

RETIREMENT INCOME DECISIONS: TAKE UP AND USE OF AUSTRALIAN LUMP SUMS AND INCOME STREAMS

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RETIREMENT INCOME DECISIONS: TAKE UP AND USE OF AUSTRALIAN LUMP SUMS AND INCOME STREAMS

Introduction

This paper addresses a range of questions about what people do with their superannuation:

- How many retirees take lump sums rather than income streams?
 - How many take both?
- What happens to lump sums at retirement: how are they spent, how invested?
 - How significant is debt at retirement?
- What are the main components of retirement assets?
- How are the funds generating an income stream drawn down over time?

Where quality data can be obtained, the paper attempts to show how the answers to the above questions vary by age, gender, and income, and whether the patterns vary over time.

Many of the questions have, of course, been asked before. Where this paper adds value is in the comprehensiveness of its approach and the data analyses based on some large new datasets that have been assembled by the Treasury.

These are important questions that are highly relevant to modelling retirement behaviour and the adequacy of retirement incomes. They are obviously also relevant to government pension costs and to policies impacting on the sustainability of Australia's age pension system. Somewhat less importantly, there is also an impact on estimating tax receipts from retirees.

While retirement can be a complex process, sometimes involving a gradual reduction in hours of work before full retirement and with the possibility of returning to work after retirement, this paper mostly uses a simple framework that says a person is either in the labour force or is fully retired.

Data Sources used

A large number of data sources were used, singly or in combination; some have restricted availability either through law or current practice.

The publically available sources are:

- ABS Survey of Employment Arrangements and Superannuation (SEAS)
- ABS Survey of Employment Arrangements, Retirement and Superannuation (SEARS)
- ABS Survey of Income and Housing (SIH), 2009-10 and earlier years
- The Household, Income and Labour Dynamics in Australia (HILDA) Survey Unit Record Data
- ABS Multipurpose Household Survey (Retirement and Retirement Intentions).

More details about these data sources are in Attachment A.

Additionally, some of the analysis of this paper relies on three confidentialised data sources not available publically. Some files have been used individually and also as a large joined and benchmarked dataset, tentatively titled BENMOD. The construction of BENMOD is fairly complex, including imputed values, behavioural change assumptions and several benchmarking approaches. BENMOD has been used for a number of costings of recent government policies.

The data sources used in BENMOD are:

- An anonymous file of all Centrelink pensioners (including age, disability and carer pensioners) for 2011-12;
- An anonymous file of SMSF members from the SMSF tax returns for the 2010-11 income year; and
- A large 16% anonymous sample file of personal income tax records from the Australian Taxation Office for the 2009-10 income year, joined together with superannuation information from member contribution statements.

Retirement

The HILDA survey allows for partial retirement and provides some interesting data in the 2003 and 2007 surveys which asked men and women aged 45 and over about their retirement intentions, expectations and experiences. Table 1 below shows some key results. In particular it shows the sharp increase (between 2003 and 2007) for people in early sixties in the proportion of people still working; the proportion increases for both men and women, 9 percentage points for men and around 14 percentage points for women (Table 1).

Table 1: Self-reported retirement status, men and women, aged 55 to 69 (per cent)

		2003		2007	
		Male	Female	Male	Female
55 to 59	Completely retired	22.1	35.2	18.5	28.1
	Partly retired	11.6	13.3	9.6	11.9
	Not retired at all	66.4	48.1	71.6	58.0
	Have never been in paid work	.	3.3	0.2	2.0
	All	100	100	100	100
60 to 64	Completely retired	48.6	63.3	40.6	53.6
	Partly retired	18.4	13.7	17.3	11.4
	Not retired at all	32.8	16.8	41.8	30.9
	Have never been in paid work	0.3	6.3	0.3	4.2
	All	100	100	100	100
65 to 69	Completely retired	74.1	79.1	74.5	80.0
	Partly retired	14.5	10.3	13.6	6.7
	Not retired at all	11.0	6.0	11.9	8.5
	Have never been in paid work	0.3	4.6	.	4.9
	All	100	100	100	100

Data source: 2003 and 2007 unit record files of the Household, Income and Labour Dynamics in Australia (HILDA) Survey.

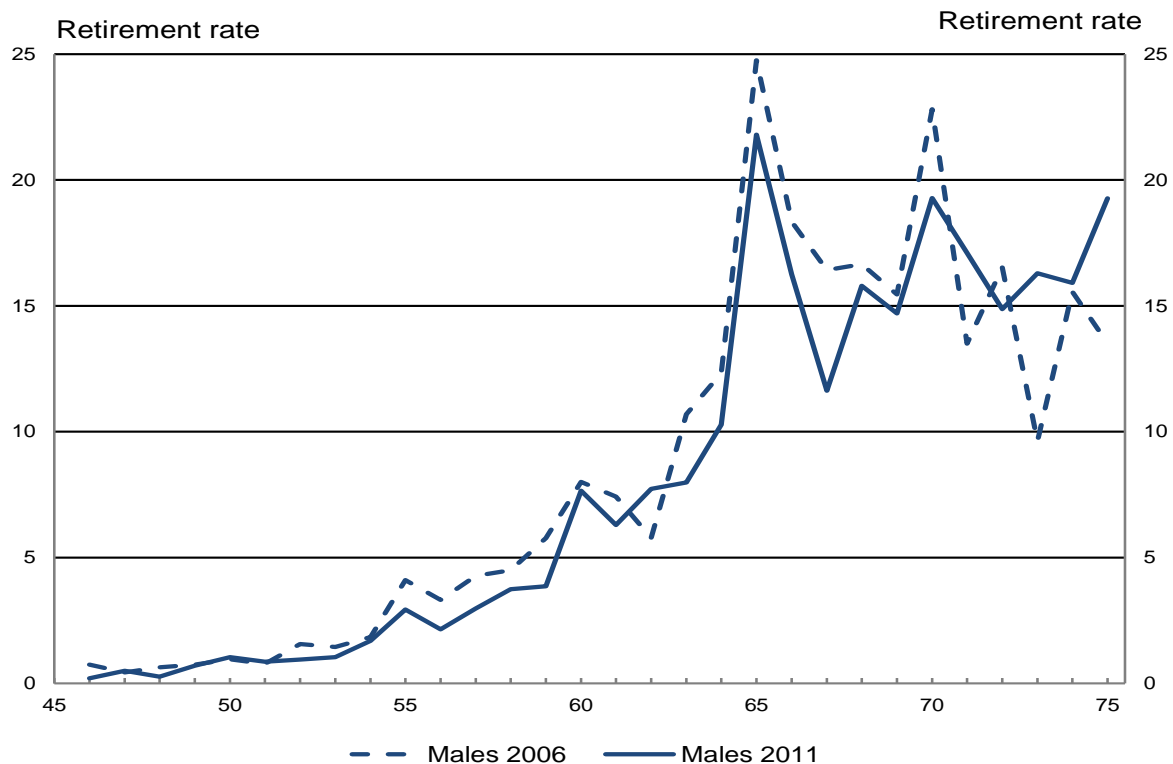
HILDA also examines main reasons for retirement. While there are some differences in reasons for men and women, HILDA confirms that health has an important effect on the retirement decision for both men and women: around 37% of men decided to retire because of poor health and physical abilities while around 21% of women cited ill-health as the main reason for retirement. Additionally, around 9% of women mentioned the ill-health of their partner or other family members as the main reason for their retirement, while only 2% of men cited this as the main reason.

For many modelling purposes a simpler view of retirement is used. In most Treasury models, the retirement rate is calculated based upon the differences in a single year of actual age participation rates observed in the Census; for example, the retirement rate for a person aged 60, is based on the difference between the number participating in the labour force at age 59 and the number participating at age 60. Deaths are accounted for, so the number generated is the number retiring for any reason; this is then calculated as a retirement rate at (or around) age 60.

Charts 1a and 1b below illustrate retirement rates using this framework for both males and females as calculated from the 2006 and 2011 Censuses. There are clear peaks at ages that are policy related, such as preservation age and age pension age (which was increasing over this period for women) and a clear trend towards later retirement, continuing the trend shown in the HILDA data.

