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Productivity Commission

Superannuation Policy for Post-Retirement

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The Productivity Commission

The Productivity Commission is the Australian Government's independent research and advisory body on a range of economic, social and environmental issues affecting the welfare of Australians. Its role, expressed most simply, is to help governments make better policies, in the long term interest of the Australian community.

The Commission's independence is underpinned by an Act of Parliament. Its processes and outputs are open to public scrutiny and are driven by concern for the wellbeing of the community as a whole.

Further information on the Productivity Commission can be obtained from the Commission's website (www.pc.gov.au).

Contents

The Commission's report is in two volumes. This volume contains the supplementary papers, detail around the conduct of the project, and references. Volume 1 contains the overview and chapters. The modelling papers referred to in the report are available from the Commission's website (www.pc.gov.au).

Volume 2: Supplementary papers

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Use of HILDA data

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

Abbreviations and explanations

Abbreviations

ABS	Australian Bureau of Statistics
APRA	Australian Prudential Regulatory Authority
ASFA	Association of Superannuation Funds of Australia
ASIC	Australian Securities & Investment Commission
ATO	Australian Taxation Office
CEPAR	ARC Centre of Excellence in Population Ageing Research
CIPR	Comprehensive Income Product for Retirement
CPI	Consumer Price Index
FSI	Financial System Inquiry
FUM	Funds under management
HILDA	Household, Income and Labour Dynamics in Australia Survey
IGR	Intergenerational Report
NATSEM	National Centre for Social and Economic Modelling
OECD	Organisation for Economic Co-operation and Development
PBO	Parliamentary Budget Office
PC	Productivity Commission
PCRM	Productivity Commission Retirement Model
SG	Superannuation Guarantee
SIH	ABS Survey of Income and Housing
SMSF	Self-managed Superannuation Fund
TTR	Transition to Retirement

Explanations

Billion	The convention used for a billion is a thousand million (10^9).

1 The superannuation policy environment

This supplementary paper details the rules governing the accumulation of, and access to, superannuation, as well as the taxation of superannuation contributions, earnings and benefits (sections 1.1 and 1.2). Some of these rules have been used to inform the modelling work undertaken by the Commission in assessing the impacts of changing the preservation age (see supplementary paper 6), while others provide necessary context for discussions in other areas of the report and are included to provide a more complete picture of superannuation taxation and access arrangements.

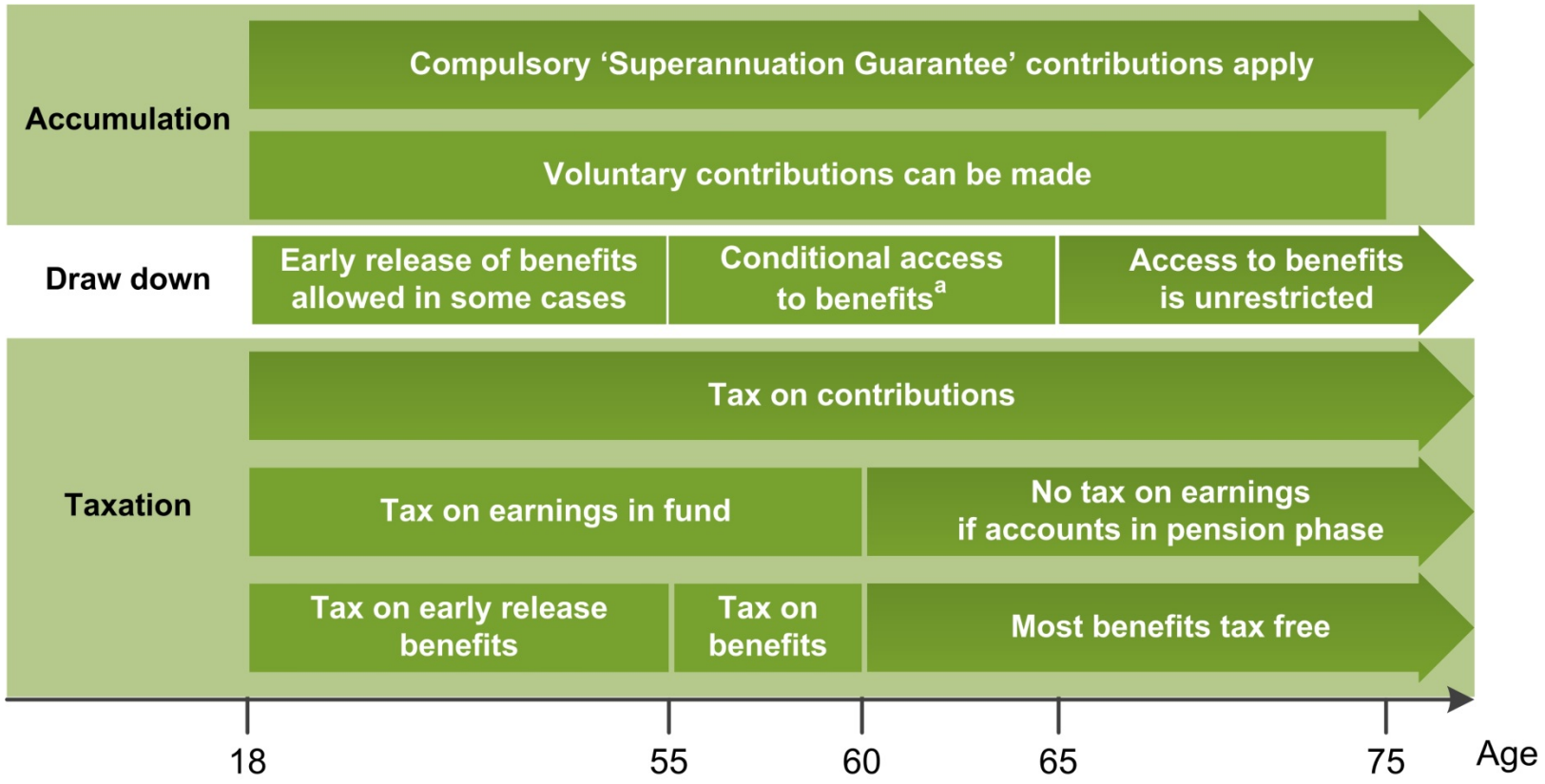
If the preservation age were to increase, rules regarding early access to superannuation benefits would take on greater policy prominence. These rules are outlined in section 1.3.

The superannuation system also interacts with the social security system — particularly in relation to the treatment of superannuation benefits under the Age Pension means tests — these linkages are discussed in supplementary paper 3.

The information presented relates to current policy and where possible incorporates proposed changes (which may or may not be legislated).[1] Australia's superannuation system has been subject to regular policy change since its inception (chapter 1), and those people significantly affected by major rule changes have generally been afforded grandfathering provisions that maintain their previous entitlements. These grandfathering provisions are typically not detailed here, nor incorporated in the modelling.

[1] Rules specific to those who are self-employed are not included in this supplementary paper.

Figure 1.1 **An illustration of the rules governing superannuation for relevant ages**



[a] Those aged 55-64 years can access their superannuation if they meet a condition of release — they have to be retired or on a transition to retirement pension. The age at which benefits can be accessed — the preservation age — is gradually increasing from 55 years to 60 years between 2015 and 2025.

1.1 Rules governing accumulation

Employers of individuals aged over 18 years who earn at least $450 (before tax) a month are required to make mandatory Superannuation Guarantee (SG) contributions to a nominated, complying superannuation fund in accordance with the legislated minimum requirements (ATO 2015c). The minimum legislated contributions are set to gradually increase over time (table 1.1). Employers of individuals aged under 18 years are required to make SG contributions if their employees earn at least $450 per month and work more than 30 hours a week (ATO 2015c).

Table 1.1 **Superannuation Guarantee entitlements[a]**
From 1 July of the relevant financial year

Financial years	*Superannuation Guarantee rate (per cent)*
2002-03 to 2012-13	9
2013-14	9.25
2014-15 to 2020-21	9.5
2021-22	10
2022-23	10.5
2023-24	11
2024-25	11.5
2025-26	12

a Proposed increases to the Superannuation Guarantee beyond 2021-22.

Sources: ATO (2014a); Swoboda (2011).

In addition to SG contributions, employees can salary sacrifice *before-tax* income as a concessional contribution.[2] Concessional contributions made up to a cap are taxed at lower rates (see below). More tax may be payable if contributions are made above the cap. Anyone aged *under* 65 years is also able to make non-concessional (after-tax) contributions to a complying superannuation fund irrespective of whether or not they are working (ATO 2014e). Individuals aged between 65 and 75 years can only make non-concessional (after-tax) contributions to a complying fund if they pass a work test where they are employed for at least 40 hours over no more than 30 consecutive days in the financial year (ATO 2014e).

Individuals cannot make non-concessional contributions to their superannuation accounts once they reach the age of 75 years (ATO 2014e).[3] But there is no age restriction on mandated SG contributions.

2 The Commission refers to concessional and non-concessional contributions as 'voluntary contributions' elsewhere in the report.

3 Individuals have up to 28 days after the end of the month in which they turn 75 to make an after-tax contribution.

Some workers — particularly longstanding public servants, but also workers in certain other sectors, such as the university sector — may have accumulated superannuation under different schemes, such as defined benefit and/or non-standard defined contribution schemes. The details of these schemes are not presented here as they only apply to a relatively small number of individuals and are generally closed to new members.

Taxation on contributions

The tax payable on superannuation contributions varies depending on how much individuals contribute and their age.

SG, salary sacrifice contributions and contributions for which a tax deduction has been claimed up to a 'concessional' contribution cap are taxed at 15 per cent for individuals earning less than $300 000 per year (see table 1.2 for concessional contributions cap amounts in recent years). These are contributions from *before-tax* income, or contributions for which a tax deduction has been claimed. Contributions above the cap (excess contributions) are taxed at an individual's marginal tax rate (prior to 2013-14, the tax rate on concessional contributions above the cap was 31.5 per cent).[4] Marginal tax rates are shown in table 1.3.

Table 1.2 **Concessional contribution caps**

Period	*General cap ($)*	*Cap for 60 years and over ($)*	*Cap for 50 years and over ($)*	*Tax rate on excess contributions*
2007-08 to 2008-09	50 000	100 000	100 000	31.5%
2009-10 to 2011-12	25 000	50 000	50 000	31.5%
2012-13	25 000	25 000	25 000	31.5%

Period	*General cap ($)*[a]	*Cap for 59 years and over ($)*	*Cap for 49 years and over ($)*	*Tax rate on excess contributions*
2013-14	25 000	35 000	25 000	Marginal Tax Rate
2014-15	30 000	35 000	35 000	Marginal Tax Rate
2015-16	30 000	35 000	35 000	Marginal Tax Rate

[a] Future years will be indexed in line with Average Weekly Ordinary Time Earnings (AWOTE) in $5000 increments

Source: ATO (2015d).

4 Individuals are liable to pay an additional 15 per cent tax (known as Division 293 tax) if they have taxable contributions in a year. If their income — for surcharge purposes plus their low-tax contributions — is greater than $300 000 the taxable contributions will be the lesser of the low-tax contributions and the amount above the $300 000 threshold. The Division 293 tax applies to the lower amount (ATO 2015d).

In addition, individuals can make contributions up to the 'non-concessional' contribution cap from *after-tax* income (for which a tax deduction has not been claimed). The non-concessional cap is six times the amount of the general concessional contributions cap. In 2013-14, the general non-concessional contributions cap was $150 000, which increased in 2014-15 to $180 000 (in line with an increase in the general contribution cap) (ATO 2014e). For people aged under 65 years, non-concessional contributions can be 'brought forward' for the next two years, thereby allowing individuals to contribute up to three times the non-concessional contributions cap in a year.

Table 1.3 **Individual income tax rates**[a]
2014-15

Taxable income	*Tax on this income*
0 - $18 200	Nil
$18 201 - $37 000	19 cents for each $1 over $18 200
$37 001 - $80 000	$3572 plus 32.5 cents for every $1 over $37 000
$80 001 - $180 000	$17 547 plus 37 cents for each $1 over $80 000
$180 001 and over	$54 547 plus 45 cents for each $1 over $180 000

a The 2 per cent Medicare levy is not applied.

Source: ATO (2014b).

No tax is payable on non-concessional contributions by a superannuation fund as income tax has already been paid when individuals earn the income used to make contributions. Tax payable for non-concessional contributions that exceed the cap are taxed at the highest marginal tax rate[5] (46.5 per cent in 2013-14 and 47 per cent in 2014-15 and later financial years plus the 2 per cent budget repair levy until 2016-17) if individuals do not elect to release their excess non-concessional contributions and the associated earnings.

Taxation on earnings

While in the accumulation phase, a statutory rate of 15 per cent is applied on the earnings of funds (ASIC 2014f). However, because of capital gains tax concessions and access to imputation credits, the effective tax rate is less than 15 per cent. No tax is payable on the fund's earnings if the funds are in the pension phase.[6]

A capital gains tax of 10 per cent may also apply where an asset held by a superannuation fund is sold for a gain (ASIC 2014f). This discounted rate only applies in cases where the asset was held by the fund for more than 12 months. In cases where the asset was held for less than 12 months, the capital gains tax rate is 15 per cent (Power 2014).

5 Marginal tax rates include the Medicare levy of 2 per cent.

6 The pension phase and drawdown options are covered in section 1.2 and are discussed in more detail in chapter 4.

Taxes paid on the withdrawal of benefits are discussed in section 1.2.

1.2 Rules governing access and draw down

Access to superannuation benefits is restricted and is only granted once one of the following qualifying provisions has been met:

- **Retirement —** Retired fund members must reach their preservation age to access preserved benefits (subject to early access exceptions discussed below). The preservation age is currently 55 but will gradually rise to 60 for those born after 30 June 1964 (table 1.4).
- **Transition to retirement —** If a member is under 65 and has reached their preservation age but remains employed (either full or part-time), they can access their preserved benefits and restricted non-preserved benefits as a non-commutable[7] income stream (box 1.1).[8] A transition to retirement pension[9] (TTR pensions) can be used to increase income, make a gradual transition to retirement (by supplementing income) or boost superannuation savings and minimise income tax for individuals. Members with TTR pensions must withdraw between 4 and 10 per cent of the balance each year.
- **Reaching age 65 —** Once a member reaches 65, they can access their superannuation benefits at any time whether they are retired or not.[10]

Table 1.4 **Transition to a preservation age of 60 years**

Date of birth	*Preservation age*
Before 1 July 1960	55 years
Between 1 July 1960 and 30 June 1961	56 years
Between 1 July 1961 and 30 June 1962	57 years
Between 1 July 1962 and 30 June 1963	58 years
Between 1 July 1963 and 30 June 1964	59 years
After 30 June 1964	60 years

Source: APRA (2006).

7 Non-commutable income streams cannot be converted (and subsequently paid out) as a lump sum.

8 Some superannuation funds do not allow their members to take TTR pensions.

9 TTR pensions are also referred to as transition to retirement income streams (TRIS).

10 Members of some funds must be retired to access their superannuation even after they reach 65 years.

Box 1.1 The preservation of benefits

Since 30 June 1999 all superannuation contributions made by, or on behalf of, a fund member are **preserved benefits** that cannot be withdrawn (unless under certain circumstances as discussed in section 1.3) until the member reaches the preservation age. Employer eligible termination payments (ETPs) made into a superannuation fund after 30 June 2004 are also preserved benefits.

Restricted non-preserved benefits include all contributions made between 1 July 1983 and 30 June 1999 (and rolled-over employer ETPs made before 1 July 2004). In general, these benefits can be accessed once a member leaves the contributing employer. However, the earnings on these contributions are preserved.

Unrestricted non-preserved benefits can be withdrawn at any time. For example, if a member does not withdraw their benefits at the time they meet a condition of release, their benefits become unrestricted and can be accessed at the discretion of the member.

Sources: ATO (2014c); UniSuper (2014).

These preservation and access arrangements are intended to ensure that the tax concessions afforded to superannuation are used to support individuals in their retirement. However, there are also limited circumstances where superannuation benefits may be accessed prior to reaching the preservation age (section 1.3).

Once an individual has retired and a qualifying provision has been met, superannuation benefits become 'unrestricted non-preserved', which means that they can be withdrawn at any time and in any way that the member sees fit, including as lump sums. Most commonly, some (if not all of the benefit) is converted to an account-based pension[11], which can be flexibly withdrawn to pay for consumption in retirement (chapter 4). However, people can also withdraw their superannuation and reinvest it in other assets, including annuities.[12]

When a person retires and their accumulation account is converted into a pension account, a minimum percentage of the total value of the account balance must be withdrawn each year (either through income streams, lump sums or a combination of the two) but the exact percentage depends on the age of the retiree (table 1.5).[13] There are no maximum

11 Account-based pensions are also referred to as account-based income streams.

12 This supplementary paper examines the access and tax rules of those benefits that either stay within the superannuation system (as an account-based pension) or are taken as lump sums. The tax treatment of investments financed through the use of lump sums is not discussed here as it is outside the purview of the superannuation system.

13 The current minimum drawdown rates were introduced in 2007 as part of the *Simplified Superannuation* reforms. These minimum rates were set in such a way — increasing with age — to enable capital to continue to grow in the early stages of retirement, and then be drawn down during the later stages of life (Australian Government 2006a). As part of this reform, maximum drawdown rates were abolished to assist retirees in meeting unexpected large expenses (Australian Government 2006a).

withdrawal limits[14] (if the person is retired), but once money is withdrawn from a pension account, it cannot be put back and, if reinvested rather than consumed, is liable for taxation on any earnings and may affect eligibility for the Age Pension.[15]

Table 1.5 **Minimum withdrawal requirements for account-based pensions[a]**

Age	*Annual payment as percentage of account balance*
Under 65	4 per cent
65-74	5 per cent
75-79	6 per cent
80-84	7 per cent
85-89	9 per cent
90-94	11 per cent
95+	14 per cent

a The minimum drawdown rates were halved between 2008-09 to 2010-11 in response to the global financial crisis. These minimum drawdown rates were then increased by 25 percentage points in 2011-12 and 2012-13 and were restored completely in 2013-14.

Source: ASIC (2015).

Taxation of benefits

Tax may also be payable once superannuation benefits are withdrawn. The tax rate applied depends on the age of the superannuant; the form in which the benefits are taken (as a lump sum or an income stream); the size of the lump sum taken; and whether benefits were taxed in the accumulation phase. Table 1.6 presents the tax rates that apply on benefits that have previously been taxed in the fund. Benefits can be accessed tax free if the superannuant is over the age of 60 and their funds were taxed as they were accumulating. Higher tax rates are applied to any benefits released before the preservation age.

14 Transition to retirement pensions must be taken as an income stream, and between 4 and 10 per cent of the pension account balance must be withdrawn each financial year.

15 Superannuation may be assessed by the Age Pension means tests in other cases. For example, if an individual is over the Age Pension age their superannuation (and their partner's superannuation, regardless of their age) is included in the assets test and is considered deemed income from financial investments (DHS 2014c).

Table 1.6 **Taxation on benefits that were taxed while accumulating[a,b]**

Tax rates apply to the taxable component of the taxed element, 2014-15

Age	*Benefit taken as lump sum*	*Benefit taken as income stream*
Below preservation age[c]	• Terminal illness benefits, lump sums less than $200 and death benefits paid to dependants are not taxed • A maximum rate of 15 per cent is applied to death benefits paid to non-dependants • A maximum rate of 20 per cent is applied to lump sums released for other reasons[d]	• Marginal tax rate applies. If early release is granted on the grounds of permanent incapacity (a disability superannuation income stream) a 15 per cent offset is applied • If a death benefit is taken as an income stream and the beneficiary and the deceased are under 60 years old the benefit is taxed at the marginal tax rate less a 10 per cent offset
Between the preservation age and under 60 years	• Tax free for lump sums valued up to $185 000 • Lump sums over $185 000 are taxed at 15 per cent • Death benefits paid to dependants are not taxed. A maximum rate of 15 per cent is applied to death benefits paid to non-dependants	• Taxed at the marginal rate less a 15 per cent offset. This arrangement also applies to those using transition to retirement pensions • If a death benefit is taken as an income stream and the beneficiary and the deceased are under 60 years old the benefit is taxed at the marginal tax rate less a 10 per cent offset
60 years and over	• Nil — amount is non-assessable non-exempt income	• Nil — amount is non-assessable non-exempt income

a A temporary 2 per cent levy applies for the years 2014-15, 2015-16 and 2016-17 to individuals with a taxable income of more than $180 000. **b** The Medicare levy of 2 per cent is not included. **c** Under certain circumstances a person can access their superannuation before preservation age. These circumstances and their prevalence are discussed in section 1.3. Those aged under 25 years who started receiving a death benefit income stream after 1 July 2007 have to take their remaining benefit as a lump sum after they reach the age of 25. The lump sum is tax free. **d** The maximum rate is applied if it is lower than the marginal tax rate. Otherwise, the marginal tax rate is applied.

Source: ATO (2015g).

In many cases, funds are taxed as they are accumulating, but there are some instances — including some public sector superannuation funds — where the contributions or earnings are not taxed. Higher tax rates apply to benefits sourced from superannuation accounts that were untaxed as they were accumulating (table 1.7).

Table 1.7 **Taxation on benefits not taxed while accumulating[a,b]**

Tax rates apply to the taxable component of the untaxed element, 2014-15

Age	*Benefit taken as lump sum*	*Benefit taken as income stream*
Below preservation age[c]	• Terminal illness benefits, lump sums less than $200 and death benefits paid to dependants are not taxed • A maximum rate of 30 per cent is applied to death benefits paid to non-dependants • Maximum[d] tax rate of 30 per cent applies to sums up to $1.35 million • Lump sums over $1.35 million taxed at the top marginal rate	• Marginal tax rates
Between the preservation age and under 60 years	• Maximum[d] rate of 15 per cent applies to lump sums valued up to $185 000 • Lump sums between $185 000 and $1.35 million are taxed at 30 per cent • Lump sums over $1.35 million taxed at the top marginal rate • Death benefits paid to dependants are not taxed. A maximum rate of 30 per cent is applied to death benefits paid to non-dependants	• Marginal tax rates
60 years and over	• Maximum[d] tax rate of 15 per cent for sums up to $1.35 million • Lump sums over $1.35 million taxed at the top marginal rate • Death benefits paid to dependants are not taxed. A maximum rate of 30 per cent is applied to death benefits paid to non-dependants	• Taxed at marginal rate less a 10 per cent offset

a A temporary 2 per cent levy applies between the years of 2014-15, 2015-16 and 2016-17 to individuals with a taxable income of more than $180 000. **b** The Medicare levy of 2 per cent is not included. **c** Under certain circumstances a person can access their superannuation before preservation age. These circumstances and their prevalence are discussed in section 1.3. **d** The maximum rate is applied if it is lower than the marginal tax rate. Otherwise, the marginal tax rate is applied.

Source: ATO (2015g).

1.3 Rules governing early access

While it is generally the case that superannuation funds cannot be accessed before members reach preservation age, the *Superannuation Act 1976* (Cwlth) provides limited

grounds for the early release of benefits.[16] Broadly speaking, the Superannuation Act provides two avenues for an individual to access their superannuation early — they can apply to the Department of Human Services on compassionate grounds, or they can apply to their superannuation fund (on the grounds of severe financial hardship, terminal illness, disability and other circumstances such as when a person has a very low superannuation balance or when they permanently leave the country).

Compassionate grounds are assessed by Department of Human Services

The Department of Human Services (DHS) is responsible for applying the law that determines early release applications on compassionate grounds. If claimed on compassionate grounds, superannuation can only be accessed if supporting evidence is provided to DHS and the applicant cannot meet their expenses by other means (including through their non-superannuation savings). Releases made on compassionate grounds can only be used to pay for specified expenses and may be subject to an annual payment cap (table 1.8).

16 The grounds for early release are defined in the *Superannuation Industry (Supervision) Regulations 1994* (Cwlth).

Table 1.8 **Specified compassionate grounds for early release**

Compassionate ground expenses	*Eligibility*	*Supporting evidence*	*Size of payment*
Medical or dental treatment and associated transport costs for applicant or their dependant[a]	• Life threatening illness or injury, acute or chronic pain or chronic mental illness • Require assistance to meet costs of medical treatment, which is not readily available through the public health system or covered by insurance • Require assistance meeting transport costs to access medical or dental treatment • Do not have the financial capacity to pay for these expenses without superannuation	• Registered medical practitioner and a qualified registered medical specialist need to provide reports, which document the life threatening illness or injury, acute or chronic pain, or chronic mental illness, and that the treatment is not readily available through the public health system. Reports expire six months after the medical practitioner and specialist sign. • In addition to the above, to claim transport expenses, a medical practitioner and a specialist need to state that the applicant or their dependant requires transport to access treatment, the type of transport required and the frequency, location and duration of treatment. • If an additional vehicle is needed to access treatment, the applicant needs to provide confirmation of the trade-in value of the existing vehicle and a written statement documenting the unsuitability of the current vehicle. The applicant must also notify DHS if they do not have a car to trade in. • Quotes or unpaid invoices from service providers, which show treatment and transport expenses are required. Quotes must not be older than six months (or 30 days old in the case of unpaid invoices) and must indicate amounts claimable through private health insurance.	• Equal to 12 months of treatment and transport expenses
Arrears on mortgage to prevent primary residence being sold by lender[b]	• Mortgagee is threatening to repossess or sell the applicant's usual place of residence • The applicant is unable to pay the arrears without accessing their superannuation	• A separate letter or legal notice for each secured home loan needs to be provided, which details the amount in arrears, the time remaining before the mortgage will be foreclosed or property with be repossessed, the address of the property, value of three months' loan repayments, 12 months of interest on the outstanding balance of the loan, the name of the mortgagee and the account number for the loan. • The letter needs to be on the mortgagee's letterhead, dated and no more than 30 days old. • The applicant needs to provide 100 points of certified identification and complete the mortgage assistance application form.	• Sum of three months of repayments and 12 months interest on the outstanding balance

(continued next page)

Table 1.8 (continued)

Compassionate ground expenses	*Eligibility*	*Supporting evidence*	*Size of superannuation payment*
Home modifications or purchase of vehicle to accommodate severe disability for applicant or their dependant[c]	• Applicant or their dependant has a severe disability, which requires them to modify their home or vehicle or purchase disability aids • Modifications and purchases cannot be made without accessing superannuation	• A letter from a registered medical practitioner who has treated the applicant or their dependant, which classifies the medical condition as a severe disability, specifies which modifications or disability aids are needed and why. • The letter needs to be on the doctor's letterhead, show the doctor's qualifications, be signed and dated and be submitted within six months. • Evidence of dependency is required if applicant is claiming on behalf of a dependant. • Quotes or unpaid invoices from service providers are required. Quotes must not be older than six months and unpaid invoices no more than 30 days old. • The applicant also needs to complete the home modification form and provide 100 points of certified identification.	• The maximum amount considered for release within a 12 month period is the total cost of modifications or disability aids
Palliative care for the applicant or their dependant[d,e]	• The applicant or their dependant has a terminal illness and cannot afford palliative care without using their superannuation	• A letter from a medical practitioner, which states that the condition is a terminal illness and the duration of palliative care. • The letter needs to be on the doctor's letterhead, show the doctor's qualifications, be signed and dated and be submitted within six months. • Evidence of dependency is required if applicant is claiming on behalf of a dependant. • Quotes or unpaid invoices from service providers, which show treatment and transport expenses are required. Quotes must not be older than six months (or 30 days old in the case of unpaid invoices) and must indicate amounts claimable through private health insurance. • The applicant also needs to complete the palliative care form and provide 100 points of certified identification.	• The maximum release amount within a 12 month period is the total cost of 12 months of palliative care

(continued next page)

Table 1.8 (continued)

Compassionate ground expenses	*Eligibility*	*Supporting evidence*	*Size of superannuation payment*
• Expenses associated with the death, funeral or burial of a dependant[f]	• The applicant cannot pay for their dependant's funeral expenses without using superannuation	• Proof that the dependant has passed away, including a copy of the death certificate or a letter from a medical practitioner confirming the death. • The letter needs to be on the doctor's letterhead, show the doctor's qualifications, be signed and dated and be submitted within six months. • Evidence of dependency is also required. • Quotes or unpaid invoices from service providers are required. Paid invoices are not considered. Quotes must not be older than six months and unpaid invoices no more than 30 days old. • The applicant also needs to complete the funeral assistance form and provide 100 points of certified identification.	• The maximum amount of superannuation that can be released is $18 000

a A person is not eligible for early release of their superannuation if they cannot work because of a medical condition and they require assistance to meet their living expenses or if they receive Workcover for medical treatment or transport expenses. **b** An applicant is not eligible to access their superannuation on the grounds of mortgage assistance if their mortgagee is not threatening repossession (even if they are in arrears). **c** Early access to superannuation is not granted if the applicant or their dependant does not have a severe disability, modifications are for a residence that is not the applicant's primary home (even if it is the dependant's primary residence) or the applicant or their dependant needs assistance with living expenses because they are unable to work as a result of their severe disability. **d** A person who is terminally ill can apply directly to their superannuation fund for the early release of their superannuation. **e** Early release on the grounds of palliative care is not considered if the applicant or their dependant does not have a terminal illness or if assistance is needed to pay for living expenses. **f** Early release will not be granted if it is being claimed for the funeral expenses of someone who was not a dependant, the funeral has already taken place and has been paid for, or the applicant is applying for their own funeral.

Source: DHS (2014b).

Early release conditions can also be assessed by superannuation funds

Superannuation funds can also grant the early release of benefits. The grounds, eligibility criteria and payouts are set by government, but funds have the scope to subjectively assess claims and choose which grounds they will accept.

Severe financial hardship

Some funds allow their members to access their superannuation if they are experiencing severe financial hardship. People may be eligible for a superannuation lump sum valued at between $1000 and $10 000 if they have received government income support payments continuously for 26 weeks (ATO 2015b) and cannot meet 'reasonable and immediate family living expenses' defined as:

> Essentially, this expression [unable to meet reasonable and immediate family living expenses] means that the person's income is insufficient to meet his or her daily living expenses and that the person's assets (excluding the family home from consideration) could not reasonably and realistically be sold or used to cover the gap. If the person has a family, the family's combined resources are considered. (Senate Select Committee on Superannuation and Financial Services 2001, p. 11)

Early access due to severe financial hardship can also be granted if the applicant is not yet retired, but has reached preservation age plus 39 weeks, has been in receipt of government income support payments since reaching preservation age, and was not employed on a full-time or part-time basis at the time of submitting their application (AMP 2013). Those who are unemployed or working less than 10 hours a week could be eligible. People can access all of their superannuation if their application is accepted under these circumstances (Senate Select Committee on Superannuation and Financial Services 2002).

Terminal illness

An applicant can apply to access the entirety of their superannuation as a lump sum if they have a terminal illness and expect to die within the next 24 months (ATO 2015e).[17] In order to gain access, the applicant is required to provide their fund with letters from a medical practitioner and a medical specialist confirming that the medical condition is likely to result in death within 24 months (ATO 2015a).

Permanent or temporary incapacity

Superannuation funds can also release superannuation in the event of permanent incapacity — having a physical or mental medical condition that prevents a person from working in a

[17] Prior to 1 July 2015, terminal illness releases could only occur if the member was likely to die within 12 months.

job they are otherwise qualified for. Letters from a medical practitioner and specialist need to be provided to the superannuation fund to claim for early release. Superannuation can be accessed as a lump sum or income stream (ATO 2015g).

In some cases, funds allow early release of superannuation on the grounds of temporary incapacity, which is defined as a period in which the applicant cannot work their usual hours because of a physical or mental medical condition. Superannuation can only be accessed as a regular income stream for the duration of incapacity (ATO 2015g).

Other grounds

Funds can also allow early release of superannuation when a superannuation balance is less than $200 or the member is permanently leaving the country (ATO 2015g).[18]

How prevalent is early release and how much is it worth?

Commission analysis of data from the *Survey of Income and Housing* (SIH) suggests that around 97 000 people under 55 years accessed their superannuation in 2011-12 (this is less than one per cent of the adult population aged under 55 years). The average lump sum that was taken by those aged under 55 years was around $16 000, and the median amount was $7000. Those drawing an income from superannuation before the age of 55 received about $350 a week on average (the median income from superannuation was close to $180 per week).

The value of early releases estimated using SIH data is broadly consistent with statistics published by DHS on compassionate releases. Unfortunately, the Australian Prudential Regulation Authority does not publish similar figures for early releases made by superannuation funds.

Prevalence and value of compassionate releases

As well as publishing statistics on the average value of early releases on compassionate grounds approved by the DHS, the Department also publishes annual statistics on the number of recipients who access their superannuation for this reason (table 1.9).

[18] Individuals may also receive an insurance payout.

Table 1.9 **Early releases on compassionate grounds**

	Units	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*2013-14*
Applications received	no.	16331	15795	17391	18024	19286
Applications approved	no.	10539	10141	11346	11510	11728
Success rate	per cent	65	64	65	64	61
Amount approved for release	$m	111	123	154	146	151
Amount released as share of total benefits[a]	per cent	0.19	0.21	0.24	0.21	0.20
Average amount released per approval	$	10 544	12 127	13 544	12 643	12 874

[a] Total benefits as reported by APRA (2014a).

Sources: DHS (2012, 2014a).

Prevalence and value of early releases by superannuation funds

No information on early releases made by funds is routinely published, but the Association of Superannuation Funds of Australia (ASFA 2001) conducted a survey of some of its members and found that there were around 83 000 early releases in 2000-01 (on compassionate and severe financial hardship grounds[19]) totalling over $350 million (an average payment of around $4200). Of these releases, more than 90 per cent were due to severe financial hardship.

Some funds also provided information on the prevalence of early releases (due to severe financial hardship) as part of a Senate Inquiry into early access in 2001-02. The prevalence of early releases differs widely across funds. In many cases, early releases account for a small share of the total benefits paid.

- UniSuper (2001) released less than one per cent of its total benefit payments due to severe financial hardship.
- Early releases comprised over 4 per cent of the total benefits paid by Cbus in 2000-01 (Cbus nd).
- Catholic Schools Superannuation Fund (WA) made seven releases on the grounds of severe financial hardship in 2000-01. This accounted for 0.015 per cent of funds under management (Catholic Schools Superannuation Fund (WA) 2001).

19 Terminal illness was not yet a ground for early release.

- HortSuper (2001) noted that severe financial hardship releases accounted for no more than 2 per cent of total benefits and transfers.

In other cases, early releases accounted for more than 10 per cent of benefit payments.

- Severe financial hardship releases accounted for between 14 and 16 per cent of the total benefit payments made by the Meat Industry Employees' Superannuation Fund in the three years up to 2000-01 (Meat Industry Employees' Superannuation Fund 2001).
- Tasplan (2001) released between 10 and 13 per cent of total benefits paid due to severe financial hardship.

2 Savings and accumulation

Key Points

Australians save for retirement within the superannuation system and outside it.

The distribution of savings varies considerably between households, and the difference in savings between wealthier and poorer households is quite large. This difference also extends to the shares of different types of assets that comprise a households' net wealth.

- The wealthiest half of households typically have a large share of their wealth comprised in the family home. They also often have a significant share of net wealth in superannuation, especially around preservation and Age Pension ages.
- In contrast, the poorest quartile of households generally have a small share or no wealth in housing equity or superannuation.

Households do not readily draw down on home equity through the retirement years. While the family home may not be used to provide a stream of income in retirement, it does provide a stream of benefits to retirees in the form of avoided rents and security of tenure.

Those with self-managed superannuation funds are more likely to be wealthy, and have balances that are markedly larger than those of the general population.

The variance of superannuation is driven by a number of factors, including the different propensities of individuals to make voluntary contributions to superannuation, gender, occupation and age.

Superannuation savings will grow as the superannuation system matures, but the current disparities in superannuation balances may grow as well.

Superannuation forms part of the savings that Australian households accumulate throughout their working lives. It forms the second pillar of retirement income through compulsory savings; and also forms part of the third pillar of retirement income through voluntary savings into superannuation in tandem with savings into non-superannuation assets. The accumulated savings then supplement or substitute the remaining pillar of retirement incomes — the Age Pension. Individuals can make contributions to their superannuation through salary sacrifice or from after-tax income, as well as invest in a wide variety of non-superannuation assets, ranging from real estate and term deposits, to more complicated financial assets including stocks and bonds. Age, gender and relative means, as well as the general economic conditions, are all important in determining the amount of assets that individuals and households have, and the way that their wealth evolves through time.

This paper supplements chapter 2 by exploring in greater detail:

- the data available to examine wealth patterns, as well as some basic patterns of savings and wealth accumulation (section 2.1)
- disparities in superannuation savings and the extent to which Australians make additional contributions to their superannuation (section 2.2)
- how the pattern of savings and wealth has changed over time, and how it might be expected to change in the future (section 2.3).

2.1 Savings in general

One concept key to retirement savings is the difference between gross and net measures of wealth. Gross measures can be informative to illustrate the manner that Australians accumulate savings (and debt) through time. Net assets — that is, the gross value of assets less the gross value of debt — are the most relevant for retirement as these represent the true stock of wealth that could be called upon by households to supplement living standards in the latter stages of life. This supplementary paper examines both.

There are many data sources that measure wealth and savings

There are a number of data sources that measure the savings that households have at different stages of life:

- the ABS *Survey of Income and Housing* (SIH) provides a detailed 'snapshot' of households and individuals at a particular point in time
- the Melbourne Institute Household survey of Income Labour Dynamics in Australia (HILDA) is a longitudinal data source, but one that provides relatively less detail in terms of assets and debts
- there are administrative data sources from which savings can be derived (such as data held by the Australian Tax Office and the Department of Social Services)
- there are other 'ad hoc' data collected and presented by superannuation and financial services companies, which are released on an irregular basis.

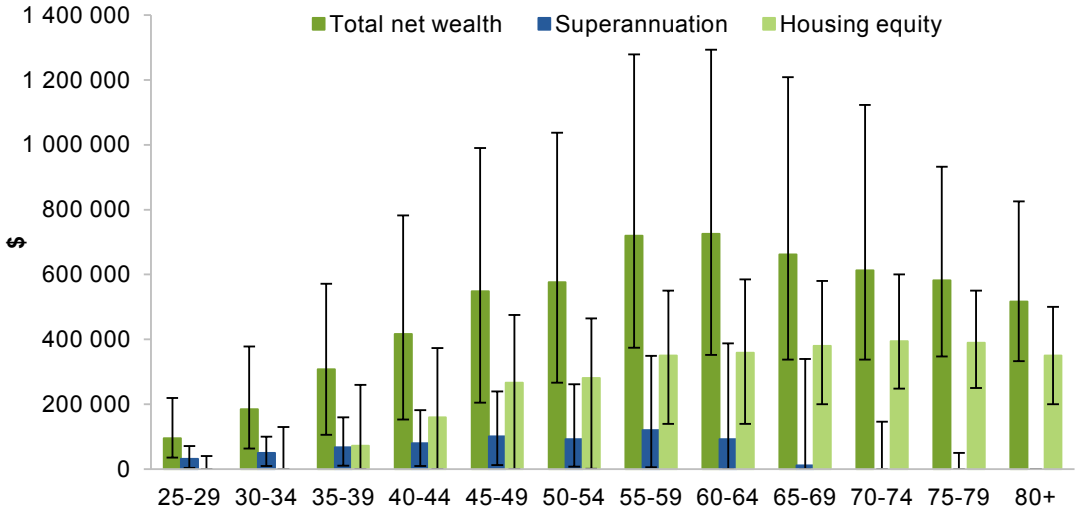
Each data source has its 'pros and cons', and comparability between data sources can be frustrated by different definitions and scope of households. The Commission has mainly drawn on data from the SIH throughout this paper, since it provides detailed data on a number of different asset types as well as superannuation balances.[20]

Basic patterns of savings and debt

Superannuation makes up a small proportion of net household wealth for any given age bracket, and the balances of superannuation (and wealth) vary significantly across households. Figure 2.1 shows the median superannuation balances and net household wealth across age categories (based on the age of the 'reference person' — the respondent to the survey).

Figure 2.1 **Median values for superannuation balances and net household wealth by age[a]**

2011-12 dollars



[a] Total net wealth comprises of superannuation, equity in the family home, and the remaining gross assets less debt. Whiskers denote the interquartile range (the values of the first quartile and third quartile for each series).

Data source: Commission estimates based on ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF).

20 The data includes the value of: accounts held with financial institutions (excluding offset accounts); offset accounts; shares (excluding own incorporated business); public unit trusts; private trusts; own incorporated business (net of liabilities); own unincorporated business (net of liabilities); superannuation; vehicles; contents of dwelling; owner occupied dwelling; and other property. The data also includes the value of liabilities associated with loans for owner occupied dwellings; other property loans; investment loans (excluding business and rental property loans); loans for vehicle purchases (excluding business and investment loans); loans for other purposes (excluding business and investment loans); the amount owing on credit cards; and debts outstanding on study loans.

The composition of assets varies across households

Typically, household wealth accumulates during the working years of its members, and then slows or tapers off following retirement. The rate of drawdown, and the accumulation of assets by type and magnitude, varies considerably by whether the household is comparatively rich or poor.

