Twenty years of the superannuation guarantee: The verdict

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Foreword

Last year marked the twentieth anniversary of the commencement of the compulsory Superannuation Guarantee (SG) system in Australia. At this milestone CPA Australia considered it timely to reflect and assess the operation of Australia's compulsory superannuation system, and whether it has delivered on its policy objectives.

This report is the second in a series examining the effectiveness of our compulsory superannuation system. The first report focused on the impact of superannuation on household savings and debt (for those approaching retirement). It found that Australia's compulsory superannuation has failed to deliver on some of its core objectives. Between 2002 and 2010, superannuation balances, property values and the value of other assets have undoubtedly grew. However, a surprising appetite for personal debt has eroded both compulsory superannuation and the benefits of strong asset price inflation for those now approaching retirement.

Lump sum superannuation benefits are being treated as a windfall and being used to pay for the lifestyle that's being lived now instead of being put aside to provide income in retirement.

At best, all that has been achieved is to make some savings compulsory instead of voluntary, and quarantine these savings until retirement age. Overall, these enforced savings, locked up until a person retires, have been largely offset by similar if not larger private borrowings.

This report takes a broader focus considering the overall impact of compulsory superannuation over the last twenty years. In particular, it looks at the impact of compulsory superannuation on retirement savings, living standards in retirement, household debt and other forms of savings.

Unfortunately, the verdict is not positive. The perceived increase in wealth from compulsory contributions, growing superannuation balances and rising house prices has persuaded people to use debt to fund a current higher standard of living. After two decades of saving, Australians now have \$1.5 trillion in superannuation savings. However, the growth in superannuation has been matched by households taking on an equivalent amount of personal debt. Households have effectively offset the superannuation savings with increased levels of personal debt.

The growth in superannuation, driven largely by compulsory contributions, has had a significant impact on Australian households. Unfortunately, the knowledge that households have a nest egg coming in retirement appears to make them more comfortable with debt and the annual superannuation fund statements along with rising house prices and household incomes have made them feel wealthier.

An expectation gap has formed. This wealth effect is producing higher expectations for living standards in retirement. However, the superannuation nest egg is not keeping pace with either the raising expectations or the need to service debt in retirement.

Further, superannuation balances have grown at the expense of other forms of saving. In 1992 superannuation and non-superannuation held similar shares of household financial assets. Twenty years on, non-superannuation assets are only two-thirds of superannuation assets.

The findings in this report reinforce the fact that Australia's compulsory superannuation system has, in many ways. failed to deliver on its core objectives.

Policy measures must be considered to ensure superannuation savings are being invested to be used to fund a person's retirement. Serious consideration must be given to encouraging income streams in retirement and limiting the amount of superannuation that can be taken as a lump sum.

Without change there is a real possibility that, superannuation savings will be inadequate for retirement, expectations will be crushed, and the age pension will be put under considerable strain. The system, therefore, will have failed.

Alex Malley FCPA Chief Executive CPA Australia

Author note

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Professor Kelly is also an adjunct professor at the University of Canberra and formerly a Principal Research Fellow at The National Centre for Social and Economic Modelling (NATSEM). He has published research on superannuation, savings, wealth, and the impact of illness on labourforce participation.

Executive summary

Australians have been making compulsory superannuation contributions under the Superannuation Guarantee (SG) scheme since 1992. After two decades, Australians now have \$1.5 trillion dollars in retirement savings in superannuation funds.

The growth in superannuation has been matched by an equal amount of personal debt being taken on by households. The superannuation saved has been offset with increased levels of debt. Over the same time, superannuation assets have significantly outgrown non-superannuation financial assets. In 1992 household financial assets in superannuation and other forms were equal, but presently non-superannuation financial assets are only two-thirds of those in superannuation. The rapid growth of superannuation assets appears to have been at the expense of nonsuperannuation financial assets (such as deposits or shares).

There are three broad categories of superannuation contributions - employer, personal and other. The aggregate level of these employer contributions in 2010–11 was \$71 billion, and this represented two-thirds of the total contributions to superannuation in that year. It is estimated that \$55 billion were SG contributions, \$9 billion were salary sacrifice contributions and \$4 billion were above minimum employer contributions. Following a very strong theme that tax concessions drive superannuation contributions, only around one-in-15 employees in the lowest income quintile were receiving above minimum contributions, whereas one-in-five of those with incomes in the top quintile were receiving above minimum. Similarly, the average earnings of those salary sacrificing superannuation was 1.7 times the average of those not using this method of contributing to superannuation. Only 21 per cent of employed people make personal contributions, and in most years these contributions represent around 30 per cent of total contributions made. Other contributions include co-contributions made by the government and spouse contributions. These other contributions normally total around \$1 billion per year.

The growth in superannuation has been driven largely by the compulsory SG contributions and has had a significant impact on Australian households. Superannuation balances have grown, albeit at the expense of other forms of saving. Despite this, the SG does not seem to have closed the gap between retirement expectations and reality. The knowledge that households have a "nest egg" coming in retirement appears to have made people more comfortable with debt and the annual superannuation statements along with rising house prices and household incomes have made people feel wealthier. This wealth effect is producing higher expectations for living standards in retirement. The superannuation nest egg being built from SG contributions is not keeping pace with the raised expectations and the need to service debt in retirement.

The verdict

Twenty years on since the introduction of the Superannuation Guarantee scheme there is no doubt compulsory savings have provided a positive benefit to GDP. However in the context of this study, which examined superannuation and household savings, the verdict is that accumulated superannuation savings minus household debt equals zero.

Introduction

Australians have been making compulsory superannuation contributions under the Superannuation Guarantee (SG) scheme since 1992. After two decades, Australians now have \$1.5 trillion dollars in retirement savings in superannuation funds. By any standard, this is a significant amount – it represents almost the annual Gross Domestic Product (GDP) of Australia (\$1.47 trillion) or more than the value of all equities on the Australian stock market (\$1.2 trillion).

Men currently aged 65 have an average life expectancy of 86, which means they can look forward to living for around 21 years in retirement. For women the time in retirement is even longer at 25 years as they start retirement a year earlier and live three years longer on average. By 2050 the average life expectancy for people aged 65 is projected to improve by 8.1 years for men and 6.5 years for women (Actuaries Institute 2012). If the pension eligibility age in 2050 has not risen above the legislated age of 67, it will be 25 years in retirement for men and 26 for women. This greater longevity as well as the movement of the large baby boomer cohort into retirement will see the number of retirees increase by approximately 150 per cent between 2010 and 2050. Treasury's 2010 Intergenerational Report expects that only one in five of these will be self-funding with the remainder at least partially reliant on income support from the government.

