

Household Saving Behaviour in Australia*

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Abstract

A paucity of reliable Australian household data means that very little is known about household saving behaviour in Australia, despite the importance of understanding saving behaviour from a policy perspective. This paper aims to contribute to our understanding of Australian household saving—and saving intentions—by using the *Melbourne Institute Household Saving Survey* and the *Westpac-Melbourne Institute Survey of Consumer Sentiment* to consider the motives for Australian household saving and the form in which household savings are held. The information presented here, while relatively simple in nature, can go some way to improving our knowledge of motivations for household saving patterns. It can therefore assist in assessing the likely impact on savings of transitory (such as the economic downturn in Asia) and permanent (such as the introduction of a GST) changes in the economic circumstances facing Australian households. The evidence suggests that there are a range of motivations for saving that are in effect at any one time, ranging from a life-cycle style hypothesis, to precautionary motives and leisure.

Key words: Australian household saving.

1. Introduction

A paucity of reliable Australian household data means that very little is known about household saving behaviour in Australia.¹ This paper aims to contribute to our understanding of Australian household saving—and saving intentions—by using the *Melbourne Institute Household Saving Survey* and the *Westpac-Melbourne Institute Survey of Consumer Sentiment* to consider the motives for Australian household saving and the form in which household savings are held. It is important to examine the reasons *why* households save, since this has implications for the *amount* they save. Additionally, examining household portfolio choice can assist in assessing the likely impact on household saving of a range of policy decisions.

Previous Australian studies that have examined saving at the household level include Dilnot (1990), Freebairn (1991), Harper (1989) and McDonnell and Williams (1994). Dilnot, Freebairn and Harper examine the Australian tax system and its possible impact on savings, while McDonnell and Williams provide some preliminary analysis of the pilot *Melbourne Institute Household Savings Survey*. Dilnot, using the Income Distribution Survey, calculated that the wealthiest 10 per cent of the population hold more than half of Australian wealth, and that the tax system plays a significant role in determining the form in which these savings are held. Freebairn used his analysis of forms of household saving to argue that the introduction of a consumption tax will result in a more efficient savings and investment mix, thereby improving the national productivity of investment (but would have a marginal impact on saving *levels*). McDonnell and Williams used the pilot surveys of the *Household Savings Survey* to provide information on the saving behaviour of households. In particular, their view was that use of such a tool is better than the alternatives of assuming ‘rational expectations, or to construct proxies by combining “hard” official data with models of varying degrees of texture’ (McDonnell and Williams, 1994, p. 73). They also suggested that survey data will quickly pick up information on changes in household behaviour in response to changes in economic or political conditions.

This survey, combined with the *Westpac-Melbourne Institute Survey of Consumer Sentiment* will be utilised here to examine household saving behaviour in Australia. Sections 2 through to 5 look at motives for saving and the portfolio allocation of saving for four classifications: by gender (and the entire sample); by age of the respondent; by household income; and by household size/number of children. Section 6 briefly examines the issues of intra-household income distribution and cohort affects, and section 7 concludes.

2. Australian household saving behaviour

The *Melbourne Institute Household Savings Survey* is conducted by telephone, and the questions are put to an area-stratified, random sample of 1200 households each quarter. The *Westpac-Melbourne Institute Survey of Consumer Sentiment* is conducted on a monthly basis. The *Household Savings Survey* records several qualitative measures on the extensiveness of household saving, reasons for saving and asset allocation.² In addition it includes information on the age of the respondent, household incomes, respondents' gender and the presence of children.³ The information presented in the tables below is based on an aggregation of four quarterly surveys, giving a total sample size of 4800 for the financial year 1997/98. Each of the tables have information on: the form of current household saving; where households would invest any new saving; the main reasons a household saves; the financial situation of the household; and the forms of debt held.

¹ The Household Expenditure Survey is of little use in undertaking savings analysis, as it suffers from problems that arise from calculating saving as income minus consumption, thereby incorporating measurement errors that may occur in both the income and consumption components.

² See the Appendix for the survey questions.

³ The surveys were piloted in 1993, and have been conducted on a regular basis since May 1994. For further information on the construction and possible uses of the *Household Saving Survey*, see McDonnell and Williams (1994).

2.1. *Reasons for saving*

In the US, much has been made of the decline in the US savings rate, and the various ‘ad hoc’ explanations stem from the fact that there is still relatively little known about the reasons why households save (Browning and Lusardi, 1996, p 1799). One of the complicating factors for theorists is that a wide range of motives for saving exists, both across populations at a given point in time, and for an individual over a period of time. Several motives can also be in effect at the same time, such as in the case where a household saves for retirement (the life-cycle hypothesis) as well as for unexpected shocks to income (the precautionary motive) (Browning and Lusardi, 1996, p 1797).

Table 1 presents saving data for the Australian population as a whole, and by gender. Of those households that do save, there are indeed a range of motives for doing so, covering consumption smoothing, the precautionary motive and the purchase of large expenditure items. The top four categories are for holidays, retirement, a rainy day and investment in the family home. There is a relatively large break between the top four and the next three reasons for saving, which are to pay off debt, education and to buy durables. The bequest motive is relatively unimportant. More interesting features of this data come to light when the data is broken down into, age, income and the size of the household categories.

Table 1. Saving, Debt and Financial Situation of Household, by respondent gender and total (1997/98)

	Male	Female	Total
Sample size	2355	2451	4806
<i>Form of household savings</i>			
Own home (paying off/own outright)	76	78	77
Bank, credit union, building soc.	62	63	62
Superannuation	53	47	50
Shares, Bonds	28	23	25
Holiday home, investment prop.	15	13	14
Managed trusts	14	13	13
Other	2	2	2
No savings	4	5	5
<i>Investment of new savings</i>			
Holiday home, investment prop.	22	21	21
Mortgage	17	17	17
Shares, Bonds	16	12	14
Bank, credit union, building soc.	12	14	13
Pay off debt	9	9	9
Managed trusts	6	7	6
Superannuation	6	4	5
Other	10	12	11
<i>Main reasons for saving</i>			
Holiday	31	30	30
Retirement	29	26	28
Rainy day (e.g. unemployment)	27	27	27
Buy, improve, upgrade home	25	26	26
Pay off debt	19	18	19
Education	16	17	17
Buy durables (e.g. car)	16	15	16
Bequest	7	7	7
Other	6	6	6
<i>Financial situation of household</i>			
Running into debt	3	4	4
Drawing on savings	7	8	8
Breaking even	37	43	40
Saving a little	40	36	38
Saving a lot	11	7	9
<i>Forms of debt</i>			
No debt	35	37	36
Mortgage	34	34	34
Credit card	30	28	29
Loan (bank, building soc. etc)	21	26	23
Car finance or leasing	9	12	11
HECS	9	8	8
Hire purchase, store credit	6	5	6
Owe money to family friends	5	5	5
Other	2	2	2

