve Bank of Australia, 2003, p 5).

This also appears to be the case in New Zealand. According to HES data, mortgage payments have increased by around 60 percent in the last 10 years (illustrated in Figure 6), but the percentage of households with mortgages has fractionally decreased from 32 percent in 1997/98 to 30.7 percent in 2006/07.

Figure 6: Average annual mortgage repayments of reporting households



Source: Statistics New Zealand Household Economic Survey data

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[5] The National Accounts consider government, business, household and external sectors.

Most of the increase in household debt is also thought to be explained by a shift to an environment of lower interest rates and lower inflation. This has had the effect of increasing the standard loan available for borrowing, but reducing the speed with which inflation erodes the real value of the debt (Reserve Bank of Australia, 2003).

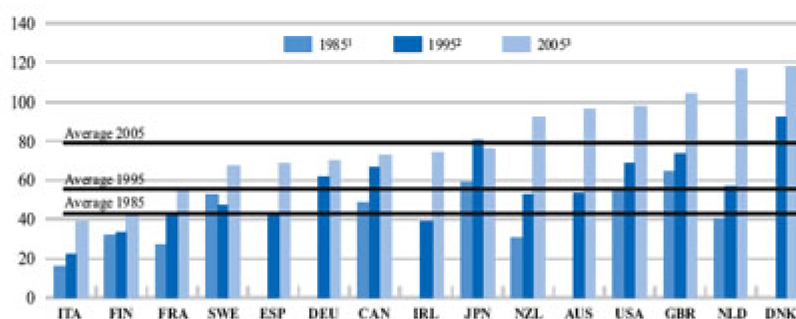
International comparison

It is difficult to accurately compare the indebtedness in New Zealand with that in other countries because the most commonly reported statistics are debt ratios. These can distort the true situation as the denominator variables are not necessarily comparable.

In 2003, New Zealand had the second highest household debt level *as a proportion of disposable income* (after the United Kingdom) of seven comparable Organisation for Economic Co-operation and Development (OECD) countries. New Zealand and Australia have had the fastest growing debt-income ratios in the OECD, partly because of their low starting levels. New Zealand is unusual, however, in having the lowest net financial wealth and total net wealth amongst the same OECD countries (Goh, 2005).

Figure 7, on the other hand, shows household debt *as a proportion of Gross Domestic Product* (GDP) for 15 OECD countries. Superimposed horizontal lines show the average levels for 1985, 1995 and 2005. Over the last 20 years, household debt appears to have been increasing at an accelerating rate as a proportion of GDP for many of the 15 OECD countries. On this basis, New Zealand rated the sixth highest in the OECD by 2005.

Figure 7: Household debt as a percentage of GDP



1. 1987 for the United Kingdom.
2. 1999 for Ireland.
3. 2004 for Japan, Denmark and Spain.

Source: OECD, 2006

New Zealand's relative position would change again if we considered debt *as a proportion of asset holdings*. We have been unable to find data to compare this measure.

Summary

So what does this tell us about the indebtedness of New Zealand families?

The information presented in this section tells us that a lot of families in New Zealand are indebted (64 percent of single families and 82 percent of couple families). In many cases, however, this is non-mortgage debt (including student loans, bank loans and credit cards and other). Relatively few families have mortgages (26 percent of single families and 55 percent of couple families). Mortgages, however, are much larger in dollar terms than other debts and account for the majority of the total value of debt held by each group (69 percent for single families and 82 percent for couple families).

Furthermore, it seems that most of the increase in the household sector's indebtedness since 2000/01 may be explained by an increase in the size of mortgages, rather than the number of mortgages. The increase is also not thought to be a result of a significant increase in other types of debt.

Aggregate figures, however, do not tell us much about how individual families are faring – particularly their ability to service debt. This is discussed further in the next section.

Part 2: Families' characteristics and circumstances

Part 2 focuses on characteristics, circumstances and environmental factors that are likely to influence and help us explain different families' decisions about savings and debt and their outcomes.

This part is divided into the following sections, each outlining relevant theory and overseas and New Zealand evidence:

- age and cohort effects
- relationships, children and transitions
- wealth and home ownership
- income, education and employment
- ethnicity and region
- economic and social climate and policy.

In reality, these factors do interact. We attempt to illustrate this as we outline available evidence in each of the sections. Kempson, McKay, and Willitts (2004), for instance, found that the rate of arrears was strongly related to the number of predisposing factors reported by a household, with a big jump among those with four and five predisposing factors (this finding is discussed later in this part). Causality is also difficult to determine. Kempson et el found that in most cases debt was as likely to come before as it was after other issues.

Parts 2 and 3 of this report adopt a multidisciplinary approach to exploring the variables that influence families' savings and debt decisions and outcomes, as recommended by Livingstone and Lunt:

> Explanations for personal debt must be interdisciplinary, drawing on a range of social science disciplines. For example, economics is concerned with the effects of income and with life cycle models; demography emphasises the importance of life events; sociology considers the debtor in the context of social groups and social norms; social psychology recognises the importance of people's social knowledge, locus of control, attitudes and values. While many factors influencing personal borrowing have been proposed, no clear conceptual model which integrates these has yet emerged and empirical studies tend to examine the role of a few factors in each study (1992, p 114).

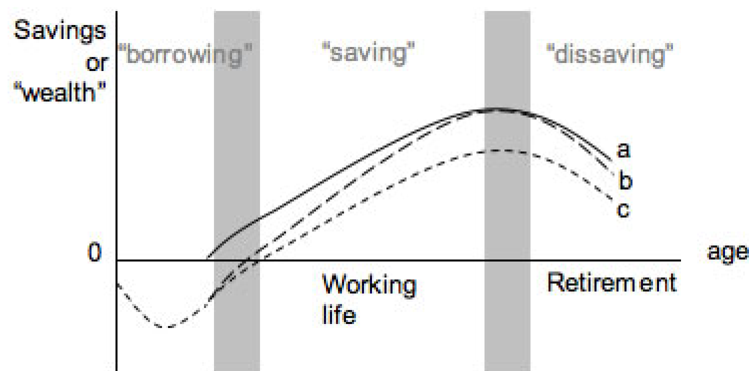
Age and cohort effects

The standard theory of saving is captured by the life-cycle model, illustrated in Figure 8.

The life-cycle model predicts that a person's *net lifetime savings should be zero*: people save during their working life the amount they intend to spend (or 'dissave') in their retirement. The aggregate saving rate (the collective savings of New Zealanders) should therefore also be zero if there is no real population or income growth (Coleman, 2006). By this token, borrowing is rational and predictable (if the means exist) provided people can meet their lifetime consumption needs. This process can also be thought of as consumption smoothing, as both saving and borrowing may be used to even out varying incomes or varying needs over the life course (Modigliani, in Eltis, Scott & Wolfe, 1970). Saving provides present resources drawn from past income, and borrowing provides present resources drawn from future income.

The model assumes that most individuals, or in this case families, go through predictable stages at predictable times. The life cycle model can therefore be thought of as capturing a series of age effects.[6] Normal patterns of human capital development and working life entail people having earnings streams that rise with age and then decline, so the theory of consumption smoothing implies a period of borrowing, followed by saving, followed by dissaving (as in Figure 8).

Figure 8: Life-cycle model



Of course, people borrowing before they have savings raises questions about the effect of this on lifetime wealth accumulation. People may accumulate less wealth over their working life (compare 'a' with 'c' in Figure 8), or they may have more income in the first place (compare 'a' with 'b' in Figure 8). If real incomes are rising over time, increasing use of debt by subsequent generations may indeed be rational and predictable. Substantial longitudinal data, however, would be required to test the presence of any cohort effect.[7]

Different cohorts exhibit different age and earnings profiles because of such factors as changing returns to education and skills, higher labour-force participation by women and later family-formation. There may also be growing dispersion. Thus, one could expect that saving rates and the age profiles of saving could vary significantly across cohorts because of these different age and earning profiles (and other factors relating to expectations and credit markets). There is some evidence that household saving rates do vary significantly across cohorts. In particular, those born between 1920 and 1939 have considerably higher saving rates than subsequent cohorts (Scobie & Gibson, 2003).

It would be interesting to test whether the following cohorts differ in their savings rates:

- 'Generation X' (born between 1965 and about 1987, although various end-dates are used). This cohort lived in a time of increased divorce, availability of oral contraception, more women in the workplace and student loan availability (from 1992 in New Zealand).
- 'Generation Y' (born between about 1988 and 2008). This cohort is considered to be peer-oriented (because of high rates of separation among their parents and less support from parents and grandparents); it faces higher educational costs than previous generations, and tends to be highly educated, ambitious and brand-conscious.

The impact of increasing life expectancy, policies like KiwiSaver[8] and changing patterns of work on the saving and debt patterns of different cohorts would also be interesting to explore.

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[6] See Definitions.
[7] See Definitions.
[8] There is some evidence that the economic theory of "Ricardian equivalence" holds; namely, that individuals exactly offset government spending and vice versa. (Some caution with the data is required, however. It is also possible that an apparent increase in debt is in fact an increased use of trusts: people are still saving to bequest, but this is not being captured by data.) One implication is that people will not save if they know the Government will provide for them in retirement – behaviour that is consistent with the life-cycle theory. A further implication of this could be that people may even borrow against this source of future income. For example, from 1958 until the 1980s, family

Overseas evidence

Age appears to be an important predictor of both debt use and debt problems, with families headed by younger adults being more likely to use debt, have long-term debt and have difficulty managing debt.

In the United Kingdom, those in their 20s and 30s are more likely to have debt problems than other age groups: almost 40 percent of those who find debt a 'heavy burden' are aged between 25 and 34 (Tudela & Young, 2004). This age group is also particularly susceptible to long-term debt, which is consistent with acquiring major assets such as houses (Balmer, Pleasance, Buck, & Walker, 2005).

According to Kempson (2002), age is one of five key factors increasing the risk of arrears[9] in the United Kingdom, the others being family, income, use of consumer credit and priority given to paying bills:

> The relationship of age to debt problems may be a consequence of better access and more liberal attitudes to using credit, as well as higher rates of setting up new homes and having children among younger respondents, both of which are major causes of debt problems (Kempson, 2002).

Less clear, however, is the relationship between age and the *amount of debt* borrowed. This may simply represent an offsetting income effect – as people age their income and capacity to borrow increase. This is discussed in a later section.

Using United Kingdom survey data, Livingstone and Lunt have shown that the demographic variables of age and number of children are found to be determinants of indebtedness but not of the amount of debt (Livingstone & Lunt, 1992). This is consistent with their earlier work on determinants of saving: demographic variables (including age, sex and number of children) explained 11 percent of the variance in amount of total savings, but almost none of the variance in the amount of regular savings (Lunt & Livingstone, 1991).

This finding in relation to debt is echoed by Del-Río and Young (2005) who have observed that the age of the borrower is the main determinant of the decision to participate in the unsecured debt market (with 20–30-year-olds most likely to borrow unsecured debt) but that age seems to be less important in determining the amount of unsecured borrowing.