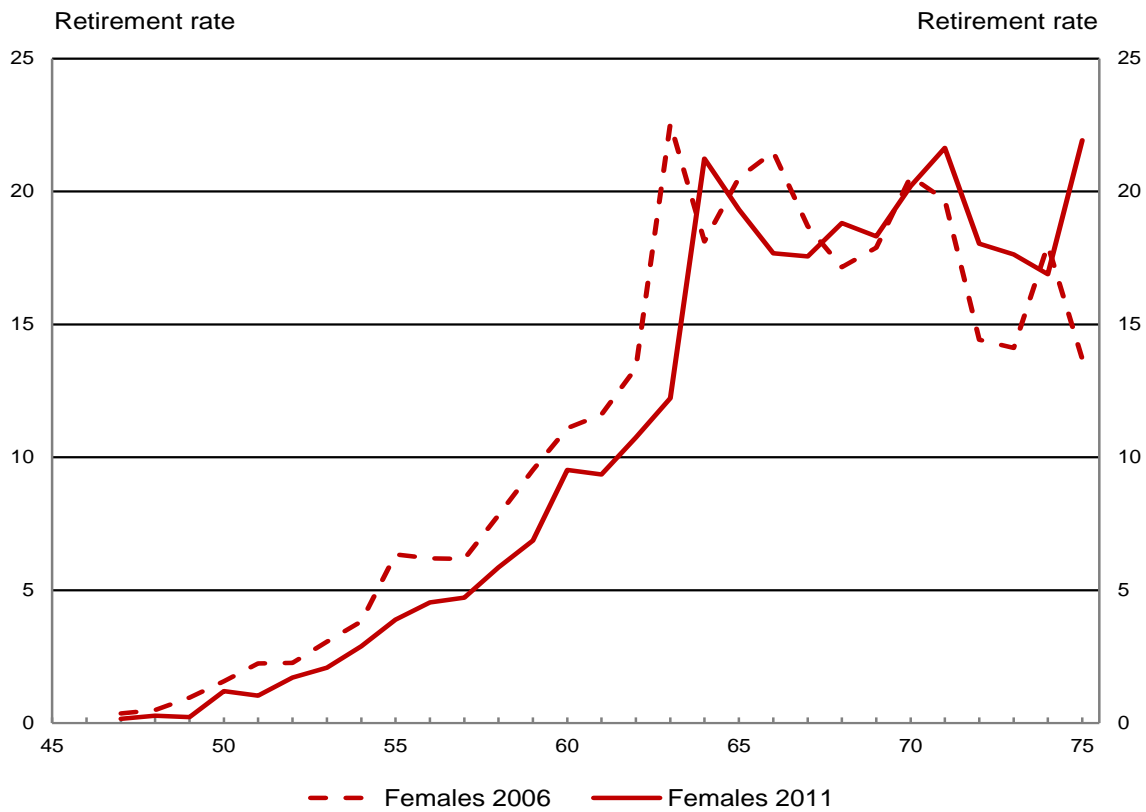
Additionally, women are seen to have consistently higher retirement rates than men; of men and women participating in the workforce at age 45, 50% of men have retired by around age 64, with 62 being the corresponding age for women.

Chart 1a: Rates of full retirement as calculated by Treasury, Males, 2006 and 2011



Data source: ABS Census of Population and Housing, 2006 and 2011.

Chart 1b: Rates of full retirement as calculated by Treasury, Females, 2006 and 2011



Data source: ABS Census of Population and Housing, 2006 and 2011.

Use of Lump Sums rather than Income Streams

Australia is unusual in not requiring any income streams to be taken upon retirement; all the funds accumulated can be taken as a lump sum¹. It is a commonly held view that lump sums are strongly preferred.

It is often difficult to collect reliable information about superannuation from individuals because many individuals don't know much about their superannuation entitlements. Probably the best data sources for this study are SEARS and its earlier incarnation SEAS, because some checking with superannuation funds was also done.

Table 2 below was prepared using extended unit record data from SEAS. The Table shows that in 2000, 86% of retirees covered by superannuation with superannuation were taking **at least part** of their benefit as a lump sum. In more detail, around 65% received only lump sum benefits while another 20% received both lump sum and income stream benefits.

A noticeably higher proportion of women received only lump sum benefits, with 71% of women in this group compared with 61% of men. This is understandable as, on average, the

¹ Since 2007 an alternative to taking a lump sum or retirement income stream is to simply leave the money in superannuation without creating an income stream; usually this involves higher taxation than creating the income stream.

superannuation payouts of men considerably exceed those of women and it's often more sensible to take a small accumulation as a lump sum.

The proportion of men receiving both lump sum and income stream benefits is over 70 per cent more than the corresponding proportion of women. Presumably this is again due to the higher payouts received by men.

Table 2: Retired persons, choice of superannuation payments types by sex and age, 2000
Retired persons, lump sum payments and superannuation income by sex and age
 (percentage of age group with a superannuation benefit)

		Has received or is receiving superannuation pension/superannuation annuity		Has received a lump sum only	Received a lump sum (with or without income stream)
		Has received a lump sum	Never received a lump sum		
Male	under 55	6%	10%	84%	90%
	55-59	28%	12%	60%	88%
	60-64	26%	13%	61%	87%
	65-69	31%	15%	54%	85%
	All	26%	13%	61%	87%
Female	under 55	3%	4%	92%	96%
	55-59	14%	11%	75%	89%
	60-64	17%	17%	66%	83%
	65-69	22%	22%	57%	78%
	All	15%	15%	71%	85%
Persons	under 55	4%	7%	89%	93%
	55-59	20%	12%	68%	88%
	60-64	21%	15%	63%	85%
	65-69	27%	17%	55%	83%
	All	20%	14%	65%	86%

Source: ABS Employment Arrangements, Retirement and Superannuation, Expanded CURF, Australia, 2000 Catalogue 6361.0.55.002

Table 3 is an update of Table 2 using extended unit record data from the 2007 release of a very similar survey, which is named SEARS. It is worth noting that the age range covered differs between SEAS and SEARS. SEAS only included people aged between 15 and 69 whereas SEARS included all persons aged 15 and above. Therefore SEARS provides enhanced data on the retirement benefit choices of older Australians.

It's evident from Table 3 that the proportion of people choosing lump sums has decreased and income stream products now have substantially increased take-up rate. This shift towards income streams is consistent with significant super reforms that were introduced between 2000 and 2007 which encouraged pension and annuity take-ups, particularly the introduction of transition to retirement pensions around 2005.

Table 3: Retired persons, choice of superannuation payments types by sex and age, 2007

**Retired persons, lump sum payments and superannuation income by sex and age
(percentage of those with a superannuation benefit)**

		Has received or is receiving superannuation pension/superannuation annuity			
		Has received a lump sum	Never received a lump sum	Has received a lump sum only	Received a lump sum (with or without income stream)
Male	under 55	2%	7%	91%	93%
	55-59	23%	12%	64%	88%
	60-64	24%	24%	52%	76%
	65-69	36%	28%	36%	72%
	70-74	28%	34%	39%	66%
	75-79	34%	24%	42%	76%
	80+	31%	30%	39%	70%
	All	29%	27%	44%	73%
Female	under 55	26%	0%	74%	100%
	55-59	16%	9%	75%	91%
	60-64	20%	24%	56%	76%
	65-69	27%	30%	44%	70%
	70-74	24%	32%	44%	68%
	75-79	24%	28%	48%	72%
	80+	22%	37%	41%	63%
	All	23%	26%	51%	74%
Persons	under 55	13%	4%	83%	96%
	55-59	20%	10%	70%	90%
	60-64	22%	24%	54%	76%
	65-69	31%	29%	40%	71%
	70-74	26%	33%	41%	67%
	75-79	31%	25%	44%	75%
	80+	28%	32%	40%	68%
	All	27%	26%	47%	74%

Source: ABS Employment Arrangements, Retirement and Superannuation, Expanded CURF, Australia, Apr to Jul 2007 Catalogue 6361.0.5.001

In more detail, the 2007 data shows around 74% of retirees with superannuation had received lump sum benefits, with 47% only getting the lump sum and 27% receiving both lump sum and income stream benefits. The overall proportion with an income stream, with or without an accompanying lump sum, has risen from 34% in 2000 to 53% in 2007. As in 2000, a higher proportion of women received a lump sum only (51%) compared with 44% of men;

An interesting observation from Table 3 is that the older a person is, the more likely that the person will have an income stream (either with or without a lump sum). This seems to be consistent with the following factors:

- The more income a person has, the more likely it is that he/she receives an income stream (see Table 4 below); those retiring early will generally have less accumulated;
- People above age 65 are more likely to insure against longevity risk by securing a long term income stream (but not monotonic by age); and
- Older people are more likely to have been members of defined benefit schemes for which pensions are a mandatory part of the benefit.

Table 4 below is also derived from SEARS and analyses the receipt of lump sums and pensions by gross income at retirement. The pattern is quite clear; those with higher incomes strongly use income streams with around 80% of those with incomes above \$600 a week receiving an income stream (with or without a lump sum) and only 10% of those with incomes above \$2000 a week receiving a lump sum only.

Table 4: Retired persons, choice of superannuation payments types by income, 2007

Retired persons, lump sum payments and superannuation income by gross weekly income (percentage of those with a superannuation benefit)

Gross weekly income	Has received or is receiving superannuation pension/superannuation annuity				
	Has received a lump sum	Never received a lump sum	received an annuity with or without lump sum	Has received a lump sum only	Received a lump sum (with or without income stream)
\$1-\$299	19%	12%	32%	68%	88%
\$300-\$599	33%	38%	71%	29%	62%
\$600-\$999	42%	43%	85%	15%	57%
\$1,000-\$1,499	32%	57%	89%	11%	43%
\$1,500-\$1,999	27%	49%	76%	24%	51%
\$2,000 or more	23%	66%	89%	10%	33%

Data source: ABS Employment Arrangements, Retirement and Superannuation. Expanded CURF, 2007

Table 5 below has been derived from the Retirement and Retirement Intentions Surveys from 2004-05 to 2010-11. ‘Receiving a lump sum’ includes those also receiving an income stream. The 63% of retirees with superannuation receiving a lump sum in 2006-07 which compares directly with 74% from SEARS at about the same time; this difference appears to exceed sampling error and the reason for the difference is not known. Conversely, the percentage of those with superannuation never receiving a lump sum is 35% in this survey compared with 26% in SEARS.

Table 5 shows the numbers receiving lump sums rising over time, particularly strongly for women, but the proportion of retirees with lump sums is falling over time. Together with the proportion never receiving a lump sum, the overall picture is of greater use of income streams over time, with a jump after Better Super (introduced July 2007), which gave greater tax benefits to income streams.

