The taxation of savings in Australia

Theory, current practice and future policy directions

The Tax and Transfer Policy Institute (TTPI)

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TTPI Policy Report Series

This report series aims to develop a framework for understanding different aspects of taxation to inform and improve future policy design. The evidence presented in the reports is grounded in economic theory and empirical research. It is also tailored to the challenges facing modern Australia.

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A note on terminology

Throughout this report, the terms 'savings', 'wealth' and 'assets' are used interchangeably and should be understood to mean the total stock of savings (rather than the accumulation of savings that occur in the present period). This includes all personal assets and possessions including:

- owner-occupied housing
- superannuation
- investment properties
- savings accounts
- shares
- trusts
- other high-value personal assets (art, jewellery etc.).

This broad definition of personal savings will also include closely held businesses. However, this report will not examine the tax treatment of businesses except where this topic intersects with the taxation of savings (such as dividend imputation).[1]

This report also uses a broad definition of 'taxation' which includes all taxes at the federal, state and local levels, as well as any reduction in means tested government payments (which reduce when some assets are held).

The term 'transfer system' is also used in the report to refer to cash payments provided by government to individuals and families. Because these payments are withdrawn as a function of income, they have effects similar to negative taxes.

'Economic rents' is used in the text to indicate payments for a good or service beyond what would normally be required by the owner to provide the good or service. 'Economic rent' is surplus profit—profit earned beyond the normal, required rate of return.

References to 'land tax' have a specific Australian connotation and refer to a tax levied by all state and territory governments, other than the Northern Territory, that are paid only on rental properties and land used by businesses (i.e. owner-occupied housing is exempt). By contrast, references made in the text to a 'broad-based land tax' refer to a tax on land that does not currently exist in Australia (with the exception of the ACT). A 'broad-based land tax' refers to a specific tax levied on the value of all land (i.e. owner-occupied housing would not be exempt).

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1   The corporate income tax is the focus of a forthcoming report referred to in this document as Tax and Transfer Policy Institute (2020).

Executive summary

Household savings are a vital component of our economy. They enable individuals to achieve the consumption they desire, including through retirement, while insuring against adverse life events or periods of low income. The intergenerational transfer of savings is a means for families to assist their children. Household savings also contribute to the pool of capital that finances business investment and infrastructure, supporting national productivity and living standards.

Taxes influence how much people save and the types of assets in which they choose to invest. In Australia, there is no consistency between the taxation of different forms of savings, with some savings vehicles, like the family home or superannuation taxed lightly or subsidised, while others, like bank deposits, taxed heavily.

Some savings income, such as bank interest or rental income, is taxed as personal income at an individual's marginal rate while others have special arrangements, such as stamp duties on property sales, dividend imputation for domestic shares or the concessional tax regime for superannuation.

Some savings tax arrangements are progressive, taxing higher incomes more heavily, and some are regressive. Some favour the old but are punitive for the young.

The current tax arrangements are inefficient, inequitable and distort the flow of savings. The system is complex and encourages Australians to engage in costly tax planning schemes.

The goal of this report is to provide a framework for improving the taxation of savings in Australia over the medium to long term and to demonstrate a consistent approach for evaluating policy proposals to change existing savings taxes. It does so by tackling three questions:

- **What is the ideal arrangement for taxing savings (chapter 2)?** The paper outlines the findings of the optimal tax literature and the major government tax reviews in Australia and abroad (e.g., Henry Tax Review (Commonwealth of Australia 2010), the 2015 Tax White Paper (Commonwealth of Australia 2015) and the Mirrlees Tax Review in the UK (Mirrlees et al. 2011)) and develops a set of four 'policy rules' that can be used to evaluate savings tax design and policies.

- **How does the current system of taxing savings measure up against that ideal (chapter 3)?** The existing system is assessed against those principles, with the Marginal Effective Tax Rates (METRs) calculated for the major types of savings held by Australians. METRs quantify the extent to which distinct forms of savings are taxed differently.

- **How should the current system be reformed (chapter 4)?** This report argues the best approach to taxing savings is a dual income tax system, where the income from most forms of savings is taxed at a low, flat rate, separate to taxes on labour income (which is taxed through the personal tax system). While that should be the long-term goal, the report identifies reforms that can be implemented in the short-term, that improve the existing system and would form intermediate steps towards a dual system of income taxation. Further investigation of these reforms should be a priority for both federal and state governments.

Four key principles for taxing savings

- **Savings should be taxed at a lower rate than labour income.** Savings demand a different tax treatment to income from wages, since they have usually already been taxed once as wages.

  The impact of savings taxes compounds over time, thus the impact of savings taxes on future consumption can be much larger than the headline rate of tax. For long-term savings, such as investments intended to fund retirement, the erosion from the compounding effect of tax on financial returns is significant. In addition, savings taxes are generally applied to nominal income, rather than to the real return after inflation. This generates an effective tax rate on the real return of savings far greater than when a similar rate is levied on personal earnings. In this way, inflation exacerbates the compounding effect of taxes over time.

  Although the public finance literature includes two famous studies that draw on these principles to show that savings should not be taxed at all, this report does not come to this conclusion – in part because the theoretical results are derived in a highly stylised framework, and in part due to specific features of the Australian economy (such as Australia's openness to international capital flows and the compulsory nature of the Australian superannuation system). Instead, this report concludes that a range of tax rates from 5 per cent to 20 per cent on the return to savings could be appropriate, with lower rates being more efficient but higher rates raising more revenue and achieving more short-term redistribution.

- **Most different types of savings should be taxed at close to the same effective tax rate.** Individuals should be able to invest in assets that best suit their preferences for risk, return and liquidity rather than to minimise tax. Taxing different asset classes at the same rate also promotes the efficient use of capital throughout the economy, promoting long-term growth. There are arguments for a lower tax rate for superannuation, because it is held long enough for the compounding impact of tax to reduce returns and because of the interaction of superannuation income with the age pension means tests. There are also arguments for higher land taxes. However, these arguments do not justify the very large divergence in tax rates observed in the current Australian tax system.

- **Savings income should be taxed at a rate that is independent of the tax rate on income from other sources**. Internationally, there are two approaches to taxing savings. The comprehensive income tax approach uses a single tax schedule for taxing all sources of income. The modular or dual income tax system taxes income from savings independently of taxes levied on other income, either at a flat rate or according to a second tax schedule. While each has its merits and disadvantages, the modular approach is preferred for Australia because it removes the existing incentives to minimise taxes by shifting savings income from one financial year to the next or splitting it amongst family members.

- **Taxation of savings should focus on the income it generates, not the total stock of assets.** Australia's tax system is built on taxing income and there would be significant transition costs in shifting to a wealth tax. Wealth taxes have a similar economic effect to taxes on savings income but can create difficulties for those who are 'asset rich but income poor'. Estate taxes are a common international exception to this approach. Even when marginal estate tax rates are set very high, they typically raise relatively little revenue. They are best seen as a potential complement to taxes on savings income, rather than as a model for savings tax.

How are savings currently taxed in Australia?

The majority of Australian household savings are in owner occupied housing (41% of total wealth), superannuation (17%) and investment properties (16%). Bank accounts (5% of total wealth) and shares held outside of superannuation (2%) are a relatively small share of existing assets.

Australia has completely different methods of taxing these different assets. Owner occupied housing is subject to stamp duty while new housing is treated as a consumption good through the GST. Rental income from investment properties, by contrast, is captured by personal income tax. Realised capital gains (on both investment properties and shares) are also taxed as personal income, but are discounted by 50%. An entirely separate set of tax arrangements has been constructed for superannuation, which are typically much lower than the taxes on other investments. There are also special rules for the tax treatment of dividends, negative gearing and trusts.

The result is widely varying tax burdens on different investments. This report calculates the Marginal Effective Tax Rate (METR) for each asset type, estimating the total impact of the various taxes on their returns. Figure 1 shows the METRs for major Australian asset types for a 20-year investment.

Figure 1 Marginal Effective Tax Rates (METRs) on different Australian asset classes

Personal income tax rate
■ 0.0% ■ 21.0% ■ 34.5% ■ 39.0% ■ 47.0%
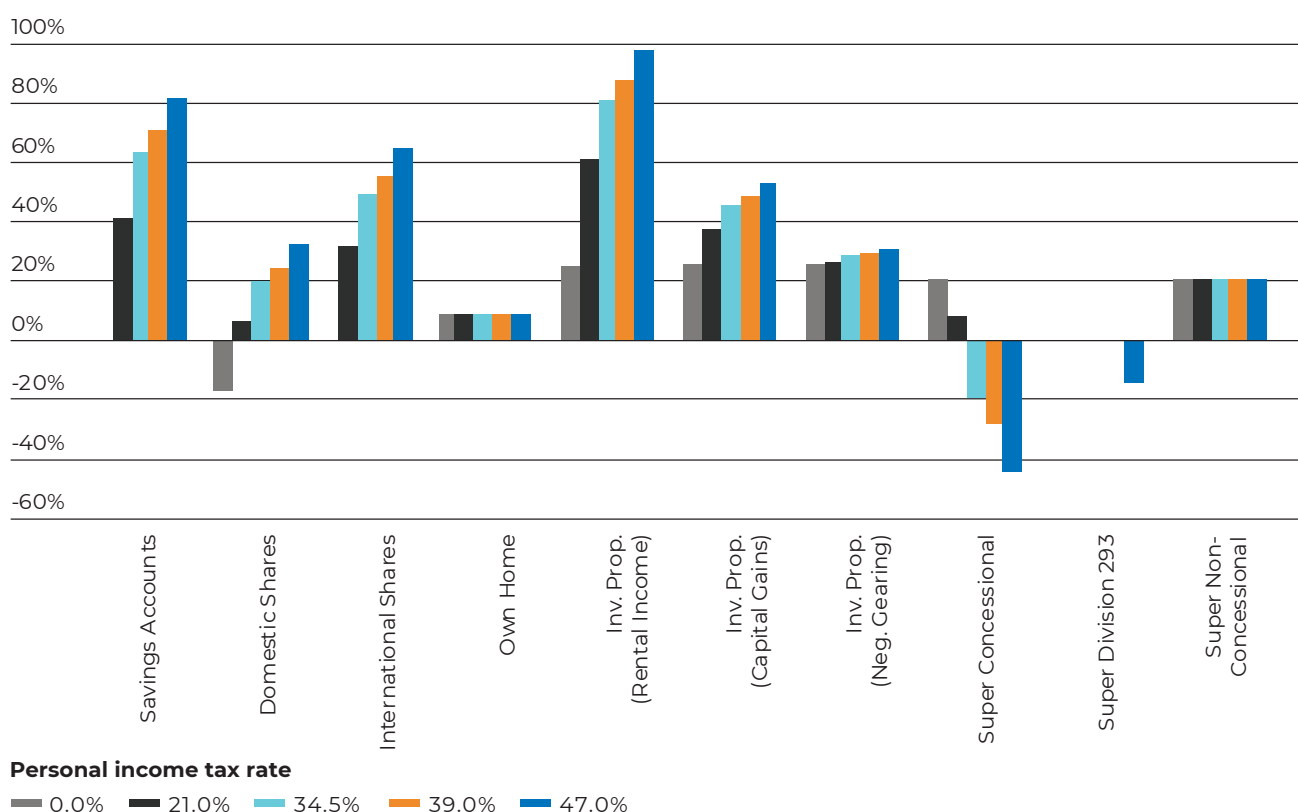
Note: This calculation incorporates the effects of the personal income tax (including superannuation taxes, imputation credits and capital gains discounts), land taxes and stamp duties. This calculation is described in detail in Chapter 3.
Source: Authors' calculations.

Superannuation is strongly favoured by the Australian tax system. For someone on the top 47% marginal rate, investment in superannuation receives a large effective subsidy. This reflects the concessional 15% tax on superannuation contributions from pre-tax earnings, as well as the concessional rates on superannuation earnings. People in the bottom two tax brackets pay a positive tax rate for superannuation savings.

Owner occupied housing faces a marginal effective tax rate of 9 per cent, mainly reflecting stamp duty (the calculation does not include council rates which can be considered a fee for service).

Interest income is taxed at a punitive rate, particularly for high income earners. The 82% METR for those in the top tax bracket reflects the compounding impact of savings taxes on returns over a long period. Investment property is subject to personal income tax on both rental income and capital gains, while it also subject to land taxes and stamp duty. For high income earners, the METR on rental income is just under 100%. Negative gearing reduces the METR but it is still above 40% for most income earners.

The tax rate on domestic shares depends on whether the tax system is viewed from a domestic or an international perspective. From a purely domestic viewpoint, dividend imputation credits are simply a refund of the corporate tax paid. The tax paid on shares is equivalent to that paid on interest from a bank account. However, from an international perspective, imputation credits are a subsidy to domestic shareholders over foreign shareholders. As a small open economy, it makes sense to view Australia's taxation of shares from an international perspective and this shows the marginal tax rate is low, ranging from 32% for someone in the top tax bracket to a subsidy of 17% for someone with taxable earnings below the tax-free threshold.

These different tax treatments result in vastly different flows of tax revenue. Superannuation taxes raise $6.8bn but grant concessions to investors worth $16.2bn. Dividends, interest income and capital gains each raise just under $3bn a year while the interest deductions claimed on negatively geared property investment mean there is a net $1.2bn subsidy. The biggest tax on savings is stamp duty on housing sales, which raises $20.6bn, while land taxes raise $7.3bn (see Table 4.2). The net impact on revenue from all savings taxes is $26bn.

Tax principles and Australian savings tax practice

Australia's system for taxing savings is set against the four principles of best practice in the summary Table 1.

Table 1 Principles for tax reform

Principle of tax design	Existing tax system	Principle for reform
Principle 1: Savings should be taxed at a lower rate than labour income, but more than zero.	The average METR across all assets is around 7.5 per cent.	The average METR is about right, so changes should be roughly revenue neutral.
Principle 2: Different types of savings should be taxed at about the same rate.	Significant variation in the tax rate between types.	Changes to the existing tax system should reduce the tax paid on high tax assets (such as investment properties) and increase the tax rate on low tax assets (such as superannuation).
Principle 3: Where possible, the tax rate on income from savings should not depend on income from other sources.	Australia currently has a mixed system where some savings are taxed as personal income while other savings are taxed at a rate that is independent of other personal income.	Where possible, tax the income from savings independently of taxes on other income sources.
Principle 4: Base savings taxes on the return to savings, as opposed to the total stock of assets or taxing estates.	This is the basis of the current tax system.	Continue to use the income from savings as the main tax base. Remove stamp duties.

Source: Authors' compilation.

When averaged out across all asset classes, Australian savings face an effective marginal tax rate of 7.5 per cent, which is broadly compatible with the recommendations of the optimal tax literature. This suggests the huge gaps between highly taxed and lowly, or even negatively, taxed savings could be narrowed in a revenue-neutral reform package.

By far the biggest tax concessions are granted to superannuation. While there is an argument for superannuation to be taxed at a lower effective rate than other savings, the existing tax concessions are poorly targeted. The main rationale for a lower rate is that superannuation is typically held for longer time periods. However, the existing tax concessions are primarily targeted towards older workers, who hold superannuation for a shorter period than younger workers. The study demonstrates that the METR for superannuation for someone aged under 20 years with 45 years of working life left is 36%, whereas for someone aged 55 to 59 years, with just five years before reaching the pension phase, there is a tax concession worth 111% of their savings. (See Table 4.4) An obvious direction for reforming the existing system is to increase the tax rate on the lowest taxed savings types (including superannuation) and decrease the tax rate on the most heavily taxed savings types.

In principle, there is a trade-off between equity and efficiency when designing savings taxes. Taxing savings at the same rate for all individuals is efficient as it removes the existing incentives to split savings income among family members or across financial years. On the other hand, taxing the savings of those with higher income or higher net wealth may improve the progressivity of the tax system.

However, as shown in Figure 2, the overall distributional impact of the current savings tax system is already regressive, with the lowest average METR paid by individuals in the highest two tax brackets. Someone in the 21% tax bracket, by contrast faces an average METR of 13.8%. The "partial equilibrium" approach to calculating the METR for different investors and assets has limitations (discussed in detail in Chapter 3), however this analysis suggests that taxing savings at a single flat rate would be both simpler and more progressive than the existing tax system.

Figure 2 Distributional incidence of existing savings taxes
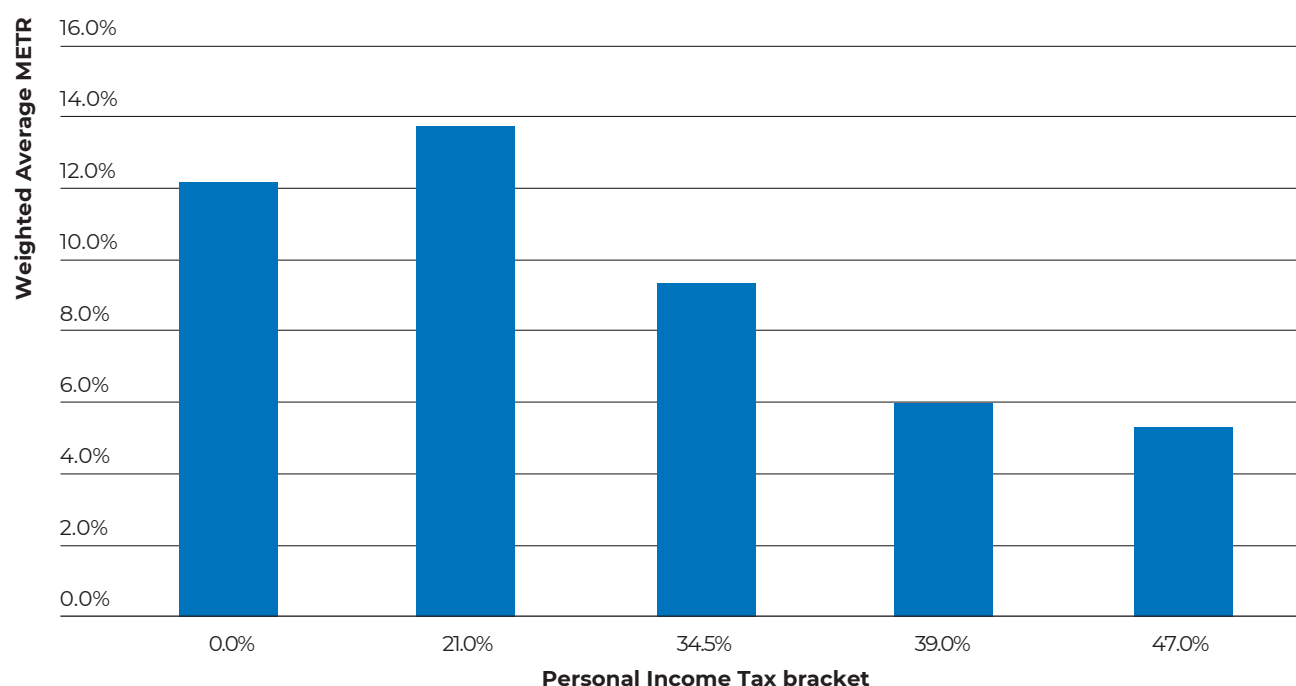
Source: Author's calculations. See Table 3.1 for breakdown of calculation.

Directions for reform

The taxation of savings is politically contentious with strong lobby groups defending particular savings arrangements, whether that is negative gearing of investment property, dividend imputation or superannuation concessions. Yet, it makes no sense to consider the tax implications of these individual savings options without also taking into account how they shape the competitive landscape, how they influence the choices of individuals and how they contribute to the efficient mobilisation of savings across the economy as a whole.

This report has considered this much broader picture of Australia's system of taxing savings and finds that the two main directions for reform are to bring the tax rates on different asset classes closer together and to tax the income from savings independently from income from other sources.

Based on these principles, the ideal way to tax savings in Australia would be to implement a dual income tax. Under such a system, all labour income is taxed under a progressive tax schedule, similar to the existing tax system, while all other income (including interest, dividends, rental income, capital gains and earnings within superannuation) is taxed independently under a second tax schedule (which is either taxed at a single flat rate, or a much less progressive rate than labour income). Dual income taxes are sometimes referred to as 'Nordic tax systems' although elements of a dual income tax have been implemented in several other countries.

A dual income tax is more efficient, simpler, and fairer than the existing (regressive) tax treatment of savings. Implementing a dual income tax should be seen as a realistic policy goal in the medium term. A major attraction of the policy is that it has already been successfully implemented in other countries.

Another attraction of a dual income tax is that it is possible to move towards this system in stages. Each of the following reforms would move towards this goal and deserves a full evaluation.

- Better targeting of the concessional tax treatments currently given to superannuation such as:
  - Making all superannuation contributions from post-tax income (potentially with an upfront subsidy, but a smaller subsidy than currently exists).
  - Taxing earnings in the retirement phase and using the resulting revenue to reduce the tax rate on all superannuation earnings.
  - Taxing superannuation at a lower annual rate for younger Australians (to account for the fact that they hold superannuation assets for a longer period).
  - Removing 'catch-up provisions', which favour older Australians in contrast to the principle of providing incentives to hold superannuation for a long period.
  - Lowering the annual concessional contributions cap.
- Replacing dividend imputation with a flat tax rate on dividends. This will remove the differential tax rate between those working and those retired, as well as the differential between domestic and international shares.
- Removing stamp duties, which significantly distort the decision of when to move house, reducing the ability of people to switch jobs and are a highly inefficient revenue source. Land taxes should be extended to owner-occupied housing with tax free thresholds removed.
- Including owner-occupied housing in means tests for pensions and other age-related spending. The current exemption is unfair, resulting in government support being provided to people with a high level of personal wealth while different levels of support are offered to people with similar levels of total assets.

1 Introduction

Savings afford significant benefits to private individuals, households and society as a whole. Savings allow individuals and families to accumulate wealth before retirement and to counteract unexpected income volatility over their lifecycles (consumption smoothing). Savings can also be passed on to future generations through gifts and bequests. For the broader public and the economy more generally, savings provide a source of money for investment that is crucial for economic growth and future well-being. Savings taxes are an important revenue source for Federal and State Governments. As Australia's fourth largest tax base, they represent around 6 per cent of total Australian tax revenue.[2]

However, there are significant shortcomings in the design of existing savings taxes that can influence the extent to which people save and the assets in which they choose to invest. The rate of tax paid on different types of investments varies widely and to a much greater extent than supported by economic theory. Moreover, taxes levied by different levels of government can interact with one another in potentially damaging ways.

Fundamental changes occurring within the Australian economy have elevated the importance of ensuring Australian savings taxes are well designed. The most significant is the ageing of the Australian population occurring alongside the maturing of the Australian superannuation system. This will result in a significantly larger share of the Australian population living on private savings (and a significant level of growth in national savings). The ageing population will also put pressure on government budgets – for instance, the Parliamentary Budget Office estimates that the population ageing is expected to reduce annual real revenue growth by 0.4 percentage points and increase real growth in expenditure by 0.3 percentage points (Commonwealth of Australia 2019). Pressure on government budgets has been further exacerbated by the most recent bushfires and on-going pandemic.

The design of savings taxes poses a number of specific challenges. First, the economic incidence of savings taxes can compound over time, and taxes on savings are usually based on the nominal, rather than the real, return from investments. Taken together, this means that taxes on savings can create strong disincentives to save. This observation has given rise to a theoretical literature in economics suggesting that the optimal rate of taxation on savings is likely to be small (and may be zero). While the extent to which this literature can be directly applied to policy is a topic of open debate, it provides insight into why taxing the return to savings at a high rate may be damaging to the economy.

A second challenge is that savings taxes can generate strong incentives for people to choose particular savings vehicles. From the standpoint of economic efficiency, investment in the economy should be determined by the potential returns from an investment (and an individual's relative preference for risk, return and liquidity). Preferential tax treatment for some types of savings gives rise to distortions that result in inefficient capital allocation. In Australia, households accumulate savings through owner-occupied housing (41%), superannuation (17%) and investment properties (16%).[3] At least part of the composition of Australians' savings portfolios is a result of preferential taxation.

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2   In this calculation, the total amount of revenue generated by savings taxes is calculated against a baseline of individuals paying the full marginal tax rate on income. Therefore, annual rental losses on negatively geared properties and concessional tax rates on superannuation reduce total tax revenue. The details of this calculation are reported in Table 4.2.

3   See Section 3.1.

A third consideration is that Australia has become increasingly integrated in the international capital market. Access to global financial markets means any reduction in domestic savings caused by savings taxes is likely to be offset (at least partially) by an increase in international investment. Access to international capital markets also means that savings taxes need to be designed to ensure that Australian savings are taxed at a suitable rate when invested offshore.

A fourth concern is that the accumulation of wealth is highly concentrated (more so than income), which means that savings taxes influence inequality. Australia does not have an inheritance tax. Subsequently, given the large increase in asset values that wealth holders in Australia have experienced over the last 20 years and coupled with their right to pass on their wealth to the next generation tax-free, not taxing savings may lead to increases in inter-generational inequality and immobility.

Finally, savings taxes cannot be designed in isolation. For instance, they must be designed to complement other elements of the retirement income system, such as the rate of compulsory superannuation contributions and means tests for the Age Pension and aged care. Similarly, taxes on housing must also be considered in the context of the legal frameworks surrounding housing and land development.

Considering these challenges, the goal of this document is to offer a framework for taxing savings that is well-grounded in economic theory and tailored to the challenges facing modern Australia. Chapter 2 examines empirical and theoretical literature on the optimal taxation of savings to identify simple rules that can be used to guide policy decisions. This chapter is split into four sections that examine; the optimal total tax rate on savings, whether the tax rate should vary across savings types, whether savings taxes should be levied through the personal income tax, and whether savings taxes should focus exclusively on the income from savings.

Chapter 3 describes the way savings are currently taxed in Australia. To enable an appropriate comparison between the total tax burden on different savings types, this report calculates the Marginal Effective Tax Rate for a variety of assets. This reveals the effective tax burden varies significantly across asset types, with superannuation and owner-occupied housing treated most favourably, and bank accounts and shares treated least favourably. This chapter also examines how the marginal effective tax rate on savings can vary within asset class by changing the level of gearing of investment properties, the period that the asset is held, the level of inflation or the rate of stamp duty paid on property.

Chapter 4 presents some directions for policy reform in Australia and concludes that savings are currently taxed at an appropriate amount 'on average', but that some savings are taxed at very high rates and some at very low (even negative) rates. This suggests that a revenue neutral reform would be possible (and desirable) where tax rates were raised on the savings types most heavily favoured by the existing tax system and lowered on the savings instruments currently taxed most heavily. A dual income tax is proposed as the ideal medium-term policy solution. A number of incremental changes to existing savings taxes are also considered that would improve the performance of the Australian tax system in the short-term and could be used as a transition path towards a dual income tax.

