

Life Savers Without Life Savings:

Early Retirement and Superannuation for Firefighters and Paramedics

By Jack Thrower

The Centre for Future Work at the Australia Institute

January 2025

About The Australia Institute

The Australia Institute is an independent public policy think tank based in Canberra. It is funded by donations from philanthropic trusts and individuals and commissioned research. We barrack for ideas, not political parties or candidates. Since its launch in 1994, the Institute has carried out highly influential research on a broad range of economic, social and environmental issues.

Our Philosophy

As we begin the 21st century, new dilemmas confront our society and our planet. Unprecedented levels of consumption co-exist with extreme poverty. Through new technology we are more connected than we have ever been, yet civic engagement is declining. Environmental neglect continues despite heightened ecological awareness. A better balance is urgently needed.

The Australia Institute's directors, staff and supporters represent a broad range of views and priorities. What unites us is a belief that through a combination of research and creativity we can promote new solutions and ways of thinking.

Our Purpose – 'Research That Matters'

The Institute publishes research that contributes to a more just, sustainable and peaceful society. Our goal is to gather, interpret and communicate evidence in order to both diagnose the problems we face and propose new solutions to tackle them.

The Institute is wholly independent and not affiliated with any other organisation. Donations to its Research Fund are tax deductible for the donor. Anyone wishing to donate can do so via the website at <https://www.tai.org.au> or by calling the Institute on 02 6130 0530. Our secure and user-friendly website allows donors to make either one-off or regular monthly donations and we encourage everyone who can to donate in this way as it assists our research in the most significant manner.

Level 1, Endeavour House
1 Franklin St, Manuka, ACT 2603
Tel: (02) 61300530
Email: mail@australiainstitute.org.au
Website: www.australiainstitute.org.au

About the Centre for Future Work

The Centre for Future Work is a research centre, housed within the Australia Institute, to conduct and publish progressive economic research on work, employment, and labour markets. It serves as a unique centre of excellence on the economic issues facing working people: including the future of jobs, wages and income distribution, skills and training, sector and industry policies, globalisation, the role of government, public services, and more. The Centre also develops timely and practical policy proposals to help make the world of work better for working people and their families.

www.futurework.org.au

About the Author

Jack Thrower is Economist at the Australia Institute. He holds Bachelor degrees in Politics, Philosophy and Economics, and Law (Honours) from the Australian National University. His research interests include inequality, taxation, social policy, the welfare state, and industrial relations

Acknowledgments

The author thanks without implication Stephen McCallum for helpful input.

This report was commissioned by the United Firefighters Union of Australia, Tasmania Branch.

The **Australia**
Institute | Centre for
Research that matters. **FutureWork**

Table of Contents

Introduction and Summary	4
Current Arrangements and Demographics	7
Working arrangements.....	7
Age and Length of Career	8
Challenges for Late-Career Workers	8
Government Policy Settings	9
Financial and Macroeconomic Conditions	9
Retirement Spending and Living Arrangements	9
Simulating Retirement Adequacy for Early-Retiring Emergency Responders	11
Base Model	11
Sensitivity Cases.....	15
Policy Responses.....	24
Conclusion	31
Appendix A: Paramedic Simulations.....	32
Appendix B: Employment Data	41

Introduction and Summary

Firefighters and paramedics save lives, protect us from the ravages of fire, and ensure the sick and injured receive the medical treatment they need. However, after a working life protecting others, under current arrangements these emergency workers face substantial risk of an inadequate retirement.

Firefighters and paramedics are regularly compelled to retire early for several reasons, including:

- Emergency responders face unique physical and psychological challenges in performing their jobs, which are difficult to sustain after the age of 60.
- There are few alternative career options for older workers, as the skills and qualifications of these jobs have limited transferability to other industries; and there are insufficient office-based positions in emergency services to employ all aging front-line workers.
- The intense physical and mental strains of their jobs put firefighters and paramedics at high risk of developing a range of physical and mental conditions over their careers.

These challenges suggest that workers in these challenging roles should have access to earlier retirement options. However, early retirement in turn raises its own challenges for these workers:

- They have fewer years for their superannuation to grow through contributions and investment returns.
- They must draw on their superannuation for more years of retirement and, unlike many other retirees, many of these years will not be supplemented by Age Pension payments.

As a result of these challenges, firefighters who wish to retire early (given the challenges of working in these jobs past age 60) face a difficult choice between two unappealing options: living substantially diminished lifestyles during their retirement (with inadequate retirement incomes), or facing the possibility of their superannuation balances running out years before their passing.

The possibility of superannuation depletion is significant even under relatively optimistic assumptions (about investment returns, home ownership, and marital

status). The concern is amplified when plausible risks to the outlook are considered – such as changes in personal circumstances, macroeconomic conditions, and government policy.

This paper provides simulations of retirement income trajectories for firefighters and paramedics. It illustrates early retirement trajectories for firefighters and paramedics under a range of assumptions. For firefighters, the key conclusions of these simulations include:

- Under relatively optimistic assumptions an early-retiring single firefighter can expect their superannuation to run out **six years** before male life expectancy, **nine years** before female life expectancy, and **15 years** earlier than for a regular retiree.
- Under alternative scenarios, incorporating plausible risks, an early-retiring firefighter can expect their superannuation to run out **15 or more years** before life expectancy.
- Alternatively, to extend superannuation longevity through their expected life, an early-retiring single firefighter would need to reduce their annual living expenses by **18.5%**.

For paramedics, the challenges facing early retirement are similar and severe. Our simulations indicate that:

- Even under the optimistic assumptions, an early-retiring single paramedic can expect their superannuation to run out **seven years** before their male life expectancy, **ten years** before female life expectancy, and **14 years** earlier than for a regular retiree.
- Considering plausible risks (such as not owning a home, being single, lower investment returns, and others), an early-retiring paramedic's superannuation could run out **15 or more years** or more before life expectancy.
- If they wished to extend the expected life of their superannuation through their expected lifespan, an early-retiring paramedic would also need to reduce their annual living expenses by **18.5%**.

Given the challenges of continuing their work in these intense roles past age 60, it is unacceptable that firefighters and paramedics should have to confront either significantly reduced living standards in retirement, or the risk of running out of superannuation years before their life expectancy.

Additional support from sponsors of emergency services (state and territorial governments) is necessary to ensure firefighters and paramedics are able to live adequate retirements and are properly protected from financial risks during retirement. A range of potential policy responses to this challenge are considered in the final section of this paper. Most promising would be to increase employer superannuation contributions rate for emergency responders during their working careers, supplemented by one-time special superannuation contributions for workers already approaching retirement.

The paper is organised as follows. It begins by reviewing existing employment arrangements for firefighters and paramedics, including demographic data and institutional arrangements. The paper then lists the further assumptions we use for our simulations of future superannuation balances.

The paper then generates quantitative estimates of early retirement trajectories (including running superannuation balances and retirement incomes), under a range of assumptions. First it provides base-case simulations of financial trajectories for early retirement for firefighters under standard, optimistic assumptions. Then it assesses early retirement trajectories for firefighters under a range of other scenarios and risks, including changes in familial scenarios, macroeconomic circumstances, and government policy. These scenarios use firefighter incomes and retirement trajectories to illustrate the basic conclusions that early retirement is highly risky for these workers. In Appendix A, parallel simulations for each case are reported for paramedics, to confirm that the same challenges inhibit these workers from retiring early, too.

The paper concludes by discussing a range of options to make early retirement more feasible and secure for emergency workers. It concludes with a core recommendation for higher superannuation contributions for emergency responders, paired with one-time end-of-career contributions for workers already approaching early retirement age.

Current Arrangements and Demographics

This paper focuses on the situation of Tasmanian firefighters and paramedics. However, the experiences of firefighters and paramedics are generally similar across Australia.¹ As such, the findings of this paper will be broadly applicable to emergency responders across Australia.

WORKING ARRANGEMENTS

Pay and conditions for Tasmanian firefighters are determined by the Firefighting Industrial Agreement, whilst for paramedics the Ambulance Tasmania Industrial Agreement applies. With few exceptions, Tasmanian firefighters start their career at the Firefighter Year 1 classification, and receive one promotion per year until they reach Senior Firefighter (Advanced) classification.² Similarly, paramedics generally start their career at Paramedic 01 and progress classifications, one per year, before reaching Paramedic 07.³ Few firefighters and paramedics continue beyond these classifications, as there are few positions (such as officer jobs) for further progression.

Over the past seven years, annual increases to salary rates have averaged under 3% for firefighters and paramedics.⁴ The awards for firefighters and paramedics in Tasmania do not mandate a higher-than-minimum superannuation contribution rate. Superannuation contributions are made by the employer on the basis of the national superannuation guarantee (currently 11.5% of earnings, rising to 12% in July 2025).

¹ This reflects the standardising effects of shared federal policies and institutions (such as superannuation laws) and similarities in state level institutions and demographic features of the workforces.

² Tasmanian Fire Fighting Industry Employees Award, Part II, clause 3.
https://www.tic.tas.gov.au/_data/assets/pdf_file/0006/731553/T15064-No-2-of-2023-Tasmanian-Fire-Fighting-Industry-Employees-Award-S202.pdf

³ Part II clause 7 of the Ambulance Tasmania Award,
https://www.tic.tas.gov.au/_data/assets/pdf_file/0003/731550/T15061-No-5-of-2023-Ambulance-Tasmania-Award-.S004.pdf

⁴ Calculated from annual agreements. In addition to regular annual increases, paramedics won a work value increase phased in over several years, concluding in 2017, which generated approximately an 18% increase.

AGE AND LENGTH OF CAREER

On average, firefighters typically retire between ages of 60 and 65. Average retirement age is boosted by officers, who can more easily work longer years and tend to accumulate more service. Paramedics and firefighters typically retire with 30 to 35 years of service. Average superannuation balances for Tasmanian firefighters for each broad age category are provided in Table 1.

Table 1 Average Superannuation Balances by Age Bracket Tasmanian Firefighters, 2024	
Age	Average Balance
<30	\$56,219
30-39	\$99,322
40-49	\$127,357
50-59	\$234, 873
60+	\$279,178

Source: Spirit Super data.

CHALLENGES FOR LATE-CAREER WORKERS

Firefighters and paramedics face highly demanding physical and mental stresses and dangers in their jobs. The grueling and often dangerous nature of the work makes it very challenging for older workers to continue to perform their duties, after decades on the job.

Health challenges faced by emergency responders include injuries experienced on the job; back and joint problems from decades of physically strenuous work; exposure to toxic substances; trauma and post-traumatic stress; and other mental health injuries.

These challenges place tremendous stress on emergency responders attempting to complete their careers.

Firefighters and paramedics carry a profound sense of community service, and do not want to let their colleagues or their community down in an emergency incident. They retire when they are no longer confident in their physical abilities, knowing that their own life and the life of their team members may depend on it.

GOVERNMENT POLICY SETTINGS

Retirement planning for firefighters and paramedics is shaped by the context of broader government retirement policies. After a seven-year transition, the Age Pension eligibility age reached 67 in 2023, with no current plan to change it further. The superannuation preservation age (when accessing superannuation is permitted) is now 60 for those born after 1 July 1964, with no current plans to increase it further. Superannuation contributions are taxed at a rate of 15%, the effective tax rate on investment earnings is 7%, and investment earnings after retirement are taxed at 0%. The minimum superannuation contribution rate for 2024-25 is 11.5% of ordinary time earnings, increasing to 12% for 2025-26.

The Age Pension, including its qualifying age, rate, means testing and relevant indexations, is assumed to remain consistent with current policy settings. All simulations assume that superannuation can be accessed when the worker retires (that is, they retire at or after their preservation age).

FINANCIAL AND MACROECONOMIC CONDITIONS

The simulations below integrate financial assumptions based on those used in the Treasury Model of Australian Retirement Incomes and Assets (MARIA).⁵ We assume fixed annual superannuation fees averaging \$74 per year, and insurance premiums of \$214 per year (both indexed to Average Weekly Earnings). Investment fees equal to 0.85% of account balances are deducted. Investment returns are assumed to equal 7.5% in the accumulation phase, and 6.5% during the retirement phase (reflecting the recommended shift to a more conservative portfolio after retirement). Annual inflation is expected to average 2.5% (consistent with the Reserve Bank of Australia's target); we also assume average nominal GDP growth of 5.25% and wage growth of 4% (consistent with current wage trends).

RETIREMENT SPENDING AND LIVING ARRANGEMENTS

Expected levels of retirement spending are based on the Association of Superannuation Funds of Australia's (AFSA) retirement standards for a comfortable retirement.⁶ At present this implies annual spending for a retired couple of just under

⁵ <https://research.treasury.gov.au/sites/research.treasury.gov.au/files/2019-11/Accumulation%20of%20superannuation%20across%20a%20lifetime.pdf>

⁶ <https://www.superannuation.asn.au/resources/retirement-standard>

\$75,000 per year. The AFSA benchmark is indexed to wage growth to ensure that retiree expenses keep pace with both inflation and gradual improvements in real living standards (so that retirees do not fall into relative poverty). In the base scenario, retirees are assumed to own their own home, which reduces living costs considerably. This assumption is relaxed in subsequent sensitivity cases.