One caveat that should be borne in mind when considering data involving any measure of wealth, including superannuation, is that the average values presented are less representative for the poorest and wealthiest quartiles. For example, most in the poorest quartile have no superannuation, so the average for the population is not representative of this group. Conversely, the spread of wealth in the highest quartile is so large that the average and median value can be quite different. As put by Challenger, as part of its retirement income research:

> Users of super balance estimates also need to be aware of the difference between median estimates and average estimates. Median balances are more likely to represent the typical super balance than averages because they show us the super balance for 'the person in the middle' of the system and are less affected by small or large outliers. (2012, p. 1)

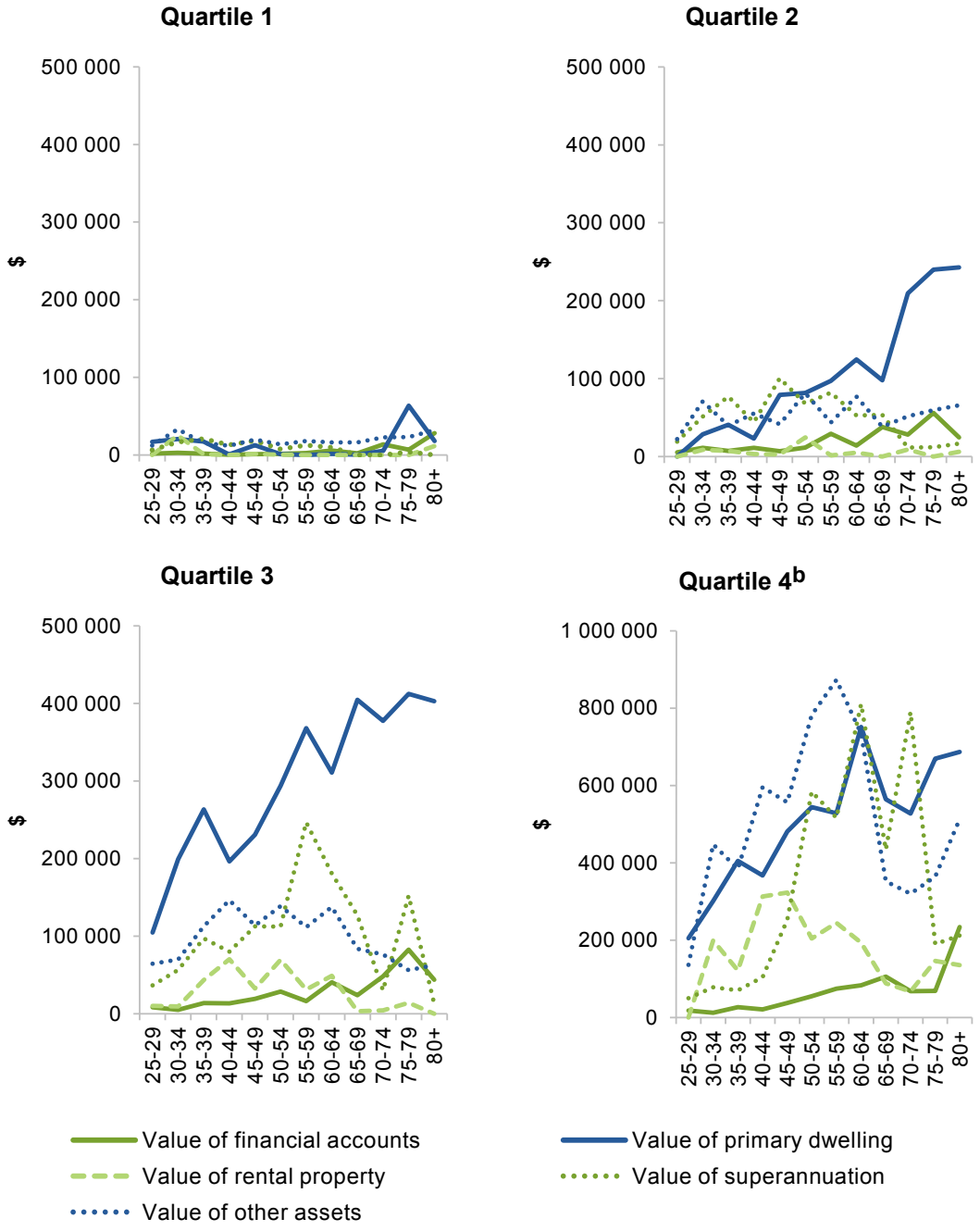
The following figures show the average gross value of different assets (real estate, accounts held in financial institutions, superannuation balances, and the value of other assets) by wealth quartile for each age bracket for single men (figure 2.2), single women (figure 2.3), and couples (figure 2.4). These gross measures do not take debt into account. Looking at data by quartile and household composition allows for more meaningful comparison, rather than relying on a single average that may misrepresent much of the population.

These patterns tend to show accumulation of wealth in all asset classes up to around the age of retirement, and then drawdown of most financial assets. This breakdown highlights the importance (and value) of assets other than superannuation, and that the value of private savings is proportionately more important with increasing household wealth. Equity in the primary residence is often the largest asset, with the exception of the wealthiest quartile, but there is little evidence of drawdown from this asset through the retirement years. While the family home may not be used to provide a stream of income in retirement, it does provide a stream of benefits to retirees in the form of avoided rents and security of tenure. These findings are largely consistent with the work of others that have examined household savings over retirement using other data sources, including Headey, Warren and Wooden (2008), Bray (2013) and Spicer, Stavrunova and Thorp (2013).[21]

[21] These papers used different waves of HILDA data to examine how portfolios changed through time, including examining how superannuation and housing assets have changed.

Figure 2.2 **Average gross assets by net wealth quartile for each age bracket[a], Single males, 2011-12**

2011-12 dollars

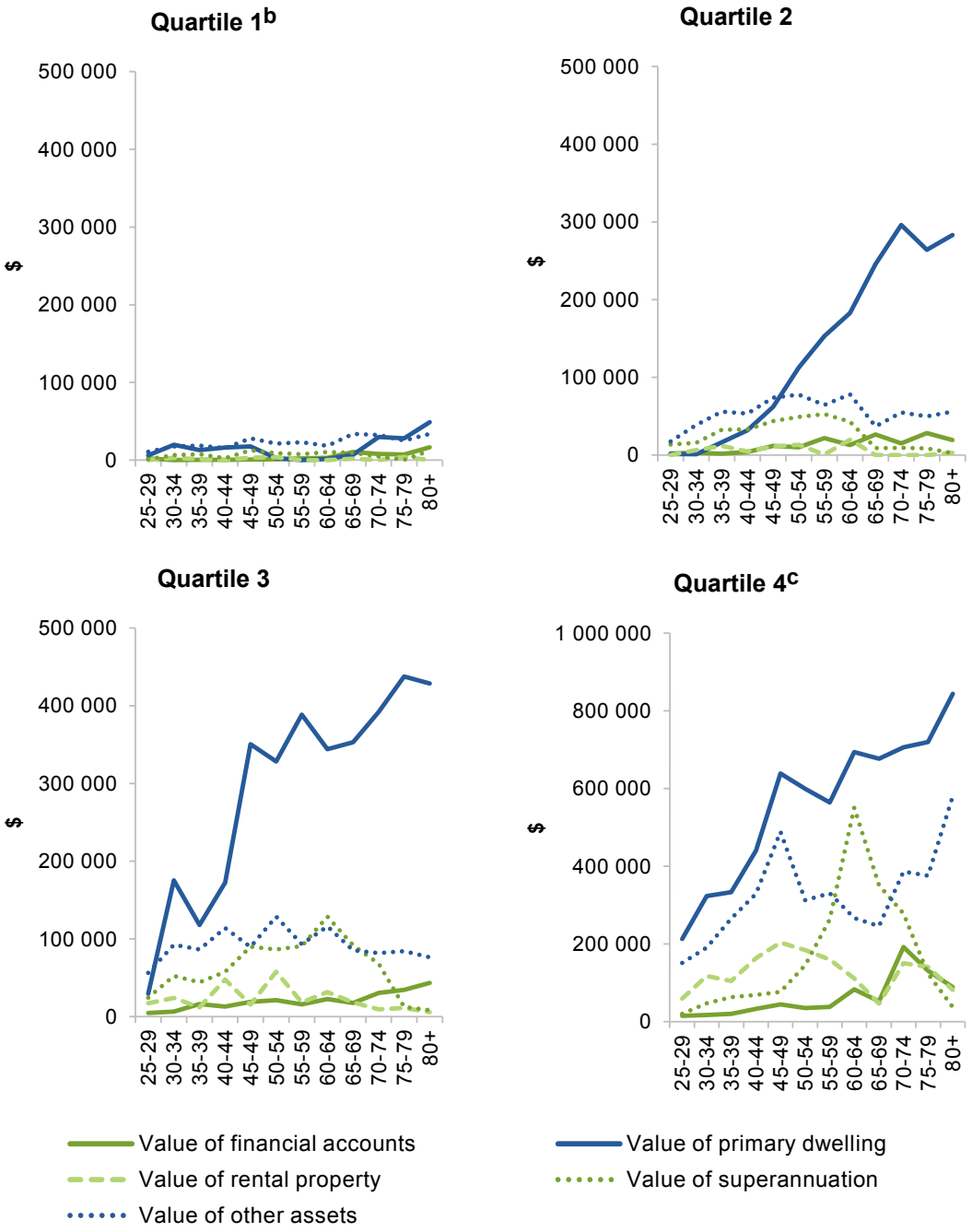


[a] Quartiles are based on net household worth by age category (determined by the age of the reference person in the SIH). The value of financial accounts corresponds to 'value of accounts held with financial institutions'. Other assets includes the value of debentures and bonds, trusts, shares, silent partnerships, value of unincorporated businesses and other assets not elsewhere classified. [b] Note different scale to other quartiles.

Data source: Commission estimates based on ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF).

Figure 2.3 **Average gross assets by net wealth quartile for each age bracket[a], Single females 2011-12**

2011-12 dollars

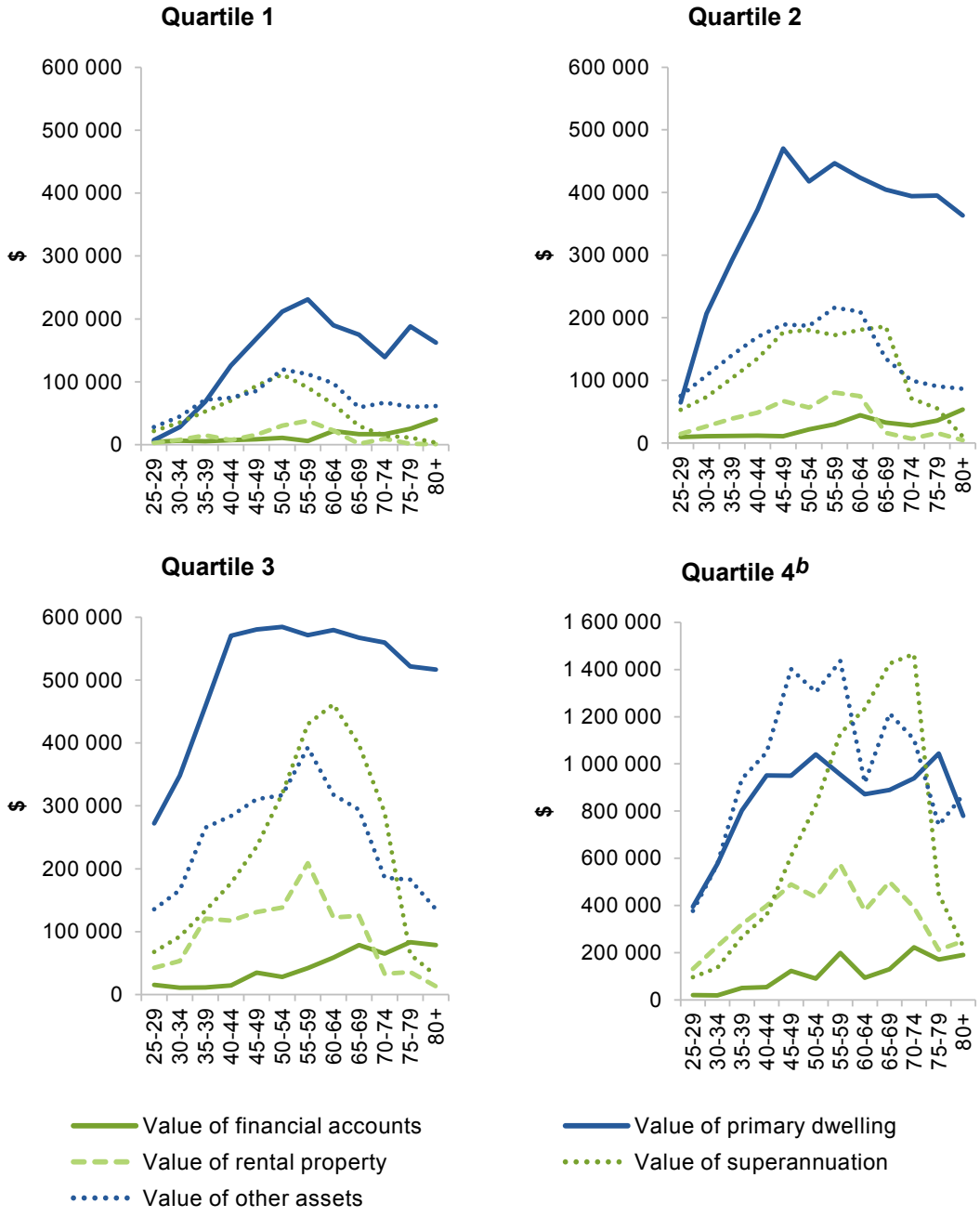


[a] See note to figure 2.2. [b] One outlier value has been removed from the 55-59 age group (a household with $2.3m in primary dwelling assets). [c] Note different scale to other quartiles.

Data source: Commission estimates based on ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF).

Figure 2.4 **Average gross assets by net wealth quartile for each age bracket[a], Couples 2011-12**

2011-12 dollars



[a] See note to figure 2.2. [b] Note different scale to other quartiles.

Data source: Commission estimates based on ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF).

Another noticeable trend is the growth of assets in financial accounts — a group that includes assets like term deposits, but is more often comprised in everyday banking accounts, especially among poorer households (Thorp 2013). The wealthiest three quartiles

all exhibit flat or modest growth in these assets through the retirement years, with a peak as age increases. The poorest quartile, however, experience stronger growth in the value of financial accounts as a share of their total assets — reaching between 15 to 30 per cent by '80+ years' (compared to 8-10 per cent for the wealthiest quartile). Whether this is the result of poor investment decisions (such as failing to invest savings), poor incentives (high effective marginal 'tax' rates, as investing could reduce the amount of Age Pension received), or preferences (a desire to have 'cash on hand' for immediate problems given a lack of other savings) is unclear.

At the other end of the wealth distribution, the highest quartile has very significant and more diversified savings in the form of other investments. Prior to retirement age, these mostly consist of residential property other than the primary dwelling, such as investment properties. At retirement age, there is a shift in how these assets are held, away from investment property and towards shares and bonds.

The extent of debt, particularly as households approach retirement, is important as this affects the stock of wealth that households can draw on to supplement living standards in the latter stages of life. Paying off debt at the time of retirement, and the implication that this can have on superannuation balances for the rest of retirement, has become a point of recent contention. For example, the CPA Australia report '*Household savings and retirement: Where has all my super gone?'* noted that:

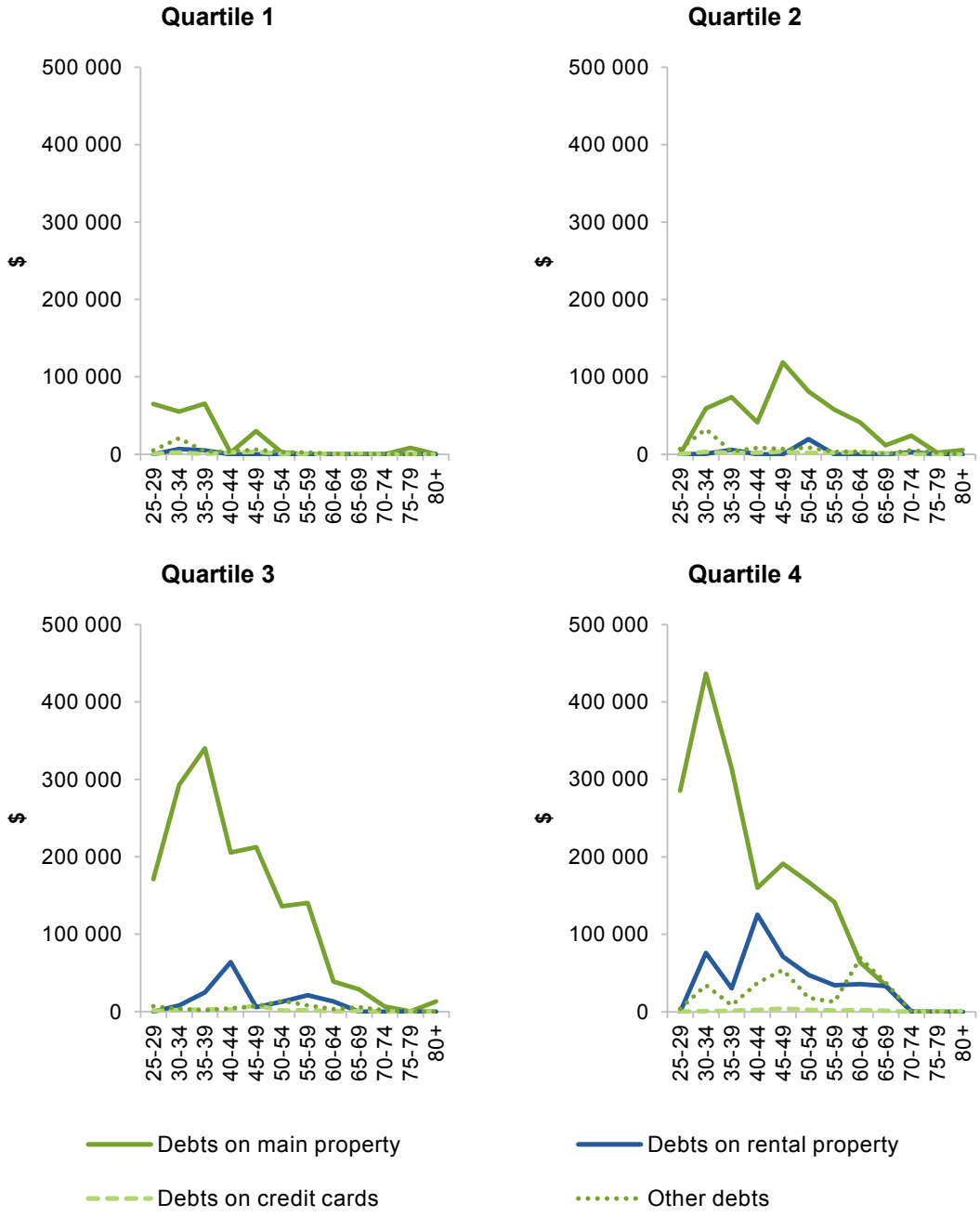
> People approaching 65 have sharply increased their debt levels. Their average mortgage balance and other property debt has more than doubled since 2002 and credit card debt is up 70 per cent.
>
> Remarkably, people aged 50 to 54 are tracking down a similar path – with a ratio of debt to superannuation of 91%. Even those people close to pension age had a debt to superannuation ratio of 42 per cent. (2012, p. 2)

How superannuation is used in retirement is discussed in more detail in chapter 4, but it should be noted that even though retirees may have higher levels of debt at retirement than their predecessors, they also have greater assets and ability to service those debts (Bray 2013). The way that housing values and debt have risen through time is discussed in section 2.3.

Figures 2.5 to 2.7 show the debt by wealth quartile for each household type. Mortgages comprise the largest share of debt for the bottom three quartiles over most age ranges, and rental property debt plays a far greater role for the wealthiest quartile. Another trend is *when* mortgage debt is accumulated: the wealthier the quartile, the earlier debt is incurred (and the earlier it is paid down). This has implications for the interaction between superannuation and housing (discussed below). Credit card debt is low across each quartile, though rises sharply as a share of all debt for the poorest three quartiles as age increases and other debts are paid off.

Figure 2.5 **Average debt by net wealth quartile for each age bracket[a], Single males 2011-12**

2011-12 dollars

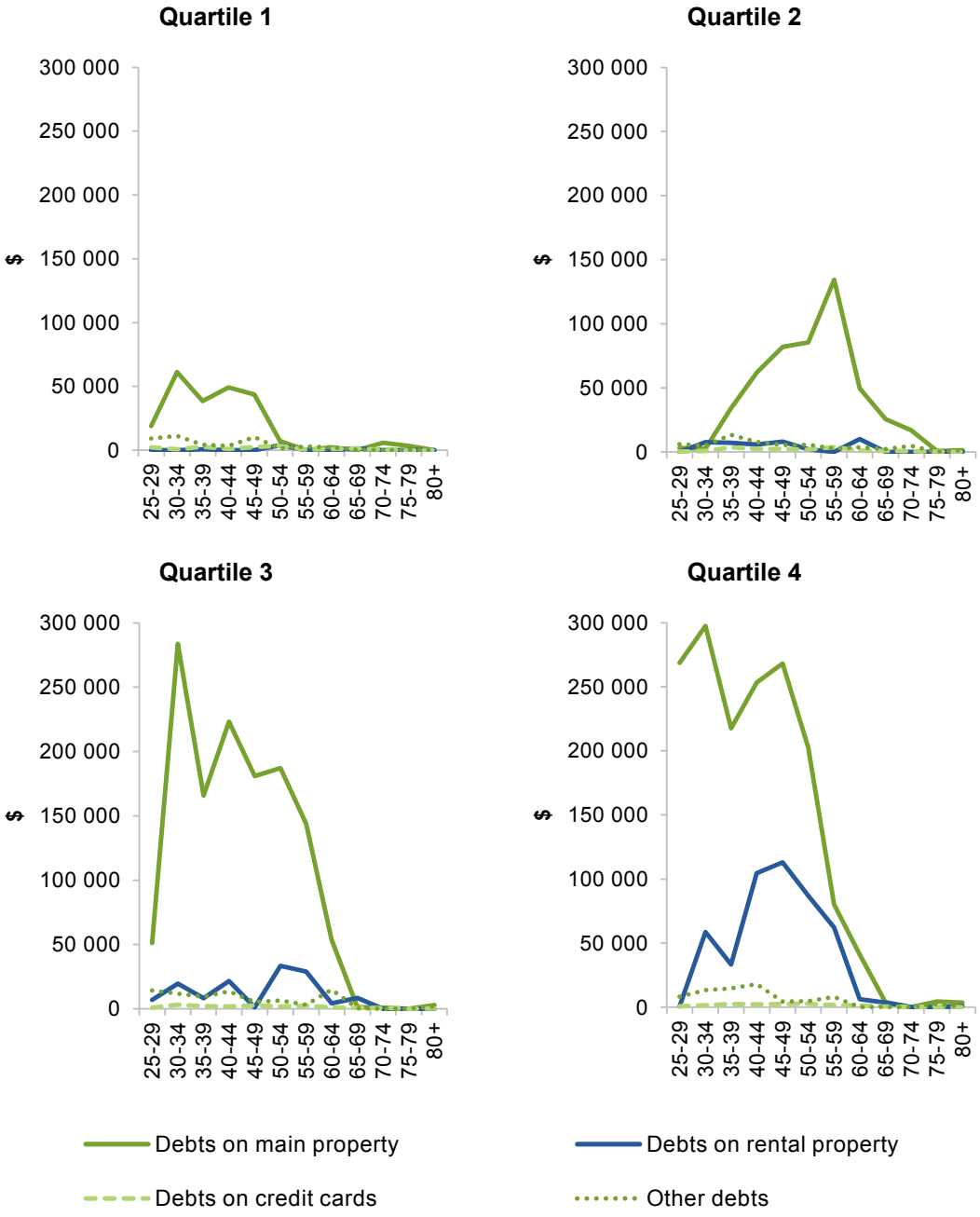


[a] Quartiles are based on net household worth by age category (determined by the age of the reference person in the SIH). Other debt includes Higher Education Contribution Scheme and Higher Education Loan Programme liabilities, principal outstanding on investment loans, non-residential housing and vehicles.

Data source: Commission estimates based on ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF).

Figure 2.6 **Average debt by net wealth quartile for each age bracket[a], Single females 2011-12**

2011-12 dollars

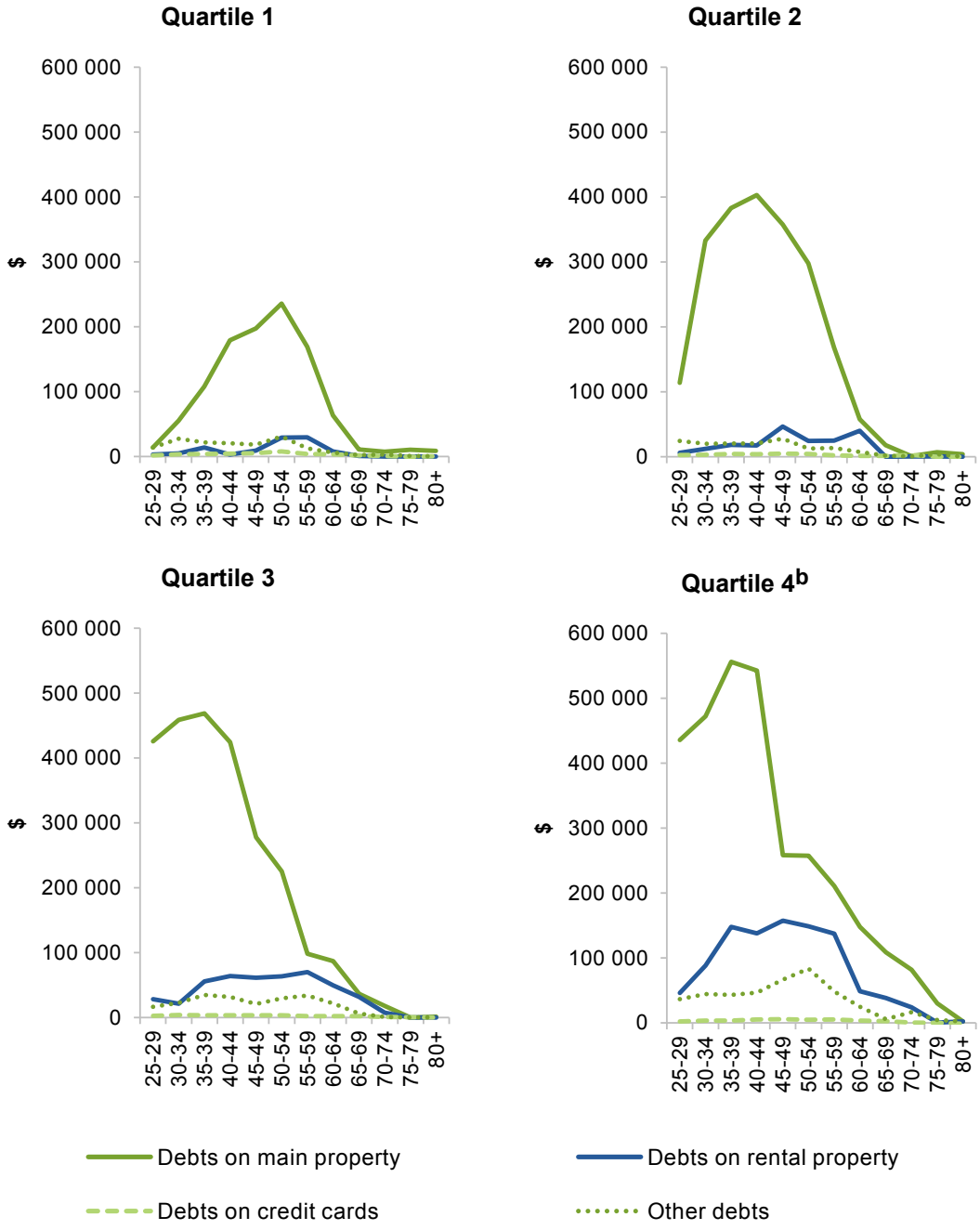


[a] See note to figure 2.5.

Data source: Commission estimates based on ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF).

Figure 2.7 **Average debt by net wealth quartile for each age bracket[a], Couples 2011-12**

2011-12 dollars



[a] See note to figure 2.5.

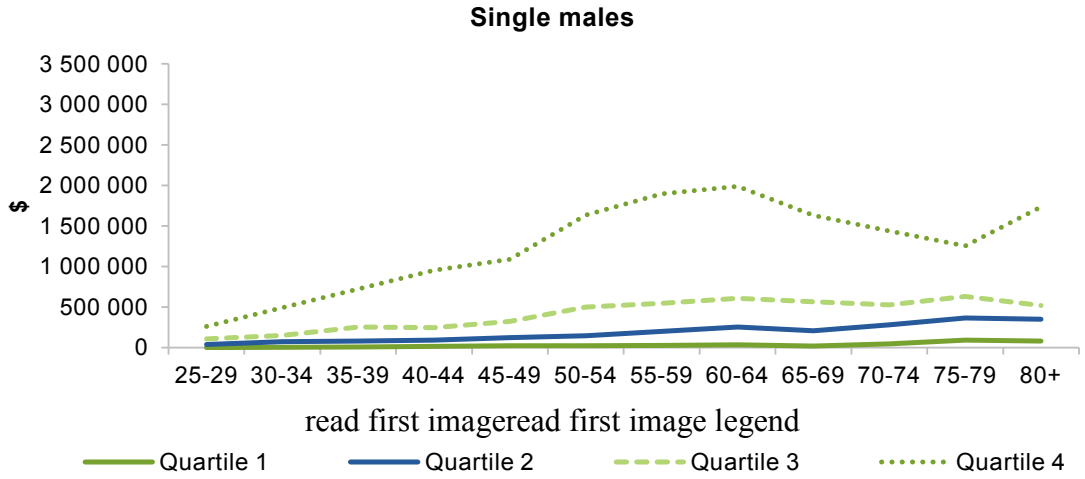
Data source: Commission estimates based on ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF).

Taking assets and debts together shows how net wealth is different across different age cohorts and household types. Figure 2.8 shows the net wealth by household for each wealth

quartile by age and household composition, and demonstrates that there is considerable difference between rich and poor.

Figure 2.8 **Average net wealth by household type for each age bracket and wealth quartile, 2011-12[a]**

2011-12 dollars



[a] Quartiles are based on net household worth by age category (determined by the age of the reference person in the SIH).

Data source: Commission estimates based on ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF).

2.2 Superannuation savings in detail

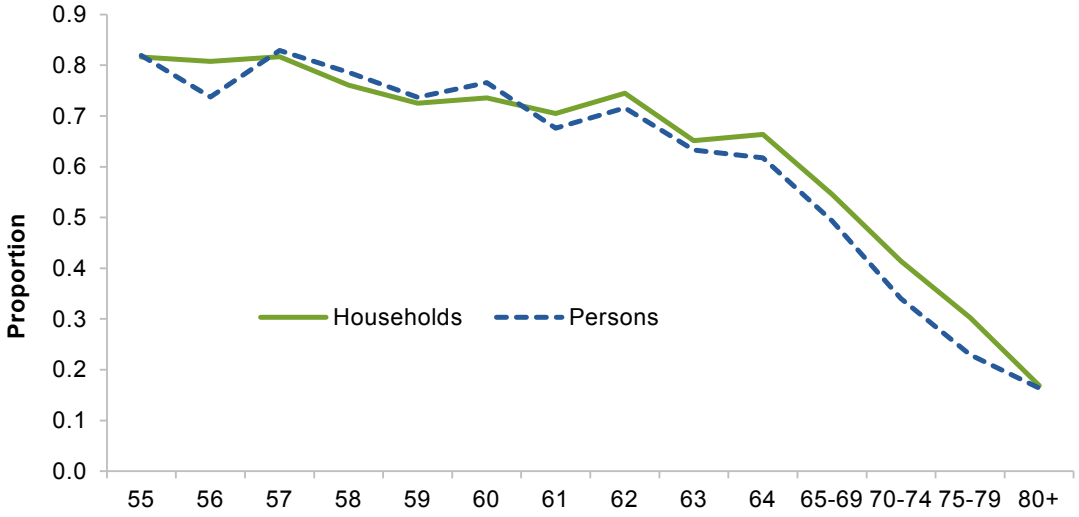
Super highs and lows

Superannuation balances vary considerably across and within different age ranges, and the presentation of the aggregated statistics can conceal the extremes of these savings. Some individuals have very little, if anything, in the way of superannuation — although couples may consider any superannuation as jointly-held — and particular groups such as women, the unemployed, and low income earners typically have lower balances than the rest of the population. The very wealthy, in contrast, are more likely to use self-managed superannuation funds (SMFSs), and nearly all of those in the fourth quartile have some sort of superannuation balance at retirement.

Those with little or no superannuation

Around 80 per cent of households and individuals in 2011-12 reached the preservation age of 55 years with any amount of superannuation savings, with this proportion falling to around 70 per cent at the age pension age of 65 years. For subsequent ages, the proportion of those with superannuation falls to about 20 per cent by the age of 80 years and above. The slightly lower proportion of those with superannuation at the individual level, compared to the household level, tends to suggest that couple households are more likely to have someone with superannuation for longer, relative to single households (figure 2.9).

Figure 2.9 **Proportion of those with superannuation by age[a]**
2011-12



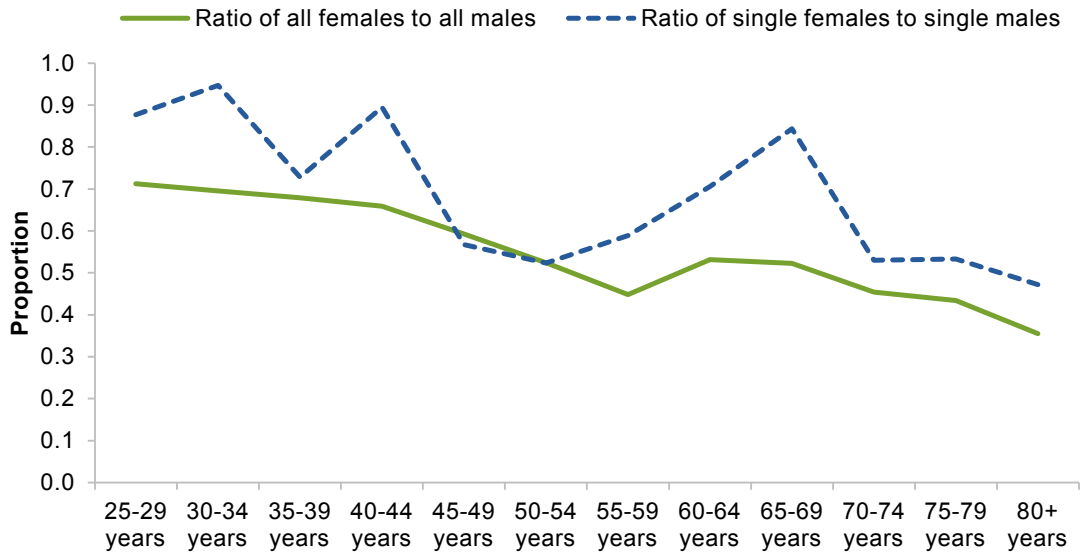
[a] The data are only available in aggregated age categories from the age of 65 onwards.

Data source: Commission estimates based on ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF).

There is a gender imbalance when it comes to superannuation

Women have less superannuation than men. Figure 2.10 shows the average superannuation balance by age cohort of women expressed as a share of the average balance of men. The decline in the ratio most likely reflects the movement of women out and back into the workforce due to having children, while the low overall ratio indicates a lower rate of participation, lower average wages (relative to men) in general and the tax incentives associated with salary sacrifice into superannuation by couples — namely that it is most advantageous to make such sacrifice from the higher earning (and higher taxed) individual in the couple, which is more likely to be male.

Figure 2.10 **Ratio of female-to-male superannuation balances[a]**
2011-12



[a] Two ratios are presented in this chart: the ratio of total female superannuation balances relative to that of males, and the ratio of superannuation held by single females relative to single males. This latter ratio provides additional context around superannuation balances by gender, as the former may reflect the incentives to salary sacrifice by the highest earner within a couple. It should be noted that there are relatively few observations for this latter ratio in later years, and hence it is more volatile.

Data source: Commission estimates based on ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF).

Labour force status and occupation

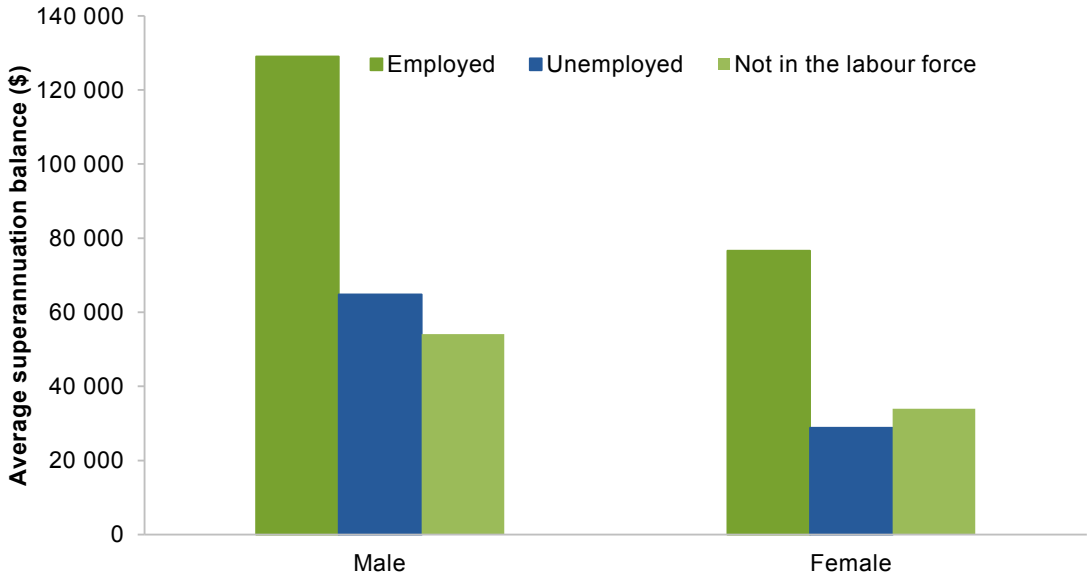
There is no source of data that measures both the balance of superannuation savings and employment status continuously through time,[22] and as such it is difficult to quantitatively determine the effect on superannuation that unemployment or absences from the labour force prior to retirement may have. All else being equal, those that spend periods out of employment would be expected to have lower superannuation balances at retirement.

Data from the SIH provides an, albeit crude, measure to try to understand the effect of labour force status on superannuation. Figure 2.11 shows the average superannuation balance for men and women aged 45-55 based on their labour force status for 2011-12 — an imperfect proxy for their labour force experience for the rest of their lifetime. On average for this cohort, those that were unemployed had a superannuation balance that was between one-third to half that of those that were employed. Those that were unemployed were also more likely to be in a household with lower net wealth, overall.

[22] The HILDA Survey does have longitudinal data on employment status on an annual basis, but measures the balances of superannuation accounts every four years.

Figure 2.11 **Average superannuation balance of those aged 45-54 by labour force status, 2011-12**

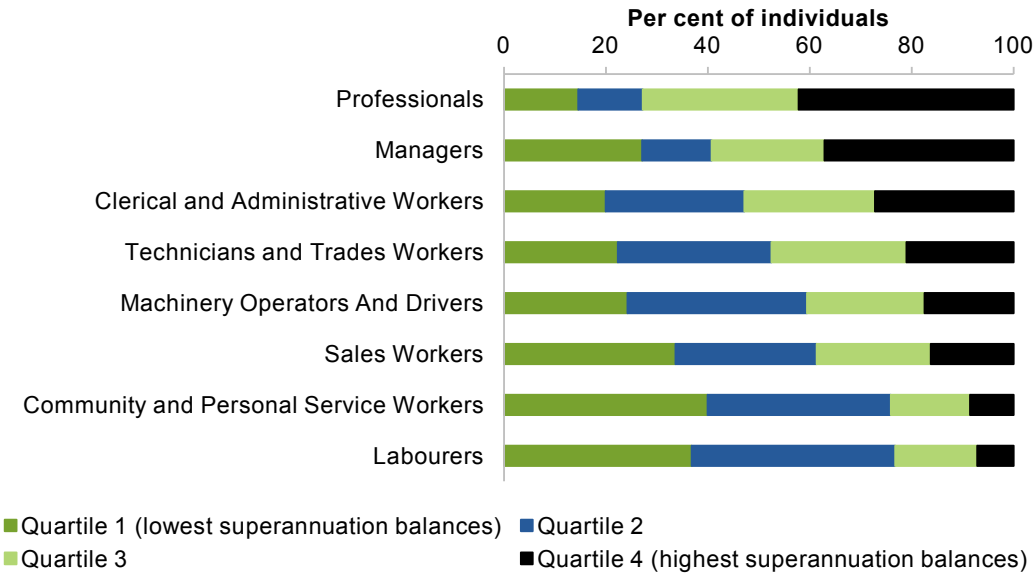
2011-12 dollars



Data source: Commission estimates based on ABS (*Survey of Income and Housing, 2011*-12, Cat. no. 6553.0, basic CURF).

Occupation also is important when it comes to understanding the distribution of superannuation. Compulsory superannuation contributions are a proportion of ordinary time earnings, so those in higher paying jobs are typically also in higher quartiles when it comes to superannuation balances. Figure 2.12 shows the share of those in each occupation that fall into the different quartiles of superannuation balances. Higher paid, white collar workers are often in the highest superannuation quartile, with around 40 per cent of professionals and managers falling into this category. By contrast, around 37 per cent of labourers and 50 per cent of community and personal service workers had superannuation balances in the bottom 25 per cent of the population.

