Superannuation: the Right Balance? November 2004



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Superannuation: the Right Balance?

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FOREWORD

In 2001, CPA Australia released the report, *Superannuation – The Right Balance?* prepared by the National Centre for Social and Economic Modelling. This report evaluated the impact of various superannuation options on living standards before and after retirement for representative retirement groups, based on family type, income level and retirement age.

At the time, the research revealed that only in the most favourable circumstances would Australians enjoy living standards commensurate with those before retirement. Our findings attracted much public interest and significantly contributed to the debate about the adequacy of retirement savings.

Since then, we have seen more changes to superannuation in Australia, including additional incentives to save and greater flexibility. Yet we still need to ask, will these changes be enough? Will we be able to maintain our standard of living in retirement?

CPA Australia commissioned the National Centre for Social and Economic Modelling to provide an update to the 2001 research. This report incorporates recent changes such as the Government co-contribution and superannuation surcharge reduction and the proposal to allow superannuation pensions to be paid before retirement. It also includes earnings and demographic updates and an additional income level.

This report shows compulsory superannuation contributions alone will still not be enough for many people to be able to maintain their standard of living in retirement. For those who have not had the benefit of compulsory superannuation over their whole working life, be it through starting late, broken work patterns or retiring early, the reduction in living standards in retirement will be even more dramatic.

For many Australians, to enjoy a reasonable standard of living in retirement means they will also have to take on the responsibility of contributing to their own retirement savings.

There is also a role for the Government and the superannuation industry to play. Not only in providing incentives to save but also ensuring that Australians have the money to save and their retirement savings are maximised. Our research shows that while incentives such as the Government co-contribution will improve retirement savings, removal of the contributions tax and superannuation surcharge will ensure living standards in retirement are more commensurate with those enjoyed before retirement.

CPA Australia is proud to support this research and looks forward to it contributing to future developments of Australia's retirement income system that will benefit all Australians.

Greg Larsen, FCPA Chief Executive CPA Australia

AUTHOR NOTE

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ABOUT NATSEM

The National Centre for Social and Economic Modelling (NATSEM) specialises in analysing data and producing models to provide policy makers with quantitative information on which to base decisions. NATSEM undertakes independent and impartial research and aims to be a key contributor to social and economic policy debate. Analysis is undertaken with the records of real (but unidentifiable) Australians. The characteristics or impact of the policy change on a household is examined, building up to the bigger picture by looking at many individual cases through the use of large datasets. NATSEM itself does not have views on policy.

ACKNOWLEDGEMENTS

Much of the work on which this study was based was undertaken by Anthony King for CPA Australia in 2001. Anthony King was formerly Director of Regional Modelling at NATSEM.

GENERAL CAVEAT

NATSEM research findings are generally based on estimated characteristics of the population. Such estimates are usually derived from the application of microsimulation modelling techniques to microdata based on sample surveys.

These estimates may be different from the actual characteristics of the population because of sampling and nonsampling errors in the microdata and because of the assumptions underlying the modelling techniques.

The microdata do not contain any information that enables identification of the individuals or families to which they refer.

EXECUTIVE SUMMARY

The Updated Model

- In 2001 NATSEM prepared a report for CPA Australia (CPA), *Superannuation The Right Balance?*. NATSEM has now updated and extended this work, bringing the model to a revised currency of 2003-04 and adding new policy proposals.
- The model estimates the adequacy of current and alternative superannuation arrangements and choices by looking at the relativities between a household's discretionary income and the costs of a 'modest but adequate' standard of living.
- Sixteen selected hypothetical lifetime cases (comprising four family and income groups) are used, taking into consideration labour force activity, demographics, earnings growth, superannuation accumulation choices, super accumulation and benefit variations, social security, taxation, and housing costs.
- The basic output is three measures of income adequacy: a post-retirement living standards index, a pre-retirement living standards index, and the percentage change in living standards (replacement rate).
- After looking at the 'current picture' provided by the base case scenario, assessment is made of the effect on adequacy measures of varying assumptions relating to retirement and partial retirement age, employee and employer contributions, earnings on super funds, the form of superannuation benefit, and superannuation taxation.

The 'Current Picture ' of Income Adequacy

- The base case scenario captures the currently applicable policy environment, and makes reasonable assumptions about the 'most likely' superannuation and lifetime choices.
- The positive finding is that the 'current picture' of retirement incomes is fundamentally 'adequate': all family types exceed the 'modest but adequate' (MBA) living standard in retirement, demonstrating the impact of compulsory 9% contributions when received over an entire working life. By exceeding the MBA standard, the families are considerably better off than on the Age Pension.
- The pattern of living standards pre-retirement shows clearly that those on higher incomes have much higher living standards (unsurprisingly), and that these are sometimes several times the MBA standard and the living standards of those of families on lower incomes.
- In retirement the relationship between income profile and living standards is much less obvious: there is considerably more equalisation of living standards. There is a clear pattern of the relativity between living standards before and after retirement falling as income increases.

- Couples without children, followed by single males, have the higher living standards prior to retirement. However, couples are worse off in retirement than are singles - partially due to the impact of females, who have lower earnings and longer life spans.
- Living standards in retirement are very similar for couples with and without children. Couples with children experience a less significant drop in living standards from pre to post retirement than do couples without children, largely because of living standards being held down prior to retirement by the costs of children.
- Although living standards in retirement still exceed the MBA standard, very few family types experience an improvement in living standards from pre to post retirement. This number is further reduced when the costs of ageing are taken into account.
- Singles on low and middle incomes are the family types that fare best from the transition from working to retirement life.

The Impact of Retirement Choices

- Retiring early significantly reduces the retirement standards index - retiring at 55 more severely than retiring at 60. Retirement at age 55 results in meeting (on average) only 60% of the living standard that would be afforded with retirement at age 65.
- The impact of partial retirement at age 55 or 60 (meaning to move to part time work, and draw a partial superannuation pension) is far less than retiring in full before age 65. A 1% 3% reduction in retirement adequacy (as compared to the base case) is resultant.
- Reducing the superannuation fund return to 3.5% universally reduces retirement standards for all cases and increasing to 5.5% universally increases retirement standards. As a broad rule of thumb, a 1% increase in super fund earnings has the effect of about a 5% increase in living standards in retirement. A 1% decrease has a similar effect in the opposite direction.
- Where the superannuation benefit is taken entirely as a lump sum, the projections show a level of living standards in retirement about 8% lower than when taken as a 50:50 split of lump sum and pension. This is due to taxation differences. Few cases in the lump sum scenario have a post-retirement living standard that exceeds their pre-retirement standard. If the super benefit is taken entirely as a pension, retirement incomes are marginally better than under the 50:50 option.

The Impact of 'Shifting the Balance'

- The addition of a 3% employee contribution increases retirement living standards by an average of 27% across all the case lifetimes. Increasing employee contributions to 6% roughly doubles the impact, with an average improvement over the base scenario index of 56%.
- Employee contributions also have the effect of reducing discretionary incomes and thereby living standards over the pre-retirement years. With 6% standard employee contributions, the pre-retirement living standard is reduced by about 9% - 10% averaged across all cases.
- The impact of increased employer contributions (as a direct employer cost) on retirement living standards is also positive, though the effects are not as favourable due to taxation differences. Broadly, a 6% increase in employer cost contributions (to 15%) has slightly less impact on retirement living standards than 3% employee contribution.
- With salary sacrifice contributions, the families experience some small (1% - 5%) improvements in pre-retirement living standards. Post-retirement income benefits are less than standard employee contributions - and similar to those from additional direct cost employer contributions. Couple families and low income families benefit less from salary sacrificing.
- Removing the super contributions tax produces improved living standards in retirement, with particular improvements for those on very high incomes. For couples in the very high income profile, the improvement is 32%, whereas for low income profiles the improvement is about 10%.
- For those on very high incomes, removing the super surcharge tax results in an average 22% improvement in retirement living standards. Effectively, removing the surcharge tax causes the retirement livings standards distributions to more closely reflect the substantial earnings differences evident in the pre-retirement index.
- With the removal of both the super surcharge tax and the contributions tax, all cases are better off. For those on very high incomes, there is an improvement in retirement living standards of between 52% and 62%, whereas for the other income profiles the improvement in standards is between 5% and 15%.

Comparative Outcomes

- The best average improvements on retirement incomes are gained from 6% standard employee contributions (56%), 15% employer contributions and 3% standard employee contributions (both 27%), and 6% sacrificed contributions and the removal of all superannuation taxes (both 22%).
- Those on very high incomes benefit significantly (about a 50% improvement on retirement income adequacy compared to the 'current picture') from the removal of superannuation taxes.
- Whilst standard employee contributions have the largest favourable impact on retirement incomes they also have negative effects on pre retirement livings standards, of -5% and -9% respectively.
- The equivalent sacrificed contributions can instead have small positive effects on pre-retirement incomes

 although the retirement benefits are much less. Singles and higher income families benefit more, in pre-retirement and retirement, from salary sacrifice contributions.
- Early retirement has the most obvious negative impact on retirement standards of living (on average –40% for retirement at age 55, and -25% at age 60). Early partial retirement results in a smaller negative impact (-4% for at age 55 and –2% at age 60).

INTRODUCTION & OVERVIEW

In 2001 NATSEM prepared a report for CPA Australia (CPA), "Superannuation – The Right Balance?", based on findings from a model developed for CPA to estimate the adequacy of current and alternative superannuation arrangements in a 2000-01 world. NATSEM has now updated and extended this model, to a revised currency of 2003-04. The new model includes updated earnings and demographic profiles, the application of new taxation and social security arrangements, the introduction of a new income level, and the modelling of additional policy alternatives. Detailed specification of the 2001 model and the changes made to it in producing the revised model can be found in the accompanying technical reports to this and the previous work for CPA¹.