Simulating Retirement Adequacy for Early-Retiring Emergency Responders

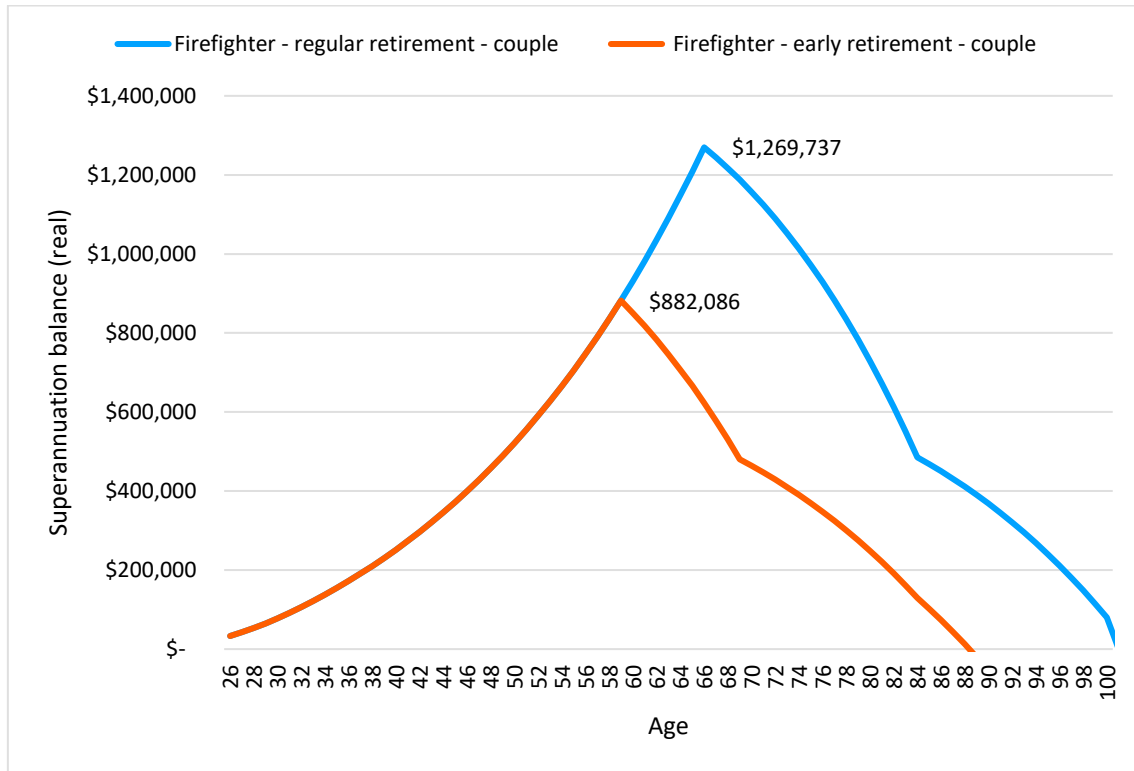
BASE MODEL

On the basis of the above assumptions regarding demographics, living arrangements, post-retirement spending, and financial returns, we simulate the financial trajectories for firefighters who retire early, describing their superannuation accumulation and depletion. We begin by assuming the retiring worker is part of a couple (resulting in lower living expenses per person). We also assume the firefighter began their career at 25, and worked continuously until retirement. Since most people do not work every year in the same job for 30 or more years continuously, this means the simulations below are inherently optimistic; any career interruptions would result in superannuation accumulations being smaller than projected. Consider, for example, that the average superannuation balance today for working Tasmanian firefighters older than 60 is only about \$280,000. That is far smaller than the projected balances in the following simulations – all based on the assumption that firefighters start their careers early, and work continuously until retirement. This is one more reason to interpret the simulations that follow as a best-case scenario; in reality, the financial prospects of retiring firefighters are riskier than suggested here.

Figure 1 illustrates the running superannuation balance for a firefighter who retires at the normal age pension year of 67 (blue line), in contrast to the trajectory for someone retiring early (at 60). Superannuation arrangements seem adequate for a comfortable retirement, for a home-owner and member of a couple, if retirement occurs at 67. Their superannuation balance reaches a maximum of \$1.27 million at time of retirement,⁷ and this funds a long and comfortable retirement at the ASFA standard – with the superannuation balance not being exhausted until the age of 103.

⁷ All figures in real terms, adjusting for inflation.

Figure 1: Base Model: Early Retirement for Couples



Retiring at age 60, however, creates significant financial challenges, both before and after retirement. The maximum superannuation balance at (early) retirement is \$880,000 (almost \$400,000 less than if they worked until 67), and the superannuation fund is depleted by age 88. This is only modestly above the expected life span of a 60-year-old person (which is 83 for men, and 86 for women⁸). Early retirement has reduced the duration of the superannuation balance (at the ASFA standard of expenditure) by 15 years.

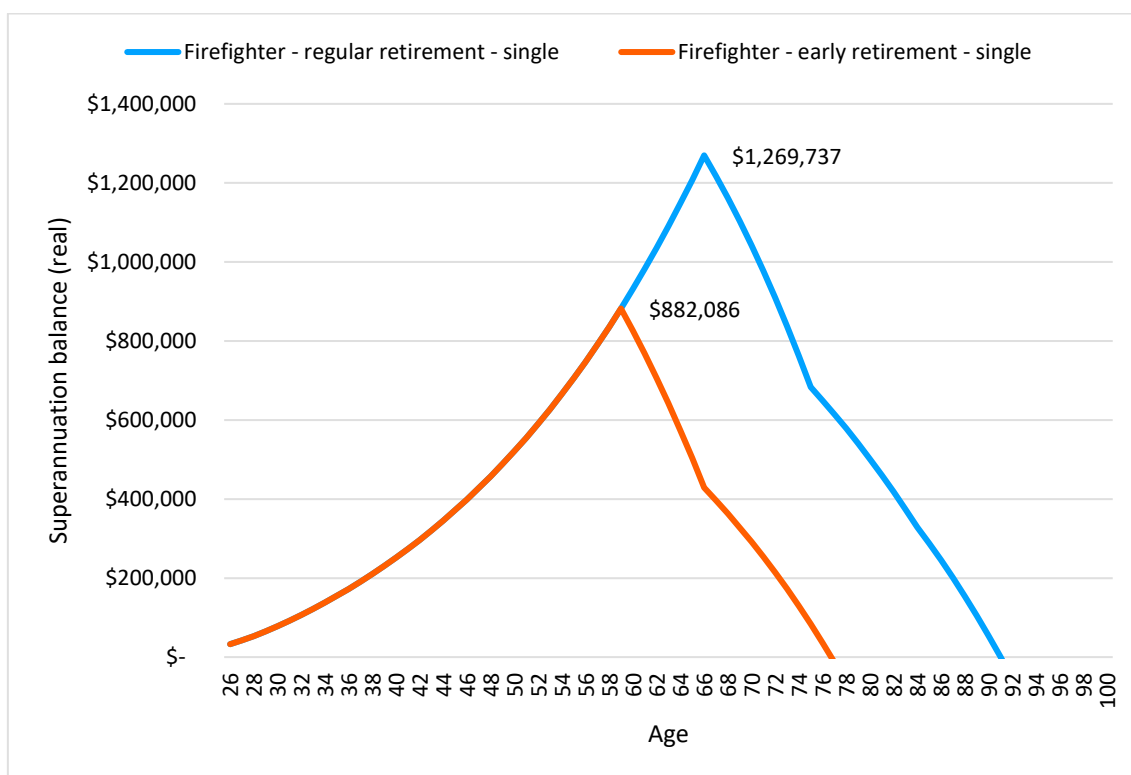
Remember, a significant proportion of the population (close to half) lives beyond average expectancy, and the risk that superannuation could run out causes undue emotional and financial stress for retirees. Moreover, a worker's superannuation balance might be needed to support a surviving partner, who may be younger. For these reasons, optimal retirement planning should ensure expected longevity of the superannuation balance that extends well beyond the expected lifespan of the retiree.

Belonging to a couple makes comfortable retirement more financially feasible (assuming both members of the couple have independent income), since per person living expenses are reduced. However, retirement income arrangements should not be contingent on every retiree remaining part of a coupled relationship. There are many

⁸ Australian Bureau of Statistics, Life Expectancy, Table 1.

reasons why many retirees end up single, and no-one should feel financially compelled to remain within relationships that are unacceptable. Indeed, about one-quarter of retirees over 65 live alone.⁹ Economic simulations of retirees in coupled living arrangements can be misleading, since they typically assume that both members of the couple are identical in terms of incomes and superannuation balances. This leads to coupled superannuation projections being unduly optimistic; most dual income households will not have two full-time incomes (with corresponding steady superannuation accumulation) for the duration of their working lives. Moreover, superannuation balances for secondary earners in a family are generally lower, because of career interruptions, lack of superannuation contributions during periods away from paid work, or lower wages.

Figure 2: Base Model: Early Retirement, Single Retiree



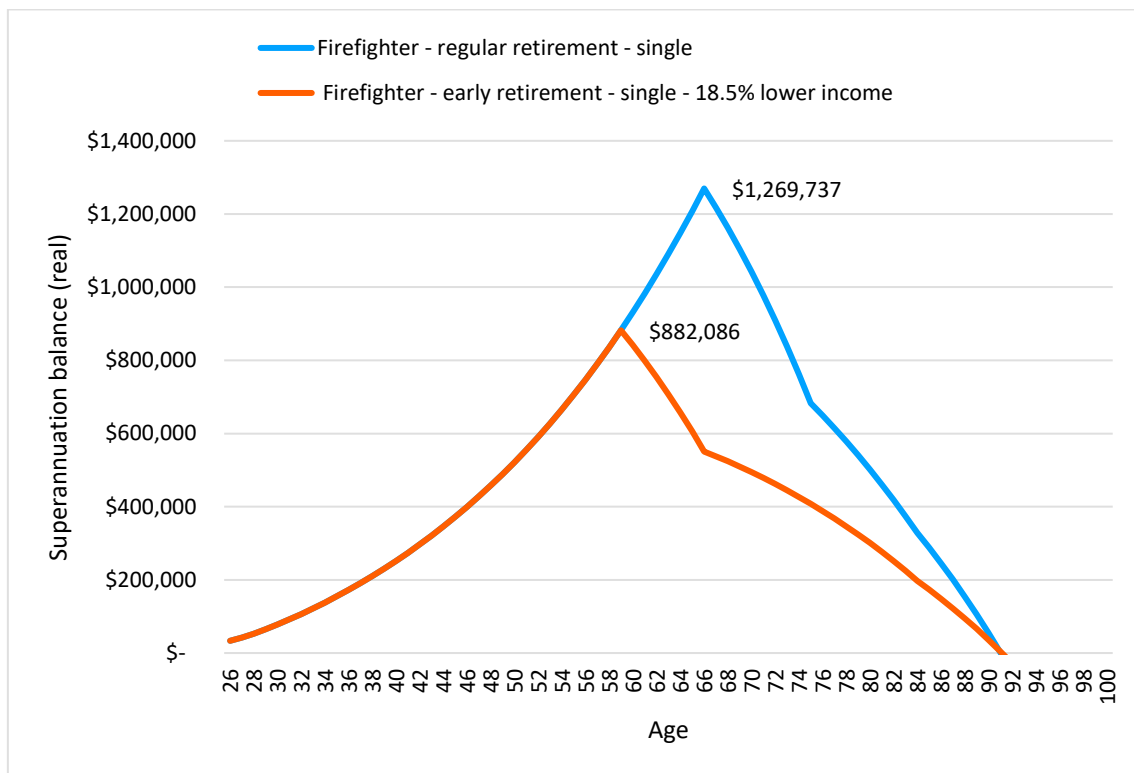
Therefore, we also consider the implications of early retirement for a single retiree. Figure 2 illustrates the financial trajectory for a single firefighter, in which case the per person living expenses for a comfortable retirement are higher than someone in a couple (whose shared expenses are divided in half). This scenario is more concerning. In this case, a regular retirement (at age 67) will lead to a superannuation balance

⁹ Australian Institute of Health and Welfare, “Older Australians: Housing and Living Arrangements,” 2 July 2024, <https://www.aihw.gov.au/reports/older-people/older-australians/contents/housing-and-living-arrangements>.

running out at 91. Early retirement (at 60) is associated with exhaustion of the superannuation fund at age 76 – once again, 15 years earlier than for the regular retiree, and now substantially earlier than the retiree’s life expectancy.

Another way of portraying the additional financial risk of early retirement, is to estimate the reduction in spending that would be required to ensure that an early retiree’s superannuation fund continues as long as if they had retired at age 67. Figure 3 illustrates this scenario for a single retiree.

Figure 3: Single Early Retirement, Equivalent Reduction in Living Standards



In order for that retiree to ensure their superannuation lasts until 91 (as would occur under a regular retirement age), they would need to cut their spending by 18.5% below the ASFA comfortable retirement standard – a significant reduction in living conditions.

In short, while the early retirement of firefighters and paramedics is made necessary by the grueling nature of their work, many of these emergency responders are likely to be unable to afford a comfortable retirement at a reasonable age. To retire at 60, these workers would have to either significantly reduce their living standards, or face the risk of their superannuation running out well before their life expectancy.

This financial challenge of early retirement arises from three sources:

- Fewer years for superannuation to grow through contributions and investment returns before retirement.
- More years of expenditure that must be financed from that smaller fund (since the worker retired earlier).
- Early retirees would not qualify for Age Pension supplements for their first years of retirement (even if their superannuation income was relatively low) since they have not yet reached the Age Pension qualifying age.

These financial challenges are experienced even under the relatively optimistic assumptions outlined above – including the assumption that retirees will own their homes. The next section of this paper will consider the implications of relaxing those assumptions for projected financial trajectories for early-retiring firefighters.

SENSITIVITY CASES

The likely inadequacy of retirement savings for emergency responders who need to retire early becomes even more evident when the relatively optimistic assumptions of the preceding simulations are relaxed. Inadequate superannuation balances mean that retirees have less of a ‘buffer’ to insure against possible economic, financial, or personal risks after they retire.