Figure 2.12 **Share of individuals in superannuation quartile by occupation[a], aged 55-64 years**
2011-12

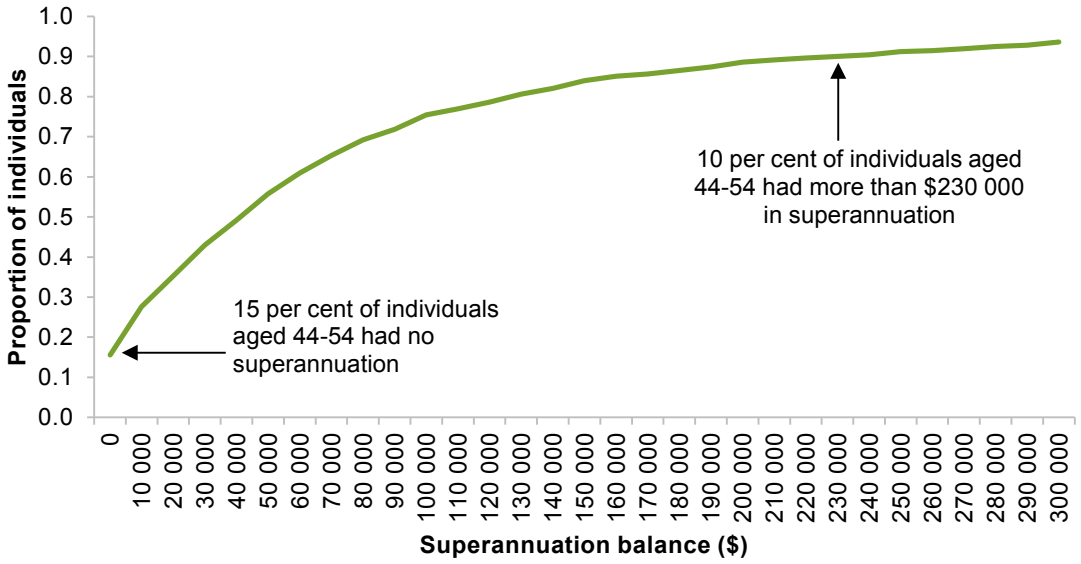


Data source: Commission estimates based on ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF).

Super disparity

The range of ages, labour force status, gender and occupation means that the variation in superannuation savings is substantial. Figure 2.13 shows the cumulative distribution of superannuation balances for those aged 45-54 years — those approaching the preservation age. Around 15 per cent of individuals have no superannuation, while 10 per cent had more than $230 000 in superannuation savings.

Figure 2.13 **Distribution of superannuation balances for those aged 45-54**
2011-12



Data source: Commission estimates based on ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF).

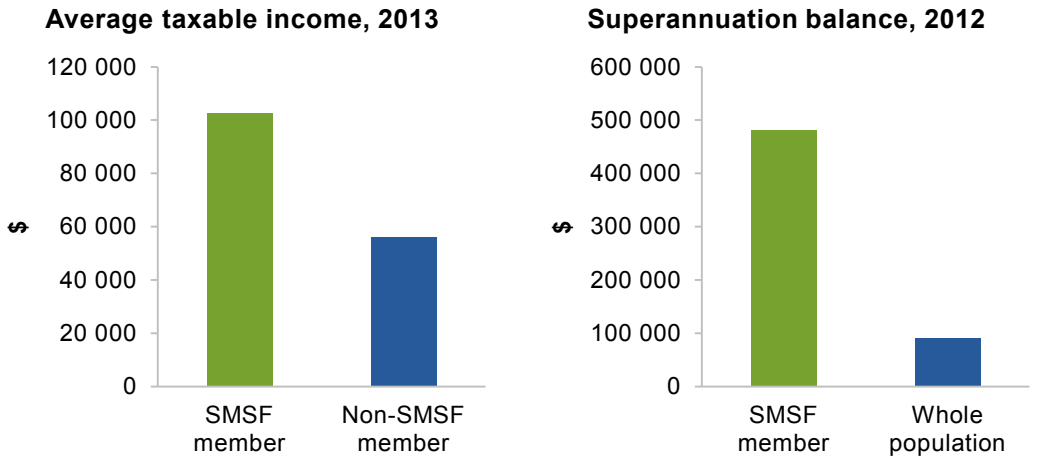
The superannuation savings of those with SMSFs

Those with self-managed superannuation funds (SMSFs) have superannuation savings that are very different to the rest of the general population. Those with SMSFs are more likely to have a higher income and a larger superannuation balance relative to the general population. Figure 2.14 demonstrates the magnitude of the difference — on average, those with SMSFs had $480 586 in superannuation in 2011-12 (ATO 2014d); while the population as a whole had an average of $91 200 in superannuation.

Use of SMSFs has been rising quickly. The number of those in an SMSF has increased from nearly 790 000 in 2010 to over 1 million in 2014 — an increase of 28 per cent (ATO 2014d). Over roughly the same period, growth in the number of member accounts — a slightly different metric to members — has been around 14 per cent in industry and retail funds (APRA 2014a). SMSFs now represent around 30 per cent of assets held by superannuation funds assets (APRA 2014a; Bambrick 2015).

Just as there is a distribution of superannuation balances across the general population, the variance in SMSF balances is quite large, too. Around 10 per cent of those in SMSFs have an account balance of less than $50 000, while about the same proportion have balances of more than $1 million. Figure 2.15 shows the distribution of superannuation balances of those in SMSFs, as well as the corresponding distribution derived from the SIH for the population at large.

Figure 2.14 **Comparing incomes and balances[a] of SMSF members with non-members and the population at large**



[a] Compared to those with any positive superannuation balance aged 15 years or older, whole population is for 2011-12.

Data source: Commission estimates based on ATO (2014d) and ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF).

Figure 2.15 **Distribution of balances in SMSF compared to the total population[a]**

2011-12

[a] Compared to those with any positive superannuation balance aged 15 years or older.

Data sources: Commission estimates based on ATO (2014d) and ABS (*Survey of Income and Housing, 2011*-12, Cat. no. 6553.0, basic CURF).

A greater proportion of contributions into SMSFs come from member contributions as opposed to employer contributions — the reverse of the case for retail and industry funds (APRA 2014a; ATO 2014d). About $3.30 of member contributions were made for each dollar of employer contributions into SMSFs in 2013 (the latest year for which data is available). Through time, the proportion of member contributions to total contributions has been increasing — rising from 62 per cent in 2009 to 76 per cent in 2013. However, these numbers reflect a minority of SMSF members that make substantial contributions to their accounts — the share of *median* member contributions to the total has increased more slowly and from a lower base — from 44 per cent in 2009 to just over half in 2013. In part, this reflects not only the higher incomes of SMSF members relative to the general population, but also the average age of SMSF members, which is higher than those with funds of other types (APRA 2014a; ATO 2014d).

Additional savings into superannuation

Part of the variation in superannuation balances comes about because the compulsory savings system is based on a percentage of ordinary time earnings — the groups identified with lower balances are more likely to have had lower incomes, and so lower contributions. Another way that differences in superannuation balances arise is because some make additional, voluntary savings into superannuation.

In addition to compulsory contributions, individuals can make voluntary contributions that typically take three forms: concessional contributions that are either salary sacrificed or that are treated as a deduction for determining assessable income, and non-concessional contributions that are made from after-tax income, which are not tax deductable.[23] Concessional contributions often bear a lower nominal tax rate (supplementary paper 1), which makes them tax-preferred for most income-earners.

Making additional contributions in these forms (up to the caps) is most advantageous to those facing the highest marginal tax rates. The SIH provides information on the individuals that choose to salary sacrifice, while Australian Taxation Office (ATO) data records information on those that make personal contributions to superannuation as part of their income tax returns. HILDA records information on these matters too, but the sample size is smaller than that of these other sources.

Salary sacrifice

Overall, around 7 per cent of households where the reference person is below the age of 70 years are salary sacrificing into superannuation. Figure 2.16 shows the incidence of those making salary sacrifice, by family status (single male, single female or couple) and wealth quartile to be consistent with the modelling presented in this report. Broadly speaking, those age ranges associated with approaching retirement are more likely to

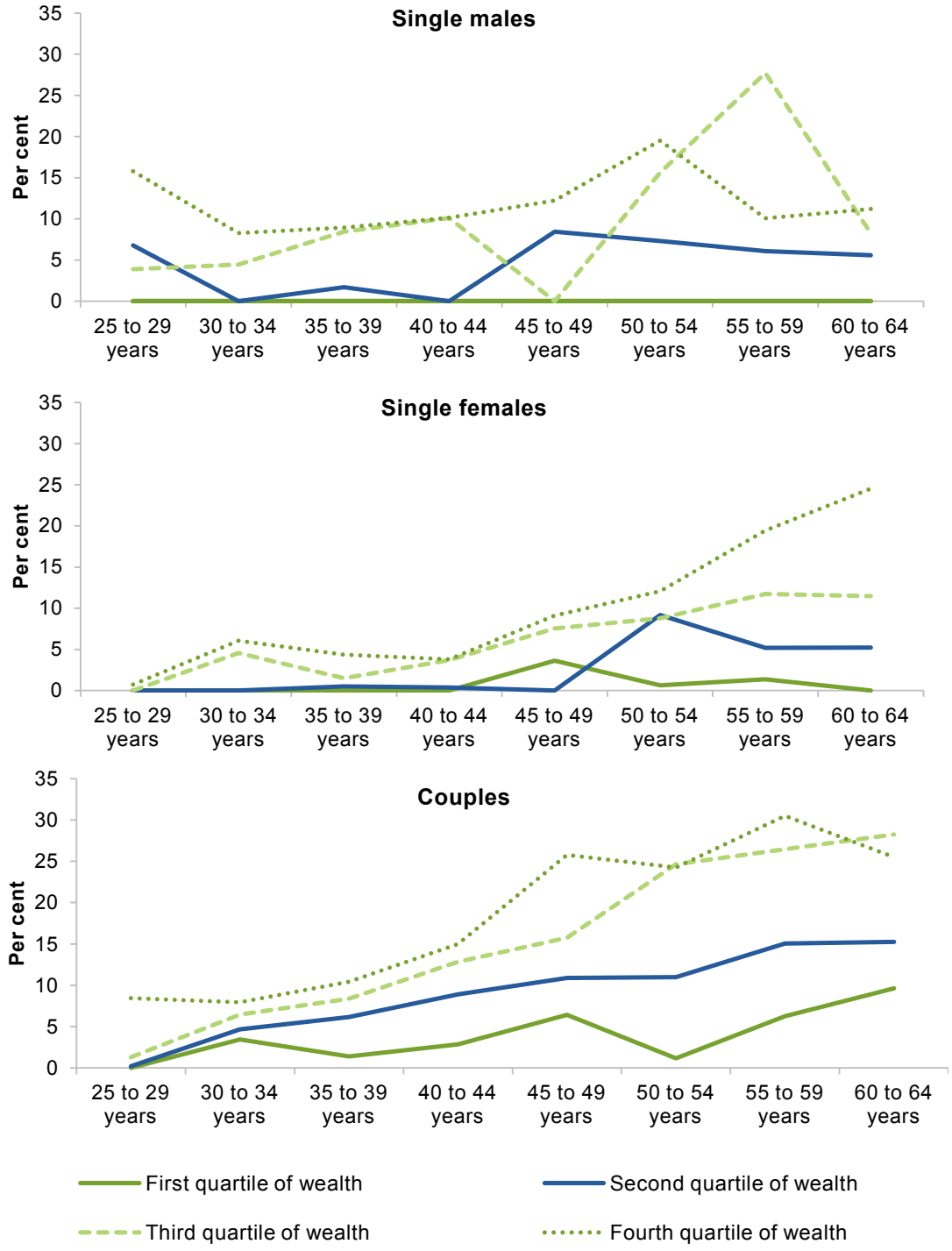
[23] Both the concessional contributions and the after-tax contributions are subject to separate annual caps.

undertake salary sacrifice, and couples are more likely than singles to salary sacrifice. The wealthier quartiles are also far more likely to salary sacrifice, reflecting a greater benefit of doing so, and the greater proportion of individuals in work for those quartiles.

Figure 2.17 shows the proportion of pre-tax income devoted to salary sacrifice for those households that do so. On average, households using salary sacrifice devote around 6 per cent of their total pre-tax income to salary sacrifice, but the scale of the contribution is often much larger as individuals approach retirement, and those in relatively wealthier quartiles tend to salary sacrifice more than poorer quartiles. While this can represent a substantial amount of money 'going in' to the superannuation system, it is likely that superannuation savings for some of the individuals that salary sacrifice is simultaneously 'going out' as part of transition to retirement arrangements.

The data indicate that the share of contributions made by salary sacrifice are concentrated in particular household types. Couple households in the highest wealth quartile make around one half of the total amount of salary sacrifice for 2011-12. When the couple households of the third wealth quartile are included as well, this proportion rises to around 70 per cent (figure 2.18).

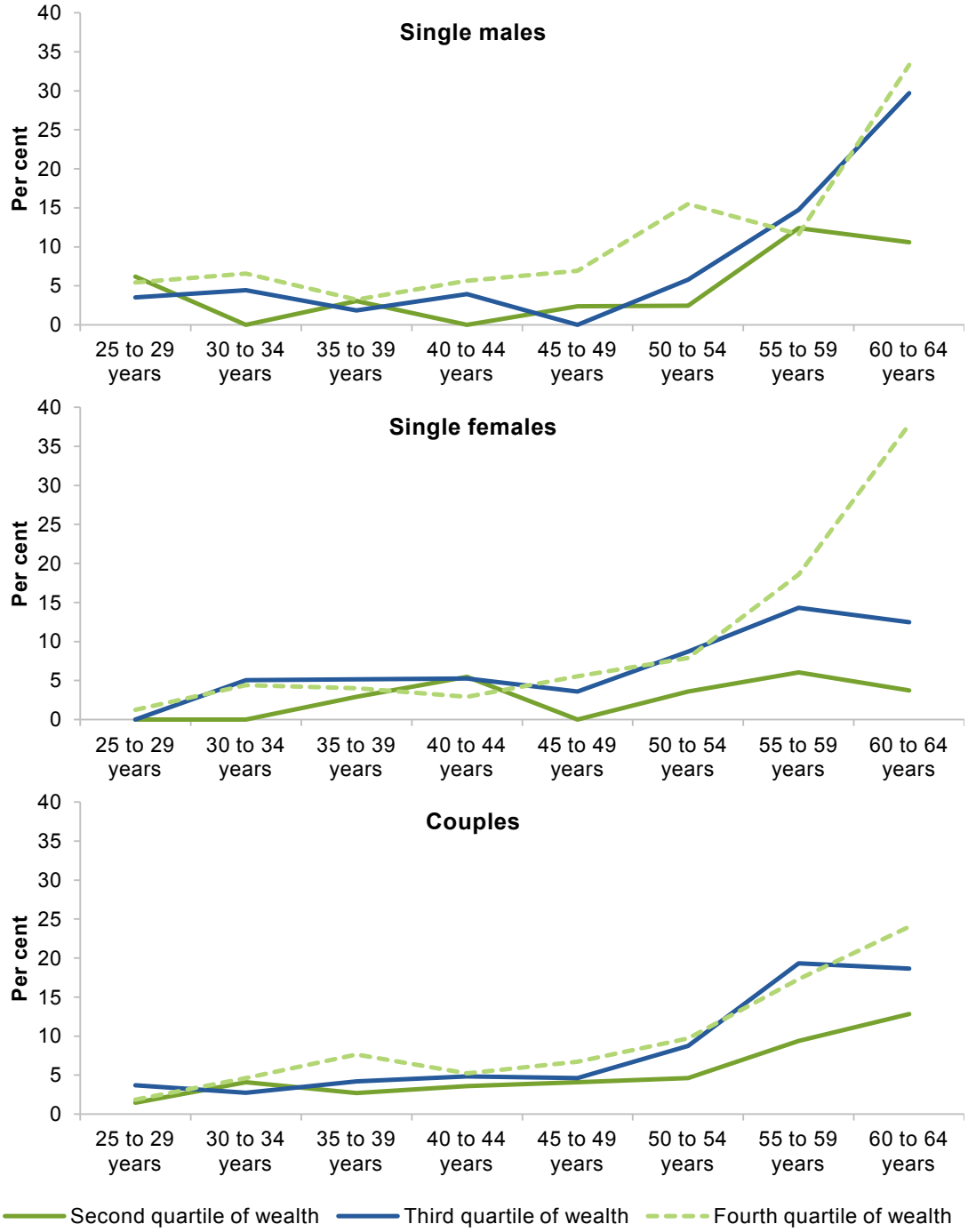
Figure 2.16 **Share of households using salary sacrifice by age**
2011-12



Data source: Commission estimates based on ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF).

Figure 2.17 **Share of pre-tax total income devoted to salary sacrifice for those households making such sacrifice[a]**

2011-12

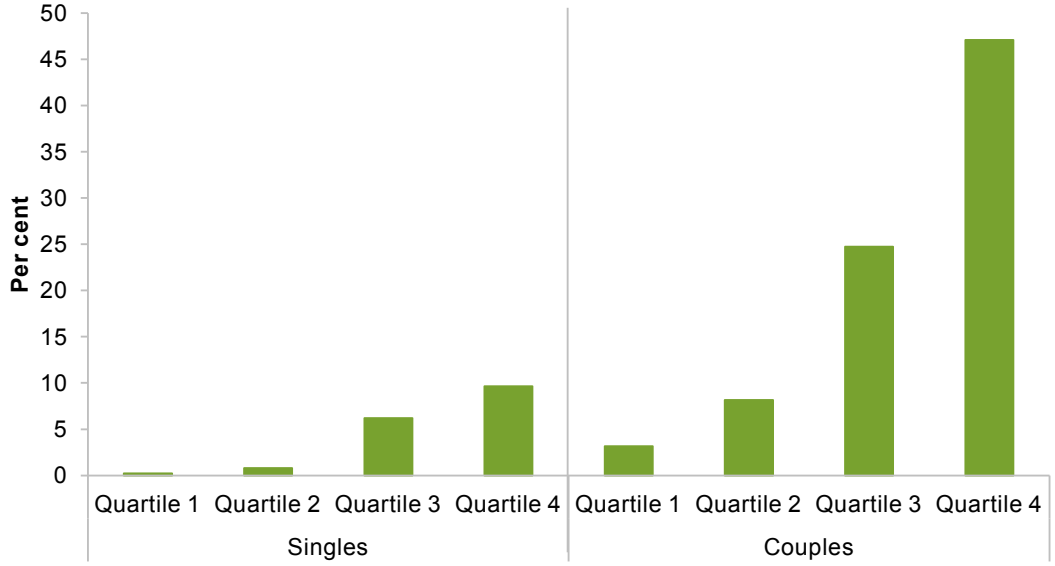


[a] Those in the first quartile of wealth — the poorest households — are not included due to the general lack of salary sacrifice by these individuals.

Data source: Commission estimates based on ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF).

Figure 2.18 **Share of total salary sacrifice contributions by wealth quartile[a]**

2011-12



[a] Shares of singles calculated by combining the proportions for the same quartile across single males and single females.

Data source: Commission estimates based on ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF).

Econometric analysis has also been undertaken by researchers to identify the characteristics associated with salary sacrifice and other voluntary contributions. Feng (2014) used a range of ABS data sources and HILDA data and found:

> The analysis of participation in salary sacrifice suggests that salary sacrifice and personal contribution participation share very similar patterns: increasing in participation with age, influenced by income, financial constraints and home ownership and is higher amongst employees with secure jobs. Further, salary sacrifice decisions may also be related to the tax incentives provided by the government …
>
> SIH results suggest that having negative wealth is indicative of not arranging salary sacrifice due to unfavourable financial situations. This can also be supported when a dummy measures whether an individual can raise emergency funds of $2,000 within a week is included. The average marginal effect of this variable is negative and significant, validating the conclusion that financial constraint is an important factor that influences the participation decisions in salary sacrifice. …
>
> The bargaining power in salary negotiation influences salary sacrifice decisions in several ways. More powerful employees are able to ask for salary sacrifice arrangements, and employer matchings in salary sacrifice to superannuation. This is reflected in the results, where employees 'only paid Award rates' are less likely to make salary sacrifice arrangements. (Feng 2014, pp. 63–65)

Feng concluded that participation in making voluntary contributions, including salary sacrifice, was influenced in the following ways:

- contributions increased with age
- financial constraints relating to daily expenses and debt in family home were strong predictors of non-participation
- there was weak evidence that people respond to the tax incentives available when making voluntary contributions, and
- the different preferences among individuals also played a role. (Feng 2014, pp. 73–74)

More recent work, undertaken by the CSIRO-Monash Superannuation Research Cluster, has made use of a database of superannuation records compiled by Mercer to examine the incidence of superannuation contributions in addition to those made by the employer as part of the superannuation guarantee. Feng, Gerrans and Clark (2014) used this data and determined that around 17 per cent of individuals with superannuation were making voluntary contributions via salary sacrifice in 2011, though with a considerable gender split (19 per cent of men and 13 per cent of women). The incidence of salary sacrifice increased with age, with up to 43 per cent of those aged 60 years and older making such contributions.

Superannuation contributions outside of salary sacrifice

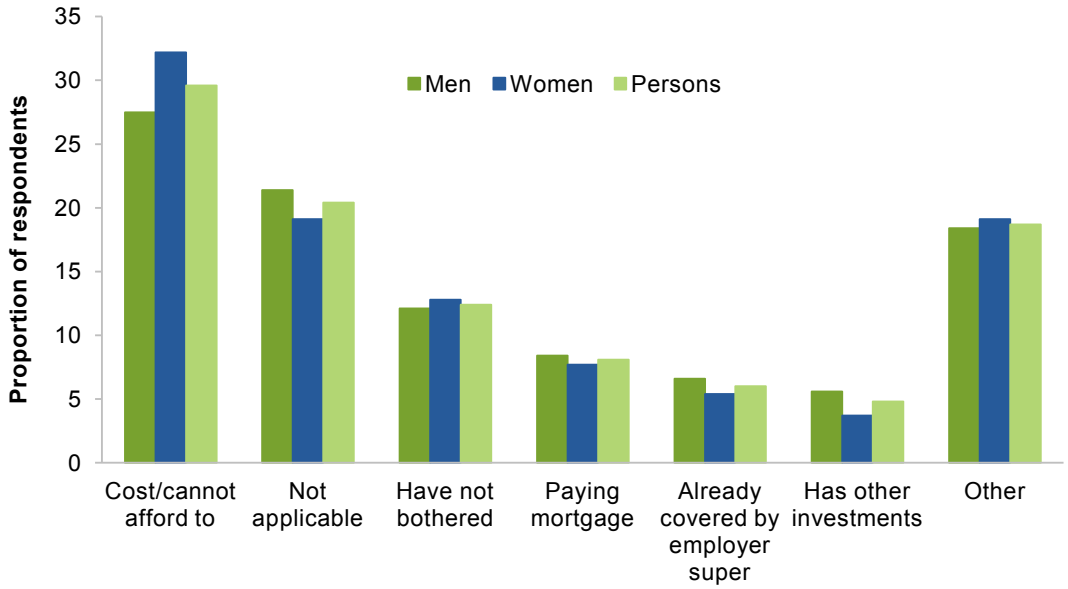
Another retirement saving mechanism is superannuation contributions from after tax income. These contributions can be treated as a tax deduction up to a particular cap for an individual (see supplementary paper 1). The advantage of making such contributions for individuals is that it provides a method for some to 'top up' their superannuation, particularly where higher caps apply in the decade or so before the Age Pension age is reached. Accordingly, it allows for more contributions to be made into a superannuation environment, where the tax on earnings is preferable to many other forms of saving.

Based on Commission estimates from the ATO 2 per cent sample file of income tax responses, less than 2 per cent of all households make superannuation contributions in this way, but these contributions are concentrated in the older, wealthier households — particularly in the age ranges of 55-70 years. Given the small number of observations, it is difficult to say what share of household income is devoted to this sort of superannuation contributions for those that make use of it.

The Survey of Employment Arrangements Retirement and Superannuation from 2007 provides some additional insight as to why individuals *did not* make personal contributions to superannuation as part of their savings. The survey results indicate that the most common reasons for not making personal superannuation contributions were cost or not being able to afford such contributions, not being eligible to make contributions and a lack of awareness or interest (figure 2.19). Women were more likely to nominate cost as a barrier, relative to men.

Figure 2.19 **Main reason not making personal superannuation contributions[a]**

2007



[a] Question asked of those employed persons with superannuation in the accumulation phase. Category 'Have not bothered' includes 'never thought about it' and 'not interested'. The 'other' category includes 'Too young/too old', 'Making pre-tax (salary sacrifice) contributions', 'Plans to join soon/has applied to join', 'Has life insurance or other superannuation scheme', 'Inadequate tax concessions', 'Spouse has cover', 'Does not intend to stay long with job or employer', 'Already have cover close to/above reasonable benefit limit'.

Data source: ABS (*Employment Arrangements, Retirement and Superannuation, Australia, Apr to Jul 2007 (Re-issue)*, Cat. no. 6361.0).

Feng, Gerrans and Clark (2014), using the Mercer superannuation database, found that around 7 per cent of individuals made post-tax contributions in 2011. As with salary sacrifice, there was a higher incidence of post-tax contributions amongst older cohorts — with up to 20 per cent of those aged 60 or over making these contributions.

Transition to retirement pension arrangements

A further way to take advantage of incentives embodied in the superannuation system is to use what is called a 'transition to retirement pension' (TTR pension). These pensions are available for those aged 55-65 years, where those still in work are allowed to draw down between 4 and 10 per cent of their superannuation balance each year after rolling all or part of their superannuation into a TTR pension account. The pension is designed for individuals to move from full-time to part-time work, but not suffer a loss of income as the draw down from their superannuation offsets part or all of the corresponding fall in wage income (see supplementary paper 1).

However, TTR pension arrangements can also be used by individuals to remain working full-time, receive the income from the pension (at a concessional rate, especially after the age of 60) and make salary sacrifice from their wage income to maintain their superannuation balances. Put more simply, wage income, which may be taxed at a higher rate, is salary sacrificed at a concessional rate in exchange for income from the superannuation balance which is taxed at a lower rate than wages. This can be used by some to reduce their tax liabilities while maintaining the same level of income.

It is difficult to ascertain how many people are using TTR pension arrangements, and for what purpose. Data collected by Australian Prudential Regulation Authority (APRA) and the ATO does not break down the payments made as part of allocated pensions outlays between 'regular' pensions and TTR pensions outside of SMSFs (box 2.1). Nor are specific questions regarding TTR pension arrangements asked as part of the SIH or HILDA collections. The Australian Government did not estimate the cost of implementing the policy on the grounds that the nature of the measure was such that a reliable estimate could not be provided (Australian Government 2004).

Box 2.1 Transition to retirement pensions and SMSFs

The only aggregate data reported publicly on TTR pension use is presented in the ATO's *SMSF statistical compendium*, where the total amount of benefits paid is categorised into income streams, lump sums, TTR pensions, and other payments. While the data is highly aggregated, it still provides some insights as to TTR pension usage amongst the relatively wealthy.

Around 11 per cent of benefits paid from SMSFs in 2013 were made as part of TTR pension payments, or around $3 billion in total. Of all those receiving benefits from an SMSF, 20 per cent were in receipt of a TTR pension payment (ATO 2014d); which when compared with the 40 per cent in the age range where TTR pensions are eligible suggests that TTR pension usage amongst SMSF users is around half. This is a much higher proportion than those based on estimates from SIH data; and again indicates the different nature of wealth and superannuation usage of SMSF members compared to the population at large.

Source: Commission estimates based on ATO (2014d).

Use of TTR pensions can, however, be roughly imputed using various data sources. For example, it could be assumed that those using transition to retirement pension arrangements would be observed to have superannuation income streams in addition to wage income. Such individuals can be isolated in the SIH, which, based on the assumptions above, indicates that around 5 per cent of those aged 55-65 years may have been using transition to retirement pensions in 2011-12.

These individuals were more likely to be working full-time and earned higher incomes than those not using transition to retirement pension arrangements. In terms of the households discussed earlier and used in the Commission's modelling, those using transition to retirement pensions were almost exclusively in the two wealthiest quartiles of couple households. While the data are imperfect, the available evidence does tend to suggest that transition to retirement pensions are used almost exclusively by the wealthy.

Why this should be the case is unclear. From the age of 55 years onwards, the tax incentives are strong enough that most who are employed and facing a marginal tax rate of greater than 15 per cent should avail themselves of the transition to retirement pension. It may be a case that those with lower incomes have less of an incentive to do so relative to those facing higher income tax liabilities, or it may also be the case that many are unaware of the transition to retirement pension arrangements that currently exist. This may not be surprising given the poor state of financial literacy when it comes to the more complicated rules and options available in the superannuation system (see supplementary paper 4).

2.3 How have savings changed and how will they change in the future?

How have superannuation balances changed in the last decade?

The superannuation system is maturing. In practice, this means that more people will have superannuation, and those that are working today will have larger balances in the future. What is less clear is how this growth will occur, and how it will be distributed. As detailed in chapter 1, superannuation does not exist in a vacuum, and there are a range of current and future policies that will affect its evolution. Looking at the past to see how previous growth has occurred could give some insights into possible future growth.

Comparing the superannuation balances of individuals in the SIH for 2003-04 and 2011-12 shows: more people have superannuation, and larger superannuation balances. Between these years, the proportion of the population that had superannuation assets increased from 31 to 37 per cent, and the average balance has more than doubled — increasing from around $33 000 to $70 000 in superannuation savings.

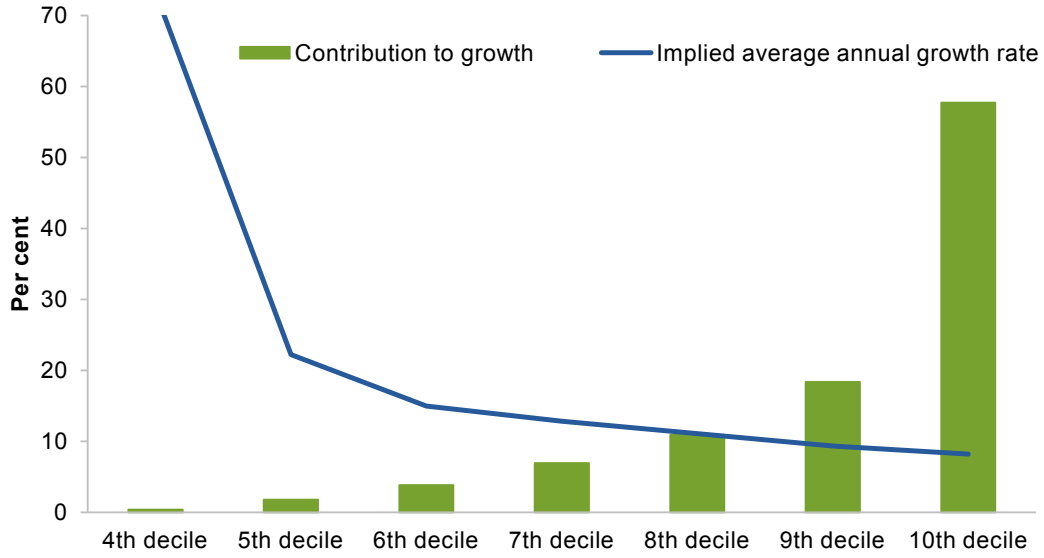
But while the average balance increased, so too has the variance, indicating that the 'spread' of superannuation balances has become more stretched. The coefficient of variation — a measure of dispersion of values adjusted for the mean value — amongst those that had superannuation balances in each year examined increased by around 5 per cent. In other words, the inequality of superannuation increased between the periods. This result is unsurprising given the growth in inequality of wages over the period (ACOSS 2015; Greenville, Pobke and Rogers 2013) as much of the contributions to superannuation come as part of the superannuation guarantee rate. Inequality in superannuation balances would also be expected to increase as wealthier individuals have both greater means and incentives to undertake salary sacrifice and other voluntary contributions, relative to poorer households.

Growth in the total amount of superannuation savings between 2003-04 and 2011-12 has not been uniform across the different superannuation deciles (figure 2.20). Those with the smallest superannuation balances have experienced the strongest implied average annual growth, due mainly to starting from a very low base of superannuation in the earlier period

compared to the later period. In contrast, those with greater superannuation balances have experienced much slower growth in superannuation, but had far larger balances in the earlier period. The growth of larger balances has made a much larger contribution to the total growth of superannuation funds, with growth in the largest 10 per cent of superannuation balances contributing more than half of total growth.

Figure 2.20 **Contributions to growth of total superannuation balances and implied average annual growth rates[a]**

By superannuation decile between 2003-04 and 2011-12



[a] Implied average annual growth rate calculated as the compound growth rate for each decile between 2003-04 and 2011-12.

Data source: Commission estimates based on ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF).

Changes over time in voluntary contributions

Superannuation balances are becoming more considerable through time, but the role that voluntary contributions are playing may be declining in significance. Feng, Gerrans and Clark examined both ABS population data and the Mercer superannuation database in an effort to determine how voluntary contributions to superannuation had changed through time. From the ABS data, they found that:

> … the participation rate in voluntary contributions … has fallen steadily at a rate of 2.5% per year from half of employees making voluntary contributions in 1993, to a little less than a quarter in 2007. The trend is observed in all age groups except the 55 and older [group], where the decline in participation slowed down between 2000 and 2007. (Feng, Gerrans and Clark 2014, p. 14)

And that a similar trend was evident from the Mercer superannuation database:

> Overall, there is a declining pattern evident for both salary sacrifice … and post-tax … contribution participation between 2002-03 and 2011/12 … Rates are relatively stable to 2007/08 but from 2008/09 through 2011/12 a drop is observed in both salary sacrifice and post-tax contributions. … the only age group which does not experience the declining trend is the oldest age group, those 60 years and above.
>
> A breakdown of participation by gender identifies clear differences but consistent trends. There is a substantially greater likelihood of salary sacrifice contributions by males. The participation rate is over five percentage points in all financial years. In contrast, females are more likely to make post-tax contributions, though the difference in participation rates is of a much smaller magnitude.
>
> The breakdown of participation by age … indicates a clear positive relationship between voluntary contribution decisions and age. Across age groups, however the general pattern for both salary sacrifice and post-tax contributions is a reduction in participation rates. This pattern is more distinct with post-tax contributions. (Feng, Gerrans and Clark 2014, p. 22)

Why voluntary contributions have declined over the last decade is not clear as there is a lack of quantitative data. Indeed, one of the only sources of information as to why individuals do not make voluntary contributions remains the question associated with the 2007 ABS *Survey of Employment Arrangements, Retirement and Superannuation*, which has been discussed above (figure 2.20). In practice, a decline in voluntary contributions could be occurring for a number of reasons:

- a substitution from voluntary contributions to compulsory contributions — that is, as the superannuation guarantee has increased, individuals have reduced their voluntary contributions to maintain the same level of superannuation savings, although there is some evidence to suggest the contrary (e.g. Connolly 2007)
- a compositional shift as superannuation coverage increased and unemployment fell over the last decade — typically new entrants into the labour market are younger and not in a position to make additional savings into superannuation, which reduces the overall proportion of those making salary sacrifice or post-tax contributions
- increased concerns around the cost of living, which all else being equal, appears a likely factor in reducing the incidence of voluntary contributions
- the effect of contribution caps, above which additional contributions are treated in a less concessional manner for tax purposes
- a substitution away from voluntary superannuation contributions into other assets.

While the reason for the decline is uncertain, the rate of voluntary contributions is still significant. If there has been a substitution between voluntary contributions and other assets, then a broader picture of how these other assets are used in retirement is needed in order to get a true sense of how retirement savings may have been affected.

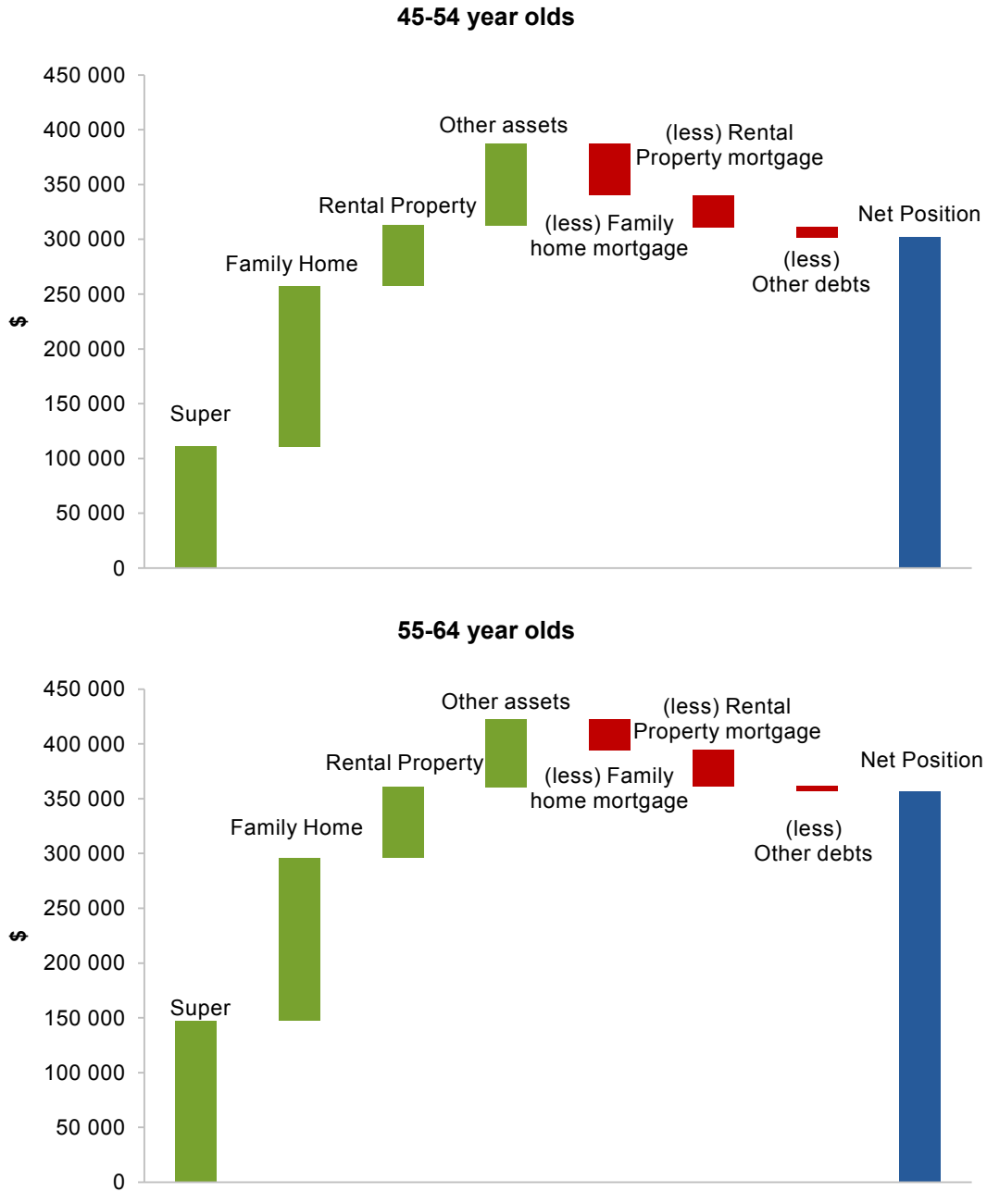
How have other assets and debt changed?

Comparing distributions of wealth and debt from the SIH for 2003-04 and 2011-12 can shed further light on recent and future trends. Figure 2.21 shows how household wealth has changed for those aged 45-54 years (those approaching retirement — 'the younger group') and 55-64 years (those for whom retirement has occurred or is imminent — 'the older group'). A household with the reference person aged 55-64 years is $350 000 more wealthy in 2011-12 compared to 2003-04, while a household with the reference person aged 45-54 years is around $300 000 more wealthy. Broadly speaking, across both groups:

- gross assets have increased substantially over the 8 year period, with about one third of the growth coming from superannuation, one third from growth in the value of the family home and the rest from growth in the value of other assets including rental properties
- gross debt has increased too, but at a much slower pace than that of assets — much of the growth in debt is associated with housing assets (both that of the primary dwelling and rental properties).

Figure 2.21 **How household wealth has changed between 2003-04 to 2011-12**

Nominal prices



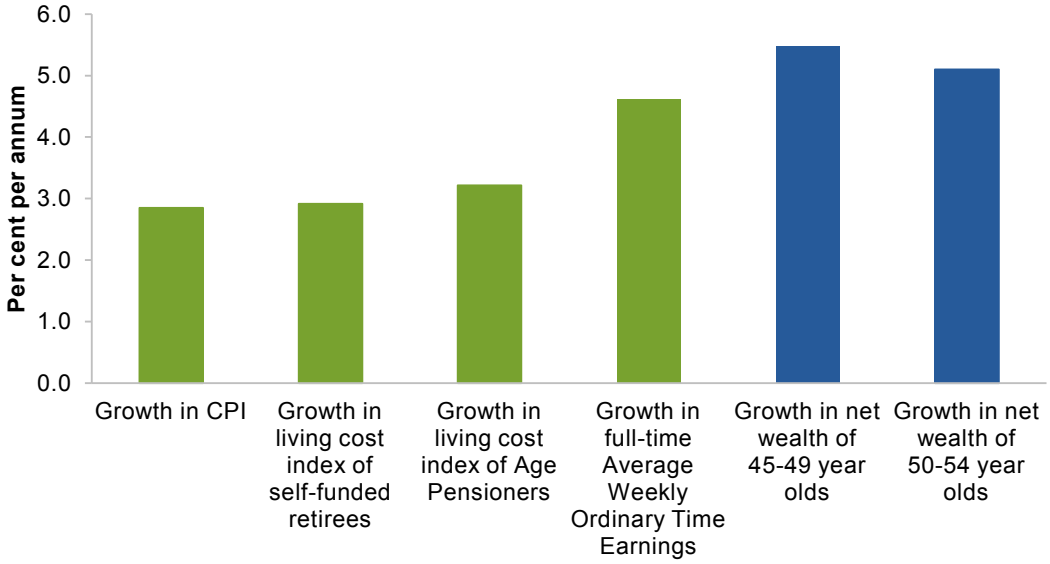
Data sources: Commission estimates based on ABS (*Survey of Income and Housing, 2003-04 and 2011-12*, Cat. no. 6553.0, basic CURF).

In practice, the growth in net assets over this period has outstripped the growth in the costs of living measured by a number of different metrics, as well as the growth in average weekly ordinary time earnings. Figure 2.22 shows the growth in the cost of living as measured by the consumer price index, and the living cost indexes of Age Pensioners and

self-funded retirees for comparison. Against this, the growth in net assets is much larger for both the younger and older group over the same period. Even if housing assets are omitted from the calculation of growth in net assets, the growth in wealth still outstrips the growth in living costs.

