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Industry Super Australia

Super in the Economy

The investment opportunity in Australian private markets

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Industry Super Australia commissioned Frontier Advisors to prepare this research paper.

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Summary

This paper considers the involvement of Australian superannuation funds (super funds) in Australian private market investments, with a particular focus on Australian venture capital, Australian agriculture, and Australian social and affordable housing.

The superannuation industry and private markets

It is evident Australian superannuation funds are strong participants and investors in Australian private markets, particularly real estate and infrastructure, despite a range of impediments that have made investing in these sectors increasingly difficult. However, investment in Australian venture capital and Australian agriculture is low and remain niche sectors, whereas these may be considered mainstream in other large developed markets such as the US and Canada. Superannuation fund investment in affordable housing has also been very limited. Historically, these latter three sectors have been inhibited by poor return for the level of risk taken on. This paper highlights numerous factors that have not only fed into this view, but other inhibitors and constraints that will influence the level of capital that is invested into these markets by superannuation funds. We also touch on potential steps to help alleviate some of these constraints.

Your Future, Your Super and the focus on fees

The two more recent factors which have impacted greater participation by superannuation funds in all private market asset classes in recent years are the increased focus on fees and how they are defined by the regulator, as well as the Your Future, Your Super (YFYS) performance test. While the intent of these regulations is logical and understandable, in application they likely have unintended adverse long-term impacts. This includes limiting capital investment by superannuation funds into Australian research as well as companies focused on science, technology, engineering, and manufacturing. This can have secondary repercussions (such as the inability to grow or sustain high skill industries, challenges developing manufacturing capabilities, difficulty obtaining self or supply-chain sufficiency, and challenges attracting skilled talent) that may be less beneficial for the Australian economy as a whole.

Superannuation policy settings

Another key factor for Australian private markets investments is stability of policy settings regarding superannuation. In the case of private markets, investments are long-term and illiquid. Uncertainty regarding future policy can make it more difficult for superannuation funds to make long-term and illiquid investments. Stability within the sectors superannuation funds invest into is also important, as a lack of confidence in the regulatory or policy environment around certain asset types will encourage the capital to be allocated to other more stable assets or even to assets outside of Australia. This would be a detrimental outcome if the largest pool of Australia capital were not able to invest in its home market and help nurture new industries.

Affordable housing

In the case of affordable housing, insufficient operational revenues, scale, planning and development risk have impeded superannuation fund investment. Fundamentally, the gap between social and affordable rents and market rents must be closed through some form of scalable government financial contribution to achieve a commercially viable return. Lack of consistency with respect to government policy support and targets for new social and affordable housing has meant there has been no investment pipeline to consistently allocate capital to, even if the risk/return challenges can be overcome. Relative to other jurisdictions, another impediment has been a lack of available built investment opportunities. Superannuation funds typically prefer investing in existing assets rather than greenfield projects. In the cases where superannuation funds are willing to consider greenfield investing, development risk is typically perceived to be excessive. However, recent reforms and greater proposed government spending are a step in the right direction in terms of encouraging private participation (and more specifically superannuation fund investment into the sector).

Australian venture capital

Australian venture capital has strengthened considerably in recent years, with the quantum of capital flowing into the asset class increasing significantly. However, the capital flow is uneven and there is still a lack of capital for the development and commercialisation of technologies that arise from Australian universities and research institutes. We believe governments and the Australian venture capital industry can do more to encourage greater capital participation in hard technology and commercialisation processes.

Australian agriculture

Australian agriculture also faces challenges that have restricted superannuation involvement in the asset class. As with the broader private markets sector, the focus on fees and YFYS pose challenges. The lack of detailed investment relevant data is another key challenge and governments could support initiatives to improve this situation.

Conclusion

While there are numerous factors that limit the level of Australian superannuation fund investment in Australian private markets, there are identifiable and practical steps governments could take to help address some of these issues. Most important and wide-reaching would be reassessment of Regulatory Guide 97 (RG 97) and the YFYS legislation. Beyond these, we have identified a range of specific initiatives per asset class for governments and industry stakeholders to consider.

For each of the sections of the paper we have noted some initial initiatives to focus on, which are summarised below.

Table 1: Suggested initial areas of focus

Sector	Initiatives
Private markets (including venture capital and agriculture)	• Reconsideration of RG 97. • Reconsideration of YFYS legislation. • Seek expert input from superannuation industry practitioners on policy development.
Australian venture capital	• Support schemes to educate and encourage commercialisation of hard technology. • Support pre-seed and seed funding for hard technology companies, potentially utilising a structure whereby private capital receives an initial preferred return.
Agriculture	• Support improved data collection.
Affordable housing	• Create meaningful and consistent government schemes (e.g., tax /land concessions) for housing (affordable and social) to provide an attractive return to private capital. • Simplify federal and state systems to support investments across internal borders. • Standardise processes and procedures in building affordable housing nationally.

Introduction

Australian superannuation funds are a large and influential group of institutional investors that invest capital on behalf of Australian workers. The current level of capital under management by superannuation funds (over A$3 trillion) is well over the total market size of the Australian Stock Exchange as well as Australia's annual Gross Domestic Product. Given their size they can play a very important role in the Australian economy.

The purpose of this paper is to consider the investment activities of the superannuation funds in the Australian economy, particularly in what is called 'private markets', which for the purposes of this paper covers unlisted real estate, unlisted infrastructure, private equity, and unlisted agriculture (noting that private markets will sometimes include other sectors such as private debt). Investment into these sectors can have a range of potential benefits for both the investor and the economy.

We have broken this report into four main sections:

- The first provides background on the superannuation funds, how they invest, what makes them unique and considers Australian private markets as a broad sector.
- The second considers Australian venture capital specifically.
- The third considers Australian unlisted agriculture specifically.
- The fourth considers affordable housing specifically (a subsector of unlisted real estate).

Within each of these sections we have broken the discussion into the following topics:

- Background information on the sector and the current 'state of play'.
- Potential benefits to both the investor and the economy from investment in the sector in question.
- Factors that may be impeding greater levels of investment in the sector by superannuation funds.
- Potential initiatives governments could explore to increase superannuation fund investment in the sector.

Many of the possible initiatives that governments could explore are specific to particular sectors. However, both Your Future, Your Super (YFYS) benchmarking and the focus on fees in illiquid investments (Regulatory Guide 97 (RG 97) and APRA's superannuation heatmaps) makes investing into Australian private markets considerably more difficult. While the intent of these regulations is reasonable, the application has significant consequences. Hence to encourage further investment into private markets we believe a review of YFYS, and RG 97 should be a priority.

Australian private markets

Australian private markets

The first section of this paper looks at Australian private markets at a high level. We consider how Australian superannuation funds view private markets, what makes superannuation fund investors unique, benefits from them investing in Australian private markets, what prevents greater investment, and what governments could potentially do to encourage greater investment. Later sections look in more detail at both Australian venture capital, Australian agriculture, and affordable housing.

There are some basic concepts that can be useful to understand when considering how superannuation funds operate and how they invest. In the Glossary we have included an explanation of 'asset classes', different routes by which superannuation funds invest, as well as the concepts of 'strategic asset allocation' (SAA) and 'actual asset allocation' (AAA). SAA is particularly important as it is the level of an asset class that an investor is targeting.

This section both describes what each of the asset classes within private markets are, as well as what characteristics they share. For the purposes of this paper, we will consider private markets to cover unlisted real estate, unlisted infrastructure, private equity, and unlisted agriculture. For each of these asset classes, we consider equity investments rather than the provision of debt financing.

What are private markets?

Unlisted infrastructure

Infrastructure assets can be diverse depending on the subsector but tend to share a set of similar characteristics. Infrastructure assets are often physically large, capital intensive and often monopolistic. In Australia, common examples include toll roads, seaports, airports, electricity networks and water assets. However, there are also smaller assets that fall into the social infrastructure class, such as schools and prisons. All these assets are expected to have relatively consistent and long-term cash flows, driven by regulation, long-term contracts, inelastic demand or monopolistic positioning.

Unlisted real estate

The core real estate asset class typically comprises established office, retail, or industrial properties. The key drivers for these assets are leasing/re-leasing space, length of lease contracts, contracted lease rate escalations, and capital expenditures. However, riskier approaches to investing in real estate may involve repositioning assets or building new assets (called greenfield investing as opposed to brownfield, which refers to existing assets). Other subsectors within real estate include self-storage, healthcare, life sciences, cold-storage, hotels, and affordable housing (covered in more detail in a later section). In Australia, institutional investors do not typically invest in residential property.

Private equity

The simplest definition of the private equity asset class is an equity investment in private traded companies (i.e., not publicly traded) to improve performance, increase company value and generate profitable returns for investors. In practice, private equity investing tends to focus on specific strategies (leveraged buy outs, growth, turn-around or venture capital). For example, buyouts are applicable for large companies that may be profitable but have the potential to become more valuable by accessing growth opportunities, better management, mergers and acquisitions, or better corporate structuring.

Venture capital is one form of private equity. Venture capital focuses on financing the development of new or young companies, typically with large potential end markets or opportunities to grow. As the name implies, this involves investing in high risk and new ideas that may provide a very high pay-off for the risk taken. Expansion phase investments are typically the next step beyond venture capital, where companies may be generating revenues, but still require capital to expand and grow.

Unlisted agriculture

Agriculture investing typically involves investment into operating farmland, with the goal of increasing value, achieved by changing the production mix, operating more efficiently, making capital improvements, or via consolidation (efficiencies of scale). The agriculture asset class can also include other related subsectors that are part of the agriculture supply chain including water trading, food processing, or horticulture, though these segments are niche investments in the asset class. These latter subsectors are often referred to as agribusinesses, though this can refer to the whole sector as well. Agriculture as an asset class typically refers to private market assets (discussed in the next section), but agriculture related companies can also be accessed via listed markets.

Characteristics of private markets

The one common factor between all 'private market' asset classes is that these comprise investments that are not publicly traded. Hence, such assets are 'illiquid'.

Liquidity is the ability to convert assets into cash over a defined time period. 'Liquid' asset classes such as equities and bonds can be converted easily and quickly to cash. 'Illiquid' asset classes cannot be converted quickly, or not without a substantial impact on the price.

Superannuation funds invest in illiquid asset classes that may have more attractive characteristics than listed assets, such as higher return, lower risk, and lower volatility. However, they do so while targeting and maintaining a prudent level of total liquidity to ensure they can pay members when required.

There are several positive factors for investing in private market assets, despite their illiquidity. A key benefit is that private markets diversify a portfolio that is made up mostly of listed equities and bonds. This is because the performance of these assets is not correlated with the performance from equities and bonds, which means a total portfolio (comprising exposure to a diverse set of asset classes) performance tends to be more stable when these assets are included.

Private markets also provide the ability to target certain performance characteristics which are difficult to achieve otherwise. For example:

- Infrastructure is often targeted for its defensive characteristics, which is to say it tends to have relatively stable returns and tends not to have large periods of negative returns.
- Private equity, on the other hand, can provide variable returns but expected returns are also very high.
- Agriculture investments have generally provided modest returns, but these exposures and returns are very diversifying relative to publicly traded assets.
- Real estate assets vary based on the exact sector exposures, but typically have less risk and exhibit greater stability in returns relative to those from listed equities.

Additionally, underlying private market assets are typically heterogenous and complex, requiring significant hands-on management and an understanding of the regulatory environment and technological landscape to create value after acquisition. Strong performance can be generated by the investor that has the skills to create this value. Chart 1 provides examples of some of the factors that can allow private markets investors to generate additional performance through hands-on management.

Chart 1: Sources of private asset complexity premium

Source: Schroders.

State of play

Australian superannuation private markets exposures

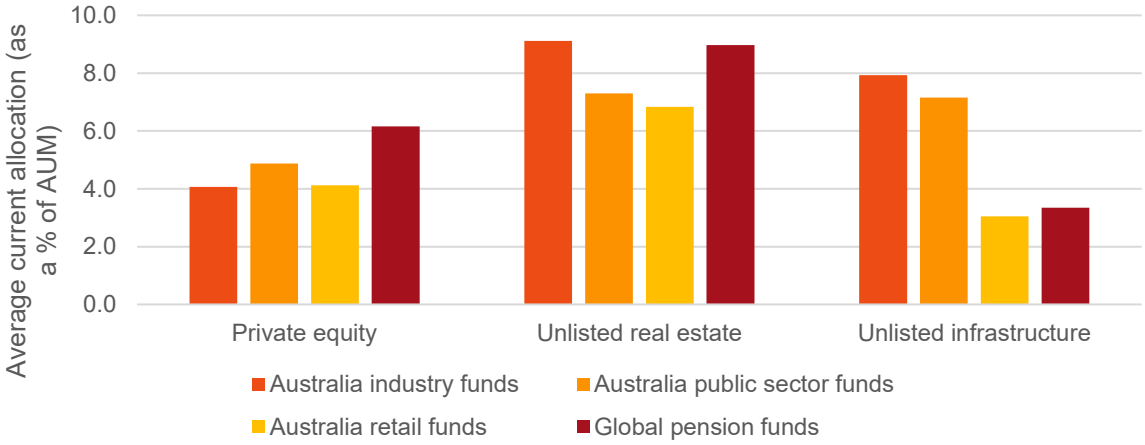
As at 30 June 2022, APRA-regulated superannuation funds invest A$117 billion in unlisted real estate (5.6% of total assets), A$71 billion in Australian unlisted infrastructure (3.3% of total assets), A$57 billion in international unlisted infrastructure (2.7% of total assets), and A$110 billion in private equity (5.2% of total assets)[1]. APRA data does not specify the geographic exposure of unlisted real estate or private equity, but we would expect the majority of the unlisted real estate to be Australian. Private equity will vary from investor to investor but is typically weighted towards international private equity.

Industry funds have a much higher weighting to private markets compared to the overall APRA-regulated superannuation fund group. Industry funds invest A$70 billion in unlisted real estate (6.9% of total assets), A$54 billion in Australian unlisted infrastructure (5.3% of total assets), A$43 billion in international unlisted infrastructure (4.2% of total assets), and A$65 billion in private equity (6.4% of total assets).

Chart 2 shows Australian superannuation fund allocations to private markets falls behind global pension funds on private equity, are about equal on real estate and have much greater exposure to infrastructure. This reflects the very early adoption of infrastructure as an asset class by Australian institutional investors relative to their global counterparts, as well as the regulatory environment which makes it more difficult to invest in sectors such as private equity (explored later in this report). Additionally, the industry fund sector has a higher exposure to infrastructure and real estate than the total superannuation sector due to it traditionally being more supportive of private assets and having a higher tolerance for illiquidity.

[1] Source: APRA, Quarterly superannuation performance, June 2022.

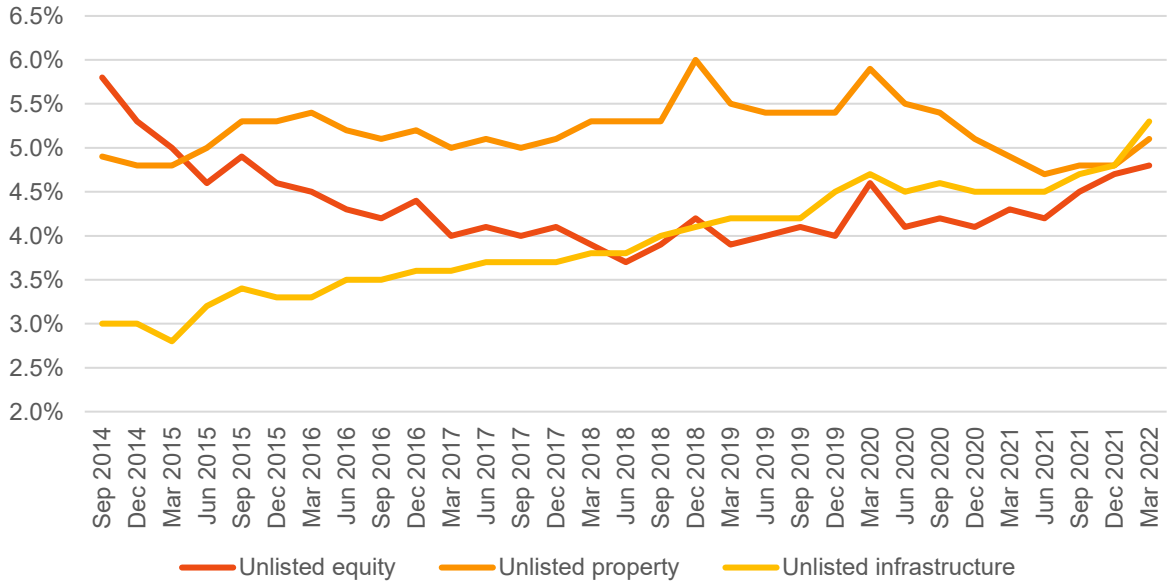
Chart 2: Allocations to private markets by investor type



Source: Preqin Pro.

Chart 3 shows how the average allocation to private markets by superannuation funds has changed over time. This shows a reasonably stable allocation to unlisted property, a declining allocation to private equity with a slight recovery more recently, and an increasing allocation to infrastructure. This reflects the attractiveness of infrastructure, the challenges facing investment into private equity, and the maturity of the funds' unlisted property allocations. These figures include the total exposure to these asset classes and not just Australian assets.

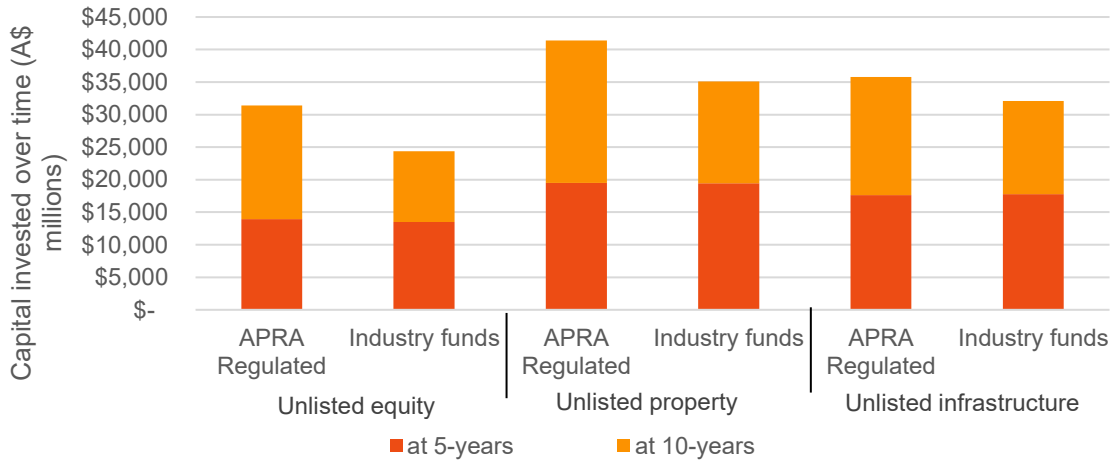
Chart 3: Superannuation fund allocations to private markets over time



Source: APRA.