This report then reviews selected measures of the adequacy of retirement income as generated by the model: adequacy here being defined relative to pre-retirement income and to a basic costs of living benchmark. To review the adequacy of retirement income NATSEM has selected four basic family types, at four income levels, and tracked the relativities between the households' discretionary incomes and the costs of a basic standard of living (varying by family type) over the households' lifetimes. Section 2 of this report provides an overview of the methods and definitions used in the model.

The outcomes for the different household types under the base case ('current picture') scenario, capturing current policy and probable lifetime and superannuation choices, are examined in Section 3. This is followed by an examination of the comparative results under a number of alternative scenarios in which variable parameters in the model are altered. The varying adequacy outcomes in comparison to the base case scenario are reviewed in Section 4 (covering superannuation and lifetime choices) and Section 5 (covering policy changes). A surmised comparison of the outcomes under the 'current picture' and alternative scenarios is presented in Section 6. Section 7 concludes.

2 MODELLING LIFETIME EXAMPLES OF INCOME ADEQUACY

This section reviews important aspects of the modelling techniques and assumptions used.

2.1 The Model

The model is a 'hypothetical lifetime' model that takes selected hypothetical lifetime cases and then examines the impacts of different policies or superannuation choices according to assumptions about their lifetime circumstances. The cases are illustrative families and individuals whose lives are based on patterns of typical lifetimes (rather than, say, assuming someone has earnings equal to the Australian average over their working life).

The model is used to estimate the adequacy of current and alternative superannuation arrangements. It does so by looking at the relativities between a household's discretionary income (broadly, their income after 'unavoidable' costs such as housing and income tax are met) and the costs of a basic standard of living over the household's hypothetical lifetime. One of the key themes of the model is to take account of the different circumstances of people before and after retirement.

The model calculates discretionary income over a lifetime by developing a set of income profiles from sample data, and applying provisions for likely circumstances of earnings growth, labour force participation, taxation, housing costs, superannuation, family composition, and so forth. The model tracks the measure of discretionary income relative to a 'modest but adequate' cost of living standard for the hypothetical lifetimes from age 25 years to death. Other studies (such as by Westpac-ASFA, 2004) have focused on dollar figure amounts required to meet a living standard in retirement. This work is broadly similar but instead seeks to track the relative ability of hypothetical family types to meet budget standards with their discretionary income. The basic output, forming the focus of discussion in this report, is in the following three measures of adequacy:

- *Post-retirement living standards index:* This is the average ratio between the household's discretionary income and a basic cost of living standard, for the years from retirement up until death.
- *Pre-retirement living standards index:* This is the average ratio between the household's discretionary income and a basic cost of living, for the years from age 25 to retirement.
- Change in living standards (replacement rate): This is the post-retirement index as a percentage of the preretirement index, hence an expression of the change in living standards from pre to post retirement.

The model operates over the hypothetical families' lifetimes, year by year, from the age of 25. It covers the following elements:

- Labour force activity (with distinction between full-time employment, part-time employment and being out of the labour force none of the illustrative cases are assumed to have periods of unemployment);
- Demographics (fertility age of mother at the birth of children, and mortality).
- Earnings (related to labour force activity and to age, sex and level of educational attainment);
- Superannuation accumulation (initial balance at age 25, employer contributions, employee standard and sacrificed contributions and associated government co-contributions, fund earnings, superannuation contribution tax and surcharge tax);
- Social security (eligibility and entitlements including income-testing and assets-testing for Family Tax Benefits, Newstart Allowance and Age Pension);
- Income taxation including tax rates and scales, Medicare, pensioner tax offset, low income tax rebate, superannuation pension or annuity tax offset, and senior Australian tax offset (including changed provisions announced in the 2004 federal budget).
- Housing costs (including rent, mortgage payments, repairs and maintenance, rates and insurance. All cases are assumed to purchase homes with initial value related to income, a progressive upgrade after 10 years, and mortgage over 20 years, with couples entering homeownership at age 27, and singles at age 32);
- Superannuation benefit at age of retirement (including reasonable benefit limit (RBL) and concessionary taxation provisions); and
- Form of superannuation payment (lump sum, complying pension, 50:50) including implications for income taxation, income-testing and assets-testing (superannuation pensions and lump sums are converted into constant income streams with no residual capital value and no reversionary provision in the case of couples).

Updates to the Model

The base year for the model is now 2003-04, meaning that the hypothetical cases are taken to be 25 years old in 2003-04. There are two broad types of changes that have been applied to the 2001 model to produce the updated version, comprising:

- Updating the model to 2003-04 currency; and
- Adding new policy proposals.

The most significant changes and additions to be highlighted are:

- Updated demographic, earnings, housing, and cost of living profiles;
- Revised social security (this includes the updated treatment of eligible superannuation pensions in the social security asset test - reduced from 100 to 50 per cent exemption), taxation and superannuation provisions;
- Addition of the government superannuation cocontributions scheme for low-income earners;
- Gradual reduction in the superannuation surcharge;
- Addition of a fourth, 'very high' income level that extends above the superannuation surcharge threshold;
- Allowing people over 55 to part retire and receive a part non-commutable superannuation pension; and
- Allowing for comparison of additional employer contributions as employee salary sacrifices, or as direct employer costs.

2.2 The Illustrative Family Lifetimes

Assessing the future impact of current superannuation policy necessitates the projection of people's lifetimes - meaning the construction of imaginary, but plausible and realistic, lifetimes for people. This involves specifying likely circumstances year by year - in terms of, as a key example, earnings. In devising the illustrative family lifetimes the aim has been to avoid overly simple and highly stylised assumed lifetimes, and present realistic lifetimes that reflect typical patterns - at least, those patterns revealed to date. While a hypothetical model can be used to analyse outcomes for a wide range of family types and circumstances, the need to have manageable results is an argument for selecting a limited set of illustrative cases. The initial project for CPA adopted twelve cases for investigation, and the current project applies sixteen (through the addition of a further income class). These cases are a combination of four family types and four income profiles.

Four 'family types' are covered:

- 1. Single male;
- 2. Single female;
- 3. Couple with no children; and
- 4. Couple with two children.

Obviously, these family types do not capture the full diversity of real lives - but they do go some of the way. Four income levels are distinguished for each family type:

- Low Income = no post-school qualifications
- Middle Income = post-school non-degree qualifications
- High Income = post-school degree qualifications
- Very High Income = high enough to be above the superannuation surcharge threshold (\$94,691 in 2003-04) during the person's lifetime

The three lower income levels are related to people's highest level of educational attainment – a reasonably constant characteristic across adult life. They are built as smoothed profiles from the latest ABS income survey data.

The 'very high' income profile is an inflation of the 'high' income profile such that men reach the lower superannuation surcharge threshold at age 30, and females at age 33. Generating a 'very high' income profile through the sample data was trialled, but found to be unsatisfactory due to the very small numbers involved.

Other key features of the hypothetical lifetimes covered include that:

- Dependent children are covered until they reach the age of 16 years (this decision has been taken on the grounds of simplicity, not because transfers from parents to their children over 16 or, indeed, transfers from children to aged parents are believed to be unimportant);
- All cases are home purchasers and then outright owners.
- Members of a couple are assumed to be the same age;
- Members of a couple are assumed to be in the same income group;
- Life expectancy is 82.4 years for males, and 85.8 years for females;
- In the cases of the couples with children, the first child is born when the mother is 27 (low income), 30 (middle income) or 34 (high and very high income), and the second child when the mother is 32, 35, and 38 respectively.
- Singles and the male partners in couples are employed full-time from age 25 to retirement or partial retirement.
- Females in couples have reduced labour force participation when they have young children; and
- Females in couples begin to reduce their labour force participation from their mid 50s.

Refer to the accompanying technical paper for further details on the model specifications.

2.3 Measuring Adequacy

The adequacy of retirement incomes generated by superannuation is sometimes assessed by expressing retirement income as a percentage of the Age Pension or as a percentage of earnings over some specified period preceding retirement. A different measure is needed to compare living standards before and after retirement – to do so requires holding up people's incomes against the costs that need to be met from these incomes, and taking account of the differences in people's circumstances before and after retirement. This study compares income with a basic living standard.

The measure of income used in this study is 'discretionary income': this measure makes a significant difference in the comparison of incomes before and after retirement, because the retired have no superannuation contributions, considerably lower housing costs and generally lower income tax. To calculate a measure of discretionary income, NATSEM has deducted 'unavoidable' costs from gross income. The costs that are deducted are:

- Income tax;
- Any (standard) employee superannuation contributions; and
- Housing costs (mortgage or rent, rates, insurance etc.).

This measure of the hypothetical cases' discretionary incomes is then compared against a measure of different needs over people's lifetimes – including the costs of children, of basic consumption items, of working, and health care. The source of this information is the major 'budget standards' study undertaken by the Social Policy Research Centre in 1997-98 (Saunders et al, 1998), and updated in 2003 (Saunders et al, 2003). This data gives an estimate of the amount needed by different family types to obtain a 'modest but adequate' (MBA) standard of living. The budget standards estimates produced by the SPRC are used as the basis for assessing living standards in this exercise.

The living standards benchmark is developed in two steps:

 The SPRC budget standards information is used to construct a broad benchmark of the costs people need to meet. This benchmark varies with the number of adults, the number of children (according to age), and people's labour force activity. Because we will be comparing this with discretionary income, the cost benchmark does not include any amounts for housing costs, superannuation contributions or income tax. 2. Secondly, the benchmark is indexed in line with the assumed increase in real earnings over the projection period, so that the benchmark continues to reflect community standards. (This is the same logic used by the government in the earnings-indexation of the Age Pension in order to maintain its relativity with community standards.)