Source: Melbourne Institute *Household Savings Survey*, unpublished data

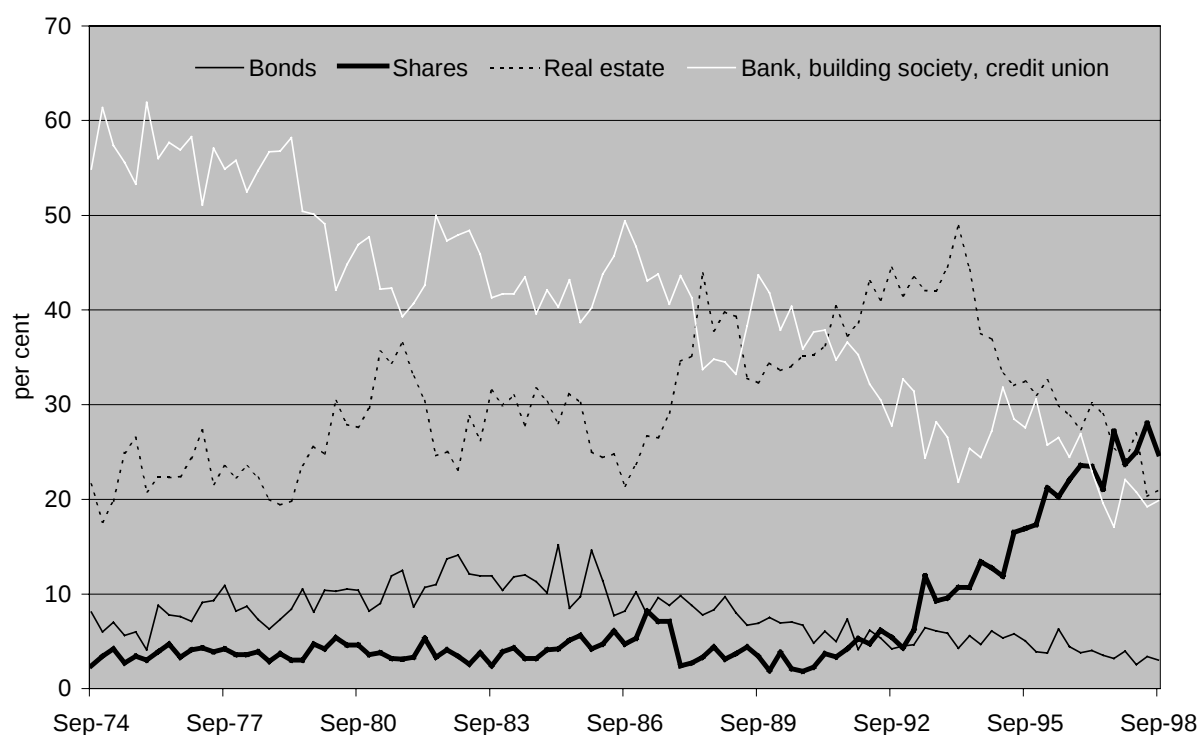
2.2. Portfolio allocation

The *life-cycle hypothesis* (Modigliani and Brumberg, 1953) is the most common theoretical approach to consumption and saving at the *microeconomic* level, and suggests that saving and dissaving are undertaken to smooth consumption and utility while yearly income varies over the stages of the lifecycle. Although the vast majority of studies are concerned with assessing the appropriateness of this hypothesis as a description of household saving behaviour, its one drawback is that it does not distinguish between various types of asset. However, commentators have suggested such information can help evaluate competing models of household portfolio behaviour, and assist in the assessment of proposals looking at financing consumption in retirement (Poterba and Samwick, 1997). An understanding of household portfolio allocation may additionally go some way to helping policymakers estimate the likely impacts of various policy decisions such as changes to the welfare payments system and the introduction of a consumption tax (Dilnot, 1990, Freebairn, 1991).

Banks are one of the primary savings vehicles across all categories, despite such savings being one of the most heavily taxed forms of assets under the current tax system.⁴ This is to be expected because such deposits are more readily accessible than other forms of savings (the liquidity and transactions motive for holding money), and employers frequently use these accounts to deposit employee wages and salaries. Other reasons for holding interest-bearing assets include the fact that they are default free, have a relatively certain return, and also give access to housing loans (Dilnot, 1990, p 36).

⁴ For estimates see Johnson *et al*, 1997, p 21.

Figure 1: Where Australian Households Would Allocate New Savings



Source: Westpac-Melbourne Institute *Survey of Consumer Sentiment* (Quarterly Report)

The Westpac-Melbourne Institute *Survey of Consumer Sentiment* asked consumers what would be the best thing to do with some (hypothetical) new savings on a quarterly basis since 1974.⁵ Figure 1 illustrates household responses to this question. At the inception of the survey, more than half of households indicated that they would place new savings in banks, building societies and credit unions. However, despite the importance of banks for current saving, households

⁵ The responses to the 'new savings' question are somewhat different in the *Consumer Sentiment* survey as compared to the *Household Savings* survey. There are several explanations for this. First, the quarterly *Survey of Consumer Sentiment* is conducted in a different month to the *Household Savings* Survey. Additionally, the structuring of questions can sometimes have an impact on responses. In *Consumer Sentiment*, households are asked about new savings as part of a set of general questions about their perception of the current state of the economy. In *Household Saving*, consumers are asked about new saving after already having had other questions asked on the savings patterns of the household. Further work at the Melbourne Institute of Applied Economic and Social Research is investigating this puzzle.

appear to be sensitive to the fact that they have relatively low returns, as now only around one in eight indicated that would use these savings vehicles if they had any new savings.

Superannuation is the second most cited form of savings and around half of Australian households indicated they hold savings in this form. This is also to be expected, as employer superannuation contributions have been compulsory for wage and salary earners earning over \$450 per month since August 1992. However, few households appear willing to put any new savings into superannuation.⁶ It is also here that the main difference in respondent gender can be seen in regard to saving. In this case, less than half of women hold their savings in superannuation, around 6 percentage points less than the percentage of men that hold their savings in this form. This is in line with the common acknowledgement that women tend to have less superannuation because of disrupted spells in the labour force.

