Saving Tomorrow

The saving and spending patterns of Australians

AMP.NATSEM INCOME AND WEALTH REPORT
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Foreword

In July 1991, just five months before he challenged Bob Hawke for Prime Minister, Paul Keating put forward his idea of what a universal super scheme should look like in the year 2000[1].

"I suggest by the year 2000 we reach a national benchmark where each and every employee has a contribution to super equal to 12 per cent of wage and salary. To build to 12 per cent over a decade is no easy task, but it can be accomplished."

Keating was right to say it is no easy task and 20 years after his self imposed deadline, Australia's compulsory super contribution has stalled at 9 per cent.

But what does this have to do with a report on national savings? We know that national savings are integral to our overall economic well-being but despite the introduction of a compulsory savings regime through the super guarantee, this issue of the AMP.NATSEM report *Saving Tomorrow* shows that Australians are saving less than their global counterparts.

In 2007 Australians fell behind most OECD nations with a debt to income ratio of 158 per cent. Only the United Kingdom was worse off at 186 per cent.

In fact the average or typical Australian saves only $300 a year, which equates to just $6 a week after tax. That may not seem like much but in 2005 Australians were not only not saving at all, we were going backwards, saving a negative 1.4 per cent as a proportion of our income.

In 2009 savings has jumped to a positive 4.2 per cent of income but it would be wrong to assume this is simply thanks to high income earners. The report shows there is a wide range of savings behaviour in Australia with good and bad savers across all income groups.

A typical high income person, for example, is saving $8,060 per year but at the extreme end some are spending up to $25,710 each year on top of all of their income while others save up to $39,120 a year.

So why is it that, despite superannuation, Australians save so little compared to our global counterparts? Is it because of our obsession with housing and buying our own home? Are we becoming more complacent about our future as our economy continues to grow despite difficult times? Are we too reliant on credit compared to our parent or grandparents who saved to buy rather than borrowed to buy?

What this report illustrates is that Australians are getting better at saving but need to do more to ensure we all have the life we dream of, and the retirement we aspire to.

1. Alan Ramsey, "PM raiding a larder he didn't stock", The Sydney Morning Herald, 28 February 2004.

It shows that for those approaching retirement, saving through building a share portfolio, reducing home mortgages and owning other properties were popular. But if we examine the typical total savings of this group, it shows the typical person has only $51,500 of savings to supplement their pension income unless they wish to sell their home.

So what would our savings look like if Paul Keating's 12 per cent super goal was implemented? This report includes modelling for what our savings would look like if the superannuation guarantee was lifted from 9 to 12 per cent.

It shows that if the increase was introduced today the typical employed Australian aged 15 to 24 would have $150,000 more in retirement savings by age 65. Under a 12 per cent rate the typical Australian would save an average of $670 per year, more than double the average under the current 9 per cent. In stark contrast if there were no superannuation guarantee contributions, the typical Australian would spend $210 more than they earned.

AMP's Chief Economist Shane Oliver says a 12 per cent Superannuation Guarantee would positively impact the broader economy by boosting domestic savings and reducing the reliance foreign savings, and it would help reduce pressure on our current account deficit and foreign debt.

It would bolster our ability to finance the mining investment boom and spending on infrastructure and reduce pressure on the pension system and public finances as the population ages, according to Oliver. It would also enhance competition by providing small business and home mortgage funding - areas weakened as a result of the financial crisis.

Combined, these benefits would enhance Australia's growth potential over the decades ahead. And for the individual Australian, gives them the savings they need to enjoy the life they want.

Craig Meller

Managing Director,
AMP Financial Services

Introduction

In the USA, researchers are suggesting that an outcome of the global financial crisis is that American savings patterns have permanently changed and savings are set to grow strongly. Will the same happen in Australia? The Australian aggregate numbers seem to suggest that we are no longer spending more than we earn and our debt levels have stabilised. So the answer appears to be YES - Australian saving behaviour has changed. Whether it is a permanent change or just a fad remains to be seen.

Whatever the reason for the change in Australian saving behaviour - whether it be the impact of the global financial crisis or baby boomers approaching retirement - it is a start in the right direction. However, the aggregate figures can be unreliable and they provide little insight into who is doing the saving and who is not. Fortunately, the Household, Income and Labour Dynamics in Australia (HILDA) survey tracks the incomes, assets and debts of Australian individuals over time. Using this survey we can follow the actual annual savings of each person.

In this AMP.NATSEM Income and Wealth report, we examine people's savings over a four year period to find Australia's best and worst savers.

The results will surprise most people. The typical Australian does manage to save but it is a very small amount each year. And the range of behaviour is extraordinary. Some people on very low incomes are saving and most on low incomes are not going backwards that fast. While some of the people on the highest incomes are the worst savers - one quarter of them spent all their income and one-third more!

We also look at the impact of changing the current compulsory 9 per cent Superannuation Guarantee to a higher level. Would this change really make a difference to people's savings and retirement outcomes?

Other interesting questions that we can answer using the detailed HILDA savings data include:

- Are men better savers than women?
- Does education make a difference?
- Are all young people terrible savers?
- Are those approaching retirement putting much away?
- What difference would changing the contributions required by the Superannuation Guarantee make to savings?

Methodology

The HILDA survey asks the same people every year about a range of subjects including questions on labour force participation, income, and housing. Every fourth year it also asks what assets and debts they own and the associated values. These questions about assets and debt are used in this report to establish the levels of savings.

To estimate how much a person saves, we initially convert all assets, debts and income to December 2009 values based on ABS changes in the CPI. We then calculate the change in the value of assets and debts of each person over the past four years. Where an asset or debt is a household item (for example a mortgage), the change in value is divided by the number of adults in the household. Finally we sum the changes in values and calculate an average annual savings amount. In addition we sum the disposable income (total income less tax) received by each person for the four years and use this to estimate an average annual disposable income.

Saving Tomorrow aims to estimate how much each person really saves, rather than how much their total net worth has changed. To achieve this, savings are adjusted for inflation and changes in the value of the family home and other property (capital gains or losses) are excluded. This definition of savings is broadly in line with the definition of household saving (see technical notes) used by the ABS in national figures.

In summary, savings shown are changes in the value of cash deposits, shares, superannuation, own business (net), education loans (for example HECS debt), other debt, home mortgage, and other property loans. For example, if a person had a bank balance of $1,000 (in 2009 dollars) in the first year and $2,000 (in 2009 dollars) in the fourth year then, for that asset, they are considered to have saved $1,000 over the four years, or $250 per year. If another person is a member of a couple and the couple have a mortgage of $250,000 (in 2009 dollars) in the first year and reduce it to $150,000 (in 2009 dollars) in the fourth year, then each member of the couple would be assigned half the savings (100,000÷2 = $50,000) and an annual saving through mortgage reduction of $12,500. So although each member still has a debt of $150,000÷2 ($75,000), their $12,500 per year savings in this form has been included.

The analysis excludes any person who was aged under 15 or a full-time student aged 15-24 at the start of the survey period.

For most of the report we provide results in terms of the median value. This is a typical or mid-point value, with half of the population having values below this number and half of the population having values above this number.[1]

Home Improvements

The methodology described above to model savings excludes home improvements. The definition assumes that the underlying properties are unchanged and all changes in value are attributed to capital gains or losses and are therefore excluded from our definition of savings. In most cases this is accurate. However, if savings are used to undertake home improvements, the amount spent on improvements will not be counted. Unfortunately, without knowing the specific growth rate for each house it is not possible to separate capital gains from savings-funded improvements.