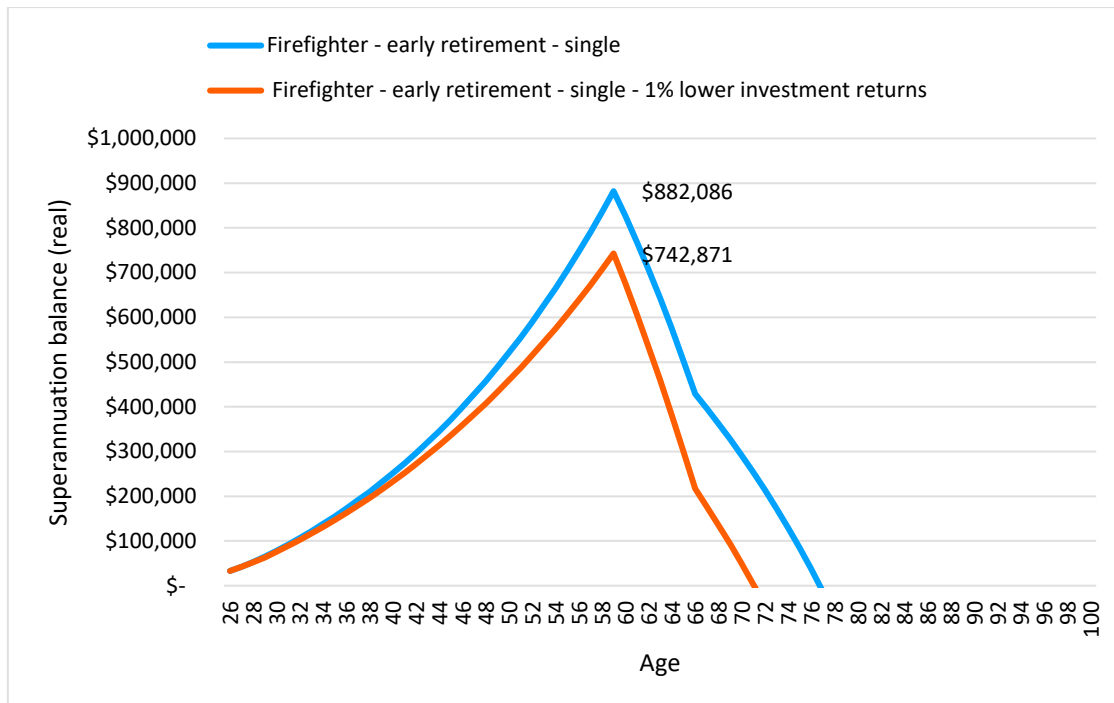
Macroeconomic and Financial Risks

Macroeconomic risks arise from changes in the broader Australian economy which undermine retirement outcomes. Two of the most important are changes in investment returns and inflation. Lower investment returns directly reduce superannuation accumulations, both before and after retirement. The basic simulations above assume returns consistent with long-run historical experience (and which are incorporated into standard retirement planning models, such as the one maintained by Treasury). However, investment returns fluctuate substantially over time, so there is no guarantee that these assumed rates of return will prevail in the future. Moreover, one weakness of Australia’s individualised retirement system is the exposure which individual retirees face as a result of fluctuations in returns.

Figure 4 illustrates the impact of lower investment returns on the longevity of an early retiree’s superannuation fund. It assumes that investment returns fall below the base rates assumed above by one percentage point, both before and after retirement. This has a major impact on an early retiree’s financial security. The maximum superannuation balance attained by early retirement is \$140,000 lower than in the

base simulation. And the superannuation fund declines faster after retirement, due to lower investment returns in the retirement phase.

Figure 4: Lower Investment Returns



For both reasons, an early retiree’s superannuation balance is exhausted six years earlier than in the base model, and the retiree runs out of super at age 71. This is twelve years earlier than their anticipated life expectancy. Even under standard financial return assumptions, superannuation balances were inadequate for early-retiring single firefighters. If investment returns fall below that standard assumption, then the financial viability of early retirement becomes impossible.

A similar but less severe financial risk is posed by the possibility of increases in management and administration fees by superannuation funds. These have a similar, but less severe, impact on superannuation longevity.

Figures 5 and 6 illustrate the effects of higher super fund fees on superannuation balances, both before and after an early retirement. The fixed fee is too small relative to overall superannuation financing to make much of a difference. As shown in Figure 5, even doubling the annual fixed fee makes little difference to pre-retirement accumulation or anticipated longevity. Variable fees (levied as a share of investment returns) are more painful, however. Figure 6 illustrates a 50% increase in variable fees. This reduces the maximum superannuation balance accumulated at retirement by over \$60,000, and accelerates the anticipated depletion of an early retiree’s superannuation balance by over two years (now exhausted around age 74).

Figure 5: Higher Superannuation Fixed Fees

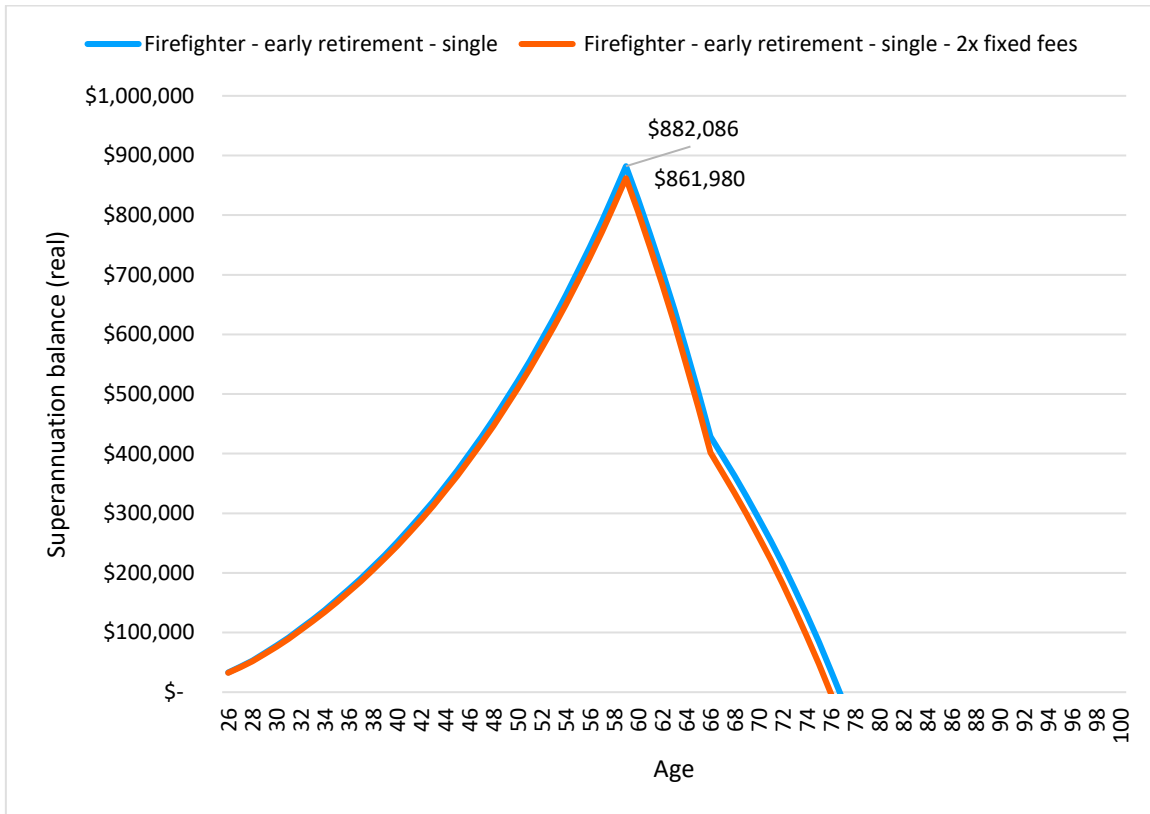


Figure 6: Higher Superannuation Variable Fees



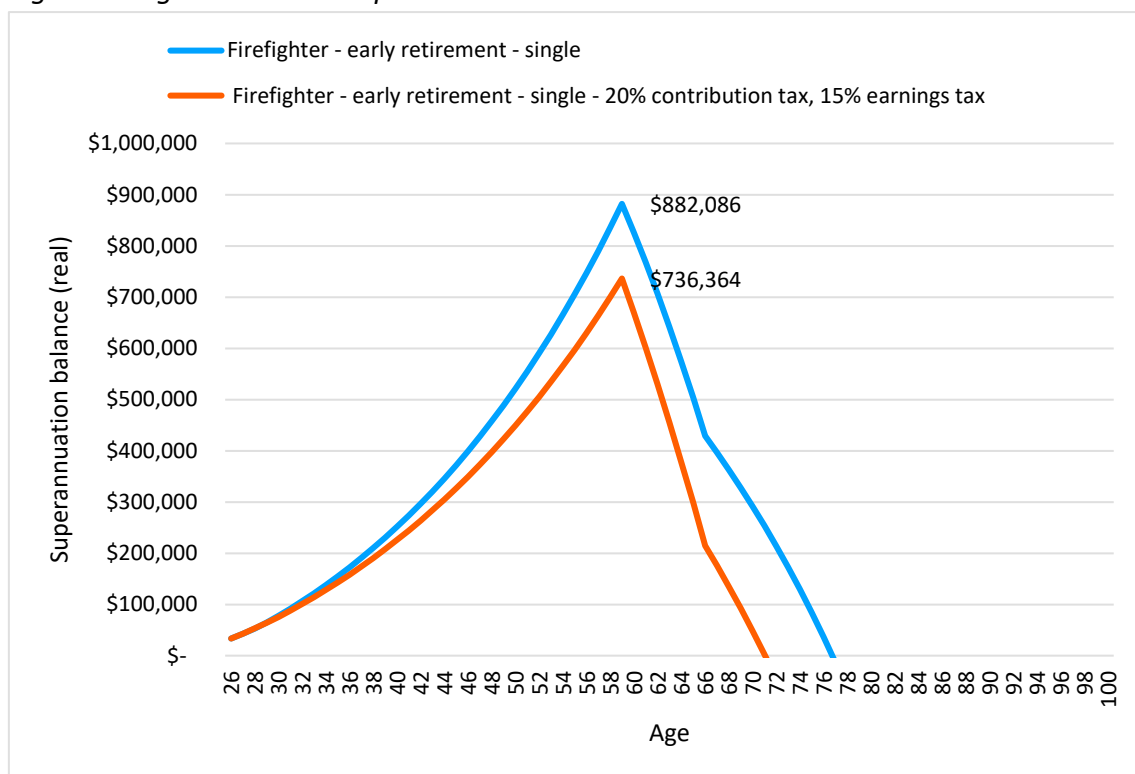
Inflation is another major macroeconomic risk in retirement planning, although its impacts are complex and in many ways offsetting. On the negative side, higher

inflation after retirement means that living expenses for retirees will grow faster, and hence superannuation balances will be depleted more quickly. On the other hand, investment returns may move with the general level of prices (assuming that capital markets function in relation to real, rather than nominal, rates of return on investment). And Australia’s Age Pension system (which is fully indexed to inflation, unlike individual superannuation accounts) provides another level of protection against inflation: faster inflation after retirement would mean that more retirees will qualify for partial pensions which offset the erosion of their personal superannuation accounts.

Policy Risks

Policy risks refer to the impacts of possible future changes in government policy that could affect superannuation balances and retirement incomes. These would include possible changes in taxes and pension policies.

Figure 7: Higher Taxes on Superannuation



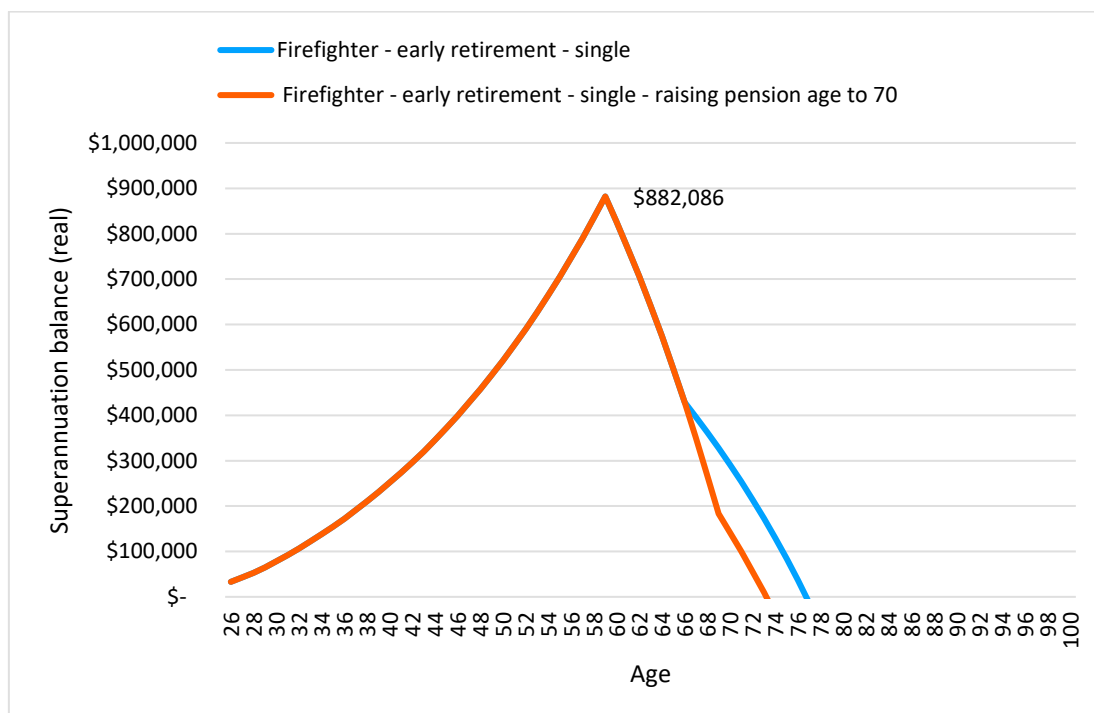
Higher taxes on superannuation contributions and investment earnings would directly undermine the value of superannuation accumulated during a firefighter’s working life. For example, Figure 7 indicates the effect (for a single firefighter) of higher tax rates on both contributions (assumed to increase to 20% from 15%) and investment earnings

(assumed to rise to 15%, instead of the assumed effective rate of 7% during employment and 0% after retirement).¹⁰

Higher taxes result in reduced accumulations during a firefighter's working life. In this scenario, the maximum balance on early retirement (at age 60) is reduced by over \$125,000. As a result, the superannuation balance is exhausted four years earlier (at age 73, a decade before a male retiree's life expectancy). It may be unlikely for political reasons that taxes on superannuation funds would be raised, however given the uncertainty in macroeconomic and fiscal affairs around the world, the possibility cannot be ruled out. And this simulation confirms that given the inadequate starting point for an early-retiring firefighter, they are highly exposed to any shift in this key underlying parameter.

Another risk to the stability of future retirement is the possibility of changes in Australia's Age Pension regime. The retirement outcomes simulated above include receipt of partial Age Pension benefits. Therefore, any negative changes to Australia's Age Pension system could also cause a retiree's superannuation fund to deplete years earlier, by reducing access to partial Age Pension income.