Figure 2.22 **Growth in cost of living and wages versus growth in net wealth**

Average annual growth rate from 2003-04 to 2011-12



Data sources: Commission estimates based on ABS (*Selected Living Cost Indexes, Australia, Mar 2015*, Cat. no. 6467.0), ABS (*Consumer Price Index, Australia, Mar 2015*, Cat. no. 6401.0), ABS (*Average Weekly Earnings, Australia, Nov 2014,* Cat. no. 6302.0) & ABS (*Survey of Income and Housing, 2003-04 and 2011-12*, Cat. no. 6553.0, basic CURF).

This style of analysis has also been examined over a longer time frame by the Bankwest Curtin Economics Centre. Its report *'Beyond Our Means? Household Savings and Debt in Australia*, it examines the trends of superannuation and debt growth, finding that 'savings have exceeded the growth in debt and that savings have grown faster than disposable income' (Cassells et al. 2015, p. 34). However, the report also notes the growth of superannuation assets being mirrored by growth in debt, and especially mortgage debts.

The way that retirement incomes may be affected by the growth in housing debt has been the topic of some consternation. Both the CPA (2012) and the Australian Centre for Financial Studies have noted the increasing proportion of households holding mortgage debt as they approach retirement age, and the potential implications:

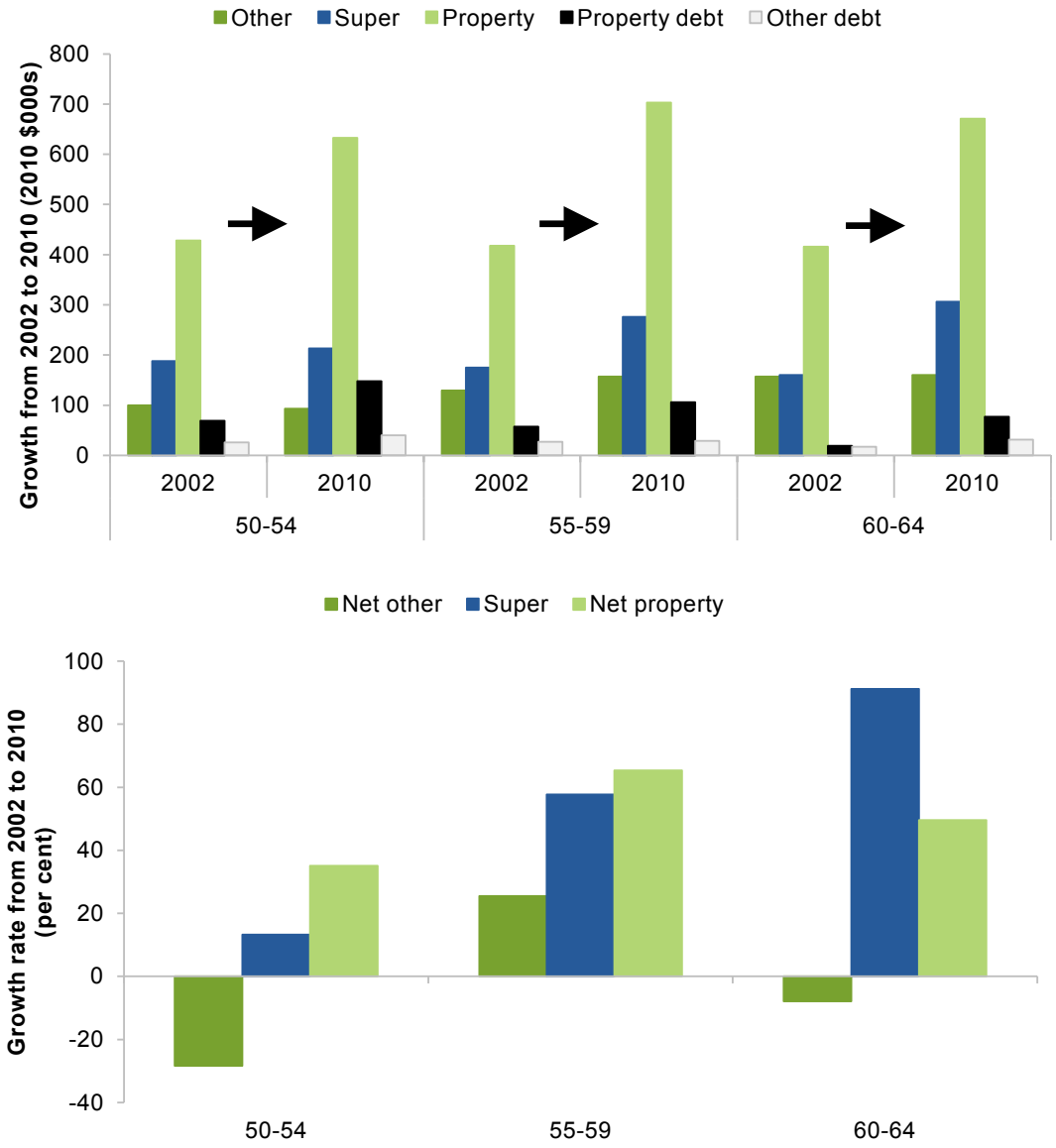
> Another important consideration is the observation of a significant increase in the proportion of households approaching retirement age who still have outstanding mortgage debt. There is anecdotal evidence of this reflecting decisions to fund higher consumption levels pre-retirement (including providing financial support to other family members for house purchase) with the

> intention to use superannuation balances to pay down the mortgage. Some part of that higher consumption may also be 'trading up' to higher value dwellings to enjoy the amenity benefits in retirement, influenced by the exclusion of the family home from the assets test for the pension. This potential cause of distortion to asset allocation, and also disincentive to 'downsizing' in retirement warrants attention. While (significantly) increasing the allowable amount for the assets test and simultaneously including the value of the family home would be one way of rectifying such distortions, it would require significant political will. (Australian Centre for Financial Studies 2014, p. 4)

Research by CPA using HILDA data indicates that the value of other assets (and debts) have increased along with superannuation. By breaking down wealth into the assets of non-superannuation, property and superannuation (along with debt in property and non-property categories), CPA shows the growth in each in real terms (figure 2.23). All age cohorts have experienced growth in the value of their superannuation and property assets, along with growth in property debt. While superannuation has grown quickly, it is often off a low base relative to property, and growth in the latter has contributed a greater proportion to net household wealth over the 2002 to 2010 period.

Figure 2.23 **Savings and debt for specific age ranges[a]**

Levels and growth from 2002 to 2010



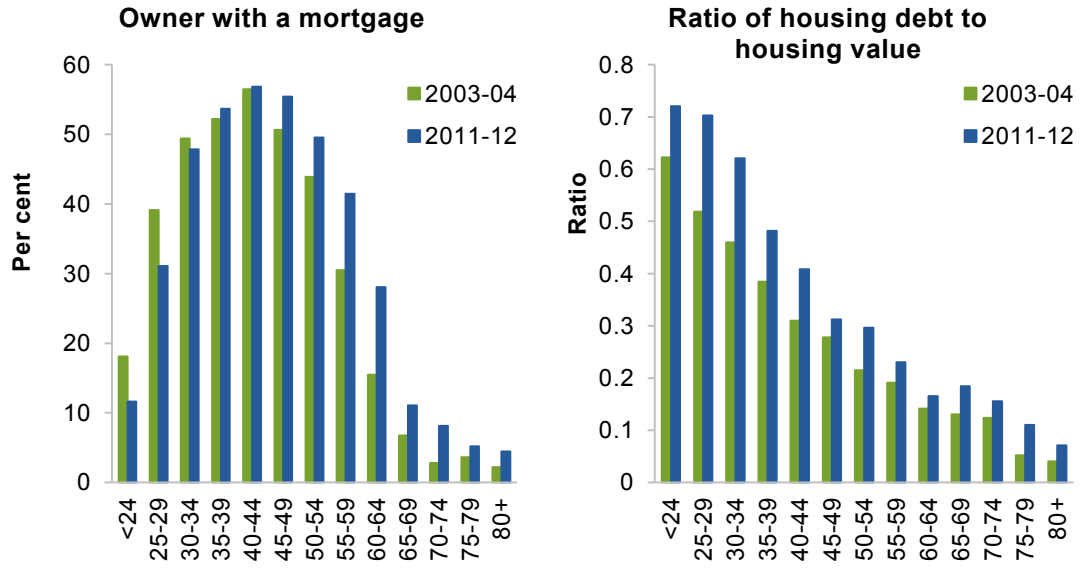
[a] Calculated in net terms by deducting property debt from property values, and other debts from other assets.

Data source: Adapted from CPA (2012).

Analysis of the 2003-04 and 2011-12 SIH data can shed further light on how mortgage incidence and magnitude has changed over the recent period. The incidence of mortgage debt has increased across most age ranges over the period, but is more pronounced for those households with the reference person older than 45 years. Figure 2.24 shows how households are still holding mortgage debt later than was the case eight years ago. The proportion of homeowners aged between 60 and 64 years that still have a mortgage has almost doubled between 2003-04 and 2011-12.

The ratio of housing debt to housing value among those with mortgages has also increased. Figure 2.24 shows this ratio by age category for the two years, and reveals that it is amongst the younger age groups where debt-to-value has increased the most. In contrast, the age category of 60-64 years — where the growing number of households with mortgages was concentrated — does not have a markedly significant change in the debt-to-value being incurred. Put another way, it does not appear that older households are leveraging themselves into positions where they will need to use their superannuation savings to remain financially solvent. (How Australians use their superannuation in relation to paying down debt is discussed in detail in chapter 4.)

Figure 2.24 **Proportion of households with a mortgage[a], and the ratio of housing debt to housing value[b]**



[a] As opposed to tenure types of 'own without a mortgage', 'renter' and 'other'. [b] For the value of the primary dwelling only. While this figure suggests that housing debt has outstripped housing value, this is only the case for the subset of those holding mortgages. On average, this is not the case (see figure 2.21).

Data source: Commission estimates based on ABS (*Survey of Income and Housing, 2003-04 and 2011-12*, Cat. no. 6553.0, basic CURF).

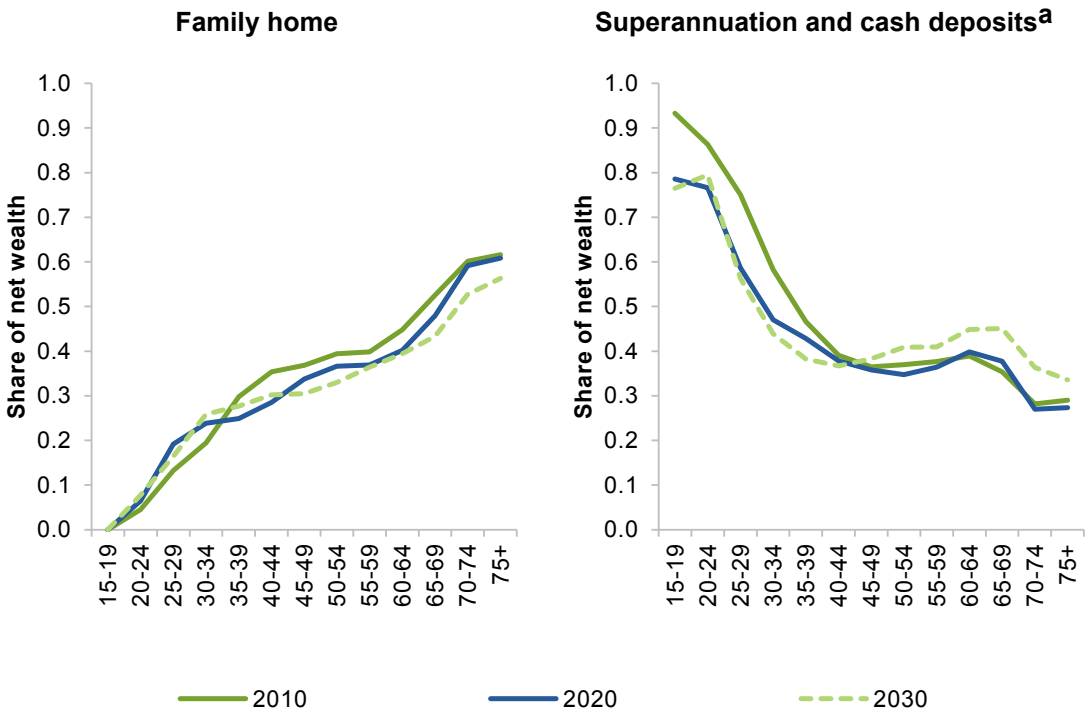
How important will superannuation be in future?

If the recent past is anything to go by, the savings of future Australians is likely to be a 'two horse race' between growing housing and superannuation assets. Projections by the National Centre for Social and Economic Modelling (NATSEM) in 2002 suggested the share of net wealth comprised by the family home would diminish relative to superannuation and other asset holdings by 2030 (figure 2.25). Even so, the NATSEM results still indicate that a large share of net wealth will be comprised of equity embodied in the family home, even as the superannuation system approaches 'maturity' — indeed, a

majority of net wealth would be comprised by the family home in 2030 for those aged 70 years or older. Consequently, the willingness of retirees to draw down on their equity in order to finance their retirement will remain a live policy question.

Figure 2.25 **NATSEM projections of the shares of net wealth comprised by equity in the family home, superannuation and cash deposits**

Shares of net wealth for 2010, 2020 and 2030



[a] Cash deposits include annuities, allocated pensions and managed funds.

Data source: Kelly (2002).

While trying to project the coverage of home ownership, and future changes in housing asset prices to calculate an exact figure, is beyond the scope of this paper, it is of interest, to examine how superannuation balances may change through time as the superannuation system matures.

What might the value of superannuation look like in the future?

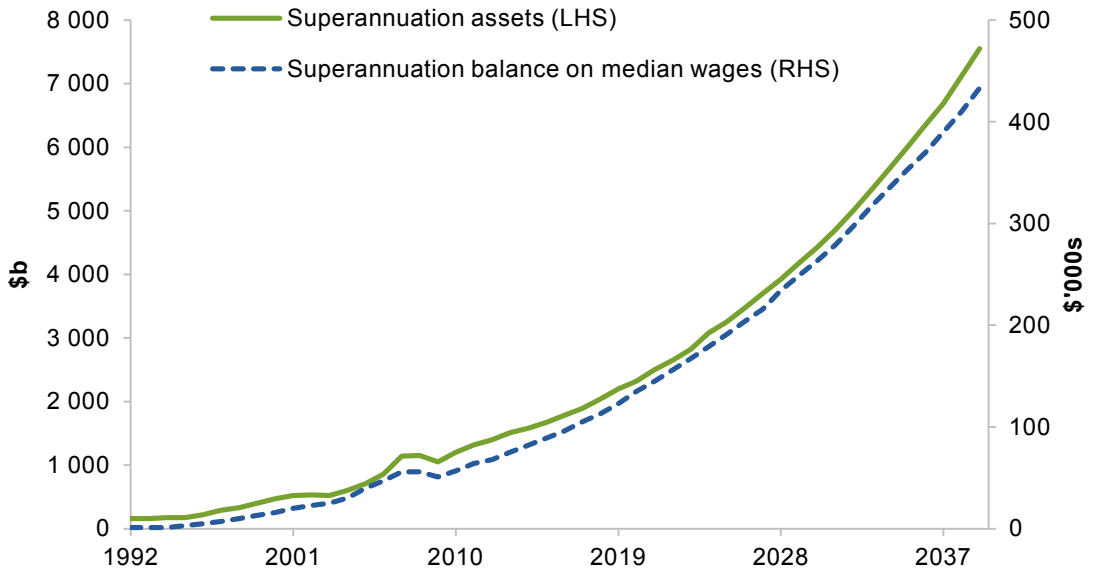
Calculating what superannuation assets in total and by balance might be in the future is complicated as it requires a number of assumptions to be made. These include making decisions about:

- the likely superannuation policy landscape, which has been subject to frequent changes — especially in relation to the Superannuation Guarantee rate, concessional contribution caps and the effect of other policies that interact with the superannuation system (such as tax rules and the Age Pension)
- how savings and drawdown rates may change, in part to reflect changes in preferences between consumption and savings
- how wages, wage growth, employment and participation may change through time, given the importance of these elements when it comes to the superannuation guarantee
- what the rate of return to superannuation assets may be, which in turn may require more complicated decisions around the asset portfolios within different types of superannuation funds.

Even small changes in assumptions can lead to very different projections of total superannuation balances, especially when balances are projected out far into the future. One example of how small changes in assumptions can lead to large differences in superannuation projections is contained in the Rice Warner Actuaries submission to the *Financial System Inquiry*. The base projection calculated superannuation assets to be $3353 billion in 2013 dollars by 2028, but the sensitivity analysis of the assumptions revealed that that different assumptions could yield a figure between $2931 billion and $3791 billion, with assumptions around contribution levels, wage inflation and investment returns all making a material difference to the final result (Rice Warner 2014).

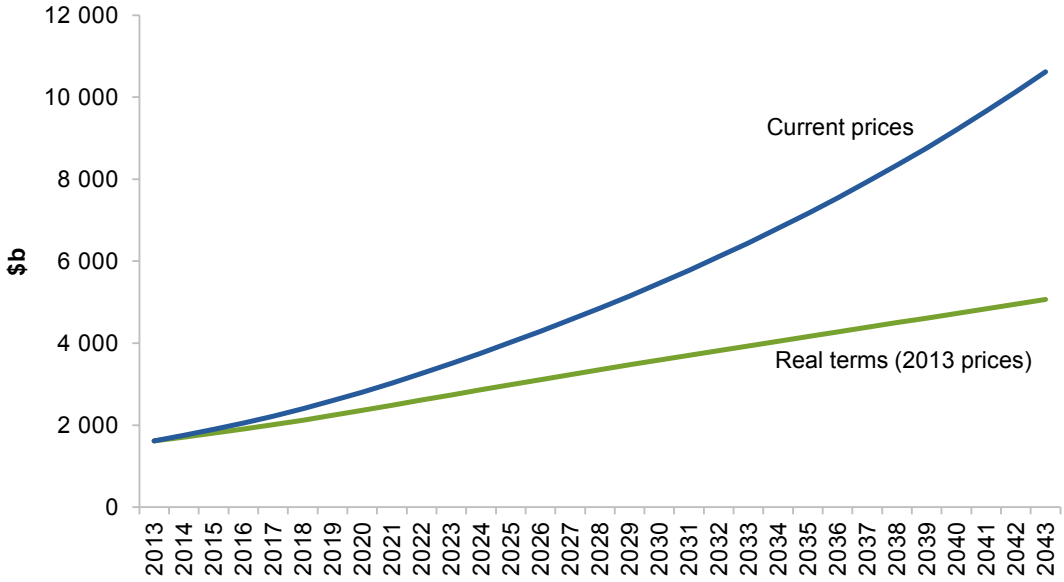
The Treasury has estimated the total amount of superannuation assets, and the projected superannuation balance for someone receiving the median wage over their lifetime as part of the budget in 2012-13 (figure 2.26). This projection to 2039 shows that the total amount in superannuation balances will be approximately $7 trillion (in current price terms), while the superannuation balance of someone earning median wages through their working life will be around $440 000 (in 2011 dollars) once they reach age 67 in 2039 (Australian Government 2012, p. 4–8). Rice Warner have also projected total superannuation funds under management to 2043. Their analysis indicates that total assets will reach around $5 trillion (in 2013 dollars) by 2043 (figure 2.27).

Figure 2.26 **Superannuation assets and superannuation accumulation**



Data source: Adapted from chart A of Australian Government (2012).

Figure 2.27 **Rice Warner projections of funds under management[a]**



[a] Current price series is a Commission estimate based on an assumption of 2.5 per cent inflation through the projection period.

Data source: Commission calculations and Rice Warner (2014).

What might the variation of superannuation assets be in the future?

Regardless of the methodology used, it is clear that superannuation assets will comprise a significant component of total household savings. However, as discussed above, totals do not reveal much about the underlying distribution of superannuation holdings. As examined above, the distribution of superannuation assets is quite wide at present, and there are a number of factors that could lead to changes in the variation of superannuation in the future (box 2.2). While aggregate figures can provide guidance for the 'average' individual, greater detail and analysis is needed to examine how particular groups may be affected by a maturing superannuation system.

Box 2.2 What factors could cause variation among superannuation balances to change?

A wide range of factors affect how superannuation balances vary from individual to individual, and many of these factors will also apply as the superannuation system reaches maturity. In addition, other factors would also affect the distribution of superannuation balances. Broadly speaking, all else being equal:

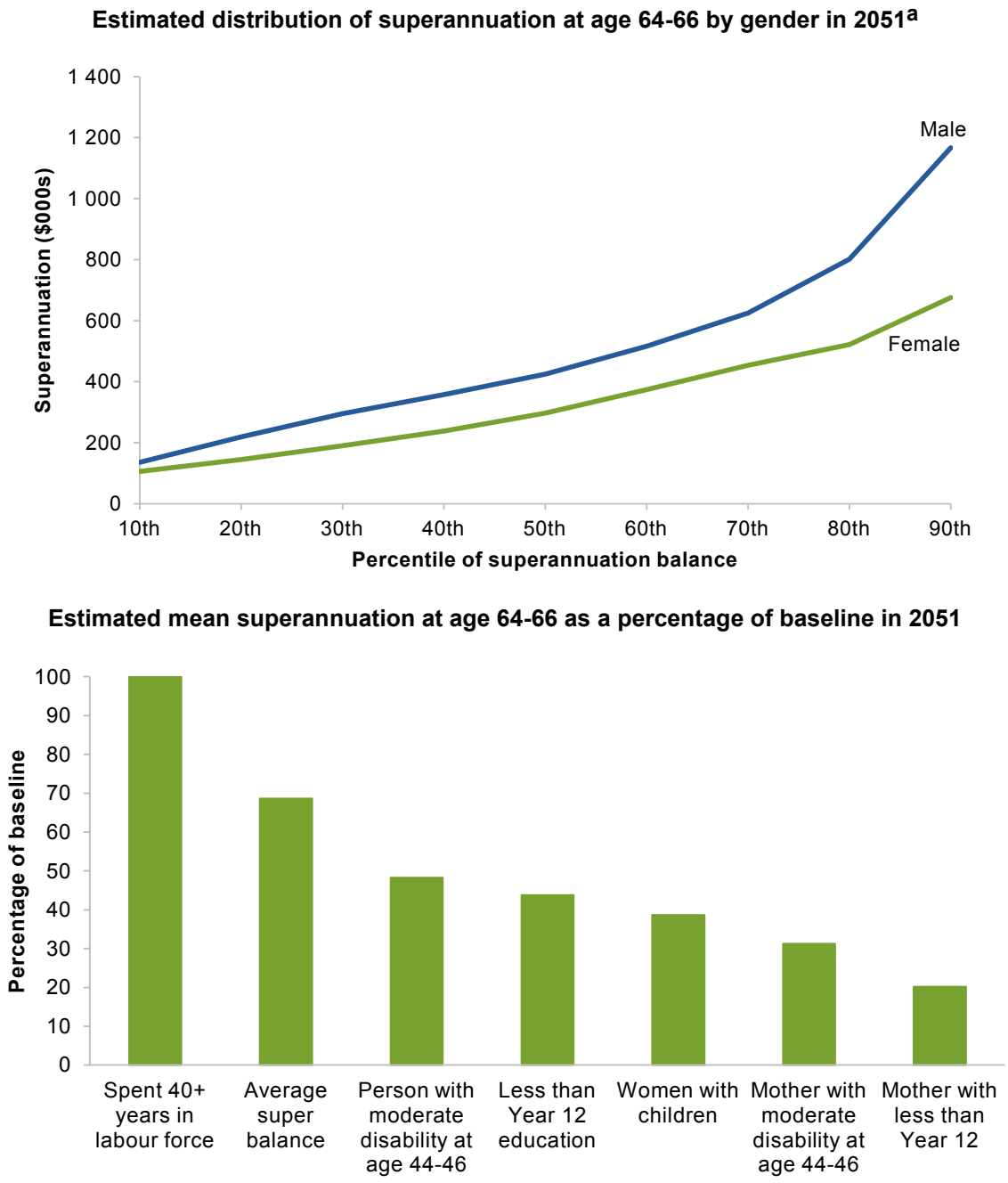
- a wider coverage of superannuation could be expected to *reduce* variation in balances — as more individuals are covered by the superannuation guarantee, this means that the number of those with no superannuation savings diminishes
- an increase in the superannuation guarantee could be expected to *reduce* variation in balances — as those individuals that do not make voluntary contributions have their savings raised to a level closer to those that do make such contributions
- greater wage inequality could be expected to *increase* variation in balances — a greater dispersion in wages can lead to a greater dispersion in superannuation contributions made under the superannuation guarantee
- greater unemployment could be expected to *increase* variation in balances — more people and/or longer periods of unemployment effectively 'pause' the contributions that individuals receive under the superannuation guarantee; and in practice erode balances as fees are deducted
- bracket creep could be expected to *increase* variation in balances — a higher marginal tax rate could increase the incentives for some to make additional tax-concessional contributions
- greater growth in immigration could be expected to *increase* variation in balances — as new workers from abroad enter the superannuation system with zero balances (although may have sizable non-superannuation savings).

NATSEM has undertaken such an exercise. It modelled the mean superannuation balance for those that spend at least 40 years of their lives in the labour force, and found for those aged 64-66 years in 2051 the median male and female superannuation balances are $424 700 and $297 000, respectively (Keegan, Harding and Kelly 2010, p. 9). In addition to examining the variation between gender, NATSEM also examined how different rates of income, education and disability would all affect superannuation balances under a mature system. The variation of superannuation balances is expected to remain large, and women,

those with a disability and those with lower levels of educational attainment are predicted to have much less superannuation than the average (figure 2.28).

In sum, superannuation balances are expected to grow over the coming decades, and will comprise a greater value of household savings. Whether superannuation forms a greater *proportion* of savings is yet to be seen, and depends on how the distribution and price of housing assets evolves in coming years. The growth of superannuation itself will not be uniform across all households, and the wide distribution of superannuation savings may not be reduced by a maturing superannuation system alone. Such a distribution is something that should be considered by policymakers when it comes to making changes to the superannuation system, and when undertaking reform of the retirement income system more broadly.

Figure 2.28 **NATSEM analysis of the distribution of superannuation under a mature system**



a In 2006 dollars.

Data source: Keegan, Harding and Kelly (2010).

3 The Age Pension

The Age Pension plays an important role in supporting the incomes of older Australians at present, and will continue to do so in the future. This supplementary paper discusses in greater detail some of the issues relating to the Age Pension, including:

- the current Age Pension policy environment (section 3.1)
- recent trends in Age Pension coverage (section 3.2)
- how the number of Age Pension recipients, and government outlays may change in the future (section 3.3).

3.1 The Age Pension policy environment

The Age Pension is an income support payment for older Australians. Established at the turn of the last century (in 1909), it is a 'safety net' that is intended to provide a level of income to ensure a reasonable minimum standard of living in retirement for all Australians. The Henry Tax Review noted it as a particular strength of the Australian retirement income system:

> It substantially underpins the retirement incomes of most low to middle income earners. It supports people who live longer than expected and exhaust their private savings, and it supports those who have less than average full-time employment due to periods of unemployment, caring responsibilities, working part-time or spending part of their working life overseas. Being taxpayer-funded, the Age Pension provides protection against investment, inflation and longevity risk. (Treasury 2009c, p. 10)

In 2013-14, 2.4 million Australians received the Age Pension at a cost of $39.4 billion.[24] Expenditure on income support payments to seniors currently comprises around 40 per cent of overall income support expenditure by the Australian Government and is around 2.9 per cent of GDP (Australian Government 2015a). It is the largest Commonwealth spending program aside from revenue assistance to the states and territories (Australian Government 2014a).

[24] Australian veterans and their families can also receive the Service Pension or Income Support Supplement rather than the Age Pension. In 2013-14, just under 220 000 people received the Service Pension at a cost of $2.79 billion (DVA 2014). Other age-related payments include the Wife Pension and the Widow B Pension, which collectively account for a relatively small and shrinking share of government expenditure costing around $130 million (DSS 2014). Expenditure under these schemes is shrinking because new payments were discontinued in 1995 and 1997 respectively.

Age Pension payments only represent a portion of overall government expenditure on older Australians, with health and aged care costs also contributing substantially. In 2011-12, health and aged care expenditure was almost twice that of age–related pension expenditure, and while health is spread across all ages, spending per person rises significantly with age (chapter 1). Older Australians also receive discounts on a range of goods and services through various concession cards, which contribute to overall government outlays, including by state and territory governments.

Many have expressed concerns about the fiscal sustainability of these expenditures as the population ages, particularly as projections suggest that compulsory superannuation will not fundamentally change overall reliance on the Age Pension (discussed below). Several recent reviews have included recommendations that have sought to improve the fiscal sustainability and targeting of the Age Pension (box 3.1).

Box 3.1 Recent recommendations relating to the Age Pension

Key recent recommendations to Age Pension policy are outlined below, some of which have already been adopted by the Australian Government.

Pension Review (2009)

- Any increase in pension rates to improve adequacy and financial security for those who predominantly rely on the pension to be accompanied by a tightening of the income test in order to limit the flow-on of benefits to those who are less reliant on the pension.
- More effective mechanisms to support pensioners maintaining or seeking paid work through concessional treatment of low to moderate incomes.
- Deeming of account-based superannuation products to equalise treatment with other financial assets. This was implemented in 2015.
- Phased increase in the Age Pension age from 2014 as part of a coordinated approach to the entire retirement income system (to be phased in from 2017, as per below).

Australia's Future Tax System Review (2009)

- Phased increase in the Age Pension age to 67 years. This will be implemented from 2017 to 2023.
- Gradually aligning the preservation age with the Age Pension age.
- Consolidating the Age Pension means tests to a single income test, rather than separate income and assets tests.

National Commission of Audit (2014)

- Age Pension to grow in line with Average Weekly Earnings rather than Male Total Average Weekly Earnings.
- Changing the means tests to a single comprehensive income test, consistent with the Henry Tax Review recommendation above.

Sources: Harmer (2009); Treasury (2009a); National Commission of Audit (2014).

Australia is neither unique nor the most extreme in the degree to which its population is ageing. While Australian governments will face additional pressures on their budgets, Age Pension expenditure by the Australian Government is low relative to other OECD countries. In 2009, the share of GDP spent on the Age Pension was 3.5 per cent, less than half the OECD average of 7.8 per cent (OECD 2013).

Who is eligible for the Age Pension?

Eligibility for the Age Pension is subject to age, residency and means tests.

The qualifying age to receive the Age Pension is currently 65 years. The eligibility age for women was initially 60 years and was gradually increased to 65 between 1994 and 2014. The eligibility age for men has remained unchanged since the inception of the national pension in the *Invalid and Old-age Pension Act 1908* (Cwlth). While the eligibility age has not changed, life expectancy has increased significantly. At the time the pension was introduced, a man aged 65 years could expect to live for around another 14 years, whereas a man born a century later could expect to live around a further 29 years after age 65 (PC 2013).

From 2017 to 2023, the qualifying age for the Age Pension will gradually be increased to 67 years (table 3.1). The 2014-15 Budget announced that the eligibility age would continue to increase at the same rate to reach 70 years by 1 July 2035, though this measure remains subject to the passage of legislation.

Table 3.1 **Eligibility age for Age Pension by 2023**

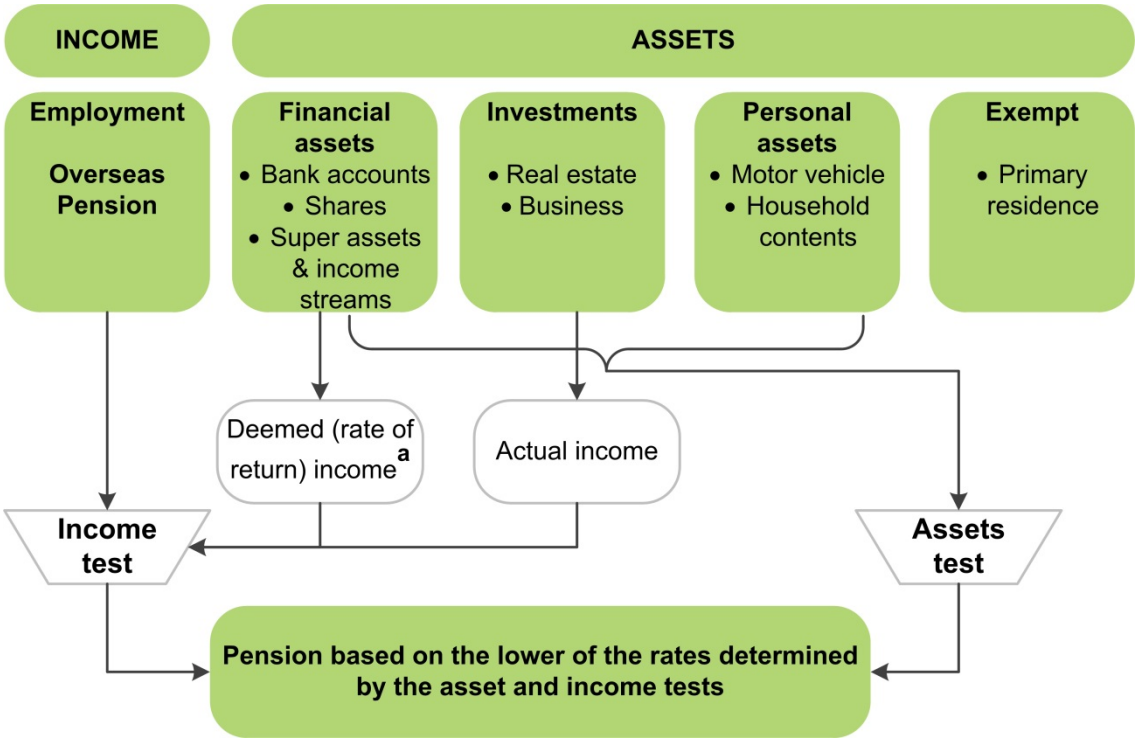
Date of birth	*Eligibility age for Age Pension*
Before 1 July 1952	65 years
1 July 1952 to 31 December 1953	65.5 years
1 January 1954 to 30 June 1955	66 years
1 July 1955 to 31 December 1956	66.5 years
From 1 January 1957	67 years

Source: Department of Human Services (2015a).

Individuals also need to meet residency requirements to be eligible for the Age Pension. Namely, having been an Australian resident for a period of at least 10 years, with at least five of these years in one continuous period, as well as being in Australia at the time they submit their claim.

Both income and assets tests apply to the Age Pension, with the test that results in the lower payment level applied (figure 3.1). In practice, for those who currently receive the part (as opposed to the full) rate pension, the income test is binding for almost 60 per cent of pensioners and the assets test is binding for the remaining 40 per cent (DSS 2015).

Figure 3.1 **An illustration of the means tests for the Age Pension**



[a] Financial assets are deemed to earn a rate of return of 2 per cent per annum for the first $48 000 ($79 600 for couples) with any amount over this deemed to earn 3.5 per cent per annum.

Source: Adapted from Treasury (2009c).

The main sources of assessable income are deemed income from financial investments including superannuation funds (box 3.2); foreign pensions; income streams; employment earnings; and real estate income. Other types of assessable income, such as income from outside Australia; business income; and dividends are not typically received directly by the majority of older Australians who are eligible for the Age Pension. Assessable assets include real estate other than the primary residence; financial investments; retirement village contributions; motor vehicles; superannuation investments; and income streams.

The income and asset limits for the full and part Age Pension are outlined in table 3.2. These limits vary depending on couple status, and also homeownership status for the assets test. Payments (including supplements) are reduced based on the following taper rates:

- 50 cents per fortnight for each additional dollar above the full payment income threshold for the income test, or
- $1.50 per fortnight for every $1000 above the full payment asset threshold for the assets test.

The part payment thresholds represent the maximum amount of income or assets that can be earned or held while still receiving a part pension.

In June 2015, legislation was passed that will modify the assets test from 2017, including by increasing the full rate assets test thresholds and increasing the taper rate from $1.50 to $3.00 (resulting in a lower part rate threshold).[25]

Table 3.2 **Means tests thresholds for the Age Pension[a]**

Must be below these limits, as at January 2015

	Income test	*Assets test*	
		Homeowners	*Non-homeowners*
Full rate	$ per fortnight	$	$
Single	160	202 000	348 500
Couple combined	284	286 500	433 000
Part rate			
Single	1 868	771 750	918 250
Couple combined	2 860	1 145 500	1 292 000

a A number of other factors can vary the limits and payment rates, such as having dependent children or couples that are separated by illness.

Source: Department of Human Services (2015a).

Box 3.2 **How is superannuation treated in Age Pension income and assets tests?**

As an overarching principle under social security law, superannuation is treated as a form of income and/or asset that can contribute to a person's (including their household's) means or capacity to support themselves.

By Age Pension age, individuals have unconditional access to their superannuation. As such, superannuation investments are included in the assets test and added to other financial assets in calculating deemed income for the income test.

The way in which superannuation is drawn down impacts its treatment under the means tests.

For example, lump sum withdrawals may be considered as financial assets if they are invested or saved, or as non-financial assets if used to purchase assets such as artworks or holiday homes.

Alternatively, they may be treated as income if rolled over into an income stream product. There are a variety of income stream types, such as account-based pensions or annuities, and the treatment of each for the purposes of Age Pension eligibility has varied over time with different rules applying depending on when the income stream was initiated. Most recently, the deeming rules have been extended to include account-based income streams purchased after 1 January 2015.

Source: Department of Human Services (2014c).

25 Social Services Legislation Amendment (Fair And Sustainable Pensions) bill 2015.

What benefits does the Age Pension provide?

Payment rates

There are different rates of Age Pension payments for singles and couples (table 3.3). Each member of a couple may be entitled to the maximum basic rate for a couple, except in circumstances where the couple is separated due to ill health (for example, where one partner is living in an aged care facility) in which case each member of the couple may be entitled to the maximum basic rate for a single person.

Individuals eligible for the Age Pension who are non-homeowners may also be eligible for rent assistance of up to $127.50 per fortnight. A range of other allowances that recognise the individual circumstances of recipients may also be payable.

Table 3.3 **Maximum Age Pension payment rates per fortnight**
As at January 2015

Pension rates	*Single*	*Couple each*
Maximum basic rate	$776.70	$585.50
Maximum Pension Supplement	$63.50	$47.90
Energy Supplement	$14.10	$10.60
Total	$854.30	$644.00

Source: Department of Human Services (2015b).

The Age Pension is indexed twice a year (on 20 March and 20 September), to (the greater of) the growth in the Consumer Price Index (CPI) or the Pensioner and Beneficiary Living Cost Index. These increases are benchmarked against Male Total Average Weekly Earnings, at 27.70 per cent for singles and 41.67 per cent for couples (combined), such that indexed rates are lifted to the benchmark level if they fall short.

It was announced in the 2014-15 Budget that from 2017 the rate of the Age Pension (and other payments) would be indexed according to CPI only, however this measure was not legislated and was later abandoned in the 2015-16 Budget (Australian Government 2015b).

Access to Commonwealth and state and territory concession cards

In addition to pension payments, older Australians may be eligible for concession cards that provide access to discounts for a range of essential goods and services in order to lower the cost of living and promote a basic quality of life. Concession card eligibility is binary — once it is determined that an individual is eligible to be a card holder, they receive the full suite of concessions regardless of their means.

Commonwealth concession cards

Individuals over 65 years of age may be entitled to the Pensioner Concession Card and other Commonwealth concession cards. Each type of card entitles holders to cheaper prescription medicines, Australian Government funded medical services (that is, bulk billing where offered by service providers) and other limited government concessions such as discounted utility bills, public transport fares and car registration. Box 3.3 summarises estimates of the value of some of these concessions to card holders.

Box 3.3 Estimated value of Commonwealth concession cards

Information on concession card expenditure is limited. In its report *Concessions — Who Benefits?*, the House of Representatives Standing Committee on Family and Community Affairs (1997) expressed concerns that, while the (then) Department of Social Security was able to estimate that around $5.1 billion (in 1996 dollars) was paid annually on concessions, the components of this expenditure could not be accurately accounted for.

The available data does not appear to have improved substantively since that time. Nonetheless, there have been some attempts to estimate the value of concession cards to their holders.

The (then) Department of Families, Community Services and Indigenous Affairs (FaCSIA) (2007) estimated the value to holders of the Pensioner Concession Card at $1600 per year. They derived this estimate by comparing the general and concessional rates for pharmaceuticals for a person who requires one prescription per week, as well as averaged savings from 'core' concessions offered by jurisdictions (such as utilities, vehicle registration and public transport). FaCSIA also estimated the value of a Commonwealth Seniors Health Card at $1200 per year. The lower value attributed to the Seniors Health Card reflects that it does not generally attract the range of state and territory concessions available to Pensioner Concession Card holders.

The Tasmanian Department of Treasury and Finance (2008) estimated that the average annual value of a core bundle of concessions (including the Electricity concession and Motor Vehicle Registration concession) was worth around $729 to a Pensioner Concession Card holder and around $600 to a Health Card holder for 2007-08. It also noted that the value to a Tasmanian recipient is high relative to a recipient in another jurisdiction, based on a comparison of core concessions in different jurisdictions.

While these estimates provide indicative values, different circumstances, such as an individual's jurisdiction and use of subsidised services mean that the value of a concession card can vary considerably. The Association of Superannuation Funds of Australia (2008) noted that estimates of the overall annual value of concessions received through holding a Pensioner Concession Card vary from as little as $300 to more than $1000 a year.

These averages are likely to substantially underestimate the value of concession cards for some. For example, the most generous estimates by FaCSIA above assume a person requires one prescription per week. However, this is likely to under-represent the costs of medicines for many older Australians. For example, Morgan et al. (2012) conducted a snapshot survey of medicine usage and found that more than 40 per cent of over 75 year olds had used between 5 and 9 medicines in the previous 24 hours while around 15 per cent of men over 75 and 30 per cent of women over 75 had used more than 10.