An important point to note about the use of the SPRC budget standards is that they assumed people were in good health and did not examine costs for anyone over 70 years old. If people are faced with rising health and aged care costs in older age, which are not offset by any falling costs in other areas, then this living standards benchmark will be too low. Arguably, it should thus be seen as a conservative benchmark. The recent Westpac-ASFA (2004) study on retirement living standards used a SPRC sourced benchmark specific to 'older Australians' (aged 70 plus), this being slightly higher than a benchmark assuming persons are aged under 70. To partially address this concern an alternative measure taking some account of the costs of ageing is looked at with reference to the base case scenario. This study is concerned with the ability of a family, over their lifetime, to meet a modest budget standard with their discretionary income as determined by their circumstances – rather than with the budget itself.

The steps above produce a living standards benchmark that reflects changes in people's circumstances over their lifetimes. By comparing the benchmark with people's discretionary incomes, the extent to which their income will afford them a MBA standard of living can be determined, or the extent to which it exceeds this standard. In most cases the incomes will exceed the MBA standard as it does not reflect a particularly high standard of living – thus it should be noted that no particular significance is attached to the MBA standard as a target, but that it is used as a reference point and measure of relativity. The SPRC describes the MBA standard as:

...one which affords full opportunity to participate in contemporary Australian society and the basic options it offers. It is seen as lying between the standards of survival and decency and those of luxury as these are commonly understood. (Saunders et al 1998, p63)

The model calculates a living standards index for each year of people's lifetimes. This is their discretionary income divided by the appropriate benchmark. If their income would just afford them a 'modest but adequate' standard of living, the index would be 1.0; if not enough to afford this standard of living it would be less than 1; and if more than enough for this standard it would be greater than 1. The year-by-year values for this index are then used to calculate the three measures of adequacy (post-retirement, pre-retirement, and change in living standards) as cited previously.

The Social Policy Research Centre published updated cost of living standards for working families for September 2003. The readily available data does not, however, include the full range of cost of living types required for the model. The updated model has instead opted for simple inflation of the 2000-01 MBA standards, by Average Weekly Earnings (AWE). The MBA standards used in the model are shown at Table 1.

Table 1 Updated cost of living budget standards

Cost Type	Modest but Adequate Budget Standard
Single Annual	14,991.24
Couple Annual	22,045.94
Cost of Working PT Annual	589.47
Cost of Working FT Annual	1,178.95
Child 0-4 Annual	10,021.07
Child 5-12 Annual	7,663.17
Child 13-16 Annual	8,547.38

Source: See text.

An Example

The approach to assessing adequacy in this study is probably best explained with an example. Take the case of a middle income couple with two children. Their gross income (indexed) at age 40 is \$97,400 with this reducing (again after yearly indexation) to about 60% of this (\$59,500) by age 70. Table 2 sets out the steps in comparing the adequacy of these incomes at the two different stages in the couple's life.

Table 2

Comparing adequacy – an illustrative example: middle income couple with two children, at ages 40 and 70 years (base case scenario – see section 2.4)

	At age 40	At age 70
Gross income	\$'000	\$'000
Earnings	96.8	0.0
Income from superannuation annuity and lump sum	0.0	39.7
Income support	0.6	19.7
Total gross income	97.4	59.5
Less:		
Income tax	20.4	0.3
Housing costs	17.6	6.5
Discretionary income	59.5	52.6
'Modest but adequate' living standards benchmark		
Cost of two adults	25.6	34.5
Cost of working (two full-time)	2.7	0.0
Cost of children	17.8	0.0
Benchmark	46.1	34.5
Living standards index	1.29	1.52

Note: Component values at each age have been subject to yearly indexation (see technical notes) and so are not strictly comparable Source: Illustrative NATSEM simulation, see text.

At age 40, the couple's gross income comprises their earnings plus a small supplement from Family Tax Benefit. At 70, having retired at 65, their income is from their benefit from superannuation, taken half as an allocated pension and half as a lump sum – with income from the lump sum including both interest income and a draw down of the capital. After the income and assets tests they are entitled to a partial Age Pension.

The first step in comparing these incomes at aged 40 and 70 is to remove the 'non-discretionary' demands on these incomes to get a better picture of just how much the family has left over to live on. The non-discretionary components are defined here as income tax, any employee superannuation contributions, and housing costs. At age 40, the couple has substantial income tax to pay, while they have only a very small tax liability at age 70. In this example no employee superannuation contributions are made, but this could be a substantial deduction from gross income in working years, but which is no longer relevant after retirement. Housing costs (mostly mortgage repayments) make a considerable call on the family's income at age 40. At age 70, with outright home ownership, housing costs are much smaller – only comprising rates, repairs and maintenance, and insurance.

Taking account of the non-discretionary components clearly has a powerful effect on the comparison of the incomes. At age 70, the couple's gross income was 61% of their gross income at age 40 (however, component values are indexed so this comparison is limited). Their discretionary income at age 70, however, was 88% of their discretionary income at age 40 – a far more favourable picture.

The second step in comparing adequacy is to take account of the different family circumstances at the two ages. At both ages, there are two adults to support. At age 40, there are also two children and the costs of working. This means that the couple needs considerably more discretionary income at age 40 as it does at age 70 (again using indexed values, \$46,100 as compared to \$34,500). Comparing the discretionary incomes with these living standards benchmarks gives living standard indexes of 1.29 at age 40 and 1.52 at age 70. In this example, despite having a considerably lower gross income at age 70, the couple's standard of living at age 70 is shown to be markedly higher than it was at age 40.

However, the results shown are for two single years in the couple's lifetime – and the outcomes will vary from year to year. For example, at age 53, with children grown and high earnings, the couple has a much higher living standards benchmark of 2.57. It is the averages of these results over the pre-retirement and post-retirement years which form the measures of adequacy used in this report.

2.4 The Base Case Scenario

The base case scenario should capture the currently applicable policy environment, and make reasonable assumptions about the 'most likely' superannuation and lifetime choices applicable to the modelled cases. The base case scenario is used as the 'current picture' scenario through which assessment is made of the balance and adequacy provided by the current superannuation system. It is also used as the point of comparison for possible changes to the policy environment, and to the variable parameters related to superannuation and lifetime choices.

The parameter settings used in the base case scenario are specified in Table 3, below. In the experimental scenarios discussed subsequently, many of these variables are altered to test the impact on adequacy measures. The base case scenario assumes 0% employee contributions, and retirement at age 65 with no period of partial retirement. The assumption of no employee contributions reflects the fact that a minority of workers make such contributions – only around 25% of workers aged 15-54 years according to a recent ABS survey (ABS, 2000, table 15). Thus, the base case also precludes the receipt of government co-contributions. The 9% employer contribution is the superannuation guarantee rate, thus not taking into account the fact that some workers may have higher rates of employer contributions. The real super fund earnings rate is 4.5% per year (equivalent to 7.5% if inflation is running at 3%), and superannuation benefits are split 50:50 between a lump sum and a complying superannuation pension.

Table 3 Base Case Scenario Specifications

Parameter	Default Setting
Life expectancy	
Males	82.4
Females	85.8
Superannuation Contributions	
Employer (base – direct costs)	9.0%
Employer (additional – salary sacrifice)	0.0%
Employee standard	0.0%
Retirement Age (=> 55 and <= 65 years)	
Full retirement	65
Partial retirement	65
Superannuation tax rates	
Superannuation tax rate	15.0%
Surcharge rate 2003-04	14.5%
Surcharge rate 2004-05	12.5%
Surcharge rate 2005-06 and onwards	10.0%
Other Parameters	
Real superannuation earnings rate	4.5%
Real earnings rate on other assets	3.5%
Real personal earnings growth rate	1.0%
Rate of normal saving out of discretionary income	0.0%
Age Pension inflator	1.0%
Other social security inflator	0.0%
Tax system inflator	1.0%
Superannuation choices	
Form of benefit (1=lump sum, 2=complying pension, 3=50:50)	3
Proportion of super lump sum consumed over lifetime	1.0
Age when employee contributions start	25
Housing parameters	
Real mortgage interest rate	3.5%
Real trade-up factor	2.0%
Real housing inflator	2.0%

2.5 Looking to the Future

Working out the impact of superannuation savings over a lifetime depends very much on assumptions about not only what people's lifetimes will look like, but also about what the economic environment will look like. The estimates are based on assumptions about key economic growth rates and indexation arrangements, which are set out below.

- Real earnings are assumed to grow at 1% per year (equivalent to earnings growth of 4% per year if inflation is running at 3%).
- The real housing mortgage interest rate is set at 3.5% per year (equivalent to a 6.5% mortgage rate if inflation is running at 3%).

With regards to indexation:

- The tax system is indexed to earnings (i.e. 1% per year);
- The Age Pension is also indexed to earnings;
- Other social security entitlements are maintained constant in real terms; and
- The RBLs and other concessionary superannuation tax thresholds are indexed to earnings.

2.6 Alternative Scenarios – Varying the Parameters

After looking at the 'current picture' provided by the base case scenario, assessment is made of the effect on adequacy measures of varying a selection of basic assumptions. These relate to retirement and partial retirement age, employee and employer contributions, earnings on super funds, the form of superannuation benefit, and to superannuation taxation rules.