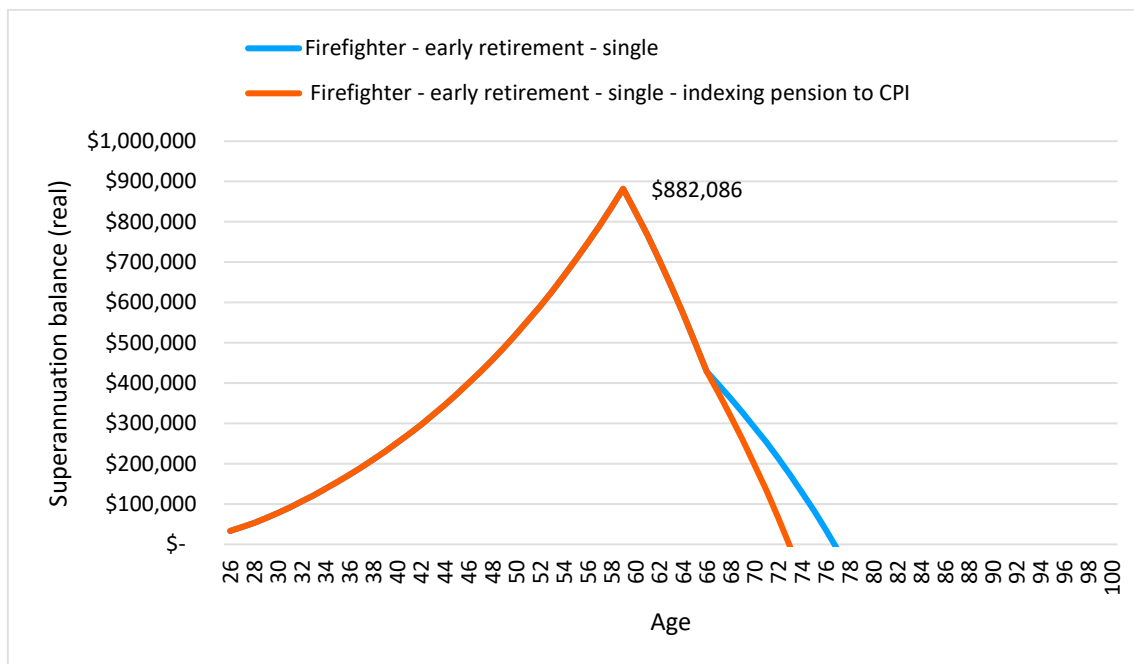
Figure 8: Raising the Age Pension Age



¹⁰ The statutory tax on earnings is 15%, but in practice superannuation funds reduce the effective rate through portfolio choices and other responses; in this simulation, we assume that the statutory rate is enforced.

For example, simply raising the qualifying age for the Age Pension to 70 would accelerate the depletion of an early retiree’s superannuation balance, since they would now need to fully self-fund their retirement income for a full decade (until partial Age Pension kicked in). As illustrated in Figure 8, this change would cut about four years from the longevity of their superannuation balance (which would be exhausted at age 73).

Figure 9: Indexing Age Pension to CPI



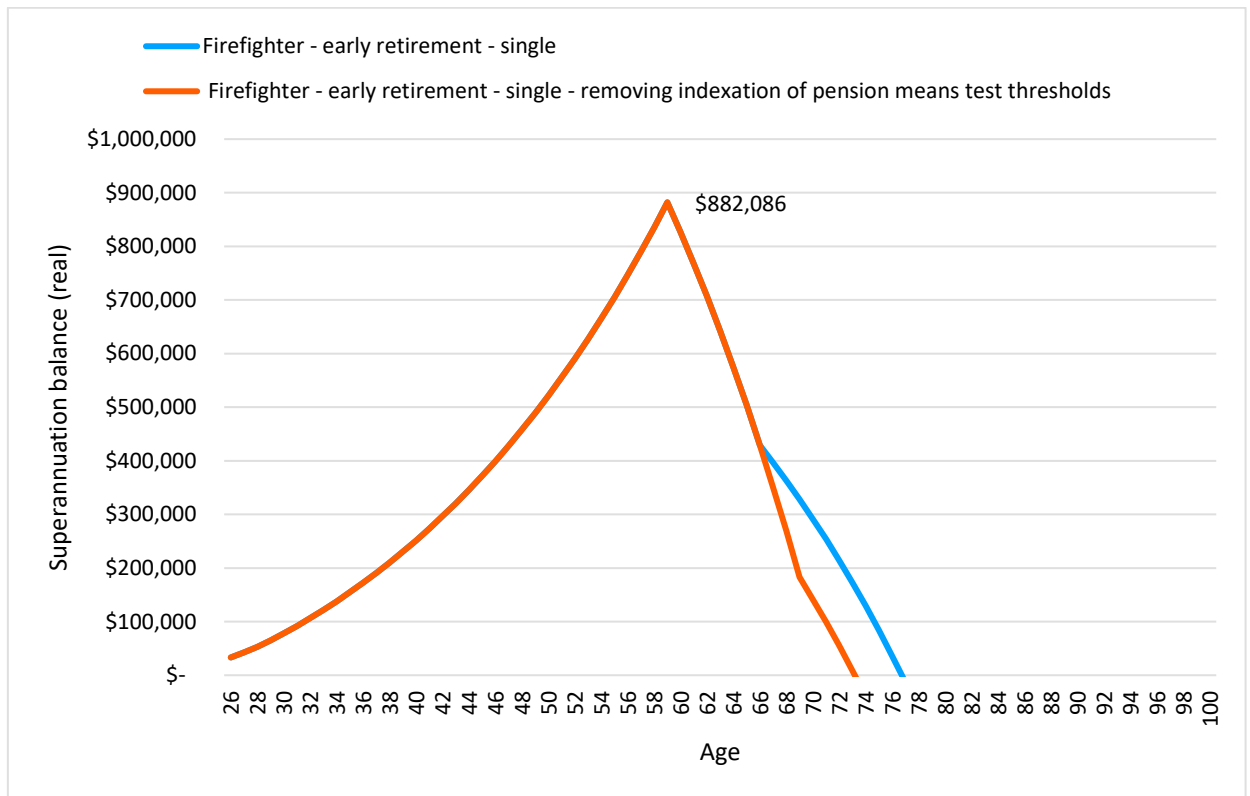
Another, less obvious policy change would index the Age Pension benefit to the rate of growth of consumer prices (measured by the CPI), rather than the current system (which depends on growth in average wages,¹¹ adjusted by other factors). This would usually reduce the rate at which the Age Pension increases. By reducing the value of Age Pension benefits after retirement, this would also reduce the longevity of an early retiree’s superannuation fund by about four years, with expected depletion occurring at age 73 (as shown in Figure 9).

Access to the Age Pension is determined through a series of income and asset tests, in order to target benefits at people with lower incomes or wealth (including their superannuation balances). People above specified thresholds for wealth or income

¹¹ The rationale for the current indexation system is to ensure that the value of the Age Pension keeps up with the general level of workers’ incomes in the broader economy. This is better than the indexing system for other benefits, such as the JobSeeker benefit, which are only indexed to direct CPI inflation (and hence decline over time in relative terms, compared to increases in average wages and household incomes, which generally grow faster than consumer prices).

lose some or all of their Age Pension. These thresholds are indexed each year to inflation. As indicated in Figure 10, if government removed this annual adjustment to Age Pension thresholds, then a retiree would receive less Age Pension over time, cutting about four years from the expected longevity of an early retiree’s superannuation balance (which would be exhausted at age 73). It is clear that any possible changes in Age Pension policy would have major implications for an early retiree’s financial security in retirement.

Figure 10: De-indexing Age Pension Means Test Thresholds



Personal Circumstances

Personal circumstances also affect superannuation balances, retirement incomes, and living expenses after retirement. The sensitivity of post-retirement superannuation adequacy to changes in these personal circumstances (including changes in relationship status, home ownership, and health costs) further illuminates the precarity of retirement incomes for early-retiring firefighters.

The base simulations described above, like most retirement planning projections, assume that the retiree owns their own home outright, with no rent or mortgage payments. However, in light of the rapid escalation in home ownership costs, this is

becoming less common for retirees. About one in five Australians over 65 now rent their homes,¹² and many home-owners still face mortgage payments.

Figure 11: Retirement for Renters

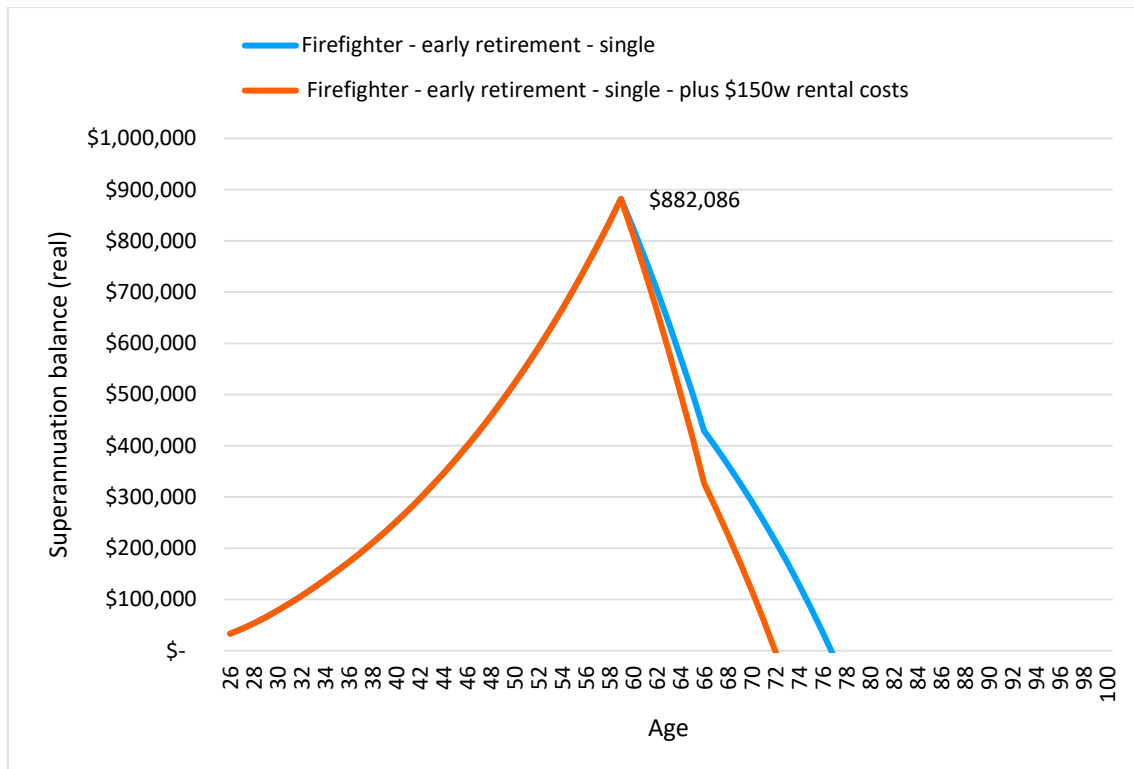


Figure 11 illustrates the implications for retirement adequacy if the retiree is assumed to spend \$150 per week on rental costs (in addition to their living expenses). This is a conservative estimate of rental costs for a single person (who likely lives alone), and relies on other offsets including availability of rental assistance.¹³ If an early retiree needs to pay rental costs, their superannuation will deplete rapidly, running out before age 71 in this simulation.

Another important risk factor for retirees is health expenses. Australia’s public health system largely insures Australians against high healthcare costs. However, some health expenses that are not sufficiently covered by the public system (including specialised treatments, or allied health services such as physiotherapy). For retirees who encounter this situation, health costs will add to living expense after retirement, and exacerbate the risks of superannuation depletion – all the more so for an early retiree.

¹² Vanguard Australia, “Retired and renting: Research reveals new retirement challenge facing Australians,” 17 June 2024, <https://www.vanguard.com.au/corporate/media-centre/2024/retired-and-renting>.

¹³ This assumed rental payment is indexed to average earnings.

Overlapping Risks

The preceding simulations have illustrated the impact on superannuation accumulation and longevity from a range of factors that could affect retirement security for early-retiring firefighters. It should be kept in mind, however, that retirees could confront more than one of these extra challenges – thus compounding the impact on their post-retirement financial security.

For example, consider an early-retiring firefighter who rents their home, and then experiences the end of their relationship (due to death, divorce, or other circumstances). The compounded impact of both these changes on their superannuation adequacy would be daunting, knocking many years off their ability to fund a decent retirement.

In sum, the risks outlined in this section underscore the need for improved retirement policies for emergency responders whose demanding jobs necessitate early retirement. After decades of service protecting their communities, these public servants deserve a comfortable and secure retirement once they reach an age when continued service is not reasonable.

Policy Responses

Governments and employers should allow emergency responders to be able to retire comfortably and securely when it is no longer reasonable to expect them to perform these physically and mentally demanding jobs. For most, that will be well before the standard retirement age of 67. As demonstrated above, the existing retirement system does not make early retirement a viable option for most of these workers. Even in a best-case scenario, under optimistic assumptions (regarding home ownership, relationship status, and investment returns), retiring early is a major risk. Early-retiring firefighters and paramedics would face an impossible choice between either seeing their superannuation run out while they have years to live, or else suppressing their expenses and living standards (by 30% or more below the comfortable retirement standard) in order to extend their superannuation balances.

To facilitate viable and secure early retirement options for emergency responders, existing retirement provisions must be reformed. This will require significant fiscal support from the governments that provide these emergency services. This support should be seen as a necessary cost of providing emergency services. It is not reasonable to expect firefighters and paramedics to continue working long after the toll of their work, on their bodies and minds, becomes intolerable. Neither is it reasonable for these workers to simply be tossed aside to fend for themselves, in cases when working to 67 is not possible.

Governments face several policy options for strengthening early retirement provisions for emergency responders, and facilitating a viable early retirement option for those who choose it. Improving the sustainability and resilience of retirement incomes requires either increasing superannuation accumulations before retirement, or reducing the expense of withdrawals after retirement. Several options in this regard are simulated below.¹⁴

Superannuation balances could be increased through various methods. These could include higher superannuation contributions during a worker's career, direct government transfers to superannuation accounts, or changes to taxation policy.

An obvious way to increase superannuation for emergency responders would be to implement a higher superannuation contribution rate from employers (mostly state

¹⁴ Again, we provide the simulations for firefighters in the main text, while Appendix A provides the same set of simulations of possible policy responses for paramedics. As with the base case and risk simulations reported above, the simulations for paramedics are very similar to those for firefighters.

governments). This would boost annual contributions, create a larger base for investment returns, and increase the accumulated size of the balance on retirement.

Many other employers in Australia negotiate or implement superannuation contribution rates well above the national superannuation guarantee rate. Justification for these higher rates often includes recognition that jobs are difficult or dangerous, and hence not amenable to the same career longevity as other roles. For example, employees in the Australian Defence Force receive superannuation contributions at a rate of 16.4%, reflecting the unique challenges of defence work. For similar reasons, the Australian Federal Police provide a 15.4% superannuation contribution rate; other police forces also provide superannuation contributions well above the statutory minimum.