Shares have become increasingly popular as a savings vehicle among households since 1992. Around one quarter of households hold current savings in the form of shares and bonds, and one in seven households have indicated that they would put new savings into these assets. This may be in part the result of a large number of 'secure' public floats such as the Commonwealth Bank, Woolworths and Qantas, and more recently, Telstra, National Mutual and AMP. Households may also have become more sophisticated in their financial planning over this time, with several financial institutions now packaging portfolio investments for individuals who have a (relatively) small amount of savings.

The rate of return on shares in comparison to the returns on interest bearing deposits may also have something to do with this shift in sentiment. At the beginning of 1992, nominal interest rates on transaction accounts at banks ranged from just under 4 per cent (roughly similar to dividend yields) to 5.6 per cent, depending on the size of the account. Since this time however, interest rates on transaction accounts have declined steadily, such that now the average rate of return ranges between 0.1 and 1.1 per cent. The dividend yield however has fluctuated between

⁶ A number of reasons were cited for this, including "I don't know enough about them" and "I want to be able to withdraw my money at any time". For more details, see the Melbourne Institute *Household Savings Report: Detailed Quarterly Report*, August, 1998.

3 and 4 per cent over this time, and currently stands at a relatively healthy 3.6 per cent; the only way an individual is able to get a better return on interest bearing deposits is to have a 6 month term deposit. In theory, changes in the real rate of interest should have an ambiguous effect on the *level* of saving, because there is both an income and substitution effect. Empirical estimation usually finds only weak evidence of a small positive impact on saving (Callen and Thimann, 1997). The observed change in consumer perceptions of where to place their savings would suggest that a change in interest rates might change the mix of saving, but may not necessarily change the level.

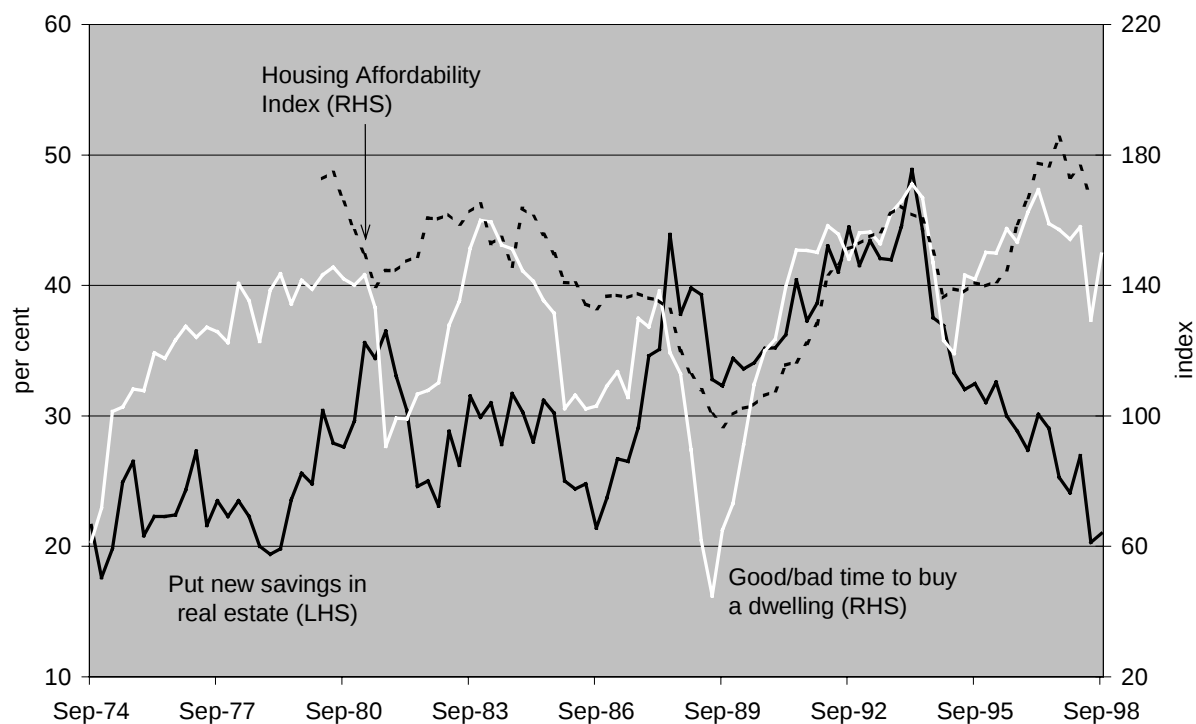
Real estate (*other* than the household mortgage) is the fourth most common form of Australian household savings. A range of characteristics could be responsible for this, including relatively low effective tax rates⁷ as well as a fairly reliable (albeit relatively small) rate of return. The Australian love affair with property appears to exhibit a more cyclical pattern than other forms of saving. Currently, around one-fifth of households have expressed an interest in keeping new savings in this form. Figure 2 plots the household responses on whether they would put new savings in real estate against household perceptions of whether now is a good time to buy a dwelling and a housing affordability index (HAI)⁸. Perhaps a little surprisingly, the HAI (and consumers' perception of whether or not now is a good time to buy a dwelling) is not that closely correlated with real estate as a good savings vehicle, and the dichotomy has become especially evident in more recent years. Several factors may be responsible for this observation. Firstly, although households consider buying conditions promising, the decision to buy (and hence to save for the deposit) would have been made at a much earlier stage. Secondly, the real estate savings option may cover more general properties such as that for commercial usage. Finally, the

⁷ Johnson *et al*, 1997, p 21.