The differences between proportions for men and women are small and do not have the same relativity as the SEARS results.

Table 5 Summary information extracted from various ABS Multipurpose Household Surveys (Retirement and Retirement Intentions)

survey year	2004-05	2006-07	2008-09	2010-11
men				
number received lump sum (ever), thousands	519	584	535	635
proportion with super who received lump sum	0.67	0.64	0.58	0.59
proportion with super who never received a lump sum	0.32	0.34	0.40	0.39
women				
number received lump sum (ever), thousands	323	431	450	530
proportion with super who received lump sum	0.65	0.61	0.58	0.56
proportion with super who never received a lump sum	0.33	0.35	0.40	0.43
persons				
number received lump sum (ever), thousands	843	1014	984	1165
proportion with super who received lump sum	0.65	0.63	0.58	0.58
proportion with super who never received a lump sum	0.33	0.34	0.41	0.41

Data source: ABS Multipurpose Household Surveys (Retirement and Retirement Intentions).

Interpretation

Over the period 2000 to now, a number of factors have influenced the relative importance of income streams and lump sums:

Tending to Increase the use of income streams

- Significant changes to retirement income policies particularly the introduction of transition to retirement pensions around 2005 and the introduction of Better Super in July 2007, which increased the tax benefits applying to income streams and removed the maximum drawdown requirement;
- Superannuation payouts growing in size - payouts have to be of a reasonable size to justify the trouble and expense of creating an income stream.

Tending to reduce the use of income streams

- Closure to new entrants of defined benefit schemes, many of which require taking at least part of the benefit as an income stream (private pension);

- More households entering retirement with debts, particularly mortgage debts, increasing the usefulness of lump sums for at least part of the benefit; and
- Concerns that the high longer term returns achieved by superannuation funds may not be sustained and concerns about the probity and competence of those managing the investments.

Despite some inconsistencies between the data sources, it is clear that the pro income stream factors have prevailed, in the view of the authors, particularly reflecting the policy changes.

It is worth noting again that not all the observed behaviour is by choice. In particular some defined benefit superannuation schemes mandate that at least part of the benefit must be taken as an income stream (eg the Commonwealth Superannuation Scheme which is now closed to new entrants).

Main uses of lump sums

In 2010–11 the Retirement and Retirement Intentions survey covered 8.5 million people aged 45 years and over who had, at some time, worked for two weeks or more; it found 4.9 million (57%) were in the labour force, 3.2 million (38%) had retired from the labour force, and the remaining 340,000 (4%) were not currently in the labour force but had not retired.

Of the retirees, 2 million had had superannuation coverage and 1.2 million had not. As reported in Table 5 of this paper, 58% of those with superannuation (1.17 million persons) had received a lump sum at some time.

Of those receiving lump sums in the last 4 years, only a small minority had received large sums; 13% had received \$150,000 or more while 45% has received a lump sum of less than \$40,000. It should be noted that there is no requirement to take all your superannuation at the one time: a series of lump sums can be taken, a combination of lump sums with retirement income streams or the money can be left in superannuation til death.

Table 6 below shows the most popular uses of lump sums received (at any time) allowing for more than one use to be reported.

Table 6: The Most Common Uses of Lump Sums by Retirees, 2010-11.

	number thousands	percent of those with a lump sum
Paid off home/paid for home improvements/bought new home	359	30.8%
Invested the money elsewhere/personal savings/bank	252	21.6%
Rolled it over/invested it in an approved deposit fund/deferred annuity or other superannuation scheme	221	19.0%
Paid for a holiday	165	14.1%
Bought or paid off car/vehicle	157	13.5%
Cleared other outstanding debts	148	12.7%

Data source: 2010–11 the Retirement and Retirement Intentions Survey.

Patterns by men and women separately are available, but are similar, with men somewhat more likely to purchase a car than women. Analysis by age is also available with some obvious correlations with younger people rolling over, as they are often required to do by law.

A reasonable interpretation of the data is that persons retiring mostly do not spend the money frivolously but on items which will raise their standard of living in retirement. But a part of this longer term benefit is indirect (home improvements, new car) rather than direct investments generating retirement income.

Impact of debt (with comments on the CPA analysis)

Table 6 clearly shows that paying off debt is a significant use of superannuation funds. CPA Australia published a Report on 3 October 2012 titled 'Household savings and retirement - Where has all my super gone?' (Kelly, 2012) The principal finding is that the rise in levels of debt held by persons approaching retirement is so large as to outweigh the growth of super and other assets, leading to a failure of compulsory super to meet a key objective of improved and adequate retirement incomes. There has been some media interest.

We have a number of concerns about the CPA findings:

- The data source used (HILDA) has far fewer records than the alternative we have used for parallel analysis (SIH) and many values have been imputed rather than directly measured.
 - Where we have obtained direct comparisons with some debt levels quoted in the Report, the SIH consistently gives much lower levels, sometimes less than half.
- Averages are used throughout the CPA report and these can be distorted by outliers. Our analysis uses both medians and averages, giving preference to medians. There are strong arguments that the 'average' household is the one at the median level.
- Total debt is emphasised. The authors consider mortgage debt as more relevant for such analysis, as most major debt outside of mortgage debt is a matter of investment choice usually fully backed by corresponding assets – see Appendix B.
- Excessive household incomes are suggested as necessary for adequacy.
 - The Report proposes that \$67,500 should be the income required for a median household to have an adequate standard of living in retirement. This is a claim completely at odds with the often quoted ASFA standards of income requirements in retirement. The ASFA standards for a 'comfortable' retirement are currently \$56,300 for a couple and \$41,200 for a single person at a time point some years after the Report's analysis (ASFA, 2013). These levels were derived by University of NSW research for the top 20% of retirees by income; for median earners the corresponding levels are \$32,600 and \$22,600 respectively. The ASFA levels assume ownership of a home, but this does not explain the extremely large differences.

Our analysis confirms that the proportion of those approaching age pension age with significant debt is increasing and the level of that debt is also increasing. But our analysis finds that for most people the level of debt is more than covered by super and other assets

and, importantly, the growth of financial assets is faster than the growth of debt, so **the situation is improving, not getting worse as the CPA claims².**

Nonetheless this analysis finds that for a small minority of women there will be nothing left after their super and other assets are used to pay off their apparent share of a mortgage.

Some of the key results of our SIH analysis are shown below. Table 7 sets out the percentages of key age groups with housing debt, analysed by gender and whether or not still working. The time trend shown below is limited but a longer analysis has confirmed a growing trend to still have housing debt at older ages, particularly before retirement. The differences between those retired and not retired confirm that superannuation and other assets are frequently used to pay off housing debt at retirement.

Table 7: Percentage of people with a housing debt, by gender and labour force status and age group, 2003-04, 2005-06 and 2009-10

		In labour force			Retired		
		03-04	05-06	09-10	03-04	05-06	09-10
Men	55 - 59	30.6	32.1	42.1	19.6	14.5	20.7
	60 - 64	21.5	24.0	24.7	9.3	8.7	11.6
	65 - 69	6.2	19.7	19.1	5.2	4.8	6.6
Women	55 - 59	26.7	31.9	34.5	17.0	18.1	21.9
	60 - 64	16.3	18.9	24.5	5.1	5.5	9.9
	65 - 69	3.2	9.5	14.2	3.4	5.1	7.5
All	55 - 59	29.0	32.0	38.6	18.0	16.8	21.4
	60 - 64	19.9	22.3	24.6	6.8	6.7	10.6
	65 - 69	5.4	16.4	17.4	4.2	5.0	7.1

Data source: ABS unit record files of the Survey of Income and Housing, 2003-04, 2005-06 and 2009-10.

Table 8 and Table 9 below shows details of debts and assets in 2009-10 for the same key age groups differentiating by gender again for those with housing debt, but restricted to those still in the labour force. The key findings for these groups are that, while on average the value of superannuation considerably exceeds housing debt, at the median level this is not generally the case. Meantime, the average debt on investment property is well covered by the average asset value on investment property at all age categories for both men and women (see also Appendix B). But it is important to note that this analysis is only for those with housing debt: around 25% of age group for aged 60 to 64, see Table 7; for those without housing debt, superannuation at both mean and median levels exceeds other debt and gives the opportunity to create retirement income, either within or outside superannuation (see Appendix C).

² The CPA growth rates are impacted by compositional effects and by the smaller number of observations in their data set.

Table 8: Debt amount (\$'000), 2009-10 for those in the labour force with housing debt, by key ages and gender

		Total Debt		Housing Debt		Investment Property Debt		Other Investment Debt		Other Debt	
		Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
		Men	55 - 59	159.0	90.6	105.0	67.5	41.8	0	4.0	0
60 - 64	136.0		84.8	73.8	55.9	54.6	0	1.4	0	5.9	2.1
65 - 69	111.0		67.7	71.0	45.0	33.6	0	1.4	0	4.6	2.0
Women	55 - 59	148.0	84.4	89.6	67.0	51.3	0	1.2	0	6.2	2.5
	60 - 64	107.0	51.8	69.0	50.0	33.8	0	0.6	0	3.4	1.5
	65 - 69	114.0	95.7	79.0	75.9	29.8	0	0.0	0	5.0	1.0
All	55 - 59	154.0	86.0	98.9	67.0	45.6	0	2.9	0	7.0	2.5
	60 - 64	124.0	70.4	71.9	50.8	46.2	0	1.0	0	4.9	1.8
	65 - 69	112.0	75.9	73.2	61.7	32.6	0	1.0	0	4.7	1.5

Data source: ABS unit record files of the Survey of Income and Housing, 2009-10.