Higher superannuation contributions for emergency responders could be negotiated in industrial agreements. Alternatively, national legislation to provide for higher contribution rates for a subset of industries (where the inherent demands and dangers of work justify shorter careers) would provide consistency across Australian jurisdictions.

Figure 12: Defence Force Superannuation Contribution Rate (16.4%)

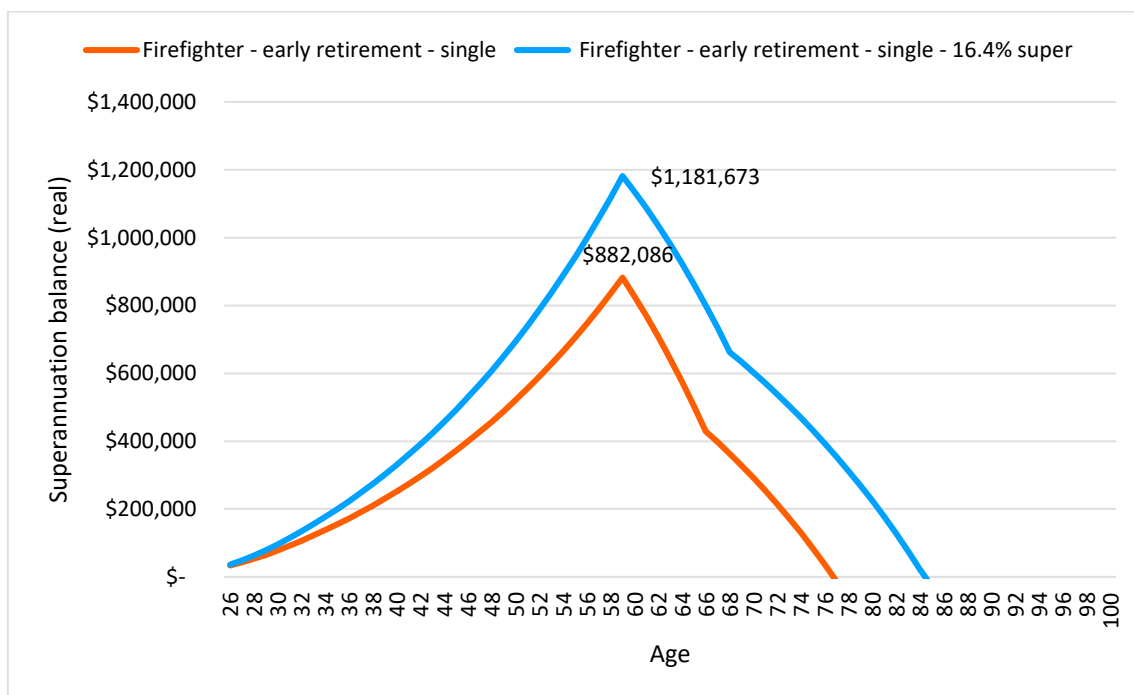
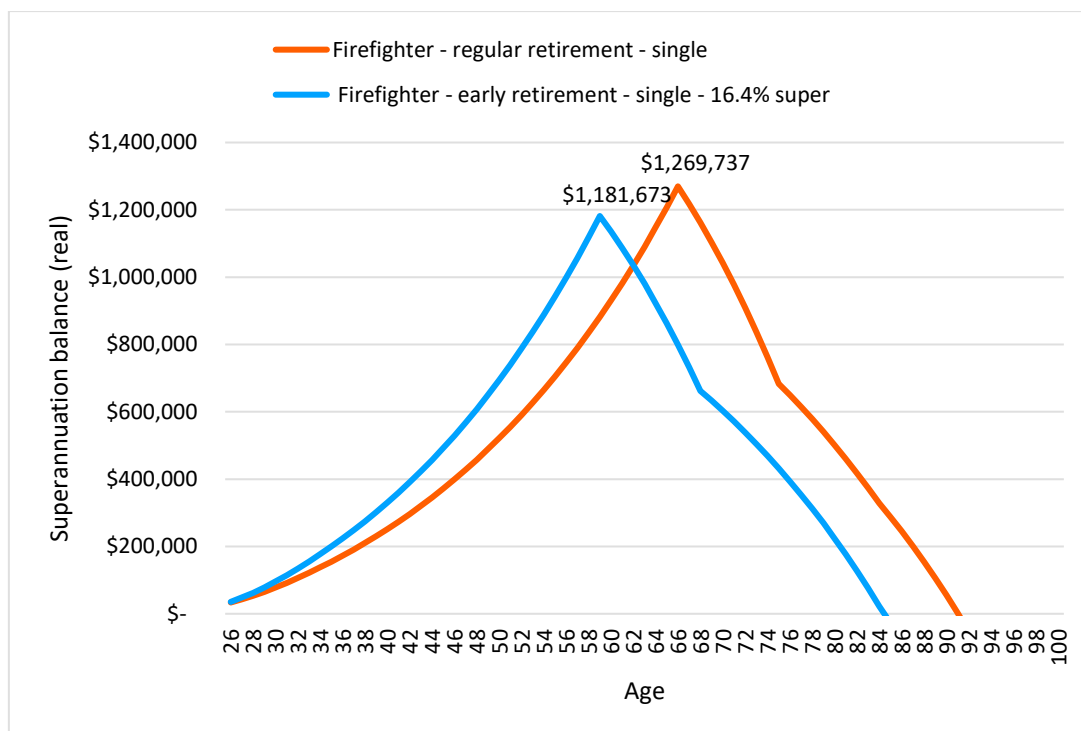


Figure 12 shows that raising the contribution rate to 16.4% would substantially improve the feasibility of early retirement for emergency responders. Superannuation balances accumulate faster (especially in the latter years of a firefighter's career, thanks to the compounding effect of investment returns on the higher base of

contributions), and reach almost \$1.2 million at time of early retirement (age 60). That would support a 25-year retirement period (to age 85, just past male life expectancy) before the superannuation fund was exhausted.

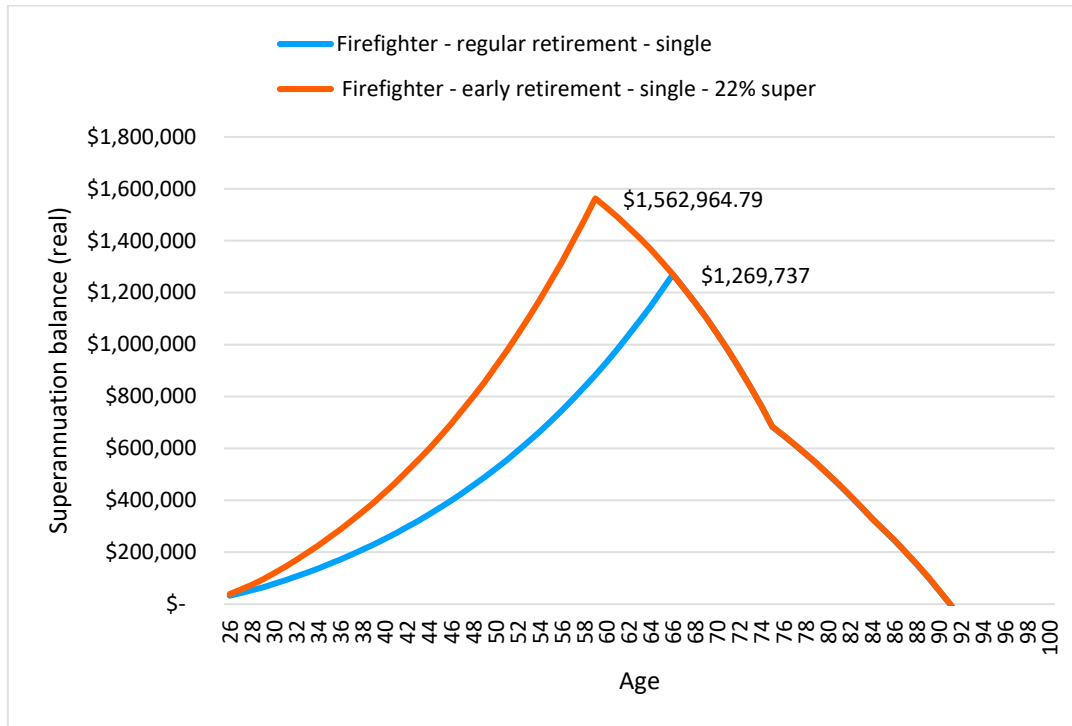
Even with the higher contribution rate, however, the superannuation trajectory is still more precarious than for a retiree leaving work at age 67. While the superannuation balance on early retirement in the Defence Force contribution rate simulation is similar to the retiring balance for a firefighter receiving statutory SG contributions and retiring at age 67 (in both cases around \$1.2 million), early retirement still depletes that balance faster. As illustrated in Figure 13, the superannuation balance for an early-retiring firefighter who received 16.4% superannuation contributions is exhausted about six years earlier than for someone retiring at 67 with a fund built up through the normal SG contribution schedule.

Figure 13: Early at Defence Force Rate v. Regular at SG Rate



In other words, even boosting the superannuation contribution rate to 16.4% over a firefighter’s working life would not create fully equivalent results to a regular retirement. To make early retirement as secure as existing regular retirement, the early retiree’s superannuation balance at age 67 would need to equal the initial retirement balance for a person retiring at age 67. For a single person, this would require superannuation contributions in the order of 22%. As illustrated in Figure 14, this would ensure that the early retiree’s superannuation balance was exhausted no earlier than someone retiring at age 67 under the current contribution regime.

Figure 14: Contributions Required to Equalise Early and Normal Retirement

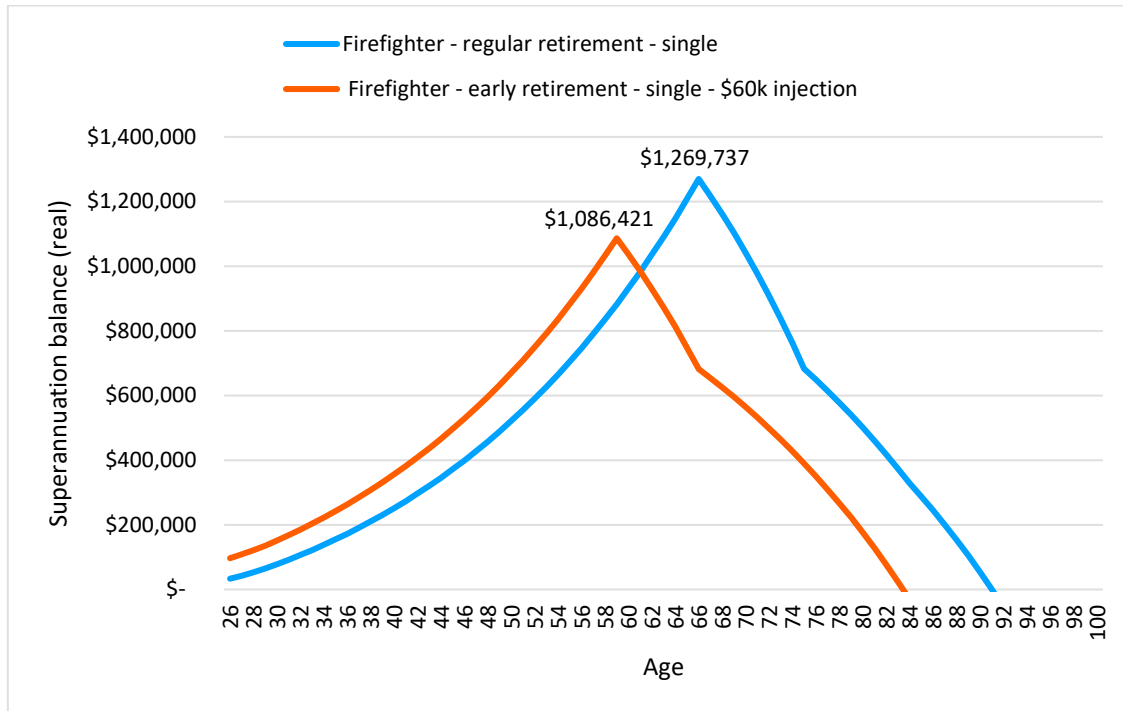


It is not likely that employers would agree to a 22% contribution rate throughout firefighters’ and paramedics’ career. But this simulation demonstrates the extent of the financial challenge post by the reality that most emergency responders will need early retirement.

Another option for boosting financial security for emergency responders would be for employers to directly supplement superannuation balances for workers who opt for early retirement. One option would be for employers to make an initial lump-sum contribution into a new firefighter’s or paramedic’s superannuation fund when they commence employment. That contribution then generates additional investment income throughout the worker’s career. For example, Figure 15 illustrates the impact of an opening superannuation contribution for new hires of \$60,000.

As we can see, this relatively modest upfront contribution makes a significant difference to the financial trajectory for an early-retiring firefighter. Indeed, its impact is similar to that of the 16.4% superannuation contribution rate. This is because of the compound investment returns earned on that initial contribution over the subsequent decades of work. The worker attains a superannuation balance of almost \$1.1 million by age 60, and that balance is not exhausted until about age 84 – roughly in line with an early retiree’s remaining life expectancy.

Figure 15: Head-Start Superannuation Contribution for Emergency Responders



An upfront superannuation contribution of this sort could assist employers in recruiting new hires for these challenging jobs, which has been more difficult in recent years because of conditions of labour shortage. Conditions would need to be attached to such a program to claw back some of the up-front contribution in event that workers leave their careers before retirement.