All Age Pension recipients are entitled to a Pensioner Concession Card, regardless of the amount of pension they receive. This can create an incentive to retain small pension payments in order to access discounted goods and services afforded by the card (see figure 3.5).

Older Australians not eligible for the Age Pension may be eligible for the Commonwealth Seniors Health Card, depending on their income.[26] Access to this card is based only on an income test that includes adjusted taxable income and a deemed amount from account-based income streams. The income test limit is $51 500 for individuals and $82 400 for couples combined.

In December 2014, almost 4 million individuals held a Pensioner Concession Card[27], and around 286 000 people held a Commonwealth Seniors Health Card (DSS 2015).

State and territory government concessions

State and territory governments (and associated government owned enterprises) also provide a variety of concessions for different card holders. Typically, the most generous concessions are given to holders of a Pensioner Concession Card but this depends on the jurisdiction.

State and territory governments also issue their own seniors cards, which are generally available to over 60 year olds who work less than a specified number of hours per week and reside in the relevant state or territory. This is a nationally agreed scheme that is intended to provide some consistency in eligibility between jurisdictions. However, each state and territory government sets its own rebates and subsidies for various services including public transport and car registration, energy and water consumption, and property rates.

Eligibility arrangements also vary by jurisdiction. In Victoria and Queensland, eligibility requires working less than 35 hours per week (averaged across a 12 month period), while in Western Australia the threshold is 25 hours per week, and in the remaining states and territories it is 20 hours per week.

Dating back to 1993, the Commonwealth provided financial assistance to the states for concession-related expenses through the *National Partnership Agreement on Certain Concessions for Pensioner Concession Card and Seniors Card Holders*. This agreement was terminated by the Australian Government on 1 July 2014.

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26 Some older Australians are also holders of the Low Income Health Care Card which affords similar benefits to the Commonwealth Seniors Health Card.

27 In addition to Age Pensioners, this includes recipients of the Carer Payment, Disability Support Pension or Newstart Allowance, who are also entitled to a Pensioner Concession Card.

3.2 Recent trends in Age Pension coverage

Who receives the Age Pension?

While the Age Pension is considered a 'safety net' and superannuation coverage and assets have been increasing, in practice the majority of older Australians receive at least a part pension at some point in their lives. In September 2014, around 70 per cent of people aged over 65 received the Age Pension, with around 60 per cent of these recipients on the full rate and the remainder on a part rate.

Consistent with the workings of the means tests, recipients of the Age Pension have less income than the rest of the population on average. ABS *Survey of Income and Housing* data from 2011-12 reveal that almost two-thirds of Age and Service Pensioners are in the bottom income quartile, and around 90 per cent are in the bottom half of the income distribution (table 3.4).

While recipients of the Age Pension also hold less overall wealth than the rest of the population on average (figure 3.2(i)), they are under-represented in the lowest wealth quartile and over-represented in the two middle wealth quartiles. This can be attributed to home ownership, since the home is exempt from the assets test. In 2014, around 75 per cent of pensioners (and 40 per cent of full rate pensioners) were homeowners. However, home ownership only provides a partial explanation for the differences in net wealth holdings. Age Pensioners who owned their own home also tended to have, on average, higher levels of non-home wealth (figure 3.2(ii)).

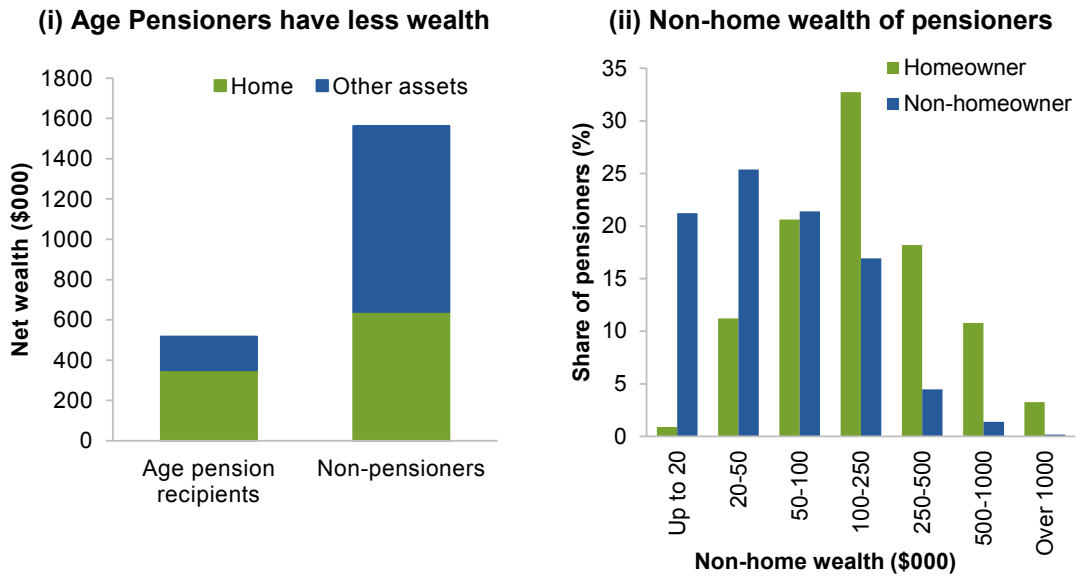
Table 3.4 **A comparison of Age Pensioner and non-pensioner income and wealth[a,b]**
2011-12

		Equivalent disposable income quartile				
		Quartile 1	Quartile 2	Quartile 3	Quartile 4	Total
Mean household income	$p.a	17 793	31 470	47 903	88 513	47 224
Age Pensioner	%	56	34	10	2	100
Non Age Pensioner	%	17	23	29	31	100
		Wealth quartile				
Mean household net wealth	$	47 140	278 590	612 780	1 930 580	728 085
Age Pensioner	%	16	25	38	21	100
Non Age Pensioner	%	27	24	22	27	100

a Includes Age and Service Pensioners. **b** Some rows may not sum to 100 due to rounding.

Sources: Commission estimates based on ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF), based on methodology used in Kelly (2009).

Figure 3.2 **Wealth profile of Age Pensioners[a,b]**
2011-12



[a] Includes Age and Service Pensioners. [b] Non-home wealth excludes the value of the family home, the value of children's assets and loans to persons outside the household and includes the value of financial assets, superannuation, business concerns, other property, home contents and vehicles.

Data source: Commission estimates based on ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF), Non-home wealth based on methodology used in Kelly (2009).

Pathways to and time spent on the Age Pension

Many pension recipients transition from another government payment. In 2013-14, almost 90 per cent of those who took up the Age Pension at the qualifying age transitioned from payments such as the Disability Support Payment, Mature Age Allowance and Widow Pensions. Of these, three quarters received the full Age Pension rate.

The majority of Age Pension commencements occur within one year of reaching the Age Pension age (around 60 per cent in 2013-14, with an average of 64 per cent over the previous ten years). Others take up the Age Pension later — sometimes more than 10 years after they reach the eligibility age. This may be because they are still in the labour force, or because they self-fund the initial years of their retirement and only become eligible for the Age Pension once they have drawn down their superannuation and other savings. A study by Bray (2013) found that couples were more likely to take up the Age Pension later compared to singles.

Once they receive the Age Pension, people tend to remain on it for long periods. Current recipients have spent an average 561 weeks (slightly under 11 years) on the payment, with around half having received the payment for more than ten years (table 3.5).

Table 3.5 **Duration of Age Pension payment[a]**
December 2014

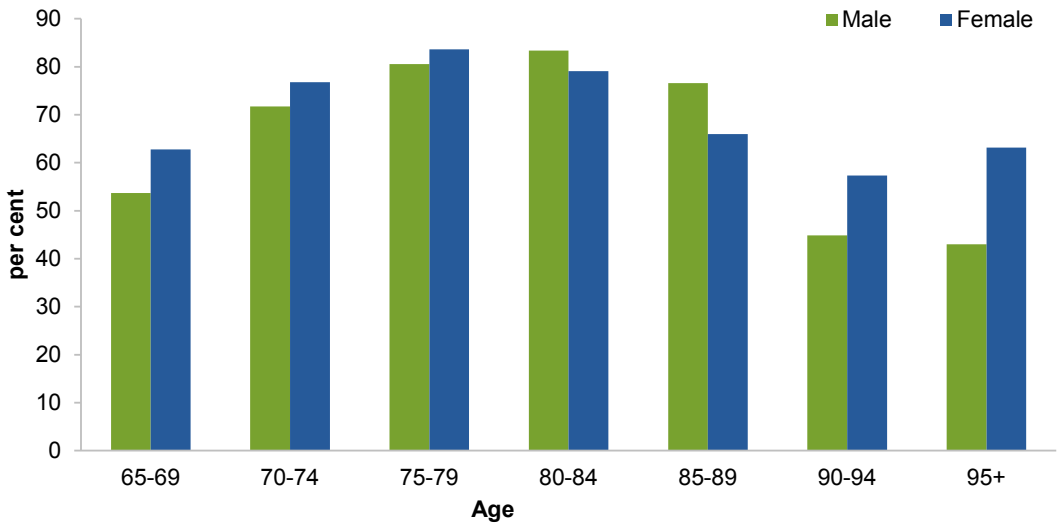
Duration of payment	*Number of recipients*	*Proportion of recipients*
	no.	%
Under 1 year	181 373	7
1-2 years	147 601	6
2-5 years	443 396	18
5-10 years	578 612	24
Over 10 years	1 096 540	45

[a] All Age Pension recipients, including those on full and part rates.

Data source: Department of Social Services Demographic Data (DSS 2015).

Breaking down Age Pension coverage by age reveals that there is a steady increase in the coverage rate from the eligibility age followed by a substantial decline from the time retirees reach their mid-80s (figure 3.3). This pattern is more pronounced for men than women. A similar pattern can be observed based on 2008 data (FaHCSIA 2008, p. 39).

Figure 3.3 **Age Pension coverage rates[a]**
Share of population by age, September 2014



[a] Data excludes those paid by the Department of Veterans' Affairs and those who are manually assessed, suspended or whose rate is unknown.

Data sources: Department of Social Services Payment Demographic data and population modelling from PC (2013).

While the initial increase in coverage is expected — because some people initially self-fund their retirement — the decline for older age groups is less intuitive. There are two key explanations for the decline. First, those in their mid-80s to mid-90s are relatively

more likely to receive income support administered through the Department of Veterans' Affairs (table 3.6).

Table 3.6 **Veteran Service Pensioners from all conflicts**
By age

	65-69	*70-74*	*75-79*	*80-84*	*85-89*	*>90*
Service pensioners	22 270	7 240	4 998	4 657	8 508	16 248
Share of pension recipients (percentage of age group)[a]	3	1	1	1	4	16
Share of population (percentage of age group)	1.99	0.88	0.82	1.04	2.88	9.95

[a] Including those receiving either the Age or Service Pension.

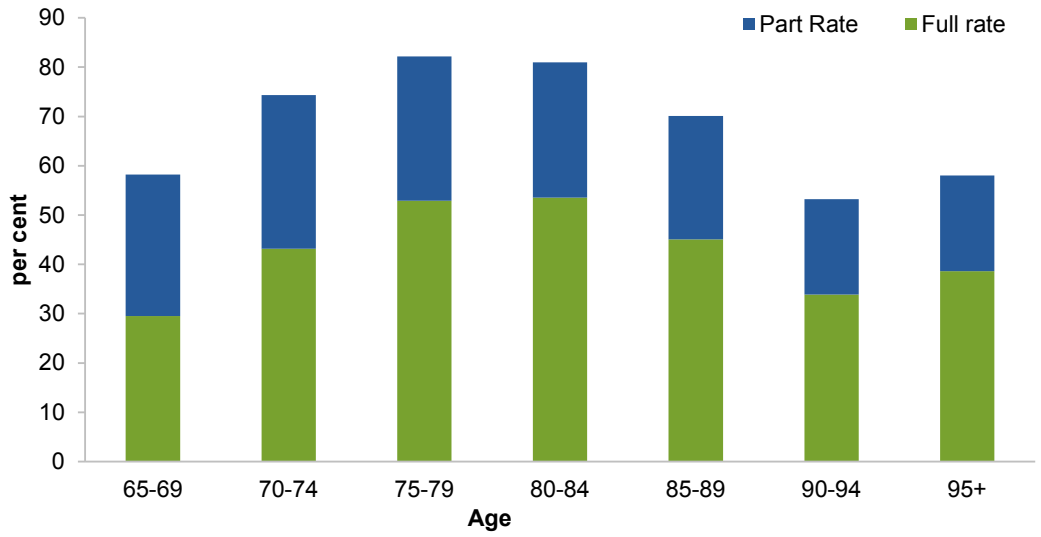
Source: DVA Pensioner Summary statistics September 2014.

Second, those with lower incomes have a lower life expectancy. There is a wide body of overseas research that supports this correlation (see for example Snyder and Evans (2006) in the United States and Blakely et al. (2005) in New Zealand). While empirical evidence is relatively limited in Australia, Clarke and Leigh (2011) found that the poorest income group had the highest mortality risk, which translated to a life expectancy gap between the lowest and highest income groups of around 5 years for 60 year olds. This suggests that pensioners are likely to have a lower life expectancy compared to those supporting themselves later in their retirement.

Separating recipients into those receiving the full and part rate pension provides some further support for this premise (figure 3.4). The decline in coverage occurs mainly for those on the full rate — that is, those likely to have had the lowest lifetime incomes.

Figure 3.4 **Age Pension coverage by full or part rate[a]**

Share of population by age, September 2014



[a] Data excludes those paid by the Department of Veterans' Affairs and those who are manually assessed, suspended or whose rate is unknown.

Data sources: Department of Social Services Payment Demographic data and population modelling from PC (2013).

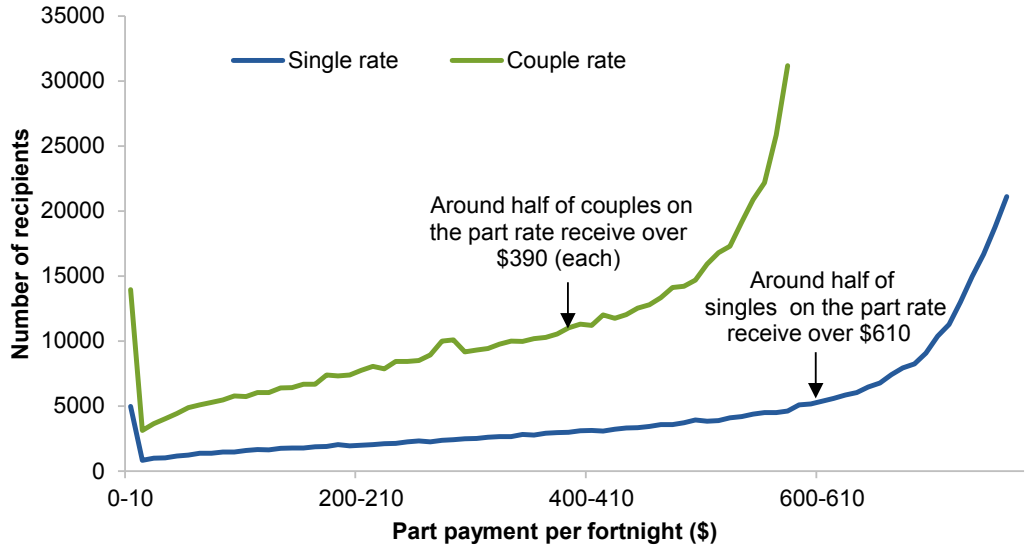
There are also likely to be other (albeit less important) factors that affect the receipt of the Age Pension. These may include differing health behaviours between cohorts and also spouses leaving bequests that result in their partner no longer being eligible for the Age Pension.

The distribution of rates received by those on part pensions is depicted in figure 3.5. There is a relatively large concentration of people receiving less than $10 — around 5000 single rate recipients and 14 000 couple rate recipients. This is consistent with the incentive to earn a small pension in order to gain eligibility to the Pensioner Concession Card. The Henry Tax Review noted that, for heavy users of the card, incentives to retain it may be especially high (Treasury 2009b, p. 622).

However, this group is small in comparison to the total number of part and full rate recipients. As noted above, the majority of pensioners (around 60 per cent) received the full rate — around 740 000 singles and 700 000 couples.

Figure 3.5 **Distribution of Age Pension part payments**

September 2014



[a] Data are provided in $10 ranges and are not reported for the range $770-780 for singles and $580-590 (each) for couples, since this encapsulates the threshold for the full rate payment.

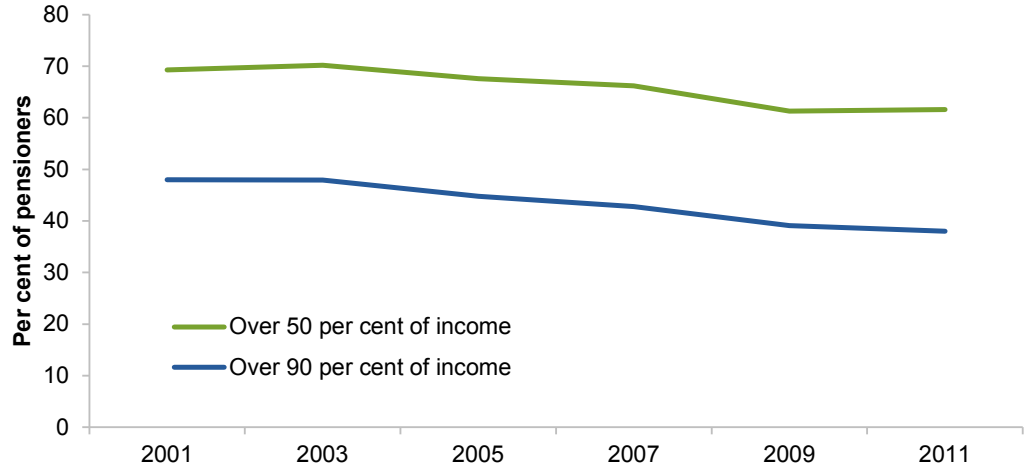
Data source: Department of Social Services Payment Demographic data.

How important is the Age Pension in understanding retirement incomes?

Despite the growing value of superannuation savings, the Age Pension remains an important source of retirement income in Australia. Nevertheless, older Australians are less reliant on government transfers when compared with other countries. The OECD (2013, p. 70) reported that government transfers accounted for 40 per cent of the gross household income of over 65 year olds in Australia, compared with an OECD average of 59 per cent. The remaining household incomes of older Australians were derived from work (25 per cent), and from capital, such as private pensions and returns from non-pension savings (35 per cent). These averages are *for all Australians* over 65, not just those that are pension recipients.

For those in receipt of the Age Pension, it is their dominant source of income. Wilkins (2014b) found that in 2011, the Age Pension comprised more than half of income for just over 60 per cent of those receiving it, and over 90 per cent of income for almost 40 per cent of recipients. However, reliance rates have been declining slowly over time (figure 3.6).

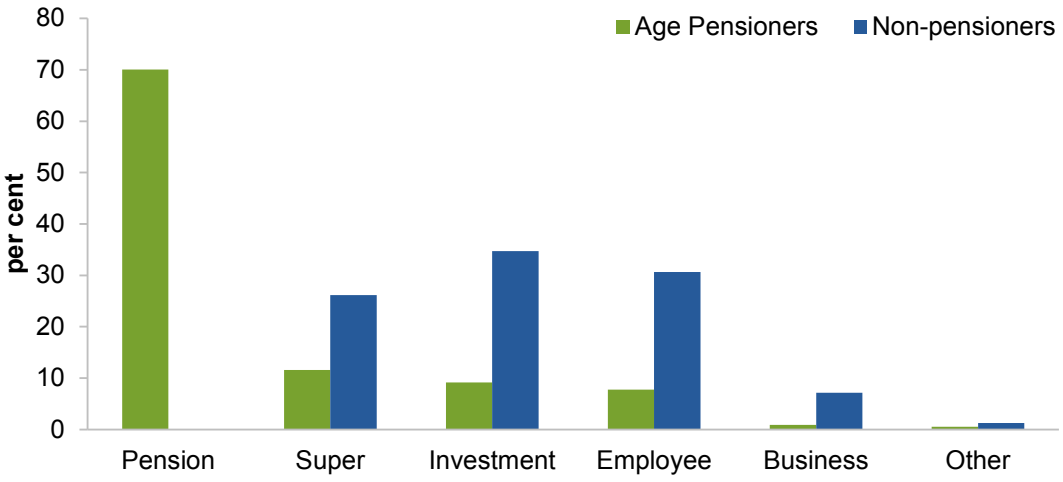
Figure 3.6 **Age Pension share of total income**



Data source: Table 5.5 in Wilkins (2014b), based on various waves of HILDA Survey data.

A comparison of other income sources of Age Pensioners and those not receiving any pension is shown in figure 3.7. On average, the Age Pension comprises 70 per cent of income for those who receive a full or part rate Age Pension, with superannuation and other income streams the second largest source of income. Those not in receipt of any Age Pension receive proportionately more of their income from investment and employment income than from superannuation income streams.

Figure 3.7 **Average share of income from different sources[a]**
2011-12



[a] Includes all singles and couples over 65, 'Age Pension' includes both Age and Service Pensions.

Data source: Commission estimates based on ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF).

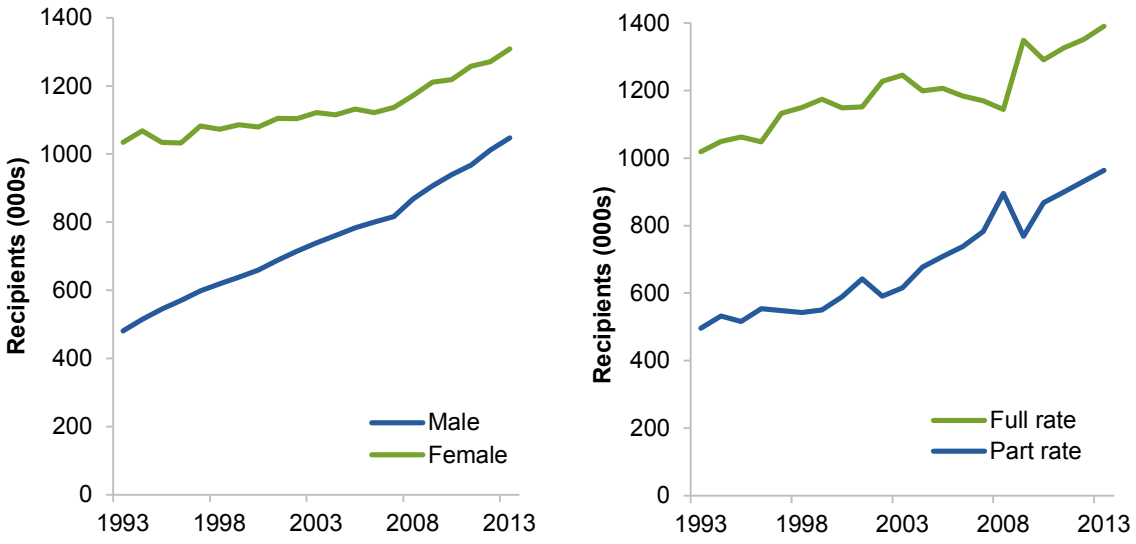
3.3 Projections of Age Pension coverage

In understanding what might happen to the number of Age Pension recipients and government outlays on the Age Pension over time, it is worth considering the recent past. Many of the factors that have shaped recent Age Pension take-up and outlays — such as population ageing and changes to eligibility criteria — will continue to be important.

What has been driving Age Pension coverage in recent years?

There has been a steady increase in the number of Age Pension recipients over the last two decades (figure 3.8). Consistent with the rising number of recipients, Age Pension outlays have also been increasing steadily over time, with total outlays having grown by $10 billion between 2009-10 and 2013-14 (from slightly under $30 billion to almost $40 billion).

Figure 3.8 **Age Pension recipients over time**



[a] Includes Age Pension payments administered by the Department of Human Services and the Department of Veterans' Affairs

Data source: Department of Social Services Payment Demographic data.

The main drivers of increasing pension recipients and outlays have been the growing share of the population above Age Pension age (chapter 1) and the indexation of the Age Pension to real wage growth. Another, albeit less enduring, factor was the unexpected reductions in the wealth of older Australians following the global financial crisis (post-2008) — with superannuation balances falling by almost 30 per cent (PC 2013).

Changes in the eligibility rules have also impacted the rate of growth in the number of Age Pension recipients. For example, in 2007 the assets test taper rate — the rate at which payments are reduced for every $1000 above the assets test limit — was halved from $3.00 to $1.50 per fortnight. This eased eligibility requirements and meant more people could receive a part pension. As a result, the number of new pensioners increased, with average assessable assets of those qualifying under the assets test increasing from around $81 000 in 2006-07 to around $190 000 in 2007-08 as a result of people with higher wealth becoming eligible to receive the Age Pension.[28]

There have also been a range of factors that have tempered increases in take-up rates and Age Pension outlays.

- The phased increase in the eligibility age for women has reduced the uptake of the Age Pension (though, some women instead migrated to other payments such as the Disability Support Payment).
- Notwithstanding the fall in the value of superannuation assets following the global financial crisis, superannuation savings have grown over the last two decades (supplementary paper 2). This partially reflects the maturing of the superannuation system. As people contribute to superannuation for a larger portion of their working lives, they can self-fund their retirement for longer before becoming eligible to receive the Age Pension. The Association of Superannuation Funds of Australia (ASFA 2014b) found that around 32 per cent of 65 year olds self-funded in 2013 compared to 22 per cent in 2000, while the number of self-funded 75 year olds has remained relatively constant (at around 15 per cent) over the same period.
- While the 2007 change to the Age Pension assets test increased take up rates, a change to the income test introduced in 2009 had the opposite effect. The income test taper was tightened from 40 cents to 50 cents for every dollar above the full payment income threshold. This led to a reduction in the number of new Age Pension recipients.

What might the future hold?

Consistent with recent experience, there will be mixed influences on the number of Age Pension recipients and government outlays in the future.

The ageing of the population has still not fully played out and will continue to place greater calls on the Age Pension system. The share of those above Age Pension age is set to rise further, from around 14 per cent of the population in 2012 to over 20 per cent in 2055 (PC 2013).

Among those factors that are likely to reduce pressure on the Age Pension are increased labour force participation of older workers (chapter 3) and increases in the Age Pension

[28] Average assessable assets then decreased to $157 000 due to the global financial crisis, and have since increased slightly to $169 000 in 2013-14.

age. The maturing superannuation system will also see an increasing proportion of individuals above the Age Pension age funding themselves for a time before qualifying for the Age Pension.

Given the competing factors affecting outlays, forecasting the long-run level of Age Pension fiscal costs is fraught. Moreover, existing forecasts have used different metrics and projection horizons, making direct comparison difficult. Nonetheless there has been a general consensus that the Age Pension is likely to continue to grow in importance both fiscally and in beneficiary numbers (table 3.7).

Table 3.7 **Age Pension projections over the years**[a]

Report	*Projection period*	*Age-related pension outlays at end of projection period*	*Age-related pension outlays as a share of GDP at end of the projection period*
		$ per person	%
IGR 2002	2041-42	3 488	4.6
IGR 2007	2046-47	3 942	4.4
IGR 2010	2049-50	3 890	3.9
An Ageing Australia (PC 2013)	2059-60	na	3.7
IGR 2015 (proposed policy)	2054-55	3 200	2.7
IGR 2015 (current policy)	2054-55	na	3.6

[a] For comparison, in 2014-15 outlays were 2.9 per cent of GDP and $2000 per person. na Not available. IGR Intergenerational Report.

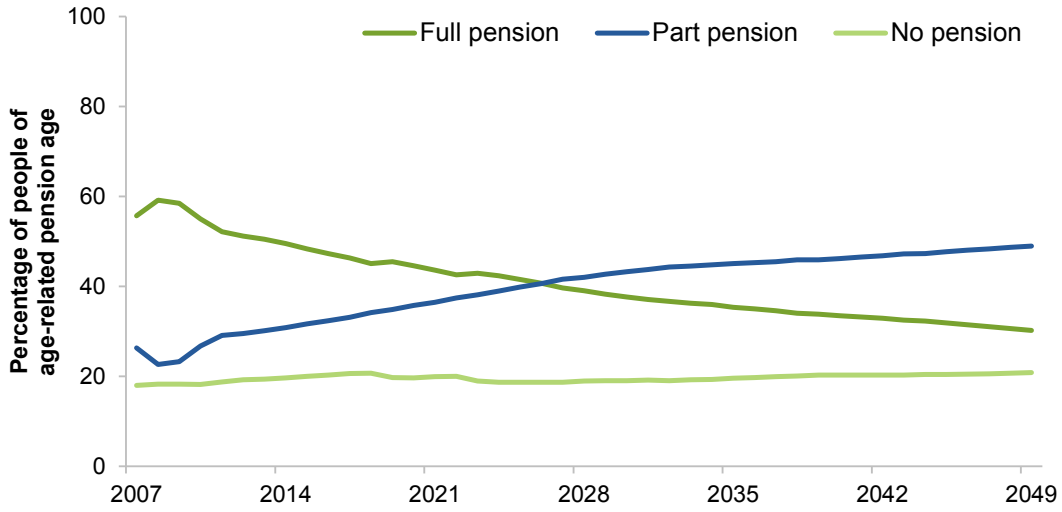
Sources: Australian Government (2002, 2007, 2010, 2015a) and PC (2013).

Successive Intergenerational Reports (IGRs) have forecast that Age Pension expenditure will rise. However, Chomik and Piggott (2012b) found that the magnitude of the increase reduced over the first three IGRs (2002, 2007 and 2010) as policy has changed, and as projections have been informed by new data and assumptions, including:

- more optimistic projections of long term fertility rates (from 1.6 to 1.7 and then 1.9 births per woman).
- higher projected migration (from 90 000 to 110 00 and then 180 000 people per year)
- overall lower expected age dependency ratios (a proxy for population ageing) — with the increases in fertility and migration above only being slightly offset by increasing longevity
- an increase in older worker participation.

The 2010 IGR projected that Age Pension outlays would grow to 3.9 per cent of GDP by 2049-50. In addition, it provided a breakdown of Age Pension coverage, which was subsequently updated by Treasury in 2012 (figure 3.9).

Figure 3.9 **Projections of age-related pension coverage[a]**



a Including Age and Service Pensions.

Data source: Rothman (2012).

In 2013, the Commission projected slightly more modest increases than those contained in IGR 2010, estimating that government outlays on age-related pensions would increase from 2.7 per cent of GDP in 2011-12 to 3.7 per cent in 2059-60 (PC 2013). The Commission's projections were informed by IGR 2010, with the lower estimate resulting from adjusting the starting point to reflect the most recent budget at the time and also incorporating the impacts of increasing the Superannuation Guarantee from 9 to 12 per cent.

However, these projections predate proposals to further increase the Age Pension age to 70 years, and to index the Age Pension to CPI only. More recent projections, which incorporate (aspects of) these proposals, suggest more modest outlays over the next few decades.

- The Parliamentary Budget Office (PBO 2014) projected that, while Age Pension expenditure has historically grown faster than GDP, it is expected to grow more slowly than GDP by 2024-25. The PBO estimates sought to incorporate the announced change to CPI-only indexation (which was expected to reduce spending by $6.9 billion by 2024-25), but did not reflect the announced increase in the Age Pension age to 70, as it was outside the projection period.[29]
- The most recent IGR (2015) also contained some limited detail on the impacts of the change to CPI-only indexation, as well as increasing the Age Pension age to 70 (Australian Government 2015a). Under this scenario the *proportion* of people of Age

[29] The increase in the Age Pension to 70 is due to commence from July 2025.

Pension age in receipt of the pension is projected to fall by 3 percentage points over the 40 year horizon — from 70 per cent in 2012-13 to 67 per cent in 2054-55. Consistent with previous IGRs, while the overall proportion of people receiving the Age Pension was expected to remain relatively constant, the proportion of pensioners on the part rate was expected to increase. That said, annual spending per person was expected to increase in current dollars, from almost $2000 in 2014-15 to around $3200 in 2054-55.

However, as noted above, proposed CPI-only indexation was abandoned in the 2015-16 Budget. The Commission is not aware of published projections of Age Pension outlays that incorporate the most recent shifts in policy, including recently legislated changes to the assets test. It is clear that some policies, such as indexation arrangements, can result in large shifts in projected outcomes, particularly when considered over a long time horizon.

That said, based on current policies, it is likely that Age Pension outlays will continue to grow as a share of GDP. Of the projections discussed above, only IGR 2015 projected that Age Pension outlays would fall slightly as a share of GDP from 2.9 per cent in 2014-15 to 2.7 per cent in 2054-55. However, this mainly reflected the proposed policies, which are yet to be legislated (the increase in the Age Pension age to 70) or have since been abandoned (CPI-only indexation). That same report noted that if existing policy were maintained, Age Pension outlays will reach 3.6 per cent of GDP in 2054-55 — closer to previous projections.

Will the Age Pension still represent the bulk of retirees' income?

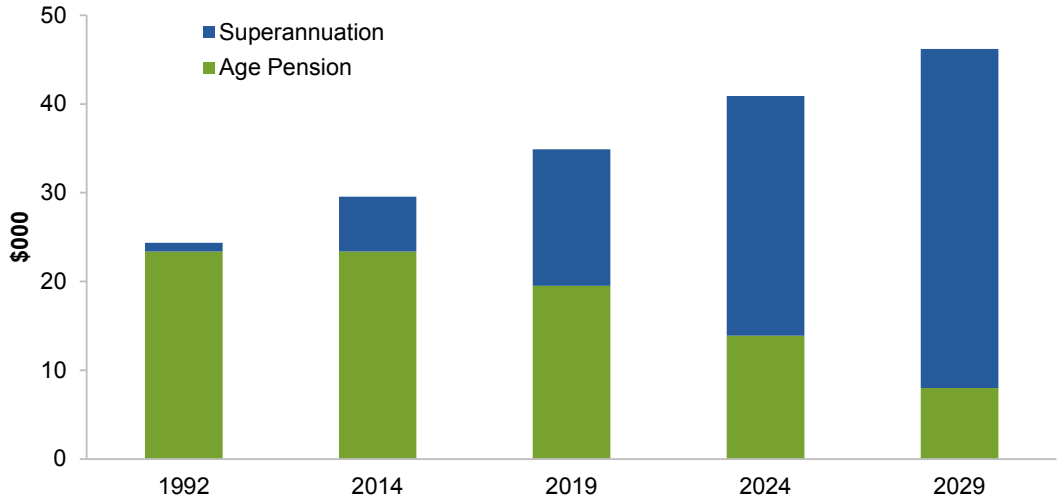
While the magnitudes of projected Age Pension outlays have varied, the projections in each IGR have consistently pointed to a decreasing share of pensioners receiving the full pension — suggesting that older Australians will increasingly rely on other savings and income to supplement any Age Pension receipts. ASFA has projected that, although the Age Pension currently comprises a large share of retirement incomes, this share will diminish as the system matures and superannuation balances increase (figure 3.10).

While average superannuation balances will grow, it is important to also consider the distribution of balances. As the superannuation system has matured there has been increasing disparity in superannuation balances (supplementary paper 2). As such, even if balances rise on average as projected by ASFA, reduced pension reliance is likely to be concentrated among those with higher wealth levels.

Many who have low incomes during their working years and/or have an interrupted work history, are likely to quickly exhaust any superannuation they may have managed to accrue, and so will remain heavily reliant on the Age Pension as a source of retirement income.

Figure 3.10 **Average retirement income at Age Pension qualifying age[a,b]**

In 2014 dollars



[a] Average balance for all single individuals above Age Pension age including those who do not receive the Age Pension. [b] Age Pension entitlement calculation is based on superannuation assets only, it does not include any other assets.

Data source: ASFA pers. comm., 20 May 2015 (updated values from ASFA (2014b)).

4 Financial literacy

Key points

Financial literacy is an imprecise concept. Recent efforts to define financial literacy have sought to recognise the importance of both knowledge and behaviour in improving financial wellbeing.

Financial literacy plays a role in how effectively individuals invest and use their wealth. It is particularly important when it comes to making decisions over a longer period of time, such as how to use the superannuation system in the lead-up to, and following, retirement.

Financial literacy in Australia is mainly measured through surveys. In general, financial literacy is well-developed and improving, but certain groups have been identified as being more likely to have poor financial literacy. These include the young, the relatively poor, women and Aboriginal and Torres Strait Islander peoples.

Broadly speaking, Australians are less financially literate in matters relating to superannuation and retirement planning than financial matters in general. A shift from defined benefit to defined contribution plans for some along with a demographic shift caused by the retirement of the 'baby boomers', longer life expectancies and increased immigration of those who may be unfamiliar with Australian financial systems, means that many require a greater level of financial literacy when it comes to making plans for their retirement.

There is a variety of programs to improve financial literacy run by governments, businesses and community groups. The most recent stocktake identified more than 100 programs, though there are likely to be many more. Of those identified, around half included information about superannuation.

The National Financial Literacy Strategy, implemented by ASIC, provides general guidelines and several calculation tools that may help to address the shortcomings of financial literacy in superannuation — particularly around how much is needed in retirement. There are, however, few tools to assist individuals understand the complex tax arrangements relating to superannuation.

There needs to be a more systematic process for evaluating outcomes and appraising the costs and benefits of improving financial literacy. It is not clear whether the many programs in operation are effective in improving financial literacy, and where attempts to improve financial literacy are being made, they are often interpreted as being 'unambiguously good'.

Beyond organised programs, changes to the way that superannuation statements are delivered, and the material that they contain, could also assist individuals to plan more appropriately for retirement. Reducing the complexity of the system and reducing the frequency of changes to superannuation policy could also be of benefit to many.

Financial literacy is important for individuals to use their superannuation and other assets effectively in retirement. It allows people to make better decisions as they gain a greater appreciation of factors such as future consumption needs, how their assets may grow, and the risks associated with investing. In some cases, the difference between a comfortable

and frugal retirement may be the choices made by individuals, which are in turn affected by their financial literacy. Greater financial literacy can also be of benefit to society more broadly, as the efficient use of private savings can lead to the more productive use of scarce resources.

This supplementary paper elaborates on financial literacy in more detail from the body of the report. It discusses the ways that financial literacy can be defined and measured (section 4.1); how financial literacy relates to superannuation planning (section 4.2); the measures currently in place to improve financial literacy (section 4.3); whether there is a need to consider further programs to bolster financial literacy when it comes to superannuation (section 4.4); and whether there are alternatives to improving financial literacy that may be worth considering to help people better prepare for their retirement (section 4.5).

4.1 What is financial literacy and how can it be measured?

There is no commonly agreed-upon definition of financial literacy (box 4.1), but the Australian Securities and Investments Commission (ASIC) uses a definition that was determined as part of its consultations for implementing a National Financial Literacy Strategy:

> Financial literacy is a combination of financial knowledge, skills, attitudes and behaviours necessary to make sound financial decisions, based on personal circumstances, to improve financial wellbeing. (ASIC 2014c, p. 6)

Box 4.1 Definitions of financial literacy

While there is no universally definition of financial literacy, the Organisation for Economic Cooperation and Development's (OECD) International Network on Financial Education (INFE) proposed the following definition after consulting with governments and various NGOs:

> Financial literacy is a combination of awareness, knowledge, skills, attitude and behaviours necessary to make sound financial decisions and ultimately achieve individual financial wellbeing. (Atkinson and Messy 2012, p. 14)

As part of its broader consultation on the National Financial Literacy Strategy, ASIC noted:

> Financial literacy encompasses both knowing about money matters and being equipped to utilise that knowledge by applying it across a range of contexts. What a person needs to know to be financially literate will vary depending upon their circumstances and needs. Generally, however, it will involve an understanding of a person's own values and priorities; budgeting; savings and how to manage money; credit; the importance of insurance and protecting against risk; investment basics; superannuation; retirement planning; the benefits of shopping around and how to compare products; where to go for advice and additional information, guidance and support; how to recognise a potential conflict of interest; and how to recognise and avoid scams. (ASIC 2011, p. 11)

(continued next page)

Box 4.1 (continued)

But ASIC has also noted that the focus on what financial literacy means has changed in recent years:

> Since 2011, dialogue on financial literacy has increasingly focused on behaviour and action. Some countries prefer to use the term 'financial capability' as they believe it better reflects the behavioural and other factors that contribute to making sound financial decisions. (ASIC 2013b, p. 6)

The ANZ Bank as part of its regular surveys of financial literacy stated that:

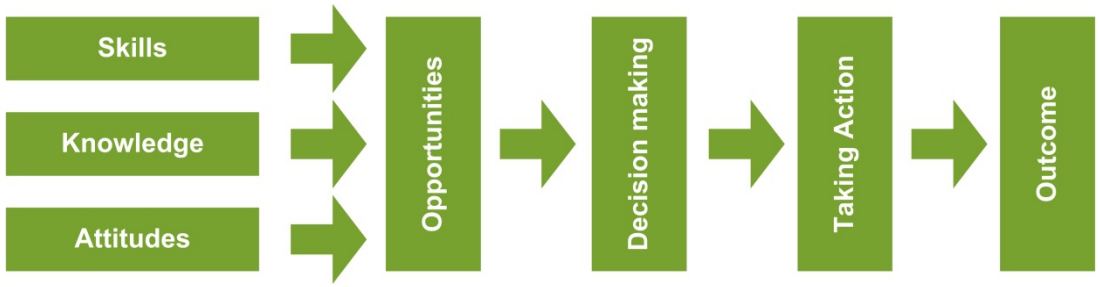
> Financial literacy can be envisaged as consisting of five separate components: keeping track of finances; planning ahead; choosing financial products; staying informed; and financial control … For the purposes of this research financial literacy was defined as *the ability to make informed judgements and to take effective decisions regarding the use and management of money*. (ANZ Bank 2011, pp. 5–6)

In short, it is often the case that the meaning of financial literacy is in the 'eye of the beholder':

> Financial literacy means different things to different people. For some it is a broad concept, encompassing an understanding of economics and how household decisions are affected by economic conditions and circumstances. For others, it focuses narrowly on money management, including budgeting, saving, investing and insuring. (Worthington 2013, p. 5)

The choice to focus on knowledge, skills and attitude as part of financial literacy reflects a shift in many countries to recognise that people's behaviour and willingness to take action are increasingly important. Knowledge and skills are not useful if there is a lack of attitude or motivation to employ them. Conversely, a strong attitude to engage with the financial system may not be successful if individuals do not have the necessary knowledge and skills (figure 4.1).