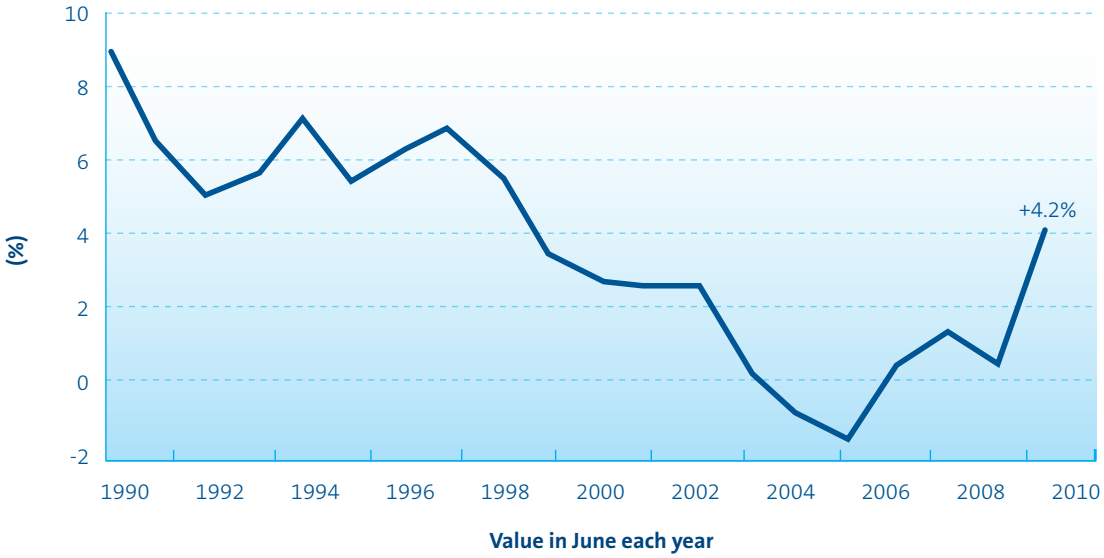
A second complication in measuring the values of savings expended on home improvements is that many renovations to a home do not add significant value, but rather personalise the house. For example, spending $10,000 converting a bedroom into a media room may add value for the current owner but may not add $10,000 to the resale value of the house. In fact, the loss of a bedroom may have decreased the value of the house. Given the HILDA survey does not provide this level of detail, this report assumes all changes in house values can be attributed to capital gains or losses.

1 Savings data is skewed by a small proportion of people having quite different values to the remainder (either very large or small values). For data of this kind, median is the preferred statistic. This is the reason that average house prices for a suburb are usually quoted in terms of the median price - the sale of one very high or low priced house would skew the price if mean was used.

The big picture

Around 107,000 Australian women will have their 64th birthday in 2010. These women are the first of 5.3 million Baby Boomers to become age-eligible for the Age Pension over the next two decades (ABS 2008)[2]. As previous AMP.NATSEM Income and Wealth reports have discussed, most Baby Boomers will not have saved enough to fund a comfortable retirement. Maybe the recent reversal in the savings ratio and a stabilising of the debt levels are responses to this impending move into retirement. And maybe the global financial crisis has reminded people of the dangers of living on credit. Whatever the reasons, there appears to be changing behaviour in regards to saving. Here are the recent trends.

Figure 1 - Household Savings Ratio, June 1990 to June 2009



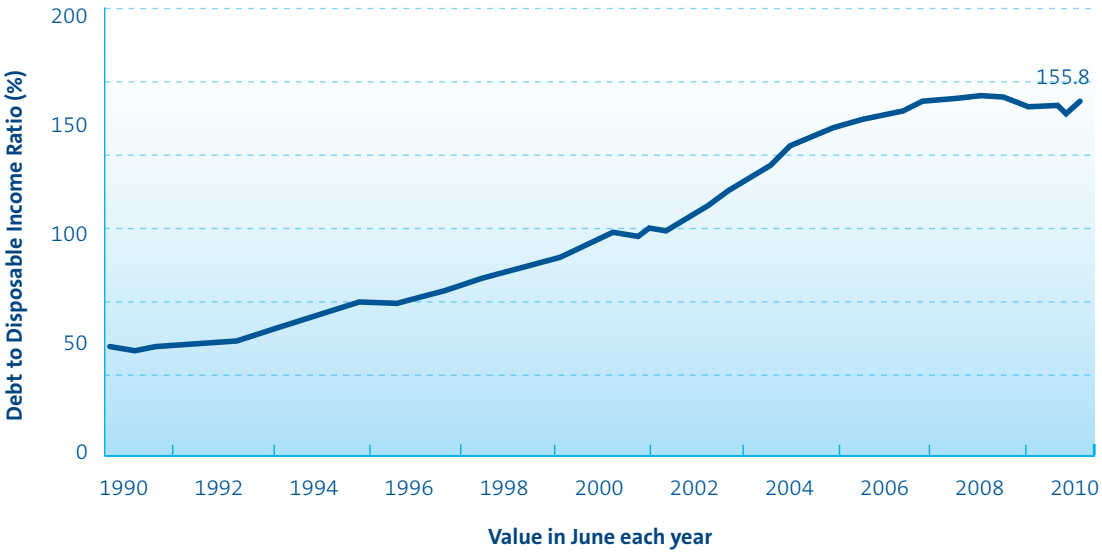
Source: *ABS 2010, Table 30.*

Household Savings

The household savings ratio is the ratio of household saving to disposable income. While the ABS definition is broader than just standard households[3], it shows that between 1990 and 2005 the proportion of disposable income that Australian households save was declining (Figure 1) and by June 2005 the ratio of savings to income had fallen to -1.4 per cent. This means, on average, Australian households were spending 101.4 cents for every dollar that came into the house. The OECD attributes some of this increased debt ratio to the rapid rise in the use of credit cards and the spread of credit cards to a wider range of social groups (OECD 2006). Fortunately, in recent years there has been a turnaround in this "spend more than you have" trend and Australian households are now saving 4.2 cents of every dollar that comes into the house (ABS 2010).

The overspending trend has resulted in Australian households having considerable debt and the level of debt has been increasing until recently. In Figure 2 the ratio of total household debt to disposable income is shown. The trend for the debt ratio has been strongly upwards for most of the last two decades. It rose from 50 per cent of disposable income at the start of 1992 to over 150 per cent in 2006. Since the peak of 160 per cent in December 2007, the ratio has declined in line with the improvement in the household savings ratio and reached a plateau of around 155 per cent. The plateau is a good sign albeit at a very high level.

Figure 2 - Total Household Debt to Disposable Income Ratio, June 1990 to December 2009



Source: *RBA Statistics Bulletin, Last update 18 Mar 2010, Table B21.*

2 Women presently qualify for the Age Pension at age 64 years while men qualify at age 65 years. The minimum age for women to be eligible for the Age Pension is gradually increasing to align with their male counterparts. The first Baby Boomer men to qualify for the Age Pension will be in 2011.

3 The ratio uses the "household sector" from the National Accounts which includes not only households, but also unincorporated enterprises (including family farms) and non-profit institutions serving households.

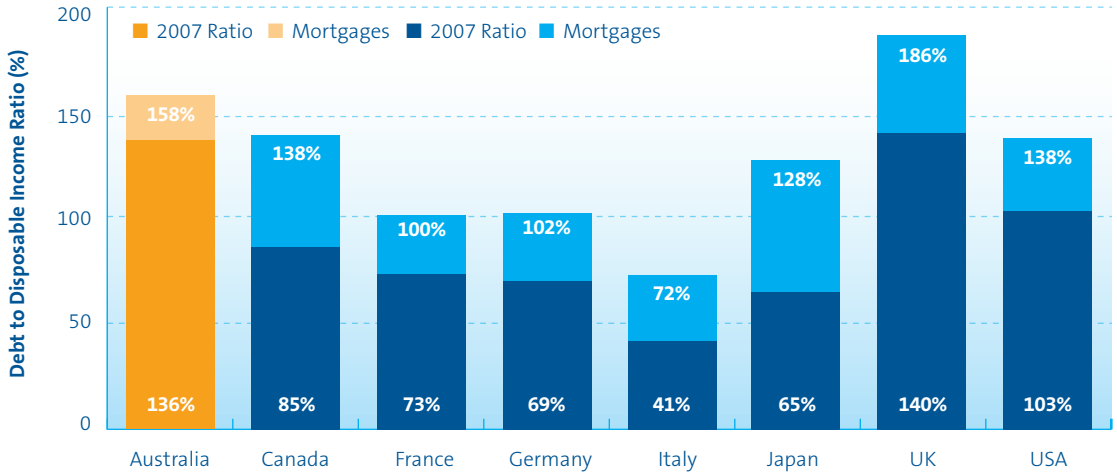
Australian households are now saving 4.2 cents of every dollar that comes into the house.