Trend data from Australia show that increasing owner-occupier housing debt is being driven by the 55–64 age group, who have lower debt-servicing and debt-asset (gearing) ratios than younger households (Reserve Bank of Australia, 2003). It is not entirely clear, however, whether this increase simply represents an increase in the amount borrowed. While there is evidence that the population holding mortgages has not increased, aggregate data could also be hiding a shift from young to older mortgagees due to the rising costs of buying a house.

There does not appear to be any longitudinal analysis of cohort effects in the overseas literature.

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benefits could be capitalised and paid in advance to help parents own their own homes, make alterations to existing homes to accommodate larger families and, under certain conditions, to pay off or reduce mortgages.

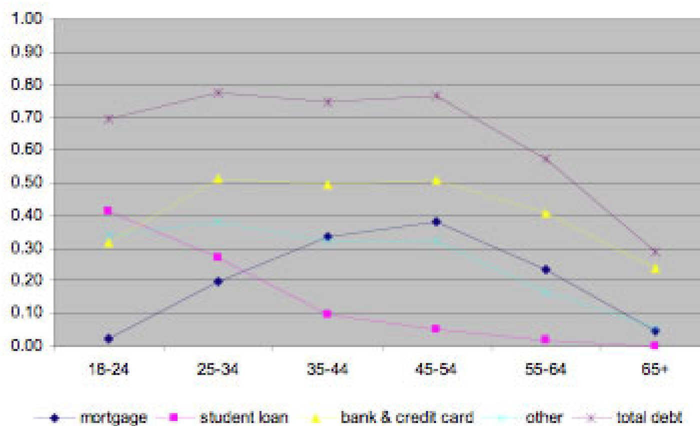
[9] Being in arrears is not only a form of debt, but is also a signal that families may be having difficulty managing their finances.

New Zealand evidence

SoFIE wave 2 data, illustrated in Figures 9 and 10, demonstrate that a life-cycle relationship does exist between age and total debt: on average, New Zealanders become slightly more reliant on debt as they move through their 20s. This plateaus though their 30s, 40s and early 50s, then falls noticeably from their late 50s into retirement. This relationship exists for both single and couple families, although a greater proportion of couples have debt than singles.

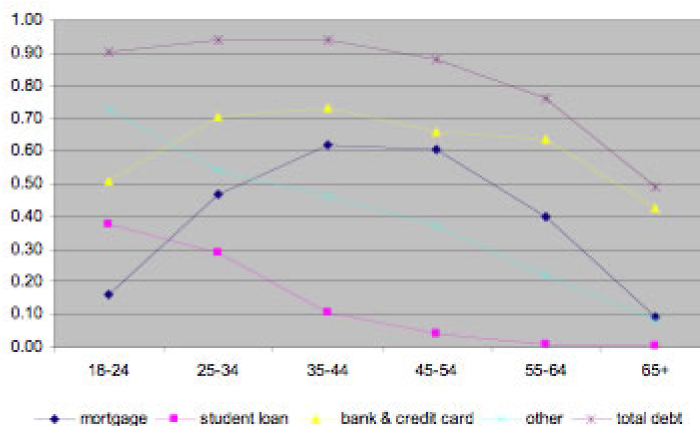
This relationship, however, is most apparent with mortgage debt and bank and credit card debt. Student loan debt and to a lesser extent 'other' debt, on the other hand, exhibit a negative relationship with age. This is to be expected in the case of student loan debt, as most students are likely to be young. The relationship with 'other' debt, however, may reflect greater reliance on non-mainstream (and unsecured) forms of credit for young people who have less income and asset security, especially those in a couple family.

Figure 9: Proportion of single families with different types of debt by age



Source: Statistics New Zealand SoFIE data, wave 2 2003/04

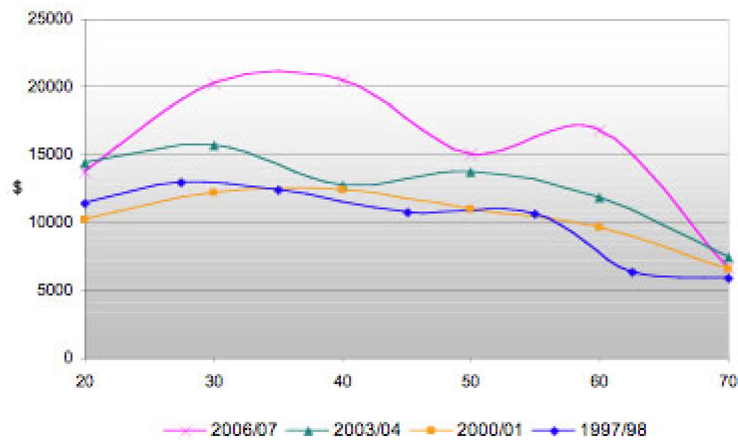
Figure 10: Proportion of couple families with different types of debt by age



Source: Statistics New Zealand SoFIE data, wave 2 2003/04

Preliminary examination of HES trend data, illustrated in Figure 11 below, suggests that older age groups are becoming more indebted. The following figure shows mortgage repayments (including interest and principal) against age of the household 'reference person' for those who reported such expenditure. Three points stand out: the broadly inverted U-shape is consistent with the life-cycle model; there is a general upward drift over time, consistent with an increase in household mortgage debt (this may include non-housing debt secured against property); and there appears to be an increase amongst older age groups.

Figure 11: Average annual mortgage repayments by age



Source: Statistics New Zealand Household Economic Survey data

As with Australian data, it is difficult to tell how much of this movement is due to interest rates, size of mortgages and number of mortgages. Increased interest rates explain some of the increase. House prices have risen (partly because of the higher purchasing power created by lower interest rates at the beginning of the period), which will also explain some of the increase (since more money is borrowed). While Australian and New Zealand data suggest the proportion of the population with mortgages has not increased, this does not rule out the possibility of movement between population groups or families with mortgages (such as a shift from young to old).

Longitudinal data are required for us to properly assess this and other cohort effects. Subsequent waves of SoFIE will provide some of this data.

Relationships, children and transitions

Family-formation is one of the key life stages captured by the life-cycle model. People have traditionally partnered and had children at the start of their working life, and this helps to explain the relatively high ratio of borrowing to saving at this life stage: incomes are low and costs are high.

Raising a child is an expensive exercise which puts real pressure on the family budget – although exactly how much is the subject of extensive literature on the costs of children with diverse definitions and methodologies (Poland & Seth-Purdie, 2005). All families are different and experience different pressures at different stages.

Increasingly, however, the ‘average’ family is forming later, having fewer children and is more likely to re-form or be a blended family (Statistics New Zealand, 2005).

While these factors are likely to have implications for families’ indebtedness, the correlation is arguably less transparent than before (in other words, we may not be able to observe a straightforward life-cycle relationship). The financial pressures of family-formation may not be as great when people have children later or have fewer children. Family-formation appears to be a more active decision or lifestyle choice; people may prefer to wait until they can afford to marry and have children.

Taking this approach, we would expect that simply having children would not be a strong indicator of indebtedness or over-indebtedness, but having children combined with being young and having a lower income or fewer assets could be a strong indicator of indebtedness or over-indebtedness.

We would also expect that family transitions, such as relationship breakdowns, would be positively correlated with indebtedness because of the impact of splitting finances and the greater costs of living separately.

Overseas evidence

There is mixed evidence as to the effect family size has on use of debt or indebtedness.

Livingstone and Lunt (1992) found evidence of a negative but insignificant relationship between use of debt and number of children.

> Contrary to the sociological literature (eg Hartropp et al 1987), those in debt did not have more children but in fact had fewer children than those not in debt (the number of dependent children did not discriminate the two groups significantly). Thus, greater family demands do not result more often in being in debt. Possibly those with more children are forced to adopt more conservative and fixed budgeting strategies because the economic demands on them are salient and constant, and so they more deliberately avoid debt, resisting the view of debt as part of modern budgeting strategy. In relation to the attribution items, those not in debt more often emphasised the pressure created by children's demands for goods, while those in debt tended to emphasise either internal factors concerning loss of control or external and general factors connected with the credit system.

The mixed evidence may be due to confounding factors such as age, income and wealth. Large families are likely to be 'older' and have the means to support more children. It follows, then, that the relationship with indebtedness may vary depending on the representativeness of survey data of the age of the family and family incomes.

A positive correlation between family size and income may help explain Lindqvist's finding that debt repayments were positively associated with family size and with owning one's own home (Lindqvist, 1981). Debt repayments reflect what people pay back, rather than what they owe or whether they borrow in the first place.

In terms of over-indebtedness (or problem debt), the relationship is clearer, but is also affected by the relationship between family size and income.

Kempson et al (2004) found that, in the UK, larger families are more likely to have arrears, be out of work and receive social security benefits. They also found that a higher proportion of larger families than smaller families experience hardship, and comment that "it is perhaps unsurprising that larger families appear more likely to be in arrears".

However, once income is adjusted for family size, Kempson et al found the link between the number of children and being in arrears (a measure of over-indebtednesss) is much weaker. They also note the complexity of interactions between age, family, income, use of consumer credit and priority given to paying bills. For example:

- Older people and couples without children had a low propensity for arrears, even if their income was low.
- Young people and couples with children were seldom in arrears if their income was high.
- Those at greatest risk were young people on low incomes and low-income families.
- The more children in a low-income household, the greater the risk of arrears.
- The rate of arrears was strongly related to the number of predisposing factors reported by a household, with a big jump in the level of risk among those with four and five predisposing factors.

Berthoud (1989, in Valins, 2004) has also found income to be a confounding variable when considering the impact of family structure on indebtedness: *over-indebtedness* tends to affect families which have both low incomes and children; among families without children, low income does not seem to make much difference. Having children and low income is a better predictor of problem debt than low income alone (Valins, 2004).

Relationship breakdown has also been found to be positively related to over-indebtedness. According to Balmer et al (2005), relationship breakdown (and other key variables such as ill health) is a significant predictor of debt problems. Kempson et al (2004) have also found that domestic violence and relationship breakdown problems more often occurred before debt problems, indicating the severe change in circumstances that can follow family breakdown. In a recent United Kingdom study, experience of domestic violence, personal injury, clinical negligence and relationship breakdown significantly increased the likelihood of debt problems (Balmer et al, 2005).

In the United Kingdom, a link between lone parenthood and debt has also been observed, with up to one in three single parents falling into arrears. Relationship breakdown or marital separation is considered the primary cause of these problems (Edwards, 2003, in Balmer et al, 2005). Single parents, followed by couples with children, had the highest rates of debt problems (Edwards, 2003, in Balmer et al, 2005).

New Zealand evidence

The Living Standards Report (Ministry of Social Development (MSD), 2006) found that families with dependent children have lower living standards than the overall population because more of these families are reliant on income-tested benefits. Families with market incomes have living standards that are similar to the overall population.

The research also found that:

- Sole-parent families have substantially lower living standards than two-parent families. This is largely because the majority of sole-parent families are reliant on benefits.
- Families with three or more children have lower living standards than families with one or two children.
- Living standards were lower among families with high numbers of doctor visits for child illnesses, and also among families that were restricted in their social and economic participation because of a child's serious health condition.
- Living standards were lower among families where a parent had had a marriage break-up.