Figure 4.1 **Skills, knowledge and attitudes are all important in making financial decisions**



Data source: Adapted from ASIC (2013b).

Surveys are the main way that financial literacy is measured

The main method of measuring financial literacy in Australia has been to conduct broad-based surveys that ask questions about financial knowledge, skills and competency. The most comprehensive surveys include a regular survey undertaken by ANZ Bank (2003, 2005, 2008 and 2011), and a 'one-off' survey undertaken by the Financial Literacy Foundation (FLF) in 2007. More information about these surveys, and some others, are detailed in box 4.2.

Box 4.2 Some recent efforts to measure financial literacy in Australia

A number of organisations have used surveys and focus groups to attempt to measure financial literacy, though each uses different questions and samples to do so. There are a number of recent examples:

- The ASIC Australian Financial Attitudes and Behaviour Tracker – an online survey of 1379 adults conducted over March to August 2014 (ASIC 2014a).
- The ANZ survey of adult financial literacy in Australia — a survey conducted by telephone among a national random sample of around 3500 individuals (ANZ Bank 2011).
- The Australia Institute conducted a survey in 2008 to test attitudes to personal finances across the Australian population — the survey was conducted online with a sample size of 1002 adults. Six focus group discussions were also held (Fear 2008).
- The Financial Literacy Foundation survey — a quantitative survey of 6974 adults aged 18 to 75 and 533 youths aged 12 to 17 (FLF 2007).
- The Mercer 2006 financial literacy survey – a quantitative online survey among a national random sample of 802 working Australians and four focus groups of 39 recent retirees in Sydney and Melbourne (Mercer 2006).

The most recent ANZ survey found that particular groups were more likely to have lower levels of financial literacy. These groups included:

- those aged less than 25
- those with no formal post-secondary education
- those whose main source of income was a government benefit
- those households with incomes less than $25 000 per year and less than $2000 in savings and investments
- those working in lower blue collar occupations
- women (relative to men).

The survey also identified other determinants of financial literacy. These included financial knowledge, such as whether individuals know how to choose financial products, keep track of finances and stay informed; and financial attitude, such as self-confidence, whether the individual finds dealing with money to be stressful, and whether an individual has a 'thrifty attitude' (ANZ Bank 2011).

The FLF survey in 2007 asked a range of questions around how individuals 'think about money'. Its findings included that:

- 88 per cent of adults said that they had the ability to save
- 85 per cent of adults said they had an ability to get information about money
- 69 per cent of adults said that they had the ability to invest money
- 66 per cent of adults said that they would not consider both risk and return when choosing an investment
- 48 per cent of adults say that dealing with money is stressful and overwhelming
- 28 per cent of adults said that they did not have the ability to understand financial language. (FLF 2007, pp. xii–ix, 45)

Andrew Worthington, an academic at Griffith University, considered these surveys and other data sources to assess the level and scope of financial literacy in Australia. He found that most Australians have reasonable levels of financial literacy and feel confident about their knowledge of financial issues; and nearly all Australians know and understand simple day-to-day money management concepts (Worthington 2013). However, he also found that they struggle with more complex concepts like investments, superannuation and saving for retirement. He went on to note that:

> [A] large number of factors appear to influence financial literacy, including attitudes and beliefs about money, interest, confidence and engagement in financial matters and socioeconomic and demographic characteristics (e.g. age, gender, education, income, ethnicity). (Worthington 2013, p. 13)

This suggests that, in general, Australians may have difficulties understanding superannuation, and that particular groups may have more problems understanding superannuation than others.

Financial literacy in relation to superannuation

Given that the evidence suggests that individuals struggle with more complex concepts, it begs the question as to what extent Australians struggle with matters relating specifically to superannuation, and whether there are particular parts of the superannuation system that are more difficult to understand than others. Susan Thorp, an academic and member of the OECD research committee on financial literacy, highlighted the deficiency in financial skills when it comes to managing retirement savings:

> … you need to understand risk if you are going to manage your superannuation investments … What we see is that people who have poor skills in this area are much less likely to have prepared for their retirement … They are likely to have found these decisions difficult and alienating and they don't want to think about it. People are dealing with increasingly complex decisions sometimes involving very large sums of money without understanding the basics, such as compound interest … By any objective measure, many lack vital financial skills. (Thorp, in University of Sydney 2015)

The ANZ and FLF surveys also indicate that individuals are generally less financially literate when it comes to using superannuation and preparing for retirement. Based on these sources and others, ASIC concluded as part of its consideration of the National Financial Literacy Strategy that:

> Overall, people seem to be more knowledgeable and confident about simple, familiar finance topics [such as] budgeting, credit, savings and debt; and less knowledgeable and confident about more complex and unfamiliar topics such as investing, superannuation and saving for retirement. (ASIC 2011, p. 4)

4.2 Why is there a lack of financial literacy when it comes to superannuation?

There are many reasons why financial literacy — where financial literacy is taken to include behaviour and a willingness to take action — may be poorer in superannuation specifically. Some factors are 'dynamic' in nature, and change through time:

- the frequent changes to superannuation policy have led to confusion
- better financial skills and knowledge are needed when it comes to matters like superannuation than previously.

Other factors that affect financial literacy are more 'static' or persistent:

- the difficulty of evaluating investments over a long period of time
- the difficulty in determining what an individual or couple will need for retirement
- the complicated nature of superannuation information provided to users of the system
- an inability or unwillingness to seek financial advice, and a mistrust of such advice.

Both sets of factors are affected by behavioural influences to varying degrees, and the effect of various 'behavioural biases' on financial literacy has been discussed at length by many researchers (box 4.3). While much of the literature on behavioural bias is based on examples from the United States — which has a different retirement income system to Australia — the same sorts of biases can still apply. This highlights that the remedies necessary to overcome shortcomings in financial literacy sometimes have to go beyond the provision of knowledge and address entrenched attitudes and cognitive biases.

Box 4.3 Behavioural influences on investing for retirement

A number of behavioural influences or 'biases' have been observed in the investment decisions made by those planning for retirement, though much of the literature is based on studies from the United States rather than Australia. For example:

- Framing decisions: the way in which information is presented to individuals can affect their choices. Benartzi and Thaler (1999) found that the presentation of aggregating one year returns on stocks into 30 year equivalents increased the attractiveness of the stocks. By extension, the way that return information is presented to workers and superannuants in the accumulation and decumulation phases can play a role in influencing their choice.
- Loss aversion: where individuals weigh reductions in wealth more heavily than increases in wealth. This has implications when individuals consider retirement investment decisions on an 'asset by asset' case, while a portfolio approach that considers the joint distribution of risk and reward would be more rational (Benartzi and Thaler 1999). This is important for superannuation, as in the long run a diversified portfolio can offer better risk-adjusted returns.
- Psychological variables: clarity of retirement goals and attitudes towards retirement have been found to be important in affecting retirement planning behaviour. Those that use more financial information sources, invest early in life, or have been active investors previously have been found to have greater retirement contributions (Hira, Rock and Loibl 2009).
- Familiarity bias: investors that are familiar with a particular sort of investment may prefer to invest in that asset again, as the familiarity can lead to a (false) perception that the familiar asset is less risky than unfamiliar assets (Bailey, Nofsinger and O'Neill 2003).
- Representative bias: individuals may believe that the shares of a 'good' company, such as one that has a good work force, or participates in community activities will provide a better rate of return (Bailey, Nofsinger and O'Neill 2003).
- Status quo bias: individuals have a reluctance to change their investment strategy, even if their circumstances have changed. This can be especially important for those that do not take an active role in investing, as their status quo is to remain doing nothing. Whether education can overcome such a bias is contentious (Kahneman 2003; Samuelson and Zeckhauser 1988).

Source: Adapted from Clark et al. (2013).

The need for financial literacy in superannuation is increasing

A shift from defined benefit to defined contribution plans for some along with a demographic shift caused by the retirement of the 'baby boomers', longer life expectancies and increased immigration of those who may be unfamiliar with Australian financial systems, means that many Australians require a greater level of financial literacy when it comes to making plans for their retirement:

> Australia's baby boomers are beginning to retire, and an increasing number of retirees can expect to live longer in retirement. As the number of people entering retirement grows and their life expectancy increases, government support for retirees, pensions, health care and retirement accommodation comes under ever-greater pressure. Many retirees will need to rely more

> heavily on personal savings and retirement income, and be more competent in a range of financial management strategies (such as asset management, tax and estate planning, and insurance) than previous generations have needed to. (ASIC 2011, p. 13)
>
> Problematically, the profile of consumers requiring knowledge to deal with complex superannuation decisions has changed with its spread across the workforce. Changes in demography with ageing and ethnically-diverse populations has seen language, educational and cultural barriers arise that may hinder the access of some populations to these improved opportunities, and lead others less knowledgeable to questionable decision-making. (Worthington 2008, p. 351)

Indeed, the ageing of the population has taken place at a time where the risk associated with longer life expectancies has shifted, to some extent, away from public and private employers (as part of defined benefit superannuation schemes) and towards households and the Australian Government (as part of defined contribution schemes and the safety net of the Age Pension). The changing nature and incidence of this risk means that some individuals may need a greater level of financial literacy, and new skills to assess and plan for risks, relative to cohorts that have come before. This adds to the need for better financial literacy in retirement decision making as households are increasingly required to play a more active role in planning their retirement:

> While the evolution towards [defined contribution] pension plans can be beneficial for both employees and employers, it nevertheless reallocates risk within the financial system. In [defined benefit] pension plans, responsibility for funding and investment management rests with the firm sponsoring the plan. In a [defined contribution] plan these tasks and the associated risks are typically assumed by the employee. This shift of responsibilities and risks from the corporate sector to the household sector has potential implications for financial stability. (Broadbent, Palumbo and Woodman 2006, p. 2)

Another problem is that individuals may not be accounting for different sorts of risks, including the risks of unemployment and health problems, in advance of their retirement. This can be demonstrated by the difference between why workers *think* they will retire and the *actual* reasons that they do retire. Surveys undertaken on behalf of National Seniors Australia, and by the ABS, often find that workers believe that they will retire for financial reasons — such as being financially secure in their retirement or being eligible for the Age Pension. However, in practice, most retire for health, family and job-related reasons. This could indicate that even those with a strong understanding of how to make financial decisions may not be considering these other risks as heavily as they should.

Individuals have not only had to address the new risks that they now face in planning for retirement, but have also had to understand numerous changes to the superannuation system. A recent chronology of changes to the superannuation and retirement income systems compiled by the Parliamentary Library stretches to more than 30 pages (Swoboda 2014), with the final report of the *Financial System Inquiry* noting that around half of the policy changes to superannuation arrangements had been in relation to tax arrangements (Australian Government 2014b, p. 139). Adapting to these changes is not costless, with the *Financial System Inquiry* stating that policy instability 'imposes

unnecessary costs on superannuation funds and their members and undermines long-term confidence in the system' (Australian Government 2014b, p. 90). Settling on stable policies around superannuation can do much to reduce the costs associated with becoming financially literate.

Difficulties understanding the information provided

Many Australians struggle with understanding key investment concepts. The ASIC Australian Attitudes and Behaviour Tracker found that:

- When asked about the concept of 'risk/return trade-off', around two fifths (41%) of people reported not having heard of the concept, 28% of people stated they had heard of it but didn't understand it, and 30% of people said they had heard of and understood it.
- Of the 30% of people who said they had heard and understood the concept, 9% were unable to accurately describe the risk/return trade-off when tested.
- More than half of those surveyed either hadn't heard of diversification (34%), or had heard of it but felt they didn't really understand it (26%).
- When asked to assess the risk associated with various types of investments, 2 in 5 (41%) rated direct property/real estate investments as low or very low risk investments. (ASIC 2014a, p. 14)

Struggling with key investment concepts means that individuals may have difficulties in planning their retirement incomes because they do not understand the information provided to them about their superannuation. For example, 69 per cent of respondents to the ANZ financial literacy survey in 2011 said that they read their superannuation statements, and of those approximately two-thirds said that they found such statements easy to understand (ANZ Bank 2011, pp. 65–67). This would suggest, then, that a majority of those receiving superannuation statements either didn't read them or found them difficult to understand — something that is not conducive to planning for retirement.

It is not just superannuation that individuals may have difficulty understanding, but also their income needs in retirement. Almost three quarters of respondents to the ANZ survey had not identified how much they would need to live on when they retire (ANZ Bank 2011). Having a poor grasp of retirement income and needs makes planning difficult.

Aboriginal and Torres Strait Islander peoples have been found to suffer from greater levels of financial stress relative to other Australians (ABS 2009a). A pilot study into financial literacy and superannuation awareness amongst Indigenous Australians concluded:

> Knowledge of superannuation [amongst Indigenous Australians] is poor compared to the general population and respondents' comments suggest a high level of cynicism about a system which is seen as inappropriate for their needs.
>
> There is a high level of desire for financial education and information in almost all the suggested areas but a lower level of usage of potential sources of financial information such as

accountants and bank employees. This is combined with a much higher reliance on family and friends in times of financial hardship.

The results of the present study suggest that there are still areas of significant need for financial education among urban Indigenous Australians. Areas of misunderstanding mean that they may be exposed to a higher level of financial error and poor financial decisions than the general population. An additional challenge for policy makers is the view of the irrelevance of current retirement incomes policy to those who are likely to have lower incomes and a shorter life expectancy. (Gerrans, Clark-Murphy and Truscott 2009, p. 436)

The role that the superannuation system is perceived to play may also have an influence on how Aboriginal and Torres Strait Islander peoples engage in understanding the system. If it is perceived as savings to be left as a bequest, rather than for retirement income, then this can reduce the motivation to understand the system better. For example, as Anthony McCarthy — a manager of Catholic Super — noted about a conference held by the National Aboriginal and Torres Strait Islander Catholic Council in 2012:

Most of the questions were about funeral benefits and (provisions) for the beneficiaries. … Almost none of the questions were actually about retirement or how to access money at an earlier stage during the life span. It was a little bit shocking. They didn't seem to see it as something they could access through their lifetime. (McCarthy in James 2012)

Difficulties in seeking advice

Given this general lack of knowledge among Australians, it could be difficult for some to make informed decisions around long-term investments for retirement. They may need to seek professional advice.

However, unlike some other areas of financial matters, many individuals do not know where to seek advice when it comes to superannuation, distrust the advice available, or leave it too late to make a difference. The ANZ survey found that 42 per cent of respondents disagreed with the statement that they 'would trust financial professionals and accept what they recommend' (ANZ Bank 2011, p. 108). This is consistent with a finding by a survey conducted by the Australia Institute that many respondents feared that financial advisers did not necessarily provide independent advice, and were suspicious whether the advice provided could be 'genuinely trusted' (Fear 2008, p. 36).

Even for those that seek advice, some suggest that not everyone is well-catered for. For example, the Council on the Ageing (COTA) noted:

The move to defined contributions has meant the individual carries the risk of ensuring their superannuation generates a sufficient income over their lifetime. Many financial advisers and superannuation funds focus on the accumulation stage with discussions [centring] on the size of the balance and how to maximize it. Consumers report to us that they feel deserted … once they reach the retirement phase, particularly if they have relatively small balances. (2014, p. 6)

Recipients of advice may not know whether the advice they are receiving is of good quality. In 2011, ASIC commissioned research amongst a group of 50 to 69 year olds who

were intending to seek retirement advice, or had sourced advice in the last 15 months, and asked them to record the advice they received. This was then compared against a template of benchmarks. ASIC found:

> … while the majority of advice examples we reviewed (58%) were adequate, 39% of the advice examples were poor, and two examples were good quality advice (3%).
>
> … Participants in our study rated their advisers and the advice they received highly: 86% of participants felt they had received good quality advice and 81% said they trusted the advice they received from their adviser 'a lot'.
>
> Care needs to be taken when interpreting participants' self-reported adviser and advice satisfaction. The absence of any variation in adviser and advice satisfaction between those who received good quality advice and those who received poor quality advice suggests that many people have difficulty in objectively assessing the quality of advice they receive. (ASIC 2012, p. 8)

Some leave their planning too late

The long-term nature of financial services, and superannuation in particular, has also been identified as a contributing factor to apathy around retirement planning. As the Consumer and Financial Literacy Taskforce put it:

> The power of the present outweighs concerns of long term wellbeing, since the future is unknowable and the emotional components of decision-making are associated with the immediate present. Unfortunately, the benefits of most financial products, especially savings vehicles and insurance products, are delivered over the long term. The ongoing problem of insufficient retirement savings is, in a sense, an understandable response to the length of the timescales and the uncertainty involved. (2004, p. 27)

Hyperbolic discounting — where individuals overvalue consumption in the present to the detriment of consumption in the future — can also be a contributing factor that explains why many struggle to plan for retirement over the longer term (Reeson and Dunstall 2009). Also individuals may be myopic insofar that they consider what they will need in the future, but do not make sufficient allowances for living longer than they expect; or simply plan for the next 'set' number of years. Both of these phenomena can adversely affect the way that people plan for retirement.

Of those that do try to plan for their retirements, many leave their planning until it is too late. Those most likely to use financial planners were aged between 55-59, or as the ANZ survey puts it, were 'those either approaching retirement or recently retired' (ANZ Bank 2011, p. 79). The Australia Institute survey found that many retirees conceded that they 'should have been planning and saving much earlier to ensure that their aspirations for retirement were properly met' (Fear 2008, p. 34). Those yet to retire often nominated that they had yet to rollover multiple superannuation accounts into a single account, and that they had not yet set up arrangements to salary sacrifice (Fear 2008, pp. 32–34). Some of those aged over 50 agreed with the statement that they just 'should be doing something better with their money', but had not yet acted upon it (Fear 2008, p. 34). These statements

indicate a broad financial illiteracy, suggesting that many retirees and those approaching retirement age lack knowledge, skills and attitude to prepare appropriately for retirement.

Agnew, Bateman and Thorp surveyed a representative sample of the population and asked some questions to determine the level of financial literacy, including comprehension of interest rates, inflation and risk diversification, and whether the respondent had ever 'tried to work out how much [they] would need to save for retirement' (2013, p. 9). They found that only 32 per cent of their sample of non-retired individuals had attempted to work out how much they needed to save for retirement, and that those that had were also more likely to correctly answer the questions relating to financial literacy compared to those that had not. The authors noted that:

> So far, after 25 years of mandatory retirement saving, a large minority of Australians does not know the relevant financial basics nor are they actively preparing for retirement. (Agnew, Bateman and Thorp 2013, p. 17)

Clark, Fiaschetti and Gerrans (2015) examined the factors that were important in motivating Australians to contact their superannuation funds (as an indicator that they were engaged with the superannuation system), by using a database provided by Mercer over the period from 2003 to 2014 and found that:

- women, those with a larger balance and those that had been in the superannuation fund for a longer period of time were all more likely to contact the fund to seek advice
- individuals 'waited to the last moment to seek advice' in response to changes to superannuation rules, and suggested a range of reasons why this might be the case:

  > But our results are, nonetheless, surprising in that those that sought advice during the window containing the implementation of changes in the federal government's superannuation tax regime (June-July 2007) did so as the window closed, not when these changes were first mooted, or when legislation was passed. In effect, they waited to the last moment to seek advice. Why procrastinate? Why wait until the last moment to seek advice?
  >
  > Here, three possible explanations are relevant. First, whereas we conceptualised retirement planning as a "continuous" decision situated in a world of ubiquitous information, it could be the case that, notwithstanding the opportunity to act continuously, most participants treat these types of decisions as 'discrete' in the sense that they only pay attention when an issue arises that is so significant that it "activates" attention (Bordalo et al. 2014). Second, given the flow of information about superannuation (in general) and changes in policy regarding the tax treatment of superannuation contributions and benefits (in particular), most people realised they could, in fact, wait until the last moment before acting on their intentions. And when they responded, a significant portion of participants sought advice before acting (if at all). Third, our results could be thought consistent with Bolton and Faure-Grimaud (2009) in that having announced its intention to provide a window for tax-preferred superannuation contributions, government prompted participants to delay making a commitment until they had to (thereby freeing-up attention for other intervening issues). (Clark, Fiaschetti and Gerrans 2015, p. 18)

Some also fail to consider the practical arrangements of managing their superannuation and investments after retiring. For example, the popularity of self-managed superannuation funds (SMSFs) has increased considerably over recent years, but there are concerns that

some SMSF members become less capable of managing their investments over time. As Matthew Bambrick — an Assistant Commissioner at the ATO — put it:

> While many trustees of course remain perfectly capable of effectively managing their financial affairs well past retirement age, there is a risk that some with diminished capacity to effectively manage their fund, may nevertheless continue to do so. Most don't have a plan for what to do if they get to this point. Many SMSFs typically have two members with one member taking a more active role. If that member dies or becomes incapacitated the remaining member with little super knowledge or experience will have to assume responsibility for managing and restructuring the fund.
>
> A poorly managed fund can result in lost income and an erosion of lifestyle. This can be caused not only by bad investment choices but also through non-compliance with super and tax laws. For example, if minimum pension payments are not made each year, the fund will lose its tax exemption. In worst-case-scenarios, non-compliance can result in the fund losing almost half its assets in tax and the trustees being fined.
>
> We've already seen too many examples of an SMSF member dying without successor arrangements, leading to significant court costs to resolve. This has also happened with a trustee or trustees having no mental or legal capacity to make decisions and there being no way short of costly court action by family members to resolve the issue. There is also a significant emotional toll on family members and friends. These issues are a time bomb waiting to go off if not addressed now. (Bambrick 2015)

This is not to say that *all* Australians struggle with their superannuation and retirement arrangements, but the discussion above does suggest that, for some, their current level of financial literacy is insufficient to plan effectively for retirement.

4.3 What measures are there to improve financial literacy?

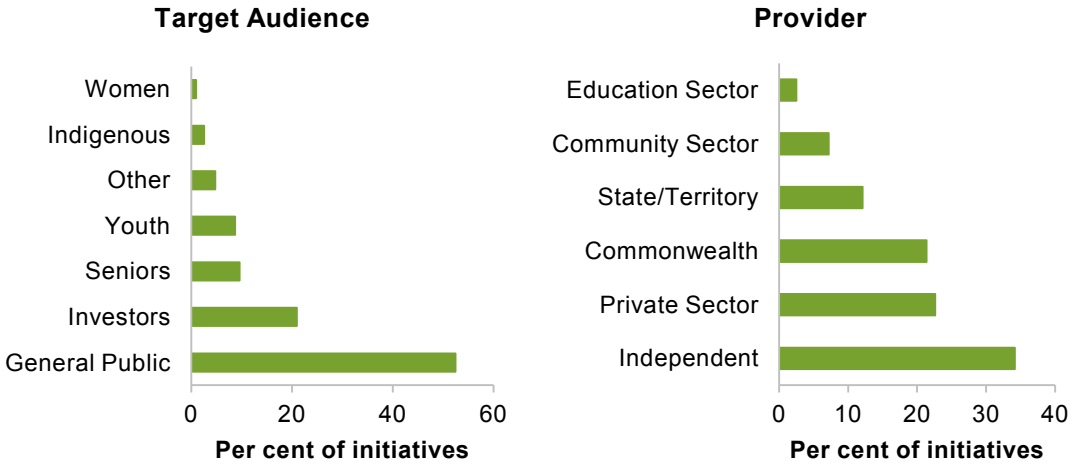
Because financial literacy is not well defined, there are a range of programs that could be judged as initiatives to improve financial literacy. Their nature and scope can vary markedly, with some initiatives being small community or firm-based programs to improve financial literacy for a few, while policies such as the National Financial Literacy Strategy aim to provide a 'framework for action to guide and encourage all those with a role to play in improving financial literacy for Australians' (ASIC 2014b).

The disparate nature of the different financial literacy measures means that it is difficult to know how many programs are operating in Australia at any given time. The Consumer and Financial Literacy Taskforce in 2004 attempted to stocktake the existing financial literacy programs (figure 4.2), finding more than 700 initiatives:

> The Taskforce has identified over 100 organisations in Australia delivering over 700 Australian consumer and financial literacy initiatives directed at a wide range of audiences. This is a preliminary investigation and the Taskforce recognises that many more programs may be in existence. … However, it is also clear that the spread of information is uneven across different

topics and target audiences. For example, there appears to be more information available to consumers on credit and loan products and how to manage borrowing (including information provided by each state and territory), and less on insurance and superannuation. (Consumer and Financial Literacy Taskforce 2004, pp. 49–50)

Figure 4.2 **Results from the Consumer and Financial Literacy Taskforce stocktake of initiatives[a], 2004**



[a] 'Independent' includes consumer/financial magazines, publications and regular newspaper columns.

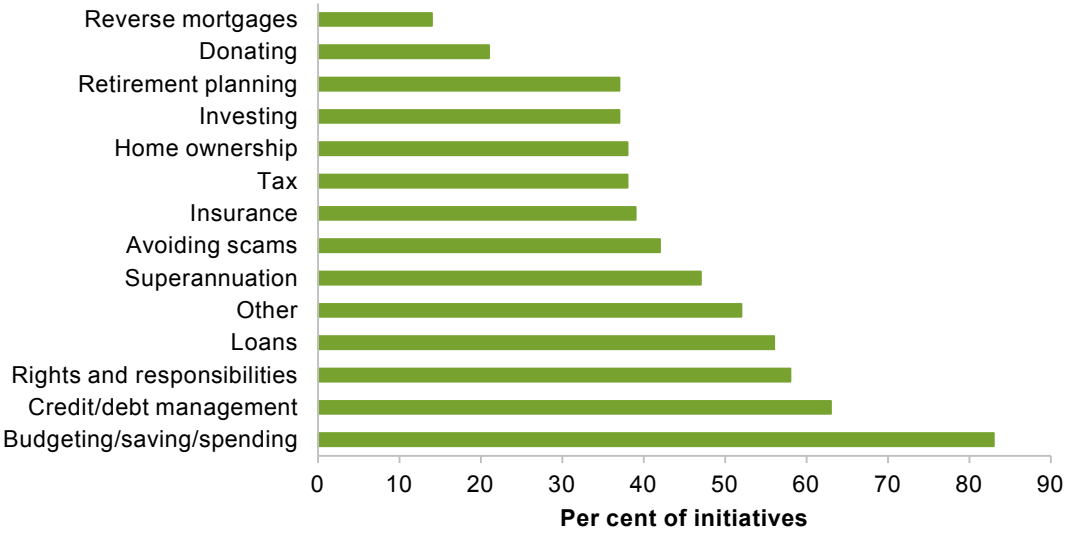
Data source: Consumer and Financial Literacy Taskforce (2004).

ASIC, as part of the National Financial Literacy Strategy, undertook its own 'stocktake' of financial literacy programs in 2013, comprising of a survey that asked organisations to nominate whether they undertook initiatives to improve financial literacy. They found:

> This report summarises 112 initiatives submitted by 64 organisations in response to the survey. While we tried to distribute the survey as broadly as possible, there may be individuals and organisations that did not complete it. There are likely to be other initiatives delivered in Australia that are not included in this snapshot. (ASIC 2013a, pp. 2–3)

ASIC also found that the financial literacy initiatives identified as part of its survey did not cover all topics of financial literacy uniformly (figure 4.3).

Figure 4.3 **Results from the ASIC stocktake of initiatives[a], 2013**



[a] Note that categories are not mutually exclusive.

Data source: Based on figure 2 of ASIC (2013a).

ASIC has had responsibility for coordinating efforts to improve financial literacy since 2008, and released the National Financial Literacy Strategy in 2011 with an update in 2014 focusing on the next three years (box 4.4).

Box 4.4 The National Financial Literacy Strategy

The most recent iteration of the National Financial Literacy Strategy has a number of key goals and priorities. As summarised by ASIC:

> The 2014–17 Strategy is designed as a flexible framework for action, encouraging active participation and providing scope for both new and existing initiatives.
>
> The Strategy recognises that all levels of government, financial institutions, large and small businesses, community organisations and the education sector have a valuable role to play in building the financial literacy of Australians.

The core principles of the strategy include:

- Shared responsibility: Improving financial literacy is a shared responsibility across the Australian government, business, community and education sectors.
- Engagement and effectiveness: An approach tailored to life stage or personal circumstances can help motivate Australians to build financial literacy and manage their money effectively.
- Encouragement of good practice: Open sharing of knowledge about lessons learned from financial literacy initiatives contributes to improving evaluation and measurement capability and practice.
- Diversity and inclusiveness: Programs and information, tools and resources must be delivered in an accessible form, recognising the different ways people learn, so that all Australians can participate.

The priorities for the 2014–17 strategy are to:

1. Educate the next generation, particularly through the formal education system
2. Increase the use of free, impartial information, tools and resources
3. Provide quality targeted guidance and support
4. Strengthen co-ordination and effective partnerships
5. Improve research, measurement and evaluation.

Sources: ASIC (2014c, 2014d)

While the National Financial Literacy Program takes a community-wide focus as part of its objectives, the poor financial literacy exhibited by many when it comes to superannuation raises the question of whether more should be done to improve financial literacy for matters relating to retirement.

4.4 Should more be done to improve financial literacy when it comes to superannuation and retirement?

Improving financial literacy has many benefits. As noted by ASIC:

> Improving financial literacy can have significant benefits for everyone, no matter what their age or income. By developing confidence, knowledge and skills to manage financial products and services, individuals will be better able to overcome or avoid financial exclusion. Such exclusion impacts on the opportunities individuals can pursue, their sense of security and their overall emotional and physical wellbeing.
>
> Good financial literacy skills help individuals and families make the most of opportunities, meet their goals and secure their financial wellbeing, as well as contribute to the economic health of society.

> Improved financial literacy can increase economic participation and social inclusion, drive competition and market efficiency in the financial services sector, and potentially reduce regulatory intervention. (ASIC 2011, p. 5)

Given that financial literacy is of benefit to individuals and society at large, programs to improve it, such as through the *National Financial Literacy Strategy* may be justified. However, there may also be other, specific measures that relate to superannuation that could be of particular benefit.

More useful information could be provided to superannuants

Superannuation savings form a large part of the wealth of many individuals (see supplementary paper 2), but not all those that use the superannuation system understand how much, or how little, superannuation savings they may have. As noted earlier, the difficulties in understanding superannuation savings, and how they can contribute to a higher quality of life in retirement, can make it difficult for individuals to plan for retirement. One avenue to address this problem is to improve the ease with which superannuation statements can be understood, and to provide more relevant information.

In addition to having annual information on superannuant's account balances provided, some may benefit from the provision of projections as to what their balance might be over the next period of time, or at the preservation age for those approaching retirement age — a recommendation of the 2014 *Financial System Inquiry* (box 4.5). This could serve to give many an indication as to how much they will have for retirement, and to plan accordingly. Additional information could also be provided as to what a superannuation balance might be expected to provide in the form of an income stream or annuity, which some individuals may understand more easily in terms of determining adequacy — that is, individuals may better understand the lifestyle afforded to them by their superannuation when expressed as a regular payment over a period rather than a simple balance. ASIC already provides detailed guidance as to how such forecasts can be provided in a consistent manner (ASIC 2014e).

Other information regarding adequacy could also be presented. For example, both the Association of Superannuation Funds of Australia (ASFA) and ASIC provide information and calculators, respectively, about how much income will be needed in retirement for different subjective standards of living. Another alternative is to provide information about the amount of income needed to match the same sort of income stream received from the Age Pension, as individuals may understand that the Age Pension provides only a basic standard of living (Cooper 2015). Marrying this sort of information with the balances or income streams from superannuation statements could help to inform individuals about their likely standard of living in retirement given their current savings patterns, and whether, accordingly, they may need to make changes to their contributions or expectations. This sort of information could also help to advise individuals about longevity risk.

Box 4.5 The Financial System Inquiry on superannuation member engagement

The *Financial System Inquiry* determined that individuals had difficulty in understanding how their superannuation savings habits may translate to income in retirement. Recommendation 37 of the inquiry suggested the following remedies:

- Publish retirement income projections on member statements from defined contribution superannuation schemes using Australian Securities and Investments Commission (ASIC) regulatory guidance.
- Facilitate access to consolidated superannuation information from the Australian Taxation Office to use with ASIC's and superannuation funds' retirement income projection calculators.

Research indicates that giving consumers retirement income projections improves their engagement with saving for retirement. However, many superannuation funds do not provide retirement income projections on member statements. All members need to understand their projected retirement income to make informed decisions about their retirement savings. Where possible, all funds should provide meaningful retirement income projections on member statements, including scenarios to alert members to sequencing risk, based on the standard assumptions described in ASIC's requirements for superannuation forecasts. This would benefit members at a relatively small cost to superannuation funds.

Superannuation funds can only provide a partial perspective of retirement incomes for members who have multiple accounts and wealth accumulated outside of superannuation. Online calculators enable individuals to enter all their information — superannuation fund and asset balances — to obtain a more accurate retirement income projection, including any income from the Age Pension. The Australian Taxation Office (ATO), which holds consolidated superannuation information across multiple accounts, could provide that information for use in calculators, which could initially be accessed from the ATO's myGov superannuation portal. This would assist funds to design calculators that provide retirement income projections based on the comprehensive income product for retirement they offer members.

Source: Australian Government (2014b, p. 267).

Evaluation can help to make existing and future financial literacy programs more effective

Broadly speaking, there is recognition that there needs to be some form of intervention when it comes to financial literacy, but there has been little coordination, evaluation or understanding of what policies work and which do not. There is a need for more rigorous evaluation of the financial literacy programs and the national financial literacy strategy before more programs or changes are implemented. Worthington describes the problem when it comes to the myriad of financial literacy programs in operation:

> … it is clear that these financial literacy programs, with a small number of exceptions, are sometimes implemented with well-meaning but not very clearly-defined objectives. It is also often unclear about who is demanding outcomes and against which criteria these will be assessed. Most importantly, only a few appear to have been subject to rigorous post-program review and evaluation, a situation made problematic by the universal lack of a 'control' group with which to evaluate the program. … It is also clear that many of the financial literacy programs implemented alongside other social welfare initiatives are supplementary, and it is not especially apparent, say, whether the financial literacy program or the package of social welfare programs is primarily responsible for any improvements in financial literacy or even

whether the program enhances the literacy outcomes. Finally, it is difficult to obtain information on the actual operations of these programs, especially in the workplace.

Overall, the research has shown us over and over again that efforts to improve financial literacy have proven elusive. But unfortunately, the diversity of 'financial literacy programs' in place do little to reassure us that they have any sort of consistency of purpose and meet appropriate educational standards and are not merely a different sort of marketing or promotional exercise in the private sector or in the government sector a means of improving political standing. (2013, pp. 21–22)

At this point in time, consideration could be given to evaluating the existing stock of financial literacy programs in order to answer some of these questions, rather than to introduce further initiatives. As ASIC remarked about the National Financial Literacy Strategy, improving financial literacy can take a long time to implement:

Implementation of the Strategy depends on a concerted approach involving many stakeholders. While considerable progress has already been made, we recognise that bringing about a significant change in Australians' financial literacy levels is a long-term journey — one that will take at least a generation. (2014c, p. 17).

This means that getting financial literacy right can benefit many over a long period of time, while getting it wrong could adversely impact a generation of savers.

4.5 Complements to improving financial literacy

Improving financial literacy is not the only way to assist individuals to improve their decision-making when it comes to superannuation and retirement. The *Financial System Inquiry* noted that more could be done to help protect consumers of financial products than just increasing the level of financial literacy:

Improved financial literacy enables consumers to be more engaged and to make more informed decisions about their finances. The Inquiry notes support from submissions on the importance of financial literacy for consumers. There are numerous examples of financial industry and Government programs that aim to educate consumers and raise their awareness of financial management issues, and the Inquiry encourages continuation of these efforts. However, in the Inquiry's view, increasing financial literacy is not a panacea. Further measures are needed to support the fair treatment of consumers. (Australian Government 2014b, p. 193)

Can behavioural biases be harnessed through 'nudge policies'?

Some have suggested that using behavioural economics, particularly so-called 'nudge policies', can be a more effective way to encourage individuals to save, and to use their savings more effectively in retirement.[30] For example, the Consumer and Financial Literacy Taskforce noted the effects of making co-contributions to retirement savings accounts in the United States an 'opt-out' policy rather than 'opt-in':

> Behavioural experiments have been conducted in the US to assess the relative influence of opt-in and opt-out programs on encouraging employee contributions to retirement saving accounts (employers have the option to make matching contributions). Under the existing system, employees are required to nominate to have contributions deducted from their salaries which the employer will match. In one experiment, 43 per cent of employees chose to opt-in to a retirement savings program at one company, while at another company where the employer automatically enrolled all employees in a matched-contributions scheme, 92 per cent chose to remain in the program even though they had the option to opt-out. (2004, p. 27)

Another program that relies on 'opt-outs' is the KiwiSaver program in New Zealand. New employees are automatically enrolled into the scheme and superannuation payments made into a KiwiSaver-approved default fund. It is incumbent on individuals to choose to opt-out, but relatively few do. The proportion of automatically enrolled members that have chosen to opt-out has fallen from 35 per cent in 2009 to 6.2 per cent in 2012 (New Zealand Ministry of Business, Innovation & Employment 2012, p. 7). The KiwiSaver scheme has been found to lead to more savings on the part of individuals, with 'about one third of private contributions representing additional savings' over and above those that would have been made anyway (Law, Meehan and Scobie 2011, p. iii). Both these examples demonstrate that default schemes where individuals have to opt-out can act effectively as nudge policies when it comes to superannuation, at least in the accumulation phase.

The recent *Financial System Inquiry* recommended a 'nudge' policy about how members of superannuation funds should receive their superannuation savings in retirement. Their recommendation was that superannuation trustees should choose 'comprehensive income products for retirement' (CIPRs) — products that are designed to do more to address longevity risk — as a default option, and that it would be incumbent on superannuants to change their method of drawdown if they wished to do so (Australian Government 2014b). Such an approach was designed to use 'behavioural biases to encourage rather than discourage the use of products that provide longevity risk protection' (Australian Government 2014b, p. 91).

The concern around behavioural biases is related to how attitudes of individuals can be key to their level of financial literacy. Providing information and options can help to overcome deficiencies in skills and knowledge, but improving attitude — or rather, reducing

[30] A nudge has been defined as 'any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates' (Thaler and Sunstein 2009, p. 6).

entrenched apathy when it comes to retirement income planning — is something that is harder to address. As the FLF said about financial literacy resources in general:

> Simply providing comprehensive and well intentioned education resources will not be adequate. There is no shortage of quality resources available already to consumers with an active interest in building their money skills. The challenge is to promote engagement and motivation to those who, for reasons of disinterest in the issue, lack of perceived relevance, stress or the other obstacles identified … are not currently seeking to build their money skills. (FLF 2007, p. xii)

Nudge policies are a way to avoid the difficulties around attitude and behaviour insofar that they try to attempt to help consumers make the right choice without having to build their financial literacy.

But it is not clear that nudge policies are a more effective alternative to improving financial literacy when it comes to superannuation. The survey evidence suggests that a significant proportion of individuals are unengaged and uncertain when it comes to the superannuation system. This in turn could mean that a well-intended nudge could end up being 'too effective', as individuals feel that they do not have the skills to change their decisions or opt-out of defaults. This is not to say that all nudge policies are inappropriate, but rather they are like any other policy aimed to improve financial outcomes: they need careful targeting and to be reviewed rigorously and regularly. As Reeson and Dunstall put it, in part of a CSIRO submission to the Henry Tax Review:

> Defaults work best where people are homogenous in their preferences and circumstances, and have relatively limited decision-making expertise. …In such cases if an optimal option can be identified it would make a good default. If people are more heterogeneous, any default is likely to be sub-optimal for a greater proportion of them, in which case it may be better to prompt people to make their own decisions … (2009, p. 15)

The circumstances of individuals in the lead up to, and after retirement are varied, reflecting their preferences as much as their level of financial literacy. Nudge policies may be difficult, if not impossible, to design in a manner to help all individuals use their superannuation to maximise their welfare in retirement.

There is also a risk — as with any government policy — that a nudge, like a soft-default, could be perceived as explicit endorsement of a particular action. This, in turn, could be misconstrued by disengaged individuals as the government making an informed choice for them (akin to the Superannuation Guarantee during the accumulation phase). At a minimum, nudges need to be accompanied by additional information to make it clear to individuals that while such policies may be designed for the 'average' person, they themselves may have specific circumstances that need to be considered. This can complement the nudge policy, as the overall goal is to change entrenched attitudes of not taking action. In the absence of such additional information and for some decision making accompanying the nudge, many could be guided into an action that is not in their best interests.

Improving the trust in financial planners could reduce the need for greater financial literacy

Improving financial literacy can be costly, both in terms of time and money — resources that those with poor financial literacy may not possess in abundance. The Consumer and Financial Literacy Taskforce recognised this, and argued that for some, the level of financial literacy needed only had to extend to recognising a shortcoming and being able to interact with an intermediary such as a financial planner:

> It is often said that you don't need to know about internal-combustion engines to buy a car and the same is true of complex financial products such as superannuation. Consumers do not need to, or want to, know the detail of many of the products they buy. They just need to know the right questions to ask an intermediary who does know and who can tailor a product to fit. In these circumstances, the intermediary plays a crucial role in delivering outcomes for the consumer. (2004, p. 47)

Or put another way, individuals only need sufficient financial literacy to recognise their lack of skills and knowledge, and thus a need to seek assistance at the right time. However, as detailed above, a large number of individuals have indicated a distrust of financial advisers and the advice provided. Financial advisers and planners have been perceived by some as lacking independence, with the quality of advice compromised by the payment of commissions and other incentives. Others have raised concerns around the educational standards and competence of some financial planners. Various policy-makers have recognised the problems that can arise from the information asymmetry between financial planners and their clients, and this has led to regulation of the financial advice industry in order to improve the quality of advice provided to the public (box 4.6).