Chart 4 shows a projection of additional capital expected to be invested into unlisted asset classes by superannuation funds over the next five and ten years, as modelled by Industry Super Australia[2]. This projects over the next ten years, APRA regulated funds will invest an additional A$31 billion into unlisted equity (private equity), A$41 billion into unlisted property and A$36 billion into unlisted infrastructure, with the majority of this investment coming from industry funds. This highlights how impactful superannuation funds are expected to be in private markets.

Chart 4: Projected cumulative superannuation fund investment into unlisted assets



Source: Industry Super Australia.

Performance

Performance of the private markets sectors over the long term has typically been strong. As expected, Australian private equity and venture capital (Table 2) have performed much more strongly over the long term than most other asset classes given the higher risk and illiquidity of private equity.

Table 2: Performance to 30 June 2020 (% p.a.)[3]

Index	1 year	3 year	5 year	10 year	15 year
Australian listed equities	-7.6	5.2	6.0	7.7	6.6
International listed equities	3.3	6.7	7.0	10.0	6.7
Australian bonds	4.2	5.6	4.8	5.6	5.8
International bonds	5.2	4.7	4.8	6.0	6.4
Australian private equity and venture capital	0.3	9.4	10.4	12.5	11.1

Source: Bloomberg, Cambridge Associates.

[2] The underlying methodology considers a range of factors including fund performance, contributions, member switching and fund expenses.

[3] Asset classes are represented by the following indexes: S&P/ASX 300 Index (Australian listed equities), MSCI All Countries Ex-Australia (AUD) (International listed equities), Bloomberg AusBond Composite Index (Australian bonds), Barclays Global Aggregate (AUD Hedged) (International bonds), Australia Private Equity and Venture Capital Index (AUD) (Australian private equity and venture capital).

When looking at Table 3, infrastructure has also been a very strong performer over the long-term, which is notable given it also provides reasonably stable returns. Real estate has not performed as strongly, but returns have still been attractive, and these assets are also defensive in nature. Period returns are not available for Australian agriculture, however Chart 17 shows that rolling one-year returns have been strong here as well.

Table 3: Performance to 31 March 2022 (% p.a.)[4]

Index	1 year	3 year	5 year	10 year	15 year
Australian listed equities	15.2	10.9	9.4	10.1	5.9
International listed equities (local currency)	8.7	14.0	11.7	11.3	7.0
Australian bonds	-5.5	-0.3	1.9	3.4	4.7
International bonds	-4.0	0.8	2.0	3.9	5.5
Unlisted infrastructure	13.5	10.5	9.8	11.0	9.8
Unlisted real estate	12.5	5.2	7.2	8.6	n/a

Source: Bloomberg, MSCI, Frontier.

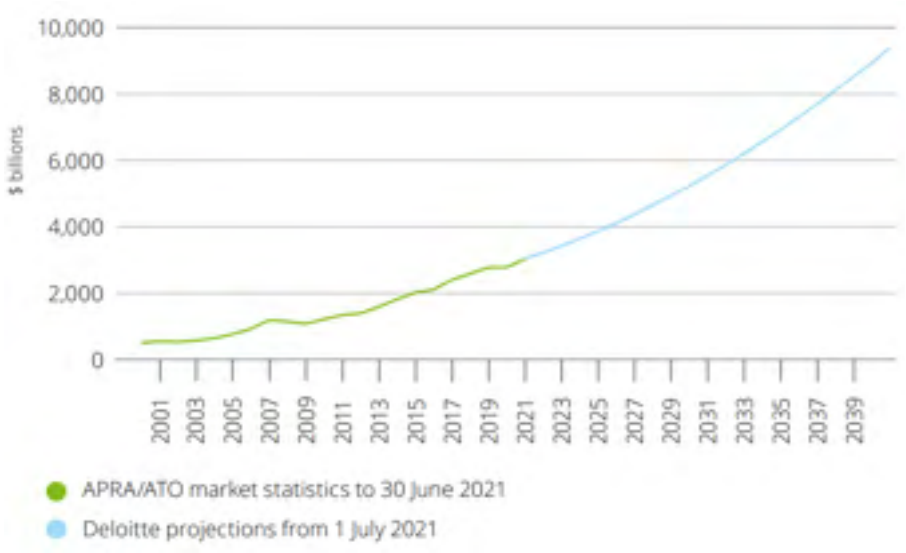
[4] Asset classes are represented by the following indexes: S&P/ASX 300 Index (Australian listed equities), MSCI All Countries Ex-Australia (LC) (International listed equities (local currency)), Bloomberg AusBond Composite Index (Australian bonds), Barclays Global Aggregate (AUD Hedged) (International bonds), Frontier Infrastructure Benchmark (NAV weighted) (Unlisted infrastructure), MSCI/Mercer Australia Core Wholesale Index (Unlisted real estate).

What makes superannuation funds unique as a group of investors?

There are a range of characteristics that make superannuation funds relatively unique investors and well-suited to investing into private markets, but in some cases may limit their exposure. Some of these characteristics are outlined below.

- **The superannuation system has a large pool of capital under management**, with A$3,312 billion in total assets of which A$1,077 billion is held by industry funds[5]. In comparison, Australia's annual GDP figure is A$2,072 billion (to March 2022) and the market capitalisation of all domestic companies traded on the Australian Stock Exchange (ASX) was A$2,524 billion (31 May 2022). This makes superannuation funds a dominant group of investors in the Australian market. As Chart 5 shows, this is only expected to grow over time as assets increase in value and contributions continue to flow into the sector.

Chart 5: Projected superannuation assets to 2041



Source: Deloitte Australia.

- **Superannuation funds are institutional investors, meaning they have scale and the capability** to understand and invest in most asset classes, including private markets. They can invest into asset classes their members typically would not be able to access by themselves. Additionally, fees charged to institutional investors are substantially lower than those charged to investors outside of this group.
- **Superannuation funds are defined contribution plans**, which means they effectively invest members' capital for them. Members in turn receive the result of their capital being invested by the superannuation fund. This contrasts with pension funds (which many of the world's largest investors are) that must pay a defined pension to their members after they retire, funded by a pool of capital they try to grow so they can meet demand for future pensions. The difference in how superannuation funds and pension funds operate can lead to quite different investment strategies.
- **Due to the long-term nature of the superannuation capital pool**, **superannuation funds can invest over long-time horizons**, which basically means they can invest into illiquid strategies as well as those strategies that take extended periods of time to come to fruition. This describes many of the assets in private markets.

[5] Source: APRA, Quarterly superannuation performance, June 2022.

- **There are very strong net inflows of capital into the sector** (A$58.9 billion for the one-year period to 31 March 2022) which means superannuation funds are always seeking new investments. This is due to the superannuation guarantee requiring employers to make superannuation contributions on behalf of their employees. Large inflows mean a greater tolerance for illiquid assets as inflows provide liquidity.
- While superannuation funds can invest into illiquid assets, **members have almost unlimited liquidity** in that they can switch member investment choice options or even superannuation fund on very short time horizons. This means a superannuation fund must balance the benefits of investing in illiquid assets (like private assets) with possible liquidity demands from member switching.
- **The pooled nature of superannuation funds means there is greater tolerance for illiquidity.** This is because at any given time most members are not moving their balance, which allows illiquid assets to continue to be held, despite member movements on the margin.
- **In the case of industry super funds, all 'profits' go to members**.
- **Most superannuation funds subscribe to principles of responsible investing** and incorporate this into decision-making (also known as environmental, social and governance considerations or ESG).

What do superannuation funds look for when investing in private markets?

Once an investor has decided to invest in an asset class the next step is selecting appropriate investments for the sector. A superannuation fund chooses its investments based on a range of criteria, including the following:

- **Expected returns should be commensurate with the risk being taken on** with the strategy. The challenge here is that 'risk' is difficult to quantify and returns are not guaranteed.
- **The risk profile needs to match the investor's requirements.** A risk profile that is lower or higher than their requirements will not be appropriate.
- **Excessively high-risk strategies tend to be less attractive overall** as returns can be very variable, which conflicts with the requirements of superannuation funds. While such investments can be part of a larger portfolio, the exposure will be low.
- **How the investment will be viewed under various regulations**, particularly the Your Future, Your Super (YFYS) regime and RG 97. For example, a strategy that is expected to generate performance lower than the designated YFYS benchmark will be less attractive.

While larger investors with internal capabilities can in theory make investments directly, typically investments will be made on behalf of superannuation funds by a fund manager that specialises in the asset class of interest. The superannuation fund will provide the fund manager with capital to invest within a certain set of guidelines. The specific assets and strategy of the fund needs to match with what the investor is seeking. This gives rise to additional considerations:

- There needs to be confidence that the manager can execute the strategy successfully. This usually involves close examination of the manager's track record, team, and approach to investing.
- The product must be structured in an appropriate manner which includes ensuring alignment between the superannuation fund and the manager, as well as having various protections in place for the superannuation fund.
- Fees are a key consideration, with expensive strategies typically being less attractive.

Australian private market opportunities

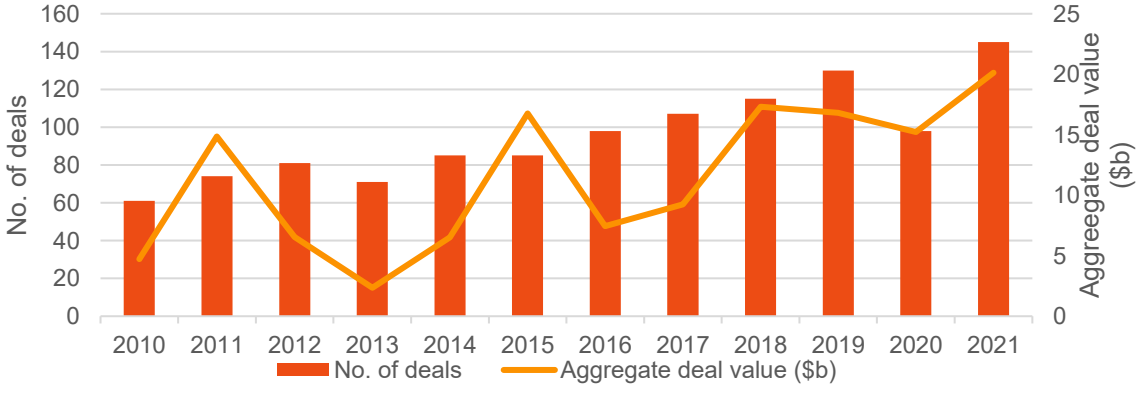
Opportunities for an investor in Australian private markets are typically quite strong, though there can be a fair amount of variability over time. Most real estate and infrastructure funds in Australia are 'open-ended' funds which means they will hold the asset in perpetuity unless reconfiguring their portfolio or for liquidity purposes. In contrast, private equity operates almost exclusively via closed-end funds, which have a defined lifespan. This means assets are more likely to come back to the market in the private equity sector.

If we consider the real estate sector, there were A$8.6 billion in Australian real estate transactions during the year to March 2022, which was very similar to the level recorded in the prior year[6]. Industrial and office real estate transactions were notable, driven in part by an increasing demand for warehousing and distribution centre solutions, plus employees returning to offices as work-from-home directives subsided. For the retail sector however, transactions continue to be slow due to customer preferences for online shopping and retailers therefore requiring less or no physical storefront space.

In the Australian infrastructure sector, opportunities to invest depend on the exact sectors of focus within what is a very diverse asset class. Opportunities for larger Australian infrastructure funds targeting lower-risk assets (called core infrastructure) have been relatively infrequent as the source of many transactions for this group are government privatisations, which have been quite slow over recent years. Many have shifted to targeting ASX-listed core infrastructure companies which have resulted in the public-to-private acquisitions of Spark Infrastructure, BINGO Industries, Tilt Renewables, Vocus and Sydney Airport over the past 18 months. Opportunities for investment in public private partnerships (PPPs) have also been slow, with only two transactions recorded over FY2021[7]. However, stakes in completed ('brownfield') PPPs do still occasionally change hands, often when developers sell down their equity stakes. The renewables sector has also been relatively slow in recent years, with many investors cautious due to ongoing challenges in this sector. Some activity has occurred, though this is largely brownfield assets changing hands.

Meanwhile, opportunities to invest in private equity appear to be reasonably strong with deal value and volumes over 2021 at historically high levels, following a slump in 2020 (see Chart 6). This reflects investors' increased confidence to deploy capital into higher-risk asset classes once the implications of the COVID-19 pandemic were better known, plus taking advantage of pandemic depressed asset values. A similar phenomenon has been seen in private equity globally.

Chart 6: Private equity-backed buyout deals in Australia by year



Source: Preqin Pro.

[6] Source: m3property.

[7] Source: Infrastructure Partnerships Australia.

Benefits from investment in these sectors

Given how broad the private markets sector is, the benefits from superannuation fund investment in private markets are equally broad and can accrue to multiple different parties including governments, superannuation fund members, the public and the economy as a whole. This section considers each asset class and some of the potential benefits that arise from superannuation investment, noting that unlisted agriculture and affordable housing will be considered separately in later sections.

However, at a high level, a common benefit across asset classes is that a superannuation fund is an Australian investor, investing on behalf of Australian members, which means the assets will be held by responsible, capable, and well-aligned investors. Superannuation funds have long investment time horizons due to the long-term nature of their role, hence they can be patient investors. This has its benefits, particularly in equally long-term assets such as can be found in private markets. For example, this long-time horizon means the superannuation fund is incentivised to ensure the long-term sustainability of an asset, which is beneficial for long-term assets such as economically vital infrastructure.

Some more specific benefits are classified by asset class are outlined below.

Unlisted infrastructure

- **Monetisation of government-owned assets.** Superannuation fund investment into infrastructure has helped facilitate the monetisation of government-owned assets. The raised funds are then able to be recycled back into other government projects or to reduce government debt. Superannuation funds as investors are well aligned with the requirements of the government (e.g., providing capable management and maintenance of assets to a high community standard).

- **Capital for new investments.** Infrastructure investors provide capital that is required for the development of new infrastructure, which would otherwise need to be provided by the government. Public private partnerships (PPPs) are one example of this model. Other examples include capital being invested into transmission and distribution, and renewable generation, which is vital for Australia to meet its net zero targets.

- **Ability to tap into broader capabilities and talent.** Tendering for asset development from private investors allows the government to tap into the capabilities and innovation of the private sector in a competitive process.

- **Focus on operational and capital efficiency.** Institutional investors tend to be more focused on operational and capital efficiency than government owners. This focus leads to stronger and more resilient businesses, innovation in service delivery and a lower cost of service.

- **Financing the modern economy.** The underlying infrastructure within the economy needs to keep pace with a changing world, driven by technological advancements and challenges, such as climate change. Superannuation funds help finance the required infrastructure. Two notable areas are the digital (which includes sectors like data centres, broadband infrastructure, and mobile towers) and energy transition sectors.

- **Financing the energy transition.** Decarbonisation of the global economy is essential to avoid the worst consequences of global warming. Central to this is moving to non-carbon polluting energy generation, such as wind and solar generation. This is a huge task and requires investment not only into generation but also into the overall energy grid. This is an area in which infrastructure investors have already participated, though this has faced many challenges. Previous government estimates are that more than A$80 billion will be invested in

decarbonisation in Australia by 2030[8]. Other opportunities for Australia in this space include green hydrogen which could prove to be an economic boon, should Australia be able to harness its abundant solar and wind resources using hydrogen.

- **Job creation.** The construction of new infrastructure assets (greenfield assets) not only generates employment in construction while assets are being built, but assets also require ongoing maintenance and operation which generates further jobs. Additionally, existing assets (brownfield assets) will often require additional investment for maintenance or expansion, which creates further construction roles. Superannuation fund investors finance these job creating activities.

Real estate

- **Developing and adapting to change.** Real estate investors have a role to play in the development and change of the economy over time. Examples of sectors where real estate investors have participated have been in the provision of data centres as well as logistics facilities that enable the ongoing development of e-commerce.
- **Socially aligned investments.** Real estate investors have been involved in providing a range of socially beneficial real estate related investments, including social housing, disability housing, key worker housing, aged care, and healthcare. Build-to-rent is another sector that is developing in Australia but is a major real estate sector overseas.
- **A key component of our economy.** The primary sectors within Australian real estate portfolios (offices, retail, and industrial properties) are all vital to the operation of the economy. These being held by superannuation funds means they are owned by sophisticated investors with both the incentive and motivation to ensure ongoing investment. This not only ensures the provision of these essential parts of the economy but generates jobs, particularly in the construction and financial services sectors.
- **Greening of real estate.** The superannuation funds' responsible investment requirements have resulted in a strong focus on incorporating environmental considerations into their real estate investments. To date this has meant the construction of more energy efficient buildings as well as investing to improve the efficiency of existing buildings. In the future a focus on environmental sustainability and a reduction in the carbon footprint of the real estate sector will be vital if Australia is to meet its net zero objectives.
- **Job creation.** As is the case with infrastructure, real estate investing involves the construction of new buildings (greenfield) or investment in existing buildings (brownfield). Greenfield investing will generate numerous construction jobs as well as other roles such as design and engineering. Brownfield investing will involve ongoing maintenance as well as potentially refurbishing or repositioning assets, all of which generates employment. Often brownfield assets will be acquired with a pipeline of capital expenditure in mind to add value to the asset.

Private equity

- **Commercialisation and innovation.** Much of the focus in venture capital is on taking newly developed technologies, or new business models, and developing these. Such innovation can potentially generate large amounts of value in the economy with the resulting benefits regarding job creation and utilisation of Australia's highly skilled workforce. If you consider the largest US listed companies, many of these did not even exist 25 years ago and many were supported at

[8] *Australia's whole-of-economy Long-Term Emissions Reduction Plan*, Australian Government Department of Industry, Science, Energy and Resources.

points in their development by venture capital funding. Venture capital will be covered in greater detail later in this report.

- **Efficiency.** Many private equity strategies are focused on cost saving and more efficient operation of companies. This is because a more efficiently operating company is more valuable. The means by which this is done is very broad, but one common strategy is the roll-up play, when several smaller businesses are purchased and merged. This allows the benefits of scale as well as removal of duplicated functions making the combined entity more valuable than the separate parts. From an economic perspective this essentially improves productivity, which is a key component of economic growth.
- **Economic growth and job creation.** Private equity is often focused on companies with high growth potential, but which are limited in some way, whether by capital, expertise, or strategy. Private equity managers aim to develop this potential. Such growth means job creation and greater economic output. It has been estimated that around 500,000 Australian jobs were supported directly or indirectly by private equity in 2020[9].