The role that indebtedness plays in these disparities has not been fully explored with LSS data to date, although good data on debt and financial strain have been captured. This will be explored as part of the multivariate analysis of the LSS dataset planned by the Families and Retirement Commissions for 2008/09.

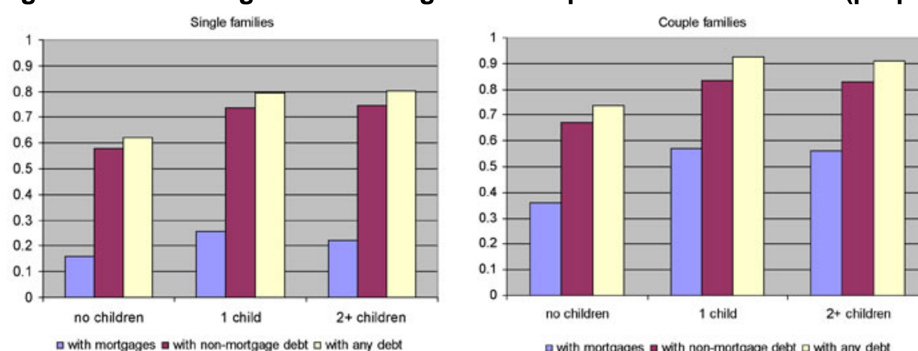
In another New Zealand study using Summary Instalment Order[10] (SIO) data, subjects with more than three dependants at the time of application for an SIO had an estimated four-fold increase in bankruptcy risk compared to subjects without dependants in the first several months after application. Other risk factors for the same time interval included the size of the SIO instalment (Allen & Rose, 2004).

According to SoFIE wave 2 data, illustrated in Figure 12, the proportion of single and couple families with debt is higher if those families have children. The difference between having one and having two or more children, however, appears insignificant.

[10] A consumer debt repayment plan administered by a court as a possible alterrnative to bankruptcy. The SIO allows the debtor to repay their debts in regular instalments without the threat of further legal action while the order is in force.

Couple families generally have a greater proportion of secured debt than single families. However, having children does not appear to disproportionately increase reliance on unsecured debt.

Figure 12: Parenting status of single and couple families with debt (proportions)



Source: Statistics New Zealand SoFIE data, wave 2 2003/04

Multivariate analysis of SoFIE data would allow us to examine whether age, income and wealth have confounding effects. Future SoFIE data could also shed more light on the effects of having fewer children and having them later, and of family transitions.

Wealth and home ownership

For most New Zealand families, borrowing – typically for home ownership – is an important mechanism for accumulating assets or building wealth. Debt secured by assets (even those not yet fully owned) is generally less risky than debt secured by disposable income (discussed in the next section).

Net worth measures the difference between a person's or family's assets and liabilities. Prudent financial management, as captured by the life-cycle model, suggests that net worth should always be greater than zero, should increase over one's working life and should decrease over one's retirement.

This relationship is also captured by the debt-asset ratio, or gearing ratio. This ratio compares a stock with a stock, so provides a reasonable measure of affordability. However, it can be difficult to accurately measure and may be slightly misleading. A ratio approaching 1 suggests you owe almost as much as you own: you have virtually no net worth. A ratio approaching 0 suggests you owe very little and have some net worth, but does not tell what that net worth actually is – a family that owes $5,000 but owns assets worth $50,000 appears equivalent to a family that owes $100,000 but owns assets worth $1,000,000.

Overseas evidence

In the United Kingdom, tenants rather than homeowners are more likely to experience debt problems and are approximately five times more likely to fall behind with rent payments than homeowners are to fall behind with mortgage payments (Balmer et al, 2005; Department for Work and Pensions (DWP) and Department for Trade and Industry (DTI) 2004; Valins, 2004). This may, of course, simply be capturing an age effect or the fact that renters have difficulty saving.

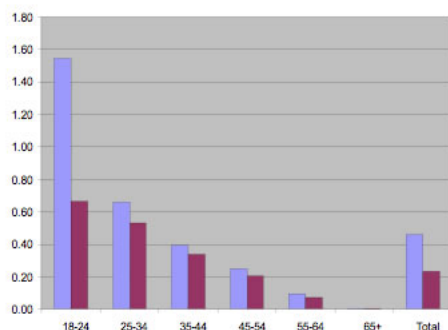
New Zealand evidence

According to aggregate Reserve Bank of New Zealand data, the ratio of the household sector's financial liabilities to financial assets doubled from 40 percent in 1991 to 80 percent in 2006 (Reserve Bank of New Zealand, 2006). The ratio of financial liabilities and student loans to financial assets and housing, however, increased only marginally over the same period, from 15 percent to 20 percent. This is reasonably consistent with Statistics New Zealand's analysis of SoFIE wave 2 data (2003/04), which produced a debt-asset ratio of 16.4 percent (Cheung, 2007). It will be possible to observe change once wave 4 of SoFIE (2005/06) is available.

According to Statistics New Zealand's analysis of wave 2 of SoFIE, the debt-asset ratio increases between the 15–19 and 20–25 age groups, then declines rapidly between 25 and 35 and steadily thereafter over a person's working life to be almost zero by retirement (Cheung, 2007). This is consistent with life-cycle theory: net worth increases as people age.

According to our analysis of wave 2 of SOFIE,[11] illustrated in Figure 13, the median debt-asset ratio starts off relatively high for the 18–24 age group, whom we would expect to have little in the way of asset security (the single families column is probably reasonably representative of this age group). The ratio then declines steadily as people age, almost disappearing by retirement.

Figure 13: Single and couple families' median debt-asset ratios by age



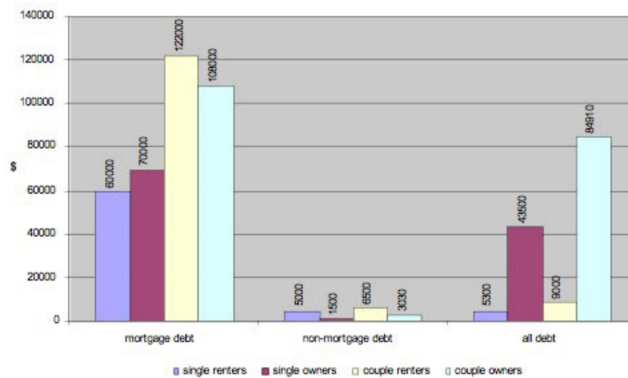
Source: Statistics New Zealand SoFIE data, wave 2 2003/04

Tenure provides us with some insight into the type of assets families use to secure their debt. Tenure is particularly interesting in New Zealand because New Zealanders have a high propensity to accumulate wealth by buying a house. This is therefore likely to be the primary form of security for most New Zealanders. In wave 2, 33 percent of single families and 66 percent of couples 'owned' the home they lived in (with or without debt).

This is apparent with the scale of mortgage debt compared to non-mortgage debt, illustrated in Figure 14. The median amount of both mortgage and non-mortgage debt held by single families is also noticeably lower than that held by couple families, as would be expected given the age differences between these two groups.

[11] Note that these data were generated by the Treasury on 30 May 2008, removing 17 debt-servicing 'outliers' who had debt-servicing to income ratios greater than five. This dataset was not used to reproduce other tables in this report because it did not appear to affect proportions.

Figure 14: Median amount of debt held by renters and owners



Source: Statistics New Zealand SoFIE data, wave 2 2003/04

Less expected is the comparability of mortgage debt between single renters and owners and between couple renters and owners. This suggests that some renters have housing assets, which are not represented by the house they live in. This may capture the anecdotal evidence of young singles and couples buying houses, but affording them by renting them out while living with parents or renting cheaper accommodation themselves. The proportion of these families is small, however. Less than 10 percent of renters are in this situation, compared with around 50 percent of home owners.

As expected, however, there is a significant difference between renters and owners in terms of non-mortgage debt. Single renters, in particular, own very little or have very little net worth. This almost certainly captures an age effect, as most renters are likely to be single and young.

Income, education and employment

The relationship between income and borrowing is not entirely straightforward. In theory, as your income increases you can afford to service more debt. However, incomes tend to increase with age, and the life-cycle model suggests that people’s propensity or need to borrow declines as they age and accumulate wealth. So which effect is greater? Is income positively related to indebtedness, but negatively to over-indebtedness?

Education and employment are also relevant to this question. Higher education is likely to mean more stable employment and higher income, as well as better financial literacy.

Financial literacy is an indicator of how well people understand, amongst other things, the terms and conditions surrounding debt. There is some qualitative evidence that poor money management is a significant component of over-indebtedness (Valins, 2004), and other research shows that consumers who are financially knowledgeable are more likely to behave in financially responsible ways (Perry & Morris, 2005).

The debt-income ratio is typically reported as a measure of debt affordability. However, this measure has two significant shortcomings:

1. It compares a stock with a flow: the ‘debt servicing costs’-income ratio is a much more accurate measure of affordability.
2. The rule of thumb that one should not spend more than 30 percent of their disposable income on debt ignores some important relativities – surviving on 70 percent of a low income is not the same thing as surviving on 70 percent of a high income!

In terms of vulnerability, those who have unsecured debt and spend a considerable proportion of their income servicing debt are at more risk than those with assets or those who have a reasonable income buffer.

Those with higher incomes also have greater choice about the amount and cost of debt. The cost of borrowing is much higher for those with fewer means:

> Credit markets are segmented in nature, structured in particular ways so that income bears a close relationship to available credit options. The structure of these markets means that low income people often have to rely on second tier financial services, forcing them into high interest debt (Williams & O'Brien, 2003, p 17).

Del-Río and Young (2005) also note that secured debt is typically cheaper than unsecured debt and will therefore be used in preference by those with access to both types of debt.

Overseas evidence

Disposable income seems to be irrelevant to whether one gets into debt (presumably once a certain minimum income is obtained), but it is a moderate predictor of how far one gets into debt and an important predictor of how much one repays. Repayments are also predicted by the amount owed: the more one owes, the more one repays, provided one has the resources to do so (Livingstone & Lunt, 1992).

In the United Kingdom, low income has been found to be a reasonable predictor of debt problems (Webley & Nyhus, 2001, in Balmer et al, 2005). Arrears also tend to be higher for those on low incomes than for the extremely poor (Valins, 2004).

Del-Río and Young (2005) assess the key factors determining participation in and the amount borrowed from the unsecured debt market. They find that positive expectations of the individual's future financial position are associated with a higher probability of participation in the unsecured debt market. Higher educational qualifications were also found to have the same association, suggesting that better qualifications make individuals more optimistic and more confident about their future income levels. Individuals with no educational qualifications were found to have a probability of debt that was 10 percentage points lower than that of qualified people. They also found that, for debt holders, the higher the educational qualification, the larger the amount of unsecured debt held. Borrowing for education, however, could likely have a significant influence on these findings. It is not clear whether this form of borrowing is included as unsecured debt, or whether income has been held constant in this study.

In the United Kingdom, those not in employment are more vulnerable to debt and twice as likely to be in arrears as those who are employed (DWP & DTI, 2004). More than a quarter of UK Citizens Advice Bureau clients also reported job loss as a major factor contributing to their debt problem (Edwards, 2003, in Balmer et al, 2005; Kempson, 2002).