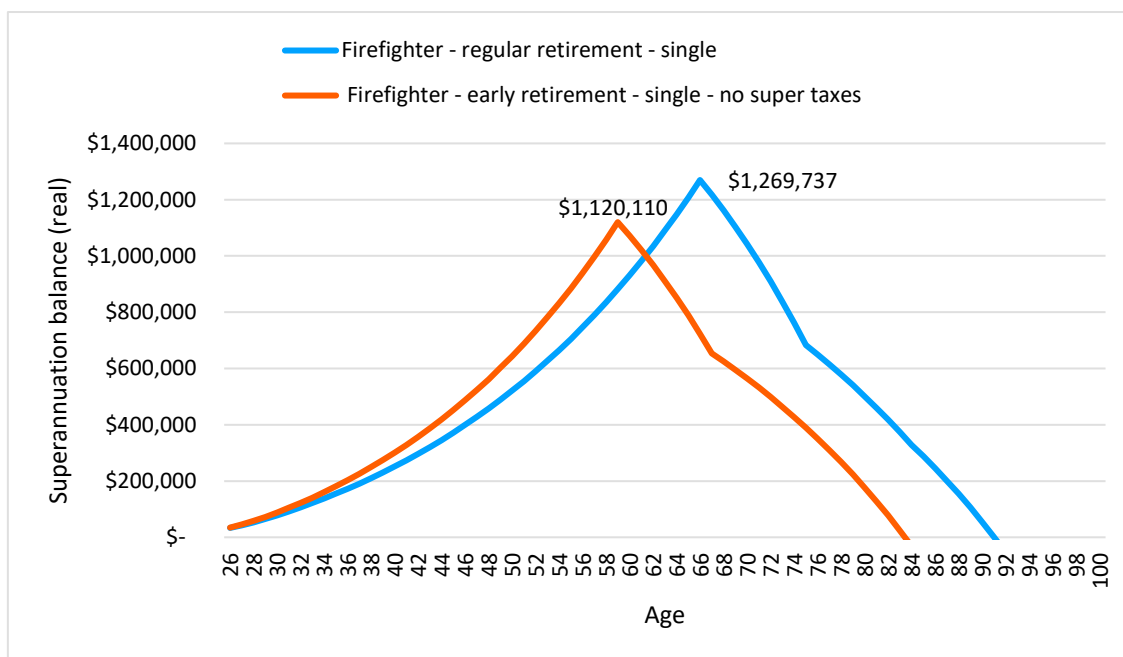
Another approach would be for employers to make a special end-of-career lump sum transfer on occasion of early retirement. To attain the same outcome in superannuation longevity (postponing full depletion long enough to match an early retiree’s life expectancy) would require a substantial end-of-career special contribution in the order of \$300,000. That is larger than the more modest start-of-career special transfer, since there is less time for an end-of-career contribution to generate investment returns.

This approach would give early-retiring firefighters and paramedics an extra boost in preparing for financial security in retirement. It would also allow employers to target this support at workers who choose early retirement (instead of providing additional retirement funding across-the-board to the whole workforce), thus reducing its aggregate cost. The end-of-career superannuation supplement would also serve as an incentive for early retirement, creating openings to hire younger recruits to fill these challenging jobs. Finally, another advantage of this approach is that it would provide support for firefighters and paramedics who are currently approaching retirement; in

contrast, the other policy options discussed above (higher superannuation contributions, or a start-of-career superannuation top-up) would be of most benefit for new hires just starting their careers (since they depend on workers benefiting from higher contribution rates and consequent incremental investment income over their entire career).

Another approach to providing extra support for emergency responders to be able to retire at age 60, would be to exempt these workers (and others in similarly challenging or dangerous jobs) from normal superannuation taxes. Justified on grounds that these workers provide a unique service to their communities, exempting emergency responders from superannuation taxes (on contributions and investment income) would have significant benefits for their financial trajectories. Accumulated balances on early retirement would reach over \$1.1 million (see Figure 16), and the longevity of the super fund would again be extended to match anticipated life expectancy (not depleting until age 84).

Figure 16: Exemption from Superannuation Taxes



This option would need to be implemented at a national level, thus providing standardised treatment for emergency responders in all states and territories. However, it might unleash similar demands from other challenging professions for favourable tax treatment. Moreover, the fiscal cost of this policy would be borne solely by the federal government, which might be reluctant to provide a fiscal subsidy for workers in mostly state-provided services.

Among these options, the most direct, transparent, and actionable proposal might be to increase superannuation contribution rates for emergency responders. This would be done as explicit recognition that the unique demands and dangers of these jobs make it unlikely these worker will be able to complete a full working career to the new Age Pension qualifying age of 67. Workers would begin accumulating these extra contributions from the start of their careers. The prospect of retiring at 60 would be a strong motivator for them to continue their careers and traverse the physical and mental challenges of their uniquely difficult jobs.

However, for older workers approaching early retirement age, this change will offer only incremental benefits. Therefore, increasing the go-forward superannuation contribution rate for all emergency responders could be paired with special end-of-career superannuation transfers provided to those who retire at 60; these lump-sum end-of-career contributions would be phased out over time, since younger workers are able to accumulate superannuation balances (under the new contribution rate) sufficient to retire early.

Conclusion

Firefighters and paramedics save lives and protect our communities, but they are often forced into early retirement due to the physical and mental challenges of their jobs, combined with scarce options for transitions into less demanding roles. Our analysis shows that even under optimistic assumptions (regarding investment returns, home ownership, relationship status, and more), firefighters and paramedics who retire early can expect their superannuation to be depleted many years earlier than those who retire later. And when a range of plausible risks are considered (such as macroeconomic conditions, shifts in government policy, and changes in personal circumstances), the prospects of early retirement become even more precarious. Without government support, many firefighters and paramedics will face substandard and insecure retirements. Many are not able to work in these physically and emotionally demanding jobs right through to age 67. After a lifetime of work and danger protecting our communities, they deserve better than having to make a devil's choice between watching their superannuation run out years before their life expectancy, or else having to retrench their living standards dramatically after retirement.

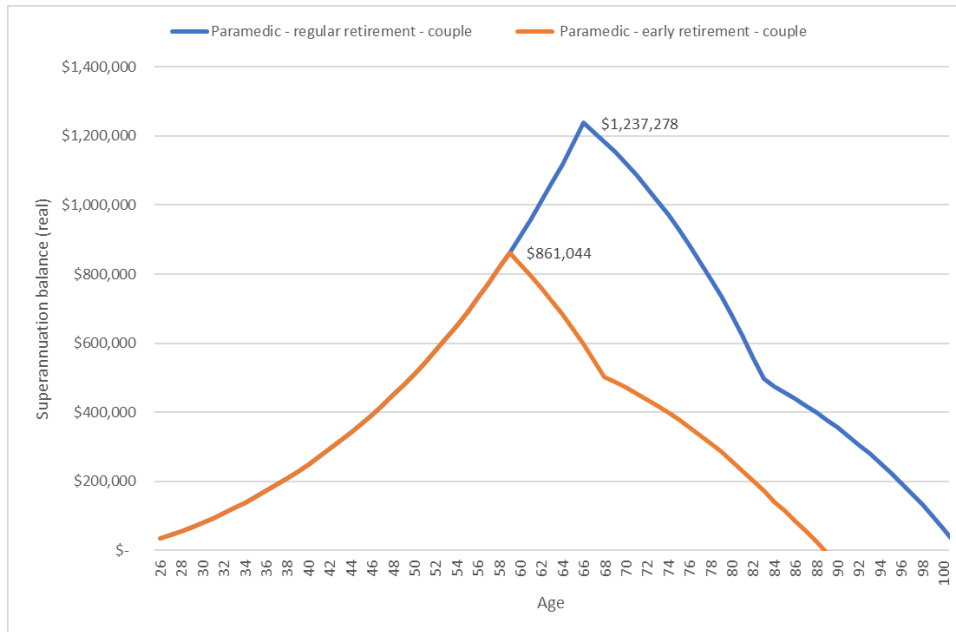
Employers and governments need to make positive policy reforms so that retirement at age 60 becomes a more viable and secure option for firefighters and paramedics. The best option would be to implement a higher superannuation contribution rate for these emergency responders, supplemented by one-time early retirement contributions for late-career workers. After decades of gruelling and dangerous service to their communities, these workers deserve access to decent and secure retirement at age 60.

Appendix A: Paramedic Simulations

This appendix presents the results of parallel simulations conducted using paramedic wages, superannuation balances, and retirement trajectories (corresponding to each of the base case simulations, sensitivity analyses, and policy option simulations provided above for firefighters). The general conclusions of the simulations for firefighters also apply for paramedics, namely:

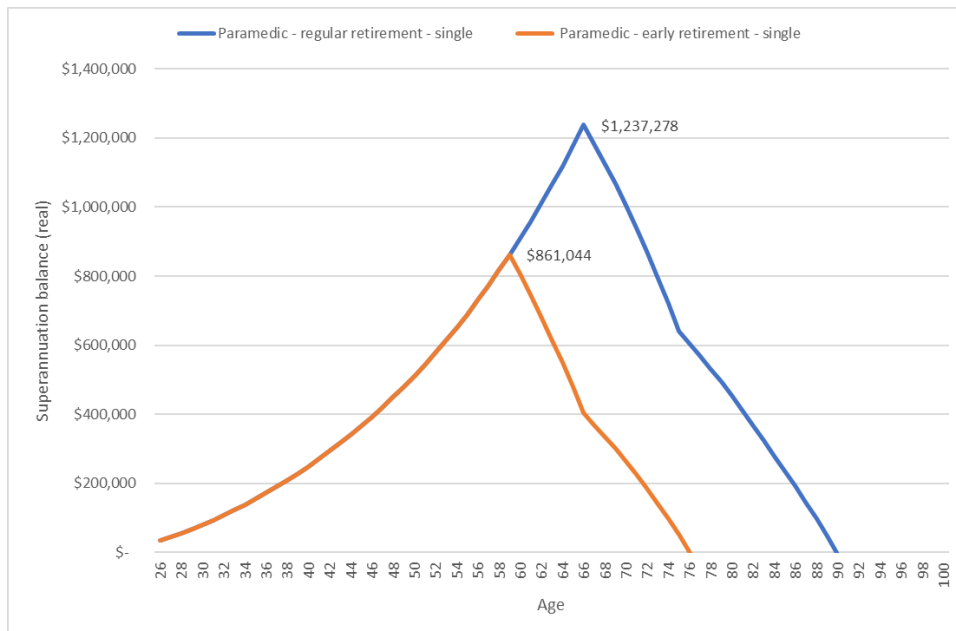
- Retiring early under existing superannuation settings creates substantial financial risks for paramedics. For single paramedics, their superannuation fund will likely be depleted seven years before expected male lifespan, ten years before expected female lifespan, and 14 years earlier than a single paramedic retiring at 67.
- Responding to this risk by reducing consumption spending after retirement would result in a severe retrenchment of living standards for paramedics during their retirement years: in the base case scenario, spending would need to be cut by 18.5 percent.
- Considering one or more of a wide range of potential risks to post-retirement financial trajectories for paramedics makes the situation even more challenging – including the situation for renters, single retirees, or those experiencing lower investment returns.

Figure A1. Base Model: Early Retirement for Couples



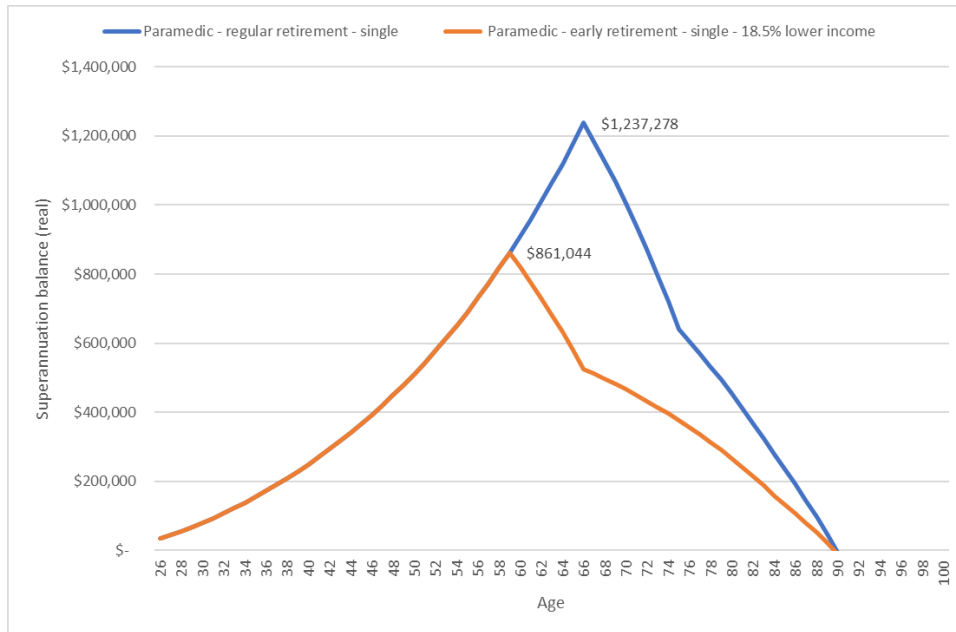
- Early retirement for a paramedic in a couple reduces the expected longevity of their superannuation fund by 13 years (to age 89 instead of 102).

Figure A2: Base Model: Early Retirement, Single Retiree



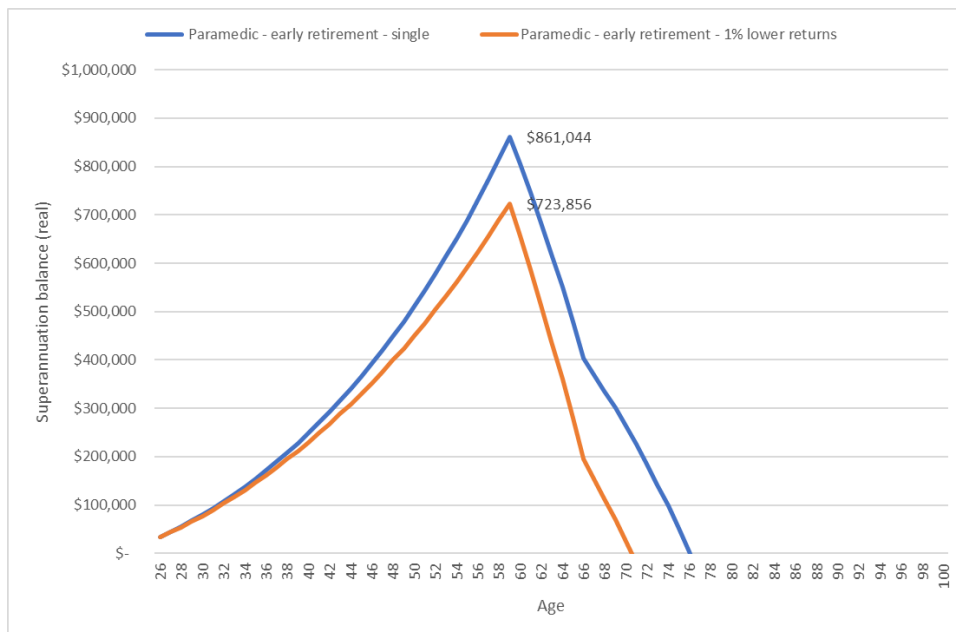
- Early retirement for a single paramedic reduces the longevity of their superannuation fund by 14 years, and it is now expected to be depleted at age 76 (about seven years before male life expectancy).

