

Lifewise

NATSEM
UNIVERSITY OF CANBERRA



The Lifewise / NATSEM Underinsurance Report

Understanding the social and economic
cost of underinsurance

Research Report

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PREPARED FOR

Lifewise, an initiative of the life insurance industry

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ABOUT NATSEM

The National Centre for Social and Economic Modelling was established on 1 January 1993, and supports its activities through research grants, commissioned research and longer term contracts for model maintenance and development.

NATSEM aims to be a key contributor to social and economic policy debate and analysis by developing models of the highest quality, undertaking independent and impartial research, and supplying valued consultancy services.

Policy changes often have to be made without sufficient information about either the current environment or the consequences of change. NATSEM specialises in analysing data and producing models so that decision makers have the best possible quantitative information on which to base their decisions.

NATSEM has an international reputation as a centre of excellence for analysing microdata and constructing microsimulation models. Such data and models commence with the records of real (but unidentifiable) Australians. Analysis typically begins by looking at either the characteristics or the impact of a policy change on an individual household, building up to the bigger picture by looking at many individual cases through the use of large datasets.

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1 INTRODUCTION

Lifewise is a public awareness initiative of the Australian life insurance industry encouraging Australians to take appropriate steps to protect themselves from the financial hardship that can result from accident, sickness or death. As part of this initiative, the Investment and Financial Services Association Limited (IFSA) has commissioned research to examine the social and economic impact of under-insurance in Australia.

The aim of this report is to show the importance of Australian families having the correct level of insurance.

This research report uses four scenarios to examine the impact 1, 5 and 10 years after an event has occurred to a typical Australian family with young children. The outcomes are considered when the family has typical levels of insurance and when the family has the recommended levels of insurance.

1.1 INSURANCE TYPES AND COVERAGE

The financial impact of having three types of insurance – life insurance, total and permanent disability (TPD) insurance and income protection insurance – are considered in this report. These are the most commonly held types of insurance and have the largest impact on the financial position of a family after an accident, sickness or death, especially for young families. Currently all superannuation fund members receive benefits in the event of death or permanent disability. Some superannuation funds also include a basic level of income protection insurance. However, the option of income protection insurance is not available from all funds.

Life Insurance

Life Insurance is an insurance policy that pays a lump sum on your death or the diagnosis of a terminal illness. A 2008 Australian Institute of Superannuation Trustees (AIST) and Industry Funds Forum (IFF) survey of members with death cover found the average level was \$189,000. This compared with an AIST/IFF formula-based suggested coverage of \$550,000 or \$483,000 based on their actual financial circumstances (Sweeney Research 2008).

Based on the AIST/IFF formula, half of the members (51 per cent) were under-insured by \$100,000 or more.

Total and Permanent Disability (TPD) Insurance

TPD Insurance is an insurance policy that pays a lump sum if you become disabled and are unable to ever work again. The 2008 AIST/IFF survey found that 71 per cent of those members surveyed had TPD cover. The average level was \$162,000. This compared with an AIST/IFF formula-based suggested coverage of \$517,000.

Income Protection (IP) Insurance

Income Protection Insurance provides a replacement income while temporarily unable to work because of sickness or injury. The replacement income can be up to three-quarters of current income and can be for short or long periods, generally after a waiting period. The length of time IP payments are received depends on the contract term; for example, it could be two years, five years, or up to age 60 or 65.

Only 31 per cent of members surveyed by AIST/IFF had income protection insurance. For those in families with dependent children the proportion with income protection insurance was only 26 per cent.

1.2 BACKGROUND

In 2008 there were 12,430 deaths of married men or women of working age (20 to 64 years) (ABS 2009a). This equates to more than 34 families per day losing a member and over half of these (52 per cent)¹ involve children losing a parent. In addition, only four per cent of Australian families with dependent children have adequate levels of insurance cover according to research commissioned by IFSA in 2005.

The 2008 HILDA Survey (Watson 2010) found that over 235,000 working age people, living as a member of a couple with dependent children, suffered a serious injury or illness in the previous 12 months. The same survey found that over 17,000 employed people who were living as member of a couple with children had been unable to continue working due to illness, disability or injury over the previous year. All of these families with children have to face both a health crisis and probably financial hardship until the person recovers.

These chances of an accident, sickness or death impacting on a family emphasise the importance of having insurance to cover these events. As almost all employees have superannuation and superannuation that includes life insurance, the vast major of working age people in Australia do have some form of death cover.

Rice Warner Actuaries calculate that the fact that over 95 per cent of families do not have adequate insurance means Australia is underinsured by \$1.37 trillion.

In an international survey of life insurance density and penetration, Australia ranked 16th (Baez and Staib 2007). This is well below the overall average and suggests that there is considerable room for improvement. The life insurance industry along with the government is aware of the low levels of insurance and (through IFSA) has developed the Lifewise campaign. The campaign aims to raise awareness of the issue at an individual level and to encourage Australians to be more self-reliant by taking appropriate steps to protect themselves from the financial hardship that can result from accident, sickness or death.

¹ 51.7 per cent of people aged 20 to 64 years who were living as a member of a couple had dependent children (ABS 2007-08 Survey of Income and Housing). However, it was much higher in the younger age groups - for those in their 30s and 40s it was over 70 per cent.

1.3 OUTLINE OF THIS REPORT

This report will use a case study approach to analyse the economic impact after a major health event occurs to a typical, middle income, Australian family with two young children. The case study will present the outcomes at periods of 1, 5 and 10 years after an event.

Four scenarios will be modelled. The first is that the father of the family dies prematurely. In the second scenario the father has a heart attack which results in him being unable to work. Under Scenario 2(a), he requires care and is unable to work for up to 10 years. Under Scenario 2(b) he requires care and is unable to ever return to work. The third and fourth scenarios are the same as the first two except the event happens to the mother.

For each of the scenarios, the economic outcomes are presented when the family has current or typical levels of insurance and when the family has recommended levels of insurance.

After presenting the outcomes of the scenarios, an estimate is provided of how many families in Australia are represented by this case study family; the estimated cost to the family; and, the estimated aggregate impact on the Australian economy.

In the next section, the details of the hypothetical family and scenarios are presented. The methodology used to undertake the modelling is then described. Section 3 presents the outcomes under the four scenarios and discusses what impact this may have on the family. Finally, in Section 4 the outcomes are considered in the broader context.

2 THE FAMILY, SCENARIOS AND MODELLING

2.1 APPROACH USED

STINMOD

This research report will use an enhanced version of STINMOD, NATSEM's static microsimulation model of tax and transfer payments in Australia (see Vu 2008 for a full description of STINMOD). STINMOD is used by Australian Government departments for their analysis of the impact of policy reforms. This model was first developed in 1994 and is continuously updated. STINMOD has two broad modelling modes. First, it can be used to estimate the aggregate fiscal impact of a change in tax and/or transfer policy on revenue or government expenditure, as well as to estimate the distributional impacts of policy change on families and individuals. Second, it can be used to assess the impact of tax and/or transfer policy on a hypothetical family, created by a user. This report uses this second mode of STINMOD to estimate the change in disposable income of a hypothetical family after an insurance event and incorporates changes in taxes and transfer payments.