There are essentially twenty (20) different scenarios appraised. The alternative scenarios involve varying the following parameters - in most cases only one variable is altered from the base case scenario, and the alternative scenario is assessed against the base case:

- Retirement age (55 and 60 against base case 65);
- Partial retirement age (5 and 10 years partial retirement, compared to base case no partial retirement)
- Drawing a partial non-commutable super pension (5 and 10 years, compared to base case no partial pension)
- Real superannuation earnings (3.5% and 5.5% against base case 4.5%);
- Form of benefit (lump sum benefit only and complying pension benefit only, against base case 50:50 split);
- Standard employee contributions (3% and 6%, against base case 0%). This triggers government co-contributions if the family meets the eligibility thresholds;
- Additional employer contributions through employee salary sacrifice contributions (3% and 6%, against base case 0%). This also triggers government co-contributions where applicable;
- Additional employer contributions as a direct employer cost (12% and 15% against base case 9%);
- Superannuation contributions tax (0% against base case 15%);
- Superannuation surcharge tax (0% against base case as per gradual reduction of surcharge tax);

3 THE CURRENT PICTURE OF ADEQUACY

The 'current picture' is the level of living standards generated by the current superannuation system, under reasonable assumptions of superannuation and lifetime choices. The 'current picture' is of projected pre retirement and post retirement discretionary incomes for people aged 25 years in 2003-04, with 9% employer superannuation, 4.5% real super fund earnings, retirement at 65, and a retirement benefit taken as a 50:50 combination of a lump sum and a pension. The picture distinguishes between the four family types and, within each family type, between four income levels. The resultant patterns are looked at first by family type then by income level. 'Adequacy' is assessed as the relationship between the family's discretionary income and a 'modest but adequate' living standards benchmark (Saunders, 1997 and 2003) that captures the costs of changes in people's circumstances over their lifetime. The measures of pre-retirement and retirement adequacy show the extent to which a family's income will afford them a MBA standard of living, or exceed this standard, in the two periods (as an average of yearly indexes). The replacement rate measures adequacy in terms of the change in living standards indices from pre-retirement to post retirement.

3.1 Adequacy by Family Type

Pre-Retirement Living Standards



Figure 1 Living standards (pre-retirement), base scenario, by family type

Source: NATSEM simulation

Prior to retirement, couples without children score highest on the living standard index. The ratio of disposable income to the MBA living standard for couples without children ranges from 1.87 for those on low incomes, to 4.78 for those on very high incomes. Single males fare the next highest on this index (ranging from 1.65 to 3.91), followed by couples with children, with single females last (reflecting their lower earnings). Within each of the family types, the index obviously varies significantly by income profile. The hypothetical families all have average standards of living in the pre-retirement (working) period that are above the MBA standard, by at least 39% and as much as a factor of nearly five. In comparison to the earlier study by NATSEM (2001), excluding the new very high income group, the retirement adequacy measure has increased by on average 0.2 points for singles and decreased by on average –0.4 points for couple families, with similar (0.2 and –0.1 respectively) trends for pre-retirement. The shifts may be attributable to various changes to the policy environment, and model assumptions (e.g. income profiles), incorporated into the updated model – however no systematic comparison of effects has been undertaken.

Living Standards in Retirement





Source: NATSEM simulation

The measure of living standards in retirement shows a considerably different picture, with a much smaller range observable. Whereas in the pre-retirement index income profiles are the major determinant, in post-retirement, family types are a stronger influence and the advantage of higher income earners is not as obvious. On the whole, singles, and single males in particular have much higher living standards in retirement than do couples. The standard of living in retirement for single males ranges from 1.81 for those on low incomes to 2.54 for those on very high incomes. Within the couple profiles (couples with no children and couples with two children), there is fairly limited variation. In part, the lower scoring of couples and single females is due to women's lower earnings and therefore lower superannuation contributions, and also partly to their longer lifetimes: women's retirement incomes are spread over more years.

On the whole, all family types meet the MBA adequacy measure in retirement. Thus the results for the current picture of superannuation, fundamentally, are that retirement incomes are adequate. In some cases, the living standards in retirement represent an improvement on the pre-retirement index, in others a considerable reduction (refer to the discussion below of replacement rates). Otherwise the retirement income standards illustrate the general benefits of 9% compulsory superannuation when received over an entire working life, as in all cases living standards in retirement are above the MBA level (which in turn is markedly higher than the Age Pension).

Change in Living Standards

Figure 3 Change in living standards (%), base scenario, by family type



Source: NATSEM simulation

The picture of absolute adequacy is one thing, however the other question to look at is how living standards in retirement compare to those over people's pre-retirement years. The picture is considerably less favourable when viewed from this perspective. While compulsory superannuation at the rate of 9% will raise retirement incomes well above pension levels, only four of the sixteen cases are projected to experience roughly equivalent, or better, living standards in retirement than those they enjoyed in the years before retirement. Most cases will experience sizeable falls, of between 5% and nearly 70%.

There are noticeably different results for couples without children, despite the similar standards of living in retirement to couples with children. Couples without children have much higher standards of living pre-retirement than couples with children. This is largely because of the effect of the costs of children in holding down the standard of living of couples with children over the earlier years. Hence, couples without children have the worst transition to retirement, experiencing from 25% to nearly 70% drops in living standards (increasing by income). Singles on low and middle incomes are the family types who fare best from the transition from working to retirement life: these groups improve or roughly maintain their living standards (the ratio is 110.12% for low income single males and 112.34% for low income single females). Of the couple groups, however, only the low income couple with two children nearly maintain (at 95.62%) their living standards from pre to post retirement.

3.2 Adequacy by Income

Pre-Retirement Living Standards

Figure 4 Living standards (pre-retirement), base scenario, by income profile



Source: NATSEM simulation

Assessed by income profile, the patterns in living standards pre-retirement are very clear – those on higher incomes have higher living standards (unsurprisingly). The pre-retirement living standard index of couples without children on very high incomes, for example, compared to couples without children on low incomes, is 4.78 to 1.87. This means that very high income families have nearly five times the discretionary income required to meet the MBA standard. On average, the very high income profiles have a pre-retirement living standards index of 4.0, the high income profiles 2.35, the middle income profiles 1.81, and the low income profiles 1.59.

Living Standards in Retirement



Figure 5 Living standards in retirement, base scenario, by income profile

Source: NATSEM simulation

In retirement, however, the relationship between income and living standards is much less obvious, with considerably less variation by income profile. On average the very high income profiles have a post-retirement living standards index of 1.89, the high income profiles 1.67, the middle income profiles 1.59, and the low income profiles 1.54. The income profiles all largely fall into the 1.4 to 2.1 living standard range: a much lower range than in pre-retirement. Again it is positive to note, however, that all income profiles exceed the MBA standard in retirement.

Change in Living Standards



Figure 6 Change in living standards (%), base scenario, by income profile

Source: NATSEM simulation

Figure 6 shows clearly that those families on low incomes make the transition from pre retirement to post retirement living standards much more favourably than do those on higher incomes. Many family types on low and middle incomes have a replacement rate of near to or over 100% from pre to post retirement living standards indexes. This being said, couples without children do not have a strong replacement rate in either the low or middle income profiles - reflecting earlier observations. Those on high and very high incomes, comparatively, experience a steep drop in living standards - replacement rates for those on very high incomes vary from only 31% (couples with no children) to 64.91% (single males). There is a clear pattern of the relativity between living standards before and after retirement falling as income increases. The low income cases have living standards in retirement which are near to or exceed their living standards before retirement; the middle income cases include some family types projected to experience a small gain or a small drop in their living standards, while all high and very high income cases are projected to experience a large drop.

Care should be taken in interpreting this measure. It is not certain that in measuring adequacy it is appropriate to aim for at least constant living standards even in the high and very high income cases (where retirement incomes are still highest). Replacement rates are obviously strongly determined by the starting living standard pre-retirement, which for higher income profiles is significantly higher than for other income types. Fundamentally, higher income groups still maintain a high standard living in retirement. There will also, of course, be considerable diversity in people's lifetime discretionary saving patterns and it needs to be remembered that this report deals with just one pattern of behaviour (i.e. where there is reliance on superannuation for retirement income).

3.3 Adjusting for the Costs of Ageing

If health and aged care costs mean increasing overall costs for older people, consideration of the alternative outcomes with this taken into account qualifies the base case scenario findings. The base case scenario assumes that the costs of adults do not vary with age and the SPRC budget standards research used as the basis for the living standard benchmarks in this study does not cover people over the age of 70 years. There is a good deal of conjecture about future health and aged care costs for the aged, with alternative views revolving around different expectations about the demand for services, the cost of services, and the level of government subsidy. No one, however, appears to be suggesting that costs will be lower. Refer to the discussion at section 2.3 for further background to this. Thus NATSEM's examination of this aspect is confined to the possibility of increasing costs with age. This is handled here in an arbitrary manner by simply increasing the living standards benchmark by 1% per annum after the age of 70 years.

Making this adjustment to the costs of older age has the effect of reducing the living standard provided by a given level of retirement income. The picture of living standards post retirement is marginally worse for all hypothetical cases, however the family types are still comfortably above the MBA standard. The change in living standards also naturally looks less favourable with this adjustment for possible higher costs in later life. For example, couples with no children on very high incomes now have a replacement rate of only 29.77%. Notably, only two cases (single males on low incomes, and single females on low incomes) have an improved living standard index after retirement when health and ageing costs are considered.



Figure 7 Living standards in retirement, base scenario – adjusted for the costs of ageing



Figure 8 Change in living standards (%), base scenario – adjusted for the costs of ageing, by family type

Source: NATSEM simulation

RETIREMENT CHOICES

This section looks at the comparative pictures of adequacy resulting from changes to retirement and partial retirement age, superannuation fund returns, and the form of benefit taken.

4.1 Retirement Age

Figure 9 Living standard index in retirement - by retirement age (middle income)



Source: NATSEM simulation

The base case scenario assumes retirement at age 65. However, many people aspire to retire earlier and do, and many people are involuntarily retired before age 65. Figure 9 shows the fundamental change in retirement living standards (for the four middle income profiles only) with retirement at 55 years and 60 years as compared to the base scenario. Essentially, retiring early significantly reduces retirement standards index - retiring at 55 more severely than retiring at 60. In including the case of retirement at age 55, it is acknowledged that the superannuation preservation age is being increased from 55 years to 60 years – which means that retirement at age 55 will be a quite different prospect in the future, compared with today. However, this future constraint on access to superannuation at age 55 is not applied in these calculations. This approach is taken in order to allow a focus on the impact of a shorter working life and a longer period in retirement.