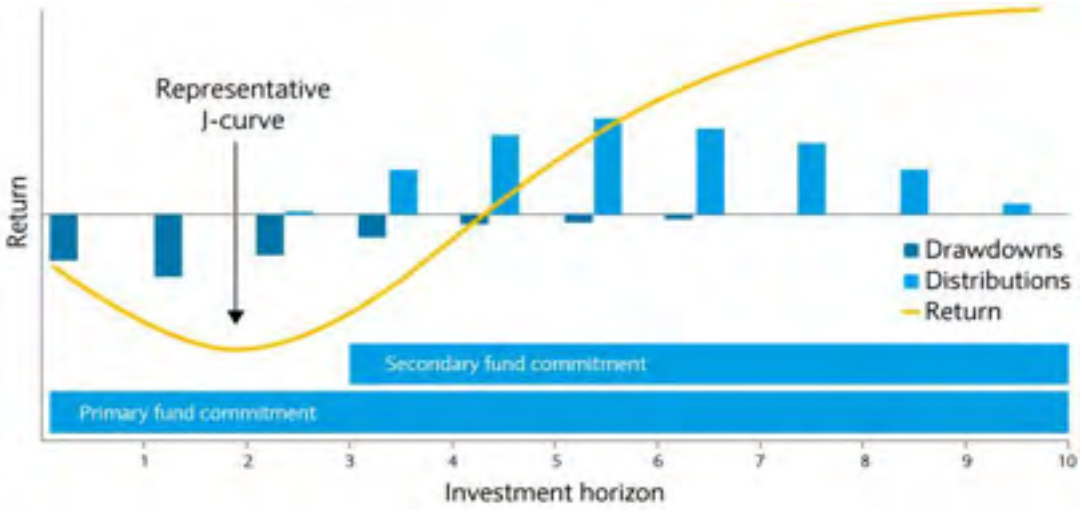
[9] Funding a brighter future, Ernst & Young, May 2022.

Impediments to investment in private markets

There are numerous reasons why superannuation funds do not invest more capital into private markets. In some cases, they are still substantial investors – Australian superannuation funds have some of the highest exposures to infrastructure of any investors globally, however their exposure to some areas, such as agriculture and venture capital, are low. Here we outline several factors that may contribute to superannuation investing less into Australian private markets than they otherwise would, noting we will examine venture capital and agriculture in more detail later in this report:

- **Your Future, Your Super (YFYS) performance test[10].** The YFYS legislation that came into effect on 1 July 2021 designates specific benchmarks that each asset class will be compared against. If a superannuation fund underperforms this test by 0.5% p.a. or greater over eight years, it must inform its members it is an underperforming fund, and if it underperforms for two years, it cannot accept new members. While the intention of ensuring trustee accountability is positive, the test is likely to disincentivise investment into many private markets sectors. This is due to several flaws in the design of the test and the severe consequences for failure. A key issue is that it does not account for the relative levels of risk between the benchmark and the portfolio being tested. For infrastructure, the lower returning, but lower risk strategies, such as investing into PPPs, privatisations, and renewables will likely fail the YFYS test. This makes these sectors significantly less attractive for superannuation funds. This approach may also encourage investment into more risky sectors, which in the case of infrastructure will typically mean more investment into non-Australian infrastructure. A similar challenge applies to real estate. Private equity's challenge is different in that the timing of return generation means a private equity fund is likely to underperform the YFYS benchmark early in its life, while outperforming later as shown by an example 'J-Curve' diagram below.

Chart 7: Private equity 'J-curve' impact on short-term returns



Source: Barclays.

[10] Frontier has published several pieces of work regarding YFYS which have included two submissions to Treasury, the first addressing where we think YFYS could be enhanced (https://www.frontieradvisors.com.au/wp-content/uploads/2021/02/Frontier-YFYS-submission.pdf) and the second suggesting an alternative proposal for the infrastructure index (https://www.frontieradvisors.com.au/wp-content/uploads/2021/05/Frontier-Infrastructure-Index-Submission-to-Treasury.pdf).

- **Uncertainty regarding policy around superannuation funds.** While superannuation funds should have long-term time horizons given the investment time horizon of most of their members, potential future changes to the rules mean funds need to be more flexible over shorter time periods than would otherwise be the case. This uncertainty disproportionately impacts illiquid asset classes. A recent example of such a change was the COVID-19 early release of superannuation scheme, which created additional unforeseeable demands on liquidity for superannuation funds right at a point where their investments were facing challenging conditions. This kind of precedent means superannuation funds need to be prepared for similar changes in rules and government-created demands on liquidity, so will tend to hold lower levels of illiquid assets than would otherwise be the case.

- **Focus on fees in isolation.** There has been a significant amount of regulation around the disclosure of fees for superannuation funds, which disproportionately impacts on private market investments. These investments typically require much greater resources to execute than liquid investments like bonds and listed equities. As a result, fees are higher. Regulation around fees (such as ASIC's RG 97) encourage superannuation fund competition based on fees, rather than returns after fees, an area in which private markets investments typically do very well. In its implementation there has also been a lack of neutrality in the way fees are measured depending on how a superannuation fund acquires and holds assets as well as how they are offered to members through respective investment options. Generally, the greater the level of intermediation between members and underlying assets, the less likely certain fees and costs will be disclosed, which is contrary to the reality. A greater focus on returns after fees would be a more effective way of focusing on what makes it into a member's account.

- **Superannuation fund size.** As superannuation funds become ever larger (with legislation appearing to encourage merger activity), certain asset classes or subsectors simply become too small for the investor. This is because a significant percentage of a superannuation fund needs to be invested into a sector before it can meaningfully impact on performance. In dollar terms, such an exposure from a large investor may be greater than a small sector can absorb over the short to medium term without creating significant market distortions. As such, the focus for large investors will tend to be on sectors where significant amounts of capital can be invested in an efficient manner, which tends to favour sectors like infrastructure and real estate, though typically in overseas markets, due to the greater size of these markets outside of Australia.

- **Large existing exposures.** Australian superannuation funds have been significant investors in private markets which means they are often fully invested, especially when listed markets have performed poorly (as the private markets will then make up a greater percentage of fund exposures). Liquidity is also considered in aggregate, so being fully invested in other illiquid asset sectors may reduce the demand for further private assets. This is not to say superannuation funds will not continue investing in private markets – member inflows, plus capital being returned from investments, means investment is ongoing. Additionally, were certain illiquid asset classes to become relatively more attractive, greater amounts of the liquidity budget could be applied to this sector.

- **Illiquidity.** The illiquidity of private markets is a key factor that constrains the amount of capital superannuation funds can invest in these sectors. The ability of superannuation fund members to move their superannuation at will (member switching) creates an ongoing need for liquidity that must be satisfied. This contrasts with a pension fund that knows with reasonable certainty what its future liquidity needs will be, meaning higher levels of illiquidity can be managed. The uncertainty around member behaviour also contributes to this. For example, member activity can increase dramatically in the middle of a crisis period, increasing liquidity demands. This also interacts with several of the other points made in this section. For example, a fund will need to plan its liquidity needs to account for the possibility that rule changes might allow members easier access to the superannuation (along the lines of the COVID-19 early release of superannuation).

- **Lack of energy policy.** The lack of a comprehensive government energy policy that accounts for the changing requirements of our energy system has meant superannuation funds have been cautious about investing in Australia's energy transition sectors, such as renewables, despite investing in these sectors overseas. Due to the market structure, it has been very difficult or impossible for an investor to establish in advance whether a new wind or solar farm will be impacted by system strength issues. Many investors in Australian renewables suffered the negative impacts of this. Government intervention in the market (for example, Snowy 2.0) also creates additional uncertainty.

- **Lack of certainty and interference in regulated markets (regulatory risk).** This particularly applies to regulated assets, such as transmission and distribution. Changes in the behaviour of the regulator, as well as the regulatory structures themselves, can reduce the level of interest in these sectors. For example, the abolition of the Limited Merits Review was not only a change in the way regulation operated, but also removed the ability of regulated entities to request a review of the Australian Energy Regulator's decisions. Another area where this applies is in areas such as social housing, disability housing and aged care, where potential future changes in government policy or changes in legislation could have substantially negative impacts on the viability of an investment.

- **Lack of opportunities.** In some sectors it is simply the limited ability to source meaningful levels of investments which is a key limitation. This has particularly been the case for larger Australian infrastructure assets in recent years.

- **Lack of market data/transparency.** Data on private markets is quite limited due to the private nature of the assets themselves. This makes it difficult to make a case for investing into certain sectors, which limits the amount of investment made. This is particularly the case for smaller sectors such as Australian agriculture and Australian venture capital, however data is still quite scarce for infrastructure, despite the large size of this sector.

- **Risk and return.** The level of risk from investing in some sectors can be quite high, or simply unknown. While risk is not a problem if sufficiently compensated in expected return, establishing whether there will be sufficient compensation can be difficult. This factor is particularly a challenge for Australian venture capital (where risk is high) and for Australian agriculture (where establishing the level of risk is difficult). In the past many investors have avoided these sectors due to concerns that risk is not being sufficiently compensated. Additionally, given superannuation funds will target specific levels of total risk, exposure to higher risk strategies will be low.

- **Risk adjusted return.** Related to the point above, taking on risk is acceptable if it is sufficiently compensated by an appropriate level of expected return. It has been unclear in some sectors, particularly in affordable housing where cashflows are subject to below-market rents. An offsetting source of return is important to make it relatively attractive to other investment opportunities.

- **Poor economics.** In some cases, certain private market sub-sectors may simply have poor economics. Build-to-rent is an example of a sector that may be a net benefit to the economy (in the face of housing affordability challenges) but uncertainty regarding the economics has meant it has been slow to develop in Australia. Taxation (including GST and stamp duty), planning rules and low yields are some of the challenges facing this sector.

Numerous other factors limit the level of investment into specific sectors with more detail provided on agriculture and venture capital later in this report. However, a common thread is *uncertainty will limit the level of investment into a sector, particularly if a sector is illiquid and has a long-time horizon*.

What can governments do to encourage investment in private markets?

There are a range of initiatives governments could undertake to encourage greater investment by superannuation funds into private markets. Several of these would encourage investment more generally, while some initiatives would specifically encourage superannuation funds. However, as mentioned in the previous section, uncertainty makes an investment into private markets difficult, hence any initiatives should be well thought out, stable, transparent, avoid unintended outcomes, and not negatively impact existing investors.

Superannuation specific

- **Provide stability of regulation and clarity of purpose for superannuation funds.** Encouragement of investment by superannuation funds requires stability of regulation and clarity of purpose so that superannuation funds can confidently plan for the long term. While an objective for superannuation against which superannuation policy is assessed should be legislated, over the medium to long term a key tenet should be the stability of regulation. Eliminating the ability of the government to make directives that allow superannuation to be used for non-retirement purposes should also be considered.

- **Re-evaluate the focus on fees in isolation of performance.** RG 97 and APRA's superannuation heatmaps are examples of regulations that should be reviewed and potentially modified given the potential disincentives they create for investment into private markets. These regulations strongly emphasise fees as a key metric, which is only one of numerous characteristics that are important to consider when investing. What is particularly important for member outcomes are returns net of fees, which is one area in which private markets typically do well. Private markets also provide different characteristics to a total portfolio, which helps stabilise returns.

- **Review Your Future, Your Super.** Reconsideration of the YFYS performance benchmarks is another area that will make a substantial difference to private markets investments. This benchmarking system has limitations; the central premise that you can decide whether any given strategy is successful or not by comparing its performance to an asset class benchmark without allowance for risk is incorrect. The severe consequences of failing the benchmarking process means superannuation funds will be encouraged to either take on greater risk in these sectors (particularly infrastructure) or avoid them altogether.

- **Consider consequences of further fund consolidation.** Another area to consider is the consequences of the push to consolidate Australia's superannuation system. As funds become ever larger, the required amount of capital to invest in single opportunities increases, moving them away from smaller and more niche sectors.

- **Involve individuals with superannuation sector expertise in policy development.** The operation of superannuation funds is highly complex, and policy made without regard for these complexities will quite possibly lead to unintended consequences and potentially worse outcomes for members.

General initiatives

There are a range of initiatives that will encourage investment into Australian private markets more generally, which will also encourage superannuation fund investment.

- **The energy transition.** A key step that will help finance Australia's energy transition is a thorough review of Australia's energy policy and related areas that account for the changing requirements of our energy system and that considers the needs of private investors. For example, the current regulatory framework around transmission in the national energy market was designed for incremental growth in the network and not the massive changes required in the energy transition. This is just one of many areas that should be examined. As outlined earlier, the current market structure and government actions have proven challenging for investors in this

sector which has resulted in less investment than may otherwise have been the case. More direct government intervention in certain areas could be considered (for example hydrogen), but care should be taken to avoid unintended consequences.

- **Regulatory risk.** Regulatory risk is a key consideration in numerous sectors, particularly those where governments have played a key role in establishing a market. For example, the disability housing sector is heavily reliant on the NDIS, however, these are long-term investments that could be negatively impacted by future governments changing the rules. Mechanisms that insulate investors from future negative rule changes in these sectors would provide additional certainty and therefore investment. For example, investments that operate using a contractual structure (such as PPPs) are typically considered to be quite low risk by investors, despite a government being the primary counterparty.
- **Support for nascent industries.** Encouragement of the build-to-rent sector is an example of a sector with potential societal benefits, yet which faces challenges relating to taxation and planning rules. This is a potential area for governments to examine to see if some of these impediments can be removed. The hydrogen economy is another area with vast potential due to Australia's natural resources, but for which demand is uncertain. Governments could, for example, underwrite hydrogen demand for projects to supply additional certainty to developers.

Some recent steps taken by the Federal Government may eventually encourage further investment into private markets, such as the National Reconstruction Fund as highlighted below. However, we believe prioritising the following initiatives will be most beneficial:

- Reconsideration of RG 97 legislation.
- Reconsideration of YFYS performance benchmarking.
- Seek expert input from superannuation industry practitioners on policy development.

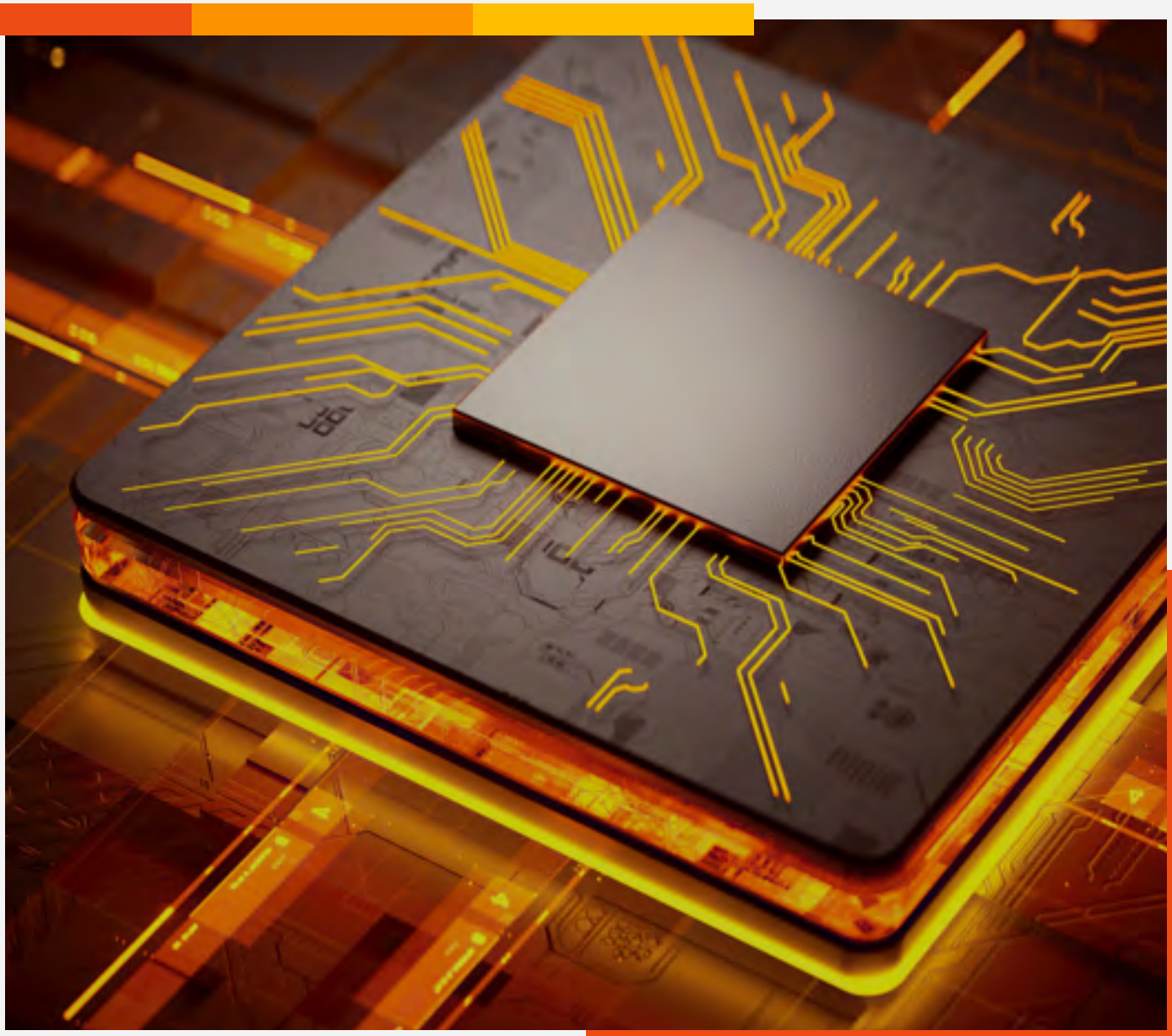
Current government initiatives - National Reconstruction Fund

In the 2022 Federal Budget, the Federal Government committed to re-build and diversify Australia's industrial base through the National Reconstruction Fund. The Fund will provide A$15.0 billion for targeted investments in independently assessed projects which support value-added production, drive productivity, and strengthen supply chain resilience.

Importantly, the Fund includes the ability to partner with the private sector to unlock further investment, support employment growth, and drive regional development.

The National Reconstruction Fund is expected to provide loans, guarantees and equity investment across seven priority areas focused on value adding and capability development to leverage Australia's natural and competitive strengths. These priority areas are resources; agriculture, forestry and fisheries; transport; medical science; renewables and low emission technologies; defence capability; and enabling capabilities.

Co-investment plans will be developed to identify high-level investment opportunities and barriers, as well as broader reforms to support growth and competitiveness, in each priority area. These co-investment plans will channel the funding from the National Reconstruction Fund on identifying and encouraging innovative ways for the economy to grow, with a focus on creating the sustainable, well-paid jobs of the future.



Australian venture capital

Australian venture capital

This section of the report seeks to outline the state of play for venture capital in Australia, the benefits of this asset class and possible ways to encourage more investment by superannuation funds.

What is venture capital?