This report concludes with four Appendices that support the main report. Appendix A reviews the empirical literature for three key research questions that influence the design of savings taxes: the elasticity of total savings with respect to savings taxes; the extent to which people re-arrange their investment portfolios in response to tax changes, and; whether the marginal dollar of investment in Australia is domestic or foreign. Appendix B summarises important potential research questions that arose in producing this report which are yet to be resolved. This is presented as a guide for ongoing research. Appendix C contains a detailed description of existing Australian savings taxes. Appendix D is a brief review of savings taxes in other countries.

2 The theory of taxing savings

This chapter identifies the key arguments from economic theory that identify how savings should be taxed. It then converts these results into four key principles that can be used to guide Australian tax policy. To do so, the chapter draws heavily on theoretical results from the optimal tax literature as well as from a large empirical literature. It is also strongly influenced by existing reviews of tax systems in Australia and around the world (for example the Australia's Future Tax System Review (Commonwealth of Australia 2010) and the Mirrlees Tax Review (Mirrlees et al. 2011)).

While the primary aim of this chapter is to provide a framework to assist the design of public policy, it should be noted from the outset that there remains some uncertainty around how best to tax savings. As a result, a key secondary goal of this chapter is to distinguish areas of tax research that have been theoretically and empirically settled from those still actively debated. Key priorities for future research are summarised in Appendix B.

This chapter is organised into four sections that discuss key questions of tax design:

- Section 2.1 - At what rate should income from savings be taxed? Should it be taxed at a rate similar to labour income (income from employment), or at a rate closer to zero?
- Section 2.2 - Should all savings instruments be taxed at the same rate? Are there compelling reasons to give preferential treatment to some savings types?
- Section 2.3 - Should tax rates on savings depend on income from other sources (like existing taxes on interest), or should they be independent of other income (like existing taxes on superannuation)?
- Section 2.4 - Should savings taxes focus exclusively on income from savings or include other tax bases like the stock of savings, endowments (estate taxes), and/or the transfer of property (stamp duty)?

2.1 At what rate should income from savings be taxed?

The first key question in designing savings taxes is to determine the extent to which income derived from savings should be taxed. Historically, the stated goal of tax design was a broad-based personal income tax in which all forms of income (including income from savings) were taxed using a single progressive scale.[4] Under such an approach, income from savings was taxed at the same rate as labour income. Auerbach (2010) suggests that this approach was considered best practice up until the 1970s.

Since then, numerous theoretical arguments have been raised that highlight the weaknesses of this approach (discussed at length below). This has resulted in many countries changing their tax systems to reduce the effective rate at which savings income is taxed. However, considerable disagreement remains as to the appropriate tax rate on savings.

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4   This approach is also known as taxing Haigs-Simons income based on papers by Haig (1921) and Simons (1938).

This report has identified seven key arguments in the public finance literature that influence the optimal tax rate applied to savings. These are:

- The extent to which savings taxes restrict the ability of Australians to smooth consumption across their lifetime.
- The extent to which savings taxes reduce investment in Australia.
- The importance of capital investments in Australia being financed by Australian investors.
- Whether savings taxes should be used to reduce economic inequality.
- How the design of savings taxes should respond to inflation.
- Whether it is feasible for the tax system to distinguish between labour income and savings income.
- Whether savings taxes can be avoided by investing overseas.

These factors are now discussed in turn, and where possible, empirical evidence is used to assess their relative importance to Australian policy design.

2.1.1 Factor 1: Do savings taxes reduce the ability to smooth income across a lifetime?

A major consideration in the design of savings taxes is that they make saving for future consumption less appealing. This reduces the ability of people to smooth consumption over their lifetime and can reduce individual utility (even if total lifetime income remains unchanged).

To understand the extent to which savings taxes reduce an individual's ability to smooth consumption over their lifetime, consider an example in which someone can choose to consume $1 today, or save that money and spend it in the future. In the absence of taxes and with an annual interest rate of r, they could consume after T years:

$$C_{No\ Tax} = \$1*(1+r)^T$$

While in the presence of an annual tax on savings income (τ) they would be able to consume:

$$C_{Tax} = \$1*(1+(1-\tau)r)^T$$

Comparing the ratio of these figures gives the proportion of pre-tax consumption that is possible in the presence of an annual tax on savings:

$$C_{Ratio} = \left(\frac{1+(1-\tau)r}{1+r}\right)^T$$

This ratio will decrease over time, which means that the impact of savings taxes on intertemporal consumption decisions can potentially become very large for long-term investment decisions. For very long time periods (T→ ∞), this ratio will approach zero, which means that the implied tax rate on savings income approaches one hundred per cent. This result is the key intuition of the Chamley (1986) paper which argues that any positive tax rate must result in a very high effective tax rate over the long-term. Therefore, the optimal tax rate on savings must be equal to zero.

To understand the importance of this observation to the practical design of savings tax, it is useful to observe how quickly the implied tax rate approaches 100 per cent. Table 2.1 displays the implied tax wedge between current and future consumption ($1 - C_{Ratio}$) for four combinations of annual rate of return (r) and annual tax rate (τ).[5] The lower rows of the table are for periods longer than a human lifespan and should therefore be interpreted as the tax rate on consumption by an individual's heir.

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5   This table is based on a similar calculation in Banks and Diamond (2010).

Table 2.1 The impact of an annual tax on savings increases over time

Years	r=5%, τ=15%	r=10%, τ=15%	r=5, τ=30%	r=10, τ=30%
1	15.0%	15.0%	30.0%	30.0%
5	16.3%	17.5%	32.6%	34.1%
10	17.9%	20.9%	34.7%	39.3%
20	21.4%	28.2%	40.1%	49.9%
40	29.1%	43.2%	51.0%	68.4%
60	36.9%	56.3%	61.1%	81.2%
80	44.5%	66.7%	69.8%	89.1%
100	51.6%	74.7%	76.9%	93.7%
200	76.2%	93.6%	94.4%	99.6%
500	97.2%	99.9%	99.9%	100.0%
1000	99.9%	100.0%	100.0%	100.0%

Note: This example excludes inflation.
Source: Authors' calculations.

Table 2.1 shows that the tax wedge between current and future consumption eventually reaches 100% for all combinations of the interest rate and tax rate. For shorter time frames, the tax wedge between current and future consumption is larger than the annual tax rate but will typically be significantly less than 100%, depending on the period of investment, the tax rate and the annual rate of return. This means that if savings decisions are primarily designed to finance large purchases in the short to medium-term (such as saving to buy a car) then the tax wedge on consumption will be relatively similar to the nominal tax rate on savings. However, if people primarily save to finance consumption in retirement, then the tax wedge will be much larger than the nominal tax rate. Finally, if individuals save in order to provide bequests to their descendants, then the implied tax rate on future consumption will be much higher than the annual rate on savings and possibly close to 100 per cent.

Savings taxes as an interpretation of Atkinson-Stiglitz (1976)

Taxes on savings are equivalent to taxing future consumption at a higher rate than current consumption. If future consumption and current consumption are considered as different classes of consumption goods, then the design of savings taxes can be understood as an extension of Atkinson and Stiglitz (1976). They show that a flat rate of indirect taxes combined with a progressive income tax is always a better way to target equity goals than differential commodity tax rates. For instance, their work suggests that the flat rate of GST levied in Australia is better than the multilevel Wholesale Sales Tax that preceded it. When applied to savings taxes, the Atkinson-Stiglitz result suggests that consumption in different periods should be taxed equally (and that society's equity goals should instead be pursued through a progressive income tax on yearly income).[6] This argument applies regardless of whether Australia is considered an open or closed economy and is particularly relevant for long-term savings.

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6   Though the Atkinson-Stiglitz (1976) paper is commonly cited as an argument for low capital taxes, Stiglitz (2017) cautions against this interpretation and suggests that the separability assumption used in the paper is questionable when considering savings taxes.

Do people reduce savings in response to a savings tax?

Savings taxes can create a disincentive to save and this effect can be particularly strong for long-term investments. However the relevance of this to policy depends crucially on the extent to which people reduce savings in response to higher savings taxes. If savings taxes are observed to significantly change savings behaviour, then the design of savings taxes will have a large impact on social welfare outcomes (and there is a strong argument to have a low tax rate on savings).

Many studies have attempted to estimate the elasticity of savings with respect to the tax rate on savings, which is a measure of how people change their savings behaviour in response to changes in savings taxes. These studies are summarised in Appendix A. While there is some variation in estimated elasticities, the studies suggest the response to higher tax rates on savings is relatively small.

In interpreting these estimates, it is useful to note that an individual's decision to save is influenced by factors other than total after-tax return. For instance, Banks and Diamond (2010, p. 59) identify alternative ways to model savings and consumption, including:

• precautionary savings, in which people save a lot in early years to guard against unemployment or illness
• time inconsistent models that are typically associated with people under-saving
• utility of wealth models that are better predictors of the savings behaviour of high wealth individuals.

Banks and Diamond (2010) also suggest that for many individuals, savings behaviour is strongly related to framing. They point to research showing that default or opt-out savings accounts have a large impact on savings behaviour. For instance, Chetty et al. (2014) suggests that around 85% of individuals are passive savers who are unresponsive to taxes and subsidies but responsive to changes in the default savings option of their retirement plan.

The relatively small elasticities found in the empirical literature may not be informative for large-scale changes in savings tax rates and their long-term effects. Responses to changes in the structure and rate of savings taxes may take time. Estimated short-run elasticities may underestimate the true degree of responsiveness to changes in the rate of savings taxes. Compositional effects also need to be considered. Studies generally find large groups of non-responsive individuals and small groups of people who respond a lot. If the non-responsive group takes some time to learn about the tax changes and their behaviour only changes at a later time, short-run elasticities may underestimate long-term responses. This is identified as an important area for future research in Appendix B.

In the Australian policy context, the concern that savings taxes will stop people from smoothing consumption across their lifetime must be considered alongside the design of compulsory superannuation contributions which forces people to save for retirement and limits the extent to which savings taxes may result in under-saving for retirement. The Grattan Institute (Daley and Coates 2018) suggests the planned increase in compulsory contributions to 12% will force many people to save too much for retirement. If true, this implies responses to savings taxes are unlikely to result in too little lifetime savings.[7]

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7   While there is disagreement regarding the main conclusions of the Daley and Coates paper, which argues that superannuation is forcing people to save more than they would like (Podger 2019), these critiques still suggest that superannuation forces people to save close to an ideal amount. Therefore, the compulsory nature of superannuation is a strong safeguard against very low levels of retirement savings.

Summary: Do savings taxes stop Australians from saving to finance future consumption?

Savings taxes reduce the incentive to accumulate savings and the effective tax wedge between current and future consumption can become very large for long-term investments. These are strong arguments for taxing the return to savings at a rate lower than other income, and are particularly strong for assets that are held for long periods of time. However, the extent to which savings taxes result in too little lifetime savings is limited by compulsory savings required by the Australian superannuation system.

2.1.2 Factor 2: Does taxing savings reduce the level of investment in Australia?

Another important consideration in savings taxes design is the extent to which they reduce the overall level of investment (capital stock) in Australia. If savings taxes significantly reduce investment in Australia, this could reduce Australian labour productivity and have a large negative impact on all Australians, particularly future Australians. If this is the case, then the optimal tax rate on savings is likely to be close to zero. On the other hand, if savings taxes have a relatively small impact on investment the optimal tax rate on savings is likely to be higher.

For savings taxes to reduce the level of investment in Australia, two things must occur:

- savings taxes must reduce the total amount that Australians save
- a reduction in Australian savings must not be replaced by inbound foreign investment.

As discussed above, a relatively large econometric literature attempts to estimate whether higher taxes on savings reduce the level of investment (summarised in Appendix A). This literature suggests that increasing taxes on savings will result in a positive but small reduction in domestic savings.

The second question, whether any reduction in Australian investment can be replaced by foreign investment, depends on how easily Australian businesses can access the global capital market. This is best understood by comparing so called 'closed economy' and 'open economy' models.

Taxing savings in a closed economy

In a closed economy investments are fully financed through domestic savings. Therefore, a tax on savings is equivalent to a tax on investment (and is usually referred to simply as a tax on capital). In a closed economy, there are strong arguments to suggest that savings should be taxed at a low rate (or not at all) as a savings tax will reduce the total capital stock and result in lower productivity.

This scenario is well demonstrated in Judd (1985) using a model in which some people have savings and others do not. In this model it is impossible to improve the incomes of those without savings by levying a tax on those with savings.[8] It also produces the surprising result that workers without savings are better off if taxes are raised through a labour income tax rather than a tax on savings.

The intuition behind this result is that the tax on capital lowers the savings rate among those who hold capital, which lowers the capital stock in the economy, which in turn lowers workers' wages.[9] Importantly, this reduction in wages is always larger than the revenue raised

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8   There is an open-economy version of the Chamley-Judd theorem (Jones 2017) but it concerns a situation in which foreign capital is taxed at the same rate as domestic capital. However, this is not the case in Australia where the tax rate on domestic savings is primarily driven by the personal income tax and the tax rate on international capital is determined by the corporate income tax.

9   If workers and capital are complements in production, then a reduction in capital (fewer buildings, vehicles, machines, tools etc.) will reduce the output of workers and thereby reduce wages.

by the savings tax, so even if all of the revenue is given to workers, they are still worse off than if no tax were levied. An alternative way to interpret the Judd (1985) paper is that the general equilibrium incidence of a savings tax falls entirely on labour. Given that workers bear the final incidence of savings taxes, they would prefer to pay a tax on labour income directly.

The work of Judd (1985) and Chamley (1986) has generated a significant economic literature investigating the circumstances under which the zero-capital tax result is maintained. Various extensions considered in the literature include:

• Incorporating a decision to develop human capital as well as personal wealth (Stantcheva (2017) and Jacobs and Bovenberg (2010)).

• Considering finite lifetimes and bequests (Piketty and Saez 2012).

• Allowing the intertemporal elasticity of substitution to vary from unity—a restriction of the Chamley-Judd model (Straub and Werning 2020).

• Including wealth directly in the utility function of savers (Saez and Stantcheva 2018).

In each case, these extensions resulted in a positive optimal tax on savings. Therefore, the zero-tax result may not be directly applicable to policy.[10] Nevertheless the optimal tax results of Judd and Chamley provide a useful benchmark to demonstrate how savings taxes can be economically damaging if they significantly reduce domestic investment.

Taxing savings in a small open economy

If Australia is viewed as a small open economy with full capital mobility and a tax is imposed on domestic savings, reducing the amount of Australian savings, domestic investment may be financed through foreign investment markets. If this is the case, **and** domestic capital is perfectly substitutable with foreign capital, then the tax rate on savings has no impact on the total level of investment in Australia. This is shown in Figure 2.1, where a tax on domestic savings reduces the level of domestic savings from "SavNo tax" to "SavTax", but this reduction is matched with an equally sized increase in foreign investment, which leaves total investment in Australia unchanged.

Figure 2.1 Taxing savings in a small open economy

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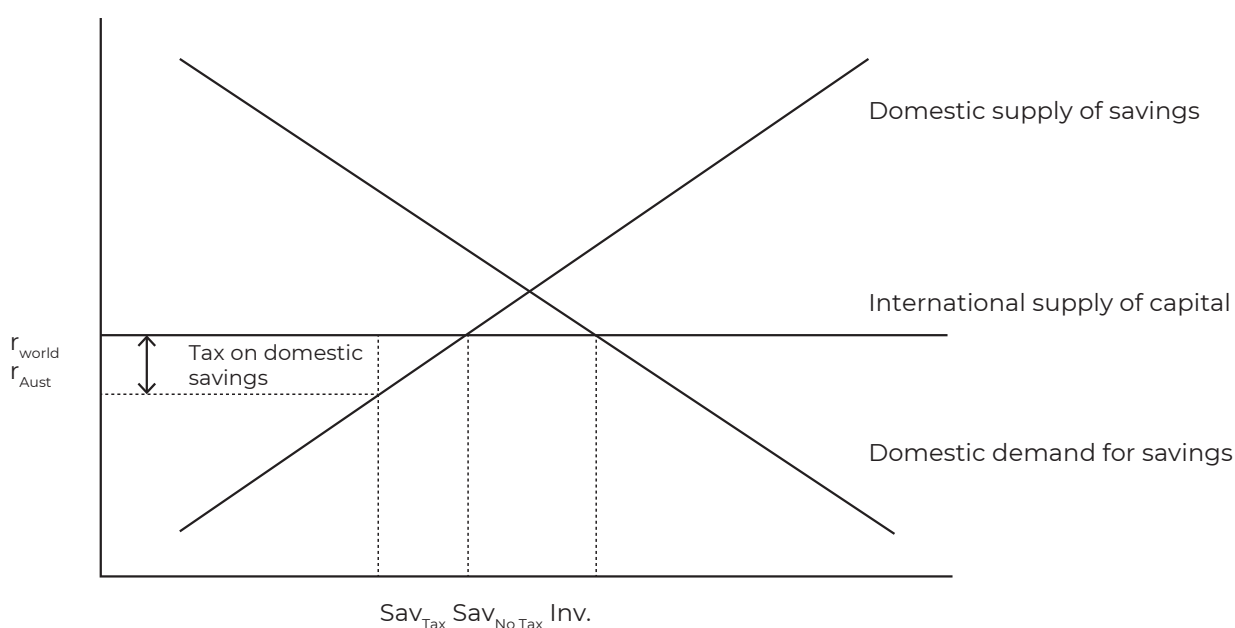
10 Some tax policy experts, such as Mankiw et al. (2009), consider the zero-capital taxation result an appropriate guide for policy, but this is a minority view in the literature.

The intuition behind this result is that there is a different tax rate on domestic savings and international capital. The tax rate on savings is primarily determined by the personal income tax and the tax rate on international capital is primarily determined by the corporate income tax. If foreign investment into Australia faces relatively low barriers, then the tax rate on foreign investment is most important for determining capital stock in Australia.

Within the small open economy framework, savings can be taxed without reducing the level of domestic investment. In this case, the ideal tax rate on savings will be higher than in the closed economy setting. It results in more of Australia's investment being provided from overseas and reduces the income of Australia's savers.

Is an open or closed economy a better guide for savings tax policy in Australia?

The preceding sections showed that in a closed economy the tax rate on savings can have a significant impact on the level of investment in an economy, and if this is the case, the ideal tax rate on capital will be relatively low. On the other hand, in an open economy taxes on savings have very little impact on the rate of investment and so the optimal tax rate on savings can be higher. Therefore, it is crucially important to determine whether the Australian economy is better understood through an open or closed economy framework.

Australia represents a relatively small share of the global capital market and is both the recipient and the source of significant amounts of foreign direct investment.[11] This suggests that the small open economy approach is the more appropriate framework. However, there are reasons to question how far the open economy approach can be directly applied. First, domestic savings may not be completely substitutable with foreign investment. Investors often have a preference for investing in their own country (known as home equity bias[12]) and so attracting investment from overseas may require paying a higher rate of return. There are also institutional constraints that limit international investment in the small business and real estate sectors that mean domestic savings are particularly important sources of funds in these areas.

The fundamental characteristic of the open economy model is that foreign investors provide the marginal dollar of investment. If this is the case, then imputation credits (which are valued by domestic investors but not foreign investors) will not influence the value of shares. This topic has been the subject of many empirical studies (which are summarised in Appendix A). These studies tend to show that imputation credits are valued at a relatively low rate, and therefore the marginal investor in Australian companies is likely to be international in the majority of cases.

Importantly, Murphy (2017) discusses the policy implications of the situation in which the marginal investor is usually international (but sometimes domestic). In particular, the paper shows that as foreign investment represents around a third of the total Australian capital stock, and the marginal investor is international in the majority of cases, the supply of foreign capital must be much more elastic than the supply of domestic capital. The paper therefore concludes that the international approach is appropriate for analysing tax policy even in the situation where domestic savers are the marginal source of investment in some cases.[13]

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11   Australia accounts for 1.5 per cent of total inbound FDI and 2.0 per cent of outbound FDI globally in 2017 (OECD 2019).

12   French and Poterba (1991) and Daly and Vo (2013).

13   Sorenson and Johnson (2010) also argue that this assumption is a reasonable basis for policy in Australia.

Summary: do savings taxes reduce investment in Australia?

The previous sections showed that:

- The total amount of Australian savings is negatively related to the tax rate on savings. However, this response is likely to be 'small'.
- In most situations the marginal investor in Australia is foreign, and so any reduction in domestic savings will be largely offset by foreign investment.

Taken together these findings suggest that taxes on domestic savings only have a modest impact on investment in Australia.

2.1.3 Factor 3: Is it important that Australian assets be Australian owned?

The previous section argued that small reductions in domestic savings will not have a large impact on the Australian economy because this capital can be replaced by foreign investment. One potential limitation to this argument is that there may be broader social reasons to prefer investments to be held by Australians. For instance:

- National security could be compromised if key assets (such as ports or telecommunications assets) were owned by foreigners.
- High levels of foreign investment may increase the danger of financial crisis driven by capital flight.
- National pride over the ownership of iconic Australian companies.

Australia has historically maintained a variety of barriers to foreign investment for these reasons, including limits on the equity share of Australian companies held by foreigners (particularly when privatising government assets), requirements that board members be Australian, and requirements for most major foreign investment actions to be reviewed by the Foreign Investment Review Board (Hanratty 1996). While there has been a general trend towards liberalisation over time, some restrictions remain in place (The Senate 2013). Some new barriers to international investors have also recently been placed on the real estate sector.[14]

Using the standard approach to economic evaluation, consumers are assumed not to have preferences for whether Australian investment is financed domestically or internationally. Under this (standard) approach, asset ownership will not play an important role in savings taxes design. However, if this is not the case (and Australians have a strong preference for investments to be locally financed) any reduction in domestic savings will have a negative welfare impact even if domestic savings are replaced, dollar for dollar, with foreign investment. This would suggest a lower optimal tax rate on savings than would otherwise be the case.

2.1.4 Factor 4: Can taxes on savings reduce economic inequality?

A common argument in favour of taxing savings is that savings (and income derived from these savings) are less equally distributed than income[15] and therefore savings taxes can reduce economic inequality in the Australian economy. Put another way, policymakers hesitate to reduce the tax rate on savings as the direct benefits of such a change will flow disproportionately to high wealth individuals.

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14 For instance, in the 2017-18 state budget, New South Wales increased the Foreign Investor Transfer Duty payable in addition to stamp duty for foreign investors from four to eight per cent (NSW Government 2018). In addition, the 2017-18 Federal budget announced that the primary residence exemption for Capital Gains Tax will no longer apply for foreign residents (ATO 2019).

15 This is shown in Australia by Roy Morgan (2017) and the ABS release Household Savings and Wealth (ABS. Cat. No. 6523.0), while the international evidence is reviewed by Zucman (2019).

However, the extent to which taxes on savings reduce inequality over the longterm is controversial. Both the Judd (1985) and Atkinson-Stiglitz (1976) models described above find savings taxes are not an effective way to achieve goals of vertical equity. In the Judd model, it is impossible to redistribute income using taxes on savings, while in the Atkinson-Stiglitz framework, any given level of redistribution is better achieved through a progressive tax on labour income and through the transfer system. In short, these results suggest that inequality is better addressed through other parts of the tax and transfer system.

However, there are several situations in which this result may not hold and savings taxes may be an effective means of achieving redistribution. The first is if there is an observed empirical relationship between savings and ability, which means that people who save their income are also likely to achieve a higher level of lifetime income. Taxing savings in this instance is a useful way to target taxes towards those with higher lifetime earning potential (Diamond and Spinnewijn (2011) and Golosov et al. (2013)).

Another key caveat to the Judd (1985) and Atkinson-Stiglitz (1976) results, which suggest inequality cannot be addressed through savings taxes, is that these results are calculated in a long-run steady state equilibrium. This means that even though the optimal tax rate on capital may eventually be zero, taxing savings may still be an effective tool for redistribution in the short to medium-term. For instance, in a calibrated version of the Judd model, Straub and Werning (2020) find that in situations where the long-run optimal tax rate on capital converges to zero, 'this convergence may be very slow, potentially taking centuries for wealth taxes to drop below 1%'. The reason that maintaining existing savings taxes can be effective in the short to medium term is that the existing capital stock is based on decisions that have occurred in the past, and therefore cannot respond to tax changes.[16]

A final argument for using taxes on savings to address inequality is that high levels of wealth inequality may have broader economic and social consequences that can't be easily expressed in a stylised economic model. As argued in Capital in the Twenty-first Century:

> The history of the distribution of wealth has always been deeply political, and it cannot be reduced to purely economic mechanisms (Piketty 2014).

To the extent that high levels of wealth inequality have a broader negative impact on society (such as through concentrated ownership of media outlets, overwhelming financial domination of political influence by a few, or a reduction in market competition etc.) wealth inequality should be treated like any other negative externality, justifying a higher tax rate on savings.

In summary, while the short-run incidence of savings taxes is progressive, there is disagreement within the literature regarding the extent to which savings taxes are an effective tool for achieving redistributive goals over the long term.

2.1.5 Factor 5: How should savings taxes incorporate inflation?

Another strong argument for taxing the return from savings at a lower rate than other income is that taxes are calculated using nominal income. Therefore, savings taxes are levied on the inflationary component as well as the real return. This often results in very high effective tax rates on savings. The table below demonstrates this effect using an investment with a real return of 3 per cent and different inflation rates. It shows that even modest levels of inflation can significantly increase the effective tax rate paid on savings.[17] For example, under high

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16 If taxes on savings were already at zero, then raising taxes on the existing stock of assets would be a form of 'retrospective taxation'. However, given that savings taxes currently exist, and that existing savings were made in the knowledge of these taxes, keeping the existing taxes in place does not raise retrospective taxation concerns.

17 This is the way that interest from savings accounts is currently taxed in Australia and results in very high Marginal Effective Tax Rates on interest from savings accounts, as discussed in the next section of this paper.

inflation, the post-tax real return for people in the top tax bracket is negative (real returns are taxed at a rate greater than 100%).

Table 2.2 The impact of inflation on the effective tax rate on savings

	No inflation (0%)	Moderate inflation (2%)	High inflation (4%)
Initial investment	$100	$100	$100
Real return	3%	3%	3%
Inflation	0%	2%	4%
Nominal return	$3	$5	$7
Nominal tax rate	47%	47%	47%
Taxes paid (if taxed at 47%)	$1.41	$2.35	$3.29
Post-tax nominal return	$1.59	$2.65	$3.71
Post-tax real return	$1.59	$0.65	-$0.29
Tax rate on real income	47%	78%	110%

Note: In this example, a tax rate of more than 100 per cent means that the opportunity for consumption goes down over time. However, it does not mean that it is better to store the money as cash with zero nominal return as this would result in a larger real loss of purchasing power.