Against this background, the SG was designed to reduce financial dependence of retirees on the government and provide a higher retirement standard of living. The SG aimed to achieve these goals by compelling employers to put a proportion of employee wages into a superannuation fund. While the earnings on these contributions receive concessional tax treatment, the money in superannuation cannot be accessed until preservation age is reached. Clearly, the \$1.5 trillion in superannuation funds should make a difference to both government dependence and living standards. However, the aims will only be achieved if superannuation is used for its intended purpose. This report suggests that after 20 years, SG is making a difference, but not to the extent that governments have expected. It appears growing superannuation balances combined with capital asset growth (rising house prices) over the 20 years have allowed people to somewhat reduce other forms of saving and spend more. The end result is that household debt levels are at the same level as superannuation and it seems much of the accumulated superannuation will be used to repay debt on retirement. In other words, compulsory superannuation has facilitated a higher standard of living prior to retirement, rather than when retirement is reached.

This report is the second in a series by CPA Australia looking at compulsory superannuation in Australia. The first report looked at households entering retirement (Kelly 2012) while this report focuses on the impact of compulsory superannuation over the last 20 years. Specifically, it looks at the impact of compulsory superannuation on retirement savings, retirement living standards, household debt and other forms of savings.

The report begins by explaining the reasons behind the SG scheme and the growth of the various types of contributions over the last 20 years. The impact of compulsory superannuation is then presented and discussed. Finally, the interaction of SG with forced savings, superannuation funds and the age pension are examined.

Data sources

This report draws on a variety of sources to ascertain trends, distribution and levels of household debt, assets, superannuation savings and other savings. National level aggregate data is sourced from the Australian Bureau of Statistics (ABS) National Accounts, Reserve Bank of Australia (RBA) data on household assets and debt, Australian Prudential Regulation Authority (APRA) data on superannuation balances and contributions, and Australian Tax Office (ATO) taxation statistics on superannuation contributions. For more disaggregated data, two sources are used – the ATO 1 per cent sample unit record files and the 2010 wave of the Household, Income and Labour Dynamics in Australia (HILDA) Survey¹ confidentialised unit record files (see Appendix B for more on HILDA).

¹ 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 report, however, are those of the author and should not be attributed to either FaHCSIA or the Melbourne Institute.

The Superannuation Guarantee

Superannuation as a form of retirement savings has been available to Australian workers for many years. However, in general, superannuation was limited to white collar, permanent employees of large corporations and public servants until the mid-1980s. At that time superannuation became more widespread when a 3 per cent superannuation employer contribution was introduced to a number of industrial awards. While these awards improved coverage, it was still not universal and the contribution rate was considered too low (APRA 2007).

Against this background, the government introduced the SG scheme. The scheme, introduced on 1 July 1992, required employers, with very few exceptions, to provide a minimum level of superannuation support each financial year for their employees. The major exceptions were employees earning less than \$450 per month, part-time employees under 18 years old, and employees aged 65 and over (later increased to 70). Funds in the superannuation account could not be accessed until preservation age (at least age 55²) and the minimum employer contribution rate rose from an initial 3 per cent over a 10-year period to 9 per cent in 2002-03. In recognition that this contribution rate would still not provide an adequate standard of living in retirement, the minimum employer contribution rate will gradually rise from 9 per cent to 12 per cent from 2013-14 and 2019-20.

The government aim to increase coverage of superannuation in Australia has been successful. In 1988, 55 per cent of employees were covered by superannuation. This increased to 78 per cent by November 1991 thanks to the inclusion of superannuation into industrial awards. The introduction of the SG saw the coverage rise further to nine-in-10 employees (89 per cent). By 2007, 94 per cent of employees were receiving SG contributions.

² Preservation age is 55 years for those born before 1 July 1960 and increases to 60 years for those born from 1 July 1964.

Household savings

Saving for retirement should be an integral part of everyone's life. Almost all desired retirement lifestyles require a level of expenditure that is above the income provided by the age pension. If savings are made during the working life, the accumulated savings can be used to generate retirement income to meet the required expenditure. Without savings, the retirement living standard of a household will be dictated by what the government can afford. With an ageing population, rising health costs, budgets in deficit, pressure to reduce taxes and many other demands on the government, it is unlikely that the age pension will be increased sufficiently to meet the living standard expectations of retirees. Individual retirement savings to supplement the pension are essential if expectations are to be met. The SG scheme was designed to ensure that households do have retirement savings.

Saving for retirement is one of the goals of the SG scheme. The compulsory nature of SG contributions combined with the preservation requirements ensure that retirement saving takes place. In addition to the compulsory SG element of superannuation, the government provides incentives to voluntarily save for retirement. The other forms of superannuation contributions include above-minimum employer contributions, personal before-tax contributions, personal after-tax contributions, and salary sacrificing. Each of these facilities for extra contributions receive some form of concessional taxation treatment. However, most are targeted by placing income bands on contributors or limits on the amounts that can be contributed. Almost every Federal Budget in the last two decades has included changes aimed at simplifying or improving the targeting of superannuation concessions.

Finally, of course, saving for retirement can also be done outside of superannuation through asset building and cash savings.

Household savings ratio

The most common measure of savings is the household savings ratio. This ratio measures consumption expenditure as a proportion of household income (Figure 1). According to this ratio, household savings had been falling up until 2002, and then climbed for seven years before stabilising at around 9.5 per cent over the last few years. However, this measure has some limitations, and the improvement in the savings rate may not be as it seems.

For example, the definition of savings used in the ratio excludes changes in asset values. In particular, capital gains associated with housing and shares are excluded. In the 1980s and 1990s when many households were shifting from bank deposits to share portfolios, upgrading their homes and buying investment properties, it is arguable that household savings were understated (RBA 2006). In other words, savings were not as low as they appeared, and at least some of the recent improvement in savings is due to households moving money out of housing and shares and back into income-bearing deposits. This would give the appearance of greater saving when in reality it is because more income is now within the scope of the savings definition.



Figure 1: Household savings ratio and SG rate, June 1992 – June 2012

Another issue is that the household savings ratio is the small difference between two very large aggregate values (household disposable income and household final consumption expenditure) and revisions to either of the aggregates can have a significant impact on the savings ratio.³ Finally, the household sector includes households, unincorporated enterprises and non-profit organisations, and in some cases it is not possible to separate them (ABS 2007). These issues reduce confidence in the accuracy of the measurement of savings based on the household savings ratio.

Despite the reservations on the usefulness of the household savings ratio, it appears that income has grown faster than consumption since 2004 and Australian households are currently saving more than in the past (RBA 2011). The RBA suggests there has been a change in attitude towards debt and financial vulnerability, and that household behaviour has become more cautious (2011). Anecdotal observations and other surveys of consumers confirm the RBA's view, but whether this is a permanent change remains to be seen.