According to Balmer et al (2005), being in receipt of benefits or suffering a long-term illness or disability is considered the strongest predictor of debt problems.

New Zealand evidence

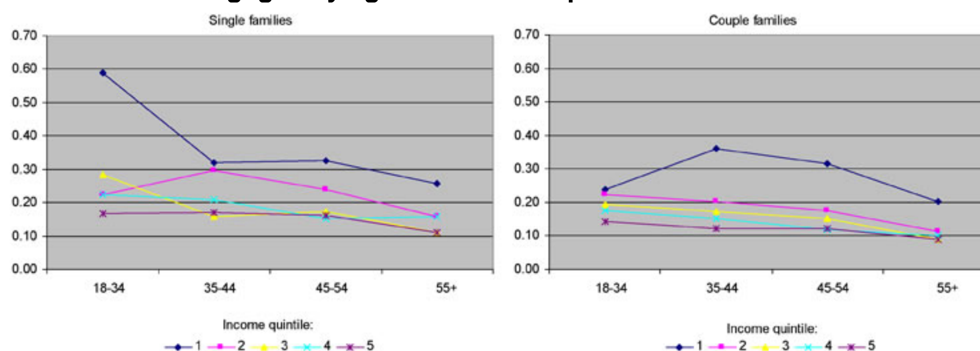
Living on a low income for a long period was found to be a major cause of indebtedness in some recent New Zealand case studies, and increasing income is considered the only way out (Williams & O'Brien, 2003).

According to SoFIE wave 2 data, illustrated in Figure 15,[12] median mortgage servicing ratios clearly decline over the life cycle and are generally higher for families with lower incomes. In other words, families with lower incomes allocate more of their income to servicing a mortgage, but all families allocate less of their income to mortgage repayments as they age.

[12] Note that these data were also generated by the Treasury on 30 May 2008, removing 17 debt-servicing 'outliers' who had debt-servicing to income ratios greater than five.

Of course, incomes tend to rise with age, so even if the proportion of income is decreasing, the actual amount repaid may still be increasing.

Figure 15: Median mortgage servicing costs to income ratios for single and couple families with mortgages by age and income quintile



Source: Statistics New Zealand SoFIE data, wave 2 2003/04

Ethnicity

Financial decision-making appears to be influenced by many personal factors. Since ethnic groups can have shared attitudes and beliefs, it is possible that ethnicity is one of the influencing factors.

New Zealand evidence

There is some evidence that ethnicity and culture influence debt behaviour in New Zealand. According to Williams and O'Brien (2003) there are cultural pressures for Pacific people to borrow money to support extended family and churches. The Ministry of Consumer Affairs, however, found that while this is a factor for Pacific people, this is not the primary reason they borrow (Ministry of Consumer Affairs, 2006).[13]

Research for the Centre for Housing Research Aotearoa New Zealand (CHRANZ) and Ministry of Pacific Island Affairs (MPIA) asked Pacific families about cultural barriers to fulfilling their housing aspirations:

> Pacific families are expected to contribute to family events, community initiatives and to the church both in New Zealand and the Pacific nations. Many agreed that financial obligations to family and community limited their ability to save. While most accepted this as an integral part of Pacific life, some would like to see the practice modified so families are able to give priority to their housing needs (Koloto, Duncan, de Raad, Wang, & Gray, 2007, p 61).

According to wave 2 SoFIE data, the population of single adults is made up of 75 percent Europeans, 13 percent Māori, four percent Pacific, six percent Asian and two percent other. The population of couples is made up of 75 percent both Europeans, 13 percent both Māori or Pacific, six percent both other, nine percent Māori-European and three percent other mixed. The proportion of each population group with debt and the median amount of debt for each population group is broadly comparable. Māori and Pacific single and couple families have slightly lower median amounts of unsecured debt than other families.

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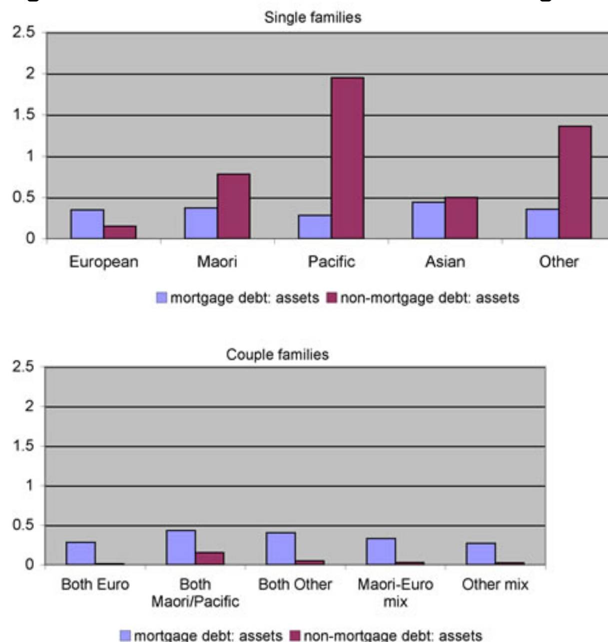
[13] The Ministry of Consumer Affairs reports that 'at-risk' borrowers primarily borrow for essential items, followed by large items and social or cultural obligations, and that reciprocity is central to Pacific cultures (p 105).

The debt-asset ratios for each population group, however, vary considerably, as illustrated in Figure 16.[14] For single families, while mortgage debt-asset ratios are broadly comparable (all less than 50 percent), single Māori, Pacific and other families have high non-mortgage debt-asset ratios. The median single Pacific family, in particular, appears to hold twice as much non-mortgage debt as assets. This suggests they have very low or negative net worth, which is supported by previous analysis of SoFIE data and HSS data. These analyses, however, suggest that age is a significant confounding effect. For couple families, all ethnic groups carry a greater proportion of secured debt to assets than unsecured debt. Couple families reporting as 'both Māori/Pacific' and 'other ethnicities' carry more secured and unsecured debt relative to their assets than other ethnicities.

Figure 16: Median debt-asset ratios for single and couple families by ethnicity



Source: Statistics New Zealand SoFIE data, wave 2 2003/04

Economic and social climate and policy

People tend to save more in periods of economic hardship (possibly to anticipate a period of unemployment) and less in a period of prosperity. Katona (1975) links both saving and borrowing in the form of instalment buying to his concept of consumer sentiment – that is, how people feel about the economy and personal economic decisions, which is itself linked to the current economic performance of society. If times are bad, incomes decrease, people feel pessimistic and so they are motivated to build up their resources and to purchase durable goods before prices rise. Thus, people are more inclined to save, to buy on instalments or with credit and to make unusual cash expenditures. When the economy improves, such behaviours decrease as incomes increase and confidence and optimism rise (Livingstone & Lunt, 1992).

This may help explain why observed net lifetime savings may not always tend to zero (as the basic life-cycle model predicts) or why aggregate savings are positive when there is no real population or income growth. In other words, it may explain why people might save more or less than is necessary for their retirement.

[14] Note that these figures have not been updated with 30 May data removing outliers. Some of the higher ratios are therefore likely to be exaggerated.

The existence of a cohort savings effect, mentioned earlier, suggests that in addition to the age effect discussed above, a range of social and economic factors can influence saving rates (and what people save for, when they save and how much they save). Influences include the state of the labour market, welfare and tax policies and changing family structure. Scobie and Gibson (2003) go so far as to conclude: “social welfare policies do seem to matter to the amount people are prepared to save” (p 26). This conclusion is tempered with recognition that individuals themselves (or cohorts) can in fact influence those social policies (Scobie & Gibson, 2003; Thomson, 1996).

Compared to 30 years ago, New Zealanders are now wealthier, have increased access to credit and have more secure government services. New Zealand has experienced a sustained period of economic growth, witnessed considerable deregulation of the credit industry and seen the advent of the Superfund and KiwiSaver.

Summary

Part 2 focused on various characteristics and circumstances, as well as environmental factors, that are likely to influence and therefore help us explain differences in families’ decisions about savings and debt, and in outcomes.

Overseas and New Zealand cross-sectional evidence based on point-in-time cross-sectional data suggests that there is a life-cycle relationship between age and indebtedness in terms of mortgages, credit cards and bank loans.

This relationship only appears with respect to debt usage or participation in the debt market, however. The relationship with the amount of debt borrowed is weak or ambiguous. This is likely to be because of the offsetting effect income has on the amount people are able to borrow as they age.

Trend analysis of recent Australian and New Zealand data, however, raises some questions about both of these relationships in terms of mortgage debt, but further data and analysis are required. Mortgage debt of older people has noticeably increased in the past decade. It is not clear whether this is because they are borrowing more, or because more older people are entering (or re-entering) the mortgage market.

Age seems to be correlated with problem debt. Younger people are more likely to get into difficulty when using debt. There may also be an income effect that is not being accounted for here.

The evidence is inconclusive as to the impact family size or number of children has on indebtedness, but this is likely to be due to such confounding factors as age, income and wealth: large families are more likely to be older and have the means to support more children. There is more evidence of a positive relationship between family size and over-indebtedness (or problem debt). This relationship is weakened, however, once income is taken into account. There is also evidence of a positive, causal relationship between relationship breakdown and over-indebtedness.

According to international evidence, income is irrelevant in determining who gets into debt, but a reasonable indicator of the amount of debt taken on (which SoFIE data appear to support) and a strong indicator of problem debt.

Having an optimistic view of one’s future financial position and having higher qualifications are associated with increased use of unsecured debt, although income level and borrowing for education may have confounding effects.

Unemployment, low (rather than extremely low) income, benefit receipt and long-term illness or disability are all positively associated with over-indebtedness.

There is little evidence linking ethnicity with indebtedness or over-indebtedness. This relationship, particularly with Pacific cultural factors, would be worth exploring further if the effects of significant confounding factors such as age and income can be held constant.

In 2008/09 the Families and Retirement Commissions are planning to undertake multivariate analysis of the LSS dataset to examine the interrelationships between circumstances and indebtedness (and over-indebtedness).

Part 3: Families' behaviour

The study of indebtedness within the realm of economic psychology is relatively recent, with the first articles appearing from 1989 (Lunt, 1995). However, the traditional theory of savings has alluded to the influence of psychological factors for some time. Psychological factors are now considered to play a key role in financial decision-making.

Lunt and Livingstone (1991), for instance, have found that psychological factors are important in the saving process, predicting the amounts people put aside for regular savings, but not the total amounts saved. When comparing those with and without regular savings in the United Kingdom, they found that psychological variables helped explain 16 percent of the variation in amount saved, in addition to the 48 percent explained by economic variables. However, demographic variables did not help explain any variation.

Cameron and Golby (1991) suggest various psychological factors may be involved in becoming financially overcommitted, such as:

- cognitive errors, where the limited information-processing capability of the human brain means that people can simply make bad choices
- motivational errors – for example, where people try to maintain a particular image of themselves despite their financial circumstances
- deviance, such as obsessive-compulsive or addictive behaviours.

Understanding these psychological factors will help us understand why some people use debt and why some of those who do, end up with problem debt.