Retirement age clearly makes a huge difference to the projected adequacy of the retirement incomes generated by superannuation. The earlier someone retires, the less scope there is to save for retirement, yet the longer the period that retirement savings have to cover. For the middle income cases shown in Figure 9, the current superannuation system will still provide for a little over the MBA standard of living if they retire at age 60 - generally representing about three quarters of the equivalent standard if retirement is at age 65. The couple profiles are just above (1.04) the MBA standard with retirement at age 60, while the singles profiles are a bit more comfortably off (1.41 for males, 1.26 for females). Retirement at age 55 means a further lowered standard of living in retirement – the couple profiles slip below the MBA standard in this scenario, although the single profiles still meet the 'adequacy' standard. Retirement at age 55 results in meeting only about 60% of the living standard that would be afforded with retirement at age 65.

Early retirement also has some smaller impacts on preretirement standards of living – in some cases the effect is positive, and others negative. This is the result of removing the post 55 or post 60 years from the pre retirement average.

Looking into the early retirement scenarios further, Figure 10 and Figure 11 show the comparative outcomes for all of the lifetime cases. Essentially, the couple profiles all have retirement incomes that just meet (when retiring at age 60) or are considerably below (when retiring at age 55) the MBA standard. The living standards of the different income profiles for couples are fairly mixed. For singles, retiring early still affords a MBA standard of living or higher – with males faring better and standards increasing by income. The replacement rates (change in living standards) are also much lower in the early retirement scenarios. Retiring at age 55 results in a living standard of between 14.78% (couples without children, on very high incomes) and 74.8% (single females, low income) of the pre retirement living standard. Retiring at age 60 results in replacement rates of between 25.9% and 88.89%.

Retiring at age 55 or 60 therefore has a strong negative impact on retirement income adequacy standards. This commentary should probably be qualified, however, by considering some of the less quantifiable lifestyle advantages available through early retirement.

Retiring at Age 55 Figure 10 Living standards in retirement, retiring at age 55





Figure 11 Change in living standards, retiring at age 55

Source: NATSEM simulation

Retiring at Age 60

Figure 12 Living standards in retirement, retiring at age 60





Figure 13 Change in living standards (%), retiring at age 60

Source: NATSEM simulation

4.2 Partial Retirement



Figure 14 Living standards in retirement – by partial retirement age (middle income)

An alternative to full retirement before age 65 is to partially retire – in this sense meaning to move to part time work, and draw a partial non-commutable superannuation pension. In this case, we are assuming earnings of 45% of full time earnings, and the drawing of a 20% non-commutable super pension. As shown in Figure 14, the impact of partial retirement at age 55 or 60, as compared to no period of partial retirement (for middle income cases), is of having a small negative impact on retirement income adequacy. The reduction is 3 - 6% for middle income families from partial retirement at age 55, and 2 - 3% from partial retirement age 60. This impact is much less than full retirement before 65.

The main reasons partial early retirement has a better effect on retirement incomes than full early retirement are firstly, that some earnings are still maintained during the period (albeit at 45% of full time earnings). These earnings in later working life are a significant contributor to superannuation accumulation, and maintaining these even at a partial rate produces much better income in retirement than where the person stops work fully at an early age. Secondly, in the part retirement scenarios applied, considerably less retirement income is 'eaten into' in the years prior to age 65 than when the person retires in full.

As shown in Figure 15 and Figure 17, all case examples comfortably meet the MBA standard in the partial retirement scenarios. Replacement rates are also better when the person has partially retired than in the base scenario (Figure 16 and Figure 18). This effect should be qualified by noting the part played by the model's definition of 'retirement' and 'pre retirement'. The model defines the part retirement period as 'pre retirement', with the 'retirement' period only commencing at the point of full retirement. Hence, in partial retirement scenarios the living standards 'pre retirement' are reduced, with the result that the proportional change in living standards upon retirement looks more favourable.

Partially Retiring at Age 55

Figure 15 Living standards in retirement, partial retirement at age 55



Source: NATSEM simulation

Figure 16 Change in living standards (%), partial retirement at age 55



Partially retiring at Age 60

Figure 17 Living standards in retirement, partial retirement at age 60



Source: NATSEM simulation



Figure 18 Change in living standards (%), partial retirement at age 60

4.3 Super Fund Earnings

Figure 19 Living standards in retirement, changes to real super earnings rate (middle income)



Source: NATSEM simulation

The 'current picture' was generated with superannuation funds earnings of 4.5% (in real terms) per year. It is reasonable to expect that the projected retirement incomes are particularly sensitive to this earnings rate – hence we look at the comparative results if real superannuation fund earnings are lower (3.5%) or higher (5.5%). As would be expected, Figure 19 shows that super fund earnings have a big impact on retirement standards (for the middle income profiles). The later more detailed graphs, below, show that reducing the return to 3.5% universally reduces retirement standards for all cases and increasing to 5.5% universally increases retirement standards.

As a broad rule of thumb, a 1% increase in super fund earnings has the effect of about a 5% increase in living standards in retirement. A 1% decrease has a similar effect in the opposite direction – living standards in retirement are about 5% lower. Singles are more strongly affected than are couples. Replacement rates are also improved by higher returns and reduced by lower returns. With a 3.5% super return, only two cases achieve a higher standard of living in retirement than in pre-retirement – compared to four cases with a 5.5% return. This being said, the improvement in retirement living standards and replacement rates produced by improved super returns is less than the scale of improvements from other changes (such as increased contributions) discussed in subsequent sections of this report.

Real Earnings of 3.5%

Figure 20 Living standards in retirement, real super earnings of 3.5%



Source: NATSEM simulation




Real Earnings of 5.5%



Figure 22 Living standards in retirement, real super earnings of 5.5%

Source: NATSEM simulation





4.4 Form of Benefit



Figure 24 Living standards in retirement, by benefit type (middle income)

Source: NATSEM simulation

The next variation to the basic picture looked at is the effect of the different forms in which a superannuation benefit can be taken. Lump sums and superannuation pensions have different implications for the degree of concessionary tax on the superannuation benefit and for social security means testing. In the base case the assumption is that the superannuation benefit is split 50:50 between a lump sum and a complying superannuation pension. Given the prevalence in Australia – at least to date – for superannuation benefits to be taken as lump sums, this is a generous assumption as it allows for greater concessionary taxation of the superannuation benefit. This is clearly evident from Figure 24, which shows retirement living standards greatly reduced when the benefit is taken as a lump sum, compared to both a 50:50 split and a pension-only benefit. Where the superannuation benefit is taken entirely as a lump sum, the projections show a level of living standards in retirement 7% - 14% lower than the base case and a correspondingly greater decline in living standards from the pre-retirement to the retirement years (Figure 26). If taken entirely as a pension, retirement living standards are slightly improved as compared to the 50:50 base - the increase is about 4% - 9%.

Lump Sum Benefit Only

Figure 25 Living standards in retirement, lump sum benefit only



Source: NATSEM simulation





Source: NATSEM simulation

Pension Benefit Only



Figure 27 Living standards in retirement, pension benefit only

Source: NATSEM simulation





SHIFTING THE BALANCE

This section looks at the effect on adequacy measures resulting from adding different types and rates of employee and employer super contributions, and of adjusting the superannuation taxation rules.

5.1 Adding Standard Employee Contributions





Source: NATSEM simulation

Figure 30 Living standards in retirement, adding standard employee contributions (middle income)



Source: NATSEM simulation

Adding standard employee contributions of 3% and 6% has a very strong positive impact on retirement income standards - particularly for very high income earners - and on the transition of living standards to retirement. At the same time, the addition of standard employee contributions reduces pre retirement living standards – precisely the reason employee contributions are not as common as their retirement income effects would otherwise justify. This being said, the improvements in retirement living standards are proportionally much greater than the reductions pre-retirement.

In the first scenario, the addition of a 3% employee contribution increases retirement living standards by an average of 27% across all the case lifetimes. Increasing employee contributions to 6% roughly doubles the impact, with an average improvement over the base scenario index of 56%.

Employee contributions also have the effect of reducing discretionary incomes and thereby living standards over the preretirement years. With 3% standard employee contributions, the pre-retirement living standard is reduced by about 4% - 5% averaged across all cases, and with 6% contributions the preretirement standard is reduced by about 9% - 10%. For lower income cases the resultant pre-retirement standard is not greatly higher than the MBA standard. The addition of employee contributions combines the effect of lower living standards before retirement and higher livings standards after retirement, to make the change in living standards from before retirement to post retirement particularly marked. Adding 3% employee contributions results in living standards in retirement that improve on those in the years before retirement for eight of the sixteen cases. The exceptions are the very high income cases, and the couples without children. Adding 6% employee contributions results in all but three cases experiencing considerably higher living standards in retirement than before retirement, with replacement rates as high as 177% (for single males on low incomes). The retirement income advantages are particularly amplified by the favourable taxation treatment given to standard employee contributions.