Source: Authors' calculations.

As a result, taxing savings at a lower nominal rate can be justified as a way of keeping the real tax rate at a similar level to other income sources. This issue is discussed further in Section 3.5.4.

2.1.6 Factor 6: Difficulty distinguishing between labour and capital income

One pragmatic concern for savings taxes design is that it is not always possible for tax authorities to distinguish between labour and capital income. Therefore, if there is a large difference between the tax rate on the return to savings and the tax rate on labour income, it creates an incentive for taxpayers to reclassify income as returns to savings and pay the lower tax rate.

For instance, a small business owner receives both labour income and a return on investment and can often choose to claim income in a way that minimises her tax liability. Similarly, trading shares for a living can be considered labour income or passive income. If the difference between the tax rate on labour income and on the income from savings is large, these income streams must be defined with significant care to stop people from reclassifying income into the lower tax rate.

This concern was raised in the Australia's Future Tax System Review[18] and internationally by Diamond and Saez (2011). Several papers show that individuals can 'shift' the form of income they claim between labour and corporate income, and demonstrate this happening after large tax reforms that switched the highest tax rate between labour and corporate income.[19] Opportunities for arbitrage between personal and corporate income tax rates in Australia are discussed in Tax and Transfer Policy Institute (2020). Sainsbury and Breunig (2020) provide several examples of commonly used strategies. There is also strong evidence (summarised in Appendix A) suggesting that investors adjust their portfolios in response to different tax rates on different investment types.

However, there is still relative uncertainty around how much income is likely to switch between tax bases as the marginal tax rate on different income types diverge. In other words, there is strong evidence indicating that if the marginal tax rate on savings income switches from being higher than labour income to being lower than labour income, then people will reclassify

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18 Commonwealth of Australia (2010, Part A, pp. 74-75).

19 See for instance Pirttilä and Selin (2011), Gordon and MacKie-Mason (1995) and Gordon and Slemrod (2000).

income towards the lower tax rate. However, it is less clear whether moving from a difference in tax rates of 5% to a difference of 15% will generate a large response. This is clearly an important question for future research.[20]

2.1.7 Factor 7: Can taxes on savings be avoided by moving assets offshore?

Another potential consideration in designing savings taxes is that higher tax rates may result in assets being moved offshore. Australian tax law requires Australian taxpayers to report and pay tax on savings income regardless of whether an asset is held in Australia or internationally. However, it is still possible to avoid taxes by:

• Not reporting income earned internationally.

• Migrating to a country that does not tax savings.

While Australian tax law requires Australian tax residents to report earnings from foreign assets as taxable income, inevitably some proportion of Australians will choose to evade income taxes by not reporting these earnings. Data recently made available by the Bank of International Settlements suggests that around 7 per cent of Australian wealth is currently hidden in this way.[21]

If Australians are making an active decision between keeping assets in Australia and avoiding taxes by holding assets offshore, this will influence the rate at which savings taxes should be set in Australia (it will likely reduce the optimal tax rate on savings). However, the extent to which this should be an active concern when designing savings taxes will depend on how much more likely people are to avoid taxes as tax rates rise. While standard theoretical models of tax evasion (such as Allingham and Sandmo (1972)) suggest that the tax rate is a key determinant of the likelihood to avoid taxes, there is currently very little empirical evidence on this question.[22] The extent to which tax avoidance should factor into the ideal tax rate also depends on the effectiveness of compliance measures. For instance, if a significant proportion of Australians are not reporting income from foreign assets, then one response could be to increase enforcement activities conducted by the ATO to ensure that this income is reported. The costs and benefits of increased compliance can be compared to the costs and benefits of changing tax rates in response to this behaviour to determine the appropriate policy response.

A related issue is that individuals may respond to high tax rates by changing their tax residence to a lower tax country. While a number of papers study whether individuals are likely to move countries in response to the personal income tax rate, there is very little existing empirical evidence to assess whether people are likely to move in response to savings taxes (Jakobsen et al. 2020). Two exceptions are Martínez (2017), who provides evidence on migration responses between Swiss Cantons in response to reductions in income and wealth taxes, and Zucman (2008), who examines international migration in response to an increase in the French wealth tax. In both cases the authors find a small positive response to tax rates, although it is unclear how these results would translate to an Australian setting.[23]

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20 The ability for individuals to shift income between labour and savings income is also an important consideration when designing a dual income tax, which is the pathway to reform preferred by the authors (discussed in Section 4.2).

21 The figure of 7 per cent is based on Figure 5 of Alstadsæter et al. (2018), but it should be noted that this paper acknowledges many challenges of performing empirical work in this area.

22 One exception is Bharadwaj (2017), who investigates data made public by the Bank of International Settlements for Switzerland, Guernsey, Ireland, Jersey, Hong Kong, Luxembourg, Macao and the Isle of Man, and finds that the top marginal tax rate in the source country has a 'small but statistically insignificant effect' on the level of offshore banking done by each source country.

23 In the first case migration was between cantons within the same small country, and in the second migration was primarily between European countries with low boundaries to migration. Therefore, in both cases migration has relatively lower costs and barriers than would be the case for Australians.

While both issues (not reporting international assets and migrating for tax purposes) are unlikely to be significant constraints in designing the tax system, they are still relatively poorly understood and should be the focus of further research.

2.1.8 Summing up the evidence: how much should savings be taxed?

The key arguments regarding the extent to which savings should be taxed are summarised in Table 2.3. The third column of this table provides an assessment of how important the argument is to the policy debate. These judgments are based on existing discussions in the literature, and on consultations conducted with numerous experts during the preparation of this report. However, ranking the relative importance of each argument is ultimately a subjective task.

Table 2.3 shows a strong case for savings to be taxed at a relatively low rate (less than the rate applying to labour income) because taxes are levied on nominal (rather than real) income and because the implied tax wedge between current and future consumption is larger than the annual tax rate on savings income. However, as Australia has access to a global capital market, taxes on savings are unlikely to significantly reduce overall levels of investment in Australia. This chapter also found that results from the public finance literature, suggesting that savings should not be taxed at all, are the product of highly stylized models and should be viewed as providing a strong argument for low rates of tax on savings rather than a strong call for zero rates.

Table 2.3 Key arguments: At what rate should income from savings be taxed?

Argument	Empirical evidence	Relevance to policy
Savings should be taxed at a lower rate than labour income		
Taxes on savings reduce the ability of individuals to smooth consumption across their lifetime.	The effective tax rate on savings increases over time, and taxing savings may significantly diminish the incentive for long-term savings.	Moderate - research suggests that behavioural design components (such as compulsory or default saving) are more important than the tax rate for determining savings levels.
Taxes on savings discourage investment which can reduce productivity and national income.	The elasticity of savings with respect to the tax rate is relatively low in Australia, and this reduction will be further offset by international investment.	Low – The impact of savings taxes on investment is likely to be relatively low given the current policy settings around foreign investment.
Taxes on savings should be low to reduce the demand for foreign investment and maintain Australian ownership over key assets.	Australia can be viewed as a small open economy, and reductions in Australian savings are likely to be offset by foreign investment.	Low – It is unclear whether policies to restrict foreign investment reflect the true preferences of Australians. However, even if they do, it remains a smaller concern than other factors.
Taxes on savings should be low to avoid taxing the 'inflation component' of the return to savings.	Without adjustment, inflation currently makes the real tax rate on savings much higher than on labour income.	High – Taxing the nominal returns to savings can (and currently does) lead to high real tax rates. A lower headline rate can offset this effect.

Argument	Empirical evidence	Relevance to policy
Taxes on savings lead to international tax evasion and to wealthy individuals emigrating from Australia.	Little existing empirical research addresses these questions. However, what research there is suggests the elasticities are relatively small.	Moderate – One might not expect large effects at existing tax rates but evidence suggests a non-negligible amount of Australian wealth is hidden overseas.
		If future evidence shows tax evasion is highly responsive to tax rates, this may prove to be of greater concern.
		More aggressive enforcement is another policy option.
Savings should be taxed like labour income		
Taxes on savings help combat inequality.	In the short-term, increasing taxes on savings and wealth will reduce inequality. However, the longer-term effects on inequality are uncertain.	Moderate – The extent and method with which savings are taxed has a significant impact on inequality. Inequality should be assessed in the context of the broader tax and transfer system.
Taxes on savings should be set at a similar rate to other income to avoid people reclassifying other income as savings income to receive preferential tax treatment.	Evidence suggests this type of substitution is possible, but only applies to a relatively small portion of labour income.	Moderate – A strong argument against setting the tax rate on savings close to zero. Integrity provisions are required where tax rates differ and where large amounts of income can be reclassified.

Source: Authors' compilation.

It remains difficult to quantify the optimal tax rate on savings. Significant empirical uncertainty remains regarding the key parameters that define the optimal tax rate on savings (such as the extent to which people reduce savings in response to a change in the tax rate). Even if these parameters were fully known, the optimal tax rate on savings would still depend on the preferences of the Australian public regarding the relative importance of the different factors mentioned in Table 2.3 (such as the value of economic redistribution or the importance of maintaining ownership of Australian assets).

As such, it is not possible to present a single estimate of the optimal tax rate on Australian savings. Instead, this report suggests that taxing the income from savings in the range of 5-20 per cent tax is consistent with the existing empirical evidence.[24] Lower values within this range are more efficient while higher values raise more revenue and are more progressive. Rates should be considered in the context of the design of the entire tax and transfer system.

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24 The values of 5-20 per cent are based on calculations from Section 4.2.4.

2.2 Should all savings instruments be taxed at the same rate?

An important benchmark for designing taxes on savings is tax neutrality across different savings instruments. Tax neutrality means that the effective tax rate is equal across different asset classes. It is generally considered a positive characteristic of tax systems as it means that the tax system doesn't distort savings and investment decisions.[25] Instead, it allows investments to be made in areas that yield the greatest return (to both the investor and society). The Murray Review into the Australian financial system raised a concern that the current tax treatment of savings is highly unequal, and that 'To the extent that distortions direct savings to less productive investments, a more neutral treatment would increase productivity.' (Commonwealth of Australia 2014, p. 17).

Taxing different asset classes at the same rate also improves the horizontal equity of the tax system as the amount of tax paid is based on total income from savings, rather than the types of investments that are made (as is the case in the current tax system).

Achieving the same effective tax rate across asset classes can be achieved by taxing all savings income using the same tax instrument. Alternatively, if different types of savings are taxed using different tax instruments (as is currently the case with the Australian tax system) tax neutrality can be achieved by ensuring that the total tax impact of an investment is similar across the investment cycle.

While full tax neutrality across all forms of savings is a useful benchmark, arguments can be raised against taxing all forms of savings equally. These include that:

- Superannuation should be taxed at a lower rate than other assets (Section 2.2.1).
  - to encourage people to save for retirement
  - because superannuation savings offset the costs of the Age Pension
  - because superannuation assets are typically held for a longer period than other assets which results in a higher effective tax rate.
- Land should be taxed at a higher effective rate as it has a fixed supply (Section 2.2.2).
- Capital gains should be taxed at a low rate to avoid 'lock-in' of assets (Section 2.2.3).

These arguments are now explored in turn.

2.2.1 Should superannuation be taxed at a lower rate than other savings?

The Australian tax system provides strong incentives to invest money in superannuation. This is typically justified on three grounds:

- On their own, some people (particularly those on low incomes) are unlikely to save enough for their retirement.[26]
- Higher superannuation balances reduce the number of people claiming the Age Pension and the amount of money paid out, lowering the tax burden on future taxpayers.
- Superannuation is held for longer than other assets, and since the effective tax rate on investments can compound over time, the annual tax rate needs to be relatively low.

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25 This can be considered as an application of the Diamond and Mirrlees (1971) result showing that intermediate inputs to production should not be taxed at different rates. A more general treatment covered in Saez and Stantcheva (2018) suggests that asset classes will have higher optimal tax rates if a) they are preferred by wealthier individuals or b) if the asset is complementary with other taxed activities. However, given the lack of information on these preferences and cross-elasticities, a uniform tax rate across assets remains an appealing benchmark.

26 Benartzi and Thaler (2013) review the international evidence that people are systematically underprepared for retirement.

In the current Australian context, the first two arguments are relatively weak. On the first point, the majority of money entering superannuation comes through compulsory contributions. The tax rate will not have any impact on the total size of compulsory contributions. A lower tax rate could be justified for voluntary contributions, although if that were the goal of the subsidies, then they should only apply to the voluntary contributions. Moreover, as discussed in the literature review of savings elasticities in Appendix A, lower income groups are more likely than higher income groups to increase savings in response to financial incentives. Therefore, if superannuation subsidies are intended to overcome savings myopia, they should target low income groups. By contrast, current superannuation subsidies fall disproportionately on middle and upper income groups.

On the second point, the Age Pension means test applies to the majority of savings types (including investment properties, shares, savings accounts and closely held businesses).[27] Therefore, the argument that superannuation should be taxed at a lower rate in order to offset the effect of the Age Pension means test applies equally to these other forms of savings. This means that this argument is best viewed as an additional reason to tax all savings at a low rate, rather than providing preferential tax treatment to superannuation over other asset categories. In addition, empirical evidence suggests that money placed in superannuation has only a modest impact on the likelihood that the superannuant will claim an Age Pension, and a relatively modest impact on the total amount of Age Pension received over the lifetime (Productivity Commission 2013, pp. 143-147). In other words, the vast majority of superannuation is received in addition to an Age Pension. While this is beneficial to the individual who is retiring, it implies that superannuation subsidies are unlikely to generate significant fiscal savings through reductions to the Age Pension.[28]

A more robust argument that superannuation should be taxed at a lower rate than other savings measures is that superannuation is designed to be held for a longer period than other asset classes. (Australia's Future Tax System Review A2-2 – Commonwealth of Australia (2010)). As discussed previously (Section 2.1.1), the effective tax rates on savings increase if the asset is held for a longer period. Therefore, having a lower annual tax rate on superannuation compared to other savings instruments can be justified as a way of avoiding very high longterm tax rates.[29]

However, if this were the principle motivation for having a lower tax rate on superannuation compared to other asset classes, it would suggest that the effective tax rate should be lowest for young workers (as they will have assets in superannuation for the longest period) and increase with age. In practice, as the effective tax rate on superannuation is heavily influenced by the individual's personal income tax bracket (see Figure 3.2), which tends to increase with age, the tax rate on superannuation earnings are higher for younger people and lower for older people.[30]

There are also some potential concerns in having tax rates on superannuation be much lower than on other investments. The first is constraints on the type of investments superannuation funds can make in the Australian economy. In particular, they are unable to invest funds directly, and must instead provide equity indirectly to companies investing in Australia. Given the large share of capital being held by Australian superannuation funds, it is possible that this restriction may generate distortions in Australian investment markets.

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27 The major exception being owner-occupied housing.

28 This point is also made by Rice Warner (2019) and the Grattan Institute (Coates, 2019).

29 The compounding effect of taxation on superannuation could in principle be avoided by not taxing the annual income on superannuation and instead taxing the income as it is withdrawn from superannuation. However, introducing this type of system in Australia would require introducing a new tax on existing assets, or require a significant grandfathering period.

30 As discussed in Section 3.3, the Marginal Effective Tax Rate on superannuation is heavily influenced by the ability to deduct superannuation contributions against income calculated for the personal income tax. This makes superannuation contributions a better option for people in higher income brackets.

Another concern is that the complexity of the superannuation market, along with the default nature of superannuation payments, allocates market power to superannuation providers.[31] This market power can be seen indirectly through the relatively high fees charged by Australian superannuation funds.[32] This suggests that if superannuation is given a relatively favourable tax treatment compared to other savings measures, some of the tax benefit will be extracted as monopolist profit by superannuation funds.

Finally, it should be noted that although private pension plans are the savings option with the lowest tax rate in most OECD countries (Appendix D), the Australian tax treatment of superannuation is more generous than equivalent savings plans in other countries.

Taken together, these arguments suggest that superannuation should be taxed at a lower rate than other types of savings, but that this difference should not be too great. Moreover, the arguments that superannuation should be taxed at a relatively low rate apply most strongly to young people and people with low incomes, while in practice, the Australian tax system provides the lowest effective tax rates on superannuation to older Australians and those in higher personal tax brackets. Potential improvements to the way superannuation is taxed are considered in Chapter 4.

2.2.2 Should land be taxed more heavily to capture economic rents?

A significant proportion of Australian investments are in real estate, which are comprised of land and the physical improvements (buildings) made on that land. Taxes on land are amongst the oldest taxes levied in Australia, with all Australian colonies introducing land taxes between 1877 and 1915, and a federal land tax introduced in 1910 (Smith 2004). There is an argument that since land is in 'fixed' supply, land taxes can be levied without the negative consequences associated with other taxes.

The simple version of this argument is that since the overall supply of land is fixed, taxing land can't change the supply of land. In this case, a broad-based land tax will reduce the value of land, but won't change the amount of land available or how that land is used. The origin of this argument is usually attributed to George (1879) but has been an active consideration in tax policy design both in Australia (Australian Government 2010) and internationally (Institute of Fiscal Studies, 2011).

A more nuanced version of this argument recognises that there are different types of land, but that the supply of land in Australia is heavily restricted by local and state planning laws. These restrictions constrain the development of new land and the use of existing land. These constraints are designed to limit the adverse effect of property development on the environment and on existing land-owners. However, they also allow existing landowners to extract economic rent.[33] While the size of this economic rent is difficult to quantify, a recent working paper from the Reserve Bank of Australia suggests that the impact of zoning restrictions may be more than half of the total value of stand-alone house prices in Sydney, Melbourne and Perth (Kendall and Tulip, 2018).

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31 Competition in the superannuation sector is a complex topic. It appears both highly competitive and highly uncompetitive depending on the metrics used. See Productivity Commission (2018, p. 23).

32 The Productivity Commission (2018, p. 17) suggests that after controlling for different types of asset management, international investment companies have an annual fee of around 0.4% of total assets held, while Australian superannuation funds have fees of around 0.68%. Given that superannuation currently manages assets equal to 140 per cent of GDP, then taking this figure at face value implies around 0.4% (0.28*140%) of Australian GDP, or $6.7 billion, is extracted as monopoly rent each year by superannuation funds.

33 While existing planning regulations are often considered to be inefficiently strict (Productivity Commission 2017a), the argument that land taxes can tax the rent associated with zoning would still apply even if planning regulations were efficiently set.

To the extent that the total supply of land is constrained by planning laws, the addition of a broad-based tax on land will not change any land use decisions and will instead act as a tax on the economic rent associated with the planning laws. This is shown in Figure 2.2.

Figure 2.2 The incidence of a broad-based land tax in the presence of economic rents from zoning
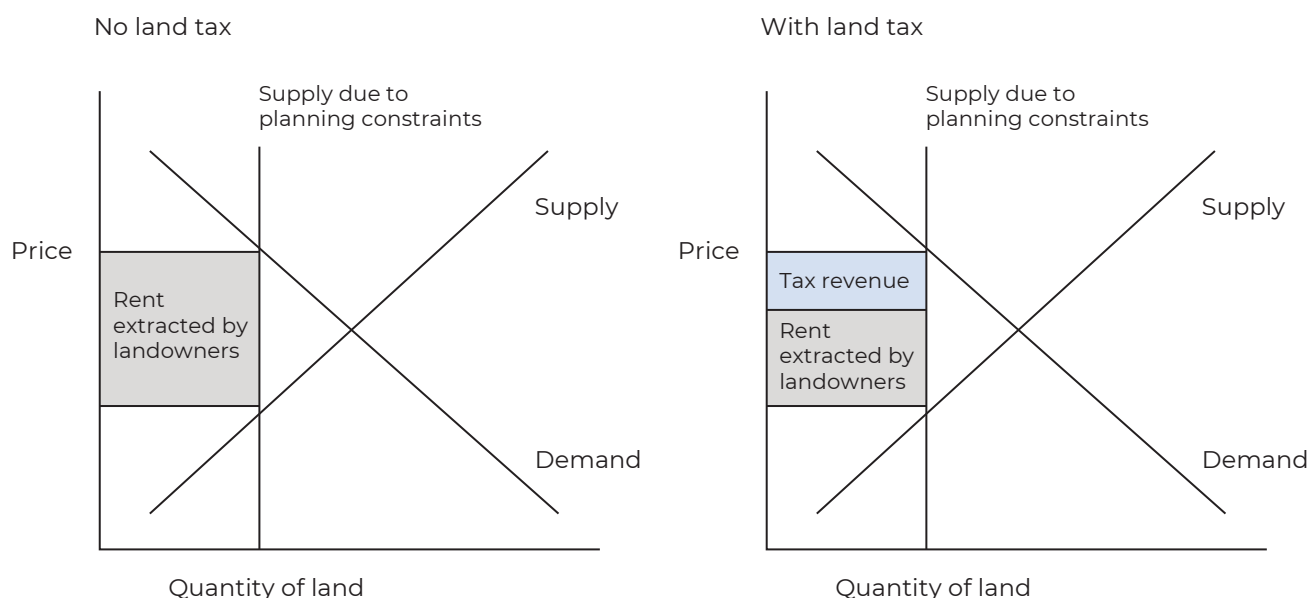
The idea that taxing land can justify a higher level of tax than other savings instruments relies on having a practical way to tax land without taxing the capital improvements that are built on it. While council rates and land taxes can work in this way, the existing design of these taxes means this is imperfectly achieved:

• Some Australian councils levy rates based on land value, while others levy rates based on the capital improved value (which is the combined value of house and land). Notably, in South Australia and Victoria, where councils have the choice to levy rates on land value or capital improved value, the trend has been away from taxes based upon the value of land (Independent Pricing and Regulatory Tribunal (IPART) of New South Wales (2016)).

• State land taxes are levied on the total value of land. However, existing land taxes in Australia exclude the vast majority of land from the tax base (since they only apply to investment properties and include a tax-free threshold) and are a fairly inefficient tax (see Section C2-3 of the Australia's Future Tax System Review (Commonwealth of Australia, 2010)).

Consequently, any proposal to increase the rate of taxation on land must ideally find ways to improve the design of existing taxes on land. This issue is considered in more detail in Section 4.3.3.

2.2.3 Should capital gains be taxed at a lower rate to avoid 'lock-in' of assets?

Most income from savings is taxed each year as the income is earned. However, capital gains are only paid when the capital gain is 'realised' (typically when the asset is sold). Investors can defer the payment of capital gains taxes by holding assets, and this is beneficial to investors as it allows the asset value to grow at a non-taxed rate.[34] In other words, an investor faces a

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34 See Commonwealth of Australia (2010, Chart A1-16) for a numerical example of the impact of taxing capital gains on a realisation basis.

lower tax rate on a single asset held for twenty years than they would if they sold the asset after ten years and reinvested the funds (at the same pre-tax rate of return) for a further ten years. This can create a dynamic where investors are 'locked-in' to a particular investment to avoid triggering a capital gains event.[35]

Capital gains in Australia are taxed through the personal income tax with a 50 per cent discount applied.[36] For instance, someone in the top tax bracket who faces a 47 per cent marginal income tax rate would face a 23.5 per cent tax rate on capital gains. A recent OECD working paper compares the capital gains tax regimes in OECD countries and found that Australia is broadly consistent with tax regimes operating in other countries (Harding and Marten 2018).[37] However, it should be noted that there was significant variation in the tax treatment of capital gains across countries. New Zealand takes an unusual approach and doesn't tax capital gains at all.[38]

The potential for investors to be 'locked-in' to investments due to capital gains taxation can be illustrated through an example in which an investor purchases an investment property which yields 5% per annum nominal capital gains, these capital gains are taxed at 23.5 per cent when realised, and stamp duty is charged at 4% of the purchase price. In this example, the investor chooses between holding a single asset for 20 years or selling the asset after ten years and reinvesting in another similar asset for a further ten years. The relative returns of these investment strategies under different tax arrangement are shown in Table 2.4.

Table 2.4 Potential for lock-in due to CGT and stamp duty

	No CGT or stamp duty	CGT only	Stamp duty only	CGT and stamp duty
	Return after 20 years	Return after 20 years	Return after 20 years	Return after 20 years
Hold one asset for twenty years	165%	126%	155%	118%
Hold two assets for ten years each	165%	119%	145%	103%

Source: Authors' calculations.

The results in Table 2.4 show that both capital gains tax and stamp duty favour holding a single asset for a longer period. Over twenty years the impact of stamp duty (10%) is slightly larger than the impact of CGT lock-in (7%). However, the impact of these two taxes on investment decisions will depend on the length of the investment and the assumed asset returns.

Whether the existing level of capital gains taxation in Australia results in lock-in is ultimately an empirical question. Burman (2009) reviews the existing empirical literature and finds that while uncertainty remains around the extent to which lock-in influences investment decisions "...on balance, the empirical evidence from the US suggests that lock-in is much less of a problem in practice than economists and tax practitioners would imagine. And, as noted, it is likely to be even less acute in Australia since capital gains carry over at death."

In addition, to the extent that lock-in was a major issue for Australian investment decisions, changing the rate of capital gains tax is only one way to reduce lock-in. One alternative is to set a maximum time limit for CGT realisations. Another option would be to tax assets that have

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35 This is distinct to the very strong lock-in effect created by not taxing assets acquired before 1985 (Commonwealth of Australia, 2010, Section A 1-3).

36 This discount was introduced based on a recommendation in the Business Taxation Report (Ralph 1999).

37 This result can be observed in Figure 4 and Figure 7 of Harding and Marten (2018).

38 A Tax Working Group commissioned by the New Zealand Government recommended the introduction of a capital gains tax in 2019 (Tax Working Group 2019). The Government has not acted on this recommendation.

been held for a longer period at a higher CGT tax rate.[39] Therefore, 'lock-in' of assets does not appear to be a strong rationale for lowering the existing level of taxation on capital gains.[40] However, 'lock-in' would be an important consideration if changes were made to the existing CGT discount.

2.2.4 Summing up the evidence: should different types of savings be taxed at different rates?

The key arguments regarding the extent to which savings should be taxed at the same rate are summarised in Table 2.5. The underlying argument that the tax system should place a relatively similar effective tax rate on all asset types is strong and should be a priority when designing a system of savings taxes. There are also relatively strong arguments to suggest that superannuation should be taxed at a slightly lower effective rate than other assets, and that land be taxed at a higher rate than other assets. However, these arguments do not justify the very large differences in effective tax rates currently observed in the Australian tax system.

Table 2.5 Key arguments: Should all savings instruments be taxed at the same rate?