It is often argued that as compulsory contributions to superannuation increase, overall savings will fall. Mapping increasing SG rates with household savings does not support this argument (Figure 1). Over the period that the SG rate was increasing (1992–2003) the saving ratio did fall. However, as the graph shows, there does not appear to be any direct correlation between the decline in the savings ratio and the steps in the SG rate. It appears other factors were influencing household savings behaviour.

Household savings

The household savings ratio indicates current savings behaviour but does not provide an insight into whether the savings are short-term or long-term. One method to gain a long-term measure of household saving is to measure the change in net financial wealth over time. Net financial wealth is defined as financial assets (such as superannuation, bank accounts, share portfolios and bonds) less non-housing debt.

In this report, we are interested in retirement savings, and a long-term measure such as net financial wealth seems appropriate. By using this measure, we do not consider growth in the value and equity of the family home. The reason for this is that only a very small proportion of people are willing to sell their home to provide a better standard of living in retirement and that renting in retirement is generally more expensive than being a homeowner. Downsizing is often suggested as a way of releasing funds for retirement, but there is little evidence of it occurring. While some people may sell and purchase a smaller home on retirement, rarely does their net financial wealth position change as an outcome of the move. Evidence of this can be found in HILDA where the retired population are less likely to move to a "smaller or less expensive dwelling" than the non-retired population (0.7 per cent in the previous 12 months compared with 1.2 per cent). Similarly, there seems to be little interest at present in using some of the equity in the home to finance retirement through "reverse mortgages".

At the end of 2011, there were only 42,400 households with a reverse mortgage (Deloitte 2012). In addition, the means testing of the age pension, which exempts the family home, discourages people from converting their home into an assessable financial asset and encourages them to move financial assets into the home through further renovations or extensions.

While the value of the home does not play a direct role in the cost of living in retirement, mortgage repayments do. A certain level of expenditure is required to maintain a desired standard of living in retirement. If a household enters retirement with an outstanding mortgage, they have a choice – they can either pay down the mortgage or continue paying the borrowing costs (repayments). Either approach will have an impact. If they continue with the mortgage, they will have higher expenditure for the desired standard of living as repayments must be included. Alternatively, if they pay off the mortgage, they will have reduced retirement savings and less retirement income.

The impact of a mortgage on retirement living standards means that it should be considered in regards to retirement savings. Net financial wealth is not broad enough to accurately represent the financial position of a household entering retirement. The definition that will be used in the remainder of this report is "household savings" which is household financial wealth less debt (housing and other debt). The financial assets included are deposits, superannuation, shares, and other financial assets. The value for superannuation is the amount held by life offices, superannuation funds and friendly societies plus "unfunded superannuation claims" which are retirement benefits owing to public sector employees.

³ Recent revisions to the historical ratio estimates have been especially large, in the order of 5-7 per cent (RBA 2011).

The aggregate values for the components of household savings over the last two decades are shown in Figure 2 (below). The net value for household savings rose from \$350 billion in June 1992 to its peak of \$1200 billion in 2007 and is currently around \$1150 billion. Despite the general growth in household savings, there have been two periods of decline over the last 20 years. The first was in 2002 and 2003 (annual decline of -8.6 per cent each year) due to growth in debt and poor investment returns; and the much larger decline was in 2008 and 2009 (annual declines of -14.9 per cent and -13.4 per cent) due to the Global Financial Crisis (GFC). Since 2009, there has been no significant growth in household savings, with the national aggregate being just over one trillion dollars.

The SG rates over the period are also shown in Figure 2 below. Whereas there did not appear to be any correlation between SG rates and the household savings ratio, there appears to be a correlation between the growth in household savings and the SG rate between 1992 and 2001. From 2002 the relationship seems to be lost. Of course, the increasing SG rate and the increasing levels of household savings do not necessarily mean there is causality; it may be a coincidence. Examination by asset type and debt suggests it may be the latter.



Figure 2: Household savings and the SG rate, June 1992 onwards

Source: RBA Table B20 - Selected assets and liabilities of the private non-financial sectors

Figure 3 shows the values of the components that make up household savings. The values for superannuation shown in Figure 3 include both money held in pension funds (funded) and superannuation owed to public sector employees by governments but not specifically set aside (unfunded). The standouts are the growth in superannuation and household debt over this period. Both have followed very similar growth paths, while superannuation shows more volatility. The mirrored growth seems to show that all of the money that has been accumulated in superannuation by Australians (\$1674 billion in March 2012) has been matched by a similar amount of debt being taken on (\$1627 billion). In other words, Australians have effectively offset all of the superannuation saved with increased levels of debt and the result is (if only superannuation and debt are considered) that nothing has been saved during the 20 years of compulsory superannuation contributions.

Fortunately, retirement savings are not limited only to superannuation. As Figure 3 also shows, the value of deposits and shares held by households have also grown, but not to the extent of superannuation balances. Superannuation has clearly been the preferred method for retirement saving. The rapid growth of superannuation appears to have been at the expense of non-superannuation financial assets (see Appendix B for more detail). In 1992 the sum of household non-superannuation financial assets was almost the same as superannuation (97 per cent). By 2012 they represent only two-thirds of the value of superannuation.

Figure 3: Selected household assets and debt, Australia, June 1992 onwards



Note: See Appendix A for definitions of household savings, assets, debt and the household sector.

Source: RBA Table B20 - Selected assets and liabilities of the private non-financial sectors

Superannuation contributions

Contributions to superannuation can take many forms. There are three broad categories of contribution – employer, personal and other. Employer contributions can be in the form of the compulsory minimum SG contributions or above-minimum employer contributions. Voluntary personal contributions can be in the form of before-tax contributions, such as tax deductible after-tax contributions, or salary sacrifice contributions. Finally, other contributions such as spouse contributions and government co-contributions can be made to the superannuation account of an individual. Differing rates of contributions tax and limits apply to these types of contributions. In addition, the taxation regime has changed many times in the last two decades and this has produced marked changes in contribution behaviour.

Figure 4 below considers superannuation contributions from 1997 to 2011. The spike in contributions in 2007 can be directly attributed to changes to superannuation introduced in 2006. In the 2006 Budget, the government removed the tax on superannuation pensions and lump sums taken after age 60, removed the "Reasonable Benefits Limits" which limited the taxation concessions based on the balance of the account, and introduced caps on annual concessional and non-concessional contributions that could be made. As part of the transition to this new superannuation system, until 30 June 2007, a non-concessional contribution of up to \$1 million could be made to superannuation. This one-off opportunity received significant media coverage and financial advice, and contributions to superannuation in that year were more than double the previous year.

In the following sections we examine the employer and personal contributions in more detail.