International Benchmarking

In comparison with other OECD countries for which data is available, Australia's household debt-to-income ratio is one of the highest (Figure 3). Australia's rate in 2007 (158%) was above all of the other OECD countries, with the exception of the United Kingdom (186%).

Thorne and Cropp from the Australian Treasury (2008) suggest that the high debt level in Australia could be the reason why Australians are becoming better savers as the level of risk that they are willing to tolerate has decreased.

Figure 3 -International Comparison of Household debt to income, selected countries, 2007



Source: *Australia - RBA Statistics Bulletin Table B21, Other countries - OECD Economic Outlook No. 86 Annex Table 58.*

Note: The percentages shown for mortgages are the component of the ratio that is a mortgage, a long term loan (France), or a medium and long term loan (Italy).

It appears the high debt-to-income ratio combined with the global financial crisis has lowered the debt level people are comfortable with (Figure 2). Debt has levelled off and the debt-to-income ratio has stabilised but only time will tell if the response is temporary or permanent.

Home Ownership

Another possible reason for the high debt-to-income ratio is the amount of debt Australians have through their mortgage. With 70 per cent of households either owning or buying their own home, Australia has a high home ownership level when compared with these other countries and this may have contributed to Australia having the highest debt-to-income ratio being associated with mortgages. At 86 per cent (136/158) Australia has a much higher share of debt associated with housing than the other selected countries. For example only 57 per cent of Italy's debt-to-income ratio is in the form of a mortgage, while for the UK, which has a higher overall debt-to-income ratio, mortgages comprise 75 per cent.

However, high levels of home ownership do not fully explain Australia's high level of mortgage debt. The rationale of linking high levels of home ownership with high mortgage debt explains the low debt level in Germany (42 per cent home ownership) and France (63 per cent). It also explains why Japan's mortgage debts are so low (home ownership is 61 per cent in Japan). However, Italy which has the highest level of home ownership of these countries also has a very low mortgage debt ratio. A possible explanation for Australia is that it has, over the last few decades, had sustained high levels of home ownership and increasing house prices. This combination, which has not existed in most other countries, may have resulted in greater acceptance of using equity in the home to fund our lifestyle.

Summary

Until recently Australian households nationally had been accumulating debt by spending more than they received in income. In 2005 the household savings ratio was -1.5 per cent and in 2007 the ratio of household debt to income hit almost 160 per cent. This was higher than most comparable countries. Since then the debt ratio has levelled off at around 150 per cent and the savings ratio has improved to 4.2 per cent. Households are moving in the right direction but have a long way to go if we are to return to the less than 100 per cent debt-to-income ratios, we enjoyed in the 1990s.

Best and worst savers

From the national household perspective, we now turn our focus to individuals and the range of savings behaviour they are exhibiting.

The level of savings of the typical Australian is very low. Based on changes in the values of assets and debt owned by the median or typical Australian aged 15 years and over[4] during a four year period, and after allowing for inflation, the typical Australian saves only $300 per year. This means that half the population saves less than $300 and half the population saves more. Alternatively the typical Australian manages to save less than $6 per week of their $820 per week after tax income. In terms of annual savings as a proportion of disposable income, the typical Australian saves 1.3 per cent.

The reason that the national household savings ratio (4.2 per cent) is higher relates to the distribution of savings. There are some Australians saving considerable more than average but also many saving considerably less than average. To gain a feel for the distribution of individual savings behaviour, one-quarter of Australians saved more than $12,360 per year over the four year period and another quarter of Australians reduced their savings (or more probably went further into debt) by $9,810 per year.

The percentage range was also large with one quarter of Australians saving 32 per cent or more of their income and another quarter spending all of their income plus 30 per cent more.

When estimating these values, the types of savings included changes in the values of cash deposits, shares, superannuation, and the net value of own business. Debt included changes in the values of education loans (for example HECS debt), other debt, home mortgage, and other property loans. Assets such as vehicles and collectibles were not viewed as savings and excluded. Using a similar definition to ABS for savings, changes in house and other property values were considered capital gains or losses and were also excluded.

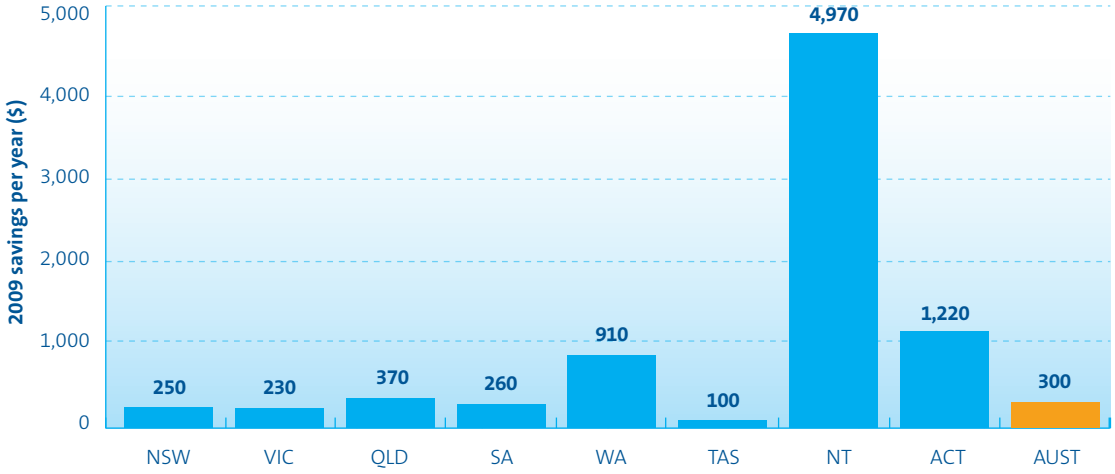
4 Persons aged under 15 years and full-time students aged 15 to 24 years at the start of the survey period are excluded.

Savings by State/Territory

Australia's best saver by geography is the typical person living in the Northern Territory - this Territorian saves $4,970 or 16 times the national median amount. Higher incomes in the Northern Territory only go part of the way of explaining why they are such good savers when compared with the rest of Australia.

Other states that have high average incomes, like Western Australia and the ACT, do have high median annual savings but nowhere near as high as Northern Territory (Figure 4). It seems the younger age, higher labour force participation rates, lower home ownership rates and a higher proportion of males in the Northern Territory have all contributed to the higher saving rates.

Figure 4 - Typical (median) annual savings by State/Territory, per person



Source: *NATSEM estimates based on HILDA data.*

Those living in the capital cities appear to be better savers than those living elsewhere. In the capital cities the median annual saving was $460 while the median for those living outside the capital cities in each state were only one-quarter of this amount at $130 per year. Again higher incomes in the capital cities may explain some of the difference but it is not the full story.

Those approaching retirement (aged 55 to 64 years) are not saving as much as the age group below them.

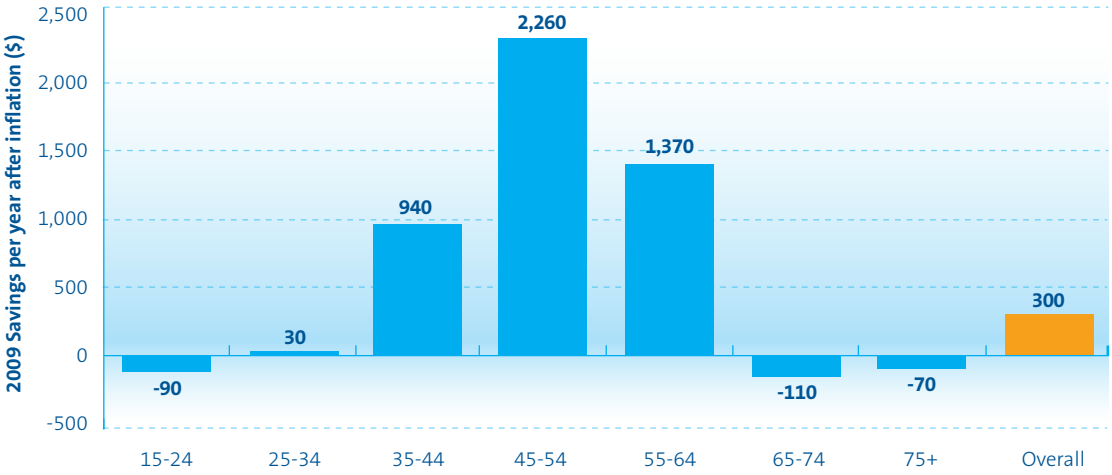
Savings by Age

The previous sections noted that the median Australian saves $300 per year. However, while this amount varies considerably, there is a clear relationship to age. The median savings by age are shown in Figure 5. Young people and those in retirement generally spend slightly more than they receive. Both of these age groups (15 to 24 years, and 65 years and over) typically spend around $100 more per year than they receive.