Argument	Empirical evidence	Relevance to policy
All asset classes		
All asset types should be taxed at a similar effective rate as this allows people to pick the assets that best suit their investment needs, rather than the ones that incur the least tax burden. This improves horizontal equity and productivity by reducing distortions in investment allocation.	There are currently very strong incentives to invest in specific assets to minimise tax paid.	High – Balancing the tax treatment across asset types has the potential to significantly improve asset allocation, and thus productivity, in the Australian economy.
Superannuation		
Superannuation should be taxed at a lower rate than other savings because otherwise people won't save enough for retirement.	The elasticity of saving with respect to the tax rate is relatively low (see Appendix A).	Low – the compulsory nature of most superannuation contributions means that the tax rate has little impact on the amount that people save.
Superannuation should be taxed at a lower rate than other savings because it takes pressure off the Age Pension.	Australian Treasury modelling suggests superannuation mostly supports a higher retirement income, but does relatively little to reduce recourse to the Age Pension.	Low - Current subsidies heavily target middle and high-income earners. To impact the Age Pension, subsidies should target lower income groups.
Superannuation should be taxed at a lower rate than other savings because superannuation is held for longer than other assets and is therefore subject to a larger effective tax rate.	The effective tax rate on savings (and the potential economic distortion) increases with longer investments. Superannuation is held for longer than other assets on average.	Moderate – taxing long-term investments can distort lifetime investment decisions. However, the compulsory nature of most superannuation limits the impact of this factor.

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39 This is suggested by Banks and Diamond (2010), who note that the observed policy is usually in the opposite direction (higher tax rates for short-term investments) which may reinforce the lock-in effect.

40 Lock-in is also likely to be a much larger issue for assets purchased before 1985 which are currently excluded from the CGT regime, but would be eligible for CGT if the asset were sold. The simplest solution is to remove or phase out the grandfathering provision for assets purchased before 1985.

Argument	Empirical evidence	Relevance to policy
A large difference between the tax rate on superannuation and other asset classes will create economic rent that can be captured by superannuation providers.	Conflicting evidence regarding the market power of superannuation providers.	Moderate – While the extent of economic rents captured by superannuation providers is uncertain, the size of the industry means that even small monopoly rents cause large economic distortions.
Land		
Land should be taxed at a higher rate than other assets as it is in fixed supply.	Large zoning premiums observed in current property prices suggest that broad-based land taxes can be levied without significantly changing supply.	Moderate – While taxes on land should be levied at a higher rate than on other assets, this argument only applies to taxes where the economic incidence falls on land, such as council rates levied on unimproved land value. It would not apply to existing state land taxes or stamp duty.
Capital gains		
Capital gains needs to be taxed at a lower rate to avoid 'lock-in'.	Capital gains lock-in does not appear to be a major determinant of investment trends at Australia's current tax rates.	Low – Lock in is not a serious concern at existing tax rates. However, this may be a concern if the rate of tax on capital gains was increased.

Source: Authors' compilation.

2.3 Should savings be taxed independently of labour income?

One approach to taxing savings is to combine income from different sources (after potentially discounting income from some sources such as currently occurs with capital gains) and tax them together using a progressive tax system. This is known as a comprehensive income tax system. An alternative approach is to treat savings income and labour income separately and tax them using independent tax systems. This is known as a modular or dual income tax approach. The existing Australian tax system uses a mixture of these approaches (Table 2.6).

Table 2.6 Some forms of savings are taxed through the personal income tax

Taxed with labour income (a comprehensive approach)	Tax rate independent of other income (a modular approach)
Interest from savings accounts	Land taxes on investment properties
Dividends from shares	Owner-occupied housing
Rental income from investment properties	Superannuation
Capital gains	Stamp duties

Source: Authors' compilation.

Policymakers in other countries have also taken different approaches to integrating savings income into the tax base. Some countries have adopted a comprehensive income tax approach, while others have adopted a flat-rate approach. A recent report by the OECD (2018b) suggests that the majority of OECD countries use a flat tax approach, although countries that are usually considered similar to Australia (such as New Zealand, Canada and the UK) use a comprehensive income tax approach. More detail is provided in Appendix D.

While this report recommends that all savings should be taxed using a dual income tax, both approaches have benefits and drawbacks.

2.3.1 Benefits of a comprehensive income tax approach

This report identifies three key advantages of a comprehensive income tax approach to taxing savings. The first is that if savings and labour income are taxed at the same marginal tax rate, the incentive to shift income between labour and savings is removed. If individuals can reclassify income in this way, it will reduce the revenue raised by the tax and raise questions of fairness as similar individuals will be taxed at different rates. However, as discussed in Section 2.1.6, the extent to which people can do this is an open empirical question. It should also be noted that this is only an advantage of the comprehensive income system if savings income is taxed at the full marginal rate of labour income. For instance, the incentive to reclassify income is still present where capital is taxed at a discounted nominal rate (as is currently the case for capital gains in Australia).

The second potential benefit of a comprehensive income tax approach is simplicity. A single tax schedule may be easier for taxpayers to comprehend than a dual income tax approach. However, while this may be true for a fully comprehensive income tax in which income from all sources is taxed at the same rate, it is difficult to argue that a dual income tax is more difficult to understand than the existing Australian tax system in which capital gains, shares and superannuation all have very different tax treatments.

The final potential benefit of a comprehensive income tax approach to taxing savings is the potential to tax savings in a progressive manner. For instance, interest is currently taxed at an individual's marginal tax rate so that high-income earners pay more tax than low income earners. In contrast, a flat tax rate on all savings income would not be progressive. However, while some elements of savings taxes in Australia are progressive, taken as a whole the existing system of savings taxation is slightly regressive (see Section 3.6.1). Therefore, transitioning from the existing system to a flat tax treatment of all income from savings (such as the dual income tax recommended in this report) would make the Australian income tax system more progressive.

2.3.2 Benefits of a modular approach

The major benefit of a modular approach is that it reduces or removes many of the strategies individuals use to minimise taxes. For instance, under a flat dual income tax, savings income is taxed at a constant rate in different periods and across individuals. This means that there is no incentive to claim savings income in a particular time period or to spread income across individuals. This is in strong contrast to the existing tax system which creates an incentive to:

- Allocate the income from savings to family members with lower income.[41]
- Negatively gear investment property.
- Negatively gear shares.
- Pay dividends with franking credits out of closely-held companies after retirement.
- Invest more heavily in shares with franking credits after retirement.
- Retain assets purchased before 1985 forever in trusts/companies as these assets remain exempt from capital gains tax.

A modular tax system which treats income from savings separately from other personal income would significantly simplify the tax system by removing these margins.

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41 Noting that there are some integrity measures designed to limit the extent to which this can occur.

2.3.3 Transitioning from the existing system would create winners and losers

Moving from the existing Australian tax system to a dual income tax would create winners and losers. In particular, people in the lowest tax bracket (including retirees) currently have a marginal tax rate of 0 per cent, and would pay a higher rate on earnings from savings if savings taxes were removed from the personal income tax system.

While in general, there is no necessity for policy changes to provide compensation to groups that are negatively impacted, a policy change that increased the rate of tax on this group would need to be carefully designed so as to limit the impact on those most affected.

The ideal approach would be to incorporate such a change into a larger package of reforms to the tax treatment of savings that spreads the benefits and costs of the change more evenly across the population. In addition, compensation packages or grandfathering systems may be considered to limit the impact on those most affected.

2.3.4 Summing up the evidence: Should Australians tax savings using a comprehensive or modular approach?

The key arguments regarding the extent to which savings should be taxed are summarised in Table 2.7. The main trade-off between these two systems is that a dual income tax removes the incentive to shift income between individuals and between time periods, while a comprehensive tax system removes the incentive to reclassify labour income as savings (as they are taxed at the same rate) and allows savings income to be taxed in a progressive manner. However, in the context of Australia's nominally comprehensive tax system these two characteristics are relatively weak. Very little savings income is taxed at the full marginal rate (so there is still an incentive to reclassify labour income as savings income), and while some savings taxes are progressive, the existing Australian tax treatment of savings as a whole is regressive. Therefore, the main trade-off between a comprehensive and modular approach relates to transition costs and determining whether the long-term benefits of a dual income tax are sufficiently large to offset the difficulties of transitioning to this system.

Table 2.7 Key arguments: Comprehensive income tax or modular taxation of savings?

Argument	Empirical evidence	Relevance to policy
Arguments for a comprehensive income tax system		
A comprehensive tax system reduces the incentive to reclassify labour income as savings income.	While this substitution does occur, integrity measures limit the extent to which it can occur.	Low – This only applies where savings income is taxed at the full rate of labour income, and so currently only applies to a small share of total income.
A comprehensive tax system can be simpler for taxpayers to understand.	While a comprehensive income tax system could be simpler, the existing Australian system of savings taxes is more complicated than a dual income tax would be.	Low – A pure dual income tax is relatively simple.

Argument	Empirical evidence	Relevance to policy
Transitioning to a new system would create winners and losers	Many people (particularly retired people) currently pay zero tax on income from savings.	Moderate – Managing a policy change should consider which groups are made better and worse off and compensation packages could be considered for those worst affected. Nevertheless, this should not stop improvements in public policy.
Arguments for a modular tax system		
A modular tax system removes the incentive to minimise taxes by splitting income between individuals or spreading income over time.	There are currently significant benefits to actively 'managing' savings income to minimise taxes.	High – this has the potential to significantly simplify and balance the approach of individuals to managing their taxes.
A modular tax system would be more progressive than the existing system of savings taxes.	The current tax system is regressive and so moving to a flat tax system applied to all savings would make the tax system more progressive.	Moderate – while it is difficult to determine the 'correct' level of progressivity, a flat tax system is more coherent than the current treatment in which some assets are taxed progressively, some regressively, and some at a flat rate.

Source: Authors' compilation.

2.4 Should savings taxes focus exclusively on income from savings or include other tax bases?

Throughout most of this report, the taxation of savings has focused on taxing the income from savings (as opposed to taxing the stock of savings or the sale of assets). The one exception to this is property where there is strong evidence that replacing transaction taxes with broad-based land taxes would increase both efficiency and equity.

The decision to focus on the income from savings is driven by the fact that the majority of capital taxes (both in Australia and around the world) fall into this category. However, there are several notable exceptions to this rule. For instance, Australia levies taxes on the ownership and transfer of land through council rates and stamp duty. Internationally, many countries levy taxes on estates and a small number of countries levy taxes on the total stock of wealth held.

This section looks at how these alternative tax bases might replace or complement taxes that are levied on annual income from savings.

2.4.1 Taxing net wealth

The first alternative tax base considered is the total stock of (net) wealth held by an individual. Net wealth taxes were once reasonably common around the world, and while they have become much less common,[42] there is some renewed interest in this policy driven, at least in part, by increasing levels of wealth inequality (OECD 2018b).

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42 12 OECD countries levied wealth taxes in 1990, while only 4 did in 2017 (OECD 2018b).

As a starting point, it is important to note that broad-based wealth taxes have similar economic properties to broad-based income taxes on savings. For instance, Shakow and Shuldiner (2000) point out that:

> …if all capital produced the same yield, an ideal wealth tax would be equivalent to an ideal income tax. Since capital produces widely divergent yields, a wealth tax still can be viewed as equivalent to an income tax levied on the average income from capital, rather than on the actual income realized from that capital.

However, important practical differences exist between wealth taxes and income taxes on savings. The main benefit of broad-based wealth taxation is that it is easier to implement in situations where the income from savings is difficult to measure (such as imputed rent on owner occupied housing). In some circumstances, taxing net wealth can also be more efficient than a capital income tax as it provides a stronger incentive to invest in assets with higher expected returns (Guvenen et al. 2019).

However, implementation issues can limit the effectiveness of wealth taxes. For instance, wealth taxes create difficulties for individuals who are 'asset rich and cash poor', and who might not have liquid assets to pay the tax bill.[43] Wealth taxes also require a system for estimating the total value of assets held by all Australians on an annual basis.

In summary, while there are important differences between taxes on the stock of wealth and taxes on the income from wealth, these taxes have relatively similar economic properties. Therefore, the large administrative costs of transitioning to a system of broad-based wealth taxation likely outweigh the benefits of making the change.

2.4.2 Stamp Duties

Another way to tax savings is to levy a tax on the sale of property. These taxes are known as stamp duties or conveyance duties, and are currently a major source of revenue for Australian state and territory governments.[44] Originally these taxes were popular due to the simplicity with which they can be levied (Commonwealth of Australia 2010, Box C2–2). However, there is a significant amount of evidence to suggest that residential stamp duties are extremely damaging to the Australian economy.

- In a Treasury working paper, Cao et al. (2015) review several papers that estimate the marginal excess burden of Australian taxes and find that stamp duty has a much higher excess burden than other Australian taxes.
- The Australia's Future Tax System Review (Commonwealth of Australia 2010, Box C2–3) found that stamp duties result in people living further away from work (creating more congestion), not being able to move to a new or better job (increasing unemployment and reducing productivity and wage growth) and staying in the same house even when it doesn't meet their needs (reducing the value provided by the housing sector).

Australia's Future Tax System Review found that "Ideally, there would be no role for any stamp duties, including conveyancing stamp duties, in a modern Australian tax system" and recommended replacing the revenue currently raised using stamp duties through an increase in consumption or property taxes. Policy issues relating to the removal of stamp duties are discussed in Section 4.3.3.

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43 Under a broad-based wealth tax, one could imagine a much richer set of financial products including commercial reverse mortgages that would assist individuals to resolve this problem.

44 In 2016-17, stamp duties represented around 26 per cent of state and territory 'own source' revenue (ABS cat. No. 5506.0, Table 10). Australia also collects a greater share of revenue from property taxes than other OECD countries, with 10.8 per cent of revenue coming from property taxes in 2016 compared to the OECD average of 5.7 per cent (OECD 2018c, Table 3.12).

2.4.3 Estate, inheritance and gift taxes

Estate taxes are a tax on the assets held by a person at death. Estate taxes were once common in Australia, with all states levying an estate tax from 1901 until 1977 alongside a federal estate tax that commenced in 1914. However, by 1984 all estate taxes were abolished in Australia (Reinhardt and Steel 2006). Nineteen of thirty four OECD countries currently use an estate tax, with many of them operating at high nominal rates. For instance, the US and UK have a top marginal rate of taxation on estates of 40 per cent.[45] More information on estate taxes operating in other countries is provided in Appendix D.

There are several reasons to tax estates at death. Interestingly, the most obvious reason — that people are less likely to miss the money after they die — is a point of conjecture in the debate over inheritance taxes. This is because if bequests are treated like any other consumption good, and the level of bequests is determined by someone that trades off their enjoyment from a bequest with their enjoyment of any other good, there is no reason to think bequests generate less 'welfare' than any other use of money. In this framework, an estate tax would violate the principle of consistent taxation of different types of consumption. However, this line of argument overlooks that inheritances are typically not 'optimised' along with other consumption decisions, and may be too large as a result of unexpected death, or because individuals accumulate excess assets before death due to a lack of liquidity (for example, because they are unable to practically access the equity in real estate).

The debate in the optimal tax literature as to whether estate taxes should play a role in a modern tax system largely depends on whether bequests are treated as an intended transfer or as surplus money at the end of a person's life. If the former, then an inheritance tax would discourage lifetime saving and it resembles a general tax on wealth. If the latter, then estate taxes can be taxed without changing economic behaviour. In principle, this question could be addressed empirically. However, as discussed by Kopczuk (2012), a change in the estate tax impacts the stock of savings over several years, and so it is very difficult, if not impossible, to capture this impact through the quasi-experimental econometric designs that are commonly used in the field. Therefore, the extent to which estate taxes influence savings behaviour remains a relatively open question.

A more practical concern associated with estate taxes is that it is necessary to either limit or tax the gifting of assets while people are alive as otherwise it would be trivial to avoid the tax by giving away all assets before death. Rules to implement this can be complicated, and have led to sophisticated tax avoidance planning structures in other countries.

While Australia does not currently have an estate tax, several elements of the Australian tax system operate together in a similar manner to an estate tax.[46] Namely:

- Government services provided to older Australians (such as aged care or health care) with a means-tested co-contribution.
- An option to delay the payment of co-contribution fees out of the estate upon death.[47]

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45 A full list of estate tax rates for OECD countries in 2017/18 can be found in Drometer et al. (2018).

46 Some superannuation balances are taxed when passed to dependants which can also act as a de facto estate tax. https://www.ato.gov.au/Individuals/Super/Withdrawing-and-using-your-super/Tax-on-benefits/?anchor=Taxondeath benefits#Taxondeathbenefits

47 One example of this is the Pension Loans Scheme offered by the Australian Department of Human Services. Details available at: https://www.humanservices.gov.au/individuals/services/centrelink/pension-loans-scheme.

Together, these policies result in a payment to the government by most older Australians, that is determined based on the value of assets to which that person has access. Notably, the co-contribution style of payment reduces the likelihood that people will try to hide their income as there is an incentive to pay a larger contribution and receive a higher quality service.[48] The Productivity Commission (2013) recommended increasing the use of means tested government payments of services delivered to older Australians as a partial solution to budgetary pressures driven by an ageing population.

As the deferred payment for government services from estates has many of the positive features of estate taxes with less potential for tax avoidance and estate planning, the expansion of this type of system should be considered as an alternative to the re-introduction of an estate tax in Australia.

2.4.4 Summing up the evidence: Should savings taxes focus exclusively on the income from savings?

The key arguments regarding the extent to which savings should be taxed are summarised in Table 2.8. This suggests that the Australian system for taxing savings should continue to focus on the income from savings (including capital gains). Broad-based wealth taxation has relatively similar economic properties to taxing the income from savings and is unlikely to justify the fundamental change in the tax system that would be required to implement it. A well-designed estate tax could complement taxes on the income from savings, but international experience suggests that it would raise significantly less revenue than existing savings taxes (and therefore should not be seen as an alternative to savings taxes). Finally, taxes on the transfer of property (such as stamp duties) are consistently evaluated as among the most economically damaging taxes in Australia and should be reduced and eventually eliminated. Replacing these with a broad-based land tax would improve efficiency and equity in the Australian system.

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48 This process of self-selection is a similar dynamic to private education and private health care.

2 THE THEORY OF TAXING SAVINGS

Table 2.8 Key arguments: Should savings taxes focus exclusively on the income from savings or include other tax bases?

Argument	Empirical evidence	Relevance to policy
Wealth Taxes		
A broad-based wealth tax is better targeted at reducing income inequality as it directly targets the total level of wealth.	Wealth taxes are reasonably uncommon (4 OECD countries in 2017). One issue of levying taxes on wealth is that people holding illiquid assets may not have the means to pay the taxes. It can also be difficult to assess the value of some types of illiquid wealth.	Low – A broad based wealth tax has fairly similar economic properties to a broad-based tax on all income from savings. Given the difficulty of transitioning to a wealth tax system, it is unlikely that such a change would be justified.
Estate taxes		
An estate tax can be used to limit the intergenerational transfer of wealth, and, in certain conditions, can represent a good source of revenue.	Estate taxes are relatively common around the world and were levied in Australia for most of the twentieth century. Estate taxes require a significant degree of enforcement to ensure that the tax isn't avoided. In practice, most estate taxes around the world do not raise much revenue.	Moderate – A well-designed estate tax would complement the existing system for taxing savings. Policymakers should also consider increasing the user-pay contribution for services such as aged care and health care for older Australians, with the option for the payment to be taken from the estate.
Stamp duties		
Stamp duties should be eliminated.	Stamp duties are consistently evaluated as among the worst taxes levied in Australia and generate significant distortions in housing and labour markets.	High – Stamp duties should be eliminated as a matter of urgency by State Governments.

Source: Authors' compilation.

THE TAXATION OF SAVINGS IN AUSTRALIA **35**

3 Existing savings taxes in Australia

3.1 How do Australians save?

To understand how savings are taxed in Australia it is important to first examine how Australians accumulate wealth. Figure 3.1 shows the distribution of assets held by Australian households in 2015-16.[49] It shows that the family home is the largest source of household wealth (41%) with superannuation (17%) and investment properties (16%) also making up significant shares. Superannuation has increased strongly as a share of total household assets since the introduction of compulsory superannuation in 1992, and the proportion of assets held in superannuation is projected to continue growing as the Australian superannuation system matures.[50]

Figure 3.1 Shares of asset types held by Australian households, 2015-16

Bank accounts 5%
Shares 2%
Home contents/vehicles 9%
Trusts 2%
Own business 8%
Other property 16%
Superannuation 17%
Own home 41%
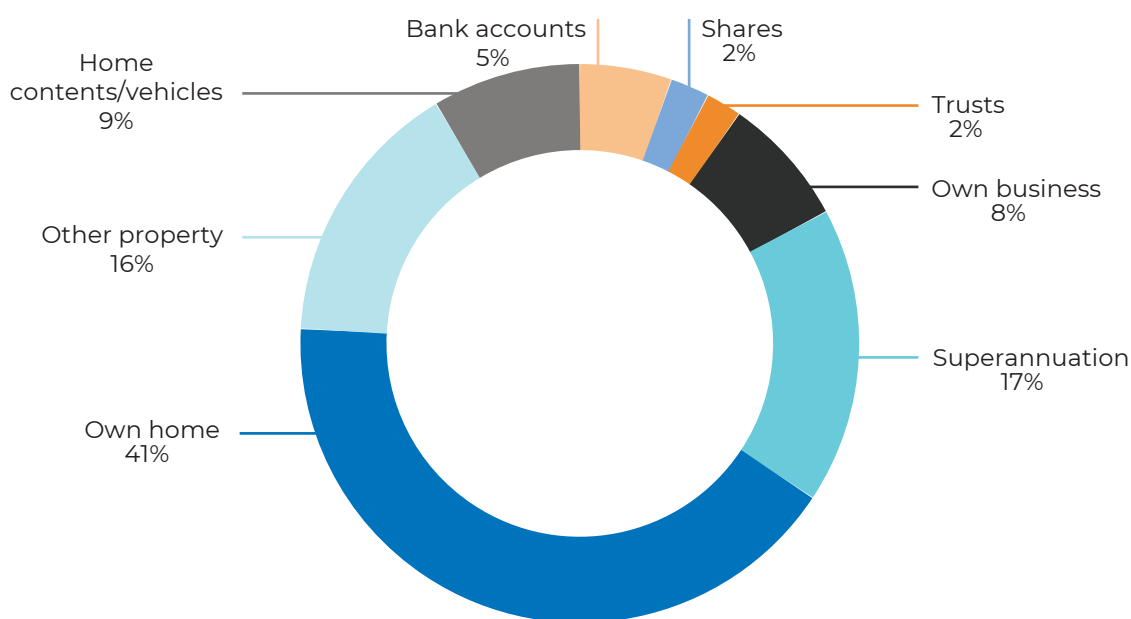
Source: ABS Household Income and Wealth, Cat. No. 6523.0

3.2 Calculating the METR on savings

Savings in Australia are taxed in different ways using a variety of tax instruments. For instance, owner occupied housing is taxed in a very different way to investment properties, which are taxed in a very different way again to superannuation. The details of how different types of savings are taxed (and how these taxes can vary between individuals) are presented in Appendix C.

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49 This is also equal to the distribution of assets at an individual level.

50 Since the introduction of compulsory superannuation in 1992, the minimum contribution level has been progressively increased from 3 per cent in 1992 to 9.5 per cent in 2017-18. Further increases are scheduled that will raise the minimum contribution to 12 per cent by 2025. However, these have already been delayed amidst doubt as to whether they will ever be fully implemented.

Given the wide variety of tax treatments that apply to different types of assets, it is useful to calculate a summary measure of the total tax burden on each asset type . This measure, known as the Marginal Effective Tax Rate (METR), calculates the net impact of the tax system on the incentive to invest in different assets, and thereby identifies which types of savings are taxed relatively heavily and which are taxed relatively lightly.

This report follows previous work by the OECD (1994 and 2018b), the Australian Treasury (Commonwealth of Australia 2010, 2015) and the Productivity Commission (2015) in defining the METR as:

$$METR = \frac{\text{Pretax real return} - \text{Posttax real return}}{\text{Pretax real return}}$$

For instance, if in the absence of taxes an investment makes a 3% real return, but after all taxes are considered the investment returns only a 1.5% real return, the METR is 50%. In other words, the marginal effective tax rate represents the share of the pre-tax return paid in tax.

The calculation assumes that savings are made from post-tax income, and so a marginal effective tax rate of 0% would still include any income tax paid on the initial income. Where savings allow someone to pay a concessional rate of income taxes (such as concessional superannuation contributions) the METR can be negative.

3.2.1 What taxes are included in the METR calculations?

In principle, all parts of the tax and transfer system that influence the return on an investment should be included in the METR calculations. This study includes:

- all taxes paid on income from savings, including personal income taxes and superannuation taxes
- taxes paid on the holding of assets (such as land taxes)
- taxes paid on capital gains
- transaction taxes (such as stamp duty)

Council rates are not included in the calculations as they are largely fee-for-service charges.[51] GST is also not directly considered under the methodology as it would be paid in the same proportion whether the income is spent today or saved and spent in the future. Means tests on Government payments such as the Age Pension are not included in the main METR calculations, but are considered separately in section 3.5.6.

3.2.2 The assumption of a fixed pre-tax rate of return

The key assumption required to estimate METRs is a fixed pre-tax rate of return on all investments. This is consistent with a small open economy assumption in which the return on each investment is set by a perfectly elastic supply of foreign capital. An alternative approach, used less commonly, is to assume a fixed post-tax rate of return. This latter approach is consistent with a closed economy in which the prices of all asset types equalise.

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51 Moreover, council rates are largely capitalised into house prices, which means they have little impact on the 'marginal' investor. In principle, a distinction should be made between taxes levied to raise general revenue and levies that reflect the cost reflective price of services delivered exclusively to the owner of an asset. Therefore, if council rates include a fee for trash collection, that should be excluded from the METR calculation, while rates collected to fund general council services should be included. While council rates are excluded from the METR calculation in this report, this has relatively little impact on the estimated METRs.

3.3 What are the METRs on different asset classes in Australia?

As discussed above, the METR paid by any individual investor depends on a range of factors. Therefore, this section will start by comparing the METRs for different asset types with a standard set of assumptions designed to represent a 'typical' investment (similar to those used in previous reports by the Australia Treasury). Then, in the following section, the report will vary many of these assumptions to show how they affect the tax treatment of different savings options. In the main results (shown in Figure 3.2), the calculations assume:

- a constant real pre-tax rate of return of 3 per cent
- annual inflation of 2 per cent
- an investment period of 20 years
- personal marginal tax rates corresponding to the five marginal tax rates in the 2017/18 Australian tax system (inclusive of the Medicare levy)
- stamp duty of 4 per cent on property transactions[52]
- earnings within superannuation taxed at 10 per cent[53]
- land tax of 0.4 per cent per annum paid on investment properties.