Table 9: Asset holding (\$'000), 2009-10 for those in the labour force with housing debt, by key ages and gender

		Net Wealth		Home Value		Superannuation		Value of Investment Property		Value of financial Asset		Value of Business Asset		Value of Other Asset	
		Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
		Men	55 - 59	615	396	323	260	160	80	114	0	44	3	159	0
60 - 64	526		394	309	260	155	57	118	0	24	4	68	0	57	52
65 - 69	550		350	330	275	57	15	78	0	138	2	79	0	62	55
Women	55 - 59	521	381	316	275	89	40	112	0	35	3	9	0	61	54
	60 - 64	563	454	345	325	93	35	90	0	32	3	13	0	61	51
	65 - 69	647	625	433	375	134	4	99	0	22	8	0	0	69	55
All	55 - 59	577	387	320	270	131	50	114	0	41	3	98	0	65	51
	60 - 64	541	421	323	275	130	50	107	0	27	4	46	0	58	51
	65 - 69	578	396	359	300	79	15	84	0	105	4	57	0	64	55

Data source: ABS unit record files of the Survey of Income and Housing, 2009-10.

Comparing this table with comparable table for 2003-04 shows that the net situation (excluding own house) is improving. Table 10 below shows that over the period 2003-04 to 2009-10, for the key 60 to 64 year age group in the labour force, median housing debt rose by 45% but median superannuation rose by 115%. The authors consider mortgage debt as more relevant for such analysis, as most major debt outside of mortgage debt is a matter of investment choice (gearing of shares and other property) usually considerably exceeded by the corresponding assets (see Appendix B).

Table 10: Percentage Growth in Housing Debt 2003-04 to 2009-10, Men and Women aged 60-64 in the Labour Force

	Total Debt		Housing Debt		Net Wealth		Home Value		Superannuation	
	Mean	Median	Mean	Median	Median	Median	Mean	Median	Mean	Median
Men	53	55	21	50	30	43	30	30	71	138
Women	75	48	85	208	23	64	64	81	40	119
All	51	35	31	45	29	53	40	38	54	115

Data source: ABS unit record files of the Survey of Income and Housing, 2003-04 and 2009-10.

How is the Wealth of Retirees distributed?

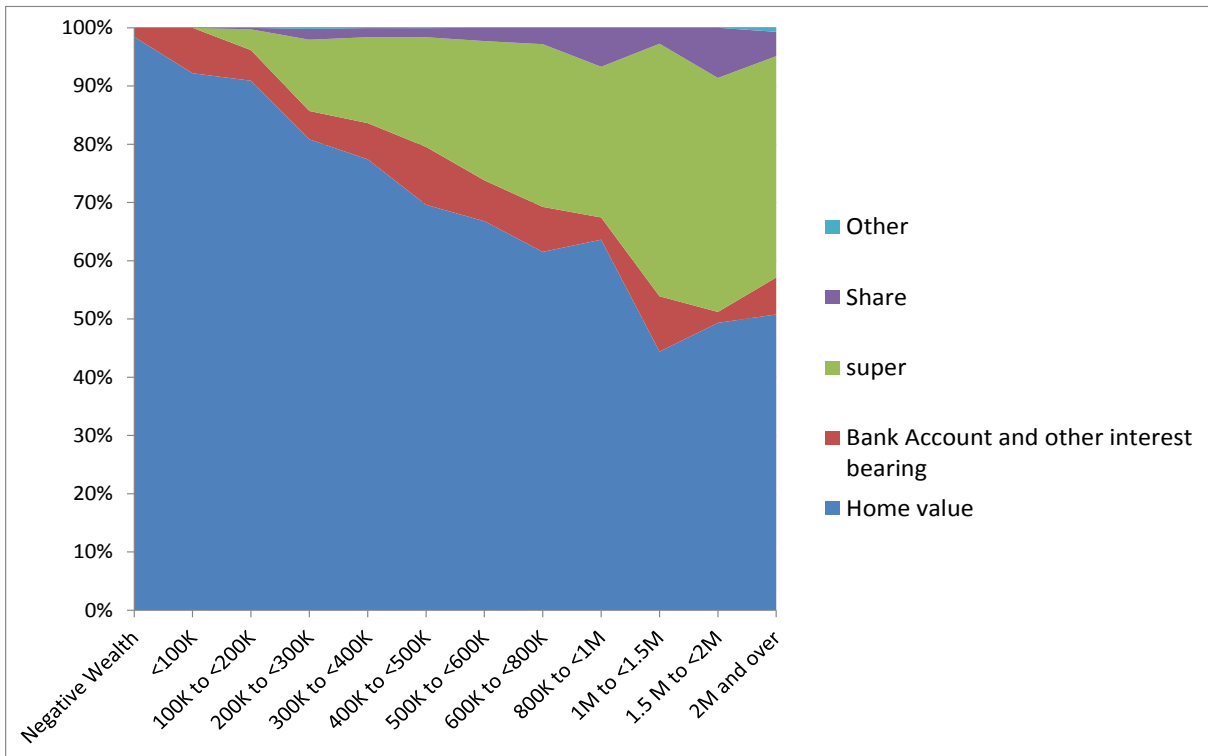
The ABS Survey of Income and Housing (SIH) 2009-10 has been extensively analysed to ascertain the distribution of wealth of retirees. The patterns are shown below in Charts 2a and 2b for a limited subset of the analysis, men and women retirees aged 65 to 69 and owning or purchasing their home.

As expected the extent, the range and significance of wealth outside of one's own house increases as total net wealth rises. The dominance of superannuation as an investment vehicle in retirement is clear, with proportion of wealth held rising up to, but not including, the highest wealth bracket. For a given wealth level, the use of superannuation by women is less than for men. The limited extent of direct share investment and other investments (such as rental property) is perhaps surprising. But superannuation can include a high proportion of growth investments and thus cater for substantial longevity after retirement. Additionally as shown in the next Section most retirees are conservative in their superannuation income stream drawdowns.

There are fewer data points for those without an own home and to get an intelligible pattern we have had to aggregate retirees over ages and gender and also amalgamate some wealth ranges. The result is shown in Chart 3 below.

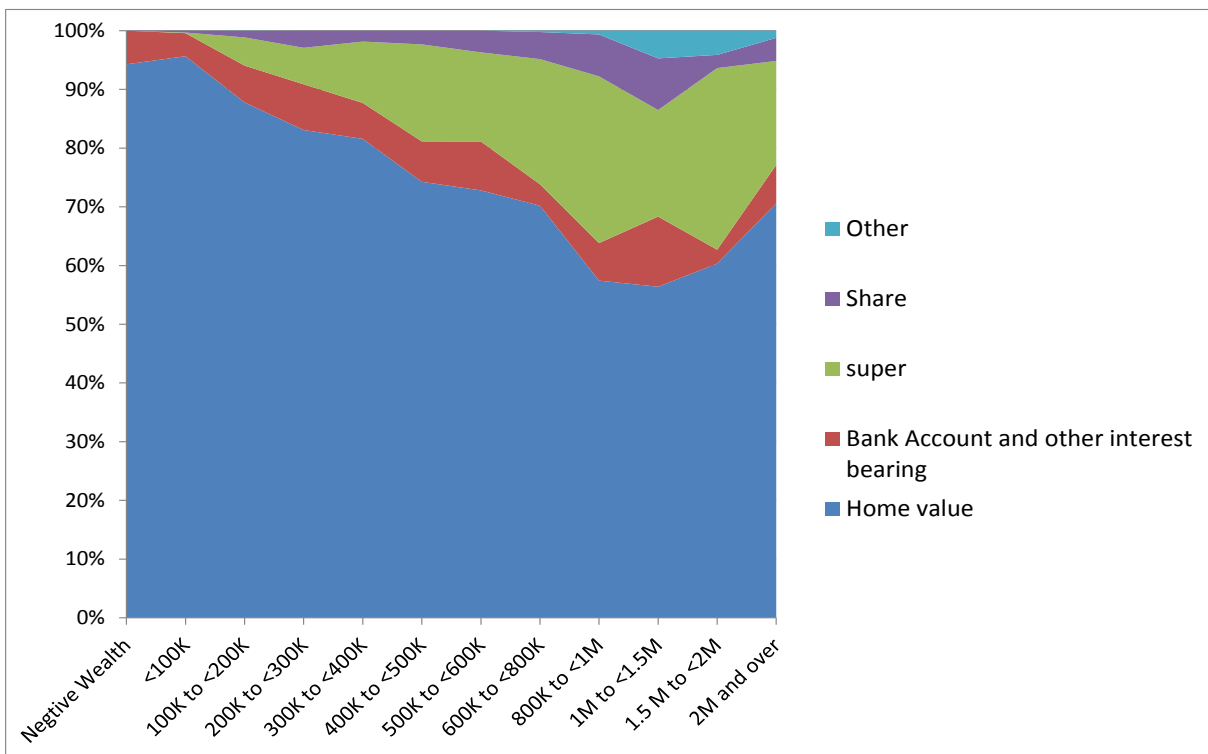
The pattern is quite clear: the proportion of wealth in bank and interest bearing deposits is sharply lower for those with greater total wealth while the proportion held in superannuation is much higher. The proportion held in shares is fairly steady across wealth ranges.