Broadly speaking, venture capital involves making investments in private companies that promise potential for growth, which often entails high risk but also high return. It is a subsector of the private equity asset class. Some of the notable characteristics of the type of companies that venture capital invests in are as follows:

- early in their life cycle (with the hope of rapid development and expansion)
- cashflow negative and may have no earnings at all
- private and cannot list on major exchanges due to risk, size, and lack of cash flows
- cannot obtain traditional debt
- investment involves issuance of new equity, so capital goes into the company to fund its development
- tend to be technology focused, with capital being used to support commercialisation
- high risk and failure rate, typically due to technology and commercialisation risk
- large potential markets for their products or services.

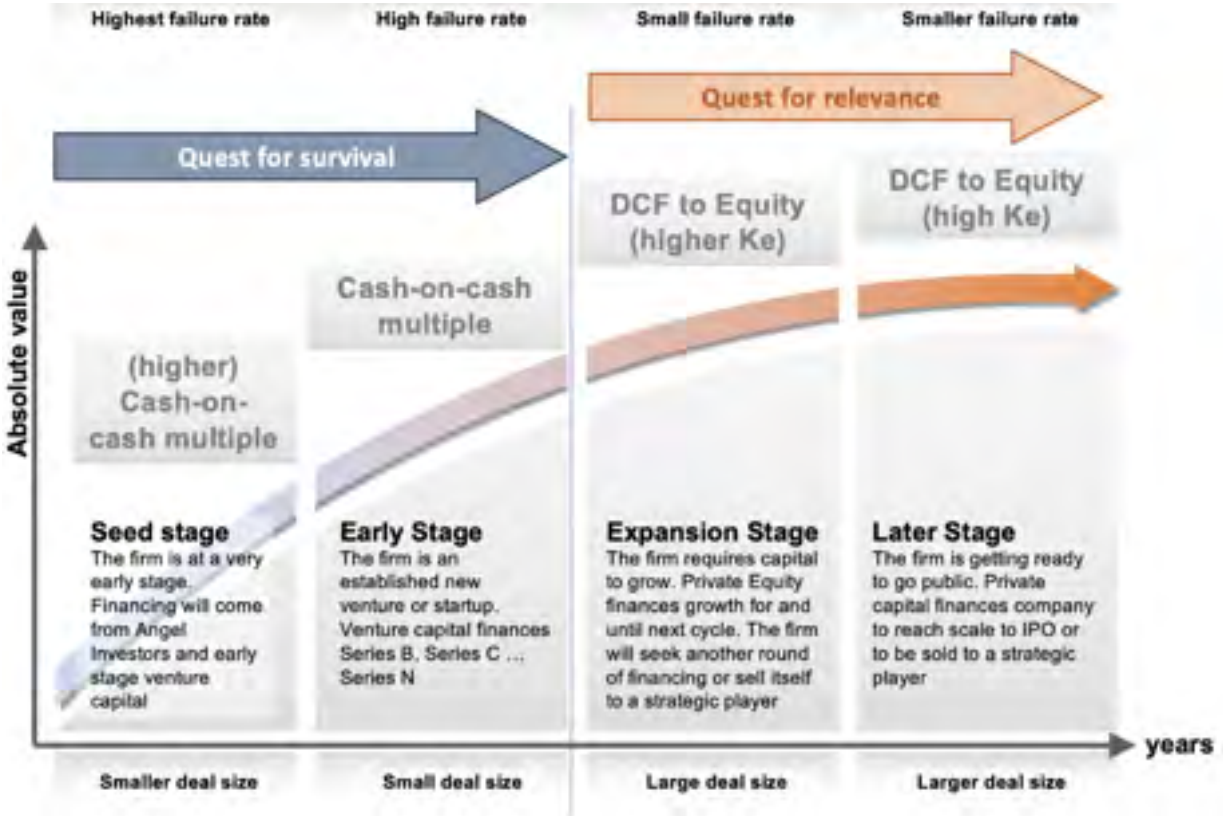
Overall, these characteristics define nascent companies that are developing new products or services and have high potential for failure but offer potentially high returns if they succeed. A venture capital manager's task is to identify suitable investments, structure the investments, and play an active role in guiding the companies through to liquidity events, such as an initial public offering (IPO), sale in a listed market, or a trade sale to another company.

Venture capital stages

Venture capital investments are often categorised by the 'stage' of investment, as outlined in Chart 8. While definitions may vary from industry to industry, as a guide, venture capital stages are commonly referred to as seed, early stage, expansion, and later stage.

- **Seed or start-up** – involves the investment of small amounts of capital for the inventor or entrepreneur to develop a proof of concept. It will also include such things as development of a business plan and market research.
- **Early stage** – refer to companies that are past the proof-of-concept stage but in the later stage of development and/or close to pilot production. Companies may be generating small amounts of revenue.
- **Expansion phase** – a company is producing and selling its product/service and requires capital to expand its capabilities. It may still be operating at a loss.
- **Later stage** – companies with a stable growth rate that may have reached profitability. This stage could be comparable to an early-stage buyout phase.

Chart 8: Venture capital valuation stages



Source: CB Insights & CapIQ.

The amounts of capital required and the valuations of the companies at these various phases can vary dramatically. Staged investments of around A$500,000 are typical at the seed end of the spectrum, moving to investments of hundreds of millions of dollars at the furthest end of the investment life cycle. Companies that are too small for venture capital will try to source funding from high-net-worth individuals, typically called ‘angel investors’, while companies on the larger end can source capital from large private equity funds or the public markets.

If successful, the venture capital-backed company will start at the seed end of the spectrum and grow through the different stages until it reaches a liquidity event such as a trade sale or listing on a stock exchange. However, the development and growth path for venture-backed companies will vary by sector and operating environment. For example, IT companies have a very different investment life cycle to biotechnology companies.

‘Hard’ versus ‘soft’ technology

A useful distinction when considering the types of companies funded by venture capital is to divide them into hard (or deep) technology focused companies and soft technology focused companies (hard tech versus soft tech). Hard tech companies are commercialising fundamental research discoveries which often typify academic research or new technology developments. Examples include biotechnology, materials research, quantum computing or semiconductor technology. Whereas soft tech companies focus on the application of already developed technologies, such as mobile apps, websites, or e-commerce for a mass market.

These types of companies have different development timelines. Hard tech will typically have long development timelines and high failure rates. New therapeutics and biomedicines are classic examples. In comparison, soft tech is developed in relatively shorter timeframes and often involves developing innovative software applications and then building a user base.

Commercialisation

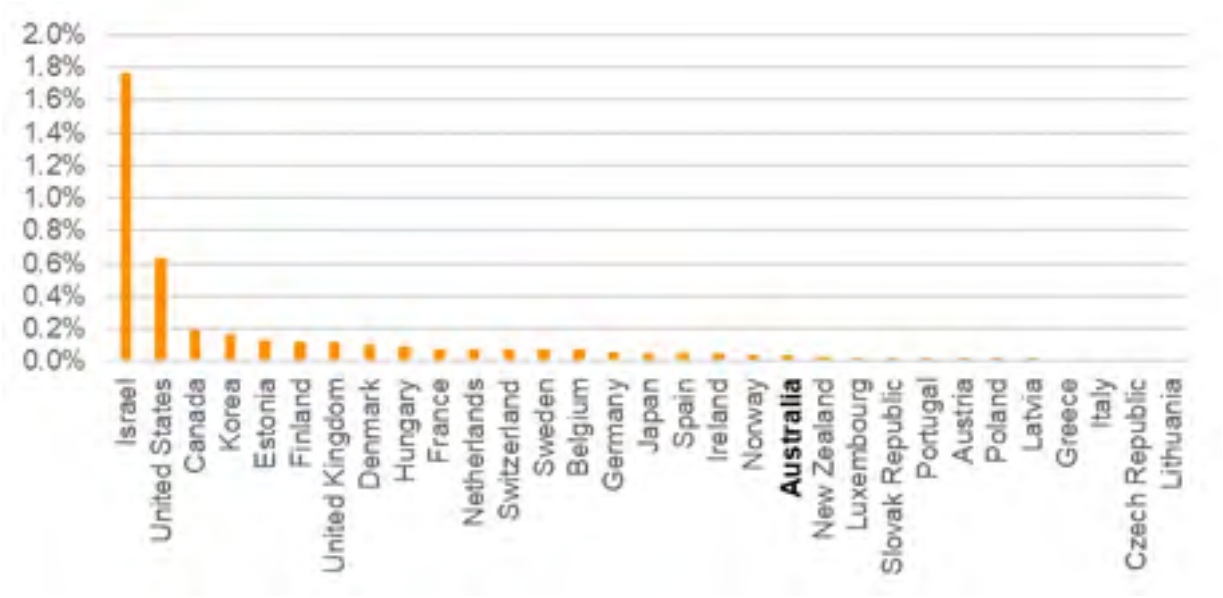
Closely linked to the venture capital industry is the concept of commercialisation, which is the development of new technologies or discoveries into commercially successful products and services. While the term can be used broadly across various types of technologies, it is more often associated with universities and research institutes and, therefore, hard technology style companies.

To execute on commercialisation opportunities, universities and research institutions employ staff focused on assessing the intellectual property position of particular opportunities in order to understand their commercial viability. If the opportunity is thought to be viable, the intellectual property position will be managed (typically through the issuance of patents), further research to strengthen this position will be planned and a business plan developed. The technology will then be marketed to venture capital managers and industrial operators to seek funding to undertake further development. This is a stage where venture capital may participate.

State of play

The venture capital universe in Australia is small, especially compared to the primary venture capital market in the US. Chart 9 demonstrates the OECD's estimate of venture capital funding as a percentage of GDP in 2019, and Australia, at a mere 0.04% of GDP, is well behind other OECD countries. US, as the largest venture market (in absolute terms), invested just over 0.6% of GDP, while Israel invested a notable 1.8% of GDP or 45 times that of Australia.

Chart 9: Venture capital investment as a percentage of GDP (2019)

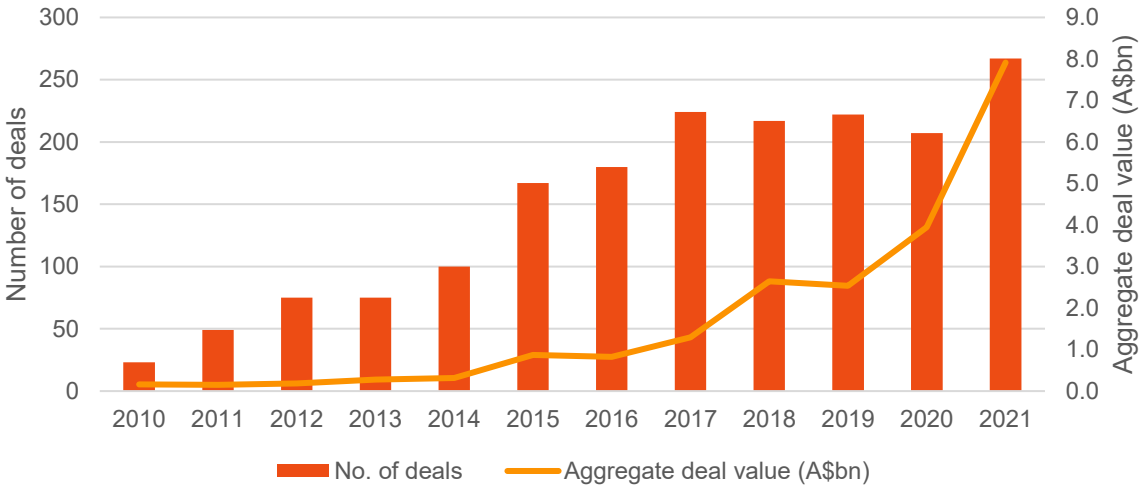


Source: OECD.

Venture capital funding was close to non-existent in Australia in the first half of the 2010s, post the financial crisis. However, as Chart 10 shows, this activity gradually picked up and peaked at around A$7.9 billion in 2021. A similar pickup in activity was evident in the US as well, though there was always a sizable baseline of annual investment, even in the early 2010s. But overall, Australian venture capital is small as an asset class, with Preqin estimating the sector to have A$12.2 billion in assets under management at 30 June 2021.

Detailed information on where Australian venture capital raises its capital is scarce, but the Australian Bureau of Statistics (ABS) estimates around a third of capital in venture capital came from Australian pension funds (primarily superannuation funds) in 2018-19[11], but this misses the more recent acceleration of investment in the sector. Even if most Australian venture capital now comes from the superannuation sector, the average exposure will be less than 0.4% of assets. We expect this to be concentrated in a handful of funds, however, as most have little to no exposure. For example, Hostplus, a high-profile investor in the sector, has an allocation to venture capital of over 2%.

Chart 10: Venture capital deals in Australia by year

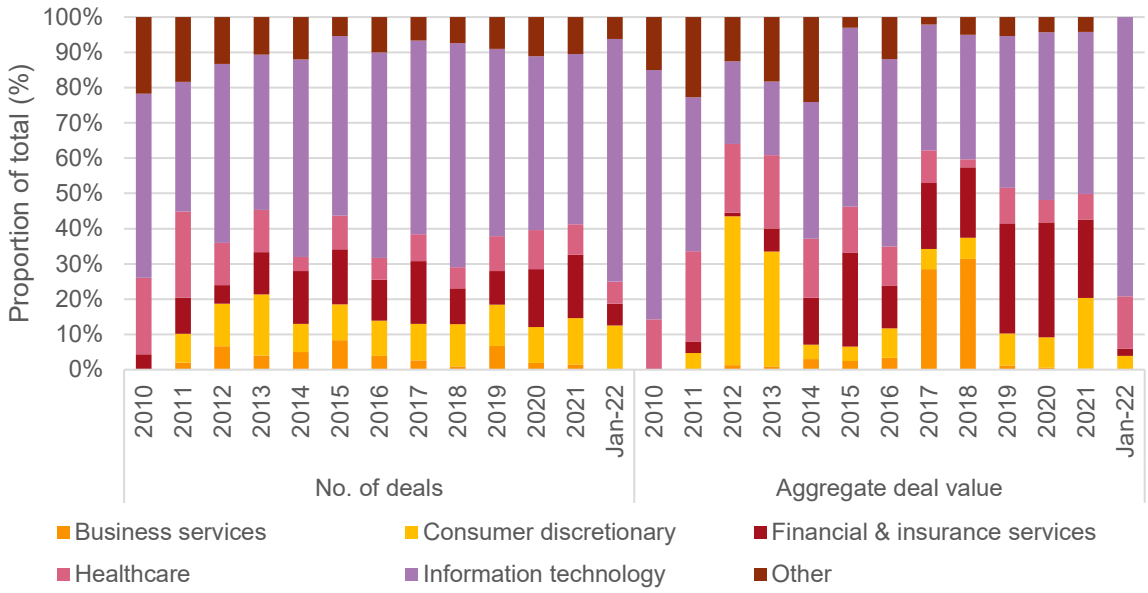


Source: Preqin Pro.

The largest sector receiving venture capital funding in Australia is classified as information technology (IT) (Chart 11). However, it appears much of this capital is being invested in large capital raisings by companies on the soft technology end of the spectrum. While this is positive for IT companies, sourcing venture capital investment is still challenging for hard technology companies. In the case of life sciences, seed funding comes primarily from only one or two funds that operate in the Australian market and reportedly financing is also very limited for other hard technology segments. Australia's largest dedicated venture capital managers include Blackbird, Square Peg, AirTree and Cathona Capital amongst others. These managers have invested a large proportion of their commitments in the IT sector.

[11] Source: Australian Bureau of Statistics, Venture capital and Later Stage Private Equity, 2018-19.

Chart 11: Venture capital deals in Australia by industry



Source: Preqin Pro.

It is difficult to estimate the number of active funds in the Australian venture capital sector, however nearly 300 early stage venture capital limited partnerships (ESVCLP) and venture capital limited partnerships (VCLP) were registered over the five years to FY20/21[12] (ESVCLPs and VCLPs are two Australian limited partnership structures designed for the venture capital sector). The largest five funds raised over the last seven years range in size from A$355 million to A$652 million (raised by Blackbird, Square Peg and Airtree), but we expect the majority of funds to be relatively small.

Prominent Australian venture capital managers

[12] Source: Australian Government; Department of Industry, Science, Energy and Resources; Venture Capital Dashboard FY 2020/21.

Anecdotally, recent performance of the Australian venture capital sector has been strong, particularly for the larger funds focused on soft technology opportunities. However, firm data on actual performance is difficult to source. The Australian Investment Council undertakes benchmarking of the sector in conjunction with Cambridge Associates, however the performance data is incorporated within the broader private equity sector performance, as shown in Table 2. Even if such data were available, it may be of limited value due to a low number of participating funds (since the number of funds in the broader Australia Private Equity and Venture Capital Index is already low).

Benefits from investment into venture capital

The primary benefit an investor gains from investing in the venture capital sector is the potential to generate very high returns, though this does involve undertaking high levels of risk. Venture capital can also be beneficial for the economy in which it operates as it is a key phase in the development of not only new technologies, but new companies and even industries. Some of these possible benefits for the Australian economy are outlined below:

- **Diversification and development of a modern economy.** Australia's economy is a notable outlier amongst developed nations as having the least complex economy within this group, with this complexity reducing over time[13]. This situation is not sustainable and will impact on economic growth over the medium to long term. A healthy venture capital sector should help develop new and innovative companies and help arrest or even reverse the current trend towards a less complex and less robust economy.

- **Utilisation of Australia's research capabilities.** Australia has the advantage of high-quality research universities and institutes and engages in world leading research in many areas, including life sciences and deep technology. Venture capital helps unlock the value generated by this research, which in many cases is funded by governments. Additionally, where commercialisation does take place, a more robust local venture capital and commercialisation ecosystem means more of the value-add can be retained within Australia, rather than go offshore as has been the case for many technologies (e.g., photovoltaic solar, photonics).

- **Productivity improvement.** A key input into economic progress is labour productivity growth, which has been falling below long-term averages in Australia. The development and adoption of new and improved technologies can improve labour productivity, which is an area venture capital funding supports.

- **Employment.** Venture capital backed companies were estimated to support over 500 Australian companies with greater than 44,000 direct employees in 2020. When including indirect employment, this number rises to over 100,000 employees[14]. The Victorian government estimates that start-up companies of Victorian origin have created over 40,000 jobs in total and 5,900 jobs in just two years[15] alone.

[13] As measured by Harvard University's Economic Complexity Index.

[14] Source: "Funding a brighter future", Ernst & Young, May 2022.

[15] Source: "Startup employment in Victoria, Australia", LaunchVic, July 2021.

- **Retention and attraction of a skilled workforce.** The development of a more complex economy with greater opportunities for a skilled workforce will help Australia take advantage of Australia's highly educated population, retain skilled engineers and scientists, and help attract skilled migrants.

- **Supply chain resiliency.** Development of a robust venture capital-supported high-tech sector will reduce the dependence of intellectual property (IP)/high-tech imports from other countries, especially if manufacturing of high-tech IP reliant products is undertaken within Australia. For example, integrated circuits, solar panels, and defence related technology.