Figure A5: Single Early Retirement, Equivalent Reduction in Living Standards



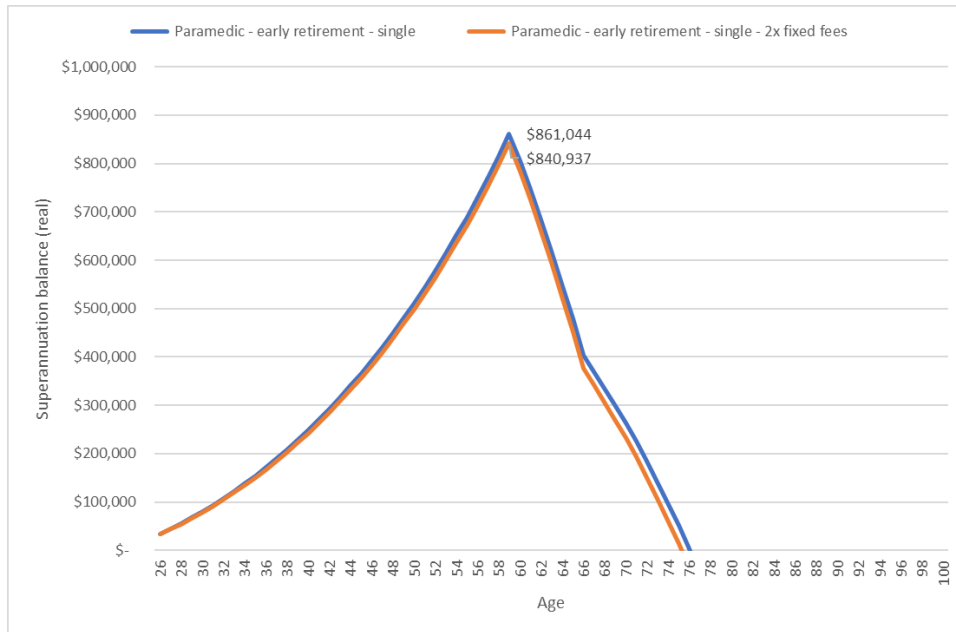
- To extend the expected life of their superannuation fund to as long as for a person retiring at 67, a single paramedic would have to reduce their annual consumptions spending by 18.5%.

Figure A6: Lower Investment Returns



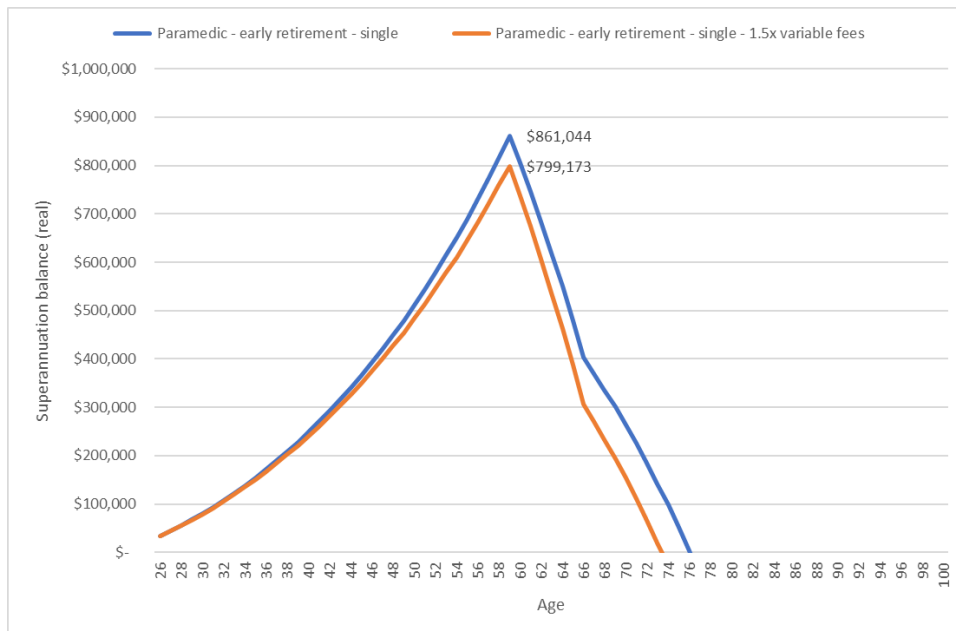
- A 1% reduction in annual investment returns would reduce the expected longevity of the superannuation fund by five years, and it would now be depleted at age 71 (12 years before male life expectancy).

Figure A5: Higher Superannuation Fixed Fees



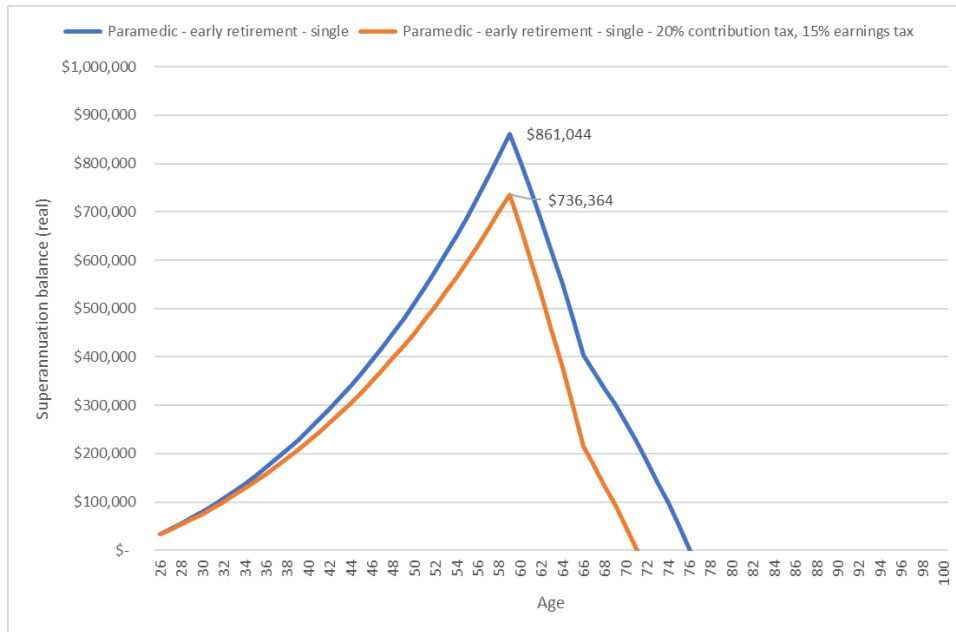
- Higher fixed fees for the superannuation account have little impact on the longevity of the superannuation fund.

Figure A6: Higher Superannuation Variable Fees



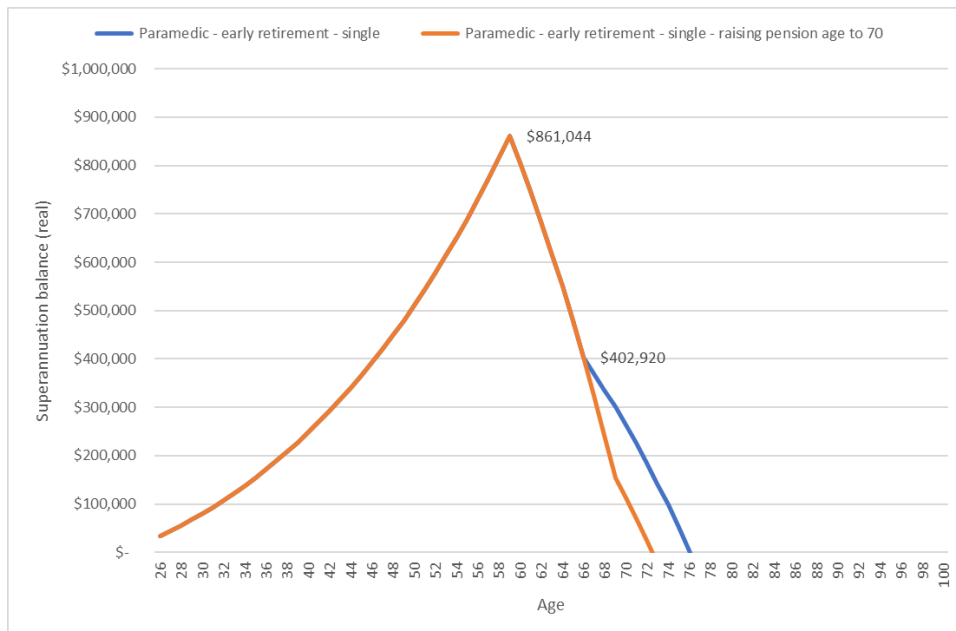
- Higher variable fees on the superannuation account reduce the longevity of the superannuation fund by about 3 years, to 73 (about a decade earlier than male life expectancy).

Figure A7: Higher Taxes on Superannuation



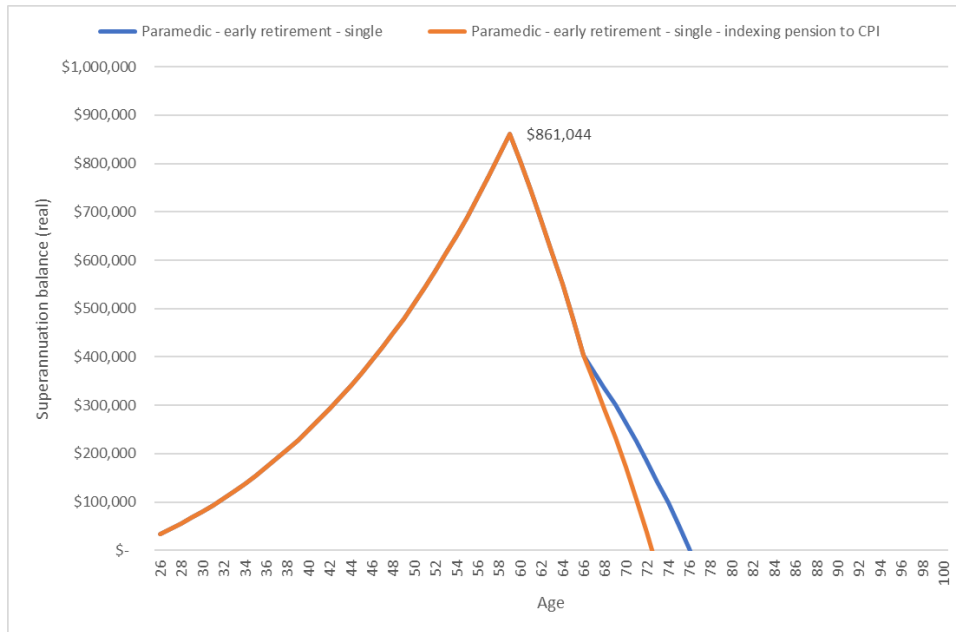
- Higher taxes on superannuation funds would reduce the longevity of the account by about 5 years, to 71 (some 12 years before male life expectancy).

Figure A8: Raising the Age Pension Age



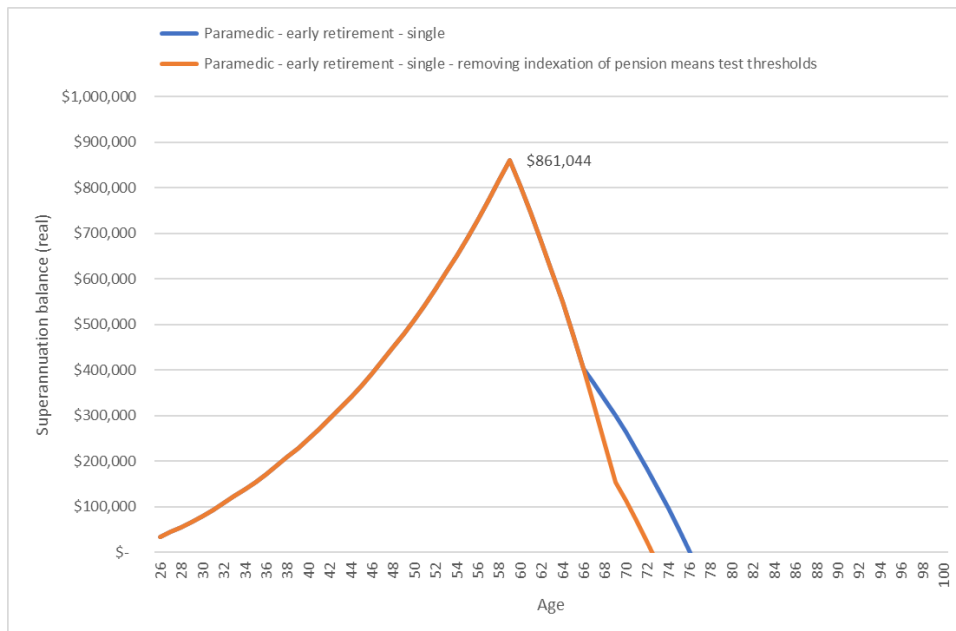
- If the age to qualify for the Age Pension was raised to 70, this would reduce the longevity of the superannuation fund by three years (to age 73).

Figure A9: Indexing Age Pension to CPI



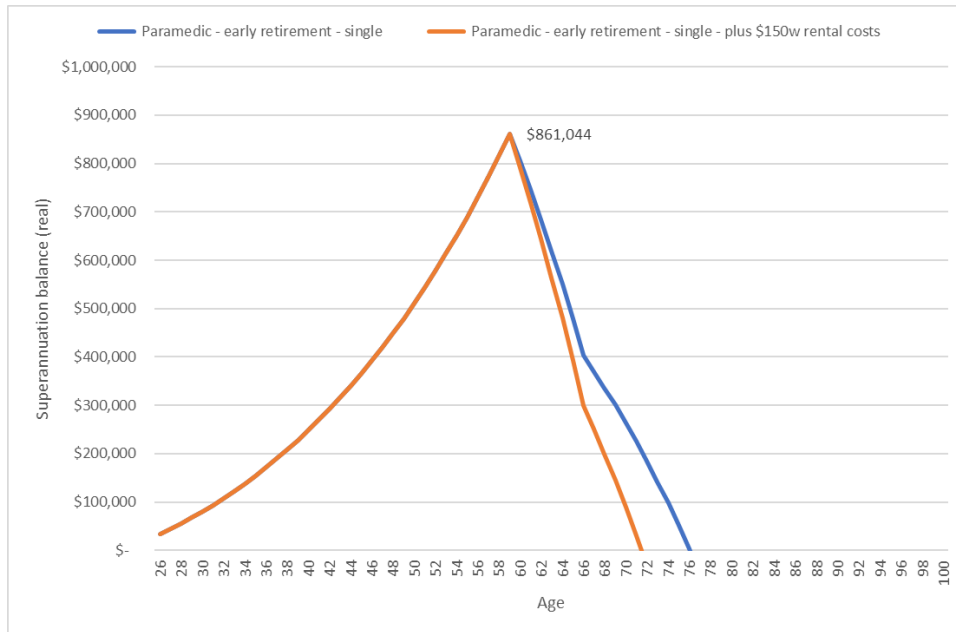
- Changing the indexing of the Age Pension to the CPI would also reduce the longevity of the superannuation fund by three years (to age 73).