Figure 4: Superannuation contributions, 1997 – 2011

Source: APRA Annual Superannuation Bulletin Table 7, various years

Employer contributions

Employers are required to make superannuation contributions on behalf of their employees. The SG sets the minimum percentage of the earnings that can be contributed. However, an employer may make aboveminimum contributions and an employee may take a reduced salary in exchange for employer contributions to superannuation (salary sacrifice). The aggregate level of these employer contributions in 2010–11 was \$71 billion and this represented two-thirds of the total contributions to superannuation in that year. Figure 5 shows the growth in employer contributions since 1996–97. As expected, total employer contributions have risen gradually since 1996–97 (\$19 billion). This is expected as the number of employees, earnings and minimum SG rate have all increased over this time.



Figure 5: Employer superannuation contributions, 1997 – 2011

Source: APRA Annual Superannuation Bulletin Table 7, various years

At the start of this section on superannuation contributions it was noted that employer contributions also include above-minimum and salary sacrifice contributions. To examine the level of these other forms of member contribution, an estimate of the SG minimum contributions is shown in Figure 6, and these figures were obtained by multiplying the number of employees, the SG rate and the average wage for each year. While this estimate is a gross simplification of an extremely complex system, it does provide an approximate baseline. Comparison of the estimated minimum SG contributions with the actual member contributions highlights that salary sacrifice and above-minimum employer contributions were popular in 1999 and from 2007 onwards.

The reason for the increase in employer contributions in 1999 is not completely clear. In that year, reporting of selfmanaged superannuation funds was changed, the age thresholds for contributions were increased, and from 1 July 1999 the preservation rules were strengthened with all contributions and earnings being unable to be accessed until preservation age (55 years and gradually increasing to 60 years). The higher age contribution limits seem to provide the best reason for the 1999 increase. However if this were the case, it could be expected that the increase would have been permanent. In the last five years, the popularity of salary sacrificing into superannuation has increased. This is evident in Figure 6 with actual employer contributions significantly exceeding the estimated minimum SG requirements since 2007. In 2007, at a time when the stock market was providing superannuation funds with very good returns, ABS estimates that salary sacrifice contributions in that year were around \$12 billion (Clare 2010). It appears people were salary sacrificing into superannuation to gain exposure to the share market.



Figure 6: Employer superannuation contributions, 1997 – 2011

Source: APRA, Author calculation (see text)

Since the peak in employer contributions in 2007, the gloss has come off the share market, and it appears salary sacrificing and extra contributions are also on the decline. In 2007 the difference between the actual employer contributions and estimated SG required contributions was \$21 million; by 2010 the difference had halved to \$11 billion. This implies that the popularity of salary sacrificing into superannuation has declined or that fewer employers are making above-minimum contributions to superannuation.

The proportions of employer contributions by type can be estimated based on the 2010 HILDA survey. The HILDA data suggests that 14 per cent of member contributions related to salary sacrificing, 80 per cent were minimum SG contributions, and 6 per cent were above minimum member contributions. These proportions are combined with estimates of aggregate values based on APRA statistics below in Figure 7.

Above SG employer contributions

Nine-in-10 employees received employer superannuation contributions according to HILDA responses in 2010. Of these employees, 87 per cent received employer contributions at the normal or minimum SG rate of nine per cent, and 13 per cent (around 936,000 employees) received above-minimum SG contributions. Those receiving above-minimum SG rates had rates in the range of 10 to 100 per cent, with the average being 14 per cent. Analysis of the data shows employees of their own businesses were more likely to be receiving above-minimum employer contributions with almost one-quarter (23 per cent) receiving above-minimum employer contributions.

Older people with higher incomes were more likely to receive above-minimum employer contributions. The proportion of employees aged 18-24 receiving above-minimum rates was 9 per cent, whereas twice this proportion (18 per cent) was found in employees aged 60-64 years. The increasing rate with age was probably because income increases with age and those on higher incomes were more likely to be receiving an above-minimum contribution rate.



Figure 7: Employer superannuation contributions by type, 2010

Source: HILDA, APRA

Only around one-in-15 (6.5 per cent) employees in the lowest income quintile were receiving above-minimum contribution rates. Whereas one-in-five (19.9 per cent) of those with income in the top quintile were receiving superannuation contributions from their employer that were above normal.

Salary sacrifice contributions

Analysis of HILDA data from 2010 shows that 8.4 per cent of employees chose to salary sacrifice into superannuation, and the average contribution rate was 11.3 per cent. As those who used salary sacrifice were generally on higher earnings than normal, the average contribution was \$9,400. People who do salary sacrifice their superannuation have an average wage of \$86,300, which is 1.7 times more than the average wage of people who don't (\$50,100). The reasons higher earning individuals are more likely to use salary sacrificing are that those with higher incomes generally have more discretionary income and the concessional taxation treatment is more attractive.

Personal and other contributions

In a previous section of this report, it was noted that in addition to employer contributions to super, personal voluntary contributions and other forms of contributions can be made to superannuation. The major types included in the "other" category of contributions are co-contributions made by the government and spouse contributions. The other contributions normally total around \$1 billion per year or one per cent of the total superannuation contributions (Appendix A). Personal contributions generally represent around 30 per cent of total contributions and are around \$33 billion at the present. Only one-fifth (21 per cent) of employed people with superannuation accounts were making personal contributions to superannuation in 2007 (ABS 2008, Table 29). If we assume that this behaviour is representative of their entire working lives, then for the majority of people their superannuation balances will not contain any voluntary personal contributions.

Personal concessional and nonconcessional contributions

Personal voluntary superannuation contributions can be divided into two types — concessional and non-concessional. There are conditions and caps associated with each type. Personal concessional contributions are applicable to the self-employed or those that receive a small proportion of their income from an employer. These contributions can be claimed as a tax deduction up to a limit (\$25,000 in 2012–13). In addition, personal non-concessional contributions can be made from after-tax money. Non-concessional contributions do not receive a tax deduction, however caps still apply (\$150,000 per year in 2012–13).

The 2007 spike in personal contributions is a direct result of transitional superannuation arrangements. As noted previously in this report, in 2006 the government removed the tax on superannuation payouts taken after age 60 and removed the "Reasonable Benefits Limits" which limited the taxation concessions based on the balance of the account, and introduced caps on annual concessional and non-concessional contributions from 1 July 2007. As part of the transition to this new superannuation system, a non-concessional contribution of up to \$1 million could be made into superannuation. With the share market booming at that time, a number of people took the opportunity to make large contributions. The average total of personal contributions to superannuation between 1997 and 2006 was \$19.6 billion per year. However, in 2006–07, personal contributions spiked to almost five times this average at \$95 billion (Figure 8). In the following year (when the new rules were in place), member contributions halved to \$47 billion and have now stabilised at around \$33 billion.