Impediments to investment in Australian venture capital

There are a range of potential impediments to institutional investment in the Australian venture capital sector. Some of these are related to the idiosyncratic requirements of investors and others are related to challenges facing the venture capital sector itself, which makes the sector less attractive for private capital. We have outlined these in two separate groups below.

Investor specific

- **Size.** The venture capital market in Australia is small versus most other sectors, and venture capital funds are typically small as well. This makes it challenging for a large investor to invest with scale to make a meaningful impact on allocation and on total fund returns. This issue will only exacerbate as superannuation funds merge and the Australian superannuation sector grows in size. While additional capital could potentially flow into the venture capital sector, this capital needs to be matched by a sufficient pipeline of high-quality venture investment opportunities otherwise overall performance will suffer.

- **Poor past experiences.** Many superannuation funds had exposure to the Australian venture capital sector in the 2000s leading up to the global financial crisis. Performance for venture capital funds invested over this period was often poor, which led to many investors abandoning the option of investing or investing meaningfully in the sector.

- **High risk.** Amongst asset classes, venture capital comprises the highest financial risk. Such high-risk investments are not suitable for many investors and, where it is appropriate, the level of exposure is low. This is a key limiting factor for allocation to the sector. The margin for error on such investments is also larger, hence poor manager selection or a poorly executed strategy by a venture capital manager is more likely to lose capital relative to other asset classes. This leads investors to be conservative with their allocation to venture capital.

- **Venture capital valuation cycle and member equity.** Venture capital funds (and private equity more broadly) are typically held at relatively conservative valuations early in a fund's life. Valuations increase as the venture fund companies mature, with actual return being realised on the sale or exit of portfolio investments. This process can take many years. Since superannuation fund members can port their superannuation holdings from one fund to another, those members exposed only to the later stages of a venture capital fund may benefit disproportionately from valuation uplifts while avoiding the conservative valuations in the early holding stages. This equity issue between members may reduce the interest in the sector by some superannuation funds.

- **Fees.** Fees on venture capital funds are high; typically, a 2% p.a. management fee on committed capital and a 20% performance fee on realised returns over an 8% p.a. net return (commonly referred to as '2 and 20'). The rationale for such high fees is the high level of management intensity required for venture capital investments, plus the relatively small size of venture capital funds. In addition, if investors invest via a fund-of-funds vehicle (which takes capital and invests across a range of different underlying funds), the fees are even greater. Superannuation funds have heightened fee sensitivity due to regulation such as RG 97, hence, venture capital fund fees are difficult to justify for many Australian superannuation funds.

- **Illiquidity.** Venture capital as an asset class is highly illiquid, in common with most of the private markets. Investments are almost exclusively made through close-ended funds, with no ability for the investor to request a return of capital. Based on typical fund terms, it may take longer than ten years until all capital is returned.

- **Your Future, Your Super (YFYS) performance test.** The challenge the YFYS performance benchmarking test poses for Australian venture capital is that many early stage venture capital strategies, or those with extended development times, can spend an extended period of time with poor or even negative performance (also known as the 'j-curve' performance effect, shown in Chart 7). This is disadvantageous for the purposes of the YFYS performance benchmarking test, which only considers returns over eight years, even if future performance is expected to compensate for early poor performance. Additionally, the possibility of investing in an unsuccessful strategy is considerably higher in venture capital than in other asset classes, simply due to the very high level of risk these investments entail. The extreme consequences of failing the YFYS performance benchmark test (in particular, being blocked from accepting new members if failing two years in a row) may mean many superannuation investors are less likely to invest in venture capital, even if the potential long-term upside for members is high.

- **Broader capital market conditions.** The state of broader capital markets may influence the behaviour of investors in illiquid asset classes such as venture capital. In the case of poor listed market performance and/or poor economic conditions, investors will be more cautious with illiquid allocations given heightened risk. Additionally, when listed markets perform poorly, unlisted markets will make up a greater proportion of the investor's portfolio, potentially resulting in a higher allocation than planned, which will slow or stop the investment pace.

Sector specific

- **Lack of industry transparency.** There is very little publicly available data about the Australian venture capital industry. While the Australian Investment Council in conjunction with Cambridge Associates does calculate the Australia Private Equity & Venture Capital Index, this is subscription only and venture capital performance is combined with broader private equity performance. The number of funds from each year participating in this benchmark is also low which poses problems for understanding overall sector performance. New investors are less likely to consider entering a sector if there isn't sufficient data available to assess its basic characteristics. Additionally, investors with poor prior experiences are disadvantaged by a lack of sufficient information to update this view.

- **Lack of scale.** In large economies where venture capital has been successful, such as the US, venture capital funds and managers that specialise in sectors of the market are common. This allows the development of sector expertise, which improves the likelihood of success. However, in a small economy such as Australia, such specialisation is much more difficult, especially in the hard technology sectors, which may partially explain poorer historical performance.

- **The commercialisation process.** The source of much of the innovation and discoveries that characterise companies in the hard technology sectors, including life sciences, are researchers working in Australia's universities and research institutes. The process of taking these discoveries and turning them into viable products is referred to as commercialisation or technology transfer. However, commercialisation is not a simple process with several impediments of its own. These include a conflict between intellectual property protection and the researchers' primary motivation to publish their discoveries, a shortage of early stage funding to initiate commercialisation, and a lack of a commercialisation 'culture' in many universities and research institutes meaning researchers simply don't engage with the commercialisation process or are unaware of it.

- **Lack of an ecosystem.** Successful development of venture capital backed companies requires a whole range of different industries and people to provide input. This includes experienced CEOs, patent attorneys, lawyers, contract research organisations, laboratory space providers,

laboratory workers, and advisors. Indeed, this appears to be part of the reason for the success of venture capital hubs around the world, such as the Silicon Valley and Boston regions in the US, as well as in Israel. Once success is realised this reinforces the overall ecosystem leading to further success.

- **Consequences of bankruptcy for entrepreneurs.** Entrepreneurs are central to the development of new companies and are extremely important in the development of companies that ultimately receive venture capital funding. However, being an entrepreneur is risky and can often result in bankruptcy. Studies have suggested that more debtor-friendly bankruptcy regimes (such as Chapter 11 of the United States Bankruptcy Code) and lack of stigma associated with bankruptcies encourages higher levels of entrepreneurship and innovation. In fact, in the US, failure is considered a rite of passage for entrepreneurs and valued highly by venture capital managers.

- **Potentially insufficient developed opportunities.** Too much capital chasing too few deals will have the effect of either pushing up prices and lowering returns or lead to funds holding capital that is uninvested. Neither situation is favourable to maintaining sustainable levels of investment. If we assume there is sufficient innovation in the economy to support a larger venture capital industry (often a virtuous circle in itself), capital and support will need to be guided to where it has the most positive impact.

- **Long development timelines for hard technology.** The lack of funding for hard technology focused companies is at least in part due to the very long development timelines required for many of these technologies. This limits potential investors to those with very long investment horizons. Anything that shortens the investment horizon, for example benchmarking over shorter periods, will reduce the attractiveness of these sectors.

What could governments do to encourage investment in Australian private equity?

When considering the overall venture capital universe in Australia, there has clearly been a substantial transformation in recent years. The level of funding has increased materially, but this has been primarily into the information technology or other soft technology style companies. However, funding and commercialisation focused on hard technology investments remains challenged. We believe more focus should be placed on the latter, though many initiatives could be beneficial for the total venture capital ecosystem.

Ultimately to attract greater levels of capital from superannuation funds (and other investors) into Australian venture capital, the challenges facing the current system need to be overcome. The final goal should be a self-supporting and return generating ecosystem, which in turn will attract greater levels of private capital. This is likely to require careful and long-term support in key steps of the commercialisation process. The benefits of a more diversified and robust economy will justify this support. The approaches that could be taken are numerous, but some areas for government to consider are:

Investor specific

- **Greater focus on net returns rather than fees.** While the focus on fees because of RG 97 and APRA's superannuation heatmaps are challenging for all private market assets, it is particularly challenging for venture capital where fees are the highest amongst private markets (though so are potential net of fees returns). While the focus on fees more generally should be considered, a targeted approach for venture capital may be beneficial for the sector. This could be applied to funds that operate via an early stage venture capital limited partnership (ESVCLP) or a venture capital limited partnership (VCLP).

- **Your Future, Your Super.** Reconsider the YFYS legislation as it relates to benchmarking (noting the Federal Government recently announced a review into the performance test where

alternative approaches could be considered). While in aggregate venture capital should be able to outperform its benchmark, the risk of underperforming for any single strategy is also potentially quite high (especially if supporting new strategies) which under the YFYS performance benchmarking test has much more significant consequences.

- **Support data collection.** As mentioned in the previous section, a lack of data about the industry poses a significant challenge for new investors contemplating an investment in the sector. Governments could consider how they could support more data transparency.

Sector specific

- **Consider the venture capital ecosystem and the virtuous cycle.** A key objective for the application of government support to the venture capital industry should be the development of a venture capital ecosystem that is self-supporting. However, this will take time and the premature removal of government support will likely undo prior progression towards this objective.

- **Grow from the ground up.** Simply pouring additional capital into what is a relatively small sector will increase competition for the limited investment opportunities that are available, resulting in poorer performance for investors followed by their retreat. So, to truly grow the sector, it needs both capital and investment opportunities. One way to create these opportunities in the hard technology sectors is to help with incentivisation, including the commercialisation process.

- **Consider the commercialisation process holistically and apply support in accordance with this.** There are a range of challenges at different points of the commercialisation cycle, some of which were covered in the previous section. All the bottlenecks in the process should be addressed to be fully effective.

- **Direct capital support.** A common approach used both in Australia and internationally is direct capital support to the venture capital industry.

    - The most direct support is via provision of capital to a venture capital manager to invest, but with conditions attached. For example, the Victorian Government provides capital to the Victorian Startup Capital Fund, but this must be matched with private capital. The government capital receives a capped return, with excess return going to private investors. A similar matched funding structure was utilised by Israel's government in the 1990s and is credited in helping develop the extremely strong venture capital ecosystem that exists in that country today. The Australian Innovation Investment Funds (IIFs) and Pre-seed Fund (PSF) programs had a similar capital distribution mechanism.

    - A key concern of investors is the potential for loss of capital. A downside protection mechanism that protects private investors from loss may be more attractive than one that provides excess return. For example, private investors could receive priority distributions up to a specified level of return.

    - A mechanism that ties the historically poorer performing pre-seed phases with more successful later stages to create a blended return, may prove to be more attractive to private investors. Governments could provide pre-seed capital to late-stage venture capital managers to invest in hard technology at the early stages. If a manager is successful with its late-stage investing, it could result in successful companies from the pre-seed program gaining access to later stage capital.

- **Maintain tax incentives.** Australia has several initiatives in place that help developing companies via the taxation system – the Research and Development (R&D) tax credit being a key example. Removing such initiatives will have a devastating impact on young companies that rely on such support. The Federal Government could also consider differential R&D tax incentives to support priority areas.

- **Support key facilities.** Governments could identify key facilities or capabilities required for certain types of technology development that are missing in Australia and support the

development and ongoing operation of these. Examples include specialised laboratories; design or manufacture centres for large-scale electrolysers for the hydrogen fuel export economy; or equipment such as nuclear magnetic resonance spectroscopy devices used in life sciences research. Future technologies such as quantum computing will likely also require specialised facilities that enable these technologies to be developed in Australia, helping to diversify our economy. This could be incorporated into the innovation hub concept, where facilities are provided to bring together start-up companies, industry, and research.

- **Support hard technology.** Commercialisation of hard technology takes a longer time and is more capital intensive than the softer technology sectors. Governments could continue to financially incentivise and provide all manners of support to the strong research base in Australian universities and research institutes that initiate research into hard technologies. This may help unlock new indigenous technologies, companies, and industries for the future.
- **Support researcher education on commercialisation.** One of the challenges for hard technology commercialisation is having researchers engage in the commercialisation process at a sufficiently early stage. Training may help address this, though other mechanisms could be considered including incentive schemes or consideration of commercialisation outcomes in grant processes. The goal is to not only educate on the commercialisation process, but also make commercialisation part of the culture within research institutions.
- **Select specific advanced industries to support.** Governments could select strategically important industries (quantum computing, photovoltaic solar, electrolysis for hydrogen economy, mRNA vaccine production, semiconductor design and/or fabrication, defence hardware) to support, with research and development central to this support. Not only could this enhance supply chain security within key sectors, but also develop a skilled industry that in turn generates future innovation. It will also help retain homegrown talent and innovation within Australia.
- **Investment into science, technology, engineering, and mathematics (STEM).** The whole venture capital ecosystem, from the initial research through to running the final operational businesses, is reliant on having a STEM educated workforce. Governments should support and encourage education in STEM disciplines to ensure Australia maintains or strengthens its capabilities in these areas. This will provide the necessary workforce to allow diversification of the economy over time.

While there are numerous suggestions for governments to consider with regards to supporting the Australian venture capital industry, a select handful of initiatives need to be prioritised initially.

- Reconsideration of RG 97 legislation.
- Reconsideration of YFYS performance benchmarking.
- Schemes to educate and encourage commercialisation of hard technology.
- Support pre-seed and seed funding for hard technology companies, potentially utilising a structure whereby private capital receives an initial preferred return.

Agriculture, agribusiness and the value chain

Agriculture, agribusiness, and the value chain

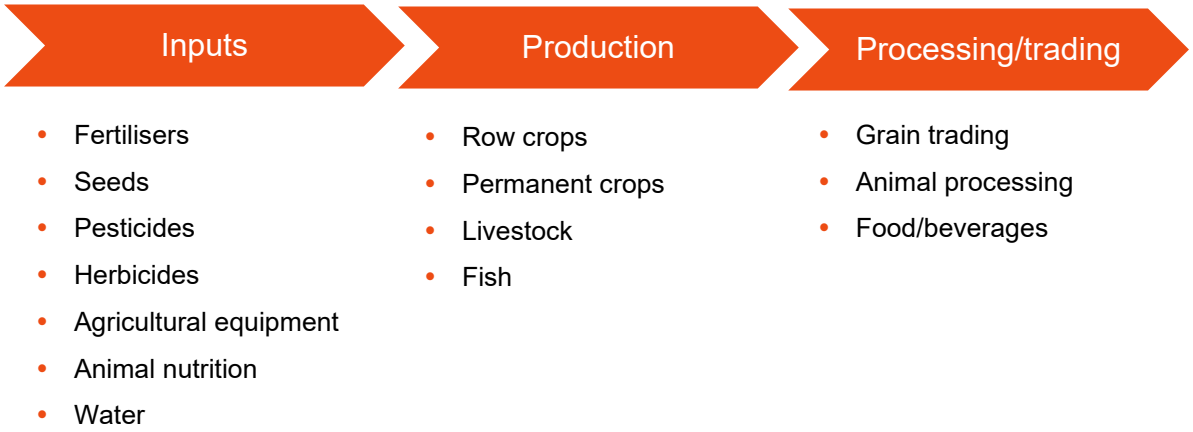
This section of the report looks at Australian unlisted agriculture and agribusiness, particularly the involvement of Australian superannuation funds in these sectors and potential ways to encourage greater investment.

Agriculture as an asset class

The agriculture asset class is focused on the production phase of the value chain, whereas agribusiness is synonymous with the bookends of the value chain, being inputs and processing/trading. Agribusiness can also include agricultural technology (agritech), which is development of new technologies of relevance to the agriculture value chain.

Chart 12 provides an illustrative overview of the various sectors that typically fall under the heading of agriculture or agribusiness.

Chart 12: Agriculture value chain



Production involves farming of plants, animals, and fungi for a range of end purposes, including consumption, production of fibre, clothing, and other goods. This can be classified broadly into annual crop, permanent crop, and livestock farming. Annual crops are planted and harvested annually, e.g., wheat, while permanent crops produce over multiple years, such as fruit trees. Livestock farming involves the tending of various animal species to produce outputs including meat, wool, milk, and other products.

Agribusiness captures ancillary businesses providing inputs into the production process or handling of the outputs such as fertiliser, equipment, logistics, processing, and distribution. These are sometimes also referred to as 'post farm gate'.

Investible assets

The investible assets within the production step of the agriculture value chains are the land, permanent crops and potentially livestock and equipment. Assets are usually sub-scale for an institutional investor, largely due to the capital constrained nature of many owner-operator farms.

Agribusiness assets can be considerably more diverse than farming assets as they operate in a range of different sectors, but these are less focused or reliant on land as a component of value. Agritech investments are more likely to appear in venture capital.

Agriculture, as accessed via the private markets, tends to be dominated by the production/farming component of the agriculture value chain. A broader range of agriculture related businesses can be accessed via listed markets, however institutional investors are unlikely to target these in a targeted agriculture allocation as the investment characteristics will be different to unlisted agriculture assets.

Investment strategies

Investment strategies within agriculture can be grouped into several different approaches, each of which is suited to the specific assets and commodities being targeted. Some of the investment approaches are outlined below.

- **Owner-operator.** The investment manager purchases farming land and farms it themselves. Within this category, there may be a focus on aggregating parcels of land to build economies of scale, plus there will be a focus on operating these farms more efficiently through capital investment and process improvement. The types of farming suited to this approach include annual cropping, permanent cropping, and livestock farming.
- **Sale-leaseback.** Under this strategy, farmland is purchased with the intent to lease it to third parties to operate. As leasing revenue is more likely to be stable than operational revenue, the returns are likely to be lower than from the owner-operator approach, but risk is lower as well.
- **Permanent cropping.** This strategy focuses on investing in permanent crops, such as trees that produce fruits and nuts. It is notable due to the large amount of capital value that resides in the crops themselves, plus its requirement for a highly reliable source of water, such as from irrigation. This strategy can be a subset of the owner-operator model to ensure that the assets are cared for appropriately and will often involve the planting of new crops to expand existing holdings as well as the acquisition of water rights.
- **Water entitlements.** Under this strategy, an investment manager acquires the rights to an allocation of water. The value of these water entitlements varies over time depending on whether the rights will receive an allocation, and then how much water will be received over time. These strategies aim to maximise the risk adjusted return generated from a portfolio of water entitlements.
- **Agribusiness/post farmgate.** Once investment strategies move into the domain of post farmgate agriculture, they begin to resemble investments suitable to private equity, in the sense that post farmgate companies can be improved in value through investment and operational improvement. Interestingly, post farmgate companies tend not to have a large amount of their value tied up in the value of land. Post farmgate strategies may still be focused on agricultural production such as intensive horticulture.

State of play

There is very limited publicly accessible information on Australian agriculture as an investible asset class, particularly the level of institutional investment in the sector. Agriculture as an asset class is not reported separately by APRA regulated funds, instead it is classified under commodities. As at March 2022, only two default MySuper funds reported an allocation to commodities (with 4% and 1% of their assets). This lack of data is discussed later in the report. ISA's recent report[16] estimates that approximately A$3.3 billion was invested in Australian agriculture by Australian based managed funds and its previous report[17] estimated industry super funds had invested more than A$1.6 billion. There is little to suggest the situation is significantly different today, except to note that agribusinesses may also enter portfolios via other sectors, such as private equity.