3% Standard Contributions Figure 31 Living standards (pre-retirement), 3% standard employee contributions





Figure 32 Living standards in retirement, 3% standard employee contributions

Source: NATSEM simulation



Figure 33 Change in living standards (%), 3% standard employee contributions

6% Standard Contributions

Figure 34 Living standards (pre-retirement), 6% standard employee contributions



Source: NATSEM simulation

Figure 35 Living standards in retirement, 6% standard employee contributions





Figure 36 Change in living standards (%), 6% standard employee contributions

5.2 Increasing Employer Contributions as a Direct Cost





Source: NATSEM simulation

Additional employer contributions are modelled here with employers supplementing earnings with an additional 3% or 6% contribution. In the 2001 report these amounts were assumed to be withheld from earnings and contributed to superannuation on behalf of the employee (salary sacrificing). This scenario is discussed and compared below. In this scenario, the standard employer contribution is raised to 12% and 15% - therefore having no impact on pre-retirement employee incomes. This scenario also does not trigger government co-contributions as do employee contributions (for those under the income thresholds).

The impact of increased employer contributions on retirement living standards has the same increasing effect as adding standard employee contributions, though the effects are not as favourable. This is because the taxation of employer contributions means that, say, a 3% employer contribution results in a smaller addition to the fund than does a 3% employee contribution, and also because employee contributions attract particular tax concessions for the eventual superannuation benefit. Broadly, a 6% increase in employer contributions (to 15%) has less impact on retirement living standards than a 3% employee contribution. For example, a 15% employer contribution improves the retirement living standards of low income single males by 18%, whereas adding an additional 3% standard employee contribution increases standard by 26%. This effect includes an income tax trade-off.

In pre-retirement, however, raising employer contributions does not have any negative impact on living standards. Thus employer contributions entail maintained living standards prior to retirement as a trade-off against smaller gains in retirement than those through employee contributions.

12% Employer Contributions

Figure 38 Living standards in retirement, 12% employer contributions



Source: NATSEM simulation





15% Employer Contributions



Figure 40 Living standards in retirement, 15% employer contributions

Source: NATSEM simulation





5.3 Salary Sacrifice Contributions



Figure 42 Living standards (pre-retirement), with employee salary sacrifice contributions

Source: NATSEM simulation





The other option for increasing 'employer' contributions is to have the additional amount withheld from gross earnings and contributed to superannuation on behalf of the employee - this is known as salary sacrifice. Employee salary sacrifice contributions have similar effects of increasing post retirement income as do raising direct employer contributions, but to a lesser extent than do standard employee contributions because they are treated as employer contributions and attract higher taxes. Salary sacrificed contributions will trigger the government co-contribution scheme, for those meeting the income thresholds. Salary sacrifice contributions differ from direct employer contributions in taxation and pre-retirement, because salary sacrifice contributions reduce the employee's taxable income and as such can improve taxation effectiveness. The families experience some improvement in pre-retirement living standards with salary sacrificing, whereas retirement incomes are always better with standard employee contributions.

On average, a 3% salary sacrificed contribution results in an 11% improvement on living standards in retirement as compared to the base case scenario. A 6% salary sacrificed contribution gives on average a 22% improvement on living standards in retirement. The taxation advantages provide better outcomes for very high-income earners (such as 43% improvement for a single male with 6% sacrificed contributions) than for lower income earners who generally have no or limited improvements. The retirement income improvements from salary sacrificed contributions are less than half from standard employee contributions, although this is offset by better outcomes pre-retirement. Retirement incomes with salary sacrificed contributions are identical, for singles, to where additional employer contributions are made as a direct employer cost. For couples, however, the retirement outcomes are better with employer contributions as a direct employer costs – suggesting reduced taxation effectiveness of salary sacrificing for those with dual incomes. Singles benefit from salary sacrificing, in retirement, much more than couples, and higher income families benefit more than lower income families.

A key difference of salary sacrifice as compared to standard employee contributions is that salary sacrificed contributions improve pre-retirement living standards by about 1% - 5% respectively, whereas the equivalent standard employee contributions reduce pre-retirement living standards by about 5% and 9%. A summarised assessment of the advantages of standard employee contributions, sacrifice contributions, and increased employer contributions is provided in Section 6 of this report.



3% Salary Sacrifice Contributions Figure 44 Living standards (pre-retirement), 3% salary sacrifice contributions

Source: NATSEM simulation







Figure 46 Change in living standards (%), 3% salary sacrifice contributions

Source: NATSEM simulation

6% Salary Sacrifice Contributions

Figure 47 Living standards (pre-retirement), 6% salary sacrifice contributions



Source: NATSEM simulation



Figure 48 Living standards in retirement, 6% salary sacrifice contributions

Source: NATSEM simulation



Figure 49 Change in living standards (%), 6% salary sacrifice contributions

5.4 Reducing the Superannuation Contributions Tax



Figure 50 Living standards in retirement, removal of super contributions tax (middle income)

Source: NATSEM simulation

Superannuation contributions by employers and the selfemployed are currently subject to a 15% contributions tax. Reducing or removing this tax produces improved living standards in retirement, with particular improvements for those on very high incomes. By completely removing the contributions tax, retirement living standards are improved by on average 15% above those produced with the current superannuation settings. For couples in the very high income profile, the improvement is 32%, whereas for low income profiles the improvement is about 10%.

0% Super Contributions Tax

Figure 51 Living standards in retirement, 0% super contributions tax



Source: NATSEM simulation



Figure 52 Change in living standards (%), 0% super contributions tax

Source: NATSEM simulation

5.5 Removing the Superannuation Surcharge Tax



Figure 53 Living standards in retirement, removal of surcharge tax (very high income)

Source: NATSEM simulation

The superannuation surcharge tax applies to superannuation of people with incomes over a set, relatively high, threshold - \$94,691 in 2003-04. Only the very high income profile is affected by the surcharge tax (hence this profile's inclusion in the updated model). The surcharge rate is 10% for most of the period covered by the model – from 2005-06 onwards, although in earlier years the rate is gradually reduced from the current rate of 14.5%.

Clearly there is no impact from removing the surcharge tax (for all years of the model) on any of the three lower income profiles. For those on very high incomes, removing the surcharge tax results in a 22% improvement in retirement living standards over the base case scenario for single males, a 19% improvement for single females, and a 24% – 25% improvement for couple types.

This change substantially raises the livings standards in retirement of those on very high incomes relative to those on lower incomes (quite different from the base case picture). It should be remembered though, the fall in living standards in retirement for this group in the base case picture was considerably greater than for the other groups. For example, single males have a retirement living standard index of 3.09 with the removal of the surcharge tax, compared to 1.81 for low income single males. Effectively, removing the surcharge tax improves replacement rates for very high income families, and causes the retirement livings standards distributions to more closely reflect the substantial earnings differences evident in the pre-retirement index.



1.56 1.62 1.75

2.49

1.40

1.85

.38 1.41

1.43 1.48

1.81

1.37

0% Superannuation Surcharge Tax

Post-Retirement Index 0.50 0.00 Middle Low Middle Middle Middle High Very High High Low High Very High Low Very High High Low Very High Single Male Single Female Couple (No Children) Couple (2 Children)

Source: NATSEM simulation

2.50

2.00

1.50

1.00

1.01

1.89 2.09



Figure 55 Change in living standards (%), 0% super surcharge tax

5.6 Removing all Superannuation Tax





Source: NATSEM simulation

The final policy setting alternative to test is the removal of both the super surcharge tax and the contributions tax – this mainly demonstrates the distributional impact of these taxes, rather than a likely change to the superannuation policy parameters.

On average, the model families achieve a 22% higher standard of living in retirement with the removal of super taxes, than in the base 'current picture' scenario. Of course, most of the improvement is again for those on very high income: for those in the lower income profiles, this policy change is effectively the same as just removing the contributions tax, as they are not impacted by the surcharge tax. For those on very high incomes, there is an improvement in retirement living standards of between 52% and 62%, whereas for the other income profiles the improvement in standards is between 5% and 15%. Again, it should be remembered, the fall in living standards in retirement for the high income group in the base case picture was considerably greater than for the other groups.

In this scenario, all cases are better off, with huge advantages to being a very high income earner. This scenario quite closely reflects the pre-retirement standards distribution.



0% Super Contributions and Surcharge Taxes Figure 57 Living standards in retirement, removal of super taxes

Source: NATSEM simulation





COMPARATIVE OUTCOMES

- In the base and all alternative scenarios, single males on very high incomes have the highest living standards in retirement. The family types with the next most adequate retirement incomes vary, depending on the scenario, between single females on very high incomes, and single males on high incomes.
- The highest degree of retirement income adequacy is obtained, for all family cases, through the alternative scenario with 6% standard employee contributions. All family types have a greatly improved standard of living in this scenario: more so than through additional employer or salary sacrifice contributions, due to the taxation advantages. The average improvement in retirement living standards on the base scenario from 6% standard employee contributions is 56%.
- The best average improvements on retirement incomes are gained from 6% standard employee contributions (56%), 15% employer contributions and 3% standard employee contributions (both 27%), and 6% sacrificed contributions and the removal of all superannuation taxes (both 22%).
- Those on very high incomes also benefit significantly (about a 50% improvement on retirement income adequacy compared to the 'current picture') from the removal of superannuation taxes, bearing in mind this group had a considerably greater fall in living standards in retirement in the 'current picture'. However other income groups have much lower (5 – 15%) benefits from the removal of superannuation taxes: the effect of removing superannuation taxes is to more closely replicate the distribution of pre-retirement incomes than in the base and other scenarios.
- Whilst standard employee contributions have the largest favourable impact on retirement incomes they also have negative effects on pre retirement livings standards, of -5% and -9% respectively. The equivalent sacrificed contributions can instead have small positive effects on pre-retirement incomes – although the retirement benefits are much less. Singles and higher income families benefit more, in pre-retirement and retirement, from salary sacrifice contributions.
- Early retirement has the most obvious negative impact on retirement standards of living (on average -40% for retirement at age 55, and -25% for at age 60). Partial early retirement has a much more marginal negative effect (-1% to -3% for at age 60 and -2% to -7% for age 55).
- Other scenarios with a poor effect on retirement standards of living are taking the superannuation benefit as a lump sum only, and reduced super fund earnings. Pension-only benefits have a small positive effect.
- The effects of funds earnings, benefit type and taxation are minimal compared to the impact of increased superannuation contributions or retirement age. For those on very high income the removal of superannuation taxes also result in significant retirement income improvements.