The simulation process first defines the family and then runs each through the tax and transfer modules of STINMOD. Using the private incomes and characteristics of the

families' members, STINMOD calculates eligible government transfer payments and the amount of income tax for which they are liable.

It is important to note that although STINMOD is intended to replicate the tax and transfer policy setting for a financial year, it does not capture every aspect of the world it represents. This is most often due to a lack of sufficient information to allow particular payments or taxes to be modelled. In addition, not every aspect and characteristic of the family can be created, and so the family may not be entitled to a particular payment that would otherwise have been available to them had that aspect or characteristic been created.

A version of STINMOD already exists, called the 'outyears' version, which is able to simulate the projected outcomes of a hypothetical family for up to five years into the future. For this project, a special version of the model has been developed which adds a 10 year projection to the 'outyears' model. Using this enhanced version of STINMOD, the hypothetical family income can be estimated for the following periods: 2009-10, 2013-14, and 2018-19.

Surveys used to produce the typical characteristics of the case study family

The 'typical' characteristics of the case study family and aggregate tables and figures in the latter part of this report have been derived from confidentialised unit record files from the ABS Survey of Income and Housing (SIH). The 2005-06 SIH and 2007-08 SIH have been used. The SIHs provide very detailed information about income and personal and household characteristics of persons aged 15 years and over resident in private dwellings throughout Australia. In 2005-06 it also contained information on homeownership, net wealth, asset ownership, levels of debt and the value of assets. The SIH excludes non-private dwellings (such as hospitals, institutions, nursing homes, hotels, and hostels), and dwellings in collection districts defined as very remote. For more details of SIH, ABS provides very comprehensive technical guides (2008 and 2009b).

In general median values, that is where half of the observations are above and half below, have been inflated to 2009 values and then used as typical.

The chance of having to leave employment due to serious illness, disability or injury has been calculated using the HILDA Survey. HILDA was initiated, and is funded, by the Australian Government Department of Families, Housing, Community Services and Indigenous Affairs. HILDA is managed by the Melbourne Institute. The survey includes two questions that are very relevant to this report. Firstly, it asks whether a person has suffered a serious injury or illness in the previous 12 months. Secondly, it asks people who were employed 12 months ago why they are not working now. More details of the survey can be found in the Melbourne Institute's HILDA User Guide (Watson 2010).

2.2 HYPOTHETICAL FAMILY

The hypothetical case study family to be used in this research is a couple in their 30s with two young children and both are in paid employment. They are purchasing their own home and have a mortgage.

The assumed details for the 'base case' of this hypothetical family are that on 1 July 2009:

- The husband is 35 years old, in the labour force, has no outstanding education loans (for example, HECS), and has no private health insurance. He is working full-time and earns \$75,000 per annum (this is the average income for a male in their 30s employed full-time)².
- The wife is 33 years old, in the labour force, has no outstanding education loans, and has no private health insurance. She is working 24 hours per week over three days (8 hours per day) and earns \$35,000 per annum (average income for a female in her 30s employed part-time with two children under 5 years).
- The first child is 4 years old. The main carer for the child is the wife. However, the child goes to long day care when the wife works. The child goes to childcare three days per week at a cost of \$45.00 per day.³
- The second child is 2 years old. The main carer for this child is also the wife. Again, the child goes to long day care when the wife works. The child goes to childcare three days per week at a cost of \$45.00 per day.
- The family is purchasing their own home (that is, they have a mortgage). The house is valued at \$496,000 and the mortgage is \$236,900 (2009 values based on median of ABS survey data).
- The husband has \$30,100 in superannuation and the wife has \$14,100 (2009 values based on median of ABS survey data).
- The family owes \$17,000 in other debt (credit cards, car loans, etc).⁴
- The family has insurance that provides death cover of \$91,000 and permanent disability cover of \$71,000 for the husband only (*Lifewise* average values).
- Neither the husband nor wife has income protection insurance. This is typical. According to Hewett (2009) only 28 per cent of males and 36 per cent of females have income protection insurance. Only one quarter (26 per cent) of families with children have income protection insurance.

² Based on current earnings from ABS 2005-06 Survey of Income and Housing, updated to 2009 (change in AWOTE between November 2005 and August 2009). See ABS (2008) for a detailed description of the data.

³ The fees charged by long day care centres vary according to location and to the age of the children receiving care. Long day care centres normally charge a daily rate rather than an hourly rate. Research suggests that around 80 per cent of centres charge a daily rate of \$40 to \$49.99 for children aged 3 years to school age. This report uses the mid-point rate.

⁴ $\$236,900 + \$17,000 = \$253,900$ is the median debt for a couple in their 30s purchasing a home with two children, male working full-time and female working 20-30 hours per week. It is different to the \$167,000 quoted in other *Lifewise* research because it is updated to 2009 and it more specifically focuses on couples aged in their 30s buying a home and with two children. However, they are both from the same source – ABS 2005-06 Survey of Income and Housing.

2.3 SCENARIOS

The family's experience under four scenarios is to be modelled.

Scenario 1: Husband dies prematurely

All details of the family are the same as those outlined for the base case family with the following exceptions:

- The husband dies suddenly on 1 July 2009
- The wife changes work schedule to 25 hours (5 days of 5 hours per week) and increases earnings slightly to \$36,500 per annum.
- Both children have to be in the long day childcare 5 days per week.

Scenario 2(a) and 2(b): Husband is unable to work

All details of the family are the same as those outlined for the base case family with the following exceptions:

- The husband has a heart attack and becomes paralysed (before work on 1 July 2009 and he receives zero income for the 2009-10 financial year)
 - Under scenario 2(a) he is unable to work for up to 10 years, and
 - Under scenario 2(b) he is unable to work again.
- The wife cares for the husband and continues working the same hours but spread over four days (6 hours per day, 4 days a week i.e. 24 hours per week)
- Both children go to long day childcare for the days when the wife works i.e. 4 days per week.

Scenario 3: Wife dies prematurely

All details of the family are the same as those outlined for the base case family with the following exceptions:

- The wife dies suddenly on 1 July 2009
- The husband changes work schedule to 25 hours (5 hours per day, 5 days per week) and earnings decrease to \$50,000 per annum.
- Both children have to be in the long day childcare 5 days per week.