Psychological factors can influence financial decision-making through the development of habits (basic budgeting approaches such as living within your means) and heuristics (basic rules of thumb such as saving 10 percent of gross income). Traditional savings theory recognises that some people save simply because it is what they are accustomed to doing, were taught to do or observe other people doing, or because they receive money that is surplus to requirements. Such behaviour suggests, however, that not much thought is put into the amount people need to save to finance their lifetime consumption needs. This may help explain why, contrary to the life-cycle model, we may observe some people not saving enough for retirement. It follows, then, that people may borrow because they do not have a saving habit or that their saving heuristics do not provide for their needs or wants.

Psychological factors can also lead to the development of coping mechanisms (strategies or behaviours adopted to avoid or encourage a particular course of action), which imply a much more deliberate or conscious approach to financial decision-making. Lunt and Livingstone (1991) have observed, for instance, that savers tend to shop in a few favourite shops using a fixed strategy, in contrast to non-savers who shop around using a flexible strategy.

Part 3 thus explores what is known about the influence of psychological factors on financial decision-making behaviour (habits, heuristics and coping mechanisms) and outcomes. The pyschological factors discussed in this part can be thought of as falling into two groups: personality variables and environmental variables.

Personality variables include:

- locus of control (the degree to which people consider they are in control of their own life and actions)
- aspirations (the degree to which people form aspirations based on comparisons with others)
- self-control (the degree to which people are impulsive or do not stick to long-term goals).

Many of the personality variables associated with financial decision-making appear to be related, and probably interact and overlap. This interrelationship is captured by Livingstone and Lunt (1992):

> Significantly, while those in debt believe that credit is a useful way of obtaining things without having to save up, they are also more likely to attribute their financial problems to the credit system. Thus they tend to blame the convenience of credit and high credit limits as well as those internal factors which centre on personal control, such as lack of self-discipline and careless budgeting. They also attribute their problems to their pleasure in consumption, such as enjoying shopping and greed. Those in debt are more likely to endorse the locus of control item in which they feel they drift along according to old habits. Similarly, they feel less in control of their finances, make more impulse purchases, and hence say they find it easier to get into debt (p 128).

Environmental variables recognise the influence of others in the family on the formation of views about money and how the family finances should be managed, and the influence of experiences shared with one's cultural or socio-economic group. It is acknowledged that there are overlaps with personality variables, which consider susceptibility to influence from one's peer group as an aspect of aspirations. They should be considered separately, however, because they are arguably more amenable to change. Environmental variables include:

- context relativity (the degree to which people's decisions are influenced by the context in which they are presented)
- shared experiences (the degree to which people's decisions are influenced by the experiences of family and friends)
- family decision-making (the degree to which people's decisions are influenced by family processes and priorities)
- consumer socialisation (the process by which people develop an understanding of the economic world)
- aggressive lending and advertising (the degree to which people's decisions are directly influenced by the actions of others).

As in Part 2, we recognise that the direction of causality between psychological variables and indebtedness, and problem debt in particular, is an issue. Virtually all research in the area establishes an association between a psychological variable and a financial outcome, but does not establish whether the tendency caused the outcome, or whether it developed as a result of the outcome. Intuition suggests the former, but longitudinal studies would be necessary to properly test this.

Finally, this part should be regarded as exploratory rather than authoritative, as the literature deserves a much closer examination than has been possible for this report.

Locus of control

According to one study, "… the most powerful explanation of the level of debt appears to be [general] locus of control, a factor not normally included in studies of household behaviour…" (Cameron & Goldby, 1991, in Valins, 2004, p 43). Locus of control applies to an individual, since each person has a locus of control as part of their personality.

Locus of control is a personality variable related to how much people believe their lives are under their own control. Those who are said to possess internal locus of control believe they determine what happens to them and that they can change or influence the course of events. Others, said to have external locus of control, feel that the cause and control of events in their lives lie outside their abilities, and attribute what happens to them to the external environment. People with external locus of control feel they have little control over how their life evolves and believe that life experiences happen from the 'outside-in'. They tend to take less responsibility for their actions than those with internal locus of control, and place responsibility on some known or unknown force out of their control such as chance, fate, powerful others, the government or God. Those with internal locus of control tend to be more

self-reliant, independent and confident in themselves and their abilities. They show more initiative, make more effort in controlling the world around them, and tend to control their own impulses or urges better than people with an external locus of control (Pinto, Mansfield, & Parente, 2004). Locus of control therefore includes but is not limited to the concept of self-control, discussed later.

A scale to measure locus of control was first developed in 1961, but many general measures have subsequently been developed, as well as specific scales, such as those developed for use with children. Locus of control can be measured in relation to various aspects of behaviour, such as consumer behaviour or innovation.

In 1986, Furnham applied the locus of control concept to economic behaviour, deriving a scale to measure Economic Locus of Control (E-LOC), which is more specific than general locus of control measures and contains five factors (internal chance, external chance, provider control, powerful others and nature of the problem).

Busseri, Lefcourt, and Kerton (1998) constructed a Consumer Locus of Control scale and found it was a significant predictor of consumer behaviour ranging from impulsive to strategic. Measures of economic and general locus of control proved to be unrelated to shopping effort, planning and product knowledge. The more internal the subjects' consumer control beliefs, the more likely they were to plan and be purposeful in the act of shopping. This research suggests that specific measures could be developed, and people could be tested for locus of control in respect of various economic behaviours such as saving, retirement planning and financial literacy.

Overseas evidence

Furnham (1986) successfully used E-LOC to differentiate between unmanageably indebted individuals and control groups; the former group was more likely to have external E-LOC. Furthermore, E-LOC was found to have greater validity than general locus of control measures in differentiating participants with high discount rates (preferring consumption in the short term) and low discount rates (focusing on longer-term goals) for financial outcomes. In other words, those with external E-LOC are more likely to have high discount rates as well as unmanageable debt. The findings were extrapolated to personal loss, business gain and business loss conditions. The author notes, however, that an external E-LOC may be the result of financial difficulties or vice versa, and that future investigation is needed to uncover the causal relationship. As a starting point, they also noted that substance abuse recovery has been associated with both increased internality and a lowering of discount rates (Plunkett & Buehner, 2007).

Lunt and Livingstone (1991) compared those who saved regularly and those who did not in the United Kingdom and found that savers have more internal locus of control than non-savers, while non-savers tend to be fatalistic. In general, savers believe in personal control over finances, in budgeting and in keeping things simple, whereas non-savers tend to make life more complicated and feel less under control.

Livingstone and Lunt (1992) found that those in debt are more likely to attribute their financial problems to the credit system, in the form of blaming:

- the convenience of credit and high credit limits
- internal factors relating to control, such as lack of self-discipline and careless budgeting
- their pleasure in consumption
- their greed
- their tendency to drift along according to old habits.

Locus of control orientation has been found to change with the age: internality tends to begin between ages eight and 14, increase until middle age and decrease thereafter (Schultz & Schultz, 2004).

Locus of control has not been found to differ significantly with gender in the United States, but there may be differences for specific categories of locus of control. For example, men may have a greater internal locus for questions related to academic achievement. Hayes researched the E-LOC of university students in the United States and found that females tended to feel less personal control over positive outcomes than male students (Hayes, 2006). They also found that this was the only significant finding among tests for gender, culture and class rank. Using a separate measure for 'financial strain', however, the study also found that female students tended to feel less disruptive interference caused by money in their relationships compared to male students; have lower scores on financial education and awareness; but also to have significantly less difficulty meeting their financial responsibilities than males.

Research has shown mixed and inconclusive findings as to the correlation between locus of control and race or ethnicity. Some studies point to a correlation between the two – for example, that minorities (particularly African Americans) are more likely than European Americans to report an external locus of control. However, the relationship between minority status and locus of control is complex and is not as yet completely understood.

One possible explanation for these results, offered by Perry and Morris (2005), could be differences in beliefs, or expectations of unfair or discriminatory treatment. Because of historical discrimination in employment and financial markets, members of minority groups may be more sensitive to negative and unforeseen events. Thus, even when they have an external locus of control, members of minority groups may be more likely than others to control their spending and save money in order to protect themselves against bad luck or powerful others.

Perry and Morris also found that locus of control mediates the effects of both financial knowledge and income on responsible financial management behaviour. Evidence of race and ethnicity as moderators is mixed, as these findings suggest that the effects of financial knowledge, locus of control and income may differ for African American and to a lesser extent Hispanic and Asian consumers. It is important to note that despite evidence of statistical significance, the regression coefficients and thus the magnitude of the effects reported are small (Perry & Morris, 2005).

This report has not examined any literature on the interaction between culture and locus of control; however, one might expect more individualist cultures to have a higher proportion of 'internals' than 'externals'. This report has also not examined any literature on empirical differences between countries' proportions of 'internals' to 'externals'. Both topics would be interesting to explore further.

Studies show that the development of locus of control is associated with family style and resources, culture and experiences with effort leading to reward. 'Internals' have been found to grow up in families that model typical 'internal' beliefs such as effort, education, responsibility and thinking. Parents typically gave children rewards they had promised them. In contrast, 'externals' are typically associated with lower socio-economic status, because poor people have less control over their lives (Schultz & Schultz, 2004). Findings from early studies on the familial origins of locus of control were summarised by Lefcourt: "Warmth, supportiveness and parental encouragement seem to be essential for the development of an internal locus of control." (Lefcourt, 1976, p 100). Environmental factors are discussed further below.

Aspirations

In addition to the practical or financial reasons for why people save, traditional savings theory suggests that people may also save for a range of aspirational reasons, including being financially independent, aspiring to a particular lifestyle based on their preferences and starting a business.

Cameron and Golby (1991) suggest the aspirational motive can be explained by social comparison theory. In particular, they use it to describe an aspirational behaviour known as 'keeping up with the Joneses'. Duesenberry (1949) recognised the social comparison process[15] as an important mechanism in both saving and borrowing, proposing that people save any money left over from expenditure necessary to keep up with their social reference group, and that people borrow in order to acquire goods necessary to keep up with their reference group.

Wood (1989) finds other reasons for people to compare themselves with others – for example, that others may be their competitors, or because the comparison adds to one's self-definition. Wood also finds that comparisons with others who are similar on any of several dimensions such as age, sex, race, college major and personality, have more impact on one's self-esteem than do comparisons with dissimilar others.

Lea, Webley, and Levine (1993) found that the conditions exist for a 'self-sustaining culture of debt' and that, consistent with social comparison theory:

> Serious debtors were less likely to claim Nonconformist, Agnostic or Atheist religious views, and had slightly more permissive attitudes towards debt, although no group showed a general tendency to approval of debt. They knew more other people who were in debt, and were less likely to think that their friends or relations would disapprove if they knew they were in debt (p 85).

Overseas evidence

Canova, Rattazzi, and Webley (2005) found that 97 British adults named 15 reasons for saving which functioned hierarchically. More concrete or materialist goals such as 'purchase', 'holidays' and 'money availability' were at the bottom of the hierarchy, while at the top were more abstract goals of 'self-esteem' and 'self-gratification'. In the middle were goals which channelled the more concrete towards the abstract.

Watson (2003) measured behaviour by variables such as self-esteem, self-worth, self-image, identity and social status, and found that highly materialistic people are more likely to view themselves as spenders and have more favourable attitudes to borrowing. The more materialistic individuals are, the more credit cards they own, the more the finance charges are on those credit cards and the more likely they are to have loans of more than $1,000 (Watson, 2003).