Figure 3.2 METRs of major Australian asset classes

Personal income tax rate
■ 0.0%   ■ 21.0%   ■ 34.5%   ■ 39.0%   ■ 47.0%
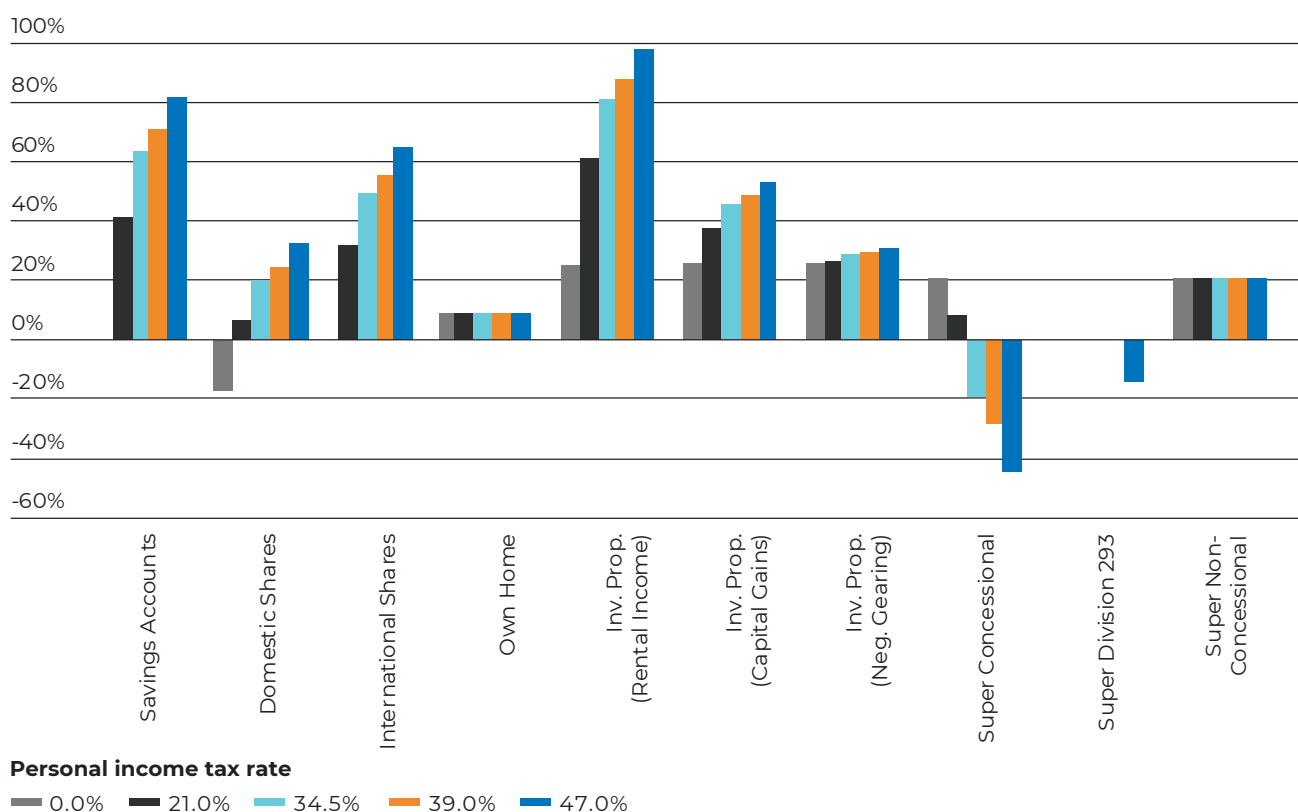
Note: Domestic shares are assumed to make half of the return through capital gains, and half through dividends. Division 293 superannuation is only applicable to individuals in the highest tax bracket, and therefore the METRs for lower tax brackets are not defined. The negatively geared investment property uses a gearing ratio of -30%.

Source: Authors' calculations.

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52 The assumptions for stamp duty and land taxes are based on total tax revenue divided by the total asset base. There will be considerable variation on these values across assets as these taxes vary by state and are typically progressive.

53 The tax rate on earnings within superannuation is 15% in the accumulation phase. However, a lower tax rate applies to capital gains (10%), earnings in the pension phase (0%) and franked dividends (15% minus the corporate tax rate). A rate of 10% is used in the calculations and is designed to be conservative. Henry (2009) suggests a figure of 7-8% while a calculation based on ATO Tax Statistics 2015-16 Super Funds Summary Tables suggests a figure close to 5%.

The figure shows that the METR on most assets is positive and relatively high. For instance, an individual in the highest tax bracket who keeps money in an interest-bearing bank account will face a METR of more than 80%. Even individuals in the middle tax rate (earning between $37,000-$87,000) face a METR of more than 50% on most types of assets.

In contrast, owner-occupied housing and superannuation stand out as paying lower rates of tax compared to other asset classes. Domestic shares are also found to be taxed at a relatively low rate (particularly for people in low tax brackets). This occurs because of the 'internationally funded capital assumption' that treats imputation credits as a subsidy to domestic shareholders.[54]

Another key feature of Figure 3.2 is that the METR increases with income for some assets (bank accounts, shares and investment properties), does not change for others (owner-occupied housing and non-concessional superannuation), and decreases with income for concessional superannuation.

3.4 Interpreting the METR

When an individual makes an investment, the effective tax rate on that investment varies based on several factors, such as an individual's income tax rate, the return on each investment type, the inflation rate and the investment period. In order to compare the METR on different types of savings, it is necessary to hold these factors constant. Therefore, the METR is best understood as a measure of whether (holding other factors constant) a particular asset type is taxed heavily relative to other assets. This value is directly relevant to policy as it identifies situations where the tax system favours a given investment type 'a priori'.

On the other hand, METRs should not be interpreted as a final tax rate on realised income. For instance, where an investment type usually receives a higher or lower rate of return than the three per cent real return assumed in the METR calculation, or where an asset type is typically held for a shorter or longer period than other assets, the realised tax rate on these investments will differ from the values in Figure 3.2.

Another limitation of the partial equilibrium approach used here is that the tax rate may directly influence the pre-tax rate of return. For instance, if an asset type is heavily taxed, investors are likely to reduce their investments in that type of asset which will reduce the price of the asset and increase the expected return. Understanding the extent to which asset prices will adjust to savings taxes is included in Appendix B as an important area for future research.

A final consideration when interpreting the METRs in Figure 3.2 is that they exclude corporate income taxes. This is particularly relevant when comparing the tax rate on interest income with other sources as interest is deductible when calculating corporate income taxes. As a result, Figure 3.2 will overstate the different tax rate paid on interest relative to other asset types.

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54 The alternative would be to use the 'domestically funded capital assumption'. In this case, the METRs for domestic shares would be equal to those for International Shares in Figure 3.2.

3.4.1 Comparing METRs with results from optimal tax theory

In Section 2.1 of this report, arguments were raised that the tax rate on savings should be lower than on labour income. In particular, the idea that the tax rate on savings compounds over time (Section 2.1.1) and that the tax system operates on nominal rather than real savings income (Section 2.1.5) mean the effective tax rate on savings increases over time.

These effects can be observed in Figure 3.2. For instance, in the top tax bracket savings income is taxed annually at 47 per cent. However, the effects of savings taxes compounding over time and inflation result in an METR on savings income over 20 years of 82 per cent. The tax rate on rental income is even higher as this is taxed in the same manner, but also includes the additional impact of stamp duty and land taxes.

However, while the results from Section 2.1 suggest that the annual nominal tax rate should be lower than labour income to prevent very high METRs on savings, they do not necessarily suggest that the METRs should be higher or lower than the annual tax rate on labour income. In particular the tax theory results do not suggest that the METRs need to be zero. Finally, negative METRs are not recommended by any results in the optimal tax theory literature.

3.4.2 Interpreting the negative METRs on superannuation

Figure 3.2 shows that the METR is negative for superannuation for individuals in the highest three tax brackets. This occurs because the METRs use a zero-tax benchmark in which income is taxed at the full marginal tax rate when earned and then not taxed afterwards. Using this benchmark, the deductibility of superannuation contributions against the personal income tax are a subsidy. For instance, concessional superannuation contributions for an individual in the 47 per cent tax bracket will be taxed at 15% (resulting in an upfront tax benefit of 32%). While earnings within superannuation are also taxed, the upfront benefit is large enough that the effective tax rate remains negative over twenty years.

The result (that superannuation is taxed at a negative rate) is dependent on several key assumptions underlying Figure 3.2. In particular, the METRs for superannuation are sensitive to the assumed length of investment (see Section 3.5.2), the assumed tax rates on earnings within superannuation, the assumed rate of inflation (Section 3.5.3) and the assumed real return on investments. Nevertheless, the METR on superannuation remains negative for many combinations of these assumptions.

Post-tax income is used as the benchmark in order to compare the choice of consuming in the current period (which must be done using post-tax income) with consumption in future periods. In other words, a METR of zero means that the relative price of shifting current and future consumption is the same as in a zero-tax world, while a negative METR means that future consumption is treated more favourably than current consumption relative to a zero-tax world (i.e. the tax system encourages people to save more than they would in the absence of taxes).

It would be possible, but undesirable, to use pre-tax income as the zero-tax benchmark. In this case, the initial tax rate on superannuation would be 15 per cent (rather than negative 32 per cent for high-income earners) and it would result in a positive net tax rate on superannuation. However, using this benchmark, the METR on all other assets would also increase by the same amount. For instance, interest income for those in the top tax bracket would face a lump sum tax of 47 per cent in the first period. Therefore, if calculated using this benchmark, the relative differences between the METRs of different assets would be maintained and superannuation would remain heavily favoured as an investment option.

Another method to calculate the net amount of taxes paid on superannuation is to use a benchmark in which income is exempt from tax when earned, the return from investment is also exempt from tax and the withdrawal of funds from superannuation is taxed as regular income through the personal income tax. This benchmark is known as an EET pension system (while the benchmark in the calculations above can be described as TEE). Previous research (CSRI 2016) has suggested the Australian superannuation system, which is best described as ttE where the small 't' indicates that contributions and earnings are both taxed concessionally, has a similar overall tax rate to an EET system, and has used this to argue the Australian superannuation system is not undertaxed (Podger 2019).

If personal income taxes were levied at a flat rate, an EET system and a TEE system result in an equivalent rate of taxation. However, since the personal income tax is levied using a progressive schedule and an EET system allows people to spread their income over more years than a TEE system,[55] an EET system will have a significantly lower overall rate of tax than a TEE system with the same tax schedule. This suggests that the negative METRs in Figure 3.2 (and the subsequent finding that this distorts consumption decisions towards future periods) are consistent with the previous research suggesting superannuation is not subsidised against an EET benchmark.

3.5 Factors influencing the METR

3.5.1 Higher levels of gearing reduce the effective tax rate on investment properties

Figure 3.2 above shows that the effective tax rate on investment properties is lower when negatively geared. This occurs because capital gains are taxed at a discounted rate (a 50% discount applies) relative to rental income. Therefore, investors would ideally like to receive as much profit as possible in the form of capital gains.

Data released by the Australian Taxation Office show the average rental income on Australian tax returns is negative (meaning the typical Australian rental property is negatively geared). This implies that the 'negative gearing' results from Figure 3.2 are most representative of the tax paid on investment properties.

3.5.2 The length of investment strongly influences the METR

The METRs shown in Figure 3.2 are calculated with a 20-year investment horizon. Using different investment horizons will alter these METRs for two reasons:

- Taxes levied each year (such as on interest in a savings account) reduce the amount of capital that can yield a return in the following year. As a result, the impact of a tax compounds over time (this is discussed in Section 2.1.1).
- Some investments have a one-off tax (like stamp duty) or a one-off subsidy (like superannuation) when the investment is made. This will have a large impact on the METRs in the short-run, but is less prominent when spread out over many years.

Figure 3.3 and Figure 3.4 show the impact on the METRs of Australian investments of investment horizons calculated for 5-year and 60-year investments.

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55 For instance, consider an individual with an annual income of $100,000. Under a TEE system they pay taxes in that year on the full amount of income. In contrast, under an EET system they may choose to divert an amount to superannuation which is only taxed when it is withdrawn. As the tax system is progressive, splitting the income and taxing it in separate years will result in a lower average rate of taxation.

Figure 3.3 METRs of major Australian asset classes, a shorter 5 year investment period

Personal income tax rate

■ 0.0%　■ 21.0%　■ 34.5%　■ 39.0%　■ 47.0%
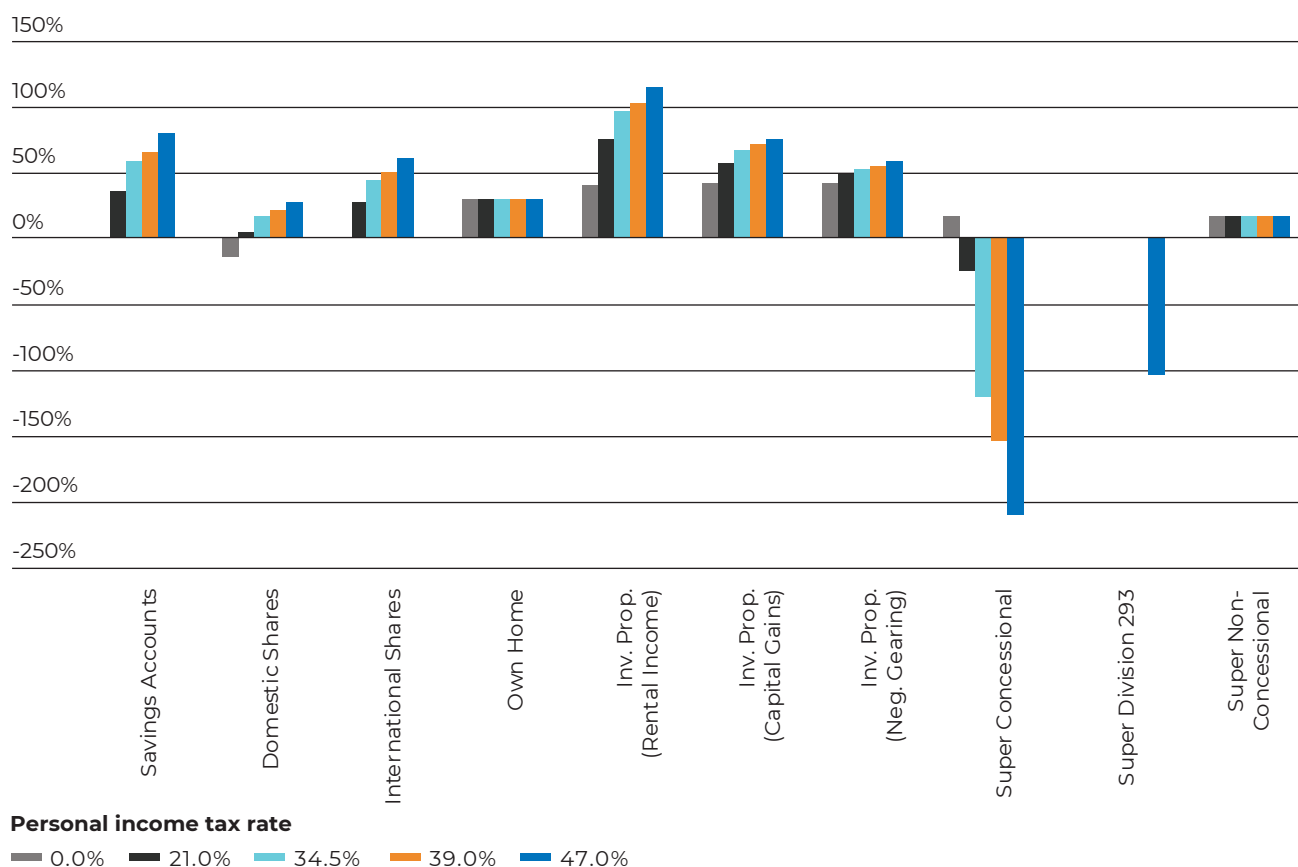
Source: Authors' calculations.

METRs calculated for five-year investments (Figure 3.3) show a higher tax rate on housing and a larger subsidy towards superannuation than the METRs calculated for 20 years in Figure 3.2. The housing result occurs because stamp duty is a one-off tax on investment and represents a larger share of total returns for shorter investments. The large negative METRs for superannuation have a similar interpretation, as investing in concessional superannuation accounts results in a significant up-front tax benefit for high-income earners. For short-term investments, this tax benefit can be larger than the investment returns.[56]

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56 For instance, in Figure 3.3 the upfront tax advantage for someone in the highest tax bracket is 32 per cent, while the real return on investment is around 15 per cent. This gives a METR of negative 200 per cent.

Figure 3.4 METRs of major Australian asset classes, a longer 60 year investment period

Personal income tax rate
■ 0.0%   ■ 21.0%   ■ 34.5%   ■ 39.0%   ■ 47.0%
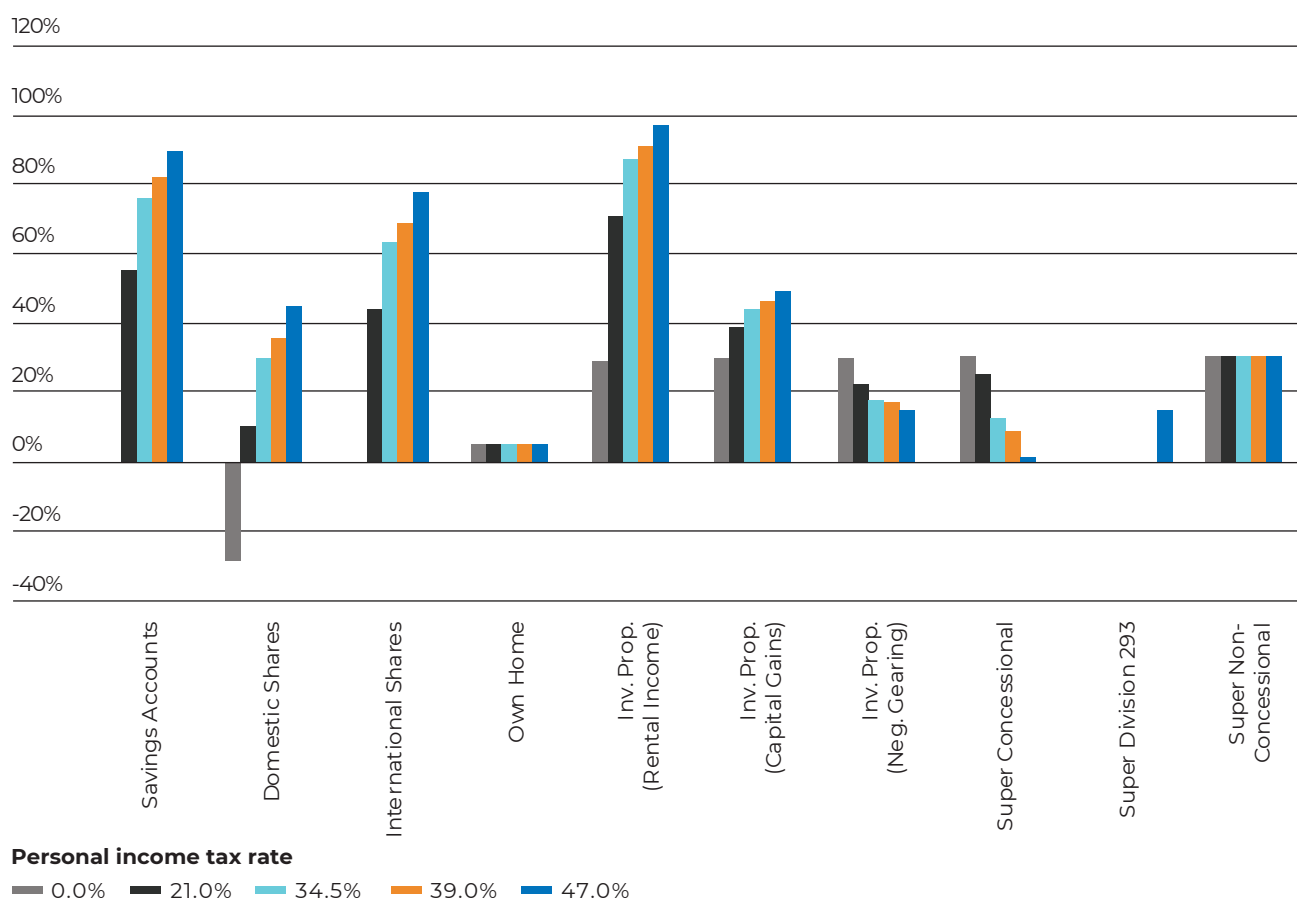
Source: Authors' calculations.

METRs calculated for 60-year investments are shown in Figure 3.4. These show that for many investment types (including savings accounts, rental income, superannuation and shares), the METR is higher than the METRs calculated for 20 years in Figure 3.2. This is consistent with the Chamley (1986) result discussed in Section 2.1.1 that METRs will approach 100% for very long timeframes. However, there are several notable exceptions to this finding:

- The METR on owner-occupied housing becomes smaller for longer investment horizons as there is no ongoing taxation of housing in this calculation[57] and the impact of stamp duty can be spread over a longer investment period.

- The METR on capital gains on investment properties does not increase over time as capital gains are taxed on realisation. This is a demonstration of the benefit of tax deferral for capital gains.

- The METR on negatively geared investment properties is lower compared to a shorter investment period. The intuition for this result is that the deferral benefit of capital gains applies to more than 100% of the original investment. This also results in higher income earners having a lower METR than low income earners for long-held investments.

Although the METRs on superannuation are higher than those calculated for 20 years, they remain very low compared to other asset classes. It should also be noted that over this time period the results are more sensitive to assumptions about the average asset return and inflation.

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57 As discussed above, council rates are considered to be fees for council services and excluded from this calculation.

3.5.3 Higher rates of real return lower the real tax rate on most assets

Higher real rates of return lower the METR for all assets, other than concessional superannuation. This occurs for two reasons. First, if the real return is larger (and the assumed level of inflation is held constant) the real return becomes a larger share of the nominal return which is the basis of taxation. Second, where the tax system confers a one-off benefit (such as concessional superannuation) or a one-off cost (such as stamp duties) a higher rate of annual real return decreases the importance of the one-off impact to the overall performance of the asset. The METRs for different Australian savings are shown below with different levels of real growth.

Figure 3.5 The impact of changes to the assumed rate of real return on METRs, 34.5% marginal income tax rate
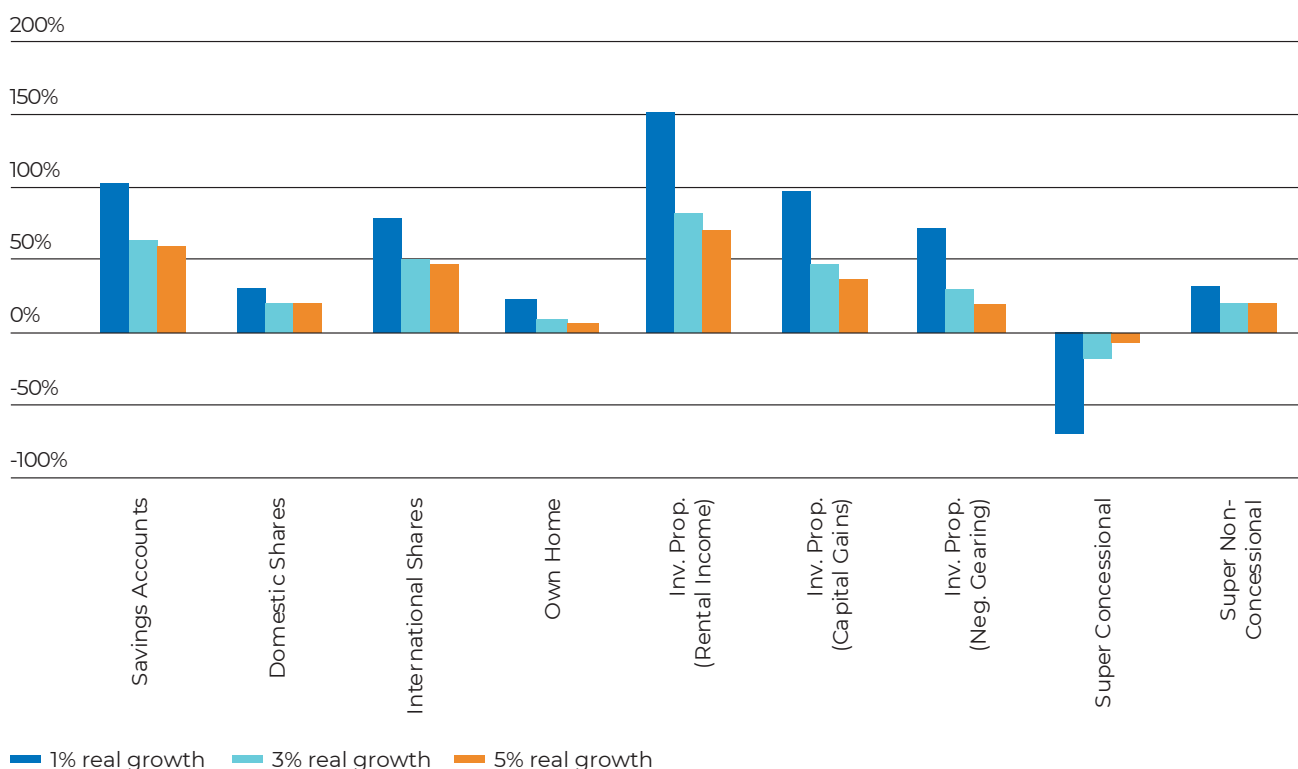
Note: The same assumptions are used as in Figure 3.2. Division 293 superannuation is not shown as the chart is presented for individuals in the 34.5 per cent tax bracket.
Source: Authors' calculations

3.5.4 Higher levels of inflation result in higher effective tax rates

A higher level of inflation in the economy results in a larger METR on all investments other than owner-occupied housing.[58] This is because the tax system operates on the nominal return to investments and so for a given real return, a higher level of inflation will increase the amount of tax paid. This impact is apparent in Figure 3.6, which compares the METRs of different savings vehicles under different inflation rates. In each case the real return of the asset is 3% and the marginal tax rate is 34.5%. For context, inflation in Australia has averaged 2.1 per cent annually since 2010 and 3% per cent annually in the decade 2000–2010.

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58 The METR on owner-occupied housing is not influenced by inflation as the only tax paid (stamp duty) is assumed to be paid at the start of the investment.