⁸ The Housing Affordability Index is constructed from information on house prices, interest rates and household disposable income. Housing Affordability is measured by the ratio of average household disposable income to the 'qualifying' income required to meet payments on a typical dwelling. In calculating qualifying income a deposit of 20 per cent with repayments equal to 30 per cent of income is assumed using a conventional 25 year loan (Housing Industry Association *Housing Report*).

two measures of buying conditions may be more closely correlated with putting new saving into a mortgage.⁹

Figure 2: The Housing Market



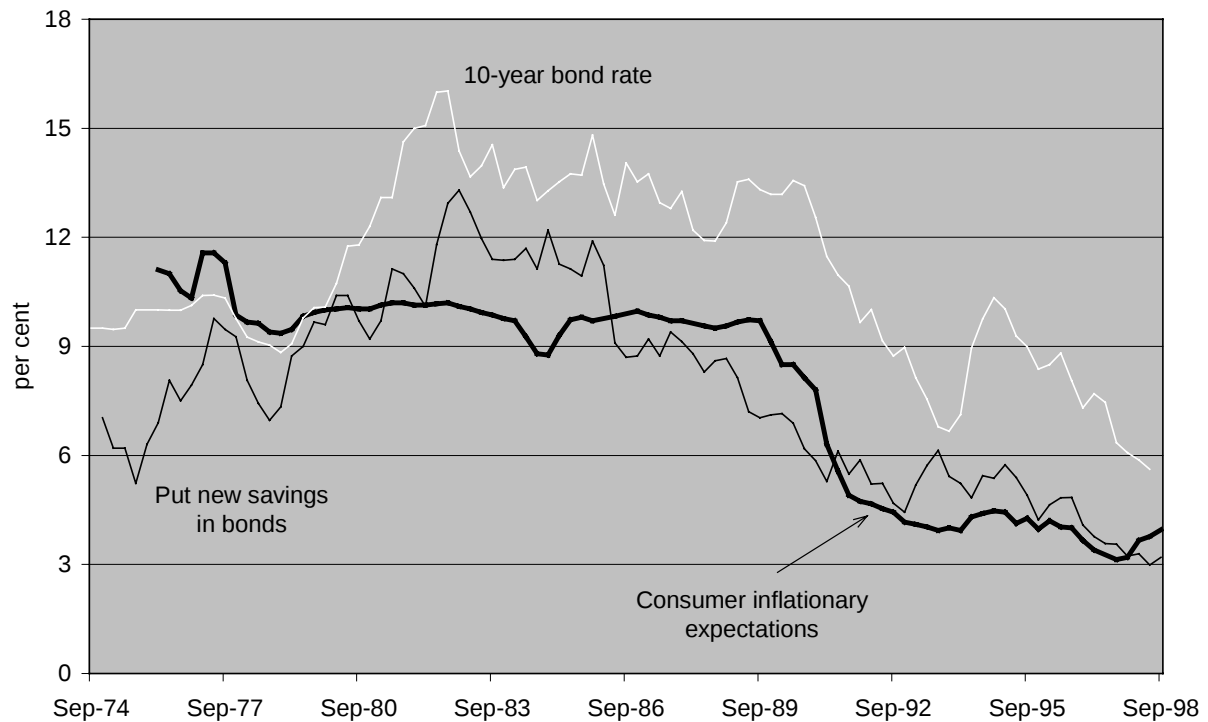
Sources: Westpac-Melbourne Institute *Survey of Consumer Sentiment* (Quarterly Report), Housing Industry Association *Housing Report*.

Portfolio choice can also be influenced by inflation (that is, real versus nominal returns). Figure 3 plots household inflationary expectations against the choice of bond holdings as a savings vehicle, and shows that the two series have moved quite closely together over time. A simple correlation coefficient yields 0.84 between March 1976 and September 1998 and 0.92 between September 1986 and September 1998. This is unsurprising given that when inflation is relatively high, interest rates also tend to be reaching a peak, and consequently bond prices are relatively low (and *vice versa* when inflation is relatively low). The last 5 years has seen a notable shift

⁹ Unfortunately, the historical series does not distinguish between the two different types of assets, and it is therefore impossible to test this hypothesis.

down in both actual inflation outcomes and, more recently, consumers perception of future inflation—bonds are therefore not considered an asset that would yield a particularly good rate of return in the current environment.

Figure 3: Bonds, Inflation Expectations and Long-term Interest Rates



Sources: Westpac-Melbourne Institute *Survey of Consumer Sentiment* (Monthly and Quarterly Reports), Reserve Bank of Australia *Bulletin*.

3. Age¹⁰

The life cycle model implies that, over the course of a life time, young individuals borrow to consume in advance of future income, repay their debt and save through the middle years (at which point they have a rising saving rate), and finally, draw down their savings after retirement. Table 2 presents saving data by the age of the respondent, and shows that there is a higher proportion of younger individuals that do indeed have some form of debt, which steadily

¹⁰ Note that age refers to age of the respondent, not age of the head of the household.

decreases as the age of the respondent increases. However, an indication that this is not the whole story is the observation that younger people also appear to be saving more than older individuals, with 42 per cent ‘saving a little’ and a further 14 per cent ‘saving a lot’. This would suggest that borrowing is *not* a relatively costless form of financing current consumption (they are liquidity constrained) and young agents are not necessarily risk-neutral. In fact, the information here indicates that younger people are no more risk neutral than any other age group, with the precautionary motive for saving (rainy day) reported by the same proportion of individuals across all age groups.

3.1. Reasons for saving

Consistent with the life-cycle model is the profile of reasons for saving across age groups. Saving for retirement is relatively important as individuals approach retirement age, with four distinct breaks in the age groupings presented here. Up to the age of 34, less than 20 per cent of households indicated that they were concerned with saving for this purpose. In contrast, around 31 per cent of those aged between 35 and 44 thought that retirement was an important reason to save. The retirement motive becomes the single most important reason for saving for the 45 to 64 year olds before declining in importance again after the age of retirement. Poterba and Samwick (1997, p 25) indicate that borrowing behaviour should receive attention when looking at the retirement motive for saving, given that the burden of debt-servicing may influence a household’s ability to finance consumption in retirement. Just over half of Australian households are in debt, and of these individuals, the most common forms of debt are the household mortgage, credit cards and bank loans. At present however, this does not seem to be a concern for retirees, as the vast majority have indicated that they have no debt.

Investing in the family home and debt repayment is a relatively more important reason to save for those aged between 25 and 44, an age at which most of the borrowing to finance consumption and house purchases would be taking place. Major consumption items, such as holidays and durables, are relatively important reasons to save for the youngest age group, but steadily decline as age increases. The importance of education increases as age increases (up to the age of 44, presumably when most households have their children at school) before declining in the later years.

Much has been made of the different saving propensities across countries, particularly in reference to the high savings rates in Japan. However, the savings motives of Japanese households exhibit characteristics consistent with the results presented here:

Saving for the leisure motive is done primarily in the twenties and thirties, that for the housing motive in the late twenties and thirties (also in the forties and fifties if saving in the form of loan repayments is taken into account) that for the education motive in the thirties and forties,...and that for the retirement motive after age 50 (Horioka and Watanabe, 1997, pp 547 & 549).

This would suggest that theories of saving *patterns* might be generalised across countries, but that there needs to be some other explanation to describe the differences in saving *levels* between countries.