Table 1: Personal concessional superannuation contributions

Taxpayers	Total Personal concessional contribution	Personal concessional contribution
No.	\$ billion	\$
172,900	1.6	9,300
179,700	2.0	11,300
203,200	3.9	19,100
252,400	8.1	31,900
231,900	7.4	31,900
193,100	6.2	32,100
181,300	3.8	21,200
	Taxpayers No. 172,900 179,700 203,200 252,400 231,900 193,100 181,300	Total Personal concessional contribution No. \$ billion 172,900 1.6 172,900 2.0 203,200 3.9 252,400 8.1 231,900 7.4 193,100 6.2 181,300 3.8

Source: ATO – Total non-employer sponsored superannuation contribution deductions for each year.

The non-concessional component of these personal contributions can be estimated as the residual when the concessional component is known. Personal (or non-employer sponsored) concessional superannuation contributions are available from the Australian Taxation Office (ATO) for 2003–04 to 2009–10 (Table 1). Based on this concessional contribution data, it can be seen that non-concessional contributions are the dominant form of personal contribution (Figure 9). The changes to the contribution policy from 2007 and the transitional arrangements at that time produced a doubling of concessional contributions. Since that time both have been trending back towards their pre-2007 values.

Figure 8: Annual personal superannuation contributions, 1997 – 2011



Source: APRA Annual Superannuation Bulletin Table 7, various years

The proportion of taxpayers making personal concessional contributions also peaked in 2007. Only 1.6 per cent of taxpayers make personal concessional contributions to superannuation over and above the SG on average, but in 2007 the proportion grew by one-third to 2.1 per cent. Analysis of those making the contributions shows that the spike in 2007 was due to those on high incomes making contributions. The top 20 per cent of income earners making concessional contributions rose from 3.7 per cent to 5.1 per cent. In other income quintiles the rise was less than 0.1 percentage points.

Co-contributions

The co-contribution scheme is designed to assist low income earners to save for their retirement. The scheme involves the government making superannuation contributions to match personal after-tax (non-concessional) superannuation contributions. When it was introduced in 2003, the government made a co-contribution of dollar for dollar up to \$1000 for low income earners. From 2004 until 2009, the matching rate was 150 per cent (up to \$1500), and then it was reduced to 100 per cent (up to \$1000) until this year when it reduces to 50 per cent (maximum \$500). In 2010–11, a total of 1,151,000 people benefitted from co-contributions and \$701 million was paid out. The ATO estimates that 16 per cent of the target population received a co-contribution in 2010–11. This proportion has been decreasing since the peak of 20 per cent in 2007-08 (ATO 2011).



Figure 9: Personal concessional and non-concessional superannuation contributions

Figure 10 shows the income distribution of co-contribution beneficiaries and their spouses. Those with very low incomes are unrepresented but this is to be expected as it is unlikely that those on very low incomes would have any spare after-tax money available to contribute to superannuation.

Despite the superannuation co-contribution being targeted at those with low incomes, it seems much of the government co-contributions are going to spouses of those on middle and high incomes. In 2010–11, six-in-10 (60.7 per cent) of those receiving a co-contribution had a spouse with a taxable income of more than \$35,000 (therefore above the threshold for the co-contribution). Among the spouses of the co-contribution beneficiaries, 9.2 per cent had incomes of \$100,000 or more. It seems due to the targeting by personal income rather than household income, some households are receiving a co-contribution from the government when they are financially able to put money aside for themselves.

Other forms of saving

The aim of compulsory saving through SG is to provide extra savings for people in retirement that is above what they would have traditionally saved. If people reduce or "offset" their traditional savings then the SG scheme will not achieve its purpose. The government accepted that there would be some offset when the SG scheme was introduced. In fact, it was expected that the offset would be between 30 and 50 per cent due to superannuation being designed to be a poor substitute for other forms of saving (Gallagher 1995). The offset would be small for those with low incomes as they have limited capacity to reduce other forms of saving but could be large for those on high incomes as they have more capacity to reduce other forms of savings and less credit constraints (Gruen and Soding 2011). The "poor substitute" seems somewhat misplaced as superannuation is now the second largest asset of most households behind the family home. It appears the policy design underestimated the attraction of reducing income tax to those on high incomes.

However, the rapid growth of superannuation appears to have been at the expense of non-superannuation financial assets (such as deposits and shares). For example, in 1992 the sum of household non-superannuation financial assets equalled superannuation assets. By 2012 they represent only two-thirds of the value of superannuation assets. While it is not possible to know whether the preference for superannuation is an offset for other forms of saving or additional saving, this reduction is very much in line with policy design and with research that found the SG contributions are offset by reductions in other forms of saving by around 30 cents in the dollar (Connolly 2007).



Figure 10: Incomes of co-contribution beneficiaries and their spouses, 2010-11

Source: APRA, ATO

Impacts of compulsory superannuation

The growth in superannuation driven largely by the compulsory SG contributions has had a significant impact on Australian households. Their superannuation balances have grown, albeit most likely at the expense of other forms of saving. Despite this, the SG has not closed the gap between retirement expectations and reality. The knowledge that households have a lump sum coming in retirement appears to have made people more comfortable with debt and the annual superannuation statements along with rising house prices and household incomes have made them feel wealthier. This wealth effect is producing higher expectations for living standards in retirement. The superannuation nest egg being built from SG contributions is not keeping pace with the raising expectations and the need to service debt in retirement.

These impacts of compulsory superannuation are considered in the following sections.

Superannuation balances

One clear effect of compulsory superannuation has been the growth in superannuation balances. As explained below, the influence of the investment strategy being used becomes more important as the balance grows. With superannuation balances continuing to grow as the system matures and the choice of strategy becoming more relevant, it does not seem the impact of the choice is well understood by the general public.

National level

Since the introduction of compulsory superannuation, the total assets held by superannuation funds have risen sevenfold – from \$207 billion in 1992 to \$1405 billion in 2012 ⁴. The total assets held as superannuation have grown at an average of 10 per cent per annum over the 20 years.

An interesting feature of the growth of superannuation is that as the value of the asset grows, its volatility increases (Figure 11). When the total superannuation is small, the majority of growth comes from annual SG contributions. Minimum SG contributions which are a function of earnings are generally very stable and this component of superannuation growth is predictable and reliable. The outcome is that the smoothed trend line and actual values are almost the same (see 1992 to 2000 in Figure 11). The other components of superannuation growth - voluntary contributions and investment returns - are more volatile. As investment returns are based on the size of the underlying asset, the volatility increases as the asset balance increases. In addition to investment returns being less predictable, investment performance also influences voluntary contributions (personal and salary sacrifice). If investment returns are good then individuals will voluntarily invest in superannuation, and conversely they will not invest when returns are poor. This behaviour tends to amplify the volatility and the overall outcome is a divergence between the trend line and the actual values as seen from 2002 onwards in Figure 11.

4 In addition to the \$1.4 trillion in superannuation funds, there is another \$269 billion owing in unfunded superannuation (mainly to government employees).