Scenario 4(a) and 4(b): Wife is unable to work

All details of the family are the same as those outlined for the base case family with the following exceptions:

- The wife has a heart attack and becomes paralysed (before work on 1 July 2009 and she receives zero income for the 2009-10 financial year)

- Under scenario 4(a) she is unable to work for up to 10 years, and
- Under scenario 4(b) she is unable to work again.
- The husband changes his work schedule to 5 hours per day, 4 days per week i.e. 20 hours per week. His earnings decrease to \$40,000 per annum.
- Both children have to be in the long day childcare 4 days per week.

Simulation scenarios for the fifth year

To project the situation of the family five years after the event, the outcome at the end of the 2013-2014 financial year were simulated. Simulations were run for the base case and the four scenarios

All details of the four scenarios are the same as those outlined above for the first year with the following exceptions:

- The husband is now 39 and the wife is 37 years old
- The children are now 6 and 8 years old and they are in primary school. The children attend after-school care for three hours per day (\$5 per hour)⁵ as required [base: 3 days/week; 1st: 5 days; 2nd: 4 days; 3rd: 5 days; 4th: 4 days]
- The earnings for this year have been increased based on Treasury projected growth rates.

Simulation scenarios for the tenth year

To project the situation of the family ten years after the event, the outcome at the end of the 2018-2019 financial year were simulated. Once again, STINMOD simulations were run for the base case and the four scenarios.

All details of the four scenarios are the same as those outlined above for the first year with the following exceptions:

- The husband is now 44 and the wife is 42 year old
- The children are now aged 11 and 13 year old and they are in primary or secondary school.
- The children do not attend childcare.
- The earnings for this year have been increased based on Treasury projected growth rates.

⁵ The careforkids.com.au website found Outside School Hours Care averages \$15 to \$20 per day.

3 PROJECTED OUTCOMES

In this section the income and debt of the family under the base case and each of the scenarios are estimated.

In the base case and the scenarios, it has been assumed that the employer-provided benefits received are equal to the additional costs associated with the death or disability. When a person dies or becomes disabled, there will normally be a payout of employer-provided entitlements such as sick leave, long service leave and unused recreation leave. There will also be costs associated with the accident, illness or death such as funeral costs, medical expenses or living costs during waiting periods (for IP insurance). As all of these benefits and costs can vary considerably, the report simply assumes that costs equal benefits.

3.1 PROJECTED INCOME

Outcomes in Year One

The private income (gross earnings plus investment income) of the hypothetical base case family, with the husband working full-time and the wife working part-time, is \$2,115 per week. In addition to this the family receive transfer income (Family Tax Benefit A or FTB[A]) of \$9 per week. After adding childcare rebates and subtracting income tax, the family would have a disposable income of \$1,814 per week. Finally after childcare costs have been paid the family would have \$1,620 per week to live on. These values for the base case and under each of the scenarios are shown in Table 1 and the more detailed calculations showing individual private and transfer incomes are in the Appendix.

Under Scenario 1, the scenario in which the husband dies, the family's private income falls to one-third of its previous level from \$2,115 to \$702 per week. This is not surprising given the husband was in full-time employment and the wife was only able to slightly increase her hours of paid employment. As noted in the previous paragraph, after paying childcare, the family in the base case has \$1,620 per week to live on. Under scenario 1, the family has \$889 per week after paying childcare. Despite increased transfer income (the family would now be entitled to Parenting Payment Single, FTB[A] and FTB[B]) and a reduction in income tax, the family must live on an income which is 54.9 per cent of the family income prior to the death of the husband.

Table 1 **Outcomes in 2009-10 for the case study family under the base case and four scenarios**

	Private income \$/wk	Transfer income \$/wk	Disposable income \$/wk	After childcare \$/wk	Proportion of Base case %
Base Case	2,115	9	1,814	1,620	-
S1	702	313	978	889	54.9
S2	673	427	1,067	988	61.0
S3	962	236	1,083	964	59.5
S4	769	383	1,089	1,011	62.4

Source: STINMOD

Under Scenario 2, where the husband is unable to work, the family's private income falls even further from \$2,115 to \$673 per week. As the wife is now required to care for the husband, she is unable to increase her work hours. The addition of Disability Support Payment (DSP) increases transfer income from the government and the overall family disposable income. Under scenario 2, the family has \$988 per week to live on after paying childcare. This is 61.0 per cent of the base case.

Under Scenario 3 (the wife dies) the family's private income does not fall as much as it did under the first two scenarios, but it still is less than half its original value. However, the husband's private income results in no entitlement to FTB [B] and lower government transfer income than under scenarios 1 and 2. The overall result is that, somewhat surprisingly, the death of the secondary earner is only marginally better than losing the primary earner in financial terms. The available income to live on after income tax, Medicare and childcare is \$964 per week (59.5 per cent of the base case) or only 4.6 percentage points better than under Scenario 1.

Under Scenario 4, where the wife is unable to work and the husband reduces his working hours to provide care, the family has \$1,011 per week to live on after paying childcare. This is 61.0 per cent of the base case.

Outcomes in Year Five

Five years after the event, earnings have grown by 18 per cent and the base case family now has a combined private income of \$2,499 per week (Table 2). The family no longer receives any government benefits (except childcare). After childcare, they have \$1,931 per week to live on.

Table 2 Projected outcomes in 2013-14 for the case study family under the base case and four scenarios

	Private income \$/wk	Transfer income \$/wk	Disposable income \$/wk	After childcare \$/wk	Proportion of Base case %
Base Case	2,499	0	2,006	1,931	-
S1	829	325	1,068	1,023	53.0
S2	795	424	1,148	1,112	57.6
S3	1,136	223	1,174	1,118	57.9
S4	909	388	1,169	1,134	58.7

Source: STINMOD

Under the various scenarios, five years after the event, the financial situation of the family has deteriorated even further. The disposable income after childcare now ranges between 53 per cent (husband dies) and 59 per cent (wife disabled) of the base case family. In the scenarios where one of the parents dies (1 and 3) the financial situation of the family has declined a further 1.5 percentage points from the already low position of one year after the event. Under scenarios 2 and 4, the financial situation has declined a further 3.5 percentage points from 61-62 per cent to 58 per cent.

Outcomes in Year Ten

Ten years after the event, earnings have grown by 45 per cent, the children do not attend childcare and three of the scenarios have seen their share of the base case disposable income fall by a further four or more percentage points, with the remaining family under scenario 1 (death of the husband) having the lowest disposable income – only half (50.5 per cent) the base case.

Table 3 **Projected outcomes in 2018-19 for the case study family under the base case and four scenarios**

	Private income	Transfer income	Disposable income	After childcare	Proportion of Base case
	\$/wk	\$/wk	\$/wk	\$/wk	%
Base Case	3,077	0	2,329	2,329	-
S1	1,021	327	1,177	1,177	50.5
S2	979	481	1,308	1,308	56.2
S3	1,398	259	1,356	1,356	58.2
S4	1,119	452	1,349	1,349	57.9

Source: STINMOD

Under Scenario 3 (death of the wife), the husband's growing earnings provide the best outcome (if it can be called that) with a disposable income 58.2 per cent of the base case.