If we assume all the capital in Australian-based agriculture funds came from superannuation investors, then this would amount to an asset allocation of around 0.1% towards Australian agriculture. If we consider just the industry superannuation funds, this increases to 0.15%. However, it

[16] Source: How industry super investments support the Australian economy, Industry Super Australia, August 2022.

[17] Driving super fund investment in agriculture, Industry Super Australia, June 2017.

is worth noting many superannuation funds have no exposure to the sector, so exposures will be higher for those funds that are already invested.

Global agriculture investments

As a comparison point, if we consider the global institutional agriculture market (estimated by Frontier to be around US$45 billion in 2019), and the size of the global pension fund sector (US$56 trillion[18]), then global pension funds have an asset allocation of around 0.08% on average, which is comparable to the situation in Australia.

In terms of geographies favoured by institutional investors for global agriculture investments, there are limited public disclosures, but based on the accounts of several major global pension funds, most investments seem to be directed towards North American assets. Australia is still well represented, which reflects the attractive investment and regulatory regime of the Australian agriculture sector.

Canadian pension funds and agriculture

The Canadian pension funds are often noted as being significant investors in the agriculture asset class. While data is limited on specific exposures, examination of annual reports of several Canadian pension funds suggests most have some level of exposure to the asset class, though this is often small. Canadian pension fund exposure to Australian agriculture is also reasonably common, though also small. PSP Investments is an exception, as it does appear to have a sizable Australian exposure with this growing rapidly over time (its natural resources sector is invested around half into Oceania and about two thirds of its natural resources sector is agriculture. Its allocation to agriculture is just over 3%[19]).

Interestingly, Canadian pension funds have a strong interest in Australian agriculture relative to Australian superannuation funds, which appear to be less interested. There are several reasons for this.

- Some of the impediments or considerations that apply to superannuation funds may not apply to Canadian pension funds. For example, Canadian pension funds may view the return, risk, and illiquidity characteristics of agriculture as attractive compared to a typical superannuation fund. Prior experience is also a key consideration, and as we outline later, the historical experience by many superannuation funds has been poor.
- The scale of the Canadian pension funds means they have very large internal investment teams, with investment staff dedicated to natural resources (which includes agriculture and timberland) within larger real assets teams. Having dedicated staff means they will have the expertise, resources, and motivation to pursue agriculture investments. Australian superannuation funds, except for a few very large funds, do not have the luxury of sizeable and/or global investment teams and therefore prioritise their precious resources and investments to core scalable asset classes such as private equity, infrastructure, and real estate.
- The very low correlation of agriculture with other asset classes is an attractive characteristic and reportedly one of the reasons why the Canadian pension funds are pursuing the sector.
- There are stringent restrictions on institutional ownership of Canadian farmland, which has meant Canadian pension funds have needed to source most of their agriculture exposures outside of Canada. Some of this capital has been invested in Australian agriculture.

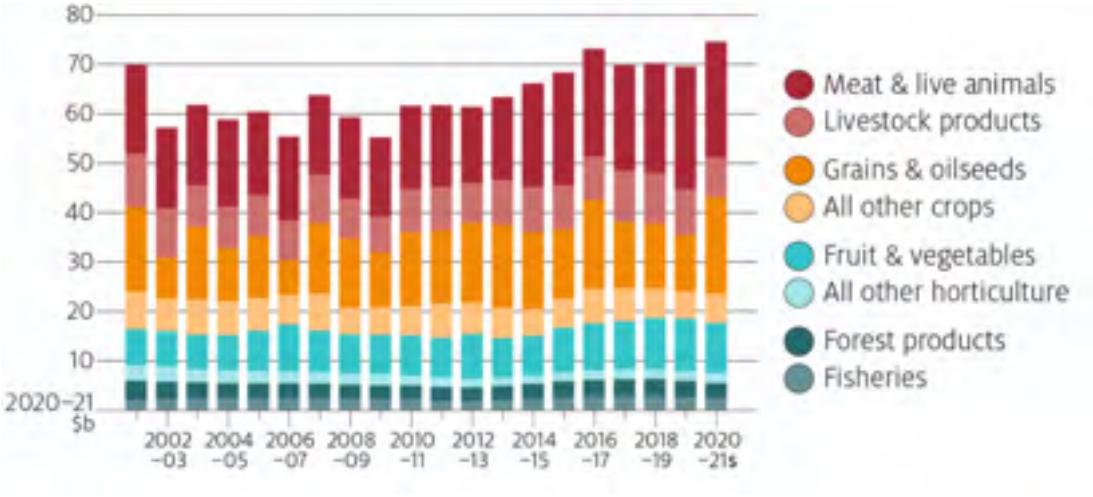
[18] Source: Pension markets in focus 2021, OECD, November 2021.

[19] Source: PSP Investments, 2022 annual report.

Opportunity set

If we want to understand the possible opportunity set for investors within the Australian agriculture sector, assessing agricultural production is one measure as shown in Chart 13. The livestock and crop related segments are broadly similar in size (at A$31 billion and A$40 billion respectively in 2020-21). Within the crop segment, broadacre crops generated A$23 billion; fruit, nuts and vegetables generated A$13 billion; and the remainder came from activities such as hay production, turf, cut flowers and nurseries. Fisheries/aquaculture is also very small in comparison to overall agricultural production. Chart 13 also includes forestry products, but this is often considered a separate asset class by investors, termed timberland.

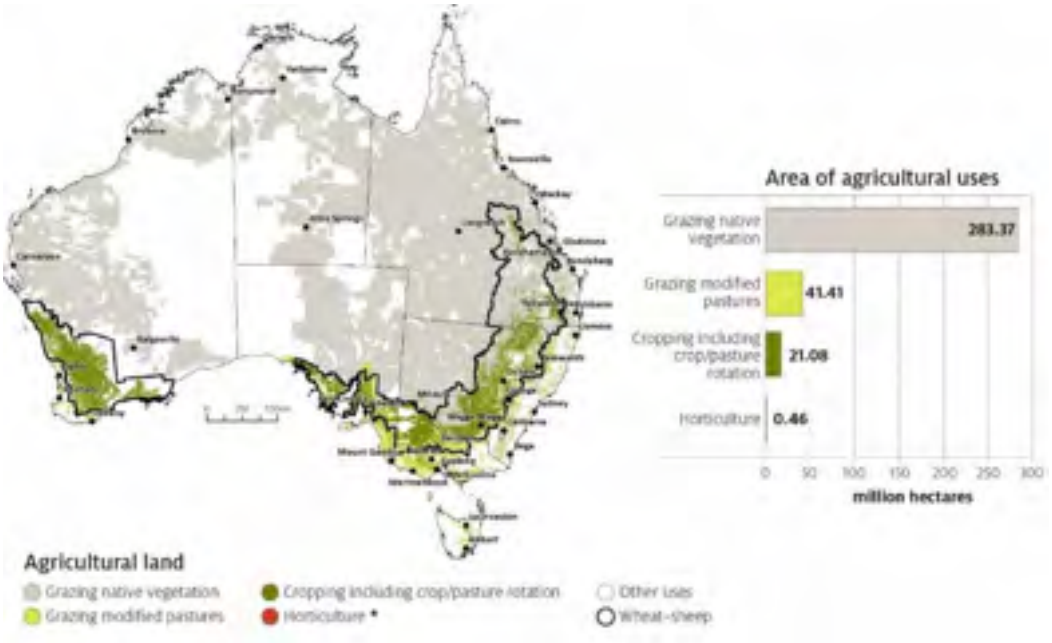
Chart 13: Agricultural, fisheries and forestry production, 2001-02 to 2020-21



Source: ABS International Trade in Goods and Services (cat. 5368); ABS Value of Agricultural Commodities Produced, Australia (cat. 7503), ABARES.

Chart 14 shows just how much of the Australian landmass is impacted by agriculture as well as its use. Almost half of Australia's land area is used for agricultural purposes.

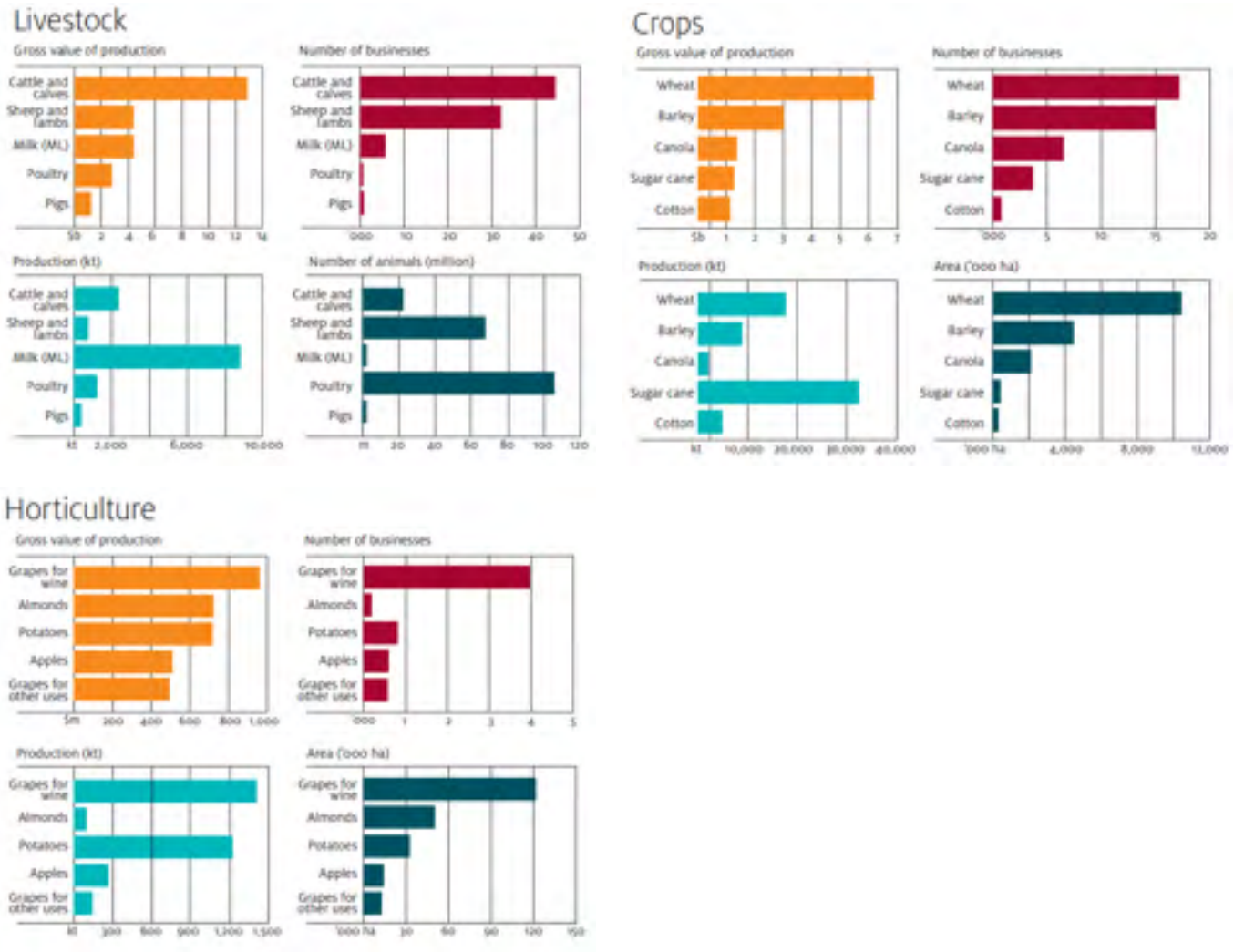
Chart 14: Uses of Australian agricultural land



Source: Department of Agriculture, Fisheries and Forestry.

Chart 15 provides additional detail on the top five commodities within each of the key sectors of livestock, cropping and horticulture. In terms of value, the key commodities are cattle and calves, wheat, and wine grapes in each of the respective sectors.

Chart 15: Uses of Australian agricultural land (2018-19)



Source: Australian Bureau of Statistics, cat. No. 7503.0 Value of Agricultural Commodities Produced, 2018–19, cat. No. 7120.0 Agricultural Commodities, 2018–19, ABARES, Agricultural commodities: June quarter 2020.

Chart 16 provides further information on the nature of Australia's agricultural exports. Notable is the increasing level of exports over time, though this has decreased as a percentage of Australia's total exports. China has also become the key export destination for Australian agriculture with agricultural exports to China tripling in value over the past decade. In 2019/20 it received 30% of Australia's agricultural exports.

The total value of the addressable Australian agriculture investment universe is harder to estimate but Warakirri Asset Management estimates an investment universe size of around A$700 billion of which around A$480 billion comprises farmland and water. Turnover is around 2% of the market per year[20].

While the market is small, those investment managers that are investing, or intend investing in agriculture, focus on either livestock or row crop production, which reflects their dominance in Australia's overall agricultural production as shown in Chart 13. Beyond this, both water trading strategies and permanent cropping strategies are common investment themes as well.

Agritech in Australia is largely nascent. The NSW Government is predicting growth in the sector to reach A$100 billion by 2030 with opportunities for investment noted in produce waste reduction and cold supply chain. However, these opportunities are more likely to be considered in asset classes other than agriculture, such as in infrastructure or logistics.

Chart 16: Australian agricultural exports (2018-19)

Source: ABARES, Agricultural commodities: June quarter 2020. Value in constant 2018–19 dollars.

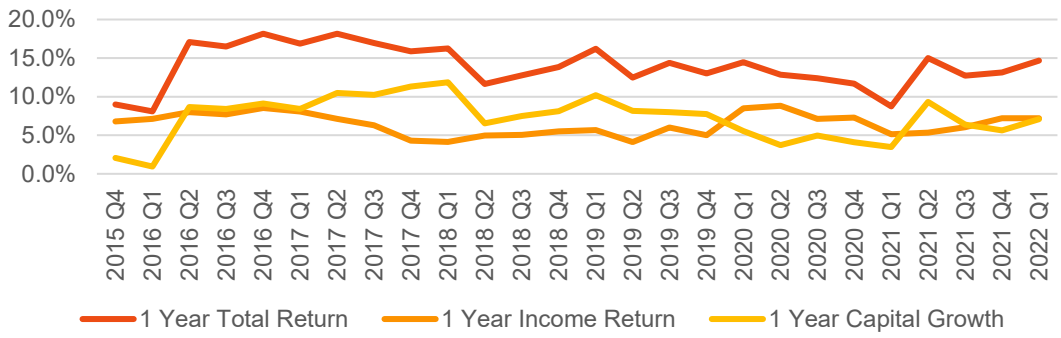
[20] Source: Warakirri Asset Management, Working the land for your members - Opportunities in Australian Agriculture, ASI 2021 Conference.

Performance

Since 2015, an Australian farmland index has been calculated which is currently called the ANREV Australia Farmland Index. It provides the returns of institutional grade farmland assets. The performance of Australian farmland over time, as indicated by this index, is shown in Chart 17. Over most one-year periods total performance has been strong at well over 10% p.a., with the exception being the year to 31 March 2021.

While the development of an index is positive, care must be taken in interpretation. Not only is the underlying asset value of the index low (A$1.8 billion as of 31 December 2021 and lesser amounts prior to this), but it is focused on cropping (about equally exposed to permanent crops and annual crops). It is a good demonstration of the level of return an investor could potentially have made in Australian agriculture, but it is not fully reflective of the broader agriculture asset class.

Chart 17: ANREV Australian Farmland Index rolling one-year return to 31 March 2022



Source: ANREV.

Benefits from investment in agriculture and agribusiness

While the level of investment by Australian superannuation funds in agriculture has been low, there are a range of potential benefits to superannuation funds from investing into agriculture/agribusiness. The primary benefit is the expected diversification agriculture provides to a portfolio of assets. Diversification is typically measured by correlations (which indicates how two asset classes move together, with 1.0 meaning they move together; -1.0 meaning they move in opposite directions; and 0 means their movements are unrelated to one another).

Table 4 shows the correlations of various asset classes. Agriculture has low correlations with most other asset classes thus it is an attractive diversifier to a typical portfolio that may be dominated by bonds and equities. This makes sense as the performance of the agriculture sector is not as closely linked to broader macroeconomic factors (such as economic growth) as is the case with other asset classes, but rather it is linked to factors that specifically impact agriculture, such as weather (some of these factors are touched on in Table 5).

Table 4: Asset class correlations (2011 to 2021)

Market indexes	Aust. equities	Global equities	Property	Infrastructure	Growth alts	Defensive alts	Aust. bonds	Agriculture
Aust. equities	1.00							
Global equities	0.60	1.00						
Property	0.14	0.01	1.00					
Infrastructure	0.68	0.48	0.56	1.00				
Growth alts	0.68	0.58	-0.01	0.61	1.00			
Defensive alts	0.66	0.55	0.09	0.54	0.96	1.00		
Aust. bonds	-0.20	-0.01	-0.71	-0.34	0.19	0.20	1.00	
Agriculture	0.01	0.06	-0.06	-0.06	-0.01	0.11	-0.32	1.00

Source: Warakirri Asset Management.

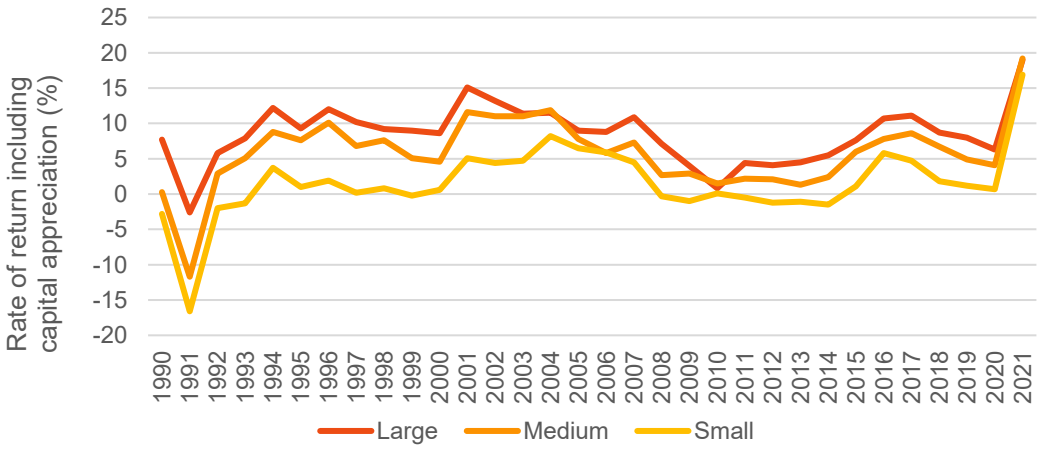
Another attractive characteristic of investing in agribusiness is the potential for relatively high expected returns. Most farming focused strategies target up to 10% p.a. net of fees, which is a strong level of return. Returns could potentially be higher than this in some non-farming agribusiness assets depending on the type of strategy being undertaken.