Figure 11: Total Superannuation Assets

In addition to households saving more of their disposable income, as shown in the household savings ratio on page seven, there has been a significant shift in the types of assets that are used for saving and a move towards less risky assets (Freestone et al. 2011). This desire to take less risk combined with more choice in the type of investment strategy of superannuation funds should see a reduction in the volatility of returns.

In summary, when the total assets are large in comparison with the contributions then investment returns will be the main driver of growth. In general, investment returns are based on stock market performance as this provides the best return in the long term but with more volatility. As superannuation assets increase, investment returns becomes a greater driver and growth becomes more volatile and this is leaving "Australians financially too exposed to market downturns" (Johnston 2012).

Individual level

The drivers of growth at the national level are the same at the individual level. Consider two people - Stephen and Luke. Stephen is aged 60, earns the average wage of \$70,000 and has \$200,000 in superannuation. Luke is aged 25, and also earns \$70,000 but has only \$2000 in superannuation as he has only recently graduated from university. Both have selected the default investment option (balanced) and superannuation returns for the year are 6.6 per cent. Both have SG contributions of 9 per cent. Excluding returns on contributions, the balance of Stephen's account at the end of the year will increase by \$19,500 (\$6300+\$13,200). In other words, one-third of the growth of Stephen's superannuation will be due to SG contributions and two-thirds will due to investment performance. For Luke, his balance will only grow by \$6432 (\$6300+\$132). Therefore for Luke, 98 per cent of the growth in his superannuation balance will be due to SG contributions.

In this scenario, both balances have grown by a reasonable amount. However, if the investment returns were minus 6.4 per cent as they were in 2008 then the numbers become minus \$6500 for Stephen and almost unchanged at \$6172 for Luke. Stephen who has the larger superannuation balance and is closer to retirement is more exposed to investment returns and hence would be worse off than Luke.

What the scenario shows is that an individual is most exposed to changes in investment returns when their superannuation balance is at its largest, which is normally just before retirement. It would appear that at a time when people should be at their most conservative, they are in fact taking the most risk.

Household wealth and debt

The "wealth effect" is an economic term that refers to an increase in spending that accompanies an increase in wealth. Alternatively, if wealth goes down, spending will decrease. However, households do not differentiate between real or perceived changes in wealth. For example, if a house is purchased at one price and sold at twice that price then the wealth increase is real and there is money available to pay for expenditure. If however, only a valuation showing the house to be worth twice the original price is obtained then it is only a perceived increase. Similarly, changes in share valuations are not real until the shares are sold and an increasing superannuation balance is not realisable until the actual superannuation payout is received. According to the wealth effect, perceived increases in wealth will increase spending just as real increases will. To pay for the increased spending, more debt needs to be taken on.

Household wealth has been rising over the last few decades as a result of housing price increases, the stock market boom, and compulsory contributions to superannuation. Research has shown that spending has also been increasing (Tan and Voss 2000). Following the theory of the wealth effect, households have been taking on more debt to cover this expenditure, knowing their wealth is increasing.

For over a decade, governors of the RBA have been warning households about these rising levels of debt. In 2001 the then RBA Assistant Governor Glen Stevens noted that households were borrowing at a pace not previously seen but the impact was hidden as interest rates were low (2001). By 2003, the RBA Governor was stating that some households had "clearly taken on more risk" and that this would make household consumption more sensitive to changes in the economic environment (Macfarlane 2003). He noted that household debt-to-income ratios had risen from 56 per cent to 125 per cent over the decade to 2003 and the rise was primarily due to increased housing debt (83 per cent of the total debt).

The RBA Governor in his famous "The Glass Half Full" address (Stevens 2012) described the decade leading up to 2007 as quite "unusual". It was a decade when real asset prices (mostly residential housing) per person appreciated at 6 per cent or more per annum and household debt started to really pile up. The increase in perceived wealth caused household consumption to grow faster than incomes for a lengthy period and household savings to "fall through the floor". Since 2007 he acknowledged growth had slowed but had also slowed for wealth and income resulting in debt remaining at 150 per cent. The matching growth of the levels of superannuation and household debt (see page six) implies that perceived housing wealth was not the only influence on the behaviour of households. It seems annual superannuation balance statements swelled by SG contributions and investment returns have encouraged households to be more comfortable with greater levels of debt. The level of comfort with debt has also been exacerbated by greater labour force participation particularly by older women (often when the children are no longer dependent). The extra earned income from working offsetting the additional costs of servicing the debt. In fact, research shows that household debt increases the probability of participating in the labour force, particularly for households with an ongoing servicing obligation (Belkar et al. 2007).

Retirement living standards

It is the current expectation of most people that living standards should not fall in retirement and many have additional expectations of undertaking activities that could not be done during their working lives. It is clear that a certain level of income is required to meet these expenditure expectations. At the time of the SG introduction, it was believed a retirement income of around 40 per cent of pre-retirement income would be sufficient. More recently, experts suggest the replacement rate should be 60-65 per cent (Senate 2002). This rate would provide 70-80 per cent of pre-retirement expenditure and provide a standard much closer to the living standard they enjoyed while working.

The SG rate of superannuation contributions was not designed to meet this level of expectation. Since 1992 labour force participation rates for older workers (and especially women in their 50s and 60s) have risen significantly. Household pre-retirement incomes, living standards and the ability to service more household debt have risen as a consequence of greater participation in the workforce. As highlighted in the previous paragraph, this is upgrading retirement expectations. However, the superannuation balances of many of these households will be insufficient to provide the income required. This is particularly the case where superannuation payouts have been earmarked for debt repayment or promised to children.

Some groups of Australians were always going to find it difficult for their superannuation and the pension to meet their retirement income expectations. These include households where the superannuation balance is low at retirement due to shorter time in the labour force, low incomes, or relationship breakdowns. Others such as non-homeowners and those with household debt on retirement require greater expenditure to meet expectations. The gap between reality and expectations for many of these households will be significant.

Increases in wealth through rising asset values (such as house prices), easy access to credit, and higher earnings have allowed many working households to enjoy a higher standard of living than was possible in the past. This is particularly true for baby boomers that are now approaching retirement. But this higher living standard has come at the cost of reduced savings. Baby boomers are enjoying a high standard of living now and their expectations have risen but unfortunately this just means the gap has increased.

Other considerations

Balanced or vanilla?

Superannuation funds currently have \$536 billion or 40 per cent of their total assets invested in Australian equities (ABS 5655.0 Table 4). This compares with an average exposure of 14 per cent across other OECD pension funds. In a study of pension fund asset allocations, the Organisation for Economic Co-operation and Development (OECD) warns that both very high and very low exposure to equities is likely to under-perform over the long run. It also suggests exposure to equities should be much lower in the years leading up to retirement to guard against negative shocks and this safeguard should be built into default superannuation schemes (Uren 2012).