Livingstone and Lunt (1992) also found those in debt considered that enjoyment requires higher consumption and therefore lower savings, while savers did not consider this to be the case.

Despite this, there is evidence of a negative association between materialism and happiness. Van Boven found that the more people aspire to materialistic goals, the less satisfied they are with life and the more at risk they are of developing psychological disorders. Furthermore, allocating discretionary resources in pursuit of life experiences was found to make people happier than pursuing the acquisition of material possessions (Van Boven, 2005).

This may explain why Livingstone and Lunt (1992) found that "those who owed more were more likely to disagree that keeping up with the [Joneses] was a source of pressure for them and hence a cause of their financial problems" (p 131). Amongst their responses, however, this group "did not identify any other cause of their problems which differed from those less in debt" (p 131) and the authors suggest that "this apparent tendency to deny the operation of social comparison processes might be investigated further" (p 131).

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[15] Social comparison processes (usually discussed in psychology literature) include the desire to affiliate with others, the desire for information about others and explicit self-evaluation against others.

They also found that those in debt not only experience pleasure in consumption but also express their social worth and social relations through consumption, buying presents for themselves and others as rewards or bribes. Debtors also tended to talk more about money with friends, suggesting that social relations partly centre on consumption as a topic of mutual interest and value. This pattern of social relations may be both cause and effect of a general dissatisfaction and disappointment experienced by debtors in their standard of living. The authors comment that being in debt appears linked to socio-psychological participation in consumer culture more generally. They observe that while having similar resources to those in debt, those not in debt are less likely to reward or bribe with purchases, talk about money with friends, feel dissatisfied with circumstances or find pleasure in shopping (Livingstone & Lunt, 1992).

Yurchisin and Johnson (2004) found that compulsive buying behaviour was negatively related to self-esteem and positively related to perceived social status associated with buying and materialism. While compulsive buying behaviours are believed to affect only one to five percent of consumers, studying this extreme behaviour enables the association to be made (Earl & Kemp, 1999).

Self-control

Behavioural economists have developed a ‘hyperbolic consumption model’ (based on economic life-cycle theory) to represent self-control problems (or ‘irrational’ consumer behaviour). According to this theory, ‘hyperbolic’ consumers are like their ‘exponential’ counterparts in that they prefer instant gratification over achieving long-run goals (in other words, they have high discount rates or prefer consumption in the short term). Unlike their exponential counterparts, however, hyperbolic consumers also have time-inconsistent preferences – that is, their preferences change depending on whether they are asked what trade-off they would make now or in the future.

In addition to discount rates and preferences, the role of expectations (or expectations of future happiness) in rational choice theory has been challenged in order to explain some observed self-control problems such as use of goods like cigarettes that bring immediate benefit, but have a potentially serious future cost, or shunning personal investment that brings immediate cost but future benefit (Clark, Poulton, & Milne, 2003).

Impulsivity is associated with problems such as addiction and criminality (Farrington, 1995). It is generally assumed that personality traits such as impulsivity are resistant to change, but one quantitative review of longitudinal studies (Roberts & DelVecchio, 2000) showed that delay of gratification is one of the personality traits most susceptible to change with adult experience.

Overseas evidence

Neuroscientists have recently isolated the brain circuit involved in thinking twice and checking impulsive action. “Our results provide the first clear neuroscientific basis for the widely held view that people can refrain from doing something even if they genuinely wish to do it.” (Brass & Haggard, 2007, p 9144).

Although not perfect, the hyperbolic discount function helps explain a wide range of anomalous economic choices including procrastination, addiction, self-deception, sub-optimal retirement timing, the design of contracts by profit-maximising firms and under-saving. The theory also offers explanations for a number of apparent anomalies in household financial decision-making:

- Households with hyperbolic discount functions tend to hold their wealth in an illiquid form, since such illiquid assets are protected from consumption splurges.
- Households with hyperbolic discount functions are very likely to borrow on their credit cards to fund instant gratification.

- Since hyperbolic households have little liquid wealth, they are unable to smooth consumption, generating a high level of co-movement between income and consumption (Angeletos, Laibson, Tobacman, Repetto & Weinberg, 2001).

Pinto et al (2004) found that students who tended to carry forward large unpaid balances were thought to make impulse purchases and use their credit cards to buy more than they could afford. Although these students were aware of the downsides of their usage level, they appeared unable to regulate or modify their behaviour in using credit.

Perhaps surprisingly, Pinto et al's study does not support previous studies showing that the psychological factors of self-esteem and locus of control were inversely related to shopping behaviour and credit card spending. Regardless of their type of credit card use, the students reported very high self-esteem and stronger internal locus of control. This suggests that there may not be a linear relationship between locus of control, aspirations and self-control.

The authors note that this may be because of the uniformity of the college-student sample and self-reporting reflecting a *change* in locus of control and aspirations rather than an *absolute* level. This is consistent with studies indicating increases in students' self-esteem and a shift from external to internal locus of control during the college years.

New Zealand evidence

Data from the Dunedin Longitudinal Study have been used to test the hypothesis that poor life expectations caused by low initial wealth will make addictive goods more attractive and investment goods less attractive. In this study, wealth was defined in terms of liquid assets and non-pecuniary wealth such as family and social cohesion, good health, social status and school or work achievement. Smoking, hazardous drinking and physical exercise were tested. Pessimistic expectations (significantly inversely correlated with broad wealth) significantly raised the likelihood of frequent smoking and less frequent exercise, but not of hazardous drinking (Clark et al, 2003).

Context relativity

Vlaev, Chater, and Stewart (2007) investigated the context relativity principle, which suggests that risky prospects are judged relative to accompanying prospects, and found that, when asked to make several choices at once, people tend to diversify. Evidence of this phenomenon (also known as the diversification bias) has been found by studying how people allocate their retirement funds across various investment vehicles. The idea is that an employee who is offered a number of funds to choose from divides the money equally among the funds offered. This implies that an investor's chosen asset allocation will depend strongly on the array of funds offered. Therefore, in a plan that offered one stock fund and one bond fund, the average allocation would be half to each, but if another stock fund were added, the allocation to stocks would jump to two-thirds.

Vlaev et al also quote research showing that when individuals are presented with three choices ranging from high to low risk, they had a significant tendency to pick the middle choice, thereby avoiding extremes. This confirms that when choices are difficult, people may resort to simple 'rules of thumb' to help them cope, such as the rule that it is best to avoid extremes.

This research clearly illustrates that savings and risky investment decisions can be influenced by manipulating the context in which the options are presented. In this way, savings rates could be increased and investment risk encouraged. Savings choices were shown to be more context-dependent than risk choices. These and similar findings mean that people tend not to independently and autonomously make optimal decisions about their financial future.

Influence of socio-economic group

Sawady and Tescher (2008) investigate borrowers' use of heuristics in the form of an alternative rationalilty based on shared experiences. This contrasts with the traditional notion of economic rationality, which assumes that individuals make choices that maximise economic utility. A multi-state United States bank and a mid-sized regional credit union conducted market research to help them reach and serve low-income consumers better. The authors' analysis suggests that low-income individuals have a common reasoning system, which is shaped by their shared experiences. This reasoning system is based on ideas such as:

- poverty leading to a short-term focus, because poverty is associated with constantly changing and frequently unpredictable circumstances. Despite this, low-income people still revealed a universal need to be successful, use cheques, have savings, understand credit, buy a home and provide for their children's future.
- the formal financial system being perceived as uncaring and disrespectful by low-income people. Many low-income people feel that banks are for 'people with money'. Banks' practices of offering services that do not fit the customer's needs contribute to a sense of alienation. Identification checks are interpreted as discrimination and overdraft fees considered betrayal. By contrast, the informal cash economy, including fringe lenders, is familiar, easy to understand and does not lead to rejection. The high fees and stigma of fringe lenders are recognised, but tolerated to avoid possible rejection and disrespectful treatment.
- a deep mistrust of mainstream practices. For example, hidden fees were interpreted as messages of exclusion and the breaking of an agreement. In narrow informal networks, social capital reduces transaction costs and increases the significance of repeated transactions. This kind of social capital correlates negatively with people's trust of mechanisms outside the immediate network, such as use of cheques, formal lenders and share-market investments.

The traditional means of engaging those who feel alienated from banks tend to focus on price and convenience. However, the emotional basis of the reasoning system and responses of low-income people leads to decision-making that may be sub-optimal or 'irrational' in terms of economics, but which makes perfect sense in terms of the shared belief system.

Family decision-making

Research suggests that some consumer decision-making styles are common to more than one culture, but that there are some cultural differences (Hafstrom, Chae, & Chung, 1992). In 1992 one team of researchers commented that family decision-making is one of the most under-researched and difficult areas to study in all of consumer behaviour (Wilkie, Moore-Shay, & Assar, 1992). It appears that this area is still largely under-researched with very little, if any, research having been undertaken since 1992 on family decision-making in relation to debt.

Overseas evidence

Walker (1996) confirmed previous findings that psychological and behavioural variables have a considerable impact on being in or keeping out of debt, but also suggests that perceived poor coping and being in debt during a period of particular financial strain (such as the birth of a baby) may actually lead to an improvement in financial management.

New Zealand evidence

Koloto and Katoanga (2007) studied 268 Pacific households in New Zealand, which included 520 'family groups'.[16] Almost two-thirds (62 percent) of the respondents reported that their decision-making approaches were changing either a lot or some of the time. The types of approach used included decision-making by the head of the household with or without adult household members collectively, and with or without adult household members taking responsibility in assigned financial areas.

Consumer socialisation

Consumer socialisation (also economic socialisation) is a specific concept referring to the process by which a child develops an understanding of the economic world.

Overseas evidence

Moschis (1985) found that the family context of interpersonal communication is believed to have the greatest influence on consumer socialisation. An interesting experimental study in this area showed that children who did not ordinarily receive pocket money spent more in credit than those who did get a regular allowance (Abramovitch, Freedman, & Pliner, 1991, in Earl & Kemp, 1999). Parental behaviour (such as discussing financial matters with children) and parental orientations (conscientiousness, future orientation) have also been shown to have a weak but clear impact on children's economic behaviour as well as on children's economic behaviour in adulthood (Earl & Kemp, 1999).

There are age-related changes in the level and forms of children's saving. In one experiment, six-year-olds saved only because they thought they ought to. Older children perceived the value of saving as a strategy to protect one's assets from external or internal threats (such as being robbed or succumbing to temptation). Another study found that older children saved because they anticipated a generalised need for money in the future (as opposed to saving for concrete targets) and were more likely to use a savings account (Earl & Kemp, 1999).

Discount rates (one's preference for current consumption over future consumption) are found to rise with the age of the household head. This result confirms the hypothesis that older consumers have shorter time-horizons and hence higher discount rates. Cole and Fuller (1980) found that, in energy markets, the youngest consumers had the lowest discount rate, which is consistent with the findings of Arthur D. Little's (1984) analysis. However, they did not find that the oldest consumers have significantly higher discount rates than younger ones.

Pinto et al (2004) suggest parental styles, family communication, consumer socialisation and media influence (discussed below) are potential antecedents to development of credit attitudes.