Chart 2a: Distribution of Retiree Net Wealth, 2009-10, Homeowners, Men aged 65-69



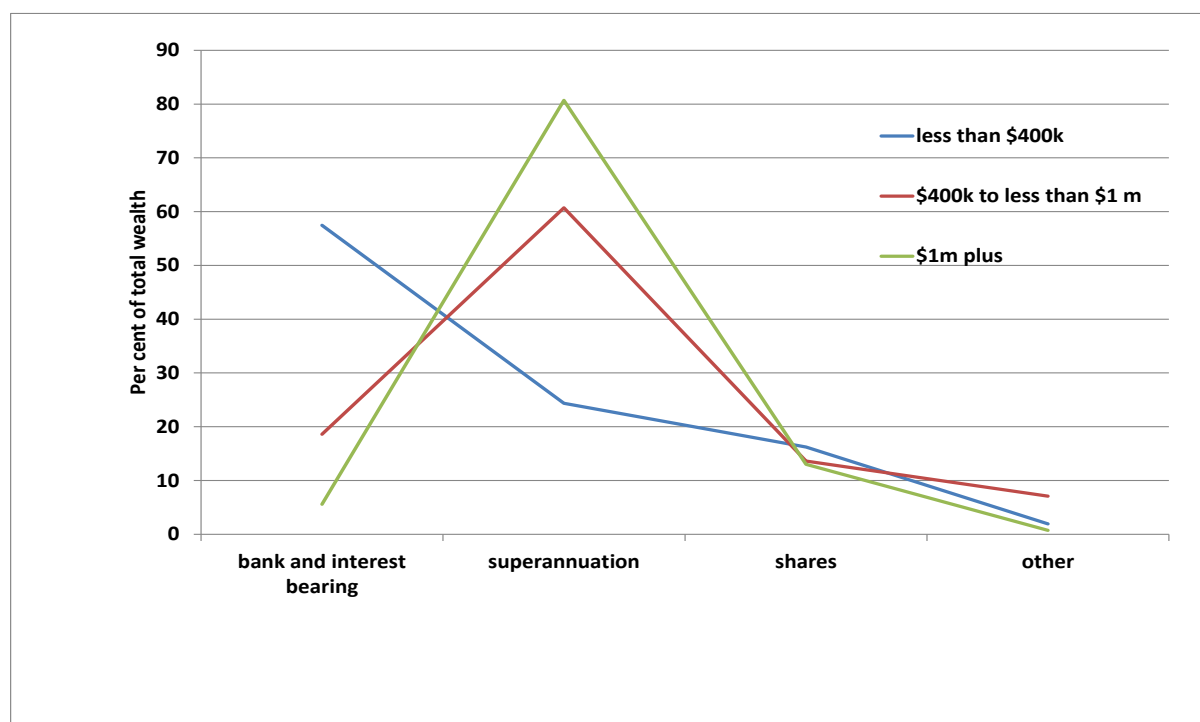
Data source: ABS unit record files of the Survey of Income and Housing, 2009-10.

Chart 2b: Distribution of Retiree Net Wealth, 2009-10, Homeowners, Women aged 65-69



Data source: ABS unit record files of the Survey of Income and Housing, 2009-10.

Chart 3: Distribution of Retiree Net Wealth, 2009-10, Persons, Not Homeowners



Data source: ABS unit record files of the Survey of Income and Housing, 2009-10.

Income streams

-Value and trends

As established above, the use of retirement income streams by Australians has been growing, particularly by those with higher accumulated assets at retirement and superannuation is the dominant investment vehicle at retirement for those with substantial funds to invest. In 2007 of those with superannuation, 64% of men and 60% of women aged 65 to 69 had an income stream (with some having received a lump sum as well) and there are strong indications that these proportions have continued to rise.

There are few sources of published statistics on the value of retirement income streams. Rice Warner (Rice Warner, 2012) estimated that in June 2011, there was an aggregate of \$406 billion in the retirement phase, of which around half was in self-managed funds, and a third in commercial retirement products. Rice Warner also produces projections of the retirement phase, estimating that from around 30% of aggregate superannuation funds in 2011 this sector will rise to around 42% by 2026.

-Amounts held by pensioners

The distribution of retirement income assets is clearly unevenly distributed. About 15% of pensioners aged 60 and over hold allocated pensions. At June 2012, the average holding was \$136,000 and, in aggregate, around \$50 billion of such assets was held by pensioners. The take-up and level of aggregate assets held by pensioners is arguably low,

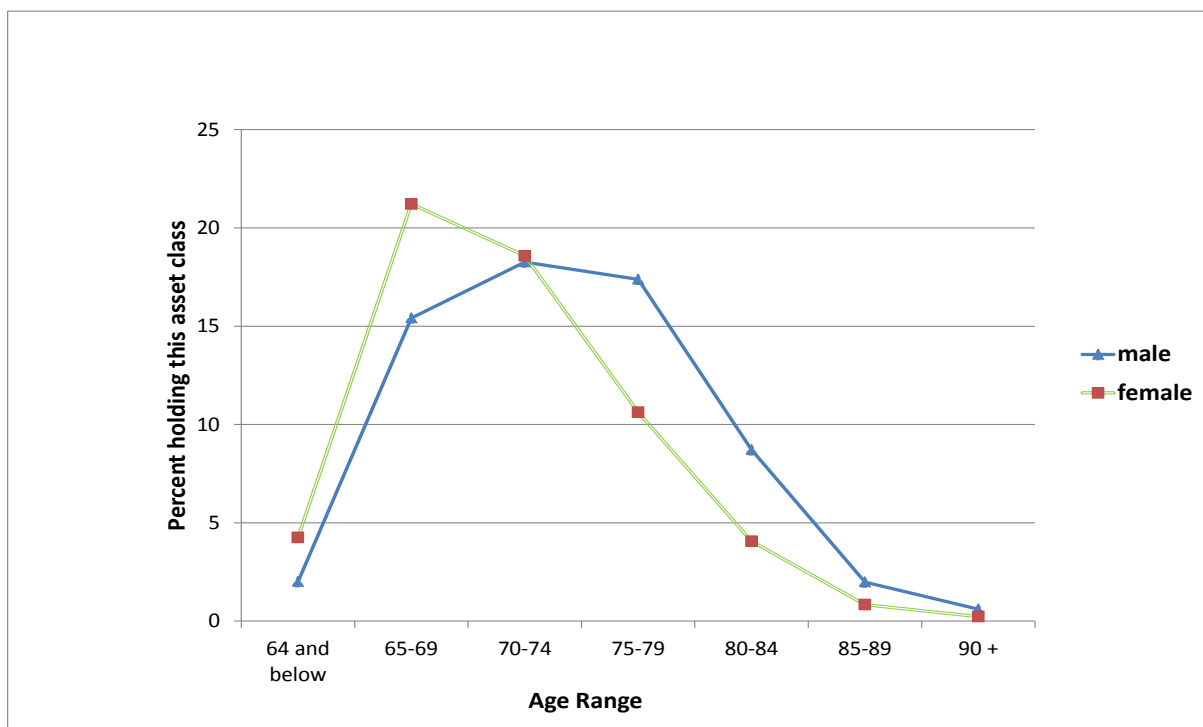
given the tax and pension advantages³ of these investments and given that around 80% of those of age pension age receive some pension.

Analysis of pensioner usage of allocated pensions shows:

- Usage by women is less overall than that of men, but not in younger age ranges
 - broadly consistent with SEAS and SEARS findings above;
- Usage reduces by age after age 65 for women, 70 for men
 - somewhat different to the SEARS finding which has broader age groupings;
- Usage is sharply higher by those with higher assets or higher income
 - in line with SEAS and SEARS findings above; and
- Usage of this asset class is higher by pensioners in couples than by single pensioners.

Charts 4 and 5 below demonstrate this.