Evidence cited in Browning and Lusardi (1996, p 1815) indicates that saving is positive for every age group, with mean savings rates increasing until the period around retirement and then decreasing. Although this data set lacks the information needed to calculate mean savings rates, the observation that the older the household gets (up to retirement age), the more of *every* type of asset they hold, suggests that Australian household saving seems to agree with this view. As wealth accumulation typically takes place over a household's entire working life, it would therefore be expected that older households will have higher assets on average than younger ones.

3.2. Portfolio allocation

The main differences in portfolio allocation across age groups are for the 18 to 24 year olds and those aged over 55. The vast majority of young people hold their savings in either a bank or similar financial institution, and (perhaps reflecting their financial 'immaturity' and the need to increase cash holdings) 22 per cent indicated that they would put any new savings they received into this vehicle. Less than half of this age group have savings in superannuation.

Table 2. Saving, Debt and Financial Situation of Household, by age (1997/98)

	18 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 plus
Sample size	731	1062	995	706	557	755
<i>Form of household savings</i>						
Bank, credit union, building soc.	69	66	62	62	58	55
Own home (paying off/own outright)	61	64	81	87	90	87
Superannuation	48	58	63	61	47	15
Shares, Bonds	21	22	27	32	33	22
Managed trusts	10	9	13	13	22	17
Holiday home, investment prop.	10	12	15	22	17	8
Other	1	2	2	2	2	2
No savings	6	6	4	3	2	5
<i>Investment of new savings</i>						
Holiday home, investment prop.	23	23	24	24	18	14
Bank, credit union, building soc.	22	9	7	8	12	23
Shares, Bonds	15	12	12	14	19	16
Pay off debt	15	10	11	7	6	3
Mortgage	8	29	26	18	9	1
Managed trusts	4	4	5	8	9	10
Superannuation	3	3	4	9	10	3
Other	9	8	8	9	13	21
<i>Main reasons for saving</i>						
Holiday	38	34	32	30	27	19
Buy, improve, upgrade home	27	38	32	24	14	9
Buy durables (e.g. car)	27	19	18	15	7	5
Rainy day (e.g. unemployment)	25	27	27	27	27	26
Pay off debt	21	27	25	17	9	4
Retirement	16	18	31	45	43	20
Education	16	19	29	18	6	3
Bequest	4	7	10	7	7	6
Other	7	6	6	5	6	7
<i>Financial situation of household</i>						
Running into debt	3	4	6	4	4	2
Drawing on savings	5	6	6	9	8	13
Breaking even	32	37	40	39	47	50
Saving a little	43	41	39	39	32	29
Saving a lot	14	11	8	9	8	3
<i>Forms of debt</i>						
Credit card	28	37	41	32	19	8
Mortgage	28	49	55	39	13	4
Loan (bank, building soc. etc)	25	31	32	27	12	3
HECS	23	12	5	6	2	0
Car finance or leasing	16	14	13	10	5	1
Owe money to family friends	9	9	5	2	1	1
Hire purchase, store credit	7	7	9	6	2	1
Other	2	3	2	2	2	1
No debt	25	19	18	31	58	82

Source: Melbourne Institute *Household Savings Survey*, unpublished data

This proportion is similar to that for 55 to 64 year olds, which may be explained by the fact that some of these individuals may have missed out on the compulsory superannuation contribution scheme that is currently in place. Given that compulsory superannuation contributions were only introduced relatively recently, it is unsurprising that only one-fifth of current retirees hold any savings in the form of superannuation. Once the current generation reaches retirement, a substantially higher proportion of retirees may hold savings in this form. In terms of new savings, retirees seem to prefer deposits or simply spend it (cited in the 'other' category). Few people would put new savings into the mortgage, because at this stage of their life, most households would have already paid off the mortgage.

Older age groups more often take up assets with higher rates of return, such as shares and bonds, most likely because they have extra funds with which to diversify. This is consistent with evidence from Poterba and Samwick (1997) who suggest that households begin to accumulate financial assets at a fairly rapid pace at around 34, with holdings peaking at around the age of 58. Investment properties are important forms of saving for the 44 to 55 year old group, as are managed trusts for the 55 to 64 year olds.

Individuals become less concerned with using new savings to pay off debt as they get older. Unsurprisingly, given that this is usually the time that individuals buy their home, 25 to 44 year olds are more likely to use new savings to pay off the mortgage. Asset allocation is likely to exhibit a substantial shift in the period immediately prior and after the purchase of a home, since 'in most cases, households must accumulate a downpayment of between ten and twenty per cent of house value before they can obtain a mortgage for the balance of their home. This could explain a pattern of financial assets accumulation for young households before they purchase a home, as well as the high level of real estate assets (and low level of financial assets) for households in the year immediately after home purchase' (Poterba and Samwick, 1997, p 27).

4. Income

A motivating factor in analysing saving patterns across income groups is that higher income earners account for a large share of aggregate savings (Carroll, 1998; Callen and Thimann, 1997). This is because a substantial proportion of households never accumulates particularly large