3.2 PROJECTED DEBT

Section 3.1 has shown the estimated levels of income that will be available to the family under the different scenarios after they have paid taxes and childcare. However, as this is a 'typical' family, the research assumes they have a mortgage and other debt. In this section the report considers the impact of this debt on the amount of money remaining each week for the family to live on. The term 'remaining income' is used to describe the amount of money that the family will have to live on after they have paid income tax, Medicare, childcare and their mortgage repayments. The cases of typical and recommended levels of insurance are considered.

The family's current debt includes a mortgage of \$236,900 and \$17,000 in other forms (credit cards, car loans and personal loans) giving a total level of debt of \$253,900. The level of debt they will have in 1, 5 and 10 years depends on whether they have typical or recommended levels of insurance.

Debt – Typical case

Against the debt of \$253,900, the husband has life insurance of \$91,000; permanent disability cover of \$71,000; and, superannuation of \$30,100. The wife does not have life insurance or TPD but has \$14,100 in superannuation.

Neither the husband nor wife has income protection insurance.

An assumption is made that any superannuation, life insurance or TPD insurance payouts received by the family will be used to reduce debt to zero. Any outstanding debt after these payouts (if applicable) is assumed to be rolled into a home mortgage and the terms of the mortgage renegotiated to have repayments that would repay the loan over 25 years at 6.5 per cent (the assumed standard variable rate). For example, in the base case it is assumed that the case study family's other debt of \$17,000 is consolidated with the existing mortgage to give a total loan of \$253,900. The repayments on this loan are assumed to be for 25 years at the average current standard variable rate (6.5 per cent). This produces repayments of \$395 per week.

If there are funds leftover, after using the payouts to reduce debt, it is assumed that the residual funds are put into low risk accounts (for example, bank term deposits) which pay 4.5 per cent (approximate current rate) interest. This investment income is then added to the private income of the family.

Debt – Recommended levels of Life and TPD Insurance

The insurance industry recommends that a person with dependants should have life insurance that will allow the family to reduce their debt to zero and provide them with seven years of a reduced income. The income is reduced to three-quarters of its current level as the costs associated with working will no longer exist (for example, the person will not need to pay the costs associated with travelling to work). Therefore, the recommended level of insurance for a person is equal to the family's current level of debt plus seven times three-quarters of the person's disposable income. An estimate of the recommended level of life insurance for the husband in this case study family is:

Gross income of \$75,000 per annum = Disposable income of \$1203.26 per week (see Appendix) or \$62,570 per annum.

Recommended level of life insurance = \$253,900 + 7 x (¾ x \$62,570) = \$582,393

Rounded to the nearest 10,000 = \$580,000.

For his wife, a similar calculation based her total income of \$35,000 produces a recommended level of life insurance of \$420,000.

With the recommended levels of insurance, after reducing all debt to zero, there will be seven years worth of income to invest. This investment income will impact on the family's disposable income. The extra private income will generally see the means tests associated with transfer income reducing the level of transfer income received. The extra private income will also produce higher levels of tax.

Recommended levels of Income Protection Insurance

The insurance industry recommends that a person should have IP insurance that provides three-quarters of current disposable income. The typical case study family does not have any IP insurance, which is typical for the majority of Australian families. In this report, the

family with the recommended IP insurance will have the temporarily disabled person's disposable income topped up to 75 per cent of its previous level.

3.3 INSURANCE OUTCOMES

The detailed tables of the family's remaining income with typical and recommended insurance are provided in the Appendix. Figure 1 provides a summary one year after the event, showing the change in income as a proportion of the base case under each scenario.

Scenario 1 Outcomes

Under Scenario 1, the case study family with **typical** levels of insurance would receive superannuation payouts of \$30,100 plus a life insurance lump sum of \$91,000. This would result in the surviving wife and children still having a debt of \$132,800. After making mortgage repayments and childcare payments to allow her to undertake some paid part-time employment, the family would have a remaining income of \$682 per week to live on. This is 56 per cent of what the family had after paying the mortgage and childcare before the accident.

If the family had the **recommended** levels of life insurance then the surviving family would have received a \$580,000 life insurance payout instead of \$91,000. Instead of a remaining \$132,800 debt, the family would have \$356,200 to invest. By removing the burden of mortgage repayments and replacing it with investment income, the standard of living of the remaining family with the recommended level of insurance moves from 56 per cent to a much more comfortable level (80 per cent).

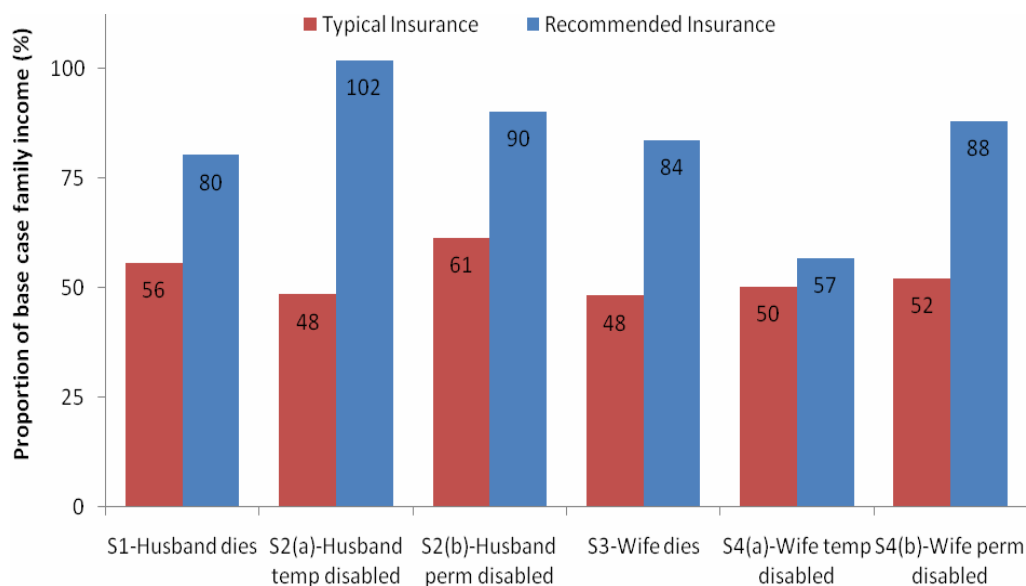
Scenario 2 Outcomes

For the second scenario which involves the husband becoming disabled, two different outcomes are shown. Scenario 2(a) shows the outcomes when he can return to work at some time in the future. Under this scenario, it is unlikely he would have access to his superannuation⁶ and would not be able to claim under TPD insurance. However, if he has IP insurance he could make a claim and receive 75 per cent of his former disposable income. Under Scenario 2(b) where he can never return to work, he will receive a TPD insurance payout and can claim his superannuation.