There have been other calls from people such as Ken Henry and Jeremy Cooper for the equity exposure of superannuation funds to be reduced and the proportion in fixed interest to be increased (Henry 2012; Johnston 2012). A previous part of this report showed that poor investment returns impacted more when the superannuation balance was large in comparison with contributions, typically on individuals approaching retirement when they have little time to recover from investment losses. Adopting the approach recommended by the OECD – to reduce exposure to equities in the last few years – would provide a slightly lower return than the long-term average over the last few years but remove any downside risk. Examination of stock market returns shows that most of the high returns were in the first decade of SG, when the SG rate and account balances were low. In the second decade of SG when the SG rate was 9 per cent and superannuation balances were higher, the stock market had some of its poorest years. The distribution of returns raises the question whether it may have been better to put the contributions into a fixed interest fund (a "vanilla" fund) than a balanced fund with exposure to the stock market.

It is possible to compare balanced and fixed interest outcomes using a simulation. The assumptions and calculations of a simulation comparing the outcomes are shown in Figure 12. A person is assumed to earn the average wage for their entire working life, have no superannuation when SG began, made contributions to the default (balanced) super fund, and their employer has contributed at the minimum SG rate. A contribution tax of 15 per cent is applied to all contributions. The balanced fund has returns each year equal to the median for this type of fund (SuperRatings 2012). The simulated outcome shows that the person contributing to a balanced account would have a superannuation balance after 20 years of \$91,529 in June 2012.



Figure 12: Simulated outcomes of balanced and fixed interest superannuation funds, 1992-2012

The simulated outcome for a person who contributes the same amount but into a fixed interest account is also shown in Figure 12. In June 2012 this person is simulated to have a balance of \$92,993. The simulation shows that over the first 20 years of SG, a person would have \$1500 more in superannuation if they had been contributing to a fixed interest fund than to a balanced fund.

The simulation suggests that the same (or even slightly better) outcome could have been achieved without the risk of being exposed to the volatility of equities. While Figure 12 shows the volatility of the balanced fund, it also shows that if the person with superannuation in a balanced fund had retired in 2007 they would have been significantly better off than if they had invested in a vanilla fund. Conversely, if a person with a balanced fund had retired in 2009, they would have seen their balance go backwards for the previous two years despite employer contributions being made. What the simulation does show is that over the last five to 10 years, those with balanced accounts have experienced a roller coaster while those in fixed interest funds have received the same outcome without the highs and lows.

As it is not possible to predict when the next boom or bust period will be, the simulation of the last 20 years adds weight to the argument that a greater share of superannuation should be allocated to fixed interest, particularly as the balance increases, which is often when an individual is nearing retirement.

Overall fees for the whole superannuation industry were \$16.1 billion in 2011, an average of 1.2 per cent (Rice Warner 2012). The research by Rice Warner suggests that the reason the most recent average was lower than the previous one was in part due to lower investment costs. Given fixed income investments have lower associated costs than equity investments, an increase in the allocation to fixed interest should have a secondary effect of further reducing superannuation fees.

The age pension

Currently over half of all Australians aged 65 and older are receiving the full-rate of pension (Harmer 2008). If a household has no debt then the full-rate age pension, approximately one-quarter of average earnings ⁵, can provide a modest retirement lifestyle. However, the vast majority of current retirees are also homeowners without a mortgage (80 per cent of households aged 65+ own outright). This home ownership is having a direct bearing on the adequacy of their retirement incomes by significantly reducing the cost of accommodation.

It is very difficult to see how baby boomers with their lower homeownership rates, extra debt, desire to retire early and higher standard of living expectations will find that the pension is adequate. It could be expected that baby boomers would be saving madly for their retirement but the national figures in this report suggest they only put money into superannuation when it will save them tax and any extra money put into superannuation is offset by taking on greater debt.

It seems baby boomers and the following generations believe the pension may provide an adequate income to meet their expectations. This misconception is not helped by media coverage of the age pension being boosted through links to Average Weekly Earnings (AWE) rather than CPI, bonuses periodically being paid to pensioners and pensioners receiving other one-off payments. The incentives to save for retirement decrease as the age pension increases. In other words, each time pensioners receive an increase, there is less incentive for baby boomers not to use their SG money to finance their current lifestyle.

⁵ The single rate of the age pension is 27.7 per cent of Male Total Average Weekly Earnings and the couple rate is 1.5 times the single rate.

Taxation

The income distribution of those making voluntary contributions to superannuation provides a clear insight into why people are contributing to superannuation. It is obvious that individuals earning high incomes salary sacrifice superannuation because they can reduce their tax. It appears that it is the difference between the marginal income tax rate and the superannuation contribution tax rate that is driving contributions. It seems that people are not willing to forego expenditure now unless the "carrot" of a reduction in tax is provided to them.

Poor targeting of the annual \$30 billion in taxation concessions means more will be used to subsidise living standards of the wealthy than assist those living on the pension alone in retirement.

Forced savings

The forced saving nature of the SG scheme combined with the default fund being a balanced account has produced some clear winners and some losers. The fund managers and the Australian share market are clear winners. In 2011, the average overall fee of 1.2 per cent by superannuation fund managers produced income of \$16.1 billion. As superannuation balances continue to grow under the SG, so will the associated fees. Superannuation funds are the major underwriters of the Australian Stock Exchange, having \$536 billion in equities or 45 per cent of the total capitalisation of the ASX, and around \$28 billion of the \$71 billion in received contributions being invested into equities each year.

The poor performance in recent years of growing these forced savings and the lack of investment flexibility with some funds has produced another winner – self-managed superannuation funds. Movement to having more control over one's savings has resulted in self-managed superannuation funds holding the largest proportion of superannuation assets by fund type (31.3 per cent) in June 2012. The poor performance due to exposure to the share market has also seen growth in making fixed interest term deposits available to self-managed superannuation funds. The taxpayer is a significant loser or at least significant subsidiser because of forced savings. The most popular methods of contributing to superannuation involve significant preferential taxation treatment and these taxation concessions cost the government (and ultimately the taxpayer) around \$30 billion per year. The concessions would be justified if they saved the government money in the long term through reduced income support in retirement but this does not appear to be the case. The matching of debt with superannuation already highlighted in this report suggests that the concessionally taxed savings will be used to repay debt and not supplement the age pension.