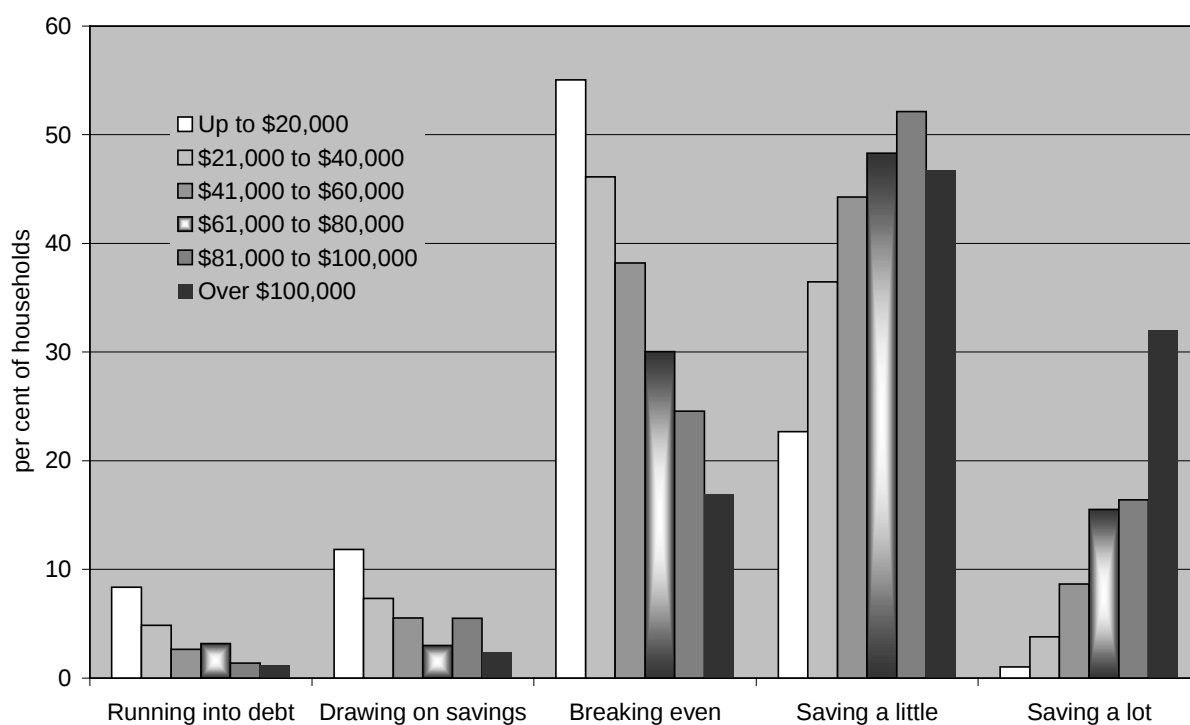
stocks of financial wealth (Poterba and Samwick, 1997, Browning and Lusardi, 1996, Dilnot, 1990). The absolute income hypothesis (based on Keynes, 1936)—where saving is determined as some function of the level of income—is the standard saving theory in the majority of macro analysis. Of relevance to this paper is that this theory allows saving to be influenced by both objective (e.g. income and interest rates) and subjective (e.g. precautionary) factors. An assets based theory of savings (Tobin 1951, Houthakker and Taylor 1970), is an adaptation of the absolute income hypothesis which embodies a stock adjustment process so that saving is positive when the level of wealth falls below the optimal level, and negative otherwise. This implies that households have a target wealth to income ratio; it has been suggested that lower saving (and therefore lower wealth) may in fact be an optimal choice for low-income households if welfare payments are means-tested (Hubbard, Skinner and Zeldes, 1994).

A priori, low-income households would be expected to save less than high income, simply because of their lower disposable income (although it should be noted that the relationship between saving and income is two-way). Indeed, the ‘residual’ hypothesis of saving (for example Marglin 1975) maintains that apart from the decision to save for a house, most household saving is the residual of income after consumption and does not emanate from a deliberate decision to save.¹¹ Figure 4 shows the financial situation of households in various income groups, and indicates that, as expected, a greater percentage of low income households (as compared to other income classes) are running into debt, drawing on their savings, or just managing to make ends meet.¹²

¹¹ This proposition would be difficult to test, because although this may be the case, there are very few households who are likely to explicitly state, even when asked why they save, that this is the reason they currently have any savings. The same can be said of the relative income hypothesis (Duesenberry 1949), which argues that social comparisons and habit determine consumption decisions. People spend according to what is normal for their reference group and past consumption levels (i.e. they save if income is high relative to their reference group or income has risen and vice versa).

¹² Browning and Lusardi (1996, p 1815) suggest that saving is usually negative for the first and second income quintile and highest in the top quintile. However, this is unable to be tested here and would require the debt levels of those ‘running into debt’ to be higher than those who are managing to save.

Figure 4. Financial Situation of Household, by income (1997/98)



Source: Melbourne Institute *Household Savings Survey*, unpublished data

In contrast, nearly one third of high-income households are managing to save a lot (remembering of course that ‘a lot’ is a subjective measure). Whether or not savings *rates* (defined as saving as a share of income) increase as income levels increase is a little more difficult to determine. While this survey does not provide us with a dollar amount of saving in order to calculate this, other evidence suggests that households with higher levels of lifetime income also tend to have higher lifetime savings rates (Carroll, 1998). Such evidence ties in well with the permanent income hypothesis (Friedman 1957), where it is argued that consumption depends on one’s expected permanent income that is exclusive of transitory components.

A first glance at the ‘forms of household debt’ question would seem to contradict the results presented in Figure 4, as nearly two-thirds of low income households indicated that they had no debt, whereas less than one-third of the higher income category suggested that this was the case. However, although high income households may have more forms of debt, their *net* lending position (i.e. the ability to cover these debts through saving) is likely to be much healthier than

that of low income households. There are also tax advantages in certain forms of debt (such as HECS and car leasing) that may also be more easily utilised by higher income households. Unsurprisingly, of those households that do have debt, the majority holds it in the form of credit cards or loans.

4.1. *Reasons for saving*

Table 3 presents saving data by household income. Less than 20 per cent of low-income households hold savings in superannuation, an outcome of the fact that the majority of these individuals are either retired or unemployed. A large share of those individuals who are not working have no savings at all. This is consistent with Callen and Thimann (1997, p 13), whose results indicate that unemployment is detrimental to saving, i.e. the ‘lower income’ effect outweighs the ‘need for precautionary saving’ effect. The precautionary motive for saving appears to be the most important motive for the lowest end of the income scale, with the greatest percentage of people indicating that they were saving to cover unexpected events such as illness or unemployment. The relative unimportance of saving for education for the lowest income group can be explained by the observation that most of these households have no children. Holidays and spending on the house are also other primary motives for saving.

4.2. *Portfolio allocation*

Similarly to debt, the percentage of individuals having several different forms of savings also increases as income increases. As with the aggregate figures, banks are one of the primary savings vehicles for all income categories, ranking second for households earning \$60,000 or less, and third for those earning more. This is in line with evidence from Dilnot (1990) and Poterba and Samwick (1997, p 6), who find that “the portfolios of higher net worth households are...less heavily invested in bank accounts and similar assets than are those of lower net worth households”.