The case study family in Scenario 2(a) is **typical** of many Australian couples with children who have no IP insurance. This typical family would have, after paying tax, childcare and loan repayments, less than half (48 per cent) of their previous remaining income. The same family with the **recommended** IP insurance would have no decrease in their living standards.

⁶ Under the current superannuation legislation, to access superannuation before preservation age requires that one of the following 'conditions of release' is satisfied: death, terminal medical condition, permanent incapacity, or severe financial hardship.

Figure 1 **Impact on family: remaining income under the four scenarios with typical and recommended levels of insurance, 2009-10**



Note: The percentages shown are the proportion of the base case family disposable income after childcare and mortgage repayments have been made and include the impact of income from invested insurance payouts.

Source: NATSEM calculations

Under scenario 2(b) with the permanently disabled husband, the case study family with **typical** levels of insurance would receive slightly less than under the scenario where he died (his TPD insurance payout was \$20,000 less than his life insurance). However, the family would receive increased transfer income (DSP, FTB[A], FTB[B], and Parenting Payment Partner) and in terms of money left after childcare and mortgage repayments are made, the family would receive slightly more than under Scenario 1. The superannuation and TPD insurance payouts would allow the family's other debt to be paid off and the mortgage reduced to \$152,800. Despite these reductions in debt, after loan repayments they would still have only 61 per cent of their previous income to live on.

The family with the **recommended** levels of TPD insurance under scenario 2(b) would receive a payout of \$580,000 plus their superannuation. This would allow them to own the house outright, have no debt and there would be investment income adding to the family income. There would be little change in the remaining income after the event as it would be 90 per cent of the previous level.

Scenario 3 Outcomes

Under Scenario 3, the wife dies and the case study family with **typical** levels of insurance would receive a superannuation payout of \$14,100. This would reduce the family's other debt to \$2,900 but the full mortgage of \$236,900 would remain. The surviving husband and children would still have debts of \$239,800. After making mortgage repayments and childcare payments to allow him to continue paid employment (but reduced hours), the

family would have \$590 per week to live on. This typical family would have remaining income that was less than half (48 per cent) their previous family income.

If the family had the industry-**recommended** levels of life insurance then the surviving family would have received a \$420,000 life insurance payout on the death of the wife. Instead of a large mortgage, the family would have \$180,200 to invest. The standard of living of the remaining family is almost the same (84 per cent) as it was before the death of the husband.

Scenario 4 Outcomes

Two outcomes are shown for the last scenario in which the wife becomes disabled.

Under Scenario 4(a) the wife can return to work at some time in the future. The wife in the **typical** case study family has no IP insurance and cannot access her superannuation under these circumstances. She will not receive a superannuation payout or income supplementation. However, the family will receive DSP, Parenting Payment Partnered, FTB[A] and FTB[B]. After mortgage repayments and childcare, the family will have half the money of the base case.

If the wife had been covered by the **recommended** IP insurance then she would have received a top-up to three-quarters of her previous disposable income. With the husband reducing his hours to care for his wife, the family will still struggle but with the recommended insurance, the remaining income would have increased from \$616 to \$694 per week.

Under scenario 4(b) the wife is unable to ever work again. When a disability is permanent, people are entitled to receive their superannuation and a payout under their TPD insurance. For the **typical** case study family, the wife would receive her superannuation payout but as she does not have TPD insurance, she would receive nothing else (check as many super funds have TPD as part of life/TPD cover). The superannuation payout would allow household debt to be slightly reduced to \$239,800. Despite the reduction in debt, after loan repayments the family would still have only 52 per cent of their previous income to live on.

A family with the **recommended** level of TPD insurance would have the wife insured for \$420,000. This TPD payout plus the superannuation payout would allow the family to clear the mortgage, have no other debt and receive investment income. The family would have 88 per cent of the remaining income when compared with prior to the event.

Insurance Outcomes 5-years and 10-years after the event

The detailed projections of the circumstances of the hypothetical family 5 years and 10 years after the event are shown in the Appendix. Those with the recommended levels of insurance maintain around 75-80 per cent of their remaining income over the 5-year and 10-year horizons. For those with typical insurance, the average levels are around 50 per cent.

The proportion of remaining income as a percentage of the base case remaining income (that is, after the mortgage and childcare), gradually reduces under both the typical and recommended insurance scenarios. The average decline is around two percentage points. The interaction of the means testing of transfer income with private income means that those with recommended levels of insurance fall at a slightly higher pace than those without. However, those with the recommended levels are always significantly better off than those with typical levels.

4 IMPLICATIONS

4.1 HOW TYPICAL IS THIS FAMILY?

ABS data suggest that the case study family are very typical. There are 2.16 million working age (20-64) couple families with dependent children in Australia. Within this group, almost 850,000 families have at least one child under five years old (Table 4). In the case study family age group (in their 30s), two-thirds of families with dependent children have a child under five years. Mortgages are very common with couples in their 30s with children – 63.2 per cent have a mortgage. Finally, perhaps because of the mortgage, both parents are employed in over six in ten (61.6 per cent) families with children, just as our case study family parents are employed.

Table 4 Working age families by type and whether youngest child is aged 0 to 4 years

Type of Working age family	No children less than 5yrs	Youngest aged 0 to 4 years	Total families
Couple with dependants	1,311,850	843,760	2,155,610
Couple only	2,012,360		2,012,360
One parent (with dependants)	383,960	152,760	536,720
Lone person	3,634,790		3,634,790
All family types	7,342,960	996,520	8,339,480

Note: 'Working age family' is defined as a family with reference person aged between 20 and 64 years. Values in the tables may not sum as they have been rounded

Source: NATSEM calculation based on ABS 2007-08 SIH CURF (see ABS 2009b)

In summary, the case study family is extremely common – there are 843,760 couples with very young children and 2.16 million working-age families with dependent children. Most of these couples are both employed and purchasing a home.

In terms of numbers of people, there are currently 4.5 million people aged between 20 and 64 under who are members of a couple with dependent children.⁷

⁷ This value is slightly different to 2 x the number of couples as it is now includes every person who is aged 20 to 64 years and is a member of a couple with dependants not just those where the family reference person is aged between 20 and 64.

4.2 IMPLICATIONS FOR THE CASE STUDY FAMILY

Typical Insurance Outcomes

With typical levels of insurance under all of the scenarios, both the family and the government are financially disadvantaged. In three variations of the scenarios (temporarily disabled husband, death of the wife and temporarily disabled wife), the family will have only half or less of the income they had in the base case.