An example of how a high income earner might behave is provided by Paul Kerin:

Suppose you're paying the top marginal tax rate, will retire in 20 years' time and have a particular nest-egg target. You have two savings options: take pre-tax earnings as super contributions or take them as cash pay and invest the after-tax proceeds yourself. Super contributions and earnings are taxed at only 15 per cent, but cash pay and earnings from investing it are taxed at 46.5 per cent (income tax plus Medicare levy). If you save \$1 of pre-tax earnings each year (assuming both investment options earn the same 7 per cent pre-tax average annual return), the super option will deliver a nest-egg twice as big. Through super, you can reach your nest-egg target while saving only half the pre-tax dollars; you can then take the other half in cash pay and spend it. Rational workers may well save less with tax-subsidised super available. (Kerin 2009)

Conclusions

Australians have been making compulsory superannuation contributions under the Superannuation Guarantee scheme since 1992. After two decades, Australians now have \$1.5 trillion dollars in retirement savings in superannuation funds. But this growth in superannuation has had some unintended consequences.

The growth in superannuation has been matched by an equal amount of personal debt being taken on by households. They have effectively offset the superannuation saved with increased levels of debt. Over the same time, superannuation has significantly outgrown nonsuperannuation financial assets. In 1992 superannuation and non-superannuation held an equal share of household financial assets. Now, 20 years later, non-superannuation assets are only two-thirds of superannuation assets. The rapid growth of superannuation appears to have been at the expense of investment in non-superannuation financial assets (such as term deposits and shares).

The growth in superannuation driven largely by the compulsory SG contributions has had a significant impact on Australian households. Their superannuation balances have grown, but at the expense of other forms of saving. Despite this, the SG does not seem to have closed the gap between retirement expectations and reality. The knowledge that households have a "nest egg" coming in retirement appears to make them more comfortable with debt and the annual superannuation statements along with rising house prices and household incomes have made them feel wealthier. This wealth effect is producing higher expectations for living standards in retirement. The superannuation nest egg being built from SG contributions is not keeping pace with either the raised expectations or the need to service debt in retirement.

The verdict

The Superannuation Guarantee scheme has markedly increased retirement savings held in superannuation. The greater accumulated superannuation has allowed households to become more accepting of risk and debt in the knowledge that a payout is coming on retirement. The increased debt has allowed households to enjoy a higher standard of living during their working lives than their actual income could support. This higher standard of living has produced increased expectations for retirement. Against these expectations is the reality that they cannot pay for the higher expectations, as the superannuation is required to repay debt.

The perceived increase in wealth from SG contributions, growing superannuation balances and rising house prices have persuaded people to use debt to fund a higher current living standard. This was not an objective when Australia's retirement savings policy was developed. It is now twenty years after the SG was introduced, and superannuation savings minus household debt effectively equals zero.

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Appendix A – Detailed tables

Table A-1: Superannuation Contributions by type, 1997 to 2011

hune of		Contributio	ons (\$mil)	
June of	Employer	Personal	Other	Total
1997	19,122	9,976		29,098
1998	21,642	13,767		35,409
1999	31,299	17,759		49,059
2000	25,960	20,318		46,278
2001	27,430	22,653		50,083
2002	28,584	23,020		51,604
2003	34,641	18,839		53,480
2004	40,205	18,258	1,858	60,322
2005	43,165	24,399	605	68,170
2006	46,374	27,292	1,156	74,823
2007	66,823	95,350	1,618	163,791
2008	67,604	47,415	1,313	116,332
2009	70,392	33,989	1,085	105,467
2010	68,087	30,534	1,358	99,979
2011	71,409	32,534	874	104,817
2012				

Source: APRA 2012

June of	Balanced Return	Fixed Int Return	Average Earnings	SG rate	SG contrib (less 15%)	Balanced Return	Fixed Int Return	Balanced Total	Fixed Int Total
			\$pa	%	\$pa			\$	\$
1992								0	0
1993	9.2%	7.0%	30,655	3.0%	782	36	27	818	809
1994	7.3%	5.7%	31,604	3.0%	806	89	69	1,713	1,684
1995	6.5%	8.8%	32,855	4.0%	1,117	148	196	2,977	2,997
1996	9.0%	7.4%	34,477	5.0%	1,465	334	274	4,777	4,737
1997	18.0%	6.3%	35,775	6.0%	1,825	1,024	356	7,625	6,917
1998	10.0%	4.8%	37,053	6.0%	1,890	857	377	10,372	9,184
1999	8.2%	4.5%	38,560	7.0%	2,294	945	465	13,611	11,943
2000	11.2%	5.4%	39,670	7.0%	2,360	1,657	702	17,628	15,006
2001	5.6%	6.0%	41,615	8.0%	2,830	1,066	977	21,524	18,813
2002	-3.1%	4.1%	43,936	8.0%	2,988	-714	833	23,798	22,633
2003	0.1%	4.5%	45,995	9.0%	3,519	26	1,098	27,342	27,249
2004	13.2%	4.4%	48,446	9.0%	3,706	3,854	1,281	34,902	32,236
2005	13.1%	4.6%	50,318	9.0%	3,849	4,824	1,554	43,575	37,640
2006	14.5%	4.4%	52,758	9.0%	4,036	6,611	1,745	54,222	43,420
2007	15.7%	4.9%	54,442	9.0%	4,165	8,840	2,207	67,227	49,792
2008	-6.4%	5.0%	57,284	9.0%	4,382	-4,443	2,573	67,167	56,748
2009	-12.9%	4.1%	60,381	9.0%	4,619	-8,962	2,392	62,823	63,759
2010	9.8%	6.8%	63,969	9.0%	4,894	6,396	4,502	74,114	73,154
2011	8.7%	6.2%	66,493	9.0%	5,087	6,669	4,655	85,869	82,896
2012	0.4%	5.6%	69,355	9.0%	5,306	354	4,791	91,529	92,993

Table A-2: Simulation of SG only contributions into a balanced and a fixed interest super accounts, 1992 to 2012

Notes: Balanced is median of balanced (60-76) returns [60-70% of accounts are of this type] (SuperRatings 2012) Fixed Int is the mid-FY (Nov) rate for 3-yr bank deposit rates (\$10,000) in RBA Table F04 Average Earnings = avg weekly earnings in mid FY (Nov) x 365 / 7. AWE = Persons, Adults, Full-time, Ordinary Time Earnings Return = rate x (previous total + half the contribution for that year) Total = previous total + contribution + return

Appendix B – Definitions and technical notes

Wealth-related terms

NON-SUPERANNUATION FINANCIAL ASSETS

This includes the value of bank accounts (individual, joint bank and children's accounts), redeemable insurance policies, financial investments (shares, managed funds, and property trusts) and cash investments (bonds, debentures, certificates of deposit, and mortgage backed securities).

HILDA

The Household, Income and Labour Dynamics in Australia (HILDA) Survey is a nationally representative panel study of Australian households that commenced in 2001. The study 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 at the University of Melbourne.

The HILDA Survey is a household-based panel study which began in 2001 and the latest version is Release 10 (Summerfield et al. 2011). The reports uses HILDA data in wave 10 which includes information on the amounts each person salary-sacrificed into superannuation, employer contributions, personal contributions, income and superannuation account balances.





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