Table 3. Saving, Debt and Financial Situation of Household, by income (1997/98)

	\$20,000 & under	\$21,000 - \$40,000	\$41,000 - \$60,000	\$61,000 - \$80,000	\$81,000 - \$100,000	over \$100,000
Sample size	827	928	658	452	245	288
<i>Form of household savings</i>						
Own home (paying off/own outright)	68	74	81	85	82	83
Bank, credit union, building soc.	56	62	68	67	68	70
Superannuation	18	51	63	71	79	76
Shares, Bonds	11	21	26	40	41	56
Managed trusts	8	11	13	20	16	26
Holiday home, investment prop.	4	10	16	20	23	30
Other	2	2	2	2	1	4
No savings	12	5	1	2	0	0
<i>Investment of new savings</i>						
Bank, credit union, building soc.	20	14	9	8	5	5
Holiday home, investment prop.	15	22	23	26	27	22
Shares, Bonds	13	14	12	16	19	24
Pay off debt	10	10	10	9	10	11
Managed trusts	9	6	6	5	5	7
Mortgage	6	18	27	24	23	18
Superannuation	4	5	6	3	7	5
Other	18	8	7	7	4	7
<i>Main reasons for saving</i>						
Rainy day (e.g. unemployment)	25	26	28	27	27	25
Holiday	17	29	36	38	40	35
Retirement	16	24	31	35	39	39
Buy, improve, upgrade home	12	25	33	39	32	31
Pay off debt	11	18	23	23	19	19
Buy durables (e.g. car)	8	16	17	20	22	15
Education	7	18	23	24	18	16
Bequest	5	8	10	8	9	6
Other	7	6	6	6	5	8
<i>Financial situation of household</i>						
Running into debt	8	5	3	3	1	1
Drawing on savings	12	7	6	3	5	2
Breaking even	55	46	38	30	25	17
Saving a little	23	36	44	48	52	47
Saving a lot	1	4	9	16	16	32
<i>Forms of debt</i>						
Credit card	18	28	36	39	43	41
Loan (bank, building soc. etc)	10	26	33	30	32	31
Mortgage	10	34	49	56	51	42
Owe money to family friends	6	5	5	4	7	4
HECS	6	8	9	11	12	11
Car finance or leasing	4	11	14	15	14	16
Hire purchase, store credit	4	7	7	7	6	9
Other	2	2	1	3	2	2
No debt	62	36	22	19	15	21

Source: Melbourne Institute *Household Savings Survey*, unpublished data

The relatively well off appear better able to finance consumption in retirement, with superannuation being the second highest form of savings once household income is over \$60,000. This appears to be a planned phenomenon, as around 40 per cent of these individuals indicated that they are saving for retirement, and would suggest that wealthier households tend to be at the stage of the life-cycle that corresponds to putting more thought into consumption after retirement. Shares and bonds also gain rapidly in importance as income increases.

As expected, a high proportion of households with an income of less than \$20,000 per annum have no savings at all. However, even for those households with no savings, attitudes to saving can still be examined through the question on what a household would do with new savings. The most popular response from the low-income households were to put new savings in the bank, contrary to that reported for the aggregate figures, which may be explained in part by the necessity to bolster cash balances. Investing in real estate or shares and bonds also ranked relatively highly. Importantly, the lowest income households—which include the unemployed—preferred to spend any new saving they received (listed under the ‘other’ option).

5. Household size, number of children

The life cycle hypothesis allows for the presence of children, with the saving and consumption needs of households with children being different to those without children (Kooreman and Wunderink, 1997, Pashardes, 1991). Empirical estimates for the US indicate that the saving of couples is negatively correlated with the number of children, and the age of the youngest child (Wang, 1994). The rationale (apart from necessarily having to consume more because there are more people) is that the addition of children to the household increases the price of time. This makes leisure more expensive, thereby causing couples to increase their labour force participation, consume more time saving goods and services, and save less. A survey of the literature by Browning and Lusardi (1996, p 1815) also corroborates these results, reporting that saving rates are higher for couples with no children, lower for households with children, and the least for lone parents. Over time, this may have implications for aggregate saving if—as is the case with a number of industrialised countries—fertility rates decline to the extent where there are significantly fewer households with larger numbers of children.

5.1. Reasons for saving

Table 4 presents Australian data on saving by the size of the household. The most oft mentioned reason for saving for households with either no children or one child is to go on holiday. In contrast, for households with 4 or more children, saving for a holiday is ranked 6th out of ten possible reasons for saving. Education becomes increasingly important as the number of children in the household increase, with a dramatic jump in this variable between households with and without children. Once the household has two or more children, it becomes the single most important reason for saving.

The second most important reason for households with children is to buy, improve or upgrade the family home, presumably because this is where most of the ‘nurturing’ takes place. For childless households, retirement is the second largest factor, which is unsurprising given that half of this subsample is over the age of 50. Interestingly, saving in order to buy durable items is reported by less than one in ten households with 4 children or more, although this could be due in large part to the fact that at this stage of household formation, most durables would already have been purchased. The bequest motive for saving, although it does increase with the presence of children, is nevertheless relatively unimportant.

5.2. Portfolio allocation

Disregarding households that have a mortgage (or own their home outright), almost one in five households with 4 children or more have no savings, and also hold less of *all* forms of saving, concurring with the empirical estimates mentioned above for the US. From these survey results, there appears to be little other significant difference in the forms that households choose to hold their savings. The two main exceptions are the decline in importance of managed trusts as the number of children in the household increases, and the increase in the number of households who have saving in superannuation as the household size increases to 3 children. The latter observation could be due to the youth of the other households with children (and therefore less chance to have savings in this form) and the observation that a large proportion of childless households are of retirement (or close to) age.

Table 4. Saving, Debt and Financial Situation of Household, by number of children (1997/98)

	None	One	Two	Three	Four or more
Sample size	3013	658	706	279	87
<i>Form of household savings</i>					
Own home (paying off/own outright)	76	76	82	84	82
Bank, credit union, building soc.	63	64	61	62	52
Superannuation	46	57	57	63	47
Shares, Bonds	26	26	25	25	19
Managed trusts	15	13	9	9	8
Holiday home, investment prop.	13	17	13	16	16
No savings	5	6	4	3	2
Other	2	2	2	2	5
<i>Investment of new savings</i>					
Holiday home, investment prop.	22	23	19	21	21
Shares, Bonds	16	12	12	12	5
Bank, credit union, building soc.	15	10	9	9	13
Mortgage	12	21	28	29	36
Pay off debt	7	12	11	14	7
Managed trusts	7	5	6	4	6
Superannuation	5	5	6	3	5
Other	12	9	7	6	7
<i>Main reasons for saving</i>					
Holiday	32	32	26	29	15
Retirement	28	27	25	28	22
Rainy day (e.g. unemployment)	26	29	25	28	20
Buy, improve, upgrade home	22	30	32	37	33
Pay off debt	15	25	25	26	30
Buy durables (e.g. car)	14	21	19	18	9
Education	6	30	37	39	40
Bequest	5	10	12	14	10
Other	7	6	4	4	3
<i>Financial situation of household</i>					
Running into debt	4	4	4	6	9
Drawing on savings	8	8	6	4	6
Breaking even	39	41	44	46	49
Saving a little	38	38	39	39	29
Saving a lot	10	8	6	5	3
<i>Forms of debt</i>					
Credit card	25	36	37	38	41
Mortgage	23	48	56	58	67
Loan (bank, building soc. etc)	18	31	34	33	32
HECS	9	10	8	4	4
Car finance or leasing	8	17	15	14	14
Owe money to family friends	5	5	6	6	4
Hire purchase, store credit	4	8	7	7	14
Other	2	2	2	2	5
No debt	46	22	16	17	19