The reality is that this family with young children faces financial disaster along with the serious illness, injury or even loss of one of the parents. In the base case, the family had \$1,224 per week to live on after paying childcare and the mortgage. With this income they have accumulated \$17,000 in debt. Now they are being asked to live on around \$600 per week in most cases. This will involve very significant changes to their lifestyle.

Table 5 **Government outlays and revenue for the case study family with TYPICAL insurance under the base case and four scenarios, 2009-10**

	Govt Revenue \$/wk	Govt Outlays \$/wk	Net Govt \$/wk	Net Govt pa \$ p.a.	Change \$ p.a.
Base Case	407.70	106.05	301.65	15,690	
S1	81.21	357.17	-275.96	-14,350	-30,040
S2(a)	72.37	465.90	-393.53	-20,460	-36,150
S2(b)	72.37	465.90	-393.53	-20,460	-36,150
S3	174.02	295.63	-121.61	-6,320	-22,010
S4(a)	101.44	421.69	-320.25	-16,650	-32,340
S4(b)	101.44	421.69	-320.25	-16,650	-32,340

Note: 'Govt Revenue' is the sum of income tax and Medicare levies paid by the family.

'Govt Outlays' is the sum of government cash benefits paid (or transfer income) and childcare tax rebates provided to the family.

Source: STINMOD

Transfer incomes increase under all scenarios. This reliance on the government, impacts on the government in two ways. First, it receives less revenue from the family – the family is earning less under all of the scenarios and paying less income tax. Second, because the family is earning less, they are entitled to greater support from the government and receive increased transfer income. The government has to outlay more money. If the net government expenditures under the scenarios are compared with the net revenue of \$15,690 it receives from the base case family, the overall financial impact for the government is increased expenditure of between \$22,000 and \$36,000 per family per year (Table 5).

Recommended Insurance Outcomes

With the industry recommended levels of insurance, the family's financial circumstances under most scenarios approach that of the base case. Generally the family is able to maintain an income after tax, mortgage repayments and childcare that is at least four-fifths of the previous level. The exception is the scenario in which the wife is temporarily disabled. In this case, there is a sharp decline in the family income despite IP insurance providing 75 per cent of her previous income. It seems that the need to reduce employment hours by the husband to care for his wife results in a drop in earnings that overwhelms the

increases in transfer payments and the IP insurance payments. The outcome is better than without IP insurance but only 56 per cent replacement of the previous income.

Table 6 **Government outlays and revenue for the case study family with RECOMMENDED insurance under the base case and four scenarios, 2009-10**

	Govt Revenue \$/wk	Govt Outlays \$/wk	Net Govt \$/wk	Net Govt pa \$ p.a.	Change \$ p.a.
Base Case	407.70	106.05	301.65	15,690	
S1	191.31	289.28	-97.97	-5,090	-20,780
S2(a)	72.37	412.69	-340.32	-17,700	-33,390
S2(b)	181.07	380.87	-199.80	-10,390	-26,080
S3	229.37	274.61	-45.24	-2,350	-18,040
S4(a)	101.44	395.10	-293.66	-15,270	-30,960
S4(b)	161.12	392.11	-230.99	-12,010	-27,700

Note: 'Govt Revenue' is the sum of income tax and Medicare levies paid by the family.

'Govt Outlays' is the sum of government cash benefits paid (or transfer income) and childcare tax rebates provided to the family.

Source: STINMOD

Table 6 shows that having recommended levels of insurance does not move the entire financial burden away from the government. The government still bears a significant proportion of the cost of the death, injury or illness. However, these costs are significantly reduced when the family has the recommended levels of insurance. As an example, under Scenario 1, while the government's balance sheet is reduced by \$5,090 per annum rather than increasing by \$15,690 for this family.

4.3 NATIONAL IMPLICATIONS

There were 12,430 deaths of married men or women aged between 20 and 64 in 2008 (ABS 2009a)⁸. Of these deaths, this report estimates that 6,540 were married with dependants (3,980 men and 2,560 women).

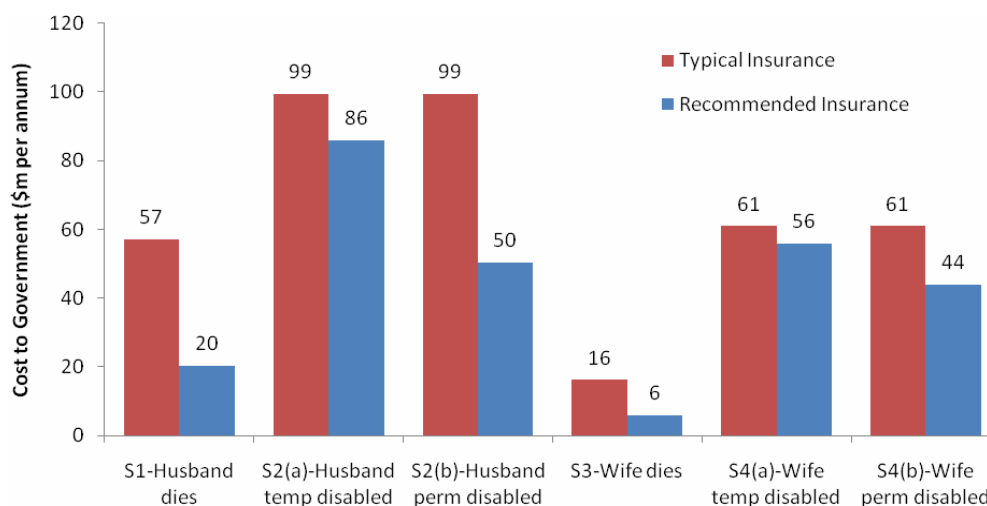
According to the HILDA Survey, there were 235,790 Australians aged 20 to 64 years who were a member of a couple with dependent children who suffered a serious injury or illness in the previous 12 months. The same survey found that 17,040 people (part of a couple with children) were no longer in the labour force – as they had been 12 months previously – as a result of their own sickness, disability or injury. This means 9,715 fathers and 7,325 mothers are no longer working due to injuries or illnesses. Over the average 45 year working life, 1,061,100 people will be impacted by the death of a parent or a serious illness or injury. Although the data does not indicate it, this report will arbitrarily assume that half of those people can never return to work.

Using data above and from the previous section we can estimate the cost to the government in terms of each family that experiences a death or disability. For example, for the death of the husband, the cost to government will be the estimated number of families impacted (3,980) multiplied by the difference between the transfer income and childcare

⁸ There were 7,462 deaths of married males aged 20 to 64 years in 2008 and 4,968 married females in the same age group.

rebates received and income tax and Medicare levy paid by each family (a net outlay of \$14,350 per family for those with typical insurance). This gives a total annual cost of \$57.1 million to the government for Scenario 1. If every family that experienced a death had the recommended level of insurance then the cost to government would have been \$20.3 million. Figure 2 shows the estimated cost under each scenario with typical and recommended levels of insurance.