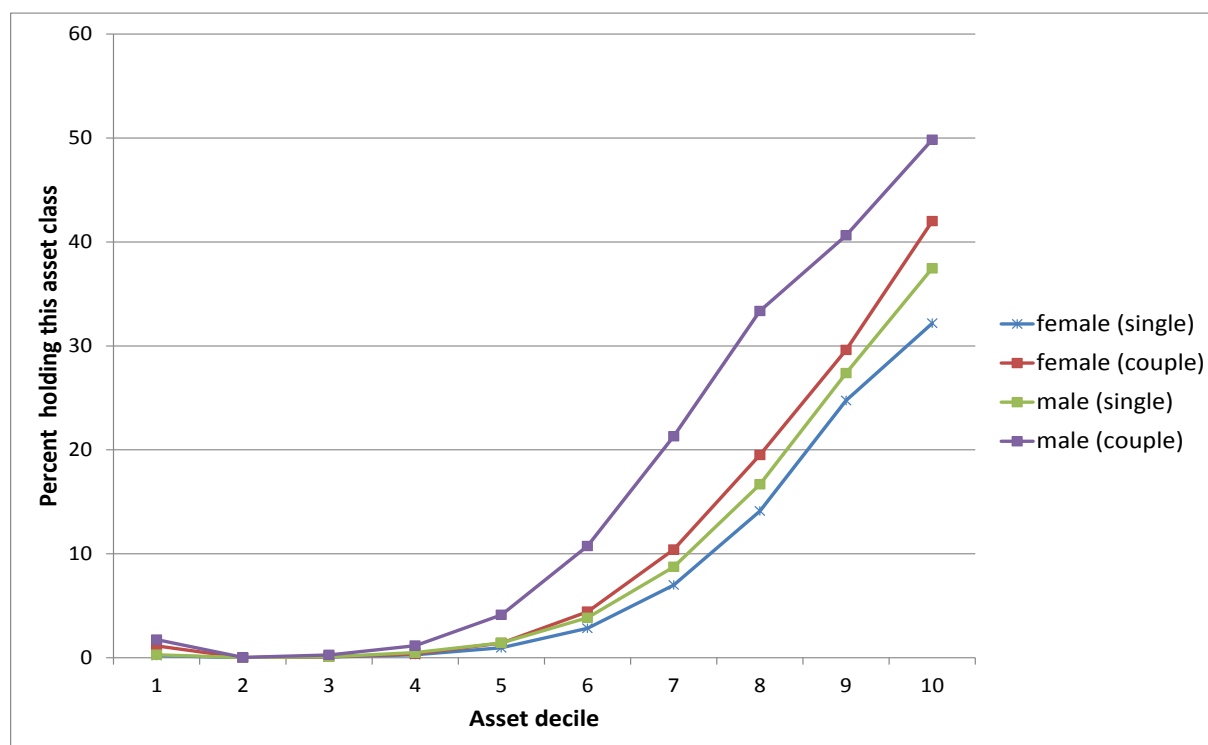
Chart 4: Usage of Allocated Pensions by Single Age Pensioners, July 2012, by gender and age group



Source: Analysis based on Treasury's 2011-12 Pensioner File.

³ A measure introduced in the 2013 budget has reduced the pension advantage by deeming account based income streams created after 1 January 2015; account based income streams in existence before that date will continue to be treated advantageously for pension purposes, until a change is made in that pension

Chart 5: Usage of Allocated Pensions by Age Pensioners, July 2012, by gender and asset decile



Source: Analysis based on Treasury’s 2011-12 Pensioner File.

Drawdowns by holders of Allocated pensions

As noted above, by joining confidentialised Tax file data, a confidentialised file on self managed funds provided by the Tax Office with a file on pensioners provided by FaHCSIA and some additional work, Treasury has created a powerful large data set (BENMOD). This has been used for policy analysis but also provides a powerful data to examine drawdown behaviour in retirement, an area where there has been very limited quality analysis.

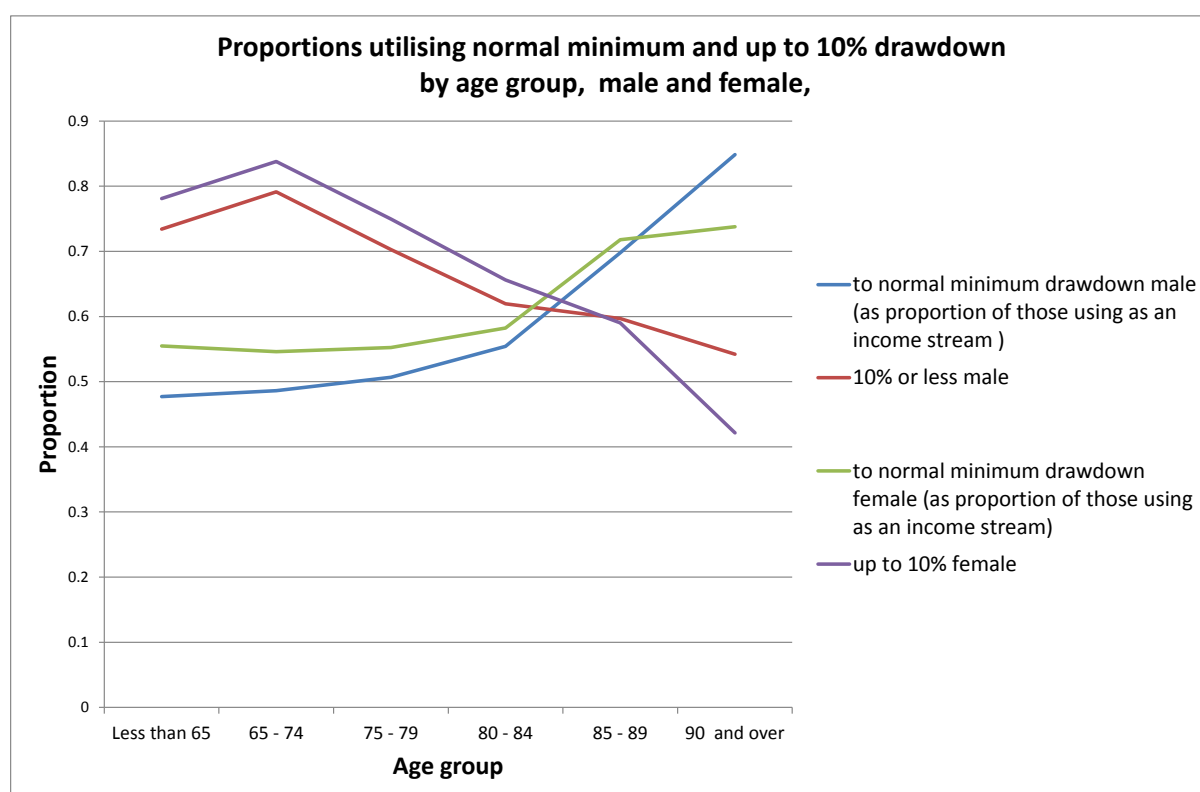
Allocated pensions (also known as account-based pensions) have minimum withdrawal or drawdown requirements: for each age range a minimum percentage of the account balance at the beginning of each financial year has to be withdrawn before the end of the financial year. The percentages rise with age from 4 per cent for those aged under 65, to 14 per cent for those aged 95 and over. There used to be an additional restriction on the maximum percentage of the account that could be withdrawn in a given year but this restriction was removed as part of the Better Super arrangements introduced in July 2007 (except for transition to retirement pensions where the maximum withdrawal in a year is 10 per cent). Responding to the concern that large amounts of capital were lost by retirees in the global financial crisis (GFC), the government softened the minimum drawdown rules, halving them for the financial years 2008-09, 2009-10, 2010-11, and reducing them by a quarter for 2011-12 and 2012-13.

The BENMOD data set has been used to analyse the pattern of drawdown from allocated pension income streams by age group, gender and wealth. Chart 6 below shows:

- Drawing down no more than the age dependant minimum is widespread, with most retirees taking a conservative approach to make their money last;
- The proportion using the minimum rises significantly with age group;
- The difference between men and women are fairly minor, with women generally drawing down at a lower rate than men; this is somewhat surprising given that lower balances are held by women and generally as will be demonstrated in Charts 7 and 8, those with lower balances have higher percentage drawdowns.

It should be noted that in Chart 6 the proportions using the normal minimum (or less as temporary lower minima apply in the period) are calculated as a proportion of those withdrawing 20% or less of their balance. The authors consider that those withdrawing over 20% in a year are not part of the group using these investments to fund ongoing retirement. The patterns shown remain if the entire group is used as the denominator, but the rates are of course lower.

Chart 6: Allocated Pension drawdowns, 2009-2012



Source: Analysis based on Treasury's BENMOD data set.

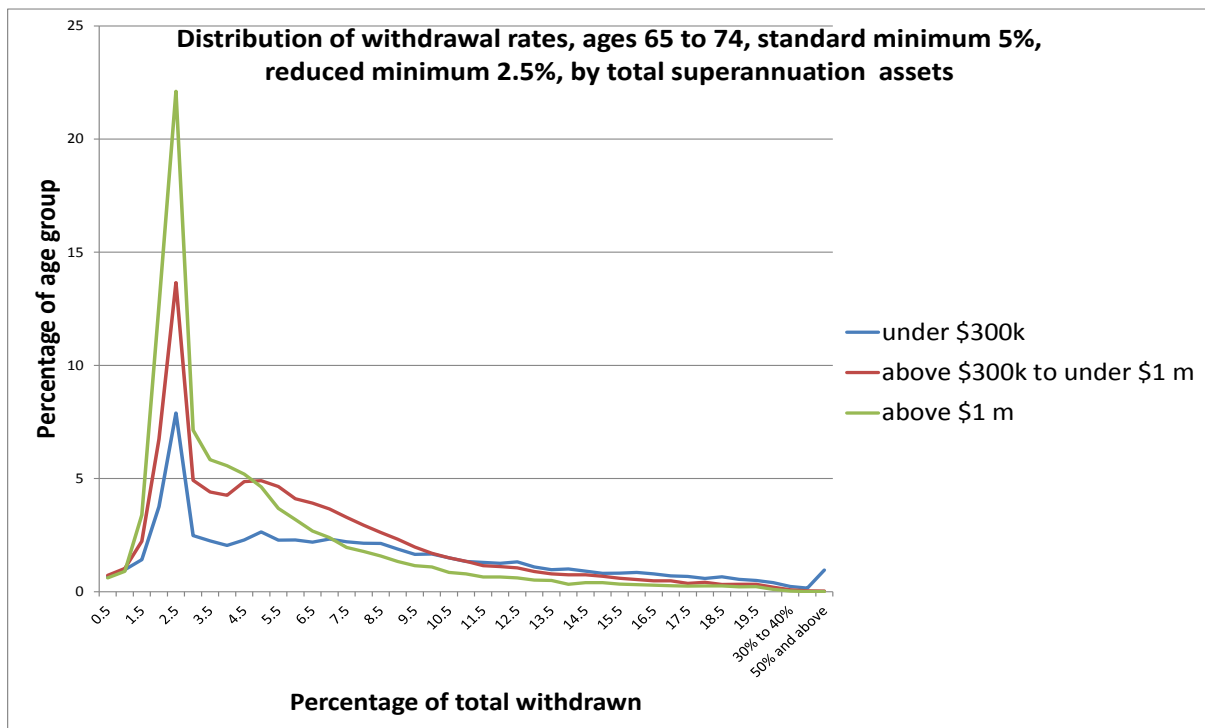
Charts 7 and 8 below show the distribution of withdrawal rates for two age ranges showing the impact of the level of assets held and also of the temporary reductions in minimum withdrawals in the period analysed.