For the young this is not unexpected as they need a large range of consumer items as they begin adult life, and most of these consumer items (cars, mobile phones, home contents, etc) are outside of the definition of savings we have used.

For those aged 65 and over, the negative savings result is also not unexpected. The majority of people in this age group are retired and living on low incomes. For most they are probably supplementing their Age Pension income by reducing their retirement nest-egg. The good news is that the typical person aged 65 and over is only reducing their nest egg by around $100 per year.

Figure 5 - Typical (median) annual savings by age group



Note: See technical notes for a definition of Savings.
Source: NATSEM estimates based on HILDA data.

For those of working age the amount saved per year grows from $30 per year (after inflation) in the 25 to 34 age group to $2,260 per year for people aged 45 to 54 years, possibly reflecting the greater ability to save as costs of home establishment and raising children decrease over time.

A somewhat surprising observation is that those approaching retirement (aged 55 to 64 years) are not saving as much as the age group below them (aged 45-54 years). Typically saving $1,370 does make those approaching retirement the second highest saving age group, but given that most will have already seen the children leave home and the home should be well established, it is not as good as it should be. Saving approaching retirement is discussed further in a later section of the report.

The popularity of some types of savings "vehicles" varies with age. Similarly certain types of debt are more common within some age groups. Table 1 shows the proportion of people within each age group that own a certain asset or have a certain type of debt. For example it shows that 91.3 per cent of all 15 to 24 year olds had some money in cash deposits at the end of the survey period and overall 75.2 per cent were buying or owned a home. It also shows that 60 per cent of all 35 to 44 year olds had a mortgage.

Table 1 - Ownership proportions by age group and type of asset or debt

	PROPORTION OWNING THIS ASSET OR DEBT %									
AGE	CASH DEPOSITS	HOME	MORTGAGE	SHARES	SUPER	OTHER PROP	OTHER PROP LOANS	BUSINESS	EDUCATION DEBT	OTHER DEBT
15-24 years	91.3	46.0	29.3	17.3	80.7	9.7	7.0	8.4	1.8	54.4
25-34 years	95.1	56.8	48.0	31.2	89.3	19.0	12.1	12.9	10.9	49.7
35-44 years	93.4	73.3	60.0	40.5	89.2	24.9	14.3	20.4	4.6	46.3
45-54 years	93.2	79.9	50.5	47.3	86.7	28.8	13.6	18.5	2.2	43.2
55-64 years	94.1	84.1	26.9	50.4	69.3	30.1	12.1	14.0	0.7	30.1
65-74 years	97.7	84.7	6.7	51.0	35.2	16.4	3.1	4.9	0.0	12.5
75+ years	98.3	77.2	3.6	38.5	10.0	8.7	0.9	1.5	0.0	3.9
Overall	**94.7**	**75.2**	**37.5**	**42.7**	**70.5**	**22.7**	**10.5**	**13.7**	**3.3**	**35.2**

Note: This table shows the percentage of the population that have a non-zero value recorded for that asset or debt in the final year of the survey. For example 17.3% of people aged 15-24 own some shares. Other debts include credit card debt, car loans and personal loans.

Source: *NATSEM estimates based on HILDA data.*

The popularity of holding savings in cash deposits is emphasised with 95 per cent of people having at least some money in this form and this percentage being reasonably constant across all age groups. Similarly superannuation ownership is steady at 80 to 90 per cent across the working age groups and declines from age 55 when it is possible to access superannuation. Home ownership is still the Australian dream with the ownership proportion increasing steadily to 85 per cent for those in the 65-74 age group. The other part of the Australian dream (to pay off the mortgage) is also clear with the proportion of those with a mortgage peaking around age 40 and dropping quickly to less than 7 per cent post-retirement. Having some equity in business follows a similar pattern to mortgages with a peak at age 40 (at 20 per cent) and declines to less than five per cent by age 65. Share ownership follows a different path as it builds from age 35 and peaks just after retirement. The popularity of purchasing other properties for investment or own use grows steadily until age 65. The popularity peaks at 30 per cent having ownership of other property. Finally education debt is mainly restricted to the young and other debt is very popular with young and declines with age.

Putting the differing assets and debt profiles together we can summarise the findings as:

- Young adults have higher exposure to education and other debt than other age groups and lower exposure to assets that assist saving such as business, shares, home or other property ownership.
- Mid career adults are saving through superannuation and home ownership, but most have a mortgage and other debt.
- People approaching age 65 are saving through home ownership, owning other properties, building a share portfolio and reducing their mortgage and other debt. However, they have also begun to withdraw their superannuation and business equity.
- In retirement people are moving away from other property and superannuation but few have any debts.

Savings by Gender

Are men better savers than women? In overall terms both men and women do manage to save a little but men do save slightly more. The typical man saves $620 per year while the typical woman saves $150 giving the overall median of $300 per year. Examination of savings by age and gender shows some interesting patterns - the typical man is initially a better saver but by age 25 the typical woman is a better saver than her male counterpart (Table 2). Women also appear to take saving more seriously than men as they approach retirement. A typical woman saves $1,660 per year in the 55-64 year age group while men only save $1,130.

Compulsory superannuation contributions by employers are related to income and ensure that men save more than women in their 30s, 40s and 50s. Women of this age often have time out of the labour force for having and raising children and often work part-time to enable them to balance work and family. At the same time, most men of this age are working full-time. Consequently, male average incomes and compulsory superannuation savings are greater than female superannuation savings. The differences in average incomes and lower superannuation savings allow the typical man to save around $2,000 more per year than women in these age groups.

Table 2 - Annual savings by age group and gender

AMOUNT SAVED PER ANNUM $			
AGE	MALES	FEMALES	PERSONS
15-24 years	150	-650	-90
25-34 years	-240	140	30
35-44 years	2,180	150	940
45-54 years	3,110	1,070	2,260
55-64 years	1,130	1,660	1,370
65-74 years	-70	-130	-110
75+ years	-20	-120	-70
All ages 15 and over	**620**	**150**	**300**

Note: See technical notes for a definition of *Savings*.

Source: *NATSEM estimates based on HILDA data.*

The typical man saves $620 per year while the typical woman saves $150.