Figure 3.6 The impact of inflation on METRs, 34.5% marginal income tax rate
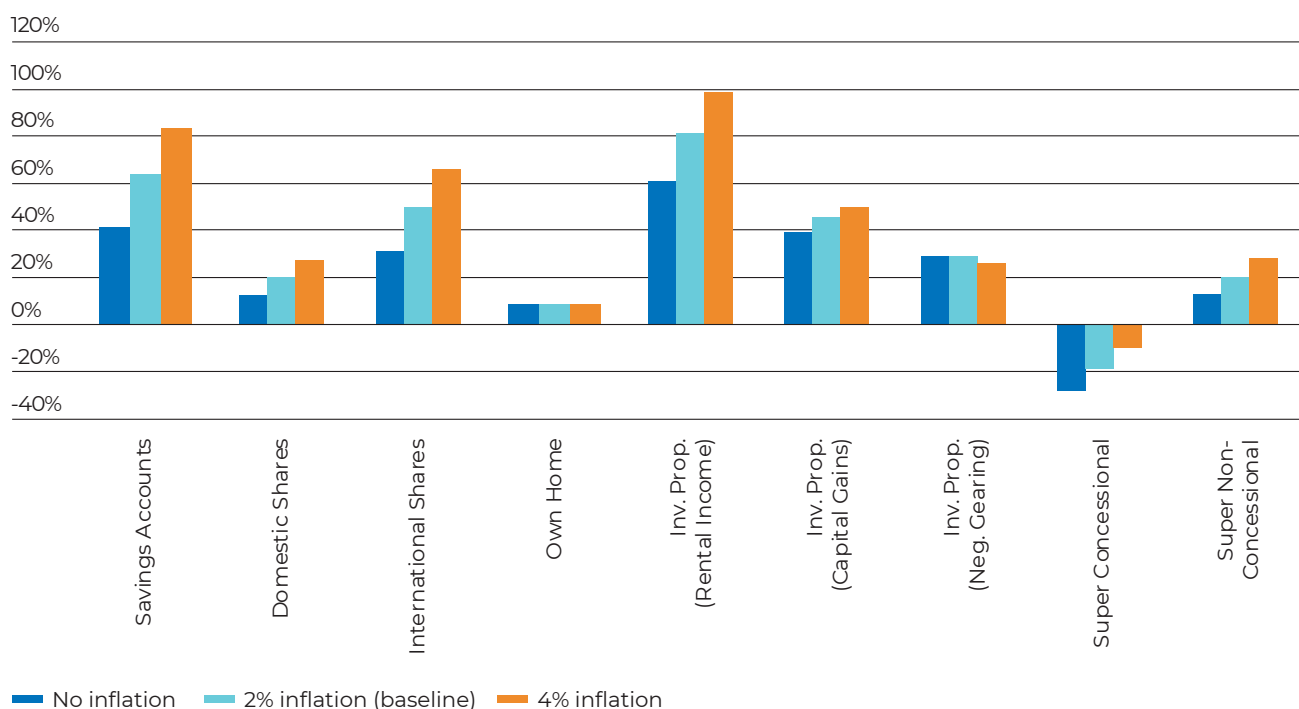
Note: The same assumptions are used as in Figure 3.2. Division 293 superannuation is not shown as the chart is presented for individuals in the 34.5 per cent tax bracket.

Source: Authors' calculations.

3.5.5 Increasing stamp duty rates has increased the effective tax rate on housing

The effective rate of stamp duty has been increasing over time as a result of bracket creep. This occurs because stamp duty is taxed using a progressive formula and the thresholds have not increased in line with house price inflation. Stamp duty as a share of housing sales prices has increased significantly over the past three decades (Figure 3.7).

Figure 3.7 Stamp duty paid on a median house sale over time
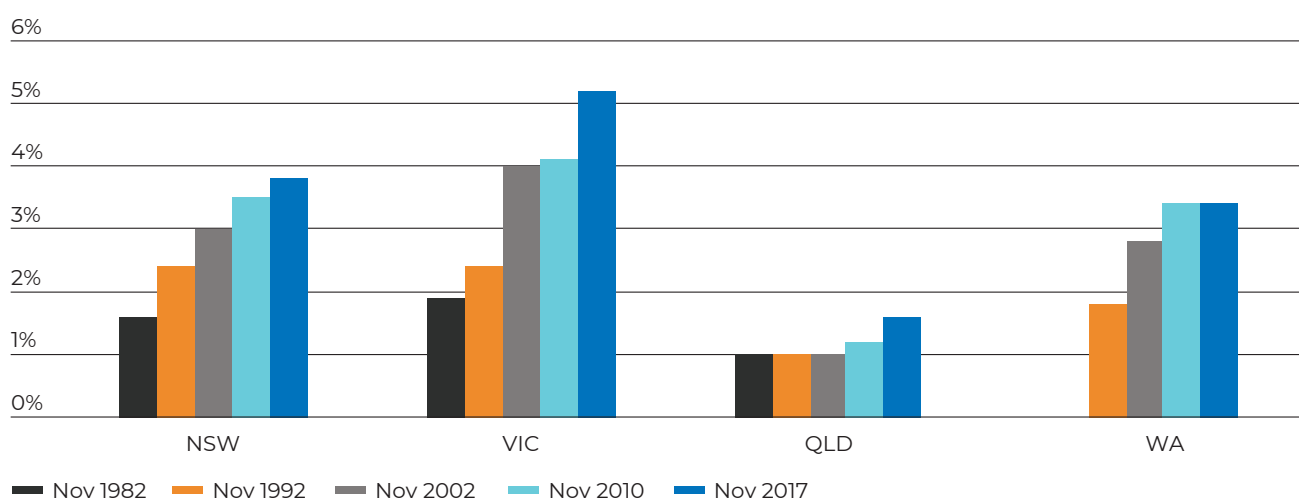
Source: Housing Industry Australia (2018)

This increase in stamp duties has reduced the attractiveness of both owner-occupied housing and investment properties. As an illustration of how this influences the METRs of these assets, reducing the stamp duty in Victoria from 5 per cent of the purchase price (the tax on a median property in 2017) to 2 per cent of the purchase price (the tax on a median property in 1982) would reduce the METR on an owner-occupied house held for 20 years from 12.7% to 5.1%. The same reduction in stamp duty would decrease the METR on a negatively geared investment property held for 20 years from 30.8% to 24.7%.[59]

3.5.6 Other factors that could affect the METR

Trusts and other forms of income splitting

Australians establish trusts for many reasons. One key advantage trusts offer is control over who receives income and when that income is received. In this way, trusts can be used to lower taxes paid. For instance:

- trusts can allow taxpayers to transfer income to others in lower tax brackets, such as spreading income across family members.
- when a company is set up inside a trust,[60] it can allow people to delay receiving income until they are in a lower personal income tax bracket, such as in retirement.

The impact of trusts on the effective tax rates paid on investments is not calculated in this report. Trusts are set up in variety of different ways, and the tax benefits of a trust depend heavily on the individuals who benefit from the trust. Therefore, it is not possible to identify how a 'typical' trust impacts the METR.

Conducting asset sales in a period with low labour income

Calculations of capital gains tax paid on shares and investment properties in the examples above assume the investor has a fixed personal income tax rate. That is, if their personal tax rate is 34.5 per cent when they make yearly profits/losses on rental income and dividends, it is also 34.5 per cent when they sell the asset. However, these tax rates may differ, which may increase or decrease the METR:

- If an investor is able to choose when to sell an asset, they may wait until they are in a lower tax bracket (such as after retirement) before realising a capital gain.
- Selling an asset may result in a one-off increase in income that pushes the investor into a higher marginal tax rate.

The relative importance of these factors is not clear, and is suggested as an area of future research in Appendix B.

Age Pension means test

The Australian Age Pension incorporates both an assets test and an income test that reduces and then restricts access to the Age Pension as assets and/or income increase (further details can be found in Appendix C). When viewed in a single static year, the financial incentives provided by the means test can be broken down into three groups:

- For those who are above the income and assets test upper thresholds (and therefore receive no pension) there is no financial penalty from holding more assets and so the means test does not change the METRs calculated above.

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59 Assuming an investor with a marginal tax rate of 34.5 per cent. All other assumptions are the same as Figure 3.3.

60 This arrangement is known colloquially as a 'bucket company' and is discussed in detail in Sainsbury and Breunig (2020).

- For those who are below the income and assets test lower thresholds and receiving a full pension there is no disincentive to hold more assets as long as they stay below the income and asset thresholds.
- For those in the 'taper' region of the means test, each additional dollar of income earned or assets held reduces the pension received. Using the assumptions above (3% real return and 2% inflation) the additional tax rate caused by the pension means test is 83% if the income test binds and 253% if the assets test binds.[61] This is in addition to any other taxes levied on these assets.

This implies that the means test has a large effective tax rate for a relatively small group of individuals, with no impact on the majority of individuals in a given year. However, limiting the analysis to a single static year will underestimate the impact of the means test on incentives to save. Although the number of people affected by means test 'tapering' is small in a given year, many people will experience at least some periods where their income falls within the taper region as they approach and go through retirement. For instance, someone approaching retirement can predict that they will be eligible for the Age Pension in the future and may reduce their assets in order to gain eligibility by:

- spending more money
- retiring earlier - Kurdna (2016) conducts a simulation exercise using an overlapping generations model and finds that the Age Pension means test has a large impact on the decision to retire for the third and fourth income quintiles (but relatively little impact on the first, second and fifth quintiles)
- investing more money into housing (which is exempt from the age pension assets test) (Cho and Sane 2013)
- giving money and assets to family members (subject to the Department of Human Services gifting rules[62]).

The effective financial impact on accumulating savings into retirement is a more complex problem than can be solved using the 'static' METR framework used in this report. Extending the METR framework to investigate the METRs faced by attempting to access the Age Pension is a potential area for future research.

The age of the investor

The age of an investor can influence the effective tax rates on savings directly as the tax rate on superannuation and eligibility to the age pension are directly linked to age. Age can also influence the effective tax rates on savings indirectly as several factors mentioned above (such as income and the expected time holding an asset) are correlated with age.[63]

The extent to which the tax rate on savings varies across the lifecycle is an important factor in designing savings taxes. For instance, if the effective tax rates diverge strongly for a particular age cohort, it is likely to heavily distort savings decisions within that group. In addition, if the tax rates on all investment types are high for people in a particular age group, it may reduce the savings rate among this group.

The static approach taken to calculating METRs in this paper means that it is not possible to investigate how these tax rates will change over the lifecycle. Extending the METR framework to examine how savings taxes impact on investment decisions for individuals at different stages of life is suggested as an area for future research in Appendix B.

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61 A 5% nominal return loses 2.5 per cent to the income test, which reduces the real return from 3% to 0.5% (83%). Similarly, the $3 reduction per fortnight due to the assets test is 7.8%, or 253% of the real return.

62 Available at https://www.humanservices.gov.au/individuals/enablers/gifting

63 Preferences for risk and liquidity will also vary across the lifecycle which will influence the types of assets that are held.

3.6 The distributional incidence of the tax treatment of savings

Calculating the distributional impact of the current tax regime on savings poses both conceptual and empirical challenges. Nevertheless, the analysis undertaken in the following section suggests that taken as whole, the tax treatment of savings is regressive. This is largely an outcome of the concessional tax treatment of superannuation.

3.6.1 Estimating the distributional incidence of savings taxes

This report estimates the distributional impact of savings taxes as a weighted average METR across all asset types, with the METRs for different tax brackets based on Figure 3.2 and the average assets held by each income group taken from the Australian Survey of Income and Housing (ABS, 2019). The results, presented in Figure 3.8, suggest that savings taxes currently operating in Australia are regressive.

Figure 3.8 Distributional incidence of existing savings taxes
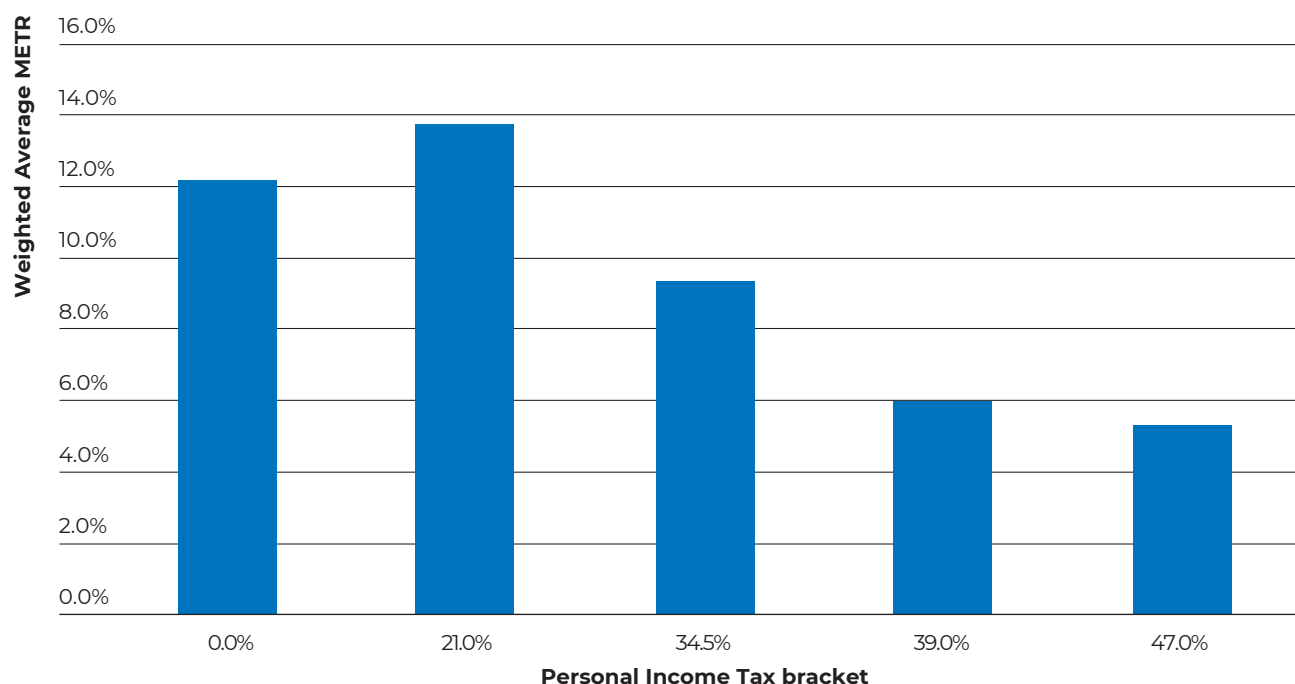
Source: Author's calculations. See Table 3.1 for breakdown of calculation.

The individual components of the calculation of distributional incidence are shown in Table 3.1. This shows that the regressive result is primarily driven by the negative METR on superannuation for those in the highest tax brackets. This calculation can also be aggregated across the total population to give an estimate of the weighted average METR across all investments of around 7.5%.[64]

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64 This figure is comparable to a calculation in Section 4.2.4 suggesting all existing savings taxes could be replaced with a flat tax on savings of 6.2 per cent.

Table 3.1 The METR and share of assets under each tax bracket

Personal income tax bracket	0%	21%	34.5%	39%	47%
Share of assets					
Bank accounts	4.9%	5.5%	4.4%	4.2%	5.4%
Shares	0.9%	1.3%	2.0%	3.0%	9.6%
Own home	67.0%	59.5%	57.5%	47.8%	34.4%
Investment properties	14.8%	17.6%	16.5%	18.4%	18.8%
Concessional Superannuation	12.4%	16.1%	19.6%	26.6%	22.2%
Superannuation (Div. 293)	0.0%	0.0%	0.0%	0.0%	9.6%
Calculated METR					
Bank accounts	0.0%	41.2%	63.8%	70.7%	82.3%
Shares	-16.8%	6.4%	20.1%	24.5%	32.1%
Own home	9.0%	9.0%	9.0%	9.0%	9.0%
Investment properties	25.5%	26.9%	28.8%	29.6%	31.3%
Concessional Superannuation	20.6%	8.4%	-19.0%	-28.2%	-44.5%
Superannuation (Div. 293)	0.0%	0.0%	0.0%	0.0%	-14.0%
Weighted Average METR	**12.2%**	**13.8%**	**9.4%**	**6.0%**	**5.3%**

Source: Authors' calculations using data from the Australian Survey of Income and Housing (ABS, 2019).

There are several limitations to this approach that need to be noted. Most importantly (as discussed in Section 3.4), METRs are forward looking measures that calculate the amount of tax paid on different asset classes while holding other factors constant (such as the return on different investments or the period that an asset is held). If these factors vary systematically across income groups, for instance, if higher income groups were more likely to invest in higher returning assets or for longer time periods, this would change the distributional impact presented above. The results could also be different in a general equilibrium context (an area of potential future research suggested in Appendix C).

Another issue is that the asset categories in the Survey of Income and Housing are not exactly the same as those used in this report. Therefore, further assumptions are required to map the asset definitions to the METRs calculated in this report.

- The Survey of Income and Housing does not distinguish between ownership of foreign and domestic shares, and so all shares are treated as domestic.
- All superannuation for those with an income less than $250,000 is treated as concessional superannuation.
- All superannuation for those with an income above $250,000 is treated as Division 293 Contributions.
- All investment properties are assumed to be negatively geared.
- Where asset ownership is defined at the household level (such as owner-occupied housing and investment properties) asset values are divided by the number of adults.
- Trusts were not included in the analysis.

Finally, the Survey of Income and Housing only includes a single year of data. This may provide a misleading picture of the distributional impact over an individual's lifetime. For instance:

- Many people in the 0% tax bracket are retired, and so may not be 'low-income' when viewed from a lifetime perspective or when broader measures of wealth are considered.

- Selling large assets (such as an investment property) can put people into the highest tax bracket even if they are not high income over the course of their lives.

Therefore, developing a better estimate of the lifetime distributional impact of taxes on savings using a panel dataset of investment behaviour should be a goal of future research.

While the distributional analysis presented in Figure 3.8 must be interpreted with these caveats in mind and the preceding discussion contains specific options for improving this analysis, it is the opinion of the authors that the broad findings of this analysis – that the existing distributional impact of savings taxes in Australia is slightly regressive – is unlikely to be significantly changed by such improvements. This is because the result is largely an outcome of the tax treatment of superannuation and this is well captured by the existing methodology.

4 A framework for reforming savings taxes

4.1 Principles of reform

A framework for improving savings taxes in Australia can be constructed by comparing the best practice principles for taxing savings (Chapter 2) with the description of the current Australian tax system (Chapter 3) and asking what reforms would move the existing tax system towards best practice. This comparison is shown in Table 4.1.

Table 4.1 Principles for tax reform

Principle of tax design	Existing tax system	Principle for reform
Principle 1: Savings should be taxed at a lower rate than labour income, but more than zero.	The average METR across all assets is around 7.5 per cent.	The average METR is about right, so changes should be roughly revenue neutral.
Principle 2: Different types of savings should be taxed at about the same rate.	Significant variation in the tax rate between types.	Changes to the existing tax system should reduce the tax paid on high tax assets (such as investment properties) and increase the tax rate on low tax assets (such as superannuation).
Principle 3: Where possible, the tax rate on income from savings should not depend on income from other sources.	Australia currently has a mixed system where some savings are taxed as personal income while other savings are taxed at a rate that is independent of other personal income.	Where possible, tax the income from savings independently of taxes on other income sources.
Principle 4: Base savings taxes on the return to savings, as opposed to the total stock of assets or taxing estates.	This is the basis of the current tax system.	Continue to use the income from savings as the main tax base. Remove stamp duties.

Source: Authors' compilation.

This comparison suggests that the main priorities for improving the Australian tax system are to:

- balance the tax rate paid on different assets by increasing the tax rate on the lowest taxed asset classes and reducing the tax rate on the highest taxed asset classes.
- tax savings income independently to labour income.

In considering reform to taxes on savings it is also important to bear in mind broader principles of tax reform. The Tax and Transfer Policy Institute (2018) has previously identified five general principles for tax policy design:

- Adequacy and Resilience – Does the tax system raise enough money to fund government operations, and is this likely to persist in the future?
- Simplicity – Can the system be easily understood and used by the Australian population?
- Fairness – Do people in similar situations pay a similar amount of tax (horizontal equity)? Do people with a greater capacity to pay taxes pay a larger share (vertical equity)?
- Prosperity – Does the tax system promote economic growth? Or, put another way, does the tax system avoid producing large distortions to economic decision-making that reduce the size of the economy?
- Consistency – Is a potential change to the tax system consistent with and supportive of other taxes and laws levied by all levels of government?

The above principles, considering the design of the entire tax and transfer system, should be applied systematically in thinking about any tax changes.

4.2 An ideal system – A dual income tax

Following the principles described above, the ideal approach to taxing savings is to implement a dual income tax such that all earnings from savings are taxed at the same flat rate (with no tax-free threshold). This savings tax would operate independent of the labour income tax, which would continue to operate using a progressive tax scale. For instance, if the dual income tax rate was set at 10%, then:

- All interest payments would be taxed at 10%.
- All dividends, both domestic and foreign, would be taxed at a rate of 10%.
- All capital gains (including owner-occupied housing) would be taxed at 10%.
- Superannuation contributions would be made from after-tax income[65] and then earnings in the account (through interest payments, dividends or capital gains) would be taxed at a rate of 10%.
- Rent and capital gains on investment properties would be taxed at a rate of 10%.
- The imputed rent from owner-occupied housing would be estimated and taxed at a rate of 10%.[66] An alternative approach would exclude owner-occupied housing from the dual income tax base and achieve a similar effective tax rate on owner-occupied housing through a broad-based land tax.

Under this approach, the tax rate applied to all forms of capital earnings (10% in the example above) could reasonably be set at between 5-20%. A lower level would provide greater incentives for savings, while a higher level would be more progressive.

Under a dual income tax, several complicating features of the existing tax system could be removed:

- There would be no capital gains 'discount' as all capital income would be taxed at the same rate:
  - Negative gearing would no longer be 'tax preferred' relative to rental income as investment losses (capital losses) could only be offset against income within the capital income tax.

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65 Under a pure dual income tax superannuation is treated equally with other asset classes. However, an upfront tax benefit can be incorporated into a dual income tax for the reasons discussed in Section 2.2.1.

66 Imputed rent is taxed in the Netherlands and Switzerland (Yates 2009).

- The imputation credit system would be removed.
- Stamp duty could be removed.
- The incentive to split income (using trusts or otherwise) or spread income across time periods would be removed as all income from these sources would be taxed at the same flat rate, irrespective of who receives it or when it is received.
- The tax-free threshold would also be irrelevant for capital earnings (it would only apply to labour income).

4.2.1 An approach with international precedence

While a dual income tax is presented here as an 'ideal' approach, a major advantage of the dual income tax approach is that it already operates successfully in many countries. Most notably, a dual income tax has been used by four Scandinavian countries (Norway, Finland, Sweden and Denmark) since the early 1990s. However, elements of a dual income tax have also been implemented by several other European countries (Austria, Belgium, Italy, Greece and the Netherlands). The different approaches taken by these countries is detailed in Eggert and Genser (2005).[67]

4.2.2 What about progressivity?

One potential concern with adopting a flat tax for all income from savings is that it is no longer integrated into a progressive tax structure, and therefore may not be seen to be as fair as the existing system. However, as discussed in Section 3.6, while the existing tax treatment of savings is incorporated into the progressive personal income tax schedule, various exemptions (superannuation subsidies in particular) mean that the existing tax treatment of savings is regressive. Therefore, moving to a dual income tax (including removing the large regressive subsidies for superannuation) would also make the tax treatment of savings more progressive than the existing system.[68]

4.2.3 Summary of benefits of a dual income tax

Efficiency

The existing system provides strong financial incentives to invest in some types of assets, and large financial penalties for investing in other assets. A dual income tax would remove this distortion and allow savings and wealth to be held in the assets that best suit an individual's investment needs. This will also improve the allocation of real investment across the economy and lead to improved economic growth.

Simplicity

A dual income tax system would be much simpler because income from all types of savings is taxed at the same flat rate. This would also reduce the incentive to pursue complex investment strategies simply to minimise taxes. For instance, it would remove incentives, which exist in the current system, to defer income or income split. This would reduce taxpayer compliance costs.

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67 In addition, dual income taxation was recommended in Germany (Spengel and Wiegard, 2004, Sinn, 2007), Switzerland (Keuschnigg and Dietz, 2007) and the United Kingdom (Griffith, Hines and Sørensen, 2008).

68 If progressivity was considered to be a major impediment to a dual income tax, additional changes to other parts of the tax system could be implemented simultaneously to further increase progressivity. However, the Australian tax and transfer system overall is already quite progressive (Tran and Zakariyya, 2019).

Fairness

The tax system would be much fairer in the sense that different people with the same amount of income from assets would be taxed at the same rate. This is very different from the current system where the level of taxes paid depends heavily on the type of assets that are held (and typically rewards people for engaging in 'tax management').

Adequacy and Resilience

A flat rate of tax across all savings income makes it harder for individuals to 'manage' their income to minimise taxes. Taxing all savings at the same rate is also likely to yield a larger growth in tax revenue as the share of assets held in superannuation (currently taxed at a negative rate) grows in the future.

4.2.4 At what rate should savings be taxed under a dual income tax?

As discussed in Section 2.1, optimal tax theory suggests that savings should be taxed at an annual rate greater than zero and less than the rate on labour income. However, this leaves a relatively wide range of potential tax policies that would be consistent with the optimal tax literature. This section investigates two possible options for setting a broad-based tax rate on savings. The first is to conduct a revenue neutral switch from the existing system to a dual income tax, while the second is to set the tax rate on savings income so that the METR is equal to the tax wedge generated by labour income taxes.

A revenue neutral switch to a flat tax on all savings income

One option would be to implement a dual income tax on all assets that generates the same level of revenue raised through existing savings taxes. To do this first requires an estimate of revenue raised by savings taxes. This is done in Table 4.2.

Table 4.2 Revenue raised by existing savings taxes

Savings tax	Revenue estimate	Data source/note
Personal income tax	**($ millions)**	
Interest income	$2,924	Author's calculation using ATO 2% sample file[a]
Rental Income	-$1,205	Author's calculation using ATO 2% sample file[a]
Capital Gains	$2,886	Author's calculation using ATO 2% sample file[a]
Dividends (net of franking credits)	$2,893	Author's calculation using ATO 2% sample file[a]
Superannuation taxes paid	$6,826	Taxation Revenue - ABS (2019)
Tax expenditure on superannuation contributions	-$16,250	Tax Expenditure Statement (Commonwealth of Australia 2017)
Other taxes		
Stamp Duty	$20,607	Taxation Revenue - ABS (2019)
Land Taxes	$7,327	Taxation Revenue - ABS (2019)
Total Savings Taxes	**$26,008**	

Notes: a) Calculation assumes that savings taxes are paid at an individual's marginal (rather than average) tax rate. b) Taxes on dividends are calculated net of franking credits which is consistent with the assumptions of international capital markets used in this report. Including franking credits as taxes on savings would increase the estimate by 9000 million. c) As elsewhere in this report, council rates are excluded on the basis that they are fee-for-service payments.