Despite numerous rules around training and standards, there are still concerns that the advice provided is not of the standard as it should be. For example, ASIC found as part of its shadow shopping for retirement advice research:

> Several advice examples were downgraded in quality because the adviser failed to include any discussion of longevity, or to acknowledge that if the client expended their desired retirement income, their total retirement savings would be exhausted in four or five years.
>
> … The 25 cases of poor advice all involved poor strategic advice. Poor strategies generally occurred where the client's expressed needs and objectives were not addressed. This commonly included the failure of advisers to address areas that did not directly involve investment products. For example, several clients had borrowings and debts that were not addressed in circumstances where a reasonable adviser would have considered these debts. (ASIC 2012, p. 9)

On financial advice in general, the *Financial System Inquiry* found that:

> In terms of fair treatment for consumers, the current framework is not sufficient. The GFC brought to light significant numbers of Australian consumers holding financial products that did not suit their needs and circumstances — in some cases resulting in severe financial loss. The most significant problems related to shortcomings in disclosure and financial advice, and over-reliance on financial literacy. The changes introduced under the Future of Financial

Advice (FOFA) reforms are likely to address some of these shortcomings; however, many products are directly distributed, and issues of adviser competency remain. (Australian Government 2014b, p. 27)

Box 4.6 A short history of financial advice

The Australian financial services industry has gone through significant changes over the last several decades as part of efforts to deregulate the financial services markets. The impact of deregulation was examined subsequently in 1991 by the House of Representatives Standing Committee on Finance and Public Administration, which concluded that there had been a failure of the market to deliver better information to consumers and that the relationship between banks and customers remained an area requiring major improvement.

The 1997 *Financial System Inquiry* ('the Wallis inquiry') also examined outcomes from financial deregulation, and made a number of recommendations around the need for consumer protection and regulatory arrangements for financial advice and financial advisers — including the responsibilities for agents and employers, and requirements for the disclosure of fees and the adviser's capacity. The *Financial Services Reform Act 2001* implemented a number of these recommendations. Further legislative changes were made in 2007 and 2008 with requirements for financial advisers to take out professional indemnity insurance, and the establishment of the Financial Ombudsman Service.

In 2009, the Parliamentary Joint Committee on Corporations and Financial Services conducted an inquiry into financial products and services in Australia in response to the practices that led to the collapse of Storm Financial and Opes Prime (among others). It found that the historical emergence of financial advisers as a sales force for product manufacturers was inconsistent with expectations that financial advisers provide a professional service that meets their clients best interests, and made a number of recommendations around the regulation and disclosure requirements of financial advisers.

In 2010, the Australian Government responded to the report with a package of reforms titled *Future of Financial Advice* (FOFA), which were designed to address many of the practices that had been seen to contribute to the collapse of many prominent investment schemes, and malfeasance within the financial advice sector more broadly. The FOFA reforms were passed in Parliament in 2012 and became mandatory in 2013. Following a change in government, a number of amendments to FOFA were passed by the House of Representatives in 2014, but have not yet passed the Senate at the time of writing.

The 2014 *Financial System Inquiry* ('the Murray inquiry') also examined matters relating to consumer outcomes and stated:

> The current [consumer] framework is not sufficient to deliver fair treatment to consumers. The most significant problems relate to shortcomings in disclosure and financial advice, which means some consumers are sold financial products that are not suited to their needs and circumstances. Although the regime should not be expected to prevent all consumer losses, self-regulatory and regulatory changes are needed to strengthen financial firms' accountability. (Australian Government 2014b, p. xx)

The Parliamentary Joint Committee on Corporations and Financial Services was also made a number of recommendations on how to increase the professional standards of advisers, which are currently being considered by government.

Source: Adapted from PJCCFS (2014, pp. 3–15).

More recently, the state of regulation around financial planners has received attention from the Parliamentary Joint Committee on Corporations and Financial Services' (PJCCFS) *Inquiry into proposals to lift the professional, ethical and education standards in the financial services industry.* The Committee made a number of recommendations, and noted that its inquiry:

> … has been undertaken by the committee during a period of significant change and scrutiny of the financial advice industry. The committee wishes to emphasise that while increasing the professional, ethical and education standards applied to financial advisers is only one of a range of measures required to protect consumers, it is an important defence mechanism to help reduce the risk of failure in the broader system. (PJCCFS 2014, p. vii)

At the time of writing, the Australian Government is undertaking a consultation process in response to the Committee's recommendations (Australian Government 2015c). Improving the quality of, and trust in, financial advice from professionals plays a key role in addressing inadequate financial literacy, as individuals need only to recognise that they need to seek advice, rather than attempting to navigate the more complicated aspects of the systems that affect retirement incomes.

Reducing the complexity of the system could reduce the need for better financial literacy

Providing more information could go a long way to help people understand their superannuation position and plan more effectively for retirement, although the complexity of the system still remains a formidable barrier for many. For example, the Senate Select Committee on Superannuation and Financial Services noted as part of the evidence it received during its roundtable in 2000 that:

> There is little evidence that levels of functional illiteracy have improved over a number of years. The implication of this, according to AMP Financial Services, is that there is going to be a percentage of the population who will never understand the concepts involved. (2000, p. 20)

This could indicate that a complementary approach to raising financial literacy is to reduce the complexity of the system so that more people are able to understand it. The superannuation system has become very complicated. For instance:

- during the accumulation phase there are complexities around how to set up salary sacrifice and interacting with superannuation funds to make after-tax contributions
- during the transition to retirement period, many are unaware of the advantageous tax treatment of transition to retirement pensions, along with different ages when different parts of superannuation become available at concessional tax rates
- during the 'decumulation phase' of superannuation there are numerous options to draw down on wealth with complicated interactions with other government benefits, including the Age Pension and various concession cards

- and throughout it all, there is impenetrable terminology that serves to build layer upon layer of confusion.

In short, while the system is designed to help people improve their standards of living in retirement, the numerous different rules are understood by relatively few. As Reeson and Dustall said:

> Increasing complexity therefore has the potential to accentuate existing inequalities. Given many of the complexities of the Australian tax and transfer system are intended to address inequity, this represents a significant problem.
>
> Delivering welfare through a complex tax system may therefore be self-defeating, as many of the people at whom it is targeted are the least well placed to access it. For example, receiving the superannuation co-contribution requires knowledge of the scheme and making a pro-active contribution to an eligible fund prior to a June 30 deadline. This is something that many human decision-makers will struggle with. More needs to be done to overcome the barriers of complexity and behavioural inertia if such schemes are to work for those who need them the most. (2009, p. 21)

Analysis by the Commission indicates that the take-up rate of salary sacrifice, post-tax contributions to superannuation, and use of transition to retirement pension arrangements are low and mainly restricted to wealthier households (see supplementary paper 2). While such arrangements are likely to be most beneficial for the wealthy (who have more disposable income to invest and a greater incentive to respond to higher rates of taxation), these arrangements still offer advantageous incentives for most households, and should theoretically be of benefit to most of those in work and approaching retirement age. Despite these programs, however, only around half of individuals are aware that superannuation is taxed at a lower rate than income (Worthington 2008, p. 349) and there is little evidence on the effective use of 'transition to retirement pensions' among the general population. As Reeson and Dunstall said:

> Welfare payments delivered through the tax system, such as the superannuation co-contribution, are likely to be missed by those who stand to benefit most. (2009, p. iii)

While making the system simpler would reduce the need for financial literacy, it would also necessitate a broad consensus among industry, government and households as to what the role of the superannuation system is, how it should interact with other areas of public policy, and other government and community objectives, such as fiscal constraints and concerns around standards of living. Seeking such a consensus is likely to require time and broad-ranging public consultation, but could be a worthwhile investment in making the retirement income system work more effectively for more Australians.

5 Involuntary retirement among mature age workers

Key Points

Not all individuals who retire do so of their own choosing — some retire involuntarily due to issues including poor health, caring responsibilities or having been made redundant.

Changes in the preservation and Age Pension age will have little, if any, impact on the workforce participation of individuals who retire involuntarily. Understanding how many people are likely to become involuntarily retired each year is an important first step in assessing policy changes in these areas.

Relatively few workers aged 45-49 retire. Of those who do, around 70 per cent retire involuntarily, with health related factors being the dominant driver.

While many more people retire at older ages, rates of involuntary retirement are lower among older workers (around 35 per cent of people who retire between 65 and 69 do so involuntarily), with redundancy or job loss becoming more important.

The involuntarily retired tend to have lower levels of wealth than the voluntarily retired, and this can adversely affect their quality of life in retirement. Education levels and industry of occupation also appear to affect the likelihood of retiring involuntarily.

Levels of involuntary retirement in the future are likely to be affected by a mix of factors, including labour market conditions and the health of older Australians. The mix of factors at play makes it difficult to project rates of involuntary retirement. All else equal, expected improvements in health status could reduce the level of involuntary retirement among mature aged workers over time.

Involuntary retirement, particularly at relatively young ages, can have significant welfare effects. Further research is needed to better understand the scale and scope of involuntary retirement and the role that policy can play in assisting affected individuals.

5.1 What drives the labour force participation decisions of older workers?

There are a number of factors that influence a mature aged worker's incentive to participate in the labour force, or their decision to retire. These drivers include whether they enjoy their job, their health, the health of their spouse or other family members and broader labour market conditions. The preservation age, tax free age and Age Pension age also play a role in influencing retirement decisions (chapter 3).

The many factors that impact on retirement decisions have some common defining elements. For example, factors can be thought of as:

- affecting the demand for labour (such as the current economic environment or a firm's willingness to hire) or the supply of labour (such as an individual's personal circumstances and inclination to work) (Headey, Freebairn and Warren 2010)
- being financial in nature (such as achieving a desired level of wealth or becoming eligible for the Age Pension) or not financial (such as having to care for a family member) (Warren and Oguzoglu 2010)
- being voluntary (where one chooses to retire or can afford to retire) or involuntary (such as where an individual is forced to prematurely retire due to adverse health) (Ralston and Jenkinson 2014).

For the purposes of this study, the Commission has employed a voluntary/involuntary retirement framework, since this framework best aligns with the analytical approach that the Commission has used to assess the impacts of changing the preservation age. The Commission's analytical approach distinguishes between those who 'elect' to retire (and assumes that individuals who do so time their retirement to maximise their utility) and those who are forced to retire before it is optimal to do so.

The remainder of this paper examines how common involuntary retirement is among older workers (section 5.2). The estimates presented in this section have been incorporated into the Commission's model of retirement behaviour (chapter 3 and supplementary paper 6). A brief discussion of some of the characteristics of the involuntarily retired follows (section 5.3). While this section presents some insights, further research into the nature and scope of involuntary retirement is needed. The paper concludes with a discussion of future trends in the rate of involuntary retirement (section 5.4).

5.2 How common is involuntary retirement?

Involuntary retirement occurs where individuals do not get to exercise choice about whether or not to continue to participate in the workforce.

In order to measure how common involuntary retirement is, it is necessary to examine the many reasons individuals retire and classify them as either being voluntary or involuntary. The Household, Income and Labour Dynamics in Australia (HILDA) Survey contains information at the individual level on the timing of, and self-reported reasons for retirement, which can be used for this purpose.

Some reasons lend themselves more readily to classification. For example, being made redundant or retiring due to ill health are generally considered to be involuntary in nature, while being able to afford to retire or wanting to spend more time with one's partner are generally considered to be voluntary.

However, some of the factors that prompt individuals to retire, such as being 'fed up with work' do not fit easily within a voluntary/involuntary taxonomy. Studies have taken slightly different approaches when categorising these factors. For example, in a study undertaken by Barrett and Brzozowski (2010) being 'fed up with work' was classified as being involuntary, while in a more recent study undertaken by Wilkins (2014a) it was seen to be voluntary. The way in which the Commission has categorised retirement reasons is more in line with the method adopted by Wilkins, and is detailed in table 5.1.

Table 5.1 **Classification of reasons for retirement**
Involuntary versus voluntary

Involuntary	*Voluntary*
• Made redundant / dismissed / had no choice • Reached compulsory retirement age[a] • Could not find another job • Pressure from employer or others at work • Own ill health • Ill health of spouse / partner • Ill health of other family member	• Became eligible for old age pension • Offered reasonable financial terms to retire early or accept a voluntary redundancy • Superannuation rules made it financially advantageous to retire at that time • Could afford to retire / had enough income • Spouse / partner income enabled me to retire • Fed up with working / work stresses, demands • Partner had just retired or was about to retire • Spouse / partner wanted me to retire • To spend more time with spouse / partner • To spend more time with other family members • To have more personal / leisure time

[a] With the exception of a few select examples, most individuals do not face a 'compulsory retirement' age. For those individuals that do, it is assumed that their retirement is involuntary. For example, federal judges face a compulsory retirement age of 70 years of age; and Australian Defence Force personnel and reservists face compulsory retirement ages of 60 and 65 years respectively.

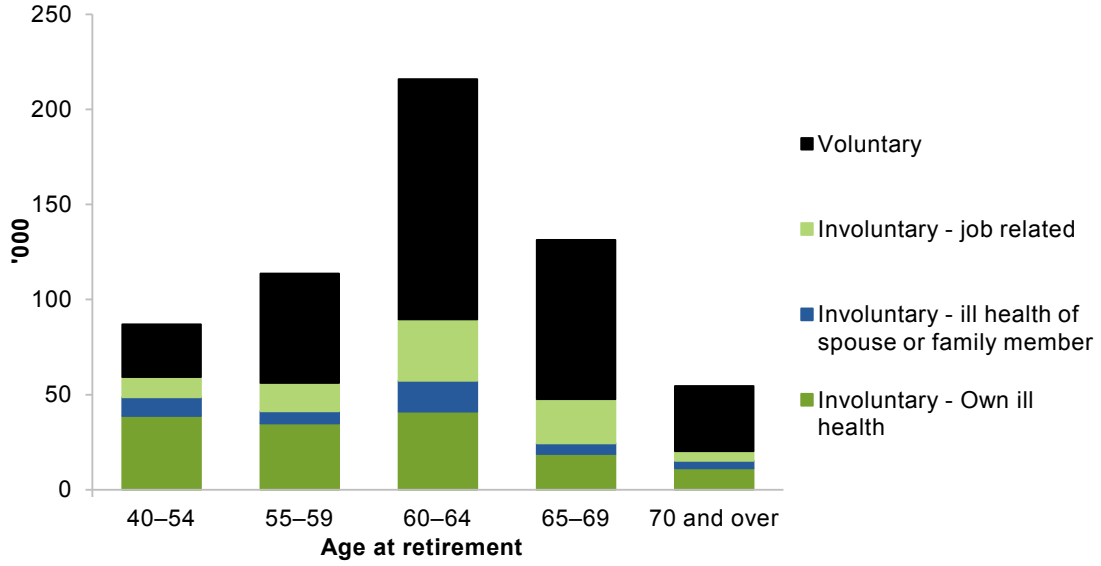
Sources: HILDA (2013, release 13, wave 11), Wilkins (2014a).

Involuntary retirement is relatively common among older workers …

A large proportion of mature age workers enter retirement involuntarily. Using the classification of retirement types presented in table 5.1 and data drawn from the 2011 wave of HILDA Survey, the Commission estimates that just under one half of all Australians that retired between the ages of 45 and 70 did so involuntarily. Those who retire involuntarily mostly do so due to adverse health outcomes or an inability to maintain or find a job.

The share of involuntary retirees relative to voluntary retirees, ranges from around 35 per cent for 65-69 year olds through to around 70 per cent for those aged under 55 (figure 5.1).

Figure 5.1 **Number of people retiring, by age group and reason[a]**



[a] Number of people who retired in the last five years, broken down by age at retirement. These results are further disaggregated according to the main reason for retirement.

Data sources: Commission estimates based on HILDA (2013, release 13, wave 11) and ABS (*Census of Population and Housing, 2011*).

For the purpose of the Productivity Commission Retirement Model, the HILDA data have been used to derive estimates of the annual probability that an individual will retire involuntarily. These probabilities are estimated by age, gender, and across 12 household types. (The results are shown in modelling supplement 3).

… and ill health is a major contributor

Ill health is the dominant driver of involuntary retirement when considered across all age cohorts as a whole. Among males who retire for health reasons, it is largely their own ill health that drives the decision, whereas among females, the need to care for a spouse or other family member with poor health is an important driver of early retirement.

The relative importance of job-related involuntary retirement appears to be slightly higher for older retirees (that is, those retiring at 60 years of age or over). This might be indicative of workplace bias or a broader lack of job opportunities for older workers. It could also reflect a mismatch between the skills of older workers and contemporary employer needs (PC 2013).

Job-related involuntary retirement is also likely to be affected by broader economic forces that affect the demand for labour, such as business cycles and structural change in the economy.

5.3 What are the characteristics of the involuntarily retired?

With a relatively large proportion of retirees retiring involuntarily, it is important to understand the key characteristics associated with involuntary retirement. Some insights into the different characteristics of involuntary and voluntary retirees can be gleaned from the HILDA Survey. In addition to containing information on reasons for retirement, the HILDA Survey contains information on individual and household characteristics (Wilkins 2014a). Three characteristics — wealth level, education level and industry of occupation — are touched on below. The information presented is not intended as a comprehensive assessment of the issue, rather it provides a starting point for more detailed research on the nature and extent of involuntary retirement.

The involuntarily retired are frequently less wealthy …

Those who retire involuntarily tend to have lower levels of net wealth relative to those who retire voluntarily. Results from the HILDA survey indicate that the median net wealth of involuntary retirees is less than half that of voluntary retirees. It is also less than that of individuals who are still working, a group who are, on average, nearly a decade younger (table 5.2).

The disparities in wealth levels between involuntary and voluntary retirees are broadly consistent with the findings from previous studies that have considered the impact of early retirement on retirement outcomes. Previous studies have found that households that face involuntary retirement due to a shock, such as illness or retrenchment, fare much more poorly in retirement than those that have a planned, voluntary retirement (Barrett and Brzozowski 2010; Haider and Melvin 2007).

Table 5.2 **Net wealth by labour force status[a]**

Net wealth level	*Units*	*Involuntarily retired*	*Voluntarily retired*	*In labour force*
25th percentile	$	100 200	505 450	323 000
50th percentile	$	427 500	897 050	665 560
75th percentile	$	804 163	1 525 002	1 195 600
Mean age	Years	62	63	55

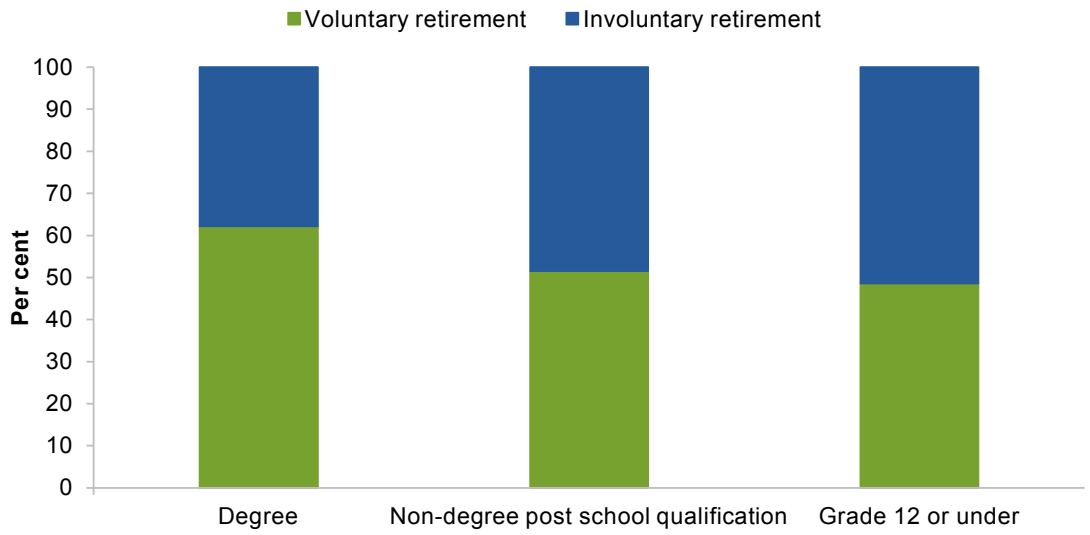
a A person is classified as retired if they did so in the last four years. This constraint is used to ensure wealth is not drawn down over a long retirement period. Age is restricted to the head of household being 45 years or older. Net wealth includes the value of the family home.

Source: Commission estimates based on HILDA (2013, release 13, wave 11).

… and have lower levels of education

There is also some evidence that involuntary retirement is more common among individuals with lower levels of education. For example, individuals with a degree are less likely to involuntarily retire relative to those with non-degree qualifications, and the latter are slightly less likely to retire involuntarily compared with those who have grade 12 or under qualifications (figure 5.2). These results are consistent with econometric and other empirical studies that find a positive relationship between education level and age at retirement (see, for example, Headey et al. (2007) and Ralston and Jenkinson (2014)).

Figure 5.2 **Retirement reasons by education status**



Data source: Commission estimates based on HILDA (2013, release 13, wave 11).

Involuntarily retirement and industry of occupation

The likelihood of being involuntary retired also appears to differ by industry of occupation (table 5.3). For example, involuntary retirement rates are much lower in the Financial and Insurance Services industry (22 per cent) compared with the Information Media and Telecommunications industry (72 per cent).

These findings (outlined in table 5.3) run counter to the 'conventional wisdom' that the industries with the highest involuntary retirement rates are those associated with manual labour, because they entail higher risk of injury and poor health. One possible explanation is that industries with higher rates of involuntary retirement are impacted more by job- rather than health-related reasons — for example, these industries may be characterised by higher rates of retrenchment, or they may be undergoing structural change that favours younger workers over older workers.

Data limitations prevent disaggregation of the results in table 5.3 by occupation or type of employment within each industry. Further data and subsequent research are required to better understand involuntary retirement from an occupational perspective.

Table 5.3 **Voluntary versus involuntary retirement shares, by industry[a]**

	Involuntary	*Voluntary*
	per cent	per cent
Information Media and Telecommunications	72	28
Administrative and Support Services	67	33
Retail Trade	67	33
Wholesale Trade	67	33
Manufacturing	65	35
Arts and Recreation Services	56	44
Construction	50	50
Transport, Postal and Warehousing	48	52
Health Care and Social Assistance	47	53
Agriculture, Forestry and Fishing	47	53
Accommodation and Food Services	46	54
Electricity, Gas, Water and Waste Services	44	56
Public Administration and Safety	41	59
Professional, Scientific and Technical services	40	60
Education and Training	33	67
Mining	30	70
Rental, Hiring and Real Estate Services	29	71
Financial and Insurance Services	22	78

a Estimates are for those classified as completely retired and aged between 45-64 in 2011.

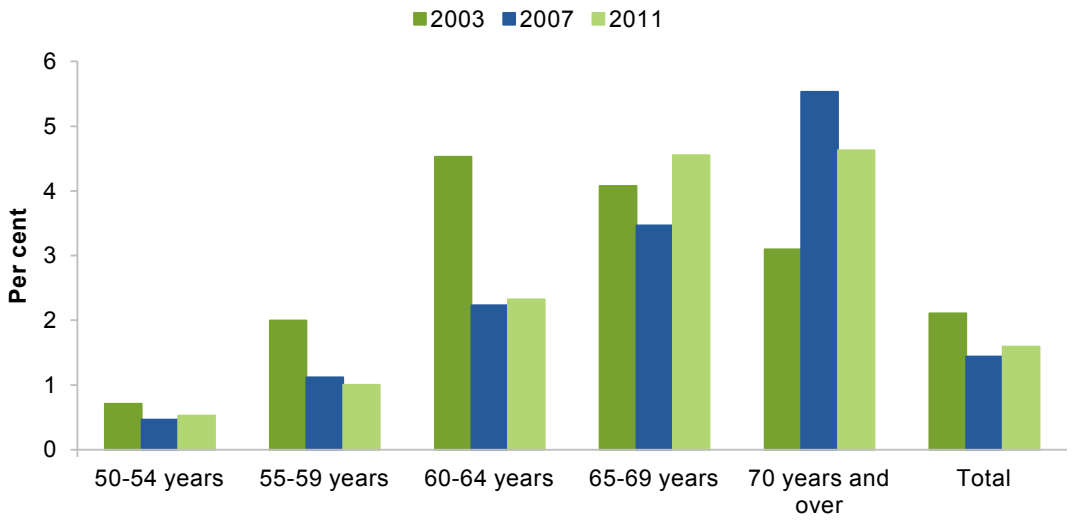
Data source: Commission estimates based on HILDA (2013, release 13, wave 11).

5.4 What is happening to rates of involuntary retirement over time?

Understanding what might happen to rates of involuntary retirement over time is not only important for assessing the impacts of changes to the preservation age, it is also important for better understanding what might happen to mature age labour force participation at a time when Australia's population is rapidly ageing.

A lack of time series data on retirement reasons makes it difficult to project future rates of involuntary retirement. Estimates from three waves of HILDA Survey — 2003, 2007 and 2011 — show no discernable trend in involuntary retirement rates (figure 5.3). Over time, as new waves of the HILDA Survey become available, a clearer picture of trends may emerge.

Figure 5.3 **Likelihood of involuntarily retirement[a]**



[a] These rates measure the likelihood an individual becomes involuntarily retired given they were working in the previous period (12 months ago).

Data source: Commission estimates based on HILDA (2013, release 13, waves 3, 7 and 11).

In the meantime, insights into what might happen to rates of involuntary retirement over time may be gleaned by examining the underlying drivers of involuntary retirement, such as health status and job-related reasons.

The positive links between health status and labour force participation have been long recognised (see for example Cai (2010)) and will continue to be important in the future. Headey Freebairn and Warren (2010) suggested that ongoing improvements in health (along with human capital) 'appear likely to matter most in future decades' in promoting mature age participation. The authors went on to note that improvements in the health of mature age men and women are projected to increase participation rates by between 2 and 2.5 per cent by 2048.

The Commission, in its 2013 report, *An Ageing Australia*: *Preparing for the Future* (PC 2013) also suggested that, on face value, significant reductions in age–specific prevalence rates of disability among working age people auger well for future age–specific participation rates.

It is less clear what might happen to rates of involuntary retirement caused by job–related factors in the future. Australia is one of a number of countries with an ageing population, and businesses may respond to the resulting social and demographic pressures by adapting and adjusting their workplaces in order to encourage and facilitate greater participation by older workers. Governments also have a fiscal incentive to support such developments. The net effect could be a lower average rate of involuntary retirement (due to job related reasons) over time.

Even so, domestic and global economic conditions will continue to drive short- to medium-term fluctuations in economic activity and hence labour demand. If demand for older workers does not match supply (at any given point in time), involuntary retirement rates will be affected. Hence, continued fluctuations in job-related involuntary retirement rates could be expected, even assuming an improvement in the underlying trend rate.

6 The Commission's retirement model

As part of its research on Superannuation Policy for Post-Retirement, the Commission has developed a model — referred to as the Productivity Commission Retirement Model (PCRM) — to assess the effects of increasing the preservation age.

Like other retirement models, the PCRM is not designed to make precise projections of how behaviour might change in response to a shift in policy. Indeed, it is not feasible to do so, given the difficulty in modelling household behaviour over a lifetime and (in the case of retirement policy) the long time horizons considered. Rather, the Commission's modelling is intended to be indicative and identify the avenues through which behavioural changes occur, and to provide guidance on the potential impact (including the order of magnitude) of such policy changes.

Results from the modelling undertaken by the Commission suggest that increasing the preservation age could induce modest increases in mature age workforce participation and in the superannuation balances of Australians at retirement, and provide fiscal gains to government.

The role of this supplementary paper is to make transparent both the modelling approach employed by the Commission and the sensitivity of its modelling results to changes in the underlying assumptions. The paper is divided into five sections:

- the first provides a broad overview of the Commission's approach to the modelling task, and the framework adopted (6.1)
- the second highlights the assumptions, caveats and limitations that are important when considering the Commission's modelling results (6.2)
- the third details the policy changes being examined (6.3)
- the fourth explains the results, as well as the intuition behind them (6.4)
- the fifth section details the sensitivity of results to changes in key assumptions (6.5).

Supporting detail on data sources and preparation, model specification, the projections undertaken, and the calibration process is provided in a series of modelling supplements to this report.

As part of the Commission's consultation in undertaking this research, the Commission held a technical workshop on 8 April 2015 to discuss and review the model and the modelling outcomes. The workshop was attended by 18 technical experts from government, academia and the finance industry (appendix A). Feedback from that workshop was used to further develop and refine the Commission's modelling.

6.1 The Commission's approach

The PCRM can be described as a 'behavioural microsimulation' model. Behavioural microsimulation models seek to simulate individual or household level decisions, and are commonly used within an economic framework to assess the impact of policy changes (such as changes in tax and benefits) on governments' fiscal positions and on labour supply. They are particularly useful where there is a wide variety of decision makers and complex policy changes are likely to impact these different decision makers in different ways.

The Commission's model consists of three modules:

- *a voluntary retirement module*, which seeks to gauge the behaviour of individuals who have some discretion in how they respond to policy changes
- *an involuntary retirement module*, which seeks to account for those individuals who do not get to exercise choice about the timing of their retirement
- *a projection module*, which seeks to weight the outcomes from the voluntary and involuntary retirement modules, both now and in the future.

The voluntary retirement module

In order to allow for different behavioural responses by different socioeconomic groups, the voluntary retirement module comprises multiple representative households for a given single age cohort (for example, 20 year olds in 2012). These households are grouped into 12 household types based on their couple status (single or couple), their gender (for single households), and their net wealth quartile relative to other households of the same type. Each of the 12 household types is further differentiated by (ten) different preferences for 'time available for non-work activities' (leisure) to give a total of 120 representative households for each age cohort.

Members of households have the choice to retire voluntarily between the ages of 50 and 75 inclusive and it is assumed that they choose the timing of their retirement 'optimally' — that is to maximise their future discounted lifetime utility. Future discounted lifetime utility is calculated by multiplying utility for each additional year of life by a discount rate and a probability of survival. Utility in a given year is derived from three sources — non-work activities, consumption and bequests.[31]

In order to estimate individuals' utility, it is necessary to first derive their time available for non-work activities, consumption and bequests. The time available for non-work activities for each future year of an individual's life is based on a relatively simple calculation. It is

[31] A bequest motive was included to proxy a range of factors that lead households to 'overinvest' for their retirement, or for other purposes (modelling supplement 2). Bequests are multiplied by the probability of death in that year rather than the probability of survival.

assumed that individuals spend only part (40 per cent) of their time engaged in non-work activities when they are in the labour force. When individuals retire, it is assumed that all of their time is spent on non-work activities.

Consumption and bequests are more difficult to calculate. For example, calculating consumption under different retirement timing choices requires a number of assumptions about:

- employment rates
- wage income
- compulsory and voluntary superannuation contributions
- non-superannuation savings
- the drawdown of superannuation and non-superannuation savings after retirement.

The Commission has based these assumptions on data from the ABS *Survey of Income and Housing* (SIH) (modelling supplement 1) and varied them by household type and age. The Commission has also had to make a number of assumptions about future changes in wages and prices and the returns that accrue to superannuation and non-superannuation assets (modelling supplement 2). The personal income tax system and the taxation arrangements associated with superannuation contributions, earnings and withdrawals have also been included to correctly model the amount of savings available for withdrawal. The taxation arrangements for non-superannuation savings are also accounted for.

Consumption is calculated from the earnings, savings and drawdown variables. Before retirement, consumption is assumed to be equal to wage income (net of compulsory contributions and income taxes) less savings (voluntary superannuation contributions and non-superannuation savings). After retirement, consumption is assumed to be equal to the drawdown of assets plus any Age Pension payments.

Bequests are equal to the total value of savings (both superannuation and non-superannuation) at death. There are not assumed to be any taxes associated with bequests.

The family home is not included as an asset that can be consumed in retirement or bequeathed at death. This is primarily because data from the SIH suggests that most households do not downsize the family home or use reverse mortgages in retirement, and to a lesser extent, due to difficulties with modelling future housing prices.[32] The family home therefore does not explicitly impact marginal decisions at and during retirement in the model.

The accumulation of assets by households to self-insure against large unknown expenses (like aged care needs) cannot be explicitly modelled in the PCRM because the modelling

[32] Some households (those in wealth quartiles 2, 3 and 4 of couple households, and quartiles 3 and 4 of households headed by single males or single females) are considered to be homeowners for the purpose of the Age Pension asset and income tests. This assumption is based on analysis of the ABS 2011-12 SIH.

assumes that there is no uncertainty in future outcomes. However, to the extent that the family home is used by households to self-insure against large uncertain expenses, the Commission's modelling — by excluding the family home — is implicitly allowing households to undertake some savings for risk aversion purposes. The included bequest motive can also be considered a proxy for this type of savings behaviour.

Additional detail on the specification of the voluntary retirement module is presented in modelling supplement 2, while modelling supplement 5 depicts how income and savings balances fluctuate over the life cycle of selected representative households.

The involuntary retirement module

Many individuals do not choose their retirement voluntarily. They may become unemployed or may not be able to work (for example, for health or family reasons) (supplementary paper 5). The involuntary retirement module groups households into the same 12 households types that are used for the voluntary retirement module and calculates the lifetime consumption and bequests they would receive for each possible age of involuntary retirement (assumed to be ages 50 to 75 inclusive). In contrast to the voluntary retirement module, the involuntary retirement module assumes that some individuals are eligible for income support payments prior to the Age Pension age, provided that they pass the relevant means test (supplementary paper 3). The model also assumes that both members of a couple retire at the same age irrespective of whether they retire voluntarily or involuntarily.[33]

The projection module

The projection module projects trends in population and household formation and calculates involuntary retirement probabilities.

- Population projections are based on the population projections included in '*An Ageing Australia: Preparing for the Future*' research paper (PC 2013). The population is projected by age and gender using assumptions about life expectancy, total fertility rates and net migration (modelling supplement 3). These projections are based on different assumptions to those underpinning the *2015 Intergenerational Report* (Australian Government 2015a), including slightly lower increases in life expectancy and the total fertility rate, which leads to a smaller projected population.
- Household formation projections (the proportion of individuals that are in single and couple households by age over time) are based on the methodology developed by the

[33] This is likely to overstate the welfare payments paid to those in couples where one member has retired involuntarily as, in some cases, their partners will continue to work. To account for this, the welfare payments paid to couples who involuntarily retire was reduced by 45 per cent (a figure based on Commission analysis using Household Income and Labour Dynamics in Australia survey data).

ABS (2015). The propensity of individuals to form different household types is held constant after 2036.

- Involuntary retirement probabilities vary across the 12 household types and are derived from wave eleven of the HILDA survey. Households in higher wealth quartiles tend to have lower involuntary retirement probabilities. For example, the probability that a single male in the highest wealth quartile becomes involuntarily retired in a given year (given that they were working in the previous year) ranges from between 0.16 per cent (for 50 year olds) to 1.5 per cent (for 70 year olds). In contrast, the same probability for a single male in the lowest wealth quartile ranges from between 1.1 per cent (for 50 year olds) to 9.9 per cent (for 70 year olds).

Combining the three modules

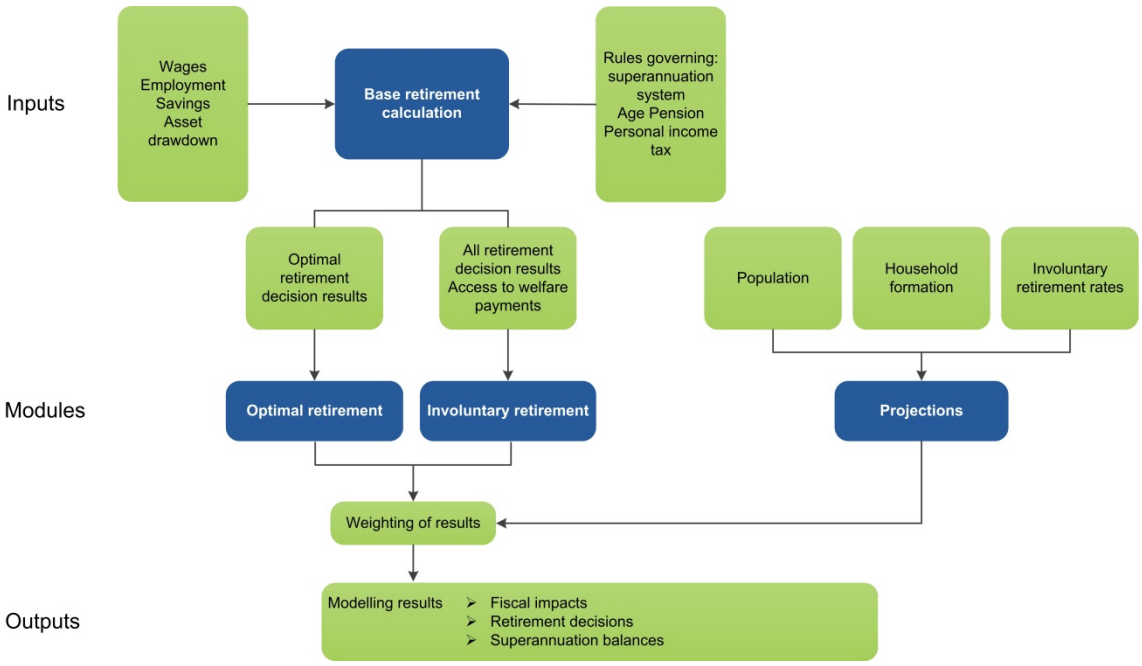
The voluntary retirement module is executed for cohorts, who in 2012, are aged 5 to 60 years inclusive.[34] For each household in each cohort, the voluntary retirement decision and all the outcomes associated with that decision for all future years of life (such as consumption, Age Pension payments, etc.) are obtained.

The involuntary retirement module is also executed for cohorts aged 5 to 60 inclusive. For each household in each cohort, the outcomes associated with all possible retirement ages are obtained.

The projection module is used to weight the outcome variables obtained from the representative households in the voluntary and involuntary retirement modules. The split between the voluntary and involuntary retirement module outcomes is determined by using the involuntary retirement probabilities for a given year. Figure 6.1 provides a stylised representation of the PCRM.

[34] Households are assumed not to earn a wage income until age 20.

Figure 6.1 **Stylised Productivity Commission Retirement Model**



6.2 Caveats

All economic modelling is best used to give an indication of the order of magnitude of effects and to identify the mechanisms that drive results rather than as precise projections of what will occur. There are a number of reasons why this is especially pertinent for modelling undertaken using the PCRM:

- Because of the effects of compounding, small differences in the assumptions made about future wages, prices and investment returns can lead to large differences in final results.
- The representative households in the model do not provide a comprehensive representation of all members of the Australian population. This is because:
  - average characteristics are assigned to the 12 representative households and some households will not be well represented by an average
  - households are assumed to stay in the same type of household and in the same wealth quartile (relative to households of the same age and household type) for their whole lifetimes.
- Underpinning the modelling framework is the assumption that households (aside from those who retire involuntarily) choose their retirement optimally. There are however, a range of reasons why this might not be the case. For example, households may not

understand all the incentives of the superannuation and tax systems, and/or may not fully comprehend their true life expectancies and mortality risks.

- A number of simplifying assumptions about retirement have been made. For example, it is assumed that retirement is permanent, that there is no phasing to retirement through reduced hours, that couple households retire at the same time, and that both members of the couple are the same age.
- Households are not assumed to *receive* bequests from deceased relatives. This means that, all else being equal, the model is likely to underestimate the amount of savings that households have when making their retirement decisions. The extent of this underestimation will depend on the size of the bequests that individuals receive and the degree to which individuals save (rather than immediately spend) these bequests.
- Changes in household structure are not factored into retirement decisions. For example, the fact that some individuals wait for their children to leave home before retiring is not explicitly modelled.
- Migrants are assumed to have the same characteristics as incumbents of the same age. For example, they are assumed to have the same level of accumulated savings, the same earning capacity and the same propensity to save and drawdown. There is evidence that suggests that migrants have lower levels of accumulated savings than incumbents (Doiron and Guttmann 2009). This means that the improvement in the Government's fiscal position arising from an increase in the preservation age is likely to be modestly overstated.
- Households are not assumed to make changes to savings rates in response to policy changes. As an example, it is assumed that households will not substitute towards investing in non-superannuation assets if investing in superannuation becomes less desirable (because the preservation age has increased).
- Younger workers today (who would be affected by a preservation age change) have not yet reached retirement age and hence the model must be calibrated using data on the retirement decisions of older workers. Thus, the model implicitly assumes that younger workers will ultimately have the same preferences as older workers. (See modelling supplement 4 for more information on the calibration process.)
- The model does not consider any indirect effects of policy changes. For example, an increase in aggregate labour supply resulting from an increase in the preservation age is assumed to not affect wages.
- Self-managed superannuation funds (SMSFs) and defined benefit superannuation funds are not explicitly modelled in the PCRM. Rather all individuals are assumed to have accumulation superannuation funds. Individuals who use self-managed and defined benefit superannuation funds may have different retirement incentives and different taxation liabilities and these are not explicitly captured by the PCRM. That said, as at June 2013, around 84 per cent of total assets in entities with more than 4 members was allocated to accumulation benefits, while 16 per cent was allocated to defined benefits

(APRA 2014a). Over the time horizon considered in this modelling exercise, it would be expected that the share of accumulation benefits would continue to rise further.

6.3 Assessing the effects of policy changes

Analysing the effects of a change in policy (such as an increase in the preservation age) involves two simulations — a base simulation that uses the current policy settings (including future policy changes that have already been announced or legislated), and a second policy simulation that assumes the proposed set of policies. The difference in outcome variables between the two simulations is attributed to the change in the policy.