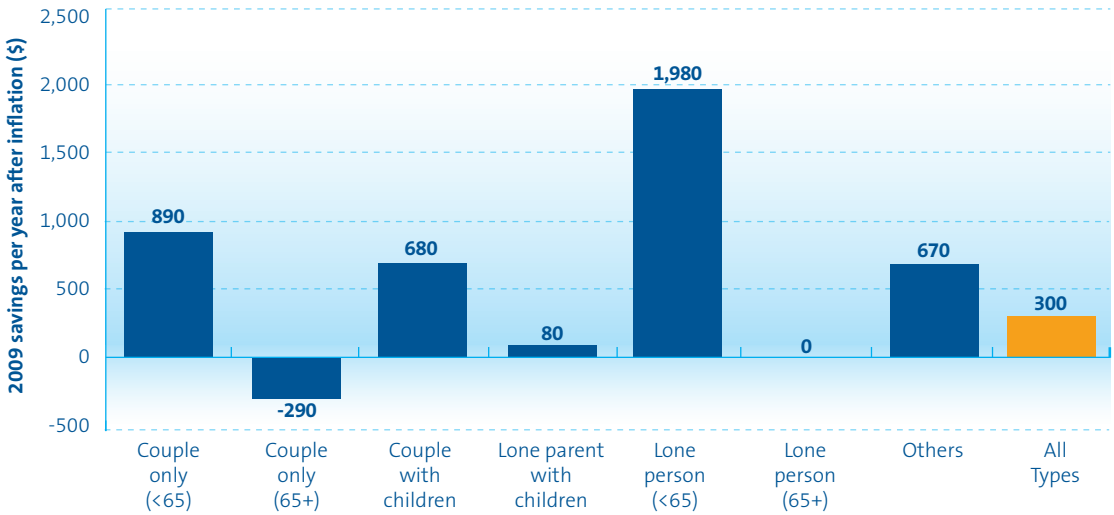
Savings by Family Type

In the previous sections the impact of age and gender were examined. Here we look at the impact of family type. The impact of being in a family with traditionally low income is evident for some groups like lone parents and older people either living alone or as a member of a couple. Neither of the over 65 family types is saving (after allowing for inflation) and while single older Australians are not drawing down on their savings, those who are a member of a couple aged over 65 typically reduce their nest egg by $290 each year (Figure 6). Remembering that the average drawdown for a typical person aged over 65 is around $100 per year, the higher reduction of couple only members compared with lone persons perhaps suggest that some SKI-ing (Spending the Kids' Inheritance) does occur while the older Australians are a member of a couple but slows when a person is living alone. One reason for this is that single people over 65 years tend to be older than members of a couple.

The family responsibilities for lone parents mean that they typically have very low incomes and this level of income combined with the costs associated with raising children and running a household by themselves results in them saving very little ($80 per annum).

At the other end of the spectrum, working age people living alone are typically Australia's best savers by family type, adding $1,980 to their nest egg each year.

Figure 6 - Typical (median) annual savings by family type, per person



Note: *Others* refers to people living in a group household or a member of a mixed/extended family household.

Source: *NATSEM estimates based on HILDA data.*

Savings by Income

In the sections above we have mentioned that some groups of society are not able to save due to their low income, but does a high income always mean that some income will be saved? Of course, the answer is NO. In fact, some of those with the highest incomes are the worst savers.

To examine the relationship between income and saving, we calculated the average annual disposable income (that is, income after tax) of each person over a four year period and then assigned them to one of five groups. The one-fifth with the lowest average income was assigned to the lowest 20 per cent, the next one-fifth to the next 20 per cent, and so on. As Table 3 shows, the average annual disposable income of those in the lowest income group was $14,100 per annum while those in the highest income group had an annual income of $86,800 after tax.

Table 3 - Annual savings by personal income

		ANNUAL SAVINGS			ANNUAL SAVINGS AS % OF INCOME		
INCOME GROUP	MEAN DISPOSABLE INCOME $PA	P25 ($)	MEDIAN ($)	P75 ($)	P25 (%)	MEDIAN (%)	P75 (%)
Lowest 20%	14,100	-2,460	0	2,420	-15.9	0.0	16.4
Next lowest 20%	24,400	-8,590	10	6,620	-33.8	0.0	26.6
Middle 20%	36,900	-11,560	670	10,700	-32.5	1.8	29.1
Second top 20%	50,200	-15,510	1,490	16,520	-31.0	2.9	32.6
Top 20%	86,800	-25,710	8,060	39,120	-33.5	10.4	51.0
Overall	**42,500**	**-9,780**	**300**	**12,310**	**-29.4**	**1.2**	**32.1**

Note: Annual savings as a percentage of Income is calculated on a per person basis and is annual savings expressed as a percentage of disposable annual income.

Source: *NATSEM estimates based on HILDA data.*

To show the range of savings patterns, Table 3 contains extra data in addition to the typical or median value for each income level. The value in the P25 column shows the level of saving by a person at the 25th percentile or one-quarter mark and the P75 column shows the level of savings by the person at the 75th percentile or three-quarter mark. The annual savings as a percentage of annual disposable income are also presented for each income group. These are also shown at the 25th, 50th and 75th percentiles. By way of example, one quarter of people in the middle income group reduced their savings by $11,560 or more[5] , half saved $670 or less, and three-quarters saved $10,700 or less (or conversely, one quarter saved $10,700 or more). The savings expressed as a percentage of disposable income for this *Middle 20%* ranged from spending 32.5 per cent more than their income to saving 29.1 per cent of their income. A typical person in this group saved an amount equivalent to 1.8 per cent of their income.

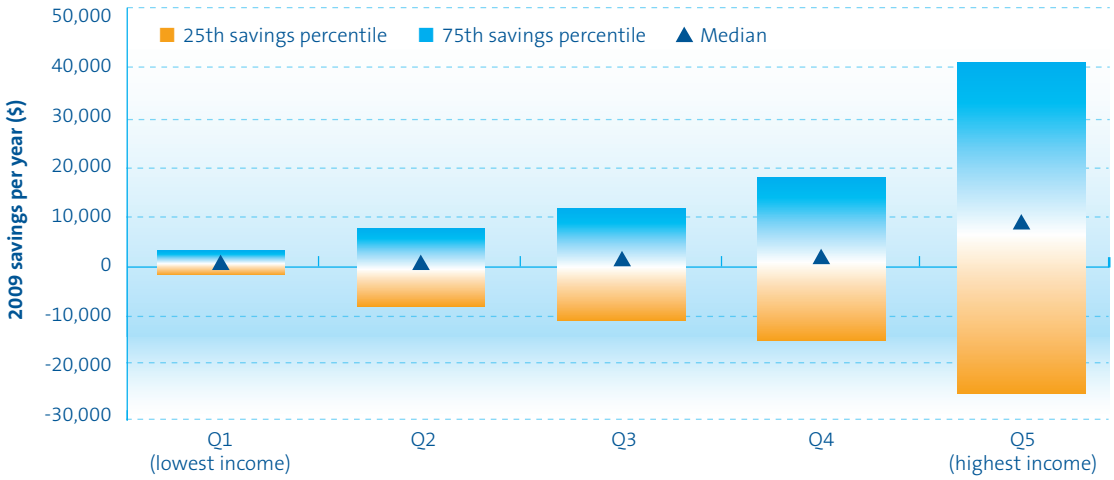
Examination of the *Mean Disposable Income* column and the *Annual Savings Median* values shows that annual savings increase as income increases. The median person in the lowest income group neither increases nor decreases their bank balance. The median level of savings for those with higher incomes increase as the income increases to $10 per year for those in *Next Lowest 20%* up to $8,060 per year for those in the *Top 20%*.

We would expect that the proportion of income that can be saved grows as income increases. The data in Table 3 supports this with the percentage of disposable income that is saved increasing from nil for those with the lowest incomes to 10.4 per cent for those with the highest incomes.

The ranges in Table 3 also provide another view of who are Australia's best and worst savers. The answer is that both the best and the worst savers in Australia come from those on the highest incomes. While the typical high income person is saving $8,060 per year, some are spending more than $25,710 each year (on top of all of their income) while others in the highest income quintile are managing to save $39,120 or more per year.

5 If a person did not have savings to drawdown then they will have gone further into debt.

Figure 7 - Distribution of annual savings by personal income quintile



Source: *NATSEM estimates based on HILDA data.*

A final point of interest in Table 3 is the spread of results for each income group. The spread or distribution of people saving or not saving by income quintile is shown graphically in Figure 7. Those in the lowest income quintile have a reduced range of outcomes. The reason for the low spread could be that credit is harder to obtain at this income level ($14,100) and that results in fewer people getting into too much debt. At the same time, on a low income, it is hard to save as most of the income will be consumed on necessities. The outcome is that generally those on low incomes are either saving a little or spending a little. The range in terms of their income is -16 per cent to +16 per cent.

The constraints on those in the low income quintile do not affect those in the top income quintile. Because of their high income they can service high levels of debt and clearly some take advantage of this and spend considerably more each year than their income. Conversely, those on high incomes have much more discretionary income and some are choosing to save large proportion of their income. The result is a very wide range of saving outcomes.

Summary

Examination of the median values shows a strong relationship between income and savings. As income grows, the proportion saved also grows. This is very encouraging. However, the distribution within each of the income groups tells a more sobering story. Except for those in the lowest income group, one quarter of Australians are spending the equivalent of all of their income plus one-third more. It appears that the availability of credit to all except those on the lowest incomes is allowing one quarter to “go backwards” at rates of up to $25,000 or more each year.