Figure 2 Estimated net government outlays under the four scenarios with typical and recommended levels of insurance, \$m per annum 2009-10



Note: The cost to government is the estimated number of families impacted under each scenario multiplied by the difference between the transfer income and childcare rebates received and income tax and Medicare levy paid by each family.

Source: NATSEM calculations

The estimated total cost to government with current (that is typical) insurance levels of the four scenarios is \$394 million per annum. If every family had the recommended levels of insurance, the cost would be \$263 million, a saving of \$131 million per year or \$1.3 billion over the next ten years. This is the saving for one group of Australians - people aged 20 to 64 years and living in couple families with dependent children. It is **NOT** the total savings to the government of people having the recommended levels of insurance.

5 CONCLUSION

The aim of this report was to show the importance of having the appropriate level of insurance. Using a case study approach based on a hypothetical case study family of a couple in their 30s with two young children and both are in paid employment, four scenarios were examined..

The family's experience under four scenarios was to be modelled.

- Scenario 1: Husband dies prematurely

- Scenario 2(a): Husband is temporarily unable to work
- Scenario 2(a): Husband is never able to work again
- Scenario 3: Wife dies prematurely
- Scenario 4(a): Wife is temporarily unable to work
- Scenario 4(a): Wife is never able to work again

The report found that with typical levels of insurance under all of the scenarios, both the family and the government are financial losers. In some cases the family had to live on less than half the pre-event income (after childcare and mortgage repayments).

Comparison of the government expenditures under the scenarios with the net revenue of \$15,690 it receives from the base case family shows that the overall financial impact for the government is increased expenditure of between \$22,000 and \$36,000 per family per year.

The long term projections of the circumstances of the hypothetical family after the event show that with the recommended levels of insurance maintain around 75-80 per cent of their remaining income over the 5-year and 10-year horizons. For those with typical insurance the average levels are around 50 per cent.

Recommended Insurance Outcomes

With the industry recommended levels of insurance, the family's financial circumstances under most scenarios approach that of the base case. Generally the family is able to maintain an income after tax, mortgage repayments and childcare that is at least four-fifths of the previous level.

National Implications

This report estimates that the total cost to government with current (that is typical) insurance levels of the four scenarios is \$394 million per annum. If every family had the recommended levels of insurance, the cost would be \$263 million, a saving of \$131 million per year. This is the saving for only one group of Australians - people aged 20 to 64 years and living in couple families with dependent children.

TECHNICAL NOTES

DISPOSABLE INCOME

Disposable Income is defined as the total private (earned) income of the person plus transfer income plus childcare tax refund amounts received less income tax and Medicare levies.

REMAINING INCOME

Remaining Income is defined in this paper as income that is available to the family to spend. It should give a reasonable indication of the amount available for the everyday living expenses of the family. It is calculated as the disposable income less mortgage repayments (principal and interest) and net childcare costs. Alternatively it is gross income less tax, Medicare, childcare and mortgage repayments.

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APPENDIX - DETAILED TABLES

Table 7 Outcomes in 2009-10 for the case study family (\$ per week)

	Private income	Transfer income	Childcare tax refund	Tax and Medicare levy	Disposable income	Net childcare costs	After childcare
Base scenario							
Reference	1,442.30	0.00	97.01	336.06	1,203.26		
Spouse	673.10	9.04	0.00	71.64	610.50		
Family	2,115.40	9.04	97.01	407.70	1,813.76	194.02	1,619.74
First scenario							
Reference	0.00	0.00	0.00	0.00	0.00		
Spouse	701.90	312.71	44.46	81.21	977.86		
Family	701.90	312.71	44.46	81.21	977.86	88.91	888.95
Second scenario							
Reference	0.00	210.18	39.15	0.00	249.33		
Spouse	673.10	216.57	0.00	72.37	817.30		
Family	673.10	426.75	39.15	72.37	1,066.63	78.29	988.34
Third scenario							
Reference	961.50	235.94	59.69	174.02	1,083.11		
Spouse	0.00	0.00	0.00	0.00	0.00		
Family	961.50	235.94	59.69	174.02	1,083.11	119.38	963.73
Fourth scenario							
Reference	769.20	2.99	39.15	101.44	709.89		
Spouse	0.00	379.55	0.00	0.00	379.55		
Family	769.20	382.54	39.15	101.44	1,089.44	78.29	1,011.15

Note: Disposable income is equal to private income plus transfer income plus childcare tax refund amounts less income tax and Medicare levies. Net childcare costs are the amount that the family would have to pay to the childcare centre after allowing for subsidies paid directly by the government.

Source: STINMOD

Table 8 Outcomes in 2013-14 for the case study family (\$ per week)

	Private income	Transfer income	Childcare tax refund	Tax and Medicare levy	Disposable income	Net childcare costs	After childcare
Base scenario							
Reference	1,703.82	0.00	37.38	424.23	1,316.95		
Spouse	795.15	0.00	0.00	106.32	688.83		
Family	2,498.97	0.00	37.38	530.55	2,005.78	74.76	1,931.02
First scenario							
Reference	0.00	0.00	0.00	0.00	0.00		
Spouse	829.17	324.69	22.09	108.41	1,067.54		
Family	829.17	324.69	22.09	108.41	1,067.54	44.19	1,023.35
Second scenario							
Reference	0.00	202.78	17.68	0.00	220.46		
Spouse	795.15	221.27	0.00	89.23	927.20		
Family	795.15	424.05	17.68	89.23	1,147.66	35.36	1,112.30
Third scenario							
Reference	1,135.84	223.05	28.45	212.82	1,174.48		
Spouse	0.00	0.00	0.00	0.00	0.00		
Family	1,135.84	223.05	28.45	212.82	1,174.48	56.9	1,117.58
Fourth scenario							
Reference	908.67	0.00	17.68	145.93	780.42		
Spouse	0.00	388.46	0.00	0.00	388.46		
Family	908.67	388.46	17.68	145.93	1,168.88	35.36	1,133.52

Source: STINMOD

Table 9 Outcomes in 20018-19 for the case study family (\$ per week)

	Private income	Transfer income	Childcare tax refund	Tax and Medicare levy	Disposable income	Net childcare costs	After childcare
Base scenario							
Reference	2,097.66	0.00	0.00	575.85	1,521.75		
Spouse	978.95	0.00	0.00	171.57	807.38		
Family	3,076.61	0.00	0.00	747.42	2,329.13	0	2,329.13
First scenario							
Reference	0.00	0.00	0.00	0.00	0.00		
Spouse	1,020.83	326.75	0.00	170.59	1,176.95		
zzFamily	1,020.83	326.75	0.00	170.59	1,176.95	0	1,176.95
Second scenario							
Reference	0.00	220.77	0.00	0.00	220.77		
Spouse	978.95	260.13	0.00	152.18	1,086.90		
Family	978.95	480.90	0.00	152.18	1,307.67	0	1,307.67
Third scenario							
Reference	1,398.39	259.33	0.00	302.03	1,355.69		
Spouse	0.00	0.00	0.00	0.00	0.00		
Family	1,398.39	259.33	0.00	302.03	1,355.69	0	1,355.69
Fourth scenario							
Reference	1,118.71	0.00	0.00	221.18	897.52		
Spouse	0.00	451.66	0.00	0.00	451.66		
Family	1,118.71	451.66	0.00	221.18	1,349.18	0	1,349.18

Note: Disposable income is equal to private income plus transfer income plus childcare tax refund amounts less income tax and Medicare levies. Net childcare costs are the amount that the family would have to pay to the childcare centre after allowing for subsidies paid directly by the government.