Source: Melbourne Institute *Household Savings Survey*, unpublished data

6. Intra-household income distribution and cohort effects

Several issues should be borne in mind when assessing any type of information on saving at the household level. Two of these (which are unable to be analysed here due to the limitations of the data) are the hypotheses that different members of the same household may have different savings propensities, and that cohort effects may matter for lifetime saving patterns.

One example of the first point suggested by Browning (1994), is that in two person households, wives prefer a household saving rate that is considerably higher than that of the husband, because the husband discounts the future more. Two observations lead him to this conclusion: women typically live longer than men and wives are typically younger than their husbands. For his household, the wife is expected to live 50 per cent longer in the retirement period (where the retirement period is defined as the husband being 65 or over) if both survive to the retirement date. An important implication of this result is that the distribution of income within the household may have a significant impact on household savings behaviour. Households in which the female is either the primary income earner, or has a relatively equal share, will be more inclined to save a greater proportion of income. Browning's analysis also has implications for portfolio choice: households buy some insurance and some annuity (but save nothing) when the wife has a low relative income, whereas when the wife earns more than half, the household only has private saving.

In regard to cohort effects, there have been several overseas studies on this issue, and the balance of opinion is that these effects are non-trivial (Attanasio, 1998, Banks and Blundell, 1994, Poterba and Samwick, 1997). The study by Poterba and Samwick looks at the implications of cohort effects for asset allocation, and conclude the presence of statistically and economically significant cohort effects for most types of assets make it impossible to aggregate households born at different ages for the purposes of portfolio modelling.

Attanasio (1998, p. 580) also points out that such cohort effects can have implications in identifying life-cycle profiles, in that a cross-section age profile may be different to the age profile of any individual. Specifically, if younger cohorts are 'wealthier' than older cohorts (in life cycle terms), then—providing the effects are strong enough—use of cross-section data may

give a misleading ‘hump-shaped’ age profile. Unfortunately, although there are several years of cross-section results available, the time frame is not long enough to adequately control for cohort effects given that a group of 45 year olds (for example) in 1974 cannot be compared to a group of 45 year olds in 1998.

7. Conclusion

The level, rate and asset allocation of household saving has wide ranging implications for the Australian economy. For instance, it is widely recognised that the current taxation system leads to losses in efficiency due to its impact on the asset allocation of saving by households. As an example, higher income earners can more easily exploit tax concessions and differing effective tax rates on classes of assets due to their greater ability to use saving vehicles other than bank accounts (the favoured form for the low income earners) (Johnson *et al*, 1997, p 20). Other evidence suggests that lower household saving is linked to a higher reliance on direct income taxes as opposed to indirect taxes, as are the presence of higher government transfers (Callen and Thimann, 1997, Freebairn, 1990).

The information presented here, while relatively simple in nature, can go some way to improving our knowledge of motivations for household saving patterns. It can therefore assist in assessing the likely impact on savings of transitory (such as the economic downturn in Asia) and permanent (such as the introduction of a GST) changes in the economic circumstances facing Australian households. The analysis presented above indicates that there are a range of motivations for saving that are in effect at any one time, ranging from a life-cycle style hypothesis, to precautionary motives and leisure. In order to quantify the predominant effect for any particular group, and thereby assess the likely impact of policy changes, it will be necessary to go beyond the descriptive nature of this paper and formally test some of the theories using an appropriate statistical analysis.

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Appendix: Survey Questions on Saving

From the Household Saving Survey

“In which of the following forms, other than your home, do you and your household hold savings now?”

1. Bank, credit union and building society deposits
2. Managed trusts, such as equity, property or cash management trusts
3. Direct ownership of shares, bonds or debentures, etc
4. Holiday home, investment properties
5. Superannuation (including rollover funds, approved deposit funds or annuities)
6. Some other form
7. Don't know
8. No savings

“Which of the following are the main reasons why you and your household save?”

1. To buy, improve or upgrade your home
2. For retirement
3. For holidays or travel
4. For a rainy day, such as getting sick or being unemployed
5. For family's education
6. To buy a car or expensive items for the house
7. Bequest to children or others
8. To repay debt
9. Some other reason (specify)
10. Don't know
11. Don't save at all

“In which of the following forms, apart from your home mortgage, do you and your household owe money?”

1. Bank, credit union or building society loan
2. Credit card debt
3. Hire purchase arrangement or store credit
4. Car finance or leasing
5. Owe money to family or friends
6. Other
7. Don't have debt
8. Don't know

“Suppose YOU PERSONALLY had some NEW SAVINGS. Which ONE of the following do you think would be the BEST thing for YOU to do with the money?”

1. Put it in a bank, credit union or building society
2. Put into managed trusts, such as equity, property or cash management trusts
3. Buy own shares, bonds, debentures

4. Invest in real estate
5. Increase employer based superannuation contributions
6. Increase personal superannuation or life insurance
7. Increase your do-it-yourself superannuation
8. Pay off the house mortgage
9. Pay off other debts
10. Or do something else with it
11. Don't know

“Which one of the following statements best describes the present situation of your household?”

1. We are running into debt
2. We are having to draw on our savings
3. We are just managing to make ends meet on our income
4. We are saving a little
5. We are saving a lot
6. Don't know/none

“Over the next twelve months, is it likely or unlikely that your household will be able to save money?”

1. Very likely
2. Fairly likely
3. Fairly unlikely
4. Very unlikely
5. Don't know

From the Consumer Sentiment Survey

“Suppose you had some new savings, what do you think would be the wisest thing for you to do with the money?”

1. Bank
2. Building society
3. Government Bonds
4. Shares
5. Real estate
6. Credit union
7. Solicitor's first mortgage
8. Own business
9. Cash management trust
10. Spend it/donate it
11. Other (specify)
12. Don't know