Sources: Data sources specified above.

If a dual income tax were levied on the return from all savings and the average nominal return to these assets was 5 per cent, then a dual income tax could be levied at 6.2 per cent of the annual return on these assets.[69] On the other hand, if particular asset types were excluded from the dual income tax base then the tax rate must increase to maintain a revenue neutral assumption. For instance, if owner-occupied housing were excluded from the tax base then a revenue neutral tax would need to be levied at 10.2 per cent each year to maintain parity with the current system.[70]

This type of forecasting exercise relies heavily on the accuracy of the underlying assumptions and in this case, it is important to note uncertainty in two key areas. The first key assumption is the expected annual rate of return across all asset types (for instance, if the annual return on assets was 10 per cent, then a dual income tax raises twice as much revenue as if the annual return is 5 per cent). The other key assumption used in this calculation is to compare the revenue raised in a single year, while in reality, the expected tax revenue raised from existing savings taxes is not in a 'steady state'. In particular, the taxes levied on superannuation are changing over time as the stock of assets held in superannuation increases and the share of assets held tax free in the retirement phase also increases. Nevertheless, the calculation shows that a revenue neutral switch to a dual income tax could be made with a relatively low tax rate on savings.

Setting savings taxes such that the effective tax rate is equivalent to the personal income tax rate

Another useful benchmark for setting the tax rate on savings in a dual income tax is to compare the implied tax wedge on consumption in two periods with the tax wedge on labour income. For instance, if individuals in the top tax bracket are taxed at 47 per cent on labour income, then the savings tax could be set at 24 per cent so that the implied real tax rate on savings income over twenty years was also equal to 47 per cent (after accounting for inflation and the compounding effect of savings taxes). These tax rates are presented in Table 4.3 for different investment horizons and are calculated using the same assumptions as Figure 3.2.

Table 4.3 Savings tax rate with an equal tax wedge as that applying to labour income

Investment horizon	Marginal tax rate				
	0%	21%	34.5%	39%	47%
5 years	0%	12%	20%	23%	27%
20 years	0%	10%	17%	20%	24%
60 years	0%	7%	12%	14%	17%

Source: Authors' calculations.

This report does not recommend that savings taxes be directly calculated in this way. There is no formal reason stemming from the optimal tax literature to suggest that these tax wedges be set at the same rate. Moreover, designing taxes in this way would raise technical problems, such as determining the appropriate investment timeframe to use as a benchmark, and reintroducing the incentive to income split that is created by different tax rates on savings.

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69 Based on the estimate of total household wealth from the 2015-16 Survey of Income and Housing. This estimate assumes superannuation is taxed at the full personal income tax rate when earned.

70 Both of these numbers are calculated assuming that all of the taxes in Table 4.2 are eliminated and replaced with one flat tax rate on savings. Looking at superannuation tax concessions in a single year may be misleading because the tax expenditures (concessions) are based on flows into superannuation while the taxes paid are based upon the stock of funds in superannuation. As the superannuation system is still maturing, stocks increase faster than flows so taxes paid increase faster than tax concessions.

Nevertheless, setting savings tax rates in this way demonstrates the trade-off between ensuring that savings income is taxed at a positive rate and the goal of ensuring that savings taxes do not result in a strong disincentive to save.

4.2.5 Detailed design of a dual income tax in Australia

A dual income tax has previously been proposed as a direction for tax reform in Australia by Sorenson and Johnson (2010), PwC (2018), Pitcher Partners (2015) and ACOSS (2009). These papers suggest that there is broad 'in principle' support for a dual income tax from a wide variety of key tax policy stakeholders. However, these papers also highlight several practical design issues that would need to be overcome in implementing a dual income tax. For instance, to implement a dual income tax in Australia, it would be necessary to:

- Decide whether all asset classes are included in the base of the dual income tax, or whether to tax some asset classes separately. For instance, if including the imputed rent from owner-occupied housing in the dual income tax base was considered too difficult, other tax instruments (such as council rates and land taxes) can be used to ensure that the overall tax rate on housing is similar to other asset types.

- Determine whether any asset types should be taxed at a higher or lower rate than others. As discussed in section 2.2, good arguments support taxing superannuation at a lower rate and land at a higher rate than other asset classes. This could be implemented as an adjustment to a pure dual income tax system.

- Determine the rate at which savings income is taxed (discussed in section 4.2.4).

- Determine how the tax code can practically distinguish between labour and savings income in closely held businesses. While this is already an issue in the current system, it becomes more important under a dual income tax (discussed in Trad and Freudenberg (2018)).

- Understand how tax rates and savings interact with means tested government programs (this is similar to the interaction between means tests and the existing tax system which is discussed in Section 3.5.6).

- Decide whether the tax rate on savings is set at a single rate or whether to attempt to include some progressivity (such as a higher tax rate for very high rates of savings income).

It is beyond the scope of this paper to fully answer these questions. However, the discussions contained in the documents cited above suggest that these implementation issues are unlikely to outweigh the potential benefits of moving to a dual income tax system.

4.3 Incremental reform

While implementing a dual income tax should be considered a realistic policy goal, other policy options exist that move part way towards a dual income tax. While they would not be as beneficial as moving directly to a dual income tax, the policies discussed below are beneficial even if implemented independently and can act as a pathway to broader reform.

4.3.1 Better targeting of superannuation subsidies

As discussed in Section 2.2.1, there is a strong case to tax superannuation at a lower rate than other forms of savings. The main reason is that superannuation is typically held for a longer period than other assets. Another consideration is that superannuation can trigger the Age Pension Means Test, which acts as an implicit tax on savings for some individuals.

However, while superannuation is currently taxed more favourably than other Australian asset classes, the concessional treatment is poorly targeted towards the objectives described above. For instance, those objectives suggest that preferential treatment of superannuation be targeted primarily at younger people (who have their assets in superannuation for a larger number of years) and towards those who are more likely to be influenced by the age pension means test. In contrast, the existing tax treatment of superannuation favours older Australians and those with higher incomes.

The extent to which current superannuation taxation arrangements favour older workers over younger workers is shown in Table 4.4, which calculates the METR on a superannuation contribution made by an individual with the average amount of taxable income at each age group. The investment is then held to the commencement of the Superannuation Pension Phase (which is a longer time period for younger workers).[71]

Table 4.4 METR on superannuation on average income at different ages

Age range (yrs)	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59
Average income	$17,562	$33,487	$48,270	$59,157	$67,313	$73,685	$77,007	$73,398	$69,244
Years to pension phase	45	40	35	30	25	20	15	10	5
METR	36%	27%	11%	7%	1%	-8%	-20%	-44%	-111%

Notes: Average income is based off 2015-16 tax records. METRs are calculated as in Figure 3.2 with the exception of earnings within superannuation which are taxed at 15% as this example focusses on superannuation held before the pension phase.
Source: Authors' calculations.

The METR calculations in this report suggest the tax treatment of superannuation is more generous than would be consistent with economic theory. For instance, the economic literature suggests that savings should be taxed at a low but positive rate. In contrast, a significant number of Australians currently face a negative tax rate when investing in superannuation. Australia's tax treatment of superannuation is also more generous than the tax treatment of equivalent savings vehicles in other countries (Appendix D).

Given the complexity of Australia's superannuation system, significant care should be taken before making changes to its tax treatment. Nevertheless, numerous options should be considered to improve the existing design of superannuation taxes:

- **Moving from a flat tax of 15% on superannuation contributions, to a system where people pay their marginal tax rate less a (small) flat discount -** This was recommended by the Australia's Future Tax System Review (Recommendation 18). The introduction of Division 293 tax payments (whereby individuals earning over $250,000 pay a rate of 30% on superannuation contributions) partially achieves this goal. One possibility would be a 5% or 10% flat discount.

- **Tax earnings within superannuation during the retirement phase –** While a primary goal of superannuation tax concessions is to ensure that long-term investments are taxed at a low rate, exempting earnings in the pension phase but not in the accrual phase places the lowest tax rate on assets held for the shortest period. Taxing all earnings within superannuation at the same rate would allow the tax rate to be lowered and simplify the administration of the superannuation system.

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71   After this point earnings within superannuation are tax exempt.

- **Lower superannuation tax rates for younger Australians:** A primary rationale for concessional tax treatment of superannuation is to account for superannuation being held for long periods. This suggests that these concessions can be better targeted by providing a lower rate of tax on entry for younger Australians.
- **Remove 'catch-up' provisions –** People who have less than $500,000 accumulated within superannuation are allowed to roll over the concessional contribution cap to future years, which allows people to make a larger amount of concessional contributions. This policy is designed to provide stronger incentives for older Australians, which is in direct contrast to the underlying principle of providing lower annual tax rates where superannuation is held for long periods.[72]
- **Lowering the annual concessional contributions cap –** In the absence of broader reforms to the tax treatment of superannuation, a simple way to limit the potential distortion to Australian savings behaviour is to lower the annual cap on concessional contributions. Above the cap, additional superannuation contributions are taxed at an individual's marginal income tax rate.[73]

4.3.2 Replace dividend imputation with a final withholding tax

The Australian dividend imputation system is designed to avoid the double taxation of dividends. Under this system, corporate taxes paid by a company create an imputation credit which can be attached to dividends. Domestic shareholders are then able to count the imputation credits as payments towards their personal income tax liability. In principle, this means that earnings from dividends are taxed only once at the shareholders' personal income tax rate. However, the existing system raises two potential issues.

The first issue with the existing system of dividend imputation is that it results in a lower tax rate on domestic shareholders than on international shareholders. As international investors are the marginal investors in the majority of cases, the imputation system serves to subsidise domestic shareholders with no overall change in the level of investment (if the marginal shareholder is foreign, then the imputation system increases the return for domestic shareholders and attracts more domestic capital, but this crowds out international capital one-for-one). This also suggests that the imputation system could be removed with little to no reduction in the level of equity investment available for Australian businesses.

The second issue is that the current system interacts poorly with the process of retirement because taxable income is a poor measure of economic wellbeing for people beyond retirement age (when superannuation income, imputed rent from owner-occupied housing and draw down of assets are not counted as income for tax purposes). This results in shares being taxed at a high rate for people while in full-time employment, but facing much lower (often negative) tax rates once in retirement, even though they may be in a similar financial situation.

There are numerous methods to avoid double taxation that can occur under classical tax systems (the options implemented by other countries are shown in Appendix D). Taxing all dividends at a flat rate (known as a final withholding tax) would be a simpler, fairer and more efficient way to tax dividends paid by companies.

72 While in principle, this policy was designed to allow people to make larger provisions if they have missed some years of work, and in particular was intended to help women increase their superannuation holdings, this provision has been used primarily as a tax planning tool for couples with high incomes and large existing super balances (Daley and Coates 2015a).
73 The Grattan Institute (Daley and Coates 2015b) suggested reducing the annual cap from $25,000 to $11,000 per year.

4.3.3 Base property taxes on land values rather than transactions

There are currently three Australian taxes that apply specifically to housing:

- Council rates, which are levied by local governments and are paid on both owner-occupied housing and rental properties.
- Land taxes, which are levied by all state and territory governments other than the Northern Territory, and are paid only on rental properties and land used by businesses (i.e. owner-occupied housing is exempt).
- Stamp duty, which is paid whenever a property is sold.

Council rates are usually considered to be one of the most efficient taxes used in Australia. They are highly efficient because they are applied broadly across different properties with few exceptions.

Land taxes are also calculated based on the value of land, and so could be a similarly efficient tax base to council rates. However, existing land taxes exempt all owner-occupied housing, as well as provide a tax-free threshold under which land tax is not paid. This means that land taxes are most likely passed on to renters as higher rents (Commonwealth of Australia 2010, p. 247).

Stamp duties are generally considered to be a highly inefficient revenue source. They significantly distort the decision of when to move, they reduce the ability of people to switch between jobs, and they create a mismatch between people and their homes.

Taken together, this suggests that housing taxes would be greatly improved if:

- Stamp duties were removed and the revenue replaced with council rates.
- The tax base of the land tax was expanded to include owner-occupied housing.
- The tax-free threshold was removed from state-based land taxes.

The inefficiency of existing housing taxes is well known in Australia. Recommendations for reform (similar to those above) have been suggested by a very wide range of organisations, including: the Henry Tax Review (Commonwealth of Australia 2010), the Productivity Commission (2017a), the Grattan Institute (2018), Housing Industry Association (Duke 2015), the Australian Council of Social Services (2015), Infrastructure Australia (2018), the Property Council of Australia (Deloitte Access Economics 2015), the NSW Business Chamber (KPMG 2016), the Centre for Independent Studies (Carling 2008) and the Australia Institute (2015).

However, to date the only jurisdiction to have achieved any progress in this space is the ACT, which is currently in the process of transitioning from stamp duties to a greater reliance on council rates.

Moreover, as stamp duties are levied on a progressive schedule, and the thresholds in the schedules have typically not changed over time, there has been a significant increase in the share of house prices paid in stamp duty due to 'bracket creep' (Real Estate Conversation 2018). Effectively, by doing nothing, states have made increasing use of one of the most inefficient and economically damaging taxes levied in Australia.

One potential short-term policy response is to index stamp duty thresholds to CPI. This was recently announced in NSW (Perrottet 2018) and is a positive first step towards limiting the damage caused by stamp duty. However, this should only be considered a stop-gap solution and not a substitute for the important goal of eliminating stamp duties in Australia.

4.3.4 Include all assets in the means tests for pensions and other age-related spending

A major goal of savings tax reform is to treat different investment options equally. This contrasts with the existing tax system where some asset classes (usually owner-occupied housing and superannuation) are treated as 'special' investment options that receive preferential tax treatment. One such piece of special treatment given to owner-occupied housing is to exclude the family home when conducting means tests for the Age Pension, aged care and low-cost health care services.

Excluding owner-occupied housing introduces inequities into the existing system because it provides different levels of support to people with the same level of total wealth. It also results in government support being provided to many individuals with a high level of personal wealth. For instance, Daley et al. (2013) estimates that of households with more than $1 million in assets, eighty per cent currently receive welfare benefits (averaging $200 per week).

The existing system is also inefficient because it provides strong financial incentives to overinvest in owner-occupied housing.[74] For instance, those approaching retirement can choose to renovate their property to convert financial assets (that impact the Age Pension) into housing assets (that do not impact the Age Pension). The existing system also provides strong disincentives against downsizing a property because any net revenue generated by the sale would become assessable assets (and generate deemed income) in the Age Pension means test.

Beyond appeals to the 'unique nature' of the family home, the usual concern of including the family home in means tests is that it is a highly illiquid asset which cannot be accessed to pay for services. However, as discussed in Productivity Commission (2013), this problem can be overcome by allowing older Australians without liquid assets to defer the payments for these services until death, at which point the house is sold and the debt is settled. Table 10 of Productivity Commission (2017b) gives examples of similar schemes operating in Australia and overseas.

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74 However, the extent to which people act on these incentives is uncertain. See Appendix A.

Appendix A: Empirical literature reviews

Do taxes on savings reduce the level of domestic savings?

The most important factor in designing taxes on savings and wealth is knowing whether people are likely to save less if those savings are taxed at a higher rate. If there is little or no response, then savings can be taxed at a relatively high rate without having a large impact on the total level of national wealth, or on the ability of people to smooth consumption across their lifetime. In other words, if savings behaviour is relatively unresponsive to taxation, then taxes can be levied without creating large economic distortions and relatively large taxes on savings can be justified. On the other hand, if savings are highly responsive to taxation, then even small taxes on savings can create large economic distortions and the optimal tax rate on savings will be relatively low.

The empirical literature on this topic is primarily focused on the introduction of low-tax savings options in various countries around the world and whether this has had a significant impact on the accumulation of total household savings. In Australia, Connolly (2007) examines the introduction of compulsory superannuation by comparing the savings behaviour of those who had previously received a workplace pension contribution with those who receive one for the first time as the result of the superannuation reforms. This paper estimates that for every $1 placed in superannuation, there is a 30-cent reduction in other assets. This implies that there are 70 cents of new savings, and that superannuation has had a large net effect on the total level of household savings in Australia. The total impact of superannuation on national savings is explored further in Gruen and Soding (2011). However, as these estimates are based on the introduction of superannuation, they capture the combined impact of lower superannuation tax rates and the compulsory nature of superannuation contributions.

Internationally, numerous studies (Table A1) attempt to identify a causal relationship between the tax rate levied on savings and the amount that people choose to save. This literature is split fairly evenly between studies that find a negative relationship between the tax rate on savings and the level of savings, and studies that find that changes in savings taxes have no impact on saving levels.

This apparent split in the literature can be interpreted in several ways. One interpretation is that the elasticity really does vary in different situations. For instance, the responsiveness to the tax rate may be different for different types of savings taxes, and for people of different ages, or across countries. It is also possible that this difference is explained in part by the framing of the savings decisions and best understood through a behavioural economics lens. Finally, it is possible that some experimental designs used in the literature were simply not able to distinguish between a small effect and no effect.

Table A1: Research on whether savings taxes reduce the total level of savings

Paper	Empirical Approach
Research that finds no relationship (or a very small relationship) between savings taxes and the level of savings	
Paiella, M. and Tiseno A (2014)	A difference-in-difference research design based on the introduction of a social security reform in Italy in the early 1990s.
Chetty et al. (2014)	Uses Danish tax data to compare the savings behaviours of individuals who switch firms.
Anton et al. (2014)	Fixed effects methodology applied to the introduction of various pension tax incentives in Spain.
Corneo et al. (2010)	Matching and panel regression techniques are applied to the introduction of the Riester Scheme in Germany.
Attenasio et al. (2004)	Literature review of studies conducted in the US and UK.
Research that finds a negative relationship between savings taxes and the level of savings	
Jakobsen et al. (2020)	Uses administrative data from Denmark to compare how different groups change their savings behaviour in response to changes in the Danish Wealth Tax.
Beshears et al. (2015)	Looks at the contributions of employees at companies that introduce 'Roth' 401k plans.
Gelber (2011)	A difference-in-difference research design comparing the savings behaviour of employees at companies who offer 401k plans after they have worked at a firm for a specified period.
Rossi (2009)	Examines the introduction of the 1986 Social Security act in Britain.
Ayuso et al. (2007)	Examines the introduction of tax incentives introduced in Spain in 1988.
Connolly (2007)	A natural experiment around the introduction of superannuation in Australia.
Poterba et al. (1996)	Examining 401k programs in the United States while econometrically controlling for different savings preferences.

Source: Authors' compilation.

The international literature also provides three key additional insights into the likely response to savings taxes. First, Chetty et al. (2014) differentiates between 'active savers' and 'passive savers', where active savers respond to changes in the tax rate primarily by shifting savings to lower tax options, whereas passive savers are relatively unresponsive to tax changes, but are heavily influenced by changes to the 'default' level of savings. The paper estimates that around 85% of households are passive savers, and therefore suggests that changing the default level of savings is a more effective mechanism than lowering tax rates to encourage savings.

Several papers also distinguish between savings at different points in the income distribution and typically find that lower income earners are more likely to respond to lower tax rates by saving more, whereas higher income groups are more likely to reallocate assets to lower taxed assets.

Finally, the literature distinguishes between the short-term and long-term impacts of tax rates on savings. While the empirical studies typically focus on the short-term elasticities implied by tax changes, Jakobsen et al. (2020) uses a calibrated life-cycle model to show that the long-term reduction in wealth is likely to be larger than the short-term reduction in wealth.

While there is still considerable uncertainty about how much people change their savings rate in response to tax rates, the best estimate for Australian policymakers is that there is a small but positive response to savings taxes. However, better understanding how much savings are likely to change in response to taxes, and whether this varies by age group or asset type should be an ongoing goal of future research.

To what extent do people adjust their portfolios to minimise taxes?

While the literature evaluating the impact of tax rates on the total level of savings is mixed, there is a much stronger consensus that differing tax rates on savings instruments influences where people choose to invest. The international literature summarised in (OECD 2018a) finds "a clear conclusion can be reached that taxpayers do respond to incentives in the tax system and alter portfolio composition towards more tax-favoured assets."

The Australian tax system offers strong incentives to invest in superannuation and housing. Treasury have noted that as a result 'more savings are held in superannuation and housing than would otherwise be the case' (Commonwealth of Australia 2015, pp. 57). However, the extent to which this occurs is an area of ongoing research which is split in two broad streams.

The first stream of research focuses on whether older Australians structure their assets to maximise the level of Age Pension they receive. This research finds that despite strong incentives to allocate as much wealth as possible in the family home[75] (as this is exempt from the Age Pension Means Test), there is little evidence that households actually do this.[76] This may be because housing is an illiquid asset and individuals are unable to quickly adjust asset holdings to take advantage of the means test. It may also be that the family house is considered separately to other assets by individuals approaching retirement.[77] Spicer et al. (2016) also find that households that exhaust other forms of financial wealth do not draw on household wealth at a faster rate than other households.

A second stream of literature focuses on whether Australians are more likely to allocate assets into superannuation as a result of the lower tax rate. While this research is in its early stages, it suggests that tax rates are an important factor in drawing savings into superannuation. For instance, Whelan et al. (2018) examine the removal of the superannuation surcharge in 2005 by comparing the contributions of high income earners (who previously had to pay an additional tax on superannuation contributions) and lower income earners (who faced no change in tax rates) using a difference-in-difference research design, and find that this reduction in taxes led to an increase in superannuation contributions from high income earners.

Is the marginal dollar of investment foreign?

As discussed in the main body of this report, determining whether the marginal dollar of investment in Australia is foreign or Australian is a key determinant of the extent to which savings should be taxed. For instance, if Australia had no access to overseas finance, then domestic investment must be directly funded through Australian savings, and taxes that discouraged savings would have a large impact on the total level of investment.

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75 For instance, Cho and Sane (2013) find that in a macroeconomic model calibrated to the Australian economy, the means testing exemption for the family home results in 6 per cent more wealth allocated to the family home.

76 Whelan et al. (2018), Cho and Sane (2013).

77 A final possible explanation for the lack of apparent adjustment in the housing market is that individuals tend to make housing decisions over long time frames and may 'over-invest' in housing in preparation for retirement. If this were the case, the quasi-experimental research designs commonly used in the field would be unable to identify an effect.

However, if Australia is able to access a global finance market and the total level of investment is driven by foreign investors, then taxes on savings would have no impact on Australian investment. Therefore, the extent to which the total level of investment in Australia is driven by domestic or foreign investment is a key factor in understanding how savings taxes impact the Australian economy.

The key research in this area focuses on the impact of imputation credits on share prices. Only domestic residents are able to claim the value of imputation credits against tax liabilities, so a domestic investor values franked dividends differently to foreign investors. This allows researchers to examine prices of publicly traded shares to see whether pricing corresponds to a model of foreign investors who do not value imputation credits or domestic investors who do value imputation credits. If the price of shares is driven by foreign investors, then the marginal dollar of investment in Australia is foreign and the total amount of investment in Australia is likely driven by foreign investment. If the price of shares is driven by domestic investors, then the total level of investment in Australia is driven by domestic investors, and reductions in domestic savings will have a large impact on the total amount of investment in Australia.

The three main empirical approaches used in this research are:

- Dividend drop-off studies, in which the change in share price is compared following the payment of dividends with and without imputation credits.
- Options analysis in which the value of the imputation credit is inferred from the relative prices of futures contracts and the individual stocks on which they are based.
- Dividend entitlement studies, in which some Australian shares are simultaneously traded in two markets – one with a dividend and the other without a dividend. This allows the value of the dividend to be calculated.

This existing Australian research was summarised in the Henry Tax Review (Commonwealth of Australia 2010, Section B-2-3) and Murphy (2017). The papers considered in these reviews are shown in Table A2 below. The last column of this table shows the value of imputation credits relative to dividend payments, where 100 cents would mean that franking credits are valued equivalently to dividends (and would suggest that the share price is driven by domestic investors), while 0 cents would mean that franking credits have no value (and the share price is driven by foreign investors).

Table A2: Studies estimating the value of franking credits

Study	Method	Study period	Estimate value of dividend (cents in the dollar)
Cannavan, Finn and Gray (2002)	Options Analysis	1994–1999	0
Hathaway and Officer (2004)	Dividend Drop-off	1986–2004	60 (Post-2000 results)
Beggs and Skeels (2006)	Dividend Drop-off	2001-2004	57
Strategic Finance Group (2007)	Dividend Drop-off	1998–2006	20–40
Strategic Finance Group (2011)	Dividend Drop-off	2000 – 2010	35
Feuerherdt, Gray & Hall (2010)	Dividend Drop-off	1995 – 2002	0
Vo, Gellard and Mero (2013)	Dividend Drop-off	2001-2012	35-55
Murphy (2017)	Dividend entitlement study	2017-2018	21

Source: Authors' compilation.

Table A2 shows that imputation credits are valued at much less than 100 per cent in all studies, suggesting international capital is the 'marginal investor' in many cases. Moreover, Murphy (2017) suggested the later studies produced estimates consistent with a larger share of foreign investment, which is consistent with a trend towards more interconnected international finance.

However, only two of the studies estimated that the value of franking credits is zero, indicating that Australian savings still play a significant role in setting the price of capital in Australia. Moreover, the studies presented in Table A2 are focused on larger publicly traded companies. The importance of Australian investors is likely to be stronger in smaller companies and the real estate market which are funded more significantly with Australian savings.

In summary, international investors are the 'marginal investor' in the majority of cases, and so open economy models are an appropriate way to analyse taxes on savings. Importantly, reductions in domestic savings due to taxes on savings are likely to be largely offset through foreign investment. However, this offset won't always be 'one-for-one' and is likely to vary by asset class.

Appendix B: Research questions stemming from this report

In developing this report, a number of topics were identified that are relevant to the design of savings taxes but for which the research community is yet to generate conclusive output. These topics are presented below as a research guide for Australian tax policy researchers.

How do savings respond to higher tax rates?

The key empirical question relevant to the design of savings taxes is determining how savings behaviour is changed by the tax system. The existing literature summarised in Appendix A suggests that the impact of savings taxes on total savings is likely to be relatively modest. However, uncertainty remains and given its importance to policy design, a more defined estimate is a worthy goal of future research. One possibility for research in this area is to determine the extent to which variation in METRs across the population (particularly METRs on superannuation) influences an individual's decision to save.