Broader benefits

Beyond direct benefits that accrue to the investor, there are a range of broader benefits that could arise from institutional investment into the agriculture asset class. We outline some of these below:

- **Increasing productivity.** A key tenet behind most private markets investing is active management of the assets. This is typically undertaking operational value-add activities, which, in farming, involves more efficient utilisation of the asset, whether by undertaking the required investments to enhance value, reduction of unnecessary costs, or developing economies of scale. The agriculture asset class has generally struggled for improved productivity and efficiency due to capital constraints. A common strategy employed by large owners and investors is aggregating multiple farms into a more scalable business. Chart 18 shows how scale in Australian broadacre farming is consistently associated with a better rate of return.

Chart 18: Rate of return on Australian broadacre farming



Source: ABARES.

- **Broadening of profitable farming or agribusiness opportunities.** Following the prior point is certain types of agribusiness opportunities are difficult to execute in a profitable manner if they are sub-scale. An example of this is the production of dried fruit. Institutional investors can reach sufficient scale to make these opportunities profitable, thereby opening up new agricultural enterprises that would otherwise not exist.

- **Better utilisation of scarce resources (water).** While Australia has large amounts of land, one key resource it lacks in large quantities is fresh water. Water trading is one way to utilise such a scarce resource more efficiently, rather than water availability being tied to specific parcels of land. Investors in this market provide market liquidity which allows landowners to sell their water entitlements and can create alternative means by which farmers can manage their water requirements, for example purchasing water on market. Such a trading system is positive for agricultural production since it allows for efficient use of a scarce resource.

- **Environmental benefits.** Given superannuation funds have a strong focus on Environmental, Social and Governance (ESG) matters, many agriculture strategies have had to incorporate ESG and sustainability principles into their investment framework to satisfy superannuation fund investors. More often than not, this involves environmental activities, such as remediating poor quality or eroded land, or nurturing more marginal land to an unfarmed or forested status. Agribusiness strategies also heed ESG principles, for example, production of pet food from offal (an agricultural by-product) is creating value-add while reducing waste.

- **Australian ownership.** Australian superannuation fund investment in agriculture allays concerns with regards to foreign ownership of valuable/strategic agricultural land.

- **Regional employment and investment.** Agribusinesses are primarily based in Australian country or rural regions. Investment in agribusinesses is an investment in the growth of Australia's country and rural towns and therefore regional employment.

- **Food security.** Greater investment into agribusiness and agriculture can encourage the development of more secure food production, for example, intensive horticulture. Additionally, superannuation funds investing in agricultural land will be motivated to generate a profit through productive use of the asset (which is a positive for secure food production), rather than utilising it for less productive purposes.

- **Agriculture asset liquidity.** Greater participation by institutional investors in the agricultural sector creates liquidity by creating opportunities for farmers and other asset owners to sell their assets.

Impediments to investment in Australian agriculture

Given the relatively low level of investment in agriculture and agribusiness by superannuation funds, there are clearly some factors that are preventing large scale investment in the sector. As in the prior sections, some of these factors are specific to superannuation funds and investment strategies, while other factors are sector specific, which makes it relatively less attractive to investors.

- **The regulatory focus on fees in isolation of performance.** As is the case across the other private markets, the fees and costs of agriculture and agribusiness strategies are high relative to most listed strategies such as equities, bonds, and cash. The RG 97 fee regulation and APRA's superannuation heatmap regulation can make agriculture investments relatively less attractive for that reason, even though net returns might be attractive.

- **Your Future, Your Super performance test.** The YFYS performance benchmarking is not clear for the agriculture asset class. Superannuation funds may classify agriculture as Australian equity, Australian property or Other, each of which has a different benchmark. The issue this creates is that the performance from agriculture is unlikely to closely resemble that of the benchmark, regardless of whether it is classified in the equity, property or other asset classes

(due to factors illustrated in Table 4), which is a challenge for benchmarking purposes. This highlights a situation where a key positive characteristic of an asset class (diversification benefits) is a disadvantage under the benchmarking process. Fees for each of the above asset classes assumed within the YFYS benchmarking process are also considerably lower than typically charged by agriculture managers. Overall, YFYS performance benchmarking is a significant barrier for superannuation funds considering investment in agriculture, especially for strategies targeting a more modest return.

- **Lack of information/transparency.** A key impediment to investment in the agriculture asset class is the lack of data availability, particularly with regards to the institutional investor experience in the asset class. Some attempts have been made in recent years to develop an Australian agriculture benchmark, which is a welcome improvement (for example, the ANREV Australian Farmland Index), but there are still limitations.

- **Historical experience.** Many of the superannuation funds made their initial foray into agriculture investing in the 2000s. However, the performance of many of these strategies was poor (due to a range of factors including poor asset management and weather impacts), which resulted in many funds retreating from the sector, and discouraged them from revisiting it.

- **Track record.** The track record of most agriculture managers in the market is quite limited, particularly when investing larger amounts of institutional capital. A short investing and/or mixed performance track record makes it difficult for Australian superannuation funds to back a particular strategy if the approach has not been sufficiently proven.

- **Skills and knowledge gap.** There is relatively limited experience and knowledge in the investment community with regards to agriculture investing. Not only does this mean superannuation funds are less likely to possess the skills to consider and assess opportunities, but it also means fund manager options are limited.

- **Strong performance of other private market sectors.** Australian superannuation funds have preferentially invested additional capital into other real asset classes (infrastructure, property) rather than in agriculture. This is a result of strong performance from these other real asset classes (especially infrastructure), similar low correlations to listed markets, greater familiarity, and less constraints such as market size.

- **Scale.** The size of Australia institutional agriculture asset class is extremely small relative to the size of the superannuation fund industry as well as relative to other asset classes. It is unclear if the underlying opportunity set in agriculture is large enough to support the substantial increase in size the asset class would experience were superannuation funds to invest a meaningful amount of capital.

- **Nature of expected returns.** The performance of an investment can come from several different sources. Some of these are under the control of the asset manager, while others are a result of broader market forces. Many strategies within agriculture, and particularly farmland, generate a significant amount of return from land appreciation, which is driven by market forces. However, institutional investors' preference is for returns to be driven by factors under the control of asset manager.

- **Reputation considerations.** Some segments of the agriculture asset class can be controversial amongst certain segments of society. For example, agriculture involving livestock may be deemed controversial amongst some groups, while water trading has received some negative press coverage. Such issues raise reputational and ESG concerns for superannuation funds and may be deemed a distraction, which can affect their appetite for investments.

- **Nature of risk in agriculture.** A notable characteristic of agriculture investments is exposure to a number of idiosyncratic risks that are often binary in nature, e.g., environmental, climate, and difficult to manage. These are in addition to the investment risks such as interest rates and manager performance. Some of these are outlined in Table 5. Some risks in agriculture can be

materially damaging and have a broad geographic reach, and the impact can also last for an extended period, particularly in slower-growing animal related sectors. A recent example is the Chinese government's additional tariffs on a range of Australian agricultural products.

Table 5: Characteristic risks in agriculture

Risk	Comment
Commodity prices	Tends to be supply side driven. Influences income and input costs. Introduces volatility to income.
Environmental/weather	Risks include fire, storms, flood, frost, drought, climate change.
Sovereign/regulatory risk	Foreign ownership restrictions, export restrictions, subsidies, tariffs.
Biological/pests, weeds, and diseases	Weed control, locust plagues or pathogen/disease epidemics.
Supply chain	Basic infrastructure needs to be in place to move product from farm to end consumer.
Currency	Has an influence on commodity prices and influences competitiveness on global markets.
Reputational	Some animal husbandry practices, and live exports can be controversial.

- **Difficulty achieving diversification.** Due to the small size of the Australian agriculture asset class, it is challenging for an investor to achieve the required level of diversification, hence portfolios may become concentrated. This is a problem because a key approach to managing risks, such as those outlined in Table 5, is to diversify exposures so in the event of any single risk materialising, only a small part of the portfolio is impacted. This is challenging in agriculture since certain idiosyncratic risks can have an impact across a wide number of assets, for example, drought can impact across large parts of the Australian continent.
- **Illiquidity.** Similar to private/unlisted markets investments, agriculture investments can also be highly illiquid, which limits an institutional investor's allocation to the asset class.
- **Regulatory uncertainty in the water trading sector.** While the water trading sector has been relatively stable in terms of operation, it is a sensitive sector that attracts a disproportionate amount of media attention and noise, particularly whenever there is a drought. The potential for government intervention in water trading schemes is a significant consideration for potential investors and will make the sector less attractive.
- **Lack of staffing.** A challenge that has become particularly acute in recent years is sourcing staff for agricultural businesses in rural areas. This includes both unskilled and skilled roles.

What could governments do to encourage investment into Australian agriculture and agribusiness?

In light of the impediments outlined, there are a number of initiatives governments could consider to encourage capital to flow into the agriculture asset class from the superannuation industry. While some challenges facing the superannuation industry are difficult to overcome (specifically scale and diversification), overcoming other impediments may be beneficial for the asset class. Initiatives include:

- **Review regulations around fees.** As is the case across all private markets, the focus on fees by RG 97 and the superannuation heatmaps makes agriculture incrementally less attractive as an asset class. This one-dimensional focus on fees misses more important characteristics such as net of fees returns and the diversification benefits agriculture brings to a portfolio, thereby distorting investment decisions to the disadvantage of the agriculture sector. This focus on fees in unlisted assets should be reconsidered, perhaps through de-emphasis of the importance of fees in isolation.

- **Review the Your Future, Your Super performance test.** Like the fees issue, the YFYS benchmarking legislation should be reviewed. Not only is there not a specific benchmark for agriculture, but also none of the other comparable benchmarks remotely resemble the performance of the agriculture asset class. Agriculture strategy fees are also higher than assumed in the YFYS benchmarking. All these factors make the YFYS benchmarking challenging for agriculture.

- **Support data collection.** A greater level of data availability and transparency in the sector will allow investors to more easily assess the potential opportunity, which may attract additional capital. ABARES already collects a range of data, but collection of data and analysis focused on financial investors could be beneficial.

- **Enhance confidence in the Murray-Darling Basin water trading scheme.** While an important component of the agriculture sector, there is a level of uncertainty and mistrust with regards to water trading. From an investor's perspective, a concern is the system may be changed to their detriment, particularly when water is in short supply. Governments and legislators could consider recommendations from the Australian Competition & Consumer Commission (ACCC) water markets inquiry, which not only acknowledged the importance of the water trading system within the Murray-Darling Basin, but also identified several weaknesses as well as recommended reforms[21].

- **Expand water trading to new basins.** Water trading in the Murray-Darling Basin has been successful at encouraging higher value use from water. Expanding this scheme to new basins will allow more efficient use of water resources in those new locations.

- **Consider expanding allowable activities under pastoral leases.** Large parts of the Australian continent operate under pastoral leases which restricts activities outside of grazing. In an environment, where food-security and increased agricultural productivity are critically important, grazing may not represent the highest value agricultural use of land, hence, reducing restrictions or changing the overall leasing structure could allow more valuable activities to take place.

- **Soil carbon.** The storage of carbon in soils is a potential opportunity to reduce carbon in the atmosphere and, therefore, assist agriculture stakeholders in meeting their global net zero greenhouse gas emission targets. However, governments can assist in allowing clear ownership of the first few metres of soil depth by the landowner to remove an area of uncertainty where land ownership intersects with mineral rights. There should also be caution when designing schemes

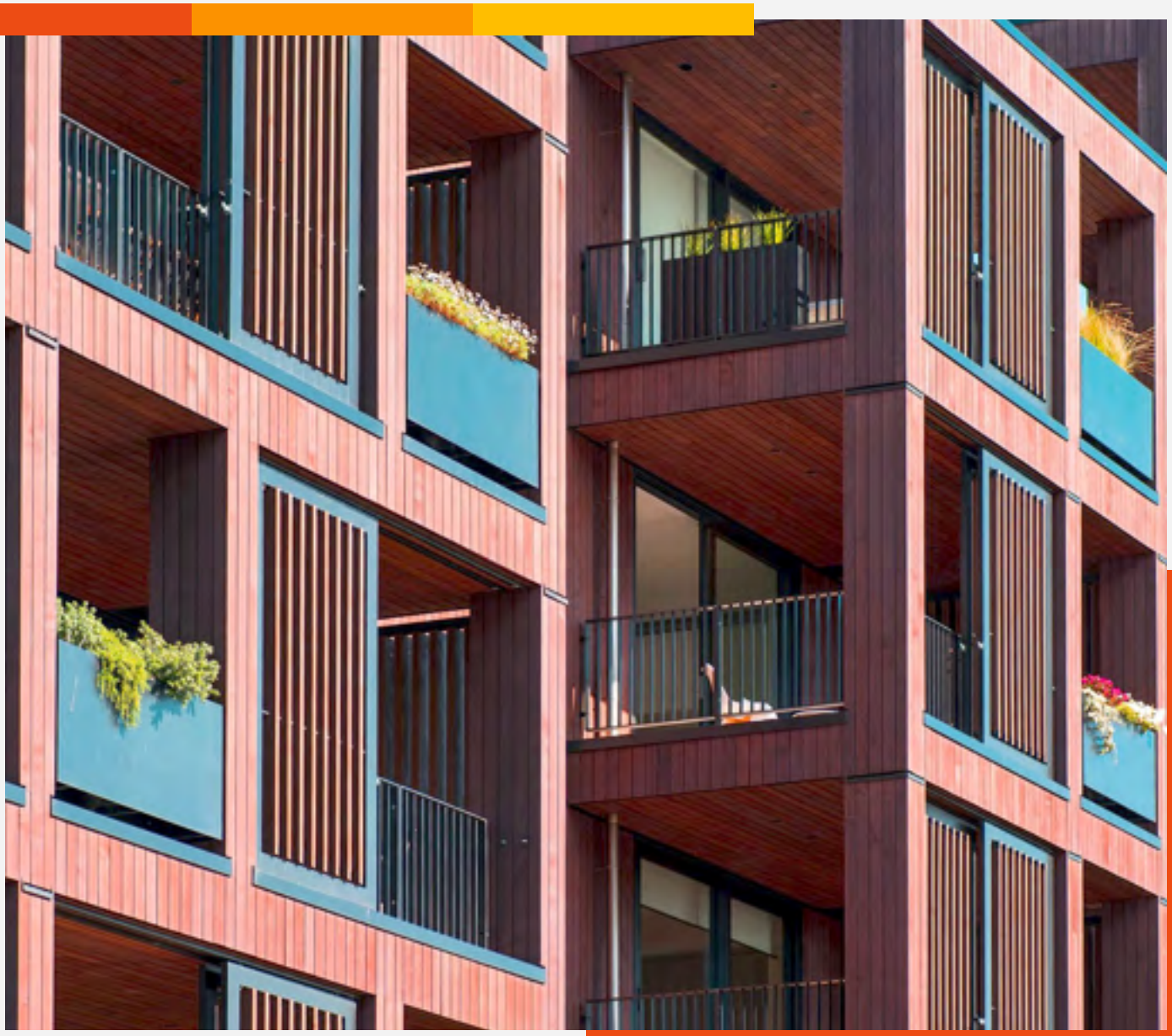
[21] ACC Murray-Darling Basin water market inquiry, Final report, February 2021.

that involve the storage of carbon in soil. An overly generous or poorly structured scheme could result in market distortions leading to a boom and subsequent bust in agricultural properties, which is not good for long-term sustainability of the asset class nor for achieving true carbon neutrality (the forestry management investment schemes being an example of policy leading to market distortions).

- **Invest in people.** For Australian agriculture to continue to be successful it needs skilled practitioners, especially as the existing ageing workforce retires. In addition to migration of farm-related labour, governments could consider additional grants or funding targeted at agricultural skills development and education which would prove beneficial to the sector overall, which in turn will help attract capital.
- **Consider the natural investor into different parts of the agribusiness spectrum.** Governments can be more targeted in attracting investment in specific parts of the agriculture value chain by identifying who the natural investor for that part of the value chain may be. For example, there is little point trying to encourage investors interested in farmland to invest in agritech as these two sectors have fundamentally different characteristics. However, an investor interested in venture capital may be interested in agritech given the right incentives.

We believe governments should prioritise the following three initiatives above all the initiatives mentioned above.

- Reconsideration of RG 97 legislation.
- Reconsideration of YFYS performance benchmarking.
- Supporting improved data collection.



Affordable housing in Australia

Affordable housing in Australia

This section of the report looks at affordable housing in Australia. We consider the current state of the sector in relation to interest and investment from Australian superannuation funds, the practical and structural impediments preventing investment by Australian superannuation funds and the potential market and policy initiatives required to improve the attractiveness of the sector for superannuation funds. We will also identify the quantifiable benefits to the Australian economy from investment into affordable housing.

What is affordable housing?

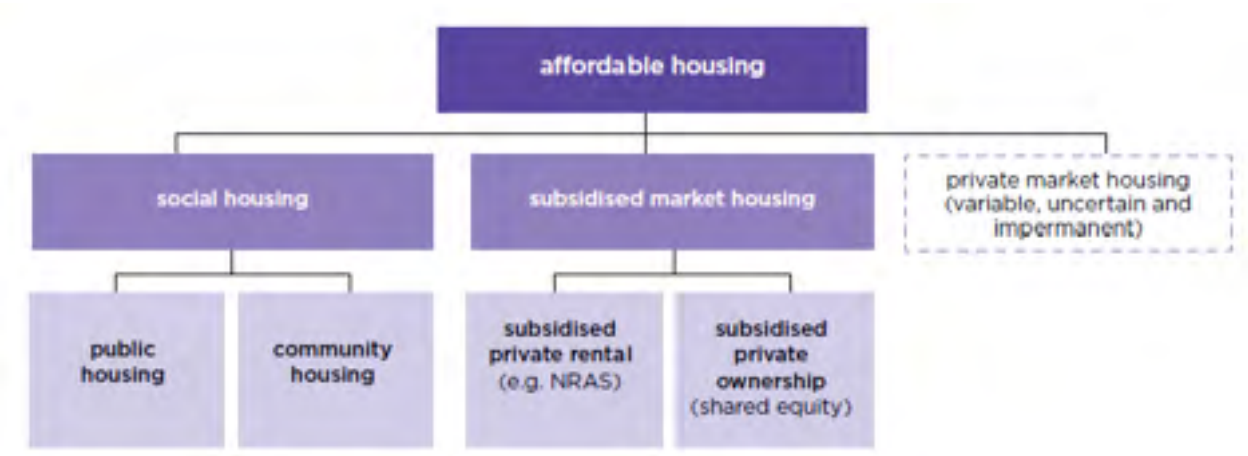
The Planning and Environment Act 1987 defines that 'affordable housing is housing (including social housing), that is appropriate for the needs of very low, low, and moderate-income households'.