Perry and Morris (2005) call for exploration of the antecedents of financial knowledge and the most effective ways for consumers to acquire this knowledge. They consider that, to understand how to prepare consumers for responsible decision-making better, future research should explore underlying sources and influences that affect financially-oriented values and beliefs.

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[16] A 'family group' included one or two adults and their dependent children if any. Thus a single adult could be a family group, as could a couple with or without dependent children, whether their own or not. Under such a definition, extended family households included more than one 'family group', with the average in the households studied being 1.94 groups.

Aggressive advertising and lending

There is little research on how aggressive lending and advertising practices affect people's financial decision-making practices and contribute to problem debt.

Overseas evidence

Norvilitis, Szablicki, and Wilson (2003) found that students with credit cards from on-campus solicitation had higher debt-income ratios than those with credit cards from other sources.

New Zealand evidence

While aggregate credit card debt is significant and rising (Reserve Bank of New Zealand, 2006), aggressive targeting of students does not appear to be a significant issue in New Zealand, perhaps because of the accessibility of the student loan scheme.

There is, however, concern that irresponsible lending and easy credit are partly to blame for problem debt, with advertising along the lines of "you need to have it", "you can afford it", "buy now, pay later". The Ministry of Consumer Affairs has explored fringe lending in South Auckland and concluded that Pacific consumers are disproportionately affected and aggressively targeted by fringe lenders, and that protection may mean making credit hard to get (Coxson & Anae, 2007). The report notes (section 2.2):

> There is consensus amongst all respondents that 'people don't save up for anything anymore', that Pacific consumers tend to just go out and buy goods and services on credit. Bolstered by influential advertising and aggressive marketing to Pacific consumers, and the availability of 'instant cash, no questions asked', these respondents perceive that the culture of easy credit and consumption has taken a stranglehold on all tiers of Pacific society. This desire for instant cash to provide instant gratification seems to cross-cut young/old, NZ/island-born, unemployed/beneficiary/professional, male/female divisions (p 105).

Summary

Evidence suggests that people's savings and debt decisions are influenced by several personality and environmental variables, which may result in the development of habits, heuristics and coping mechanisms.

Recognising these habits, heuristics and coping mechanisms and understanding what influences them should help us predict and influence financial behaviour. Environmental variables are particularly appealing because they may be more amenable to change. The role that family, parenting and communication styles plays in consumer socialisation, and in family decision-making more generally, has emerged as a significant research gap.

Locus of control, aspirations and self-control have all emerged as key personality variables that warrant further investigation.

Having an external locus of control (particularly an external economic locus of control, or E-LOC), having aspirations based on comparison with others or having poor self-control (a tendency to be impulsive) suggests one is more likely to have a spending than a saving habit. These traits may be significant factors influencing whether a family becomes financially better or worse off over time. Further research on gender and age differences in these variables is required, as is an understanding of the interplay between these variables in a group or family decision-making setting. For example, where in a two-parent family one partner has an internal E-LOC and the other an external one, it may be in the family's long-term interests for

each to be aware of their tendencies, strengths and weaknesses and to empower the internal partner to make decisions about the family's finances.

These variables are summarised in Table 1. It should be noted that while the table suggests a linear relationship between these variables – namely that someone who has external locus of control is likely to have aspirations based on comparison with others and low-self control, and thus be more likely to use debt and be susceptible to problem debt – the study of students by Pinto et al (2004) cautions against taking too simplistic an approach.

Table 1: Personality variables that influence financial decision-making

Locus of control orientation	Internal • believe they determine what happens to them • believe they have the ability or power to change or influence the course of events • tend to be more self-reliant, independent and confident in themselves and their abilities • show more initiative • make more effort in controlling the world around them • tend to control their own impulses or urges better	External • feel they have little control over how their life evolves • believe life experiences happen from the 'outside-in' • tend to take less responsibility for their actions • place responsibility on some known or unknown force out of their control (chance, fate, powerful others, the government, God and so on) • * not so good at controlling urges
Aspirations	Less concerned with status Aspirations are more abstract High self-esteem, self-worth	Based on comparisons with others Aspirations are more material Low self-esteem, self-worth
Self-control	High Patient Thinks before acting	Low Impulsive/prefers instant gratification Acts before thinking
Saving/borrowing behaviour	Savers	Borrowers
Outcomes	Wealthier?	Poorer?

Part 4: Problem debt

Problem debt is a way of describing having too much debt or having unmanageable debt. Problem debt is also referred to in the literature as over-indebtedness.

Problem debt can be difficult to define in a measurable way. Firm evidence about the impact of debt is scarce (Valins, 2004; Williams & O'Brien, 2003). This is in part because it is difficult to determine whether debt causes a particular outcome, or vice versa, and in part because it is difficult to disentangle debt from other factors that may contribute to a particular outcome.

Being able to measure an outcome is important, however, if we are to identify New Zealand families who are encountering or vulnerable to problem debt, and distinguish them from other families who are not, but who are otherwise in the same financial position.

While we have not attempted to do this in this report, this section outlines what we may need to think about.

In terms of outcomes, problem debt is most likely to manifest itself in poor standards of living, stress and poor health. Longer-term consequences of debt could be measured in terms of quality adjusted life years (QALYs) and wealth disparities, which are not explored in this report.

In terms of explanatory variables, we need to consider both circumstances and behaviours, and how they interact.

Standard of living

Repossession, eviction, mortgagee sales, bankruptcy and utility disconnections are some direct ways in which debt can adversely affect families' standards of living.

Problem debt can become a barrier to sustainable employment, or moving into work or between jobs, and can reduce the financial returns from work. As Valins (2004) notes:

- Debt repayments tend to increase when people move into work, or the fear of this can become a barrier to work. However, United Kingdom analysis found that those with arrears were no less likely to move into employment than those without.
- Creditors, who tend to be patient when a person is not working, increase the required repayment rates once they know someone is working.
- People who move into employment will receive reduced social welfare benefits and will face increased income tax, which reduces the financial gains from working. If such people are also under pressure to repay debts once they are working, the effective marginal tax rates can become such that in the short term it can be financially better to remain on the benefit (p 55).

Debt repayments, however, may simply be prioritised over essential items, including food, heating, shelter, clothing and medical visits (Valins, 2004). This behaviour could have long-term implications for families' health and wellbeing. There is some anecdotal evidence that this is happening in New Zealand, with a reported increase in the number of applications for food assistance and budgeting advice from those with and without means (St John & Wynd, 2008, Williams & O'Brien, 2003). Of course, as Valins (2004) points out, debt avoidance strategies (such as going without essentials) may be equally problematic. Williams and O'Brien (2003) also note that what people forgo matters as much as the lower quality of what they buy.

Debt may put pressure on family time. It is entirely possible that some families choose to work longer hours to meet onerous debt obligations. Debt may also strain extended family relationships, particularly if the extended family is being asked to provide in-kind assistance, such as childcare.

In the United Kingdom, studies have used arrears and civil proceedings data to approximate problem debt, because of concern about capturing the poorest families (Balmer et al, 2005; Kempson et al, 2004). In New Zealand, some work examining the reasons for problem debt has been undertaken with evidence from the New Zealand consumer-debtor repayment programme, the Summary Instalment Order (Redhead & Rose, 1999).

Other New Zealand data sources might include:

- the Ministry of Social Development's Living Standards Survey
- utility companies
- Baycorp, Veda Advantage & bankruptcy data
- store repossessions
- truancy
- problem gambling.

Stress and poor health

Managing debt can be stressful, particularly if high servicing costs are putting pressure on disposable income. Unsecured debt can increase families' dependency on employment in order to protect future earnings:

> …simply making ends meet becomes a full-time job which pre-occupies the mind of many people most of the time – this seems to be especially so for women (Nettleton 1998s) (Williams & O'Brien, 2003, p 31).

According to Valins (2004), there are not many empirically robust studies studying the impact of debt on physical and mental health, family stress, stigma and social exclusions. In the UK, associations have been found between debt and various aspects of ill-health (Balmer et al, 2005).

There are a number of options for sources of New Zealand data that could be explored:

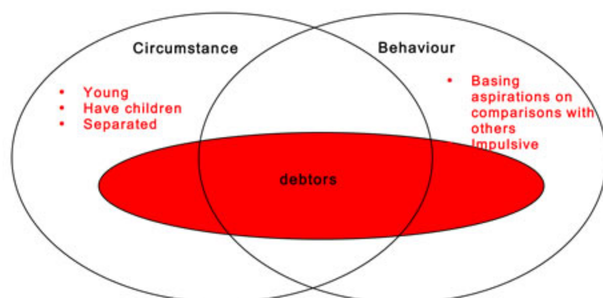
- the Ministry of Social Development's Living Standards Survey
- Statistics New Zealand's New Zealand Health Survey
- future waves of Statistics New Zealand's Survey of Family, Income and Employment
- Massey University's Health, Work and Wellbeing study.

Who is vulnerable?

In this section we explore how the circumstances and behaviours outlined in Parts 2 and 3 might interact to enable us to accurately classify who uses debt well and who does not.

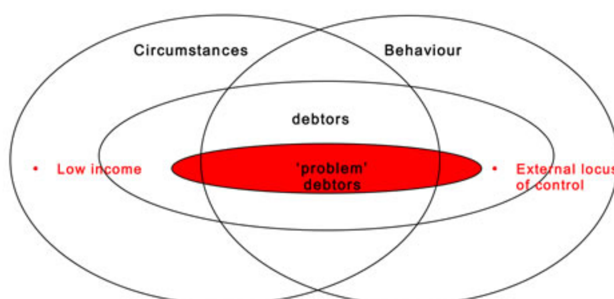
From the information we have gathered, it appears that some circumstances (notably being young, having children and separation) and some personality traits (basing aspirations on comparisons with others or being impulsive) are important in determining who gets into debt, as illustrated in Figure 17.

Figure 17: Factors that may influence who gets into debt



Other circumstances (notably having a low income) and personality traits (having an external locus of control) are important in determining how well people manage debt (or whether people get into problem debt), as illustrated in Figure 18.

Figure 18: Factors that may influence how well people manage debt



Of course, these findings are generally at an aggregate level, or across a large population group. For different population groups, it is not entirely clear whether these conclusions hold. Do behavioural factors cease to explain variation if circumstances are held constant, for instance?

In our view, this question has not been properly explored. Circumstances and behaviours tend to be viewed in isolation. Livingstone and Lunt (1992) are a notable exception, but they do not appear to thoroughly examine some of the multi-colinearities (correlations between independent or explanatory variables), as discussed in Part 3, because their population group is too wide.

Overseas evidence

According to Valins (2004), the common correlates with 'over-indebtedness' include having four or more credit commitments; spending more than 25 percent of income on credit; and spending more than 50 percent of gross income on mortgage and credit cards.

According to international studies, a young single parent, living in rental accommodation, is the archetypical 'problem debtor' (Balmer et al, 2005).

According to Livingstone and Lunt (1992):

> …what determines how deeply people get into debt differs from that of who gets into debt in the first place, particularly with regard to the variables of age and number of children… (p 129).
>
> Disposable income seems to be irrelevant to whether one gets into debt (presumably once a certain minimum income is obtained), but it is a moderate predictor of how far one gets into debt, and an important predictor of how much one repays… (p 132).