Existing research has provided some detailed insights into how people respond to savings taxes. For instance, as described in Appendix A, lower income individuals typically have a larger change in total savings in response to savings taxes, while higher income individuals are more likely to re-arrange their portfolios. Moreover, this research suggests that the likelihood of responding to changes in the savings taxes is highly heterogenous and heavily driven by default savings plans such as superannuation. However, considerable uncertainty remains around how this behavioural response occurs. For instance:

- Is the elasticity of savings with respect to the tax rate similar across the population or do different groups respond differently?
- Is the short-term behavioural response to changes in the tax rate similar to the long-term behavioural response (and do quasi-experimental research designs that focus on short-term changes under/overestimate the long-term savings elasticity)?
- Is it only the tax rate on the most favourable asset class that impacts the total savings level or does the tax rate matter across all instruments? (For instance, would reducing the tax rate on savings accounts increase the level of total savings?)
- Following the work of Chetty et al. (2014), can researchers identify 'active savers' (those who actively manage their portfolio and are therefore likely to be responsive to tax rates) and 'passive savers' (those who save primarily through superannuation and are more responsive to changes in default savings rules) in the Australian economy?

- How easily can people reclassify income between savings and labour income? While there is strong evidence that individuals will reclassify income if the tax rate on labour income switches from being higher than savings income to being lower than savings income, it is unclear whether changing from a gap of 10% to 15% will make people more likely to reclassify income.
- The extent to which Australians can and do earn income on assets internationally and avoid claiming this income in Australia.
- The extent to which Australian residents choose to reside in another country to avoid taxes on savings.
- The extent to which current financial incentives created through the tax system and the Age Pension means test influence the housing decisions of older Australians.

While many of these questions are may prove difficult to answer, it remains important to document where the uncertainty lies.

Better understanding the Australian superannuation system

Further empirical research to understand how Australians use the superannuation system would be highly beneficial. Australia's superannuation system is globally unique, and therefore policy design cannot rely on international experience to guide policy design. Moreover, there have been several changes to the superannuation system in recent years that are well suited to event-study style analysis. Some potential research topics include:

- How has the introduction of the Div. 293 levy (and the reduction in the threshold from $300,000 to $250,000) changed the way that high income Australians use the superannuation system?
- When the $1.6 million balance transfer cap was introduced, how did it affect the savings behaviour of people above the threshold?
- Who used the catch-up provisions introduced in 2018, and did it have any impact on total household savings? (Or, did increases in superannuation correspond with a reduction in other savings?)
- How did the reduction of the annual contribution cap to $25,000 influence total savings behaviour?

Optimal capital taxation in small open economies

Most of the key theoretical results referred to in this report are based on large economies, while in most circumstances Australia is best modelled as a small open economy. While the classic results (Judd-Chamley and Atkinson-Stiglitz) give similar conclusions in an open-economy setting, it is not clear the extent to which newer models of capital taxation such as those of Piketty and Saez (2013) and Saez and Stantcheva (2018) would be changed by the small open economy assumption.

This creates scope for theoretical research with direct application to Australia's circumstances.

The conditions under which Australia should be considered a small open economy also merits investigation. The literature summarised in Appendix A suggested that the marginal investor in the Australian stock market is typically foreign. However, it remains unclear whether the marginal investor is foreign in other investment markets (such as Australian real estate). It would also be useful to further develop models of optimal savings taxes when the marginal investor is usually, but not always, foreign.

How do distortions in savings influence Australian investment?

Strong evidence suggests the existing tax treatment of savings influences the way that Australians choose to save. For instance, the low tax rates on superannuation and owner-occupied housing encourage Australians to hold these assets. However, it is less clear how this flows through into the market for Australian investment. For instance, does Australia have more housing and less commercial investment than it would if all assets were taxed at the same rate (or does owner-occupied housing just crowd out investment from potential landlords)? Similarly, does the high tax rate on interest and bonds reduce the ability of Australian companies to access debt financing (or does the deductibility of interest for businesses balance out this incentive)? Finally, if the marginal investment is foreign, does this mean the tax rate on domestic savings is irrelevant to the types of real investment made in Australia?

Understanding the pattern of savings and investment across the lifecycle

The analysis of Australian savings behaviour in this report was undertaken primarily using data from the Australian Survey of Income and Housing. While this provides a highly detailed description of the assets and incomes of Australians at the individual and household level, its major shortcoming is that it is a snapshot taken at a point in time.

Using asset values from a single point in time provides limited information about how assets are accumulated across the lifecycle. It also excludes other crucial information influencing the tax rate paid on savings such as the period for which different assets are held, or how an individual's marginal tax rate changes over time. Furthermore, calculating the distributional incidence of savings taxes using a single year of data (as was done in Section 3.6) will present an-overly simplified picture and potentially inaccurate assessment of the distributional impact.

Research could extend the METR analysis and distributional analysis contained in this report using a panel dataset that tracked individual and household investment throughout the lifecycle.

Estimating the effective tax rate on savings in general equilibrium

As discussed in section 3.4, the METRs calculated in this report (and in previous research into savings taxes in Australia) are partial-equilibrium measures. This means that while METRs are good measures of the forward looking distortions created by Australian savings taxes, they are less well suited as measures of the realised tax paid on different assets. Some asset prices are likely to adjust in general equilibrium and so assets that have higher METRs are also likely to have higher realised rates of return.

Therefore, one potential avenue for future research is to analyse the extent to which different asset prices adjust to different tax rates. This question is very closely related to research (summarised in Appendix A) on the extent to which individuals adjust their portfolios in response to different tax rates. If different investments are perfectly substitutable to investors, then asset prices are more likely to adjust. On the other hand, if asset classes can't be easily substituted (for instance, if people keep money in a savings account for liquidity) then prices are unlikely to adjust. Another key challenge is to understand the extent to which different asset classes are sold in a single market. When this is the case, the price of an individual asset is unable to adjust to different METRs. For instance, the price of a share held in superannuation and the same share outside of superannuation must be the same, even if the tax rates differ.

A similar constraint will require that housing assets must cost the same price regardless of whether they are held by owner-occupiers or purchased as investment properties.

What is the long-run elasticity of savings with respect to the tax rate?

Related to the above question, what are the long-term responses to the tax rate on savings in terms of human capital investment and lifetime labour market decisions. From the labour supply literature, we know that short-run elasticities are much smaller than long run elasticities. This is consistent with evidence and theory. We have little evidence about the difference between long-run and short-run elasticities of savings with respect to tax rates. As noted above, applying short-run elasticities to long-run or large changes may be misleading.

To what extent do Australians respond to tax rates by moving assets offshore or through migration?

While there is some evidence about the amount of assets held offshore by Australians, we do not know anything about whether this volume responds to the level of savings taxation. Would lowering tax rates on savings result in assets being moved back into Australia, potentially expanding the tax base? Or are these offshore assets unresponsive to Australian tax rates?

Similarly, to what degree do Australians or workers in Australia respond to savings tax rates by emigrating? Twenty-eight percent of Australians were born overseas and many Australians hold multiple citizenships. Do Australians respond to tax rates by re-locating elsewhere?

Very little Australian-specific evidence is available about these potential behavioural responses of taxpayers.

Appendix C: Summary of Australian savings taxes

Different types of savings are taxed in very different ways under the Australian tax system. This Appendix summarises the tax treatments that apply to the different asset classes held by Australians. This information is used in Section 3.3 to calculate the marginal effective tax rate, which is an aggregate measure of the total tax paid by each investment type.

Interest from bonds and savings accounts

Interest paid on bonds and savings accounts is treated as regular income and taxed through the personal income tax system (at the individual's marginal tax rate). While this approach is simple to implement, it results in a relatively high rate of taxation compared to other types of personal savings.

Capital gains

Capital gains are the difference between the purchase price and the sales price of an asset (after deducting costs, such as improvements, legal fees, state taxes and interest expenses). For instance, if an asset is purchased for $100,000, and sold for $110,000, the investor has made a $10,000 capital gain. Capital gains are also taxed through the personal income tax system. However, a fifty per cent discount is applied to the capital gain before the tax is applied provided the asset has been held for at least 12 months (i.e. a $10,000 capital gain is taxed as $5,000 of income). The 50% discount was introduced in 1999 and replaced an indexation rule which allowed the asset price to be indexed by CPI in order to tax only the real (as opposed to nominal) capital gain. The fifty per cent discount has a similar motivation (Ralph 1999) but is simpler for taxpayers to understand and calculate.

Capital gains are only taxed when the capital gain is realised (typically when the asset is sold), meaning that there are often tax incentives to bring forward or defer selling assets. For instance, if an asset has appreciated in value it may make sense to defer selling the asset to delay paying tax on the capital gain.

Some items are exempt from capital gains tax, including the family house, motor vehicles, personal use items valued at less than $10,000 and assets purchased before 20 September 1985.

Dividends

Australia taxes dividends from shares under a full imputation tax system. Under this system, corporate taxes paid by a company create an imputation credit which can be attached to dividends. Shareholders are then able to offset their personal income tax liability with this credit. If the imputation credits exceed their personal income tax liability, they receive a

tax refund from the Australian Taxation Office.[78] In this sense, corporate tax is treated like a withholding tax for Australian resident taxpayers whose final tax liability will be determined by the marginal tax rate they pay through the personal income tax schedule.

Superannuation

The tax treatment of superannuation depends on how the money enters the superannuation system. There are three broad possibilities:

- Stream 1: Concessional superannuation payments up to $25,000 per year, which include compulsory employer contributions and most employee contributions (86 per cent of all superannuation contributions in 2015-16), are taxed at a rate of 15 per cent on pre-tax income for all earners other than those in the lowest tax threshold.[79]
  - Earnings within the fund are taxed at 15% in the accumulation (pre-retirement) phase. Capital gains are taxed at 10% if held for more than twelve months. All earnings are taxed at 0% in the retirement phase (provided that funds in the retirement phase remain below the $1.6 million cap). There are no taxes paid when money is withdrawn from superannuation accounts.

- Stream 2: People who earn above $250,000 per year pay an additional 15% tax on concessional superannuation contributions (known as Division 293 tax),[80] which brings the total tax on concessional contributions to 30%. For every dollar of income above $250,000, individuals are required to pay an additional 15% tax on one dollar of concessionally taxed superannuation contributions. So, someone who earns $250,100 dollars will pay an additional $15 of tax in Division 293 contributions. Division 293 assessable contributions comprised around 6 per cent of all superannuation contributions in 201516.
  - Division 293 only affects payments into the fund. Once in the fund, earnings and withdrawals are taxed in the same way as other contributions.

- Stream 3: Individuals can make non-concessional contributions to superannuation (8 per cent of contributions in 2015-16). These are paid out of after-tax income and are not taxed further on entry to the superannuation account.
  - Once in the fund, earnings and withdrawals are taxed in the same way as other contributions.

The first two streams of superannuation contributions are based on pre-tax income, meaning that individuals do not have to pay personal income tax on this income. As a result, the tax rate of 15% (or 30% for individuals earning over $250,000) is often much lower than the income tax an individual would otherwise have to pay.

Owner-occupied housing

Owner-occupied housing is treated primarily as a consumption good in the Australian tax code, with Goods and Services Tax (GST) paid on the purchase of new and renovated houses. Consequently, the family home receives several favourable tax treatment relative to other asset classes:

- The accommodation value from living in a home (known as imputed rent) is untaxed.
- Capital gains made on the family home are not taxed.
- The family home is exempt from the Age Pension means test.

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78 The corporate tax system and imputation credits is analysed in much more detail in another Tax and Transfer Policy Institute policy report (Tax and Transfer Policy Institute 2020).

79 The lowest tax threshold group (those with a marginal tax rate of 0%) receive a Low Income Super Tax Offset Contribution, which is a payment (up to $500) designed to offset tax paid on superannuation contributions and typically reduces the net tax rate on contributions back to 0%.

80 Introduced in 2012-13. The income threshold was reduced from $300,000 to $250,000 in 2017–18.

However, two additional taxes apply to the family home:

- Stamp duty is paid one time only on the purchase of residential properties.
- Council rates are levied by local councils on a recurrent basis.

As stamp duties and council rates are levied by state and local government, the rates and thresholds can vary significantly between different Australian regions.

Investment properties

Like properties purchased as a principal residence, investment properties must pay stamp duty[81] and council rates. In addition, they must also pay:

- **Land taxes**. All Australian states and territories (other than the Northern Territory) levy an additional tax on properties not used as the principal place of residence. These taxes are based on the value of land and are calculated using a progressive tax scale. Land taxes levied by all jurisdictions other than the ACT include a tax-free threshold which allows for smaller investors to avoid paying tax.[82]
- **Taxes on rental income and capital gains**. Income from investment properties comes from two streams; net rental income and capital gains when the property is sold. Net rental income is taxed through the personal income tax, while capital gains are eligible for the 50% capital gains discount.

The total tax paid by owners of investment properties is influenced by negative gearing, which is an investment strategy used in Australia to lower taxes. While many investments can be negatively geared, it is primarily used in Australia to invest in real estate. An investment is said to be negatively geared when the net rent (rental income minus interest costs and other expenses) received for the property is negative. In this situation, the annual loss can be used to offset income from other sources to reduce the current year income tax bill. Negative gearing can be attractive for some investors because losses in the current year avoid taxes at an individual's marginal tax rate, whereas capital gains on the property are taxed using a 50% discount. In Section 3.5.1, this report examines the METR of investment properties with different levels of gearing, and shows that higher levels of gearing reduce the effective tax rate on an investment property.

Trusts

Trusts are a legal construct whereby one party (the trustee) holds assets for the benefit of another party (the original owner, referred to as the beneficiary). Trusts are used for a variety of purposes, including setting up businesses and transferring inheritances to heirs who are considered too young to responsibly manage these assets. However, a benefit of trusts is that they allow individuals to control how and when savings income is claimed in order to lower income tax liabilities.

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81   Some states charge higher rates of stamp duty for investment properties.

82   The Henry Tax Review (Commonwealth of Australia 2010) criticised the narrow base of existing Australian land taxes and recommended extending the tax to cover residential properties, small investors and rural land, with the existing progressive rates on aggregate land holdings to be replaced with a progressive scale on the per square metre property value (Recommendations 52-54).

For instance, trusts may allow the trustee to distribute income from the trust to beneficiaries in lower personal income tax brackets. Alternatively, through the use of a so call 'bucket company', the trustee can defer income to a period where a beneficiary is in a lower tax bracket. In a simple example, an individual in the highest tax bracket who has adult family members in lower tax brackets may set up a trust with these family members as beneficiaries. This would allow investment earnings to be taxed according to the lower tax rates (including the tax-free threshold) of these family members.

The Age Pension means test

The final aspect of the tax and transfer system considered in this report is the Age Pension means test.[83] The means test is not a tax on savings in the usual sense (it acts to reduce government expenditure rather than generate revenue). However, it creates a financial penalty for holding a higher level of assets and therefore acts as an implicit tax for some people entering retirement.

The Age Pension means test combines an assets and income test, with the full pension for singles restricted to people with income below $172 per fortnight and assets below $465,500.[84] Thresholds vary depending on an individual's domestic status (single or part of a couple) and on whether they own their home. Some types of assets also create deemed income, which is an income calculated from the value of an asset and an assumed rate of return over time. The inclusion of deemed income in the income test means that most people reach the income threshold before reaching the assets threshold (Chomik and Piggott 2014). The interaction between the assets and income tests is shown in Figure C1.

Figure C1 The Age Pension means test
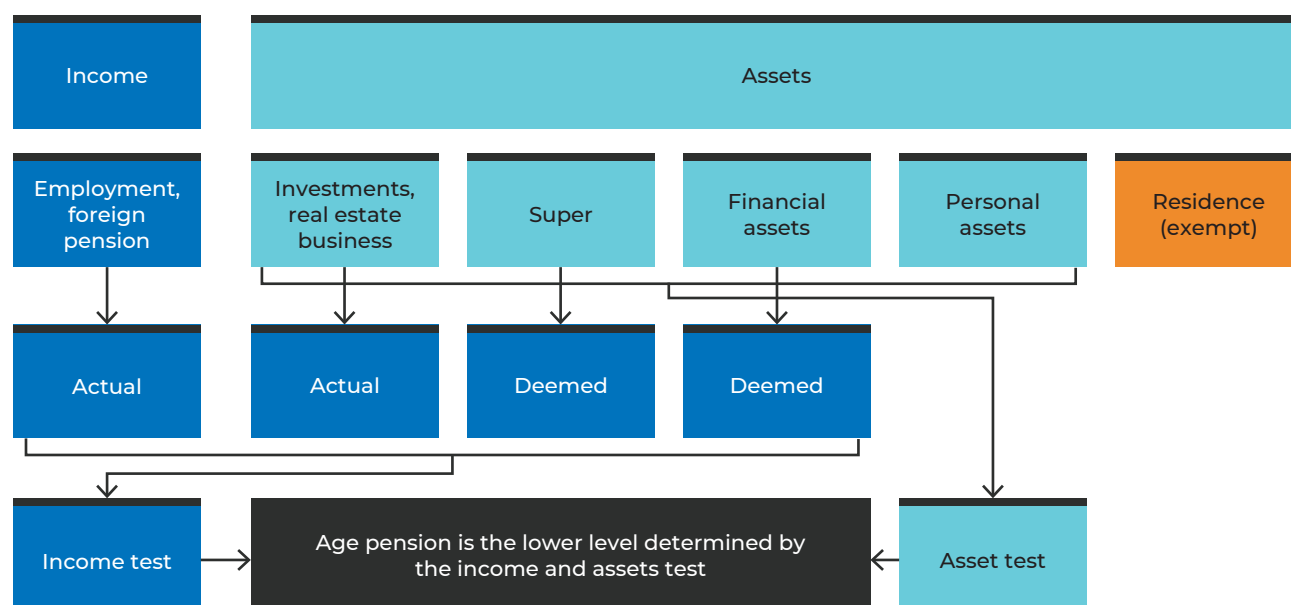
Source: Chomik and Piggott (2014)

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83 Means tests apply to other Federal welfare programs. However, this paper focuses on the Age Pension as receipt of the Age Pension is more predictable than unemployment or disability benefits, and therefore more likely to trigger a response to financial incentives.

84 Figures from the Department of Human Services website (https://www.humanservices.gov.au/). The values are for individuals who do not own a house.

Both the assets and income tests operate with a tapered phase out. The pension is reduced by fifty cents per fortnight for every dollar of income above the income test threshold, and by three dollars for every thousand dollars of assets over the assets test threshold.

Summary of the Australian tax treatment of income from savings

The different approaches to taxing income from different types of assets in Australia described in the previous section are summarised in Table C1.

Table C1 Tax treatment of different asset classes

	Share of household assets	Tax treatment
Own home	41.5%	Taxed through the GST stamp duty and council rates. Receives exemptions for capital gains and pension means tests.
Other property	15.6%	Liable for stamp duty, council rates, GST, land taxes, taxes on rental earnings and capital gains tax. Negative gearing can confer some tax advantages.
Superannuation	17.1%	Most contributions are taxed at a flat rate of 15% on pre-tax income. Earnings on investments within superannuation are taxed at a concessional rate.
Own business	7.5%	Non-incorporated businesses are taxed through the personal income tax.
Home contents and vehicles	8.6%	Taxed through the GST. Typically exempt from capital gains tax.
Bank accounts, term deposits and bonds	5.3%	Taxed through the personal income tax.
Shares	2.3%	Capital gains taxed upon sale through the personal income tax. Dividends taxed through the personal income tax, with imputation credits provided to remove the impact of corporate taxes.
Trusts	2.1%	Distributions from trusts are taxed through the personal income tax. However, the distribution of dividends can lower the effective tax rate paid.

Source: Authors' compilation and calculations based on ABS Household Income and Wealth, Cat. No. 6523.0.

Appendix D: An international comparison of savings taxes

This appendix provides a brief overview of how Australian savings taxes compare with tax systems in other countries. This summary is based heavily on a recent OECD report titled 'Taxation of Household Savings' (OECD 2018b).

Most OECD countries use a flat tax approach to taxing savings

As discussed in Section 2.3 of this report, one of the main decisions in designing savings taxes is whether or not to tax savings using a comprehensive income tax, or to tax savings independently of income from other sources. Australia has a mixed system in which some types of savings are taxed like labour income, while other types of savings are taxed at a flat rate. For instance, the tax rate on interest income and dividends is determined by an individual's total income, while the tax rate on owner-occupied housing and superannuation is not.

Internationally, some countries have adopted a comprehensive income tax approach, while others take a flat tax approach. A recent OECD report suggests that more countries use a flat tax approach, although countries usually considered similar to Australia (such as New Zealand, Canada and the UK) use a comprehensive income tax approach. These countries are listed in Table D1, although as noted in the OECD report (and highlighted by the Australian case), many of these countries use mixed systems.

Table D1 Tax treatment of different asset classes

Broadly comprehensive with progressive rate	Flat rate approach	Other framework (including a mix of flat/comprehensive, deemed return and rate of return allowance)
Australia, Canada, Chile, France, Ireland, New Zealand, South Africa, Spain, Switzerland, UK, US.	Austria, Belgium, Bulgaria, Colombia, Czech Republic, Denmark, Estonia, Germany, Greece, Hungary, Iceland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Poland, Portugal, Slovak Republic, Slovenia, Sweden, Turkey.	Finland, Korea, Mexico, Argentina, Netherlands, Norway.

Source: OECD 2018b, Table 2.1.

The Australian approach of taxing interest income at the full personal income tax rate is relatively uncommon

Australia taxes interest income at an individual's personal income tax rate. As discussed in Section 3.3 of this report, this can create a very large METR on interest income. An international comparison in OECD (2018b, p. 28) suggests that only 10 of 40 countries reviewed used this approach. Alternative approaches include:

• Taxing interest income at a low, flat rate. This is the approach used in 25 of 40 countries examined in the OECD report.

• Taxing interest income at an individual's personal tax rate, but after discounting the amount of income earned (used in 3 of 40 countries).

• Creating a tax-free threshold such that small amounts of interest income are tax free (used in 2 of 40 countries).

Private pension plans are the lowest taxed asset type in most OECD countries

OECD (2018b) calculated the METRs for different types of savings in forty countries and finds that private pension plans had the lowest METRs in 33 of those countries. This is consistent with the arguments in this report suggesting superannuation should be taxed at a lower rate than other types of savings. However, as discussed below, Australia's tax treatment of superannuation is generous relative to international standards.

Many countries have moved away from full imputation systems

As discussed in Ainsworth (2016), a significant number of countries have moved away from full dividend imputation systems in recent years, including the UK (1999), Ireland (1999), Germany (2001), Singapore (2003), Italy (2004), Finland (2005), France (2005), Norway (2006) and Malaysia (2008). This means that Australia, Canada, Chile, Mexico and New Zealand are the only remaining OECD countries using full imputation systems.

The main alternative approaches to dividend taxation currently used by OECD member countries are:

• Classical systems in which income is taxed at the full corporate rate and then taxed again at the full personal income tax rate when distributed as a dividend.

• Modified classical systems in which income is taxed at the full corporate rate, and then taxed again through the personal income tax at rates lower than other personal income when distributed as a dividend.

• Applying a standard discount to dividend income before applying the personal income tax (similar to the Australian approach to capital gains).

• Applying a final withholding tax when dividends are distributed.

A list of the approaches used by different OECD member countries can be found in OECD (2018b, p. 58).

Estate, inheritance and gift taxes are relatively common internationally

While Australia does not levy estate, inheritance or gift taxes, these taxes are relatively common in other advanced countries. Drometer et al. (2018) review wealth and estate taxation among 26 OECD countries and find seventeen countries levy an estate tax while nine do not. These taxes commonly include large tax-free thresholds, followed by relatively high marginal tax rates. For instance, the top marginal tax rate in both the US and UK is 40 per cent.

Existing estate, inheritance and gift taxes raise a relatively small amount of revenue compared to other taxes. Of the 17 countries considered by Drometer et al. (2018), the average amount of revenue raised was 0.1% of GDP, while the largest level of revenue raised was 0.7% of GDP (in Denmark). This is a relatively small share of total tax revenue which averaged 34.3% of GDP in the countries examined.

Wealth Taxes are relatively rare internationally

Australia does not levy a tax on net wealth. Wealth taxes were once relatively common but have been removed by a large number of countries. For instance, OECD (2018b) finds that 12 OECD countries levied a tax on net wealth in 1990, but only 4 OECD countries had a net wealth tax in 2017. Of those four (France, Norway, Spain and Switzerland), the Swiss tax raises the largest amount at 3.7% of total tax revenue.

How do Australian Marginal Effective Tax Rates compare with other countries?

As discussed in this report, Marginal Effective Tax Rates (METRs) provide a summary measure of the total impact of the tax system on a particular type of savings. This makes it a particularly useful way to compare tax designs from different countries. Calculating the METRs for tax systems in other countries is beyond the scope of this report. However, this exercise was conducted in a recent report by the OECD (2018b).

The following table compares Australian METRs calculated in the OECD report with METRs from four 'similar' countries. Table D2 also reports the METRs from the 25th, 50th and 75th percentile of the 40 countries considered in OECD (2018b). These METRs are calculated at the average income level in each country.

Table D2 Tax treatment of different asset classes

	Australia	New Zealand	Canada	UK	US	OECD 25th percentile	OECD 50th percentile	OECD 75th percentile
Bank Deposits	66%	41%	45%	0%	38%	13%	27%	41%
Shares (dividends)	15%	3%	10%	0%	23%	14%	26%	38%
Shares (capital gains)	27%	0%	19%	0%	19%	1%	22%	29%
Private pensions (deductible contributions)	-27%	38%	0%	-10%	0%	-23%	-7%	0%
Private pensions: (non-deductible contributions)	25%	38%	25%	13%	42%	0%	13%	24%
Owner occupied housing	15%	20%	39%	28%	40%	8%	15%	22%
Rental property – rental income	88%	46%	75%	55%	58%	26%	45%	52%

Source: OECD (2018b).

Table D2 provides several insights into existing savings taxes in Australia:

- Australian interest income is taxed at a relatively high rate compared to both comparison countries and OECD countries.
- Australian dividends are taxed at a high rate compared to 'similar countries' but at a low rate compared to most OECD countries.
- Deductible pension contributions are taxed at a low rate in many countries, but Australian superannuation is still generously treated by international standards.
- Owner occupied housing is taxed at a lower rate in Australia than comparison countries, but at around the median rate for OECD countries.
- Australian investment properties generating rental income are taxed at a high rate compared to both comparison countries and OECD countries.

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