Source: STINMOD

Table 10 Outcomes with Typical and Recommended Insurance under the base case and four scenarios, 2009-10

	Current Debt	Super payout (m)	Super payout (f)	Ins (m)	Ins (f)	Net debt	Invested	Repay loan	Disp Inc (m)	Disp Inc (f)	Childcare	Income after childcare	Remaining Income	% of base case
	\$	\$	\$	\$			\$	\$/wk	\$/wk	\$/wk	\$/wk	\$/wk	\$/wk	
Base Case	-253,900	0	0	0	0	-253,900	0	-395	1,203	611	-194	1,620	1,224	100.0
Typical Insurance														
S1- death (m)	-253,900	30,100	0	91,000	0	-132,800	0	-207	0	978	-89	889	682	55.7
S2(a)-temp disabled (m)	-253,900		0		0	-253,900	0	-395	249	817	-78	988	593	48.4
S2(b)-perm disabled (m)	-253,900	30,100	0	71,000	0	-152,800	0	-238	249	817	-78	988	750	61.3
S3-death (f)	-253,900	0	14,100	0	0	-239,800	0	-373	1,083		-119	964	590	48.2
S4(a)-temp disabled (f)	-253,900	0	0	0	0	-253,900	0	-395	710	380	-78	1,011	616	50.3
S4(b)-perm disabled (f)	-253,900	0	14,100	0	0	-239,800	0	-373	710	380	-78	1,011	638	52.1
Recommended Insurance														
S1- death (m)	-253,900	30,100	0	580,000	0	0	356,200	0	0	1,108	-126	982	982	80.2
S2(a)-temp disabled (m)	-253,900		0		0	-253,900	0	-395	902	817	-78	1,641	1,246	101.8
S2(b)-perm disabled (m)	-253,900	30,100	0	580,000	0	0	356,200	0	196	985	-78	1,103	1,103	90.1
S3-death (f)	-253,900	0	14,100	0	420,000	0	180,200	0	1,163	0	-140	1,023	1,023	83.5
S4(a)-temp disabled (f)	-253,900	0		0		-253,900	0	-395	710	458	-78	1,089	694	56.7
S4(b)-perm disabled (f)	-253,900	0	14,100	0	420,000	0	180,200	0	803	353	-78	1,078	1,078	88.0

Source: NATSEM calculations

Table 11 Outcomes with Typical and Recommended Insurance under the base case and four scenarios, 2013-14

	Current Debt	Super payout (m)	Super payout (f)	Ins (m)	Ins (f)	Original Net debt	Originally Invested	Repay loan	Disp Inc (m)	Disp Inc (f)	Childcare	Income after childcare	Remaining Income	% of base case
	\$	\$	\$	\$			\$	\$/wk	\$/wk	\$/wk	\$/wk	\$/wk	\$/wk	
Base Case						-253,900	0	-395	1,317	689	-75	2,081	1,685	100.0
Typical Insurance														
S1- death (m)						-132,800	0	-207	0	1,068	-44	1,112	905	53.7
S2(a)-temp disabled (m)						-253,900	0	-395	220	927	-35	1,183	788	46.7
S2(b)-perm disabled (m)						-152,800	0	-238	220	927	-35	1,183	945	56.1
S3-death (f)						-239,800	0	-373	1,174	0	-57	1,231	858	50.9
S4(a)-temp disabled (f)						-253,900	0	-395	780	388	-35	1,204	809	48.0
S4(b)-perm disabled (f)						-239,800	0	-373	780	388	-35	1,204	831	49.3
Recommended Insurance														
S1- death (m)						0	356,200	0	0	1,175	-57	1,232	1,232	73.1
S2(a)-temp disabled (m)						-253,900	0	-395	988	927	-35	1,950	1,555	92.3
S2(b)-perm disabled (m)						0	356,200	0	166	1,106	-35	1,307	1,307	77.6
S3-death (f)						0	180,200	0	1,247	0	-57	1,304	1,304	77.4
S4(a)-temp disabled (f)						-253,900	0	-395	780	517	-35	1,332	937	55.6
S4(b)-perm disabled (f)						0	180,200	0	880	360	-35	1,276	1,276	75.7

Source: NATSEM calculations

Table 12 Outcomes with Typical and Recommended Insurance under the base case and four scenarios, 2018-19

	Current Debt	Super payout (m)	Super payout (f)	Ins (m)	Ins (f)	Original Net debt	Originally Invested	Repay loan	Disp Inc (m)	Disp Inc (f)	Childcare	Income after childcare	Remaining Income	% of base case
	\$	\$	\$	\$			\$	\$/wk	\$/wk	\$/wk	\$/wk	\$/wk	\$/wk	
Base Case						-253,900	0	-395	1,522	807	0	2,329	1,934	100.0
Typical Insurance														
S1- death (m)						-132,800	0	-207	0	1,177	0	1,177	970	50.2
S2(a)-temp disabled (m)						-253,900	0	-395	221	1,087	0	1,308	912	47.2
S2(b)-perm disabled (m)						-152,800	0	-238	221	1,087	0	1,308	1,070	55.3
S3-death (f)						-239,800	0	-373	1,356	0	0	1,356	982	50.8
S4(a)-temp disabled (f)						-253,900	0	-395	898	452	0	1,349	954	49.3
S4(b)-perm disabled (f)						-239,800	0	-373	898	452	0	1,349	976	50.5
Recommended Insurance														
S1- death (m)						0	356,200	0	0	1,322	0	1,322	1,322	68.4
S2(a)-temp disabled (m)						-253,900	0	-395	1,141	1,087	0	2,228	1,833	94.8
S2(b)-perm disabled (m)						0	356,200	0	158	1,281	0	1,439	1,439	74.4
S3-death (f)						0	180,200	0	1,430	0	0	1,430	1,430	74.0
S4(a)-temp disabled (f)						-253,900	0	-395	898	606	0	1,503	1,108	57.3
S4(b)-perm disabled (f)						0	180,200	0	998	420	0	1,419	1,419	73.4

Source: NATSEM calculations