- Most of the scenarios modelled have no impact on pre-retirement living standards – for example, increased employer contributions as a direct cost, or variation in super fund return rates.
- However, standard employee super contributions have a big negative impact on pre-retirement living standards. This is offset by proportionally larger gains in retirement living standards. Salary sacrifice contributions can improve pre-retirement living standards, but with fewer gains to retirement living standards.
- Early retirement and partial retirement also impact on average reduce pre-retirement living standards, by reducing earnings in key earnings years. Partial retirement has a stronger negative effect on pre-retirement incomes - this effect is partly definitional.

Table 4

Retirement income living standards - average (across case types) change from base scenario of alternative scenarios (in descending order)

Scenario	Average Difference
6% standard employee contributions	+56%
15% employer contributions	+27%
3% standard employee contributions	+27%
6% sacrificed contributions	+22%
0% surcharge tax, 0% contributions tax	+22%
0% super contribution tax	+15%
12% employer contributions	+13%
3% sacrificed contributions	+11%
Real super earnings 5.5%	+8%
Complying Pension benefit	+6%
0% surcharge tax	+6%
Part retire at 60	-2%
Part retire at 55	-4%
Real super earnings 3.5%	-6%
Lump sum benefit	-8%
Retire at 60	-26%
Retire at 55	-40%

Source: NATSEM simulation

Table 5

Pre-retirement living standards - average (across case types) change from base scenario of relevant alternative scenarios (in descending order)

Scenario	Average Difference
6% sacrificed contributions	+3%
3% sacrificed contributions	+2%
Retire at 55	-4%
Retire at 60	-4%
Part retire at 60	-5%
3% standard employee contributions	-9%
6% standard employee contributions	-9%
Part retire at 55	-10%

CONCLUSIONS

This report has compared the retirement and pre-retirement living standards of sixteen hypothetical family types, in a base case or 'current picture' scenario and against alternative scenarios with changes to superannuation choices and policies.

The current picture of retirement income adequacy is that all family types meet a modest but adequate standard of living in retirement. However, living standards in retirement still represent a considerable drop from pre-retirement living standards. Lower income singles are the only family types to improve their living standards in the move from preretirement to retirement. In retirement, the variation of living standards by income profile is much smaller.

Looking at the impact of superannuation choices, retiring early has a negative impact on retirement incomes, as the superannuation benefit is smaller and has to stretch over a greater number of years. Partial retirement, by comparison, impacts on retirement incomes far less as some earnings are maintained and less benefit is 'eaten into' in the years preceding age 65. Superannuation fund earnings rates have an impact on retirement income adequacy. Broadly, a 1% increase in super fund earnings has the effect of about a 5% increase in living standards in retirement, while a 1% decrease has a similar effect in the opposite direction. The form of benefit taken is best taken as a pension-only benefit or as a 50:50 split of lump sum to complying pension. Taking the superannuation benefit as a lump sum only has about an 8% negative impact on post retirement income adequacy as compared to taking a 50:50 split. Choosing a pension benefit represents 3% - 6% improvements in post retirement income - particularly for higher income couples or single females.

Looking at the impact of 'shifting the balance', the picture is largely that significant improvements to retirement income can be made by adding additional superannuation contributions or reducing the taxation of superannuation. In particular, adding standard employee contributions can result in a huge improvement to retirement living standards. Standard employee contributions have the advantage over direct cost employer contributions and employee salary sacrifice contributions through their favourable taxation treatment. Conversely, standard employee contributions involve the biggest trade off for pre-retirement living standards. Adding additional direct cost employer contributions has no impact on pre-retirement income, whereas adding salary sacrifice contributions has some advantages for pre-retirement incomes (as the taxable income of the family is reduced). Singles are better off in retirement with salary sacrificing than with direct employer contributions, with the reverse true of couple families. Again, whereas additional employer direct cost contributions and salary sacrifice contributions result in improvements to retirement incomes, the gain is on average less than half the gain to be made from standard employee contributions.

Removal of the superannuation contributions tax or the superannuation surcharge tax represents a significant gain in retirement income adequacy particularly for very high income earners (those with incomes high enough to otherwise be subject to the surcharge tax), bearing in mind this group had a considerably greater fall in living standards in retirement in the 'current picture'. The removal of superannuation taxes means that very high income earners again have noticeably higher standards of living than other income profiles, as in preretirement – a pattern that is equalised in the 'current picture'.

A Detailed Tables

	Base Scenario	Retire at 55	Retire at 60	Part retire at 55	Part retire at 60
Single Male					
Low	1.81	1.08	1.36	1.75	1.78
Middle	1.89	1.13	1.41	1.83	1.86
High	2.09	1.25	1.55	2.01	2.05
Very High	2.54	1.46	1.83	2.44	2.49
Single Female					
Low	1.56	1.00	1.22	1.52	1.54
Middle	1.62	1.03	1.26	1.57	1.59
High	1.75	1.13	1.35	1.69	1.72
Very High	2.09	1.32	1.57	2.03	2.06
Couple (No Children)					
Low	1.40	0.87	1.04	1.37	1.38
Middle	1.43	0.90	1.04	1.39	1.41
High	1.48	0.91	1.06	1.41	1.44
Very High	1.48	0.70	1.03	1.38	1.42
Couple (2 Children)					
Low	1.38	0.85	1.03	1.35	1.36
Middle	1.41	0.89	1.04	1.38	1.39
High	1.37	0.82	0.97	1.33	1.34
Very High	1.45	0.69	0.95	1.36	1.39

 Table 6
 Living standards in retirement: base scenario and retirement age

Source: NATSEM simulation

Table 7 Living standards in retirement: base scenario and super choices

	Base Scenario	Real super earnings 3.5%	Real super earnings 5.5%	Lump sum benefit	Pension benefit
Single Male					
Low	1.81	1.69	1.96	1.70	1.87
Middle	1.89	1.76	2.05	1.77	1.96
High	2.09	1.94	2.34	2.03	2.18
Very High	2.54	2.28	2.88	2.55	2.49
Single Female					
Low	1.56	1.47	1.66	1.47	1.61
Middle	1.62	1.53	1.72	1.50	1.69
High	1.75	1.65	1.89	1.63	1.87
Very High	2.09	1.91	2.36	2.07	2.17
Couple (No Children)					
Low	1.40	1.35	1.44	1.19	1.48
Middle	1.43	1.39	1.48	1.23	1.55
High	1.48	1.40	1.61	1.36	1.68
Very High	1.48	1.33	1.68	1.43	1.61
Couple (2 Children)					
Low	1.38	1.33	1.42	1.18	1.45
Middle	1.41	1.37	1.46	1.21	1.53
High	1.37	1.33	1.40	1.14	1.49
Very High	1.45	1.31	1.65	1.40	1.58

	Base	3% standard	6% standard	3%	6%	12%	15%
	Scenario	employee	employee	sacrificed	sacrificed	employer	employer
Single Male							
Low	1.81	2.28	2.66	1.98	2.14	1.98	2.14
Middle	1.89	2.41	2.85	2.07	2.29	2.07	2.29
High	2.09	2.63	3.19	2.42	2.79	2.42	2.79
Very High	2.54	3.42	4.34	3.10	3.64	3.09	3.62
Single Female							
Low	1.56	1.87	2.10	1.67	1.77	1.67	1.77
Middle	1.62	1.96	2.25	1.73	1.85	1.73	1.85
High	1.75	2.23	2.67	1.92	2.16	1.92	2.16
Very High	2.09	2.75	3.45	2.51	2.96	2.50	2.93
Couple (No Children)							
Low	1.40	1.68	1.96	1.44	1.51	1.47	1.58
Middle	1.43	1.79	2.12	1.48	1.58	1.52	1.68
High	1.48	1.79	2.41	1.64	1.83	1.72	1.99
Very High	1.48	1.95	3.00	1.78	2.08	1.92	2.35
Couple (2 Children)							
Low	1.38	1.64	1.90	1.43	1.48	1.45	1.54
Middle	1.41	1.76	2.09	1.47	1.57	1.50	1.65
High	1.37	1.71	2.04	1.40	1.48	1.45	1.60
Very High	1.45	2.19	2.95	1.75	2.05	1.88	2.30

Table 8 Living standards in retirement: base scenario and contributions changes

Source: NATSEM simulation

Table 9 Living standards in retirement: base scenario and taxation changes

	Base Scenario	0% super contribution tax	0% surcharge tax	0% surcharge tax, 0% contributions tax
Single Male				
Low	1.81	2.02	1.81	2.02
Middle	1.89	2.13	1.89	2.13
High	2.09	2.50	2.09	2.50
Very High	2.54	3.26	3.09	3.93
Single Female				
Low	1.56	1.70	1.56	1.70
Middle	1.62	1.77	1.62	1.77
High	1.75	1.98	1.75	1.98
Very High	2.09	2.65	2.49	3.18
Couple (No Children)				
Low	1.40	1.48	1.40	1.48
Middle	1.43	1.53	1.43	1.53
High	1.48	1.73	1.48	1.73
Very High	1.48	1.96	1.85	2.41
Couple (2 Children)				
Low	1.38	1.45	1.38	1.45
Middle	1.41	1.52	1.41	1.52
High	1.37	1.45	1.37	1.45
Very High	1.45	1.93	1.81	2.36