Savings by Education

A typical person with a degree seems to have significantly different savings behaviour to other people. While the median person with no post-school qualifications saves almost nothing ($50 per year) and those with diplomas and certificates save $200-$270 per year, those with degrees typically save $3,610 - 15 times more than these other groups (Table 4).

Table 4 - Annual savings by highest post-school qualification

		ANNUAL SAVINGS			ANNUAL SAVINGS AS % OF INCOME		
HIGHEST QUALIFICATION	AVERAGE INCOME $PA	P25 ($) (BAD SAVERS)	MEDIAN ($)	P75 ($) (GOOD SAVERS)	P25 (%) (BAD SAVERS)	MEDIAN (%)	P75 (%) (GOOD SAVERS)
Degree	64,700	-17,150	3,610	26,250	-32.4	7.7	43.9
Diploma	48,500	-18,750	200	22,170	-44.1	0.6	49.5
Certificate	43,300	-10,900	270	10,500	-33.2	1.0	28.8
No post-school qualifications	31,500	-6,460	50	7,950	-24.2	0.2	26.5
Overall	42,500	-9,780	300	12,310	-29.4	1.2	32.1

Note: *Annual savings as % of Income* is calculated on a per person basis and is annual savings expressed as a percentage of disposable annual income.

Source: *NATSEM estimates based on HILDA data.*

Part of the difference between the savings patterns by qualification can be explained by the higher average incomes of those with degrees ($64,700) compared with the overall average of $42,500. However, that does not satisfactorily explain the large difference in the proportion of income that is saved. While those without degrees typically save one per cent or less of their income, those with degrees typically save almost eight per cent (Table 4).

Despite the differences in median values, the range of savings behaviour within each qualification level is still marked. Those with degrees and diplomas have an annual difference of over $40,000 between the good savers (75th percentile) and the poor savers (25th percentile). The smallest range is for those with no post-school qualifications ($14,410) but this may be an outcome of their low income and inability to easily obtain credit.

Those with degrees typically save $3,610 - 15 times more than these other groups.

Savings by Tenure

In this final disaggregation of savers we examine their savings behaviour by whether they live in a household that owns a home, is buying a home, renting or has some other tenure arrangement.

Table 5 - Annual savings by household tenure

		ANNUAL SAVINGS			ANNUAL SAVINGS AS % OF INCOME		
HIGHEST QUALIFICATION	AVERAGE INCOME $PA	P25 ($)	MEDIAN ($)	P75 ($)	P25 (%)	MEDIAN (%)	P75 (%)
Owner	36,500	-5,970	1,140	18,470	-26.3	5.5	53.7
Buyer	52,200	-23,130	-2,320	11,660	-50.1	-5.8	25.2
Renter	36,900	-1,390	570	7,190	-5.4	2.2	19.7
Other	38,900	-1,730	1,010	16,600	-7.5	3.8	55.5
Overall	**42,500**	**-9,780**	**300**	**12,310**	**-29.4**	**1.2**	**32.1**

Note: *Annual Savings as % of Income* is calculated on a per person basis and is a percentage of disposable annual income. Tenure refers to the household to which the person belongs.

Source: *NATSEM estimates based on HILDA data.*

Examination of the *Annual Savings Median* column shows generally similar amounts saved for Owners, Renters and *Others* ($570 to $1,140 per year) but a significantly lower value (-$2,320) for the typical person that is a member of a Buyer household (that is, has a mortgage). This poor savings behaviour cannot be attributed to paying off the mortgage, as the definition of saving includes reducing the value of a mortgage. Rather it suggests that a buyer is more likely to be renovating, making changes or adding features to a home, or simply buying a second property. It is possible that some of the spending on the home will not be included in our definition of savings but may have resulted in increasing the value of the home (which is a capital gain and not included in our definition of saving). In other words, the savings behaviour of those in a *Buyer* household may not be as bad as it appears - it depends on what they are spending their money on.

Other features of the savings by tenure data are the narrow range of *Renter* behaviour and high savings rate as a percentage of income for *Owners*.

Types of savings

The way people choose to save varies based on many things including personal preference. In an earlier section we saw that age seems to influence the popularity of certain types of savings. In Table 6 the mean change in the value of each asset and debt is shown by age group. In the other tables in this report, the median value has been shown. However, if median had been used in this table, given that the proportion of the population holding many assets or debt was below half (Table 1), most of the values would be zero. Because of the uneven distribution, the mean values are shown. These mean values could be influenced by extremely high or low values, as discussed earlier in the report.

Table 6 - Annual mean savings by age and type of asset or debt

	MEAN AMOUNT SAVED PER ANNUM $PA							
	CASH DEPOSITS $PA	MORTGAGE $PA	SHARES $PA	SUPER $PA	OTHER PROP LOAN $PA	BUSINESS EQUITY $PA	EDUCATION DEBT $PA	OTHER DEBT $PA
15-24 years	900	-3,500	-100	1,600	-1,000	-600	0	-900
25-34 years	1,100	-6,400	-500	3,200	-3,200	2,500	200	-700
35-44 years	2,100	-4,900	3,200	5,100	-3,300	5,600	0	-1,100
45-54 years	600	-2,600	1,000	10,400	-2,800	800	0	-2,000
55-64 years	2,700	-400	5,000	12,600	-1,900	0	0	-500
65-74 years	100	100	2,400	2,300	-600	-4,600	0	0
75+ years	600	0	900	-400	-200	-1,200	0	-100
Overall	**1,300**	**-2,700**	**2,100**	**6,300**	**-2,200**	**1,100**	**0**	**-900**

Note: This table shows **mean** values. If a distribution of an asset or debt is skewed these values could be quite different to values presented in other parts of this report. If an asset, a negative value means that this asset decreased in value. If a debt, a negative value means the amount owing increased each year.

Source: *NATSEM estimates based on HILDA data.*

Some observations from the table are as expected and encouraging - the amount saved through superannuation increases with age until age 65, the annual value of the share portfolio increases with age, and people are saving a little each year in their bank accounts. One of these - superannuation - is a clear favourite of those approaching retirement. As people get older, the amount saved via superannuation grows from $1,600 per year in the 15 to 24 year age group to $12,600 in the 55-64 year age group. Other aspects of the table are a little more disturbing.

One of the more disturbing aspects is that, on average, mortgages are getting bigger (that is the value shown in the table is negative) every year until the 65 to 74 age group is reached. This observation when considered in conjunction with the reducing proportion of people that have mortgages as they get older (Table 1) suggests that while the majority are gradually reducing their mortgage to zero, a reasonable proportion are either taking on bigger mortgages as they upgrade their home or use the equity in their home to borrow more money.

Other debts (car loans, personal loans and credit card debt), it would be hoped are being reduced during our working lives, but Table 6 suggests that the debt continues to get bigger until we approach retirement.

Savings and retirement

The recent release of the 2010 Intergenerational Report highlighted that *"the ageing population will result in substantial fiscal pressures from increased demand for government services and rising health costs... Australia's ability to meet these future challenges depends on actions taken today"* (Treasury 2010). It seems reasonable that some of these "actions" will include better targeting of government benefits to those most in need and encouraging greater self reliance in retirement. With the first of the Baby Boomers becoming eligible for the Age Pension this year and being aware of the fiscal challenges future governments will be under, it would seem reasonable that Baby Boomers should be currently saving strongly for their retirement. Is this the case?

Approaching Retirement

Earlier in the report, we commented that the typical person approaching retirement (aged 55 to 64 years) is saving but not as much as those in the 45 to 54 year age group. Typically they save $1,370 per year. We also noted that at all ages there is a considerable range of savings behaviour and this distribution is certainly true of those approaching retirement. Some people in this age group are saving the equivalent of three-quarters of their annual income while others are drawing down on their savings by up to $13,410 per annum. This means these people who are theoretically saving for their retirements are in reality spending all of their income plus up to 38.5 per cent more (Table 7).