It is quite clear that those with higher assets use the lowest legal percentage withdrawal rates more than those with lower assets, and in particular made very extensive use of the temporary reductions in minima offered in this period. The peaking in Chart 7 at 2.5% and at 3% in

Chart 8 is clear and dramatic. The use of the temporary minima varies from around 30% of retirees with allocated pensions with \$100,000 of superannuation assets to over 60% usage at the highest asset ranges.

The clear tendency demonstrated is that retirees with allocated pensions are conservative in drawdowns, even though drawing down and dissipating assets would for many of them result in a higher pension payment; this argues against a recent paper by Jack Ding (Ding 2013). The essence of Ding’s paper is that age pension savings from, say, the increase in SG from 9 to 12 per cent are lower than projected by Treasury’s RIMGROUP model, because according to Ding, retirees adjust their assets to optimise their financial position, particularly their pension entitlements (Ding, 2013)⁴. The data presented here suggest this is not so. Even without the SG rise, many wealthier retirees could get higher pensions by drawing down their assets more quickly but the evidence presented here is that they mostly do not do so – wealthier retirees draw make far greater use of the minimum drawdown rates for allocated pensions than less wealthy ones, particularly of the halved rates.

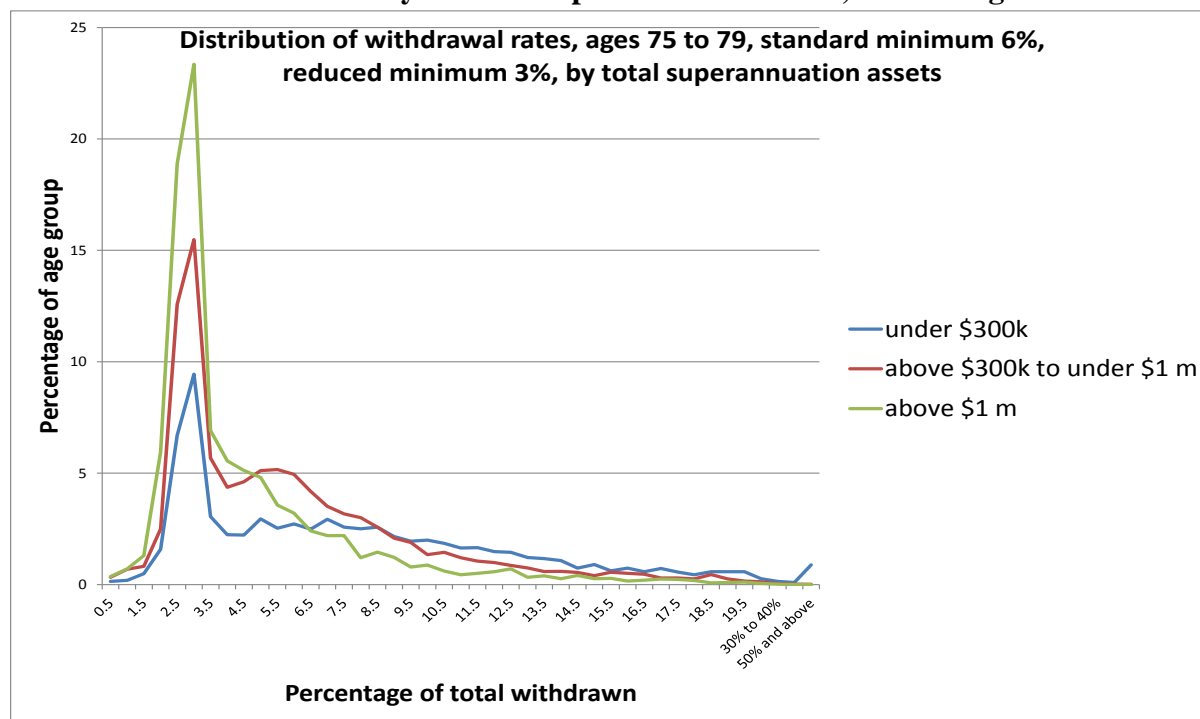
Chart 7: Withdrawal rates by value of superannuation assets, Persons aged 65 to 74



Source: Analysis based on Treasury’s BENMOD data set.

⁴ In fact much of the 13% difference between Ding’s pension payments in 2035 and those projected by Rothman (2012) are due to parameter differences. Ding’s projected wages by 2035 are over 10% higher than Rothman’s flowing through directly to Age and Service pension costs.

Chart 8: Withdrawal rates by value of superannuation assets, Persons aged 75 to 79



Source: Analysis based on Treasury’s BENMOD data set.

There are reasonable (legal) reasons for drawdowns apparently below the temporarily reduced minima. The first is simply taking out the pension after the beginning of the financial year, where a pro rata drawdown is allowed. The second is that some imputed values and estimation are involved in the analysis, which means that an observation just under the minimum may be actually at the minimum.

Conclusions

Australians are continuing to live longer and almost all will reach retirement, with age at retirement increasing over time. Using averages for retirement age understates the complexity of retirement and the relevance of institutionally specified ages such as preservation age and age pension eligibility age.

This paper has used a large number of data sources, including some not publically available, to examine key questions about the funding of retirement, particularly, but not exclusively, the use of superannuation to help fund retirement. There are two primary areas of potential use for the findings: the refinement of models and the development or refinement of policies. The relevance to policy may be indirect through impacting upon and improving various relevant models, or through assisting in the evaluation of recent policies.

Some major findings of the paper are:

- The use of income streams is more widespread than commonly thought and has been increasing since 2000;
- A further increase followed the delivery of higher tax benefits for income streams in the Better Super changes applying from July 2007;
- Income streams are used much more by those with higher incomes;
- Repaying debt at retirement, particularly housing debt, is a major use of lump sums but in most cases this leaves significant amounts to invest to generate retirement income;
- The significance of debt as a negative factor in determining adequacy is reducing rather than rising;
- The dominance of superannuation as an investment vehicle in retirement is clear, with usage rising up to, but not including, the highest wealth bracket. For a given wealth level, the use of superannuation by women is less than for men;
- At least 50% of income stream drawdowns by retirees are at the minimum rate required by law, with the proportion using the minimum rate rising with age and income;
- The policy of temporary reductions of minimum drawdowns allowed by the government to allow lower drawdowns during the GFC was utilised by a significant proportion of holders of allocated pensions; and
- About 15% of pensioners aged 60 and over hold allocated pensions. At June 2012, the average holding was \$136,000 and, in aggregate, around \$50 billion of such assets was held by pensioners.

Some these patterns are as expected but the more detailed results presented here can refine and improve the modelling.

For example Treasury's RIMGROUP model⁵ currently has assumed drawdown patterns for allocated pensions moderately above the minimum applying for each age group, but the relationship to the minima is not a function of income or age, whereas these findings indicate use of the minima rises with age and income. Similarly, greater detail on the use of allocated pensions by pensioners will facilitate improved modelling of the longer term impact of the change in the 2013 Budget to include allocated pensions in the deeming arrangements (for new pensions).

The analysis can also indicate the relevance of certain types of models. Jack Ding (2013) uses a utility framework to model retirees adjusting their assets to optimise financial well-being, particularly through maximising their age pension entitlements. The findings presented here suggest this is not a good model of retirees' behaviour. Even without the SG rise, many wealthier retirees could get more pension by drawing down their assets more quickly but the evidence presented here is that they mostly do not do so – wealthier retirees

⁵ RIMGROUP is a comprehensive cohort projection model of the Australian population which starts with a population and labour force model, tracks the accumulation of superannuation in a specified set of account types, estimates non-superannuation savings, and calculates tax payments and expenditures, social security payments including pensions and the generation of other retirement incomes.

Aggregate modelling based on various versions of RIMGROUP have been of policy significance over many years; for instance, in Intergenerational Report 2010, Rothman (2012) and Gruen and Soding (2011).

make far greater use of the minimum drawdown rates for allocated pensions than less wealthy ones, particularly of the temporary halved rates.

The analysis in this paper has clearly demonstrated the very extensive use of the temporary reductions in minimum offered in response to the GFC from 2008 on. The use of the temporary minima varied from around 30% for retirees with allocated pensions and about \$100,000 of superannuation assets, to over 60% usage at the highest asset ranges.

On another important question on how growing debt may impact on the adequacy of superannuation, the findings of this paper differ markedly from those of the CPA (Kelly, 2012). The CPA's principal finding was that the rise in levels of debt held by persons approaching retirement is so large as to outweigh the growth of super and other assets, leading to a failure of compulsory superannuation to meet a key objective of improved and adequate retirement incomes.