				Part retire	Part retire
	Base Scenario	Retire at 55	Retire at 60	at 55	at 60
Single Male					
Low	1.65	1.60	1.64	1.49	1.58
Middle	1.81	1.76	1.80	1.64	1.73
High	2.49	2.38	2.46	2.21	2.36
Very High	3.91	3.69	3.85	3.48	3.71
Single Female					
Low	1.39	1.34	1.37	1.25	1.33
Middle	1.62	1.53	1.58	1.44	1.53
High	2.15	2.05	2.11	1.91	2.04
Very High	3.58	3.34	3.49	3.17	3.38
Couple (No Children)					
Low	1.87	1.96	1.95	1.76	1.81
Middle	2.14	2.20	2.22	1.99	2.05
High	2.97	2.98	3.04	2.71	2.80
Very High	4.78	4.76	1.47	4.36	4.49
Couple (2 Children)					
Low	1.44	1.39	1.47	1.33	1.39
Middle	1.67	1.57	1.69	1.52	1.58
High	1.80	1.62	1.78	1.60	1.65
Very High	3.73	3.35	3.68	3.30	3.44

Table 10	Living standards	(pre retirement):	base scenario an	d retirement age
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Source: NATSEM simulation

Table 11 Living standards (pre retirement): base scenario and super choices

	Base Scenario	Real super earnings 3.5%	Real super earnings 5.5%	Lump sum benefit	Pension benefit
Single Male					
Low	1.65	1.65	1.65	1.65	1.65
Middle	1.81	1.81	1.81	1.81	1.81
High	2.49	2.49	2.49	2.49	2.49
Very High	3.91	3.91	3.91	3.91	3.91
Single Female					
Low	1.39	1.39	1.39	1.39	1.39
Middle	1.62	1.62	1.62	1.62	1.62
High	2.15	2.15	2.15	2.15	2.15
Very High	3.58	3.58	3.58	3.58	3.58
Couple (No Children)					
Low	1.87	1.87	1.87	1.87	1.87
Middle	2.14	2.14	2.14	2.14	2.14
High	2.97	2.97	2.97	2.97	2.97
Very High	4.78	4.78	4.78	4.78	4.78
Couple (2 Children)					
Low	1.44	1.44	1.44	1.44	1.44
Middle	1.67	1.67	1.67	1.67	1.67
High	1.80	1.80	1.80	1.80	1.80
Very High	3.73	3.73	3.73	3.73	3.73

	Daca	3%	6%	2.0/	6.0/	120/	150/
	Scenario	employee	employee	sacrificed	sacrificed	employer	employer
Single Male							
Low	1.65	1.57	1.50	1.67	1.69	1.65	1.65
Middle	1.81	1.73	1.65	1.84	1.86	1.81	1.81
High	2.49	2.37	2.26	2.53	2.57	2.49	2.49
Very High	3.91	3.70	3.48	4.01	4.12	3.91	3.91
Single Female							
Low	1.39	1.33	1.27	1.41	1.43	1.39	1.39
Middle	1.62	1.55	1.48	1.64	1.66	1.62	1.62
High	2.15	2.05	1.95	2.18	2.21	2.15	2.15
Very High	3.58	3.38	3.19	3.67	3.77	3.58	3.58
Couple (No Children)							
Low	1.87	1.79	1.70	1.89	1.92	1.87	1.87
Middle	2.14	2.04	1.95	2.16	2.19	2.14	2.14
High	2.97	2.04	2.70	3.02	3.07	2.97	2.97
Very High	4.78	2.83	4.25	4.91	5.03	4.78	4.78
Couple (2 Children)							
Low	1.44	1.38	1.32	1.46	1.48	1.44	1.44
Middle	1.67	1.60	1.52	1.69	1.72	1.67	1.67
High	1.80	1.72	1.64	1.83	1.85	1.80	1.80
Very High	3.73	3.52	3.32	3.82	3.92	3.73	3.73

Table 12	Living standards	(pre retirement):	base scenario	and contributions	s changes
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Source: NATSEM simulation

Table 13 Living standards (pre-retirement): base scenario and taxation changes

	Base Scenario	0% super contribution tax	0% surcharge tax	0% surcharge tax, 0% contributions tax
Single Male				
Low	1.65	1.60	1.49	1.58
Middle	1.81	1.76	1.64	1.73
High	2.49	2.38	2.21	2.36
Very High	2.54	3.26	3.09	3.93
Single Female				
Low	1.39	1.34	1.25	1.33
Middle	1.62	1.53	1.44	1.53
High	2.15	2.05	1.91	2.04
Very High	3.58	3.34	3.17	3.38
Couple (No Children)				
Low	1.87	1.96	1.76	1.81
Middle	2.14	2.20	1.99	2.05
High	2.97	2.98	2.71	2.80
Very High	4.78	4.76	4.36	4.49
Couple (2 Children)				
Low	1.44	1.39	1.33	1.39
Middle	1.67	1.57	1.52	1.58
High	1.80	1.62	1.60	1.65
Very High	3.73	3.35	3.30	3.44

	Base Scenario	Retire at 55	Retire at 60	Part retire at 55	Part retire at 60
Single Male					
Low	110.12	67.30	82.83	117.75	113.16
Middle	104.52	64.37	78.43	111.75	107.40
High	84.17	52.62	62.81	90.71	86.75
Very High	64.91	39.55	47.53	70.17	67.14
Single Female					
Low	112.34	74.80	88.89	121.23	116.29
Middle	99.89	67.45	79.68	108.69	103.88
High	81.48	55.35	63.98	88.70	84.61
Very High	58.56	39.44	45.10	63.95	60.92
Couple (No Children)					
Low	75.04	44.61	53.28	77.73	76.28
Middle	66.76	40.89	46.83	70.01	68.70
High	49.84	30.46	34.74	52.02	51.31
Very High	31.01	14.78	70.21	31.75	31.56
Couple (2 Children)					
Low	95.62	60.92	70.21	100.84	98.04
Middle	84.82	56.33	61.44	90.76	88.36
High	75.93	50.93	54.48	82.76	81.11
Very High	39.02	20.46	25.90	41.09	40.44

Table 14 Change in living standards (%), base scenario and retirement age

Source: NATSEM simulation

Table 15 Change in living standards (%), base scenario and super choices

	Base Scenario	Real super earnings 3.5%	Real super earnings 5.5%	Lump sum benefit	Pension benefit
Single Male					
Low	110.12	102.66	118.90	103.46	113.66
Middle	104.52	97.15	113.20	97.95	108.39
High	84.17	78.03	94.20	81.59	87.83
Very High	64.91	58.30	73.73	65.19	63.80
Single Female					
Low	112.34	105.86	119.45	105.43	115.49
Middle	99.89	94.35	106.20	92.67	104.38
High	81.48	76.85	87.89	76.06	87.00
Very High	58.56	53.34	65.92	57.93	60.66
Couple (No Children)					
Low	75.04	72.48	77.29	63.63	79.39
Middle	66.76	64.95	69.13	57.40	72.75
High	49.84	47.26	54.28	45.69	56.68
Very High	31.01	27.89	35.08	30.00	33.65
Couple (2 Children)					
Low	95.62	91.95	98.80	81.55	100.45
Middle	84.82	82.31	87.77	72.86	91.91
High	75.93	73.93	77.77	63.19	82.64
Very High	39.02	35.05	44.21	37.71	42.35

		3%	6%				
	Base	standard	standard	3%	6%	12%	15%
	Scenario	employee	employee	sacrificed	sacrificed	employer	employer
Single Male							
Low	110.12	144.75	176.66	118.52	126.69	120.14	130.16
Middle	104.52	139.40	172.49	112.75	122.87	114.32	126.29
High	84.17	111.00	141.01	95.46	108.41	97.16	112.21
Very High	64.91	92.54	124.69	77.16	88.40	78.93	92.63
Single Female							
Low	112.34	140.21	165.16	118.42	123.60	120.01	126.92
Middle	99.89	126.20	151.86	105.57	111.00	107.00	114.01
High	81.48	108.89	136.85	88.43	97.87	89.68	100.63
Very High	58.56	81.23	108.42	68.46	78.51	69.93	82.04
Couple (No Children)							
Low	75.04	94.27	114.86	76.31	78.56	78.72	84.46
Middle	66.76	87.62	109.07	68.41	72.23	71.24	78.47
High	49.84	87.62	89.23	54.45	59.81	57.78	67.10
Very High	31.01	68.88	70.65	36.33	41.32	40.19	49.28
Couple (2 Children)							
Low	95.62	118.36	143.84	97.54	99.95	100.45	106.95
Middle	84.82	110.07	136.93	86.71	91.28	90.15	98.99
High	75.93	99.51	124.81	76.78	79.71	80.58	88.66
Very High	39.02	62.13	88.84	45.86	52.28	50.49	61.86

Table 16 Change in living standards (%): base case and contributions changes

Source: NATSEM simulation

Table 17 Change in living standards (%): base case and taxation changes

		0% super		0% surcharge tax,
	Base Scenario	contribution tax	0% surcharge tax	0% contributions tax
Single Male				
Low	110.12	67.30	122.49	118.40
Middle	104.52	64.37	117.85	113.90
High	84.17	52.62	98.07	94.32
Very High	64.91	39.55	74.79	71.24
Single Female				
Low	112.34	74.80	123.99	119.63
Middle	99.89	67.45	112.99	108.74
High	81.48	55.35	95.37	91.57
Very High	58.56	39.44	69.56	66.06
Couple (No Children)				
Low	75.04	44.61	81.58	80.73
Middle	66.76	40.89	75.41	74.66
High	49.84	30.46	58.43	57.68
Very High	31.01	14.78	34.00	33.71
Couple (2 Children)				
Low	95.62	60.92	105.04	103.08
Middle	84.82	56.33	97.56	95.75
High	75.93	50.93	87.98	86.89
Very High	39.02	20.46	44.19	43.37

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