Table 7 - Annual savings of those aged 55 to 64 by labour force status at the end of the period (2009)

		ANNUAL SAVINGS			ANNUAL SAVINGS AS % OF INCOME		
LABOUR FORCE STATUS	AVERAGE INCOME $PA	P25 ($)	MEDIAN ($)	P75 ($)	P25 (%)	MEDIAN (%)	P75 (%)
Employed FT	66,200	-13,410	6,120	33,060	-33.0	14.9	59.3
Employed PT	48,500	-13,200	1,760	18,360	-38.5	6.0	41.1
Unemployed	-	-	-	-	-	-	-
Not in Labour Force	24,700	-4,900	300	16,780	-22.2	1.8	79.8
Overall	**44,200**	**-9,360**	**1,370**	**23,940**	**-29.3**	**5.7**	**60.5**

Note: *Annual Savings as % of Income* is calculated on a per person basis and is a percentage of disposable annual income. The sample size of *Unemployed* is too small to be statistically reliable. However, the observations are included in the *Overall* values.

Source: *NATSEM estimates based on HILDA data.*

Examination of those approaching retirement by whether they are still employed shows some very different savings behaviour. The typical or median person in the 55 to 64 age group who is working full-time is saving almost 15 per cent of their income while a typical person who is no longer in the labour force is saving less than 2 per cent of their income. Clearly leaving the labour force early is impacting on the ability to save.

We saw earlier that for those approaching retirement, saving through home ownership, owning other properties, building a share portfolio and reducing their mortgage were popular. Unfortunately, closing superannuation accounts and businesses were also popular. However, if we examine the typical total savings of those approaching retirement, it shows that the typical person has only $51,500 of savings to use to supplement their pension income unless they wish to sell their home. Table 8 also shows that those who have left the labour force early do not have a significant level of savings.

Table 8 - Median Savings of those aged 55 to 64 by labour force status

	MEDIAN AMOUNT SAVED PER ANNUM $PA							
	CASH DEPOSITS ($)	MORTGAGE ($)	SHARES ($)	SUPER ($)	OTHER PROP LOAN ($)	BUSINESS ($)	OTHER DEBT ($)	TOTAL SAVINGS ($)
Employed FT	5,500	0	500	103,600	0	0	0	109,600
Employed PT	6,500	0	2,700	45,800	0	0	0	55,000
Unemployed	-	-	-	-	-	-	-	-
Not in Labour Force	5,500	0	0	0	0	0	0	5,500
Overall	**5,500**	**0**	**200**	**45,800**	**0**	**0**	**0**	**51,500**

Source: *NATSEM estimates based on HILDA data.*

While saving by investing in the family home has appeal, it means that the home must be sold or remortgaged to provide an income in retirement. Most research would suggest that few Australians are willing to downsize and move to a new community in order to fund their retirement.

During Retirement

Economic theory would suggest that the savings accumulated during the working life are drawn down during retirement. This is what happens for the typical Australian. The savings data presented earlier in this report confirms that drawing down on savings is typical for older Australians - by $110 per annum for those aged 65-74 and $70 per annum for those aged 75 and over (Table 2).

What is surprising is that current retirees are drawing down such a small amount of their nest egg. It is clear from this why the current generation of retirees are called the “frugals”. Having lived through World Wars and a Depression, they enjoy living a simple life on a very modest income - the Age Pension. The Baby Boomers who have enjoyed a very high standard of living and are used to plenty of indulgences may find living on a very modest income more challenging.

Compulsory superannuation

Since 1992 employers have been obliged under the Superannuation Guarantee (SG) to make superannuation contributions on behalf of almost all of their employees[6]. The SG contribution rate started at three per cent of earnings (before tax) and gradually rose to nine per cent. It has remained at this level since 2002-2003. As superannuation is designed to provide financial support during retirement, access to these funds is generally not available until age 65 is reached. However, a person can access their superannuation if they retire permanently after their preservation age (55 years for those born before 1 July 1960 and increasing up to 60 years for those born after 1 July 1964) or in a very limited range of other circumstances.

Annual Impact of the Superannuation Guarantee

Compulsory saving for retirement through the SG represents a major component of a typical person's savings. Using the gross income data available in HILDA, this report estimates the level of savings that could be attributed to compulsory superannuation contributions. This calculation was done by multiplying their wages and salaries (adjusted for inflation) over the four year period by nine per cent. In Table 9, three columns of typical savings are shown for the various age groups. The first column shows what the typical levels of saving would have been if there was no compulsory superannuation, the second column presents the current SG level (nine per cent) while the third column shows what the savings levels would have been if the SG was set at 12 per cent - a level currently being suggested.

Table 9 - Estimated Savings with selected Superannuation Guarantee rates by age group

	ESTIMATED MEDIAN AMOUNT SAVED PER ANNUM $PA			DIFFERENCE $PA
	NO SG	CURRENT SG (9%)	PROPOSED (12%)	12% - 9%
15-24 years	-1,600	-90	110	+200
25-34 years	-2,250	30	630	+600
35-44 years	-740	940	1,590	+650
45-54 years	0	2,260	3,110	+850
55-64 years	380	1,370	1,950	+580
65-74 years	-150	-110	-90	+20
75+ years	-70	-70	-70	0
All ages 15 and over	-210	300	670	+370

Note: These estimates are based on the average inflation adjusted earnings of each person over a four year period.

Source: *NATSEM estimates based on HILDA data.*

Without SG contributions, the typical Australian would have spent $210 more than they received. All age groups, with the exception of those aged 45 to 54 and 55 to 64 years, spent more than they received when SG contributions are removed from their annual savings.

For younger age groups it is clear that SG represents a significant part of their savings. For example, we saw earlier that those aged 15 to 24 years typically spent $90 more per year than they had received in income. By separating out the SG component, we can see that this age group typically spent $1,600 more than they received and it was the 9 per cent SG contributions (which could not be accessed) that brought them back to a $90 overspend.

Former Prime Minister Paul Keating and the Association of Superannuation Funds Australia have suggested that the government should increase the SG contribution rate (see, for example, ASFA 2010). This suggestion has reignited discussion of increasing the rate to 12 per cent or even 15 per cent. Table 9 shows the impact an increase in the SG to 12 per cent would have on the annual savings of typical individuals.

For all age groups that the SG covers, there would be an improvement in savings if SG was increased to 12 per cent. The biggest impact would be for those aged 45 to 54 years as this age group have high levels of labour force participation and high incomes.

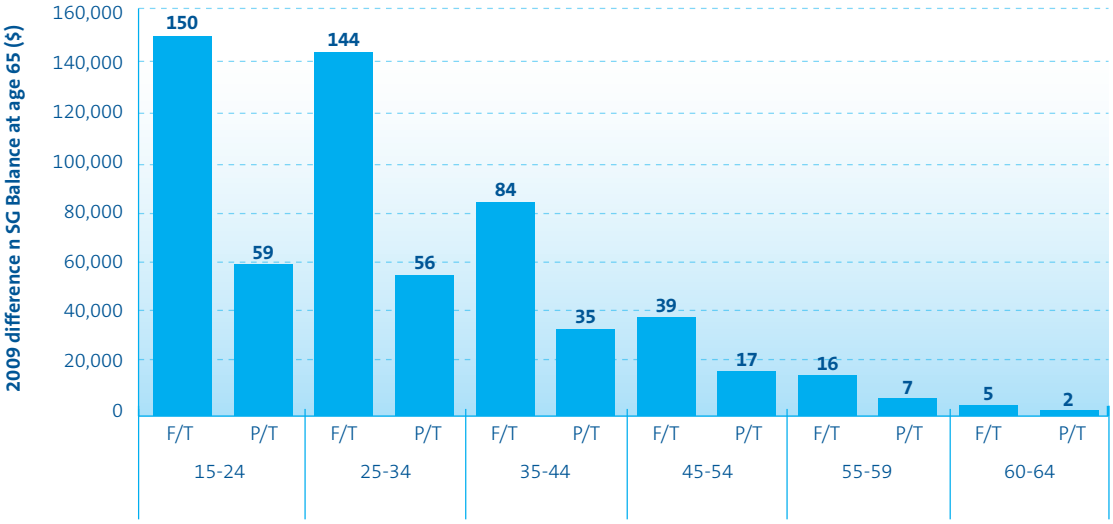
6 Exceptions include employees earning less than $450 per month, part-time employees aged under 18 years and employees aged 70 and over.