> …psychological factors are more important in determining how much of a debt is repaid by those who have the resources to do so (p 133).

In a recent United Kingdom study (Balmer et al, 2005), the issue of causality was explored:

> In most cases, debt was as likely to come before as it was after other issues. Domestic violence and relationship breakdown problems, though, were notable exceptions. These problems more often occurred prior to debt problems; indicating the severe change in circumstances that can follow family breakdown (p 48).

Webley and Nyhus (2001, in Balmer et al, 2005) find that chronic debtors are a small group and are distinguished by having more limited economic and social resources, being more present-oriented and finding it more difficult to control their expenditure than temporary debtors. Dynamic analyses suggest that many of the psychological variables between debtors and non-debtors may be a consequence of being in debt rather than a cause of it.

Lea, Webley, and Walker (1995) studied groups of customers who were non-debtors, debtors and serious debtors to a utility company. They found that:

- non-debtors had more money-management facilities, such as bank accounts, than debtors, and rated their abilities at money management more highly
- debtors had shorter time-horizons than non-debtors
- there were no group differences in attitudes to debt or locus of control
- a complex mixture of psychological and behavioural variables affects debt and is affected by it. It is argued that these variables are linked to the psychology of poverty.

New Zealand evidence

New Zealand research (Redhead & Rose, 1999) on the reasons 234 people filed for bankruptcy found the following:

- three key factors – current consumption preference, inadequate income and unanticipated events – interacted to cause financial difficulty
- inadequate income was associated with financial difficulty for 68 percent of the sample; 14 percent of the sample had experienced two of the three factors, while two percent had experienced all three factors
- the sample was disproportionately young, with 46 percent being aged 25 to 34
- 27 percent were employed, 72 percent were beneficiaries and one percent were students
- the mean indebtedness was $10,600
- about half the debt was secured and one of the major components of unsecured debt was credit card debt
- the average value of assets was $15,700, more than two-thirds of which was investment in housing.

Summary

Whether debt is a problem depends on how we measure it. Ideally, we should establish an independent measure of financial strain that is not simply an arbitrary debt ratio (such as spending more than 30 percent of gross income servicing debt).

How people behave or their personality traits appear to be variables which can explain differences between savers and borrowers, and those with and without problem debt. It is difficult to disentangle these factors from circumstances, however. Age seems to be an important factor in development of self-worth, and thus people’s desire for less materialistic things and their propensity to save. Income, on the other hand, changes the social group people operate in and compare themselves with.

There also remains a question of whether psychological differences emerge before or after people become indebted – can we reliably use these factors ex ante to identify problem debt risk factors?

We have noted several areas for research in this report:

1. Define and identify families who are in or close to a problem debt situation. The Livings Standard Survey (LSS) dataset offers the most potential for determining both outcomes and explanatory variables. (Note that multivariate analysis of the LSS dataset for this purpose will be undertaken by the Families and Retirement Commissions in 2008/09.)

2. Mortgage debt of older people has noticeably increased in the past decade. It would be worth exploring whether this is because they are borrowing more, or because more older people are entering (or re-entering) the mortgage market. Data from the Household Economic Survey (HES) or the Survey of Family, Income and Employment (SoFIE) should shed some light on this question.

3. There is evidence in the United Kingdom of a positive, causal relationship between relationship breakdown and over-indebtedness. It would be interesting to explore whether this is the case in New Zealand. LSS and SoFIE data may be useful for exploring this research question.

4. Determine whether income is also a strong indicator of problem debt in New Zealand. LSS and SoFIE data should be suitable for this analysis.

5. There is little evidence linking ethnicity with indebtedness or over-indebtedness. In New Zealand, however, Māori and Pacific families have high debt-asset ratios compared to European families. This relationship would be worth exploring further if the effects of significant confounding factors such as age and income could be held constant.

6. Evidence suggests that savings and debt decisions are influenced by various personality and environmental variables, which may result in the development of habits, heuristics and coping mechanisms. Identifying these variables and understanding what influences them may help us predict and influence financial behaviour. Environmental variables are particularly appealing because they may be more amenable to change. The role that family, parenting and communication styles plays in consumer socialisation, and in family decision-making more generally, has emerged as a significant research gap.

7. Having an external locus of control, basing aspirations on comparison with others or having poor self-control (a tendency to be impulsive) tend to make a person more likely to have a spending than a saving habit. These traits may be significant factors influencing whether a family becomes financially better or worse off over time. Further research is required, however, to determine whether these relationships hold ex ante – that is, before people become indebted. Further research on gender and age differences in these variables is also required, as is an understanding of the interplay between these variables in a group or family decision-making setting. For example, where in a two-parent family one partner has an internal locus of control and the other an external one, it may be in the family's long-term interests for each to be aware of their tendencies, strengths and weaknesses and to empower the partner with the internal locus of control to make decisions about the family's finances.

Definitions

Aspiration: Used in this report to include various self-improvement reasons for which people may save or wish to improve their financial circumstances. These include being financially independent, aspiring to a particular lifestyle based on their preferences and starting a business.

Cohort / cohort effect: A cohort is a group of people born in a defined period of time who share similar experiences, including life events, economic fluctuations and policy settings. The cohort effect is an inter-temporal concept that suggests that outcomes can vary for different cohorts depending on these shared experiences. Furthermore, these shared experiences can be externally influenced. The cohort effect should be distinguished from the age and period effect, however. The age effect captures what we expect to observe as people age (irrespective of when they were born). The period effect captures the impact of an event across the population (irrespective of age or cohort) at a point in time.

Consumer socialisation: The process by which young people develop consumer-related skills, knowledge and attitudes.

Coping: The process of managing taxing circumstances and expending effort to solve problems, or seeking to master, minimise, reduce or tolerate stress or conflict.

Coping strategies: Three main strategies are distinguished for coping with stress:

- appraisal-focused strategies, which involve modification of one's thinking processes (including denial, rationalising, distancing, altering goals and values or seeing humour in a situation)
- problem-focused strategies, which involve finding out more about the problem, learning new skills to manage it, rearranging one's life around it and so on
- emotion-focused strategies, which involve techniques such as releasing emotions, distracting oneself, managing hostile feelings, meditating and relaxation.

People tend to use a combination of strategies, and their preferred strategies are likely to change over time. All can be useful, but some claim that those using problem-focused strategies adjust better in the long term.

Debt: Any financial obligation, leveraged against an asset (secured debt) or against future income (unsecured debt). For our purposes, debt includes mortgages, student loans, bank loans, hire purchase, credit cards, store credit, being in arrears and use of fringe lenders. Indebtedness refers to the act or situation of being in debt. Over-indebtedness refers to the act or situation of being in too much debt (also referred to as 'problem debt'). In practice this can be difficult to measure because debt repayments may be prioritised over other expenditure items (even necessities). 'Liability' is the alternative accounting term for debt. Sometimes the term 'credit' is distinguished from 'debt' to differentiate manageable from unmanageable debt, or indebtedness from over-indebtedness. In this report, credit is only used when referring to a particular type of debt, such as credit card debt, notwithstanding the following usages: credit is what is loaned, debt is what is borrowed; creditor is owed, debtor owes.

Discount rate: The annual interest rate at which an assumed future value is reduced to produce the required present value. A present-oriented agent discounts the future heavily and so has a high discount rate, in contrast to a future-oriented agent who has a lower discount rate.

Economic Locus of Control (E-LOC): The locus of control concept can be applied to economic behaviour. In 1986, Furnham derived a scale to measure Economic Locus of Control (E-LOC), which is more specific than general locus of control measures. It has been used successfully to differentiate between unmanageably indebted individuals and control groups. The process of becoming over-indebted may involve inter-temporal choice decisions such as the use of consumer credit, and E-LOC was found to have greater validity in

differentiating participants with high and low discount rates for financial outcomes. The findings were extrapolated to personal loss, business gain and business loss conditions.

Fringe lenders: These lenders are known by several terms, including ‘loan sharks’, ‘money lenders’, ‘pay day lenders’, ‘cash loan companies’ and ‘marginal lenders’. They tend to provide loans at short notice at high rates.

Heuristics: Informal methods for solving problems.

Hyperbolic consumption: According to this theory ‘hyperbolic’ consumers are like their ‘exponential’ counterparts in that they prefer instant gratification over achieving long-run goals (in other words, they have high discount rates or prefer consumption in the short term). Unlike their exponential counterparts, however, hyperbolic consumers also have time-inconsistent preferences – that is, their preferences change depending on whether they are asked what trade-off they would make now or in the future.

Indebtedness: The act or situation of being in debt.

Locus of control: Locus of control is a personality variable related to how much people believe their lives are under their own control. Those who are said to possess internal locus of control believe they determine what happens to them and that they have the ability or power to change or influence the course of events. Others, said to have external locus of control, feel that the cause and control of events in their lives lie outside their abilities and attribute what happens to them to the external environment. People with external locus of control feel they have little control over how their life evolves and believe that life experiences happen from the ‘outside-in’. They tend to take less responsibility for their actions than those with internal locus of control, and place responsibility on some known or unknown force out of their control, such as chance, fate, powerful others, the government or God. Those with internal locus of control tend to be more self-reliant, independent and confident in themselves and their abilities. They show more initiative and make more effort in controlling the world around them and tend to control their own impulses or urges better than people with an external locus of control. Locus of control therefore includes but is not limited to the concept of ‘self-control’.

Non-status lenders: Operators who specialise in lending money to individuals with a poor credit rating. Non-status lenders typically charge far higher interest rates than mainstream lenders.

Over-indebtedness (or) problem debt: The act or situation of being in too much debt. In practice this can be difficult to measure because debt repayments may be prioritised over other expenditure items (even necessities).

Reverse mortgage: Also called ‘decumulation’ or ‘home equity release’. A special type of loan allowing the equity in a home to be converted into cash. The money obtained through a reverse mortgage is usually used to provide older people with financial security in their retirement years and may enable them to stay in their home longer than would have been possible otherwise.

Saving/savings: The act of putting money aside. Saving (singular) is a flow-concept and should be distinguished from savings (plural), which is effectively another term for wealth.

Social comparison theory: Social comparison theory includes processes (usually discussed in psychology literature) such as the desire to affiliate with others, the desire for information about others and explicit self-evaluation against others.

SoFIE: SoFIE (the Survey of Family, Income and Employment) is a longitudinal survey that runs for eight years, visiting respondents yearly to build a picture of how their circumstances are changing. The survey is now in its sixth wave (interview cycle), having commenced in 2002/03. Dependent children are defined as children who are under 15 years of age, or under 18 years of age and not employed more than 30 hours a week.

Status attainment theory: In the educational context, status attainment assumes that the social status of parents affects the educational level achieved by children, which in turn affects occupational level and social status. Thus, level of schooling would affect (moderate) the degree of intergenerational transmission of social status.

Summary Instalment Order (SIO): A consumer debt repayment plan administered by a New Zealand court as a possible alternative to bankruptcy. The SIO allows the debtor to repay their debts in regular instalments without the threat of further legal action while the order is in force.

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