Figure A10: De-indexing Age Pension Means Test Thresholds



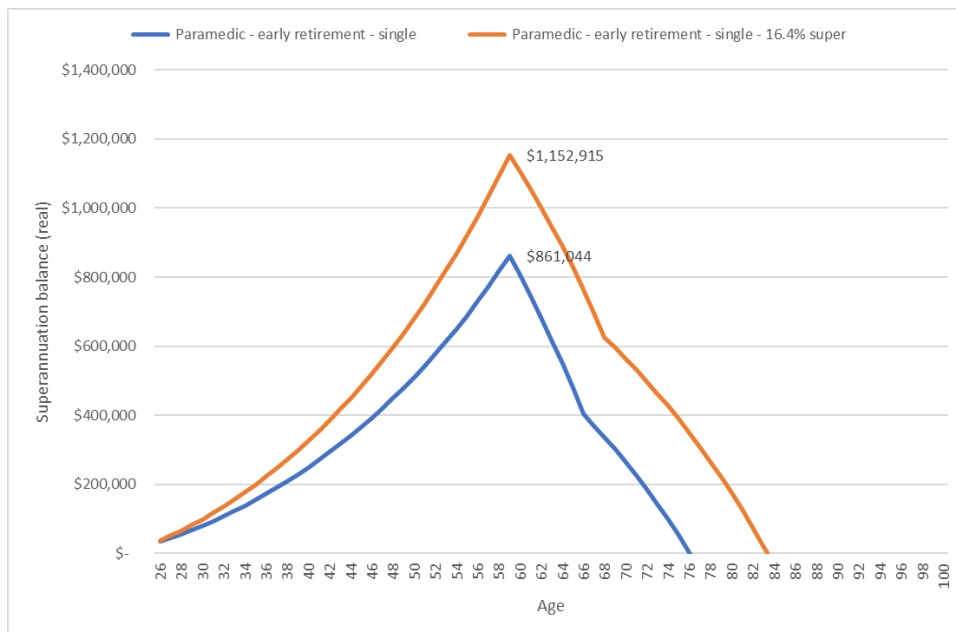
- De-indexing the income and wealth means tests for the Age Pension would also reduce the longevity of the superannuation fund by three years (to age 73).

Figure A11: Retirement for Renters



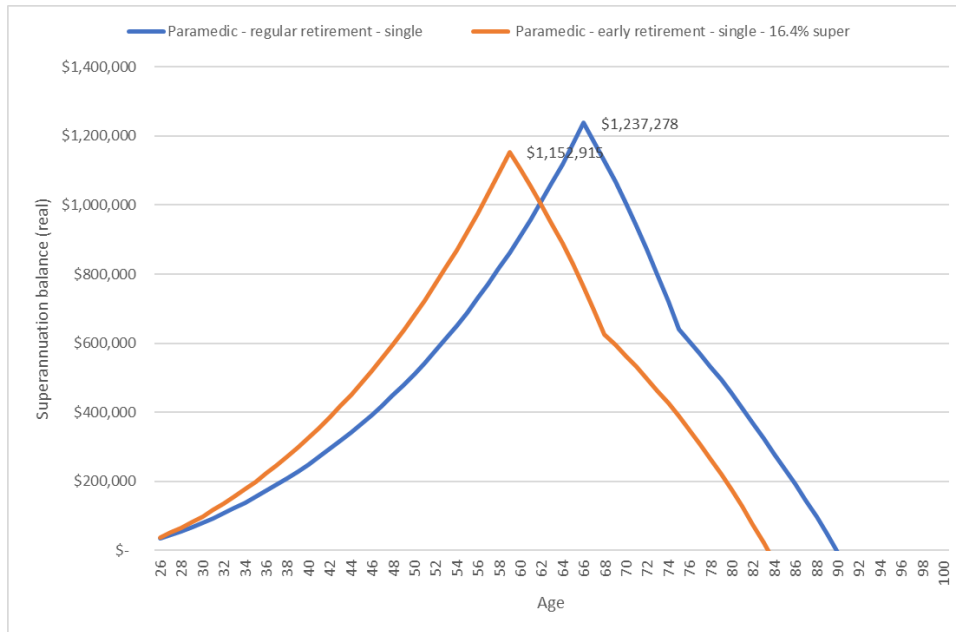
- For a single early-retiring paramedic who rents (rather than owns) their home, their superannuation fund will be depleted at age 72 (11 years earlier than male life expectancy).

Figure A12: Defence Force Superannuation Contribution Rate (16.4%)



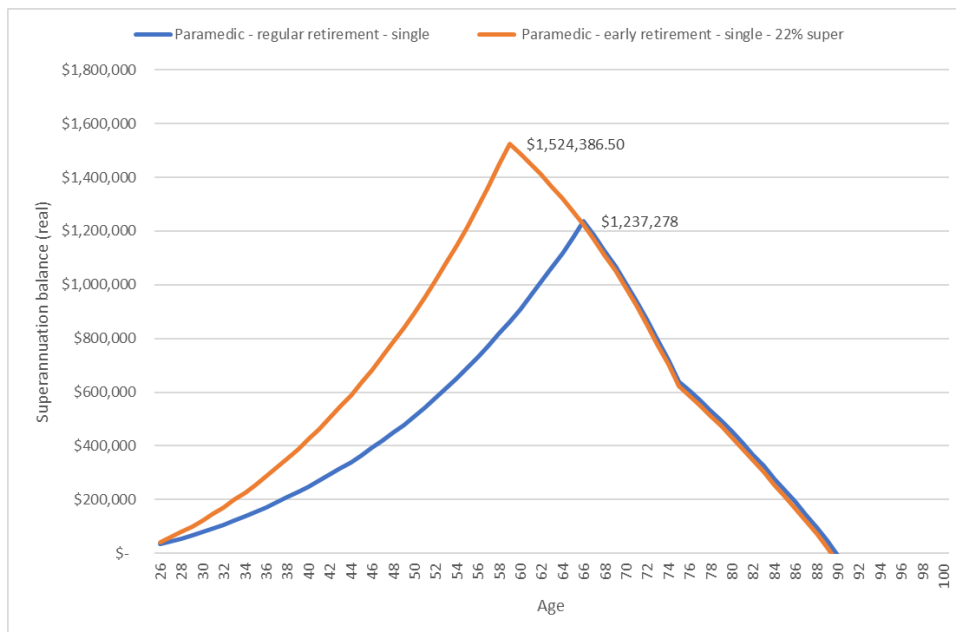
- Increasing the superannuation contribution rate to 16.4% (equal to the Australian Defence Force) would extend the single early-retiring paramedic's superannuation fund to age 83 (matching male life expectancy).

Figure A13: Early at Defence Force Rate v. Regular at SG Rate



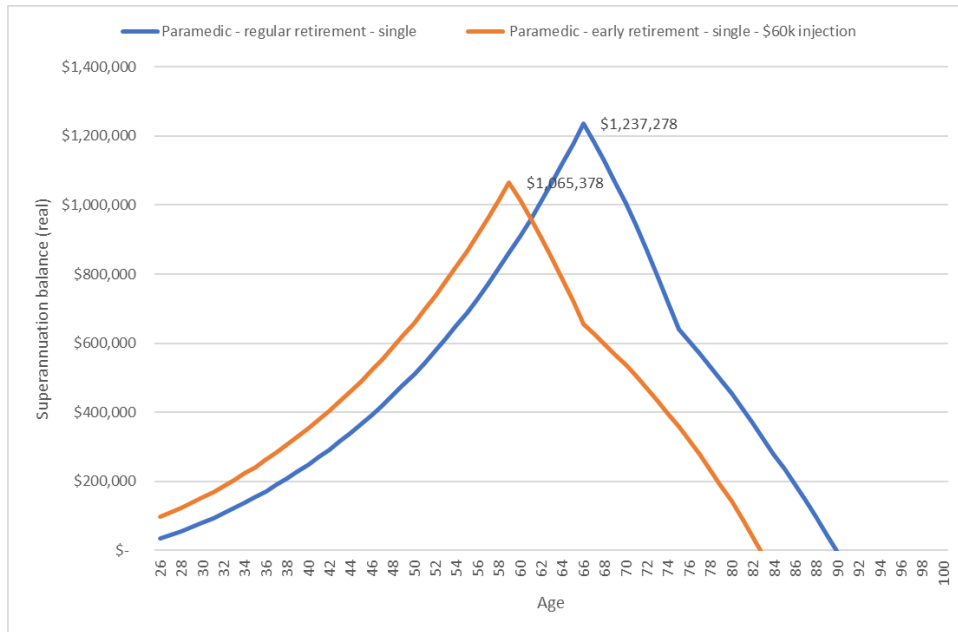
- Even raising the superannuation contribution rate to 16.4% would still leave an early-retiring single paramedic’s superannuation fund in worse shape than a normal-retiring person’s fund (under the existing contribution rate).

Figure A14: Contributions Required to Equalise Early and Normal Retirement



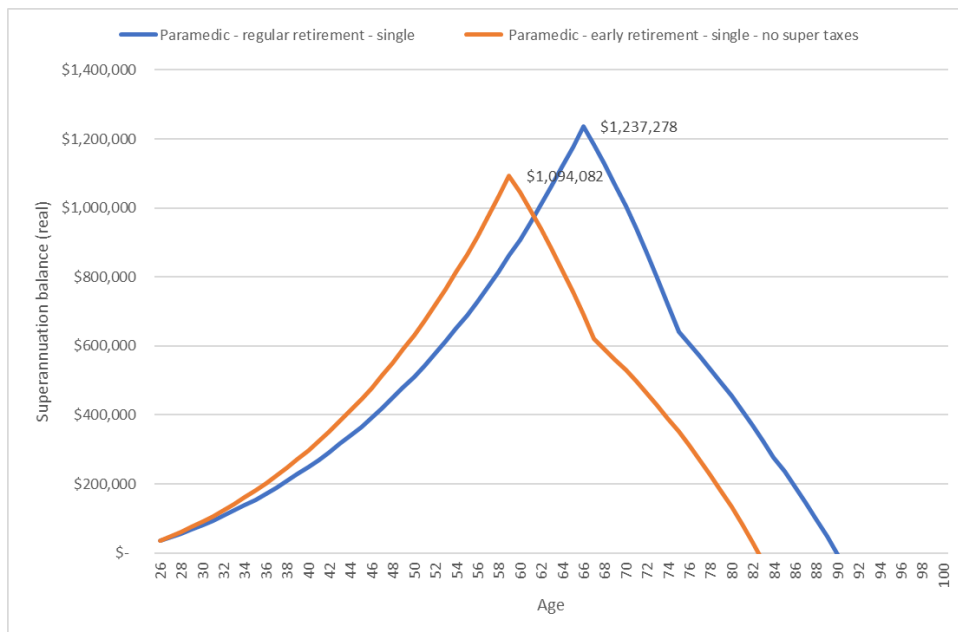
- It would require a 22% contribution rate to equalise the longevity of a single early-retiring paramedic’s superannuation fund to that of a normal-retiring paramedic under the existing contribution rate.

Figure A15: Head-Start Superannuation Contribution for Emergency Responders



- Providing paramedics with a ‘head start’ \$60,000 superannuation contribution on commencement of their career would extend the longevity of an early retiree’s superannuation fund to 83 years (matching male life expectancy).

Figure A16: Exemption from Superannuation Taxes



- Exemption from superannuation taxes would also extend the longevity of an early retiree’s superannuation fund to 83 years (matching male life expectancy).

Appendix B: Employment Data

Firefighter Headcount, 2022-23

Age	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
<30	676	178	461	45	78	17	35	16	1,506
30-39	1,781	1,301	1,256	375	322	83	133	90	5,341
40-49	1,859	1,038	1,194	333	352	100	115	66	5,057
50-59	1,896	733	1,206	329	338	110	86	52	4,750
60+	617	453	366	104	170	17	26	11	1,764
Total	6,829	3,703	4,483	1,186	1,260	327	395	235	18,418

Firefighter FTEs by Status

Status	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Permanent	676	178	461	45	78	17	35	16	1,506
Part-time and other	1,781	1,301	1,256	375	322	83	133	90	5,341
Other	1,859	1,038	1,194	333	352	100	115	66	5,057
Total	1,896	733	1,206	329	338	110	86	52	4,750
Support workforce	617	453	366	104	170	17	26	11	1,764
Total (e)	6,829	3,703	4,483	1,186	1,260	327	395	235	18,418

Source: Productivity Commission, Report on Government Services, 2023, Table 9A.4.

Ambulance Personnel 2022-23

Age	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
<30	1 690	1 573	1 489	353	495	171	87	76	5 934
30-39	1 352	1 807	1 409	475	491	222	88	74	5 918
40-49	1 100	749	996	340	384	121	69	41	3 800
50-59	917	653	886	241	332	101	65	34	3 229
60+	185	176	300	83	112	27	16	5	904
All ages	5 244	4 958	5 080	1 492	1 814	642	325	230	19 785

Personnel by Function

Age	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Patient transport officers	–	60	229	197	66	17	20	39	628
Students and base level ambulance officers	789	544	42	287	197	33	34	38	1,964
Qualified ambulance officers	3,963	4,157	4,000	704	1,056	396	199	146	14,621
Clinical other	83	29	7	11	64	21	–	–	215
Communications operatives	509	238	509	168	151	60	45	56	1,736
Total	5,344	5,028	4,787	1,367	1,534	527	298	279	19,164
Proportion of total salaried personnel	85.6	82.3	88.9	66.8	78.4	83.0	80.3	79.7	83.0