Long term impact of a higher Superannuation Guarantee

While the previous table showed that all age groups would benefit from a higher SG (except those aged 75 and over), it is the compounding effect that many years of higher SG contributions that will really make a difference. To show the impact, NATSEM has developed a model that projects the growth in the SG balance of an employee from their current age to age 65 years. The model only considers employees and makes the conservative assumptions that their wages grow at one percent per annum (after inflation) and that all superannuation funds return four percent per annum (after inflation). Using this new model, we are able to compare the SG outcomes under the current 9 per cent contribution rate and under the increased rate of 12 per cent.

Figure 8 shows the difference in the projected SG balance at age 65 under the two contribution rates for different age groups. The difference is also shown for full-time employment and part-time employment. As an example of how to read the values, an employee working part-time and currently aged 35 to 44 years is projected to have $35,000 more in superannuation at age 65 under a 12 per cent SG contribution rate than the same person under the current SG rate.

Figure 8 - Projected difference in SG balance at age 65 by age group and labour force status



Note: The values shown are the projected difference between SG contributions of 12% and 9% per annum until age 65. The projections assume real wages growth of 1% per annum and real superannuation returns of 4% pa.

Source: *NATSEM estimates based on HILDA data.*

As the number of years until age 65 is short for those already aged 60 to 64 years, there are only small but significant differences between the two SG rates - $5000 for a typical employee working full-time and $2000 for a typical employee working part-time. For younger ages groups the differences are very significant. A typical employee currently aged 15 to 24 years and working full-time, increasing the SG rate to 12 per cent will add $150,000 to their superannuation balance by age 65 years. Clearly an additional $150,000 in superannuation will make a major difference to a person's standard of living in retirement and help reduce the fiscal pressure on future governments.

Conclusion

National statistics suggest that the approaching retirement of the Baby Boomers and the global financial crisis have impacted on the levels of debt that Australians are comfortable with. According to the national statistics, more Australians have begun to live within their means - they are not spending every cent that comes into their house. However, Australians had been spending more than they received for some time and this has left Australians with one of the highest levels of debt to income ratios amongst comparable countries. The debt to income ratio in Australia is currently 155.8 per cent -to reduce this debt to zero every Australian needs to contribute all of their income for the next one and a half years to savings.

But national statistics do not tell the full story and so in *Saving Tomorrow* we took a more detailed look at how Australians save and who the best and worst savers are. The definition of saving used in this report attempted to capture saving behaviour that is, where a person chooses to save the money rather than spend it and this includes paying off debts. To do this we excluded capital gains and losses (mainly changes in housing values).

The analysis showed that there was a huge range of savings behaviour happening in Australia. No matter what their income, we found that a large group of Australians were spending far more than their current income and another group were saving a large amount of their income. This meant that some of the worst savers were found in the highest income group (spending 133 per cent of their disposable income each year but also some of the best savers (saving the equivalent of more than 51 per cent of their disposable income each year).

Based on individual data collected over a four year period, the typical or median Australian saves a very modest $300 per year. While the typical person having a degree, living in the Northern Territory, owning a home or having a high income was found to be better than average, amongst each of these groups there were some very poor savers.

Savings for retirement is extremely important as the Age Pension is unlikely to provide most with the post-working lifestyle to which they aspire. Given this, some 55 to 64 year olds are saving, especially those still in the labour force who are making use of the taxation advantages of superannuation and investment real estate. However, other 55 to 64 year olds are spending considerably more than their income. This seems short-sighted as they are ensuring they will have a very modest lifestyle on just the Age Pension for the 20-30 years after retirement. We can only assume that these Australians are really saving by putting money into their home (which was excluded from our definition of saving). But how realistic is it to think that you can downsize your home to pay for the lifestyle you want in retirement?

Projections undertaken for this report show that increasing the superannuation guarantee rate from its current level of 9 per cent to 12 per cent would make a significant difference to the retirement savings of all employees. Based on some very conservative estimates, for a typical employee currently aged 15 to 24 years and working full-time, increasing the SG rate to 12 per cent will add $150,000 to their retirement savings by age 65 years.

Finally, answering the questions posed in the introduction.

- The typical male is a slightly better saver than a typical woman but neither are particularly good.
- In the typical case, having a degree does make a large difference to annual savings.
- The typical young adult does not save.
- The median person approaching retirement is saving but not as much as was expected, they are putting money into superannuation but they are also increasing their mortgage, and
- Changing the SG rate to 12 per cent would make a big difference to the retirement living standards of all employees, especially the young.

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Technical notes and definitions

HILDA Survey

This report uses unit record data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey. The HILDA Project was initiated and is funded by the Australian Government Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) and is managed by the Melbourne Institute of Applied Economic and Social Research (Melbourne Institute). The findings and views reported in this paper, however, are those of the authors and should not be attributed to either FaHCSIA or the Melbourne Institute.

Wooden and Watson (2007) provides details of the design of HILDA and Watson (2010) is the latest version of the HILDA User Guide.

Household Savings

ABS defines savings as the part of after-tax income that is not directly used up or transferred as part of household consumption. ABS calculates household saving using data from the household sector of Australia's National Accounts. However, the household sector in National Accounts includes not only households, but also unincorporated enterprises (including family farms) and non-profit institutions serving households. In addition, household savings is calculated as a residual item, by deducting household final consumption expenditure from household disposable income. As these two aggregates are large, and the difference between them is small, household saving is hard to measure accurately and is prone to significant revisions. The published household saving ratio is calculated net of depreciation, that is:

$$\text{Saving ratio} = \frac{(\text{Gross disposable income - Depreciation}) - \text{Consumption}}{(\text{Gross disposable income - Depreciation})}$$

The household saving ratio does not take into account capital gains and losses as these are not considered to be part of household disposable income. Thus a period of high asset price inflation (eg rising house prices) will not directly influence the household saving ratio. When considering the "wealth effect" it is possible that consumption in current quarters will rise on the basis of strong gains in the value of assets and in this situation saving will fall, all else being equal.

The fact that saving is a residual measure has a number of implications for its measurement. Most importantly it is subject to measurement errors contained in the various series in the household income account. As the difference between the household disposable income and household final consumption expenditure is relatively small, caution should be exercised in interpreting the Household saving ratio in recent years, because major components of household income and expenditure may be subject to significant revisions. Many of these series are based on annual indicators and in a number of instances the household sector is measured as a residual of all other sectors.

Savings - Our Definition

Personal annual savings is defined as the change in value of assets and debt over a four year period divided by four years. Assets and debt are cash deposits, shares, superannuation, own business (net), education loans (for example HECS debt), other debt, home mortgage, and other property loans. Cash deposits include accounts held with financial institutions, debentures, bonds, loans to other people, trusts and other financial investments. For the cash held in bank account, superannuation, credit card debit, education loans and other individual loans, individual reported values are used, while for household assets, personal values have been estimated by dividing the household value by the number of adults in the household and assigning that value to each adult. For example, a mortgage is a household value, if there are two adults living in the household then half of the value of the mortgage will be assigned to each.

Using a similar definition to ABS for household savings, changes in house and other property values were considered capital gains or losses and excluded.

The values of each of these assets and debt have been updated to December 2009 estimates by applying the change in the CPI.

AMP.NATSEM Income and Wealth Reports:

- Trends in Taxable Income (February 2002)
- Live long and prosper - The income and wealth of those about to retire (May 2002)
- All they need is love... and about $450,000 - The costs of children in Australia today (October 2002)
- Does your wealth depend on good health? - Health and income in Australia (March 2003)
- You can't rely on the old folks' money - Wealth and inheritance (June 2003)
- Generation Xcluded - Income and wealth of Generation X (November 2003)
- The lump sum: here today gone tomorrow - Income, superannuation and debt pre and post retirement (March 2004)
- Money, money, money - is this a rich man's world? - Trends in spatial income inequality 1996-2001 (September 2004)
- Walking the tightrope - Household debt in Australia (November 2004)
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