Our analysis using a different data source confirms that, recently, the proportion of those approaching age pension age with significant debt is increasing and the level of that debt is also increasing. But we also find that for most people the level of debt is more than covered by superannuation and other assets and, importantly, the growth of superannuation is faster than the growth of debt, so the situation is improving, not getting worse as the CPA appears to claim.

The analysis presented here also exemplifies the great value of very large data holdings, often derived from administrative ones. It is much easier to get solid patterns by age, gender and income from files of around a million records than samples of 5 to 20 thousand, most of whom are not in the class (eg retirees) that we are studying. Much more care is needed with the smaller samples to avoid misleading results.

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APPENDIX A: DATA SOURCES PUBLICALLY AVAILABLE

ABS Survey of Employment Arrangements and Superannuation (SEAS)

6360.0 - Superannuation: Coverage and Financial Characteristics, Australia, Jun 2000

This publication presents results from the superannuation component of the Survey of Employment Arrangements and Superannuation (SEAS). The SEAS was a household survey conducted by the Australian Bureau of Statistics (ABS) throughout Australia, with information collected from individuals by personal interview from April to June 2000. Superannuation funds and administrators provided some supplementary information during the period May to October 2000.

Also available and used in this paper as an Expanded Confidentialised Unit Record File, Australia 2000, ABS Catalogue No. 6361.0.55.001.

ABS Survey of Employment Arrangements, Retirement and Superannuation (SEARS)

This survey provides information on employment arrangements, working patterns, work and caring, retirement and retirement intentions, superannuation coverage and other characteristics. This survey is conducted on a six-yearly basis.

6361.0 [Employment Arrangements, Retirement and Superannuation, Australia](#), Apr to Jul 2007 (Re-issue)

The expanded Confidentialised Unit Record File, Australia April to July 2007, ABS Catalogue No. 6361.0.55.001 was used in the analysis for this paper.

ABS Survey of Income and Housing (SIH) 2009-10

The 2009-10 Survey of Income and Housing (SIH) is a household survey which collected information from a sample of around 18,000 households over the period July 2009 to June 2010. It collected information on sources of income, amounts received, housing characteristics, household characteristics and personal characteristics. Income is collected on both a current and financial year basis. In the 2009-10 survey, information on household assets and liabilities was also collected. The survey scope covers residents of private dwellings in both urban and rural areas of Australia.

Microdata: Household Expenditure Survey and Survey of Income and Housing, Australia, 2009-10, ABS Catalogue No.6540.0

<http://www.abs.gov.au/AUSSTATS/abs@.nsf/Microdatabycatalogue/F62D7DA578052CCFCA257187000E3309?OpenDocument>

The Household, Income and Labour Dynamics in Australia (HILDA) Survey Unit Record Data

The HILDA is a broad social and economic longitudinal survey commencing in 2001. It is managed by the Melbourne Institute of Applied Economic and Social Research (Melbourne Institute). While the longitudinal design means most questions are common across time, each wave has also included special modules focusing on particular areas of interest to Australian policymakers and researchers. The data on household wealth is included in wave 6 and wave 10. The questions concerned their holding of various classes of assets and debt: these subsequently provide measures of financial and non-financial assets and debt and, ultimately, household net worth.

Household assets are categorised as home and other property, superannuation, equity and cash investment, business assets, bank accounts, life insurance, trust funds and collectibles. Wave 3 and Wave 7 included special retirement module asking men and women aged 45 and over about their retirement intentions, expectations and experiences.

ABS Multipurpose Household Survey (Retirement and Retirement Intentions), Expanded Confidentialised Unit Record File, Australia 2010–11, ABS Catalogue No. 4100.0.55.001

This survey, conducted at 2 yearly intervals, collects information about the retirement status and retirement intentions of people aged 45 years and over. Data has been collected about retirement trends, factors influencing decisions to retire, and the income arrangements that retirees and potential retirees have made to provide for their retirement. A publication setting out the survey's findings is readily available:

[http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/C4C9530A2947002ACA25796400145D56/\\$File/62380_july%202010%20to%20june%202011.pdf](http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/C4C9530A2947002ACA25796400145D56/$File/62380_july%202010%20to%20june%202011.pdf)

APPENDIX B: COMPARISON OF INVESTMENT DEBT AND INVESTMENT ASSETS

Table B1: Investment debt amount (\$'000) and corresponding assets, 2009-10 for those in the labour force with investment property debt, by key ages and gender

A) Debts

		Total Debt		Housing Debt		Investment Property Debt		Other Investment Debt		Other Debt	
		Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
		Men	55 - 59	278.0	216.0	41.9	0.0	213.0	146	12.4	0
60 - 64	254.0		169.0	21.2	0.0	219.0	146	6.5	0	7.3	1.8
65 - 69	146.0		100.0	29.2	0.0	111.0	90	2.5	0	3.8	1.5
Women	55 - 59	268.0	183.0	38.4	0.0	217.0	160	3.4	0	8.7	2.3
	60 - 64	206.0	147.0	30.9	0.0	169.0	131	2.4	0	3.3	2.0
	65 - 69	154.0	85.1	11.5	0.0	129.0	83	11.4	0	1.8	0.6
All	55 - 59	273.0	189.0	40.2	0.0	215.0	154	8.0	0	9.5	2.4
	60 - 64	240.0	160.0	24.1	0.0	205.0	140	5.3	0	6.1	1.9
	65 - 69	149.0	96.2	23.6	0.0	117.0	90	5.3	0	3.2	1.0

Data source: ABS unit record files of the Survey of Income and Housing, 2009-10.

B) Assets

		Net Wealth		Home Value		Superannuation		Value of Investment Property		Value of financial Asset		Value of Business Asset		Value of Other Asset	
		Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
		Men	55 - 59	864	579	318	260	201	132	473	310	57	7	117	0
60 - 64	1,020		676	318	275	311	120	451	300	108	14	278	0	68	55
65 - 69	1,050		742	463	350	290	144	259	200	109	4	122	0	74	73
Women	55 - 59	761	590	341	275	120	55	386	291	28	8	8	0	67	58
	60 - 64	820	689	354	375	137	48	306	233	50	14	16	0	65	58
	65 - 69	1,150	863	627	450	133	149	316	225	76	12	1	0	74	65
All	55 - 59	814	581	329	275	162	84	430	300	43	8	64	0	69	57
	60 - 64	962	689	329	300	260	100	408	280	91	14	201	0	67	57
	65 - 69	1,080	798	515	350	240	149	277	200	99	10	83	0	74	70

Data source: ABS unit record files of the Survey of Income and Housing, 2009-10.

The key relevance of the above Tables in the context of this paper is to show that for those with investment debt, the level of that debt is much less than the value of the investment asset acquired.

APPENDIX C: COMPARISON OF DEBT AND ASSETS, PERSONS IN LABOUR FORCE, WITHOUT HOUSING DEBT

Appendix C1

A) Debt amount (\$'000), 2009-10 for those in the labour force without housing debt, by key ages and gender

		Total Debt		Housing Debt		Investment Property Debt		Other Investment Debt		Other Debt	
		Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
		Men	55 - 59	49.7	2.1	0.0	0.0	34.1	0	10.3	0
60 - 64	50.4		1.3	0.0	0.0	41.2	0	3.3	0	5.8	0.6
65 - 69	9.7		0.6	0.0	0.0	6.7	0	0.1	0	2.9	0.4
Women	55 - 59	47.5	2.0	0.0	0.0	38.4	0	3.7	0	5.4	0.8
	60 - 64	20.5	0.4	0.0	0.0	16.8	0	1.2	0	2.5	0.3
	65 - 69	16.4	0.6	0.0	0.0	9.2	0	4.4	0	2.8	0.3
All	55 - 59	48.6	2.0	0.0	0.0	36.2	0	7.1	0	5.3	0.9
	60 - 64	38.3	0.8	0.0	0.0	31.3	0	2.5	0	4.5	0.4
	65 - 69	12.1	0.6	0.0	0.0	7.6	0	1.6	0	2.9	0.4

Data source: ABS unit record files of the Survey of Income and Housing, 2009-10.

B) Asset holding (\$'000), 2009-10 for those in the labour force without housing debt, by key ages and gender

		Net Wealth		Home Value		Superannuation		Value of Investment Property		Value of financial Asset		Value of Business Asset		Value of Other Asset	
		Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
		Men	55 - 59	746	519	259	225	200	81	165	0	76	10	117	0
60 - 64	812		556	284	230	230	84	165	0	86	14	138	0	58	52
65 - 69	949		555	314	250	292	63	134	0	73	13	172	0	70	52
Women	55 - 59	642	544	278	230	108	43	113	0	43	13	38	0	58	52
	60 - 64	759	498	313	250	135	50	114	0	57	15	55	0	60	55
	65 - 69	847	699	349	250	139	60	85	0	64	20	105	0	71	52
All	55 - 59	695	535	268	225	155	60	139	0	60	11	78	0	58	48
	60 - 64	791	533	295	250	191	70	144	0	74	14	104	0	59	53
	65 - 69	913	620	327	250	238	63	117	0	70	15	148	0	70	52

Data source: ABS unit record files of the Survey of Income and Housing, 2009-10.

The key relevance of the above Tables in the context of this paper is to show that for those without housing debt, the level of total debt is much less than superannuation at both the mean and median level (in contrast with Tables 8 and 9 which are for persons with housing debt).