The Commission uses two base cases (A and B) in its modelling. Both base cases include the legislated increases in the preservation age (from 55 to 60), increases in the Age Pension age (from 65 to 67) and increases in the Superannuation Guarantee. The only distinction between base cases A and B relates to their treatment of the announced (but not legislated) changes in the Age Pension age (from 67 to 70) — base case B incorporates the announced changes while base case A does not.

Three policies are modelled:

- a delayed, phased increase in the preservation age, which commences 15 years after the legislated changes in the preservation age are completed (figure 6.2)
- a phased increase in the preservation age, which begins immediately after the legislated increase in the preservation age is completed
- a delayed, phased increase in the tax-free age (the age at which most superannuation benefits can be withdrawn without incurring any tax liabilities), which commences 15 years after the legislated changes in the preservation age are completed. (The purpose of modelling this policy is to attempt to disentangle the impacts of raising the preservation age from those associated with lifting the tax-free age).

All three policies are run using both base cases, leading to six policy simulations in total (table 6.1).

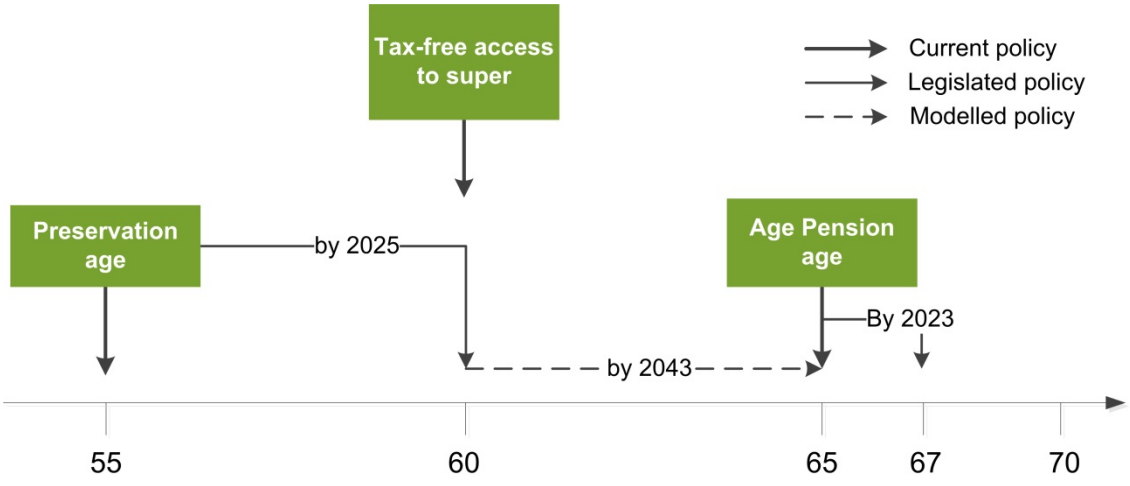
Both the preservation age and the Age Pension age drive the retirement decisions of households, albeit to different degrees (chapters 2 and 3). The relative importance of the preservation age in determining the timing of retirement is likely to increase as the superannuation system matures (and as average superannuation balances grow), all else equal.

Table 6.1 **Policy simulations**

Policy number	*Policy*	*Base case*
1A Slower phase in	1 — an increase in the preservation age (from 60 to 65) that phases in from 2035 (the phase in is completed by 2043). 38 year-olds in 2012 are the first cohort affected, and 34 year olds in 2012 face a preservation age of 65.	A — announced changes in the Age Pension age (from 67 to 70) are not included.
1B[a]	1	B — announced changes in the Age Pension age (from 67 to 70) are included.
2A Earlier phase in	2 — an increase in the preservation age (from 60 to 65) that phases in from 2026 (the phase in is completed by 2034). 47 year-olds in 2012 are the first cohort affected, and 43 year olds in 2012 face a preservation age of 65.	A
2B	2	B
3A Tax-free age	3 — an increase in the tax-free age (from 60 to 65) that phases in from 2035 (the phase in is completed by 2043). 38 year-olds in 2012 are the first cohort affected, and 34 year olds in 2012 face a tax-free age of 65.[b] The preservation age remains at age 60.	A
3B	3	B

[a] The differences in results between policies 1A and 1B are not equivalent to modelling the effects of increasing the Age Pension age from 67 to 70. Rather these scenarios quantify the effects of raising the preservation age under two different future views of the world — one where the Age Pension age remains at 67 and one where the Age Pension age increases to 70. [b] Between the preservation age and the tax-free age, income streams are taxed at an individual's marginal tax rate less a 15 per cent offset (see supplementary paper 1).

Figure 6.2 **Stylised representation of Policy 1A**



6.4 Model mechanisms, drivers and results

Effects of changing the preservation age to 65 under policy 1A

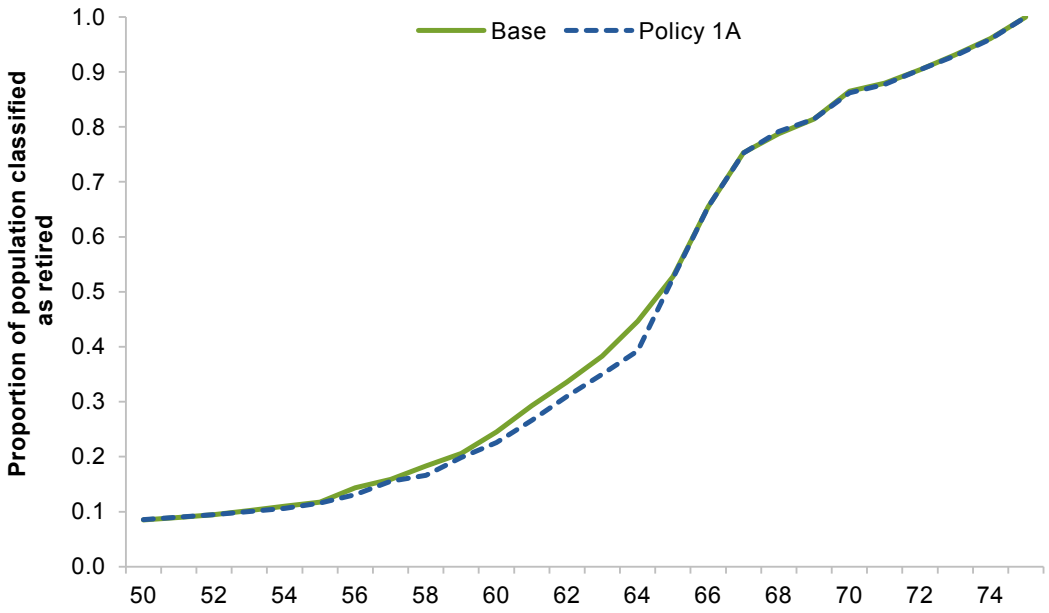
The response of households to a change in the preservation age (under policy scenario 1A) can be characterised in one of three ways:

- *Households who retire voluntarily before 65 years of age under the base case*. These households retire early in the base case because they have strong preferences for non-work activities and they have sufficient savings to live off (at least) until they reach the Age Pension age. The model suggests that these households respond to an increase in the preservation age by delaying their retirement as they must now wait until age 65 to access a store of wealth that does not require them to forgo leisure. Not all of these households retire exactly at 65.
  - Some are not able to delay retirement for as long as they would like to (for example, because they are made redundant or suffer from poor health in the years between their original voluntary retirement age and their revised voluntary retirement age).
  - Some, such as those with non-superannuation savings, 'choose' to retire before the preservation age and live off non-superannuation savings until they reach the preservation age.
- *Households who under the base case wish to retire later but who retire involuntarily before 65*. While these households do not change their retirement age under the policy, they may still be affected by it. For example, households may now have to rely on welfare payments because they cannot access their superannuation as early as they previously could.[35]
- *Households who retire after age 65 under the base case*. These households are unlikely to change the age at which they retire if the preservation age increases. However individuals who utilise Transition to Retirement pensions (TTR pensions), including to minimise their tax liabilities, under the base case are still likely to be affected by the change in policy. These households will have lower consumption as their ability to reduce their tax liabilities has been limited.

A second way to consider the modelled impacts that arise from increasing the preservation age is to examine the effects on particular age cohorts. Figure 6.3 presents the effects on the retirement ages of the cohort of 30-34 year olds in 2012 of a delayed, phased increase in the preservation age from 60 to 65 (Policy 1A).

[35] Such impacts might be mitigated by early access arrangements for superannuation, though current arrangements are likely to be too restrictive to have a large effect (supplementary paper 1).

Figure 6.3 **Effect of policy 1A on retirement ages (2028–2053), those aged 30-34 years in 2012**

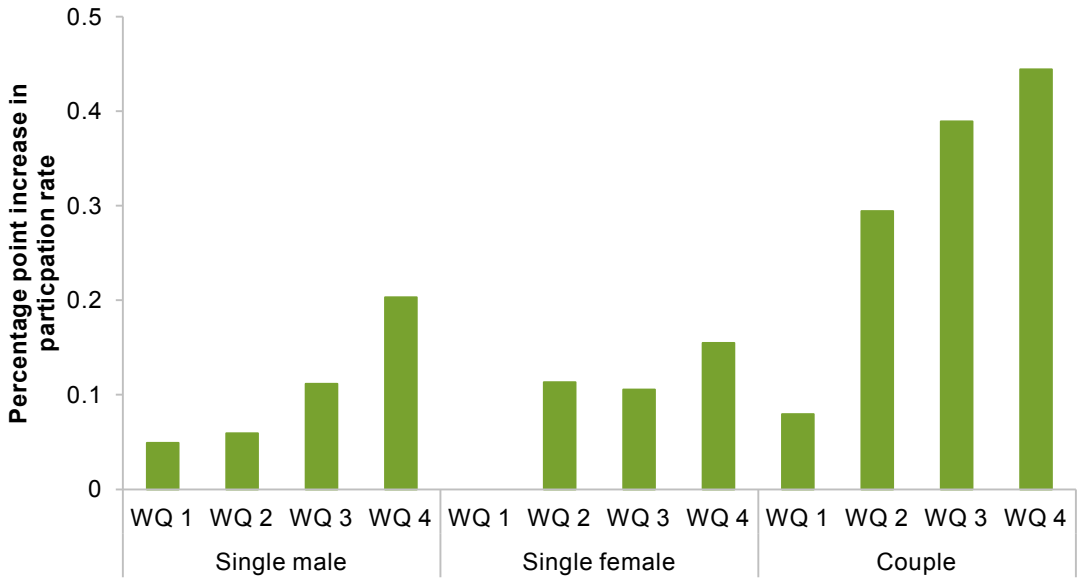


Data source: Commission estimates.

Around 14 per cent of individuals who are 30-34 years old in 2012 (approximately 255 000 people) delay their retirement as a result of the policy (table 6.2). The policy increases the proportion of 50-64 year old individuals who are working by 2 percentage points in 2055 (table 6.2).

The model predicts that the retirement decisions of wealthier households, and particularly households headed by couples rather than singles, are more likely to be affected by the preservation age change (figure 6.4). Raising the preservation age has less effect on the retirement decisions of households with lower net wealth as most do not have the financial resources to retire voluntarily before reaching the Age Pension age.

Figure 6.4 **Relative contribution of households to increase in participation rate in 2055**



Data source: Commission estimates.

Individuals who retire later also have larger superannuation balances as they make contributions for additional years and have additional years to earn returns. Table 6.2 shows the effect of Policy 1A (slower phase in) on superannuation balances at retirement for households aged 30-34 years in 2012. Individuals who retire later have a superannuation balance that is around 9 per cent larger at retirement. Individuals who do not change their retirement decisions do not have increased superannuation savings. The exception is for those households that use TTR pensions to reduce tax liabilities under the base case. These households will have slightly smaller superannuation balances at retirement because an increase in the preservation age means that there are fewer years in which they are able to minimise their superannuation taxation liabilities.

Table 6.2 **Effect of changing the preservation age on workforce participation and superannuation balances**

	Units	*Effect of Policy 1A*
Change in participation rate of 50-64 year olds in 2055	Percentage point change	2.0
Proportion of 30-34 year olds who delay their retirement	%	14.3
Average change in superannuation balances of 30-34 year old households who retire later	%	9.0
Average change in superannuation balances of 30-34 year olds who retire later	$ (2015)	48 300

Source: Commission estimates.

Delayed retirement and increases in superannuation balances both have consequences for the government's net fiscal position. The effects on government balances under a delayed, phased increase in the preservation age (Policy 1A) are shown in table 6.3. Total spending on the Age Pension decreases as households are retiring at a later age with a greater amount of savings. However, the reduction in Age Pension outlays is partially offset by increases in other welfare payments since:

- some households who were retiring voluntarily under the base case cannot delay their retirement because they now retire involuntarily
- some households, who were originally retiring involuntarily and drawing down their superannuation savings until transitioning on to the Age Pension, now rely on welfare payments before they can access their superannuation savings. It is assumed that there is a direct substitution from the Age Pension to other welfare payments for affected individuals.

Table 6.3 **Fiscal effects in 2055 of increasing the preservation age — policy 1A**

Changes in government accounts relative to base case

	$ billion[a]
Government expenses	
Age Pension	-2.8
Other welfare payments	0.7
Total	-2.0
Government tax receipts	
Personal income tax – wage income	2.0
Personal income tax – taxes on investment returns	0.9
Taxes on concessional superannuation contributions	0.1
Taxes on superannuation investment returns[b]	2.2
Taxes on superannuation withdrawals	0.0
Total	5.2
Net government fiscal position	**7.2**
Net government fiscal position (% of GDP)[c]	**0.15**

[a] In 2015 prices. [b] This includes an increase in income tax that occurs when households can no longer use TTR pensions to avoid tax liabilities. [c] GDP projections from PC (2013) are used. As these projections are not derived from the PCRM (and thus may implicitly make different assumptions about trends in productivity and participation), the reported value for the net government fiscal position as a percentage of GDP should only be considered approximate.

Source: Commission estimates.

While raising the preservation age reduces Age Pension outlays, the main source of fiscal gain is through additional tax revenue from those households that delay their retirement:

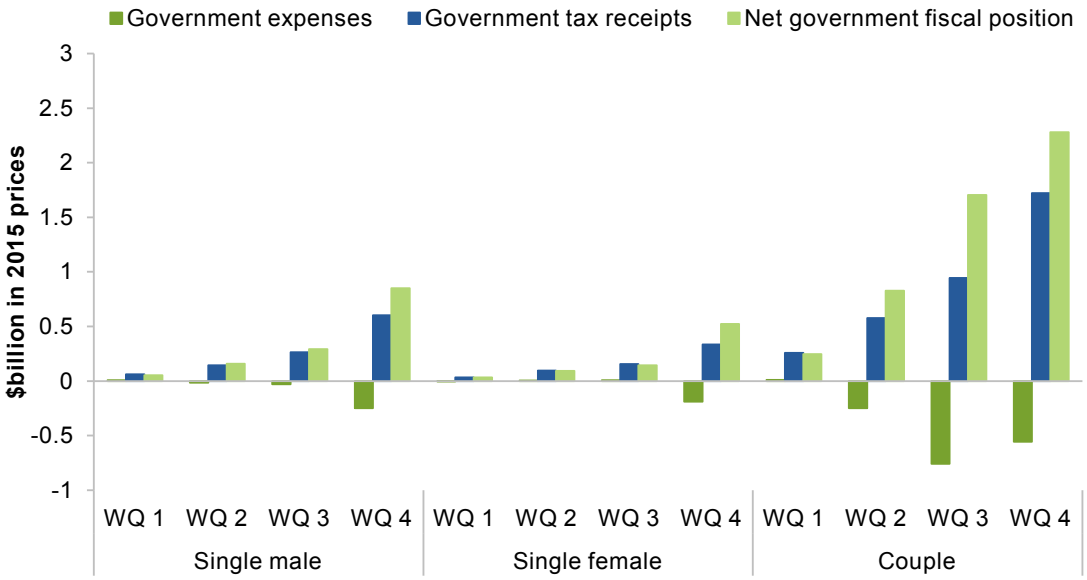
- personal income tax revenue increases because households work for longer
- superannuation contribution tax revenue increases because households work for more years and thus make more contributions to superannuation
- taxes on superannuation and non-superannuation returns increase because households make more contributions (and thus balances are larger) and because they are not drawing down on their assets as early.

Wealthier individuals are, on average, more likely to delay their retirement. They also have higher superannuation savings (thus pay more tax on superannuation earnings) and receive fewer welfare payments in later years. These factors combined mean that the bulk of the fiscal gains associated with an increase in the preservation age can be attributed to wealthier households (figure 6.5).

In contrast, poorer individuals tend not to delay their retirement in response to a change in the preservation age — their limited superannuation savings mean that the Age Pension eligibility age is often far more important in determining when they might retire. Even so, poorer individuals will still be affected by an increase in the preservation age. They have a greater likelihood of becoming involuntarily retired and so must wait up to an additional five years before they can access their superannuation savings. The modest fiscal savings attributed to lower wealth households arise, in part, because their superannuation earnings are taxed during this time. Some stakeholders have proposed that any increase in the preservation age be accompanied by a relaxation of early access arrangements for the involuntarily retired. Doing so would have two (opposing) fiscal effects — reducing calls on government payments and reducing tax revenues on superannuation earnings relative to the counterfactual.

Figure 6.5 **Fiscal impacts in 2055, by household type[a]**

By wealth quartile and couple status



[a] WQ1 denotes the lowest wealth quartile (specific to each household type) while WQ4 denotes the highest.

Data source: Commission estimates.

Illustrations of how some example households respond to a delayed, phased increase in the preservation age are contained in modelling supplement 5.

A comparison of results across the different policies

The effects on workforce participation and superannuation balances vary over time and for each of the six policies modelled (table 6.4).

- The effects on workforce participation and superannuation balances in 2055 are identical under Policy 1 (the delayed, phased increase in the preservation age) and Policy 2 (the preservation age increase with no delay). This is because under either policy scenario, changes to the preservation age would have been fully phased in by 2055.
- Households tend to retire later under Base Case B (since the Age Pension age increases to 70 as opposed to 67), and so there is a relatively smaller pool of households that are affected by a preservation age change.
- Increasing the tax-free age has a small net effect on the retirement decisions of households. Some households may delay their retirement so that they pay superannuation withdrawal tax for fewer years. Other households (typically those who retire before 60 under the base case and who have strong preferences for non-work activities) may retire earlier in response to an increase in the tax-free age so that they

can spend a larger proportion of their non-superannuation savings and thus limit their incidence of superannuation withdrawal tax when they reach the preservation age. The presence of these two responses accounts for the discontinuity between the 'change in participation rate of 50-64 year olds in 2055' and the 'proportion of 30-34 year olds who delay their retirement' in table 6.4.

Table 6.4 **Effect of changing the preservation age on workforce participation and superannuation balances**

	Units	*Policy 1A & 2A*	*Policy 1B & 2B*	*Policy 3A*	*Policy 3B*
Change in participation rate of 50-64 year olds in 2055	Percentage point change	2.0	1.0	0.3	0.3
Proportion of 30-34 year olds who delay their retirement[a]	%	14.3	9.7	7.0	5.5
Average change in superannuation balances of 30-34 year old households who retire later	%	9.0	8.9	9.9	10.3
Average change in superannuation balances of 30-34 year old households who retire later	$ (2015 dollars)	48 300	51 300	61 800	65 900

a Individuals aged 30-34 years old in 2012.

Source: Commission estimates.

The fiscal impacts for all six policies modelled are presented in table 6.5. These results reveal a number of key differences (and similarities) between the policy outcomes:

- The increase in the preservation age under policy 2A begins to phase in earlier (relative to policy 1A) and so more households delay their retirement. These households experience an increase in their superannuation balances and a reduction in their reliance on the Age Pension in their later years. In 2055, the estimated savings on Age Pension outlays are $0.7 billion larger under policy 2A than under policy 1A.
- As mentioned previously, under Base Case B, households tend to retire later than under Base Case A. This means that policies assessed against Base Case B will (all else equal) have a reduced effect on retirement decisions and thus lower Age Pension savings and smaller increases in tax revenue.[36]
- By 2055, the preservation age is the same under policies 2A and 1A and so some changes in tax receipts are identical.
- Increasing the tax-free age has a negligible fiscal impact. This reflects the limited net effect this policy lever has on the retirement decisions of households. Of the small

36 While those who retire at 'Age Pension age' also retire later (relative to Base Case A) they will not be affected by changes in the preservation age because the Age Pension eligibility age is later than the preservation age (even after policy changes).

fiscal gains that arise under this policy, about half are attributable to the tax revenue that is collected on superannuation withdrawals.

Table 6.5 **Fiscal effects in 2055 of increasing the preservation age — all policies**
($b in 2015 prices)

	Policy 1A	Policy 2A	Policy 3A	Policy 1B	Policy 2B	Policy 3B
Government expenses						
Age Pension	-2.8	-3.4	-0.6	-1.4	-2.0	-0.4
Other welfare payments	0.7	0.8	0.0	0.6	0.6	0.0
Total	-2.0	-2.7	-0.6	-0.8	-1.5	-0.4
Government tax receipts						
Personal income tax — wage income	2.0	2.0	0.3	1.3	1.3	0.2
Personal income tax — taxes on investment returns	0.9	0.9	0.2	0.6	0.6	0.2
Taxes on concessional superannuation contributions	0.1	0.1	0.0	0.0	0.0	0.0
Taxes on superannuation investment returns	2.2	2.2	0.1	1.9	1.9	0.1
Taxes on superannuation withdrawals	0.0	0.0	1.2	0.0	0.0	1.1
Total	5.2	5.2	1.9	3.8	3.8	1.6
Net government fiscal position	**7.2**	**7.9**	**2.4**	**4.7**	**5.3**	**2.0**
Net government fiscal position (% of GDP)	**0.15**	**0.17**	**0.05**	**0.10**	**0.11**	**0.04**

Source: Commission estimates.

6.5 Sensitivity analysis

The model results are highly sensitive to a number of key assumptions. This section analyses and makes transparent how results under Policy 1A (a delayed, phased increase in the preservation age) change when some of the assumptions are varied (table 6.6). The importance of a range of key assumptions cannot be readily tested and have been excluded from this sensitivity analysis.

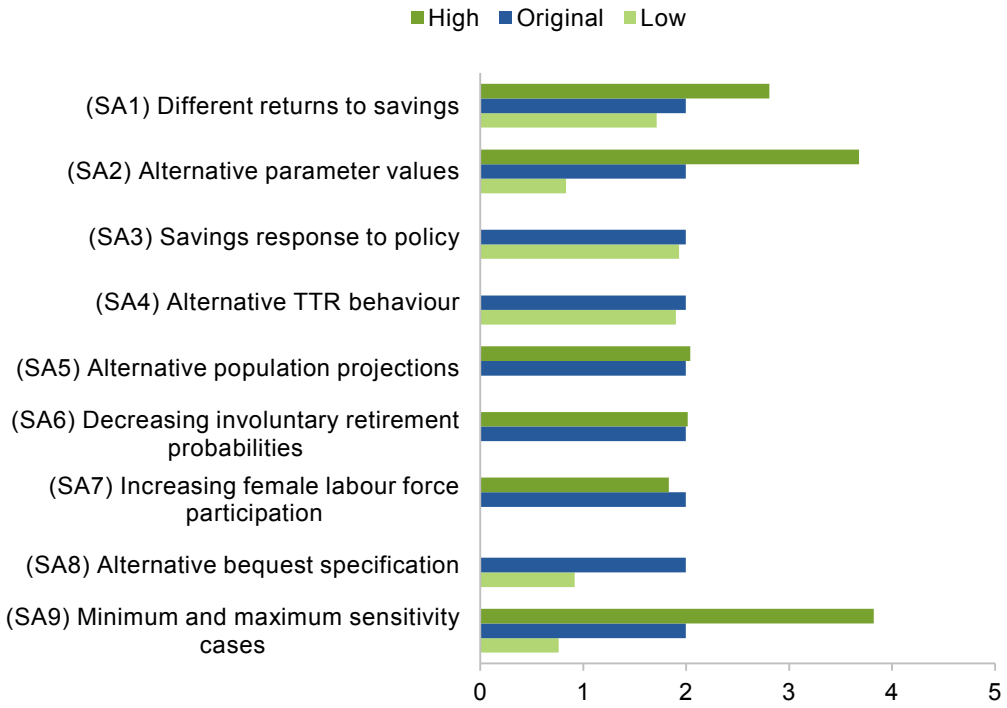
Table 6.6 **Sensitivity analysis scenarios**

Number	*Sensitivity analysis scenario*	*Description*
SA1	Different returns to savings	Returns to superannuation and non-superannuation savings are varied by +- 1 percentage point.
SA2	Alternative parameter values	Both higher and lower values for the rate of time preference and alternative rates of preference for non-work activities and bequests were used (including in combination).
SA3	Different savings response to policy	Households respond to an increase in the preservation age by switching 30 per cent of their voluntary concessional contributions to non-superannuation savings if they are past the age of 50.
SA4	Alternative TTR behaviour	Wealthy households are assumed to fully use Transition to Retirement arrangements to minimise their tax liabilities.
SA5	Alternative population projections	The 'greater life expectancy' scenario from the 2013 Ageing paper is employed.
SA6	Health-driven decrease in involuntary retirement probabilities	Health-driven improvements in involuntary retirement rates based on projections from Headley et al (2010) are employed. These improvements are small and concentrated on those aged 65+.
SA7	Increasing female labour force participation	The participation rates of women aged between 20 and 50 years old are increased such that the gap between men and women is reduced by 25 per cent.
SA8	Alternative bequest motive specification	The relative weight place on bequests does not change as life expectancies improve.
SA9	Minimum and maximum sensitivity cases	Captures the cumulative effect of multiple low/high sensitivity analysis scenarios.

Analysing the effects of changing key assumptions involves two simulations — a base case simulation and a policy simulation (both of which employ the alternate assumptions). The difference in outcome variables between the alternate base case and the alternate policy simulation, and the original base case and the original policy simulation, can be attributed to changes in the assumptions.

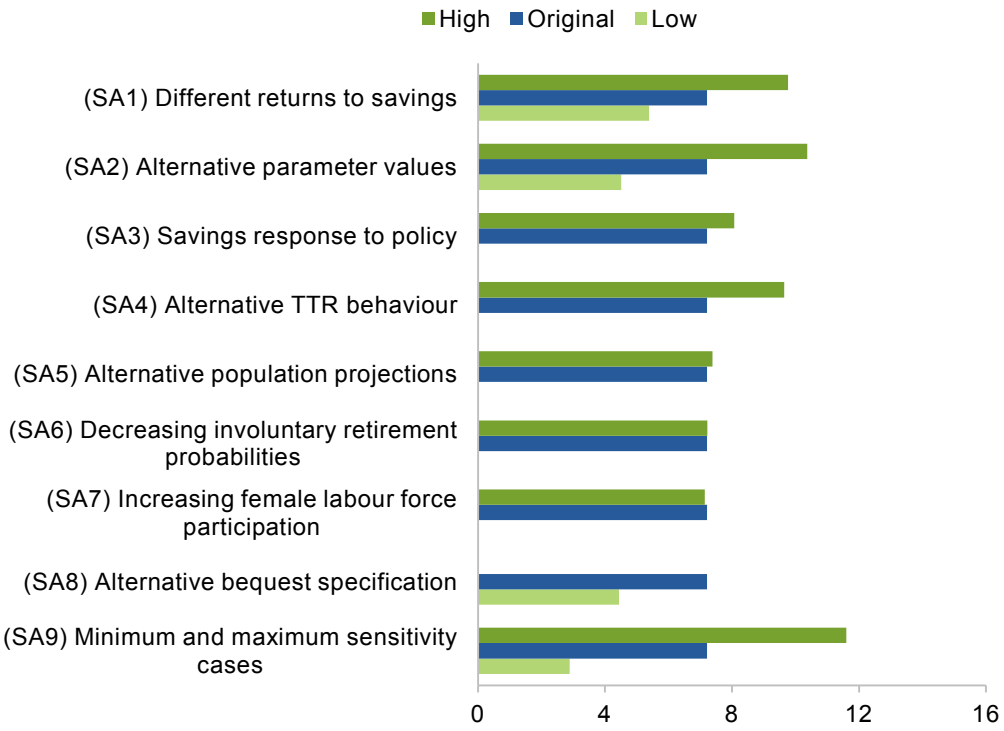
Varying the parameter values in the utility function and the assumptions about future returns to savings have the largest impact on retirement decisions and fiscal balance results (figures 6.6 and 6.7). This is because these sensitivity analyses fundamentally change the trade-offs that households make when choosing their retirement age. Changes in the results under the other sensitivity analyses are far less pronounced as they only apply to a limited number of households, or have a minor effect on the trade-offs that households make. Modelling supplement 6 describes the sensitivity of the modelling results to changes in the key assumptions in more detail.

Figure 6.6 **Change in participation rate of individuals age 50-64 in 2055 (percentage point) — Policy 1A**



Data source: Commission estimates.

Figure 6.7 **Fiscal impacts in 2055 — Policy 1A**
($ billion in 2015 prices)



Data source: Commission estimates.

7 The drawbacks of drawdown data

There are many sources of data on drawdown patterns, but little consistency in the measurement of lump sums and superannuation income streams. This frustrates comparisons of the data and can lead to contradictory conclusions on the prevalence and value of benefits taken as lump sums and income streams.

This supplementary paper examines the need for a strong evidence base, which supports the development and review of superannuation policy (section 7.1). The deficiencies in the existing evidence base are then considered (section 7.2). These include differences in the way data sources define, measure and collect information on superannuation benefits. The Commission's approach to using particular sources of information in its analysis of drawdown patterns is also presented (section 7.3).

7.1 Why are robust data important?

In general, evidence-based policy requires high quality data to reveal gaps in policymakers' and stakeholders' understanding of the problem and inform future policy directions and solutions.

> Without evidence, policy makers must fall back on intuition, ideology, or conventional wisdom — or, at best, theory alone. And many policy decisions have indeed been made in those ways. But the resulting policies can go seriously astray, given the complexities and interdependencies in our society and economy, and the unpredictability of people's reactions to change. … Among other things, policies that haven't been informed by good evidence and analysis fall more easily prey to the 'Law of Unintended Consequences' — in popular parlance, Murphy's Law — which can lead to costly mistakes. (Banks 2009, pp. 4–5)

In particular, an understanding of retirement behaviour is important for government and for the superannuation industry. Robust data have a role in facilitating this understanding:

> Adequacy of retirement income is a complex function of taxation, home ownership, marital status, superannuation and social security. One area where accurate data would be particularly helpful is in identifying the impact of policy settings. For instance, it would be beneficial in discussing retirement incomes policy questions if we had a better understanding of the extent to which Australian retirees draw down on their assets so they could benefit … from the pension, or conversely, are living too frugally so as to ensure that their assets last their lifetime. This is a critical and evolving risk that needs to be better understood.
>
> Given the impact of changing demographics on the size of retirement savings pools, the effects on investment funds in the post-accumulation phase and rising future health costs it is important for market efficiency that the private sector has access to relevant data so that it can

develop the products that will assist consumers best manage their evolving retirement needs. (Actuaries Institute 2015, p. 4)

7.2 What are the drawbacks of drawdown data?

As noted in chapter 4, there are many sources of information on drawdown behaviour that could be used to build an evidence base — including data from the Australian Bureau of Statistics (ABS), Australian Prudential Regulatory Authority (APRA), the Australian Taxation Office (ATO) and the Melbourne Institute's Household, Income and Labour Dynamics in Australia (HILDA) Survey. But there is little consistency in how data are defined, measured and collected.

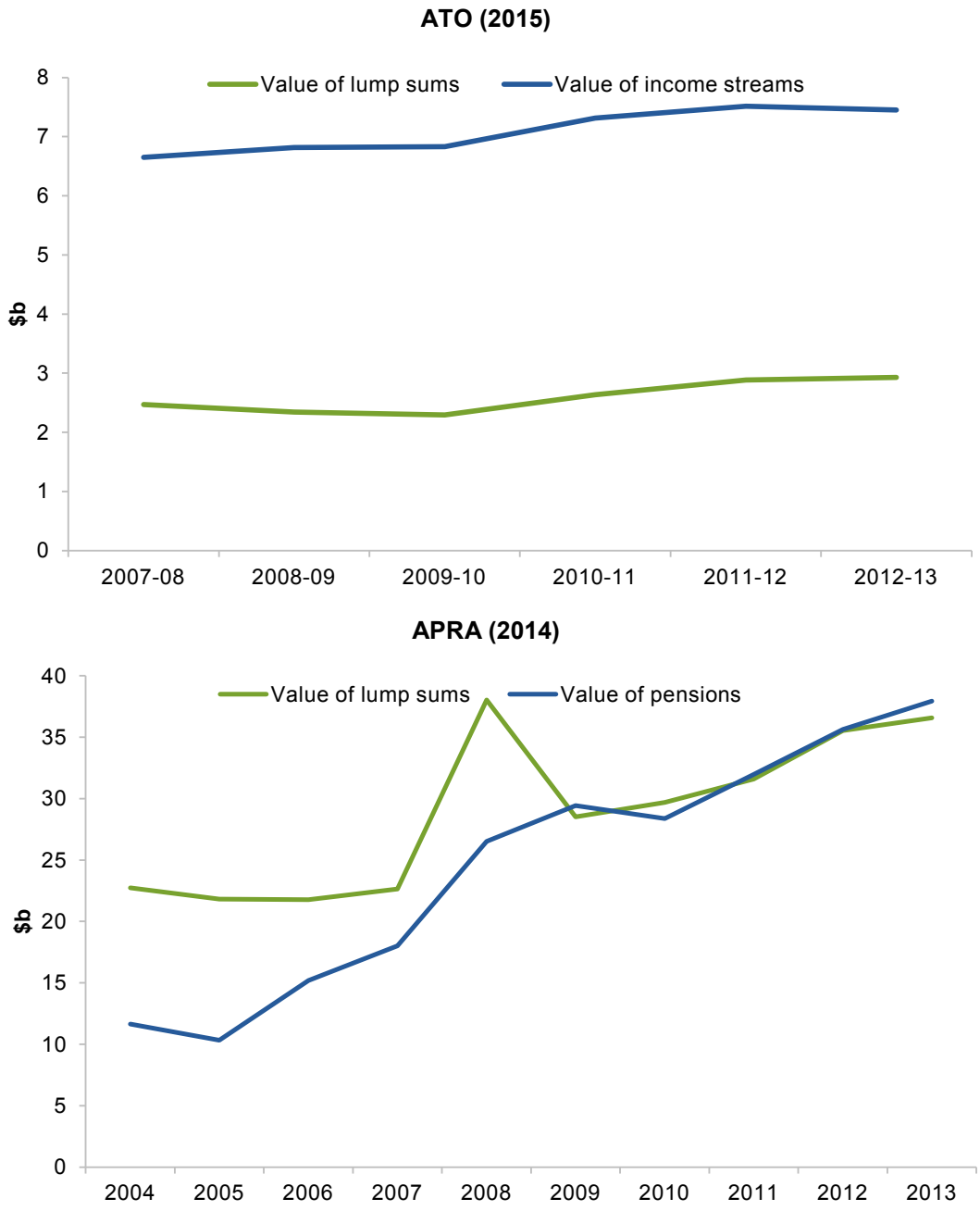
Inconsistencies in definitions frustrate the task of accurately and consistently measuring the incidence and size of lump sums over time, and (partially) explain why stakeholders have formed conflicting views on the size of, and propensity to take lump sums. To illustrate, without controlling for definitional differences, measures of lump sums, expressed as a share of superannuation benefits range from around 7 through to 50 per cent, depending on the dataset used.

There are many reasons for the differences in the size of superannuation benefits. Some datasets including the ABS' *Survey of Income and Housing* (SIH), HILDA and the ATO's Taxation Statistics, do not collect information on lump sums under particular amounts (usually $200 or $500) and some only record lump sums that are taken for particular purposes (by excluding death benefits and early releases). Many data sources collect information on individuals' lump sums and income streams, but there are some cases where information is account-based. It is difficult to reconcile account- and individual-based datasets because individuals can have multiple accounts.

The nature of withdrawals from income stream products, including account-based pensions, can also contribute to data inaccuracies. While account-based pensions usually generate an income stream, lump sums can also be withdrawn. This dual function of account-based pensions may lead to lump sums being inadvertently counted as income streams if the recording period is too broad — some data sources record withdrawals from account-based pensions over a year instead of as regular weekly payments. Where this happens, the size of income streams may be overstated.

As a result of differences in data definitions and measurement, divergent trends in the value of lump sums and income streams have emerged (figure 7.1). Examining trends over time is further complicated by changes in reporting requirements. Since 2007-08, individuals over the age of 60 have not been required (in most cases) to report their lump sums or income from superannuation to the ATO. This affects a relatively large section of the population who access their superannuation.

Figure 7.1 **Comparison of income streams and lump sums over time[a]**

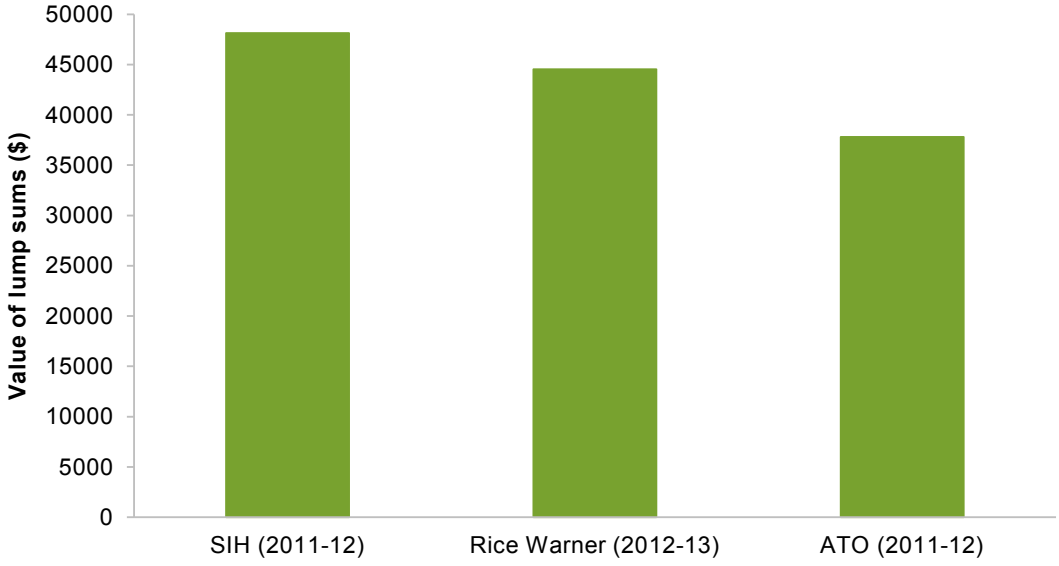


a The ATO and APRA define lump sums differently. The ATO counts 'net' lump sums, which are withdrawals from the superannuation system. APRA includes retrenchments, redundancies, resignation and disability benefit payments, as well as transfers and rollovers between funds. The ATO defines income streams as any taxable source of income that is derived from superannuation, whereas APRA's definition of pensions includes complying pensions, allocated pensions and annuity payments.

Data sources: ATO (2015f); APRA (2014a).

There is more similarity across datasets once some of the definitional differences are controlled (figure 7.2).

Figure 7.2 **Average size of lump sums for those aged 55 to 70 years[a,b]**



[a] The ATO data excludes untaxable lump sums, such as those derived from superannuation contributions that were made after-tax and many lump sums taken out by those aged over 60. [b] The sample excludes those outside the age range of 55 to 70 years to be consistent with Rice Warner data.

Data sources: ATO (2014f); Rice Warner on behalf of ASFA (2014a); Commission estimates based on ABS (*Survey of Income and Housing, 2011-12*, Cat. no. 6553.0, basic CURF).

7.3 The Commission's approach to drawdown data

Information on drawdown behaviour can still be gleaned from the available data, provided definitional and measurement differences are taken into consideration (chapter 4). The Commission primarily uses the SIH data to analyse drawdown behaviour. The SIH has the advantage of allowing detailed analyses of drawdown patterns, is representative of the population, and is individual- rather than account-based, which means that there is little risk of recording rollovers and transfers between accounts as lump sums. The SIH also avoids the issue of recording lump sums as income streams.

A Conduct of the project

In preparing this research paper, the Commission consulted with a range of organisations, individuals, industry bodies, government departments and agencies (table A.1). The Commission is most grateful for the input stakeholders provided throughout this study. The Commission also held a modelling workshop on 8 April 2015 (table A.2).

Table A.1 **Consultations**

Organisation
Australian Capital Territory
Australian Taxation Office
CPA Australia
Department of Social Services
Parliamentary Budget Office
Department of the Treasury
New South Wales
Australian Council of Social Service
Australian Prudential Regulation Authority
Challenger Limited
Council on the Ageing
Hazel Bateman, University of New South Wales
The Reserve Bank of Australia
Rice Warner Actuaries Pty Ltd
Susan Thorp, University of Sydney
The Association of Superannuation Funds of Australia
Financial Planning Association of Australia
Victoria
Australian Institute of Superannuation Trustees
Committee for Sustainable Retirement Incomes
Diana Warren, Australian Institute of Family Studies
First Nations Foundation
Grattan Institute
John Freebairn, University of Melbourne
Mercer
Roger Wilkins, University of Melbourne

Table A.2 **Workshop participants — Canberra, 8 April 2015**

Organisation	*Participant*
Australian Institute of Family Studies	Diana Warren
Centre of Excellence in Population Ageing Research	George Kudrna
CSIRO-Monash Superannuation Research Cluster	Thomas Sneddon Zili Zhu Peter Toscas
Department of Social Services	Peggy Hausknecht
Department of the Treasury	Bruce Bastian Anthony King Keldon Pattugalan William Young
National Centre for Social and Economics Modelling	Ben Phillips
Parliamentary Budget Office	David Tellis Mark Bott Gareth Wett
Private capacity	Philip Gallagher
Private capacity	George Rothman
Rice Warner Actuaries Pty Ltd	Nathan Bonarius
University of Sydney	Susan Thorp

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