Social housing differs in that it is either owned by state governments or owned and/or managed by registered housing agencies such as community housing providers (CHPs), who are registered and regulated by state governments. Additionally, social housing has its own set of eligibility criteria, which prioritises those who are homeless and receiving support; those who have escaped family violence; those with a disability or significant support needs; or those who need to move for health reasons. Income eligibility thresholds will vary by state and are revised on a yearly basis.

Affordable housing is a broad term for subsidised market housing, which needs to be differentiated from social housing. It is also sometimes referred to as 'key worker' housing, which is provided by the private market through subsidy arrangements provided by state and/or Federal Government. In other mature overseas markets, key worker or workforce housing is synonymous with commercially viable market rental structures, not requiring government subsidies. Affordable housing offers secure long-term housing to those in need.

Chart 19 shows the different sub-sectors that fall under the broader affordable housing banner. The subsidised housing market is likely to be an important area of focus for the superannuation sector if proposed models match the gap between affordable rents and commercial rents. In meeting their fiduciary responsibility, superannuation funds must demonstrate a return that is appropriately risk-adjusted and in the best interest of their members.

Chart 19: Broad housing segments



Source: City of Melbourne.

Affordable housing is quality, fit-for-purpose housing that is priced at a level that is affordable relative to the income of its occupants. Affordable housing helps people that are:

- Experiencing rental stress – defined as when 30% or more of a household's income is spent on rent.
- Unable to afford accommodation within a reasonable distance to their place of work.

The issue extends beyond homelessness or for those on the lowest rung of the socio-economic ladder. The need for affordable housing extends to key workers that are unable to access affordable housing options close to their place of work or other amenities. The Australian Housing and Urban Research Institute (AHURI) defines the concept of 'being in housing need' more broadly and includes people who are any or a combination of the following:

- Homeless.
- desiring to form a household but are unable to afford access to appropriate housing.
- living in financially unsustainable / unaffordable housing, such as those on the edge of home ownership or struggling to sustain a private rental tenancy.
- living in over-crowded or poor-quality accommodation that does not meet basic requirements for the household, e.g., too many children crowded into one bedroom.
- requiring specific care or who are part of other specific, vulnerable groups (e.g., recent escapees of family/domestic violence situations).
- living under a condition of harassment such as domestic violence/forced labour.

Recently, the need for more affordable housing has increased substantially, with supply not keeping pace with demand. Booming housing markets during COVID-19 were a factor of record low interest rates, quantitative easing measures and pent-up household savings, exacerbating the need for affordable housing in Australia. Lower rates of residential construction and rising home prices have decreased housing stock across all spectrums. Record low levels of rental vacancy rates have pushed up rents dramatically across both metropolitan and regional locations.

Post-pandemic, a vastly different economic environment is likely to further heighten demand for affordable housing. Higher interest rates are likely to decrease rates of home ownership pushing more Australians to rent, further intensifying the shortage of viable rental options, particularly for very low-to-middle income households. Inflation is also at the highest level in decades, creating cost of living pressures that affect these households more than others.

Table 6: Frontier analysis of the key attributes and differences between affordable and social housing

	Social housing	Affordable housing
Definition	• Social housing is made up of two types of housing, public housing, and community housing. It is for people on low incomes who need housing, especially those who have recently experienced homelessness, family violence or have other special needs. People who are eligible for social housing may also be eligible for affordable housing properties.	• Referred as key worker housing, this type of housing is usually reserved for key workers; that is employees in services essential to a city's functioning and require physical presence, but who earn very low to moderate incomes. For these workers, housing costs (as a proportion of income) exceed the acceptable threshold – 30%. Affordable housing is open to a broader range of household incomes than social housing. Households do not have to be eligible for social housing to apply for affordable housing.
Income thresholds	• Eligibility for social housing is dependent on whether the applicant needs priority access or are placed on a general social housing wait list. Thresholds will vary by state. Table 9 illustrates income thresholds for Greater Capital City Statistical Area of Melbourne.	• Thresholds will vary by state. Table 8 illustrates income thresholds for Greater Capital City Statistical Area of Melbourne.
Ownership structure	• Owned by the Director of Housing (public housing) as well as housing that is owned or managed by registered housing agencies such as community housing providers (CHPs), who are registered and regulated by state governments.	• Private ownership.
Management	• Managed by registered housing agencies such as CHPs, who are registered and regulated by state governments.	• Managed by registered housing agencies such as CHPs, who are registered and regulated by state governments. Residents get access through subsidised private rentals (the most common) or subsidised private ownership.
Calculation of rents	• Rents are heavily subsidised by the government and managed by CHPs.	• Rents are at a discount to market rents (decided on development or acquisition of a residential building).
Government subsidy/ policy/ regulation	• Capital grants, operating/service/rental subsidies, government backed bonds, land lease or transfer, inclusionary planning requirement/incentives.	• Some capital funding/operating/service/rental subsidies, rental subsidies for eligible households, access to government backed bonds, land lease or transfer, inclusionary planning requirement/incentives, tax subsidies/concessions.

Source: Frontier analysis.

Current state of affordable and social housing

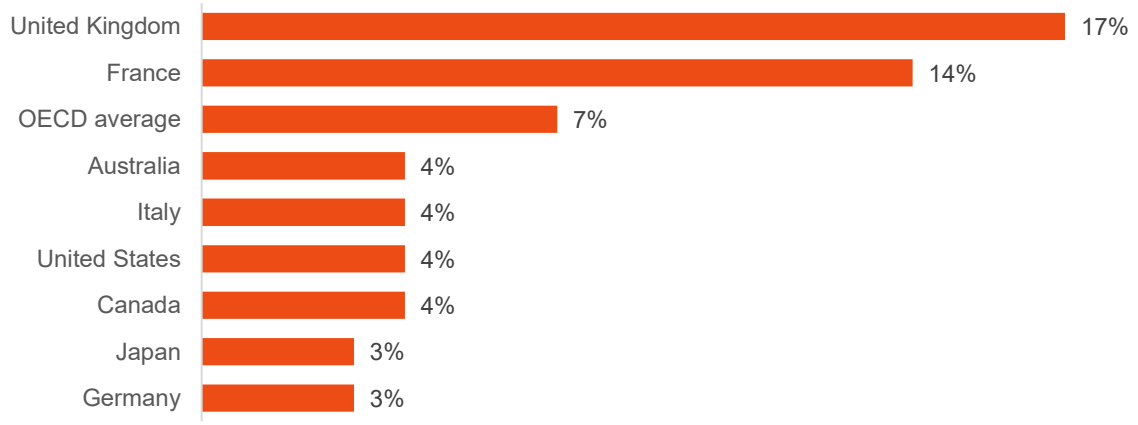
Affordable housing is typically categorised as essential infrastructure and the provision of sufficient affordable and social housing provides real benefits to the economy and society as a whole (as outlined in the Benefits from investment in affordable housing section). According to several research reports, the shortfall in social housing dwellings in 2022 is estimated at 524,000 and is set to increase to 671,000 over the next decade.

The current shortage of affordable housing in Australia is a culmination of all of the following:

- rapid population growth.
- wages not growing in line with cost of living.
- residential property values and rents growing at record high levels.
- low levels of supply by government (as well as selloffs of existing stock).
- a lack of reform encouraging private market participation.

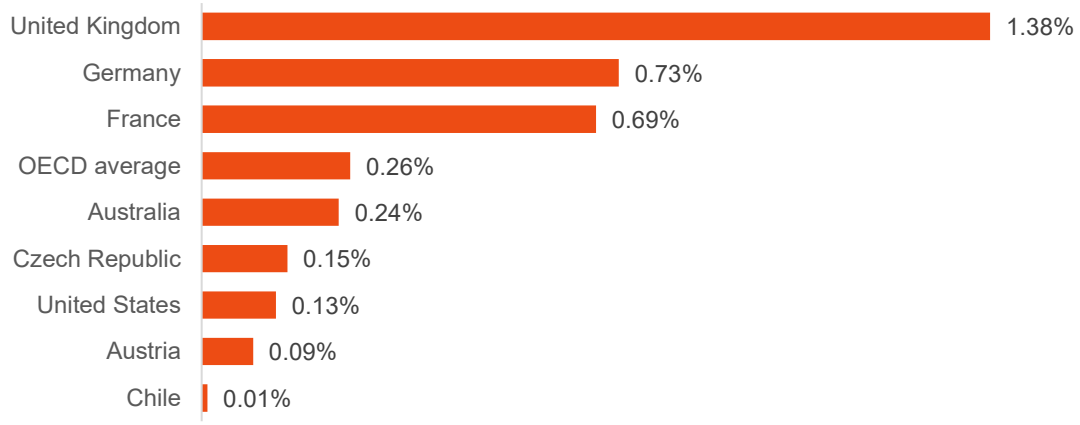
In Australia, the availability of affordable housing has fallen significantly over the last three decades. The portion of rental properties in Australia that are classified as affordable accounts for less than 4% of total stock. According to Australian Housing and Urban Research Institute (AHURI), Australia falls short of its developed peers with both the proportion of social housing and spending on social housing below the OECD average (Chart 20 and Chart 21).

Chart 20: Social rental dwellings as a share of total residential dwellings (2020 or latest)



Source: OECD affordable housing database.

Chart 21: Public spending on social housing as a % of GDP (2020 or latest)



Source: OECD affordable housing database.

The stock of public and community housing has continued to decline in Australia since 1981 (see Table 7).

Table 7: State of current Australian stock

	Social housing dwellings	All Australian	% Social housing
1981	228,938 dwellings	4,668,906 dwellings	4.9%
2021	351,017 households	9,275,217 households	3.8%

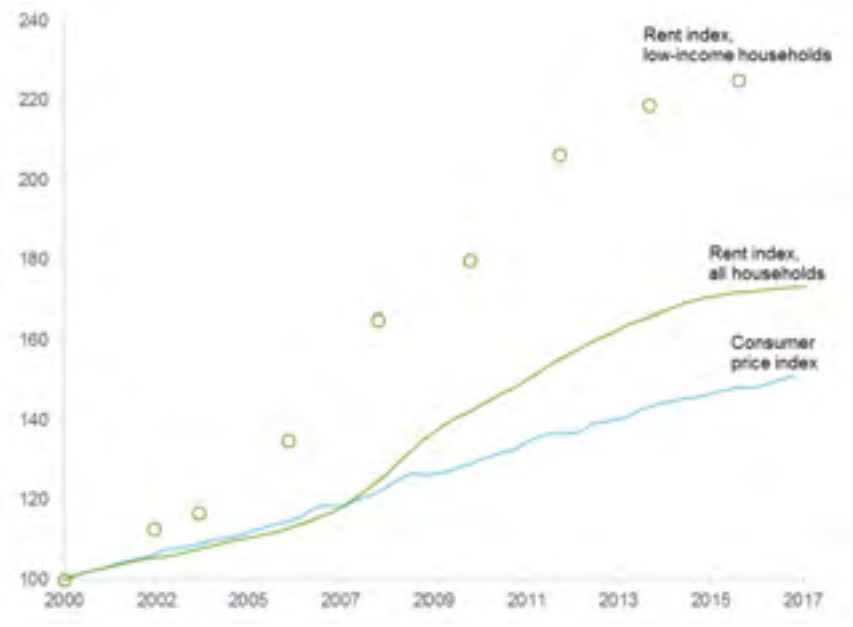
Source: AHURI Final Report No. 231.

The need for affordable housing is expected to grow considerably in Australia given the significant levels of investment and funding being promised for building the required stock. However, forecasts predict this will fall short of what is required.

One of the key reasons for a shortage in affordable rental stock in Australia has been the concentration of 'mum-and-dad' investors in the private rental market as owners[22]. Outside of owning their own homes (either outright or with a mortgage), approximately 20% of Australians own an investment property. Existing debt burdens on these investors means they are not motivated by altruistic reasons to provide rents at affordable rates and thus rents are driven by market forces of supply and demand.

Housing affordability and shortages are most pronounced for workers trying to access rental housing in the lowest quintile (by cost) of rental options and in areas close to key employment hubs. Chart 22 shows the trajectory of rental growth outpacing inflation which creates greater stress for low-income households.

Chart 22: Rental growth outpacing inflation



Source: Australian Bureau of Statistics

[22] Only 4% of the listed property sector is exposed to residential property. Retail investors dominate the residential housing market in Australia, with 52.5% of Australian household wealth held in housing.

There also needs to be attention paid to the design of housing, so it meets the needs of those in need. One of the key issues has been larger families (usually with more than two children) trying to access housing that is fit-for-purpose. Large families are often put up in housing not large enough or that which is further away from key amenities such as schools, shopping, health, and recreational facilities. This has adverse repercussions on learning and mental health outcomes for children. As such, the design of affordable housing should consider the types of households that are trying to access it.

The need for affordable housing has become more pronounced as key workers are being increasingly priced out of areas close to key employment hubs, public transport hubs and areas with sufficient amenity and infrastructure (whether this be health, transport, or educational infrastructure). Key workers are often on incomes high enough that they do not qualify for subsidised housing, but not high enough to afford the high market rents (and annual rental increases) in areas close to their place of work. Additionally, it can be challenging to access suitable housing large enough to accommodate their families. Key workers are therefore faced with undesirable options:

- Rent privately at levels that exceed the acceptable level (as a proportion of income >30%), thus putting them at great risk of housing stress.
- Rent accommodation not fit-for-purpose (that is, not large enough for the family or of very poor quality, with the balance of power in favour of the landlord).
- Commute unsustainably long distances to work[23], forgoing quality of life/family life.

Table 8: Income thresholds for eligibility for affordable housing (2021)

	Single adult	Couple, no dependants	Family (one or two parents with dependent children)
Very low	< A$25,220	< A$37,820	< A$52,940
Low	< A$40,340	< A$60,520	< A$84,720
Moderate	< A$60,510	< A$90,770	< A$127,080

Source: City of Melbourne.

Table 9: Income thresholds for eligibility for social housing (2021)

	Single adult	Couple, no dependants	Family (one or two parents with dependent children)
Priority access	< A$29,484	< A$51,012	< A$52,884
Inclusion on general social housing waitlist	< A$52,728	< A$80,704	< A$108,784

Source: City of Melbourne, figures denominated in Australian dollars.

[23] Research shows commuting over two hours a day has negative impacts on health and wellbeing. In cities like Sydney and Melbourne, workers commute between 65 and 71 minutes a day, with lower income workers commuting significantly longer than their wealthier counterparts.

State of play

Australian superannuation private markets exposures

There needs to be greater collaboration and partnerships between governments, community-based participants, and private market participants to supply the volume of social and affordable housing needed in Australia. Investment by superannuation funds into the affordable housing sector is a possible option either through equity or debt structures. Affordable housing offers stable risk-adjusted cash flows and returns are non-cyclical in nature. We view returns to be largely non-cyclical because of the inherent need for housing. In the case of affordable housing, rental agreements are usually signed by CHPs (with the landlord) over long tenures (minimum of 10 years). Long waitlists for affordable housing mean occupancy rates are persistently high through market cycles.

Social housing presents several hurdles for superannuation funds at present: lack of adequate returns, perceived reputational risk, and sub-optimal scale of investments. Additionally, social rents are priced at a considerable discount to market rents, thus making social housing (on a stand-alone basis) a financially unviable investment for institutional investors. Social rented housing has historically delivered rents at around 50% of market rates alongside long-term security of tenure (with annual rental increases not a feature of social rented housing).

In contrast, affordable housing rents are usually delivered at a 20 to 25% discount to market rents, with annual rent reviews incorporated in the lease agreements. Meaningful changes to affordable housing policies can help make affordable housing a more viable option for institutional investors.

Superannuation investment into Australian affordable housing has been fragmented and mixed. Examples of superannuation funds investing in affordable housing include:

- **AustralianSuper** acquired a 25% equity stake in Melbourne housing provider and developer, Assemble Communities, to make impactful investments. Assemble Communities partners with CHPs to deliver social and affordable housing, with a unique 'rent with the option to buy' pathway offered to key workers on low to moderate incomes. Returns for investors come from two sources: net income out of rents, and the final sale price. Assemble Communities sets its margin at one-third below the traditional build-to-sell model[24].

- **Australian Retirement Trust (ART)** partnered with investment manager, QIC, to work with Brisbane Housing Company on a new venture aimed at providing a scalable model for the financing, development and operation of social and affordable housing. Under the partnership, up to 1,200 new homes will be built in Queensland, which will also source funding from the state government. The first two projects are expected to be complete in 2024. This is ART's first social issue-focused investment since it was formed in a merger between SunSuper and QSuper in early 2022[25].

- **Aware Super** has committed over A$3 billion towards a broader residential strategy in Australia, the US and Europe[26]. In Australia, the priority is key workers' affordable housing. Aware Super will deliver up to circa 1,800 key worker housing units which will be rented at a 20% discount to market rent to key workers such as teachers, nurses, emergency services workers and social

[24] https://assemblecommunities.com/australiansuper-makes-cornerstone-investment-in-assemble-communities/.

[25] https://www.qic.com.au/knowledge-centre/art-social-and-affordable-20220725.

[26] https://realassets.ipe.com/residential/aware-super-expands-its-living-portfolio-globally/10059608.article.

workers[27]. With these commitments, Aware Super's total exposure to essential worker affordable housing is circa A$1.5 billion[28].

- **Cbus Super** has to date, successfully invested just under A$150 million into the National Housing Finance and Investment Corporation[29] (NHFIC) bond issuances[30].
- **HESTA** invests in a range of projects:
  - NHFIC's first Sustainability Bond, raising around A$400 million. The funds raised from this bond help registered community housing providers construct new social and affordable dwellings by providing cheaper, longer-term financing. The investment will support the delivery of around 600 social homes and 450 affordable and private rental homes. HESTA has also invested in NHFIC's Social Bond issuance, helping low income and vulnerable Australians access affordable housing[31].
  - Committed a total of A$70 million to Social Ventures Australia's (SVA) Social Impact Investment Trust (SIIT) [32]. HESTA's initial A$30 million investment was deployed towards several social impact projects (including affordable housing). Most recently, HESTA has allocated a further A$40 million to SIIT. The affordable housing projects include:
    - AAHS & Horizon Housing: A$6.7 million investment in Horizon Housing, (a CHP in Queensland), which is focused on increasing the supply of social and affordable housing and helping low-income earners achieve home ownership in targeted areas[33].
    - Nightingale Village, Victoria: A$20 million invested in a 185-apartment, carbon-neutral residential project in Brunswick. 20% of apartments in the project were allocated to key contribution workers such as nurses and aged care professionals. A further 20% were pre-sold to CHPs, which eligible clients can rent at reduced rates. The remainder were sold to the public, many of whom are first homebuyers[34].

However, these investments represent a small fraction of total available funds available for investment for superannuation funds.

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[27] https://aware.com.au/member/investments-and-performance/how-we-manage-your-investment/investment-types/affordable-housing.

[28] https://aware.com.au/content/dam/ftc/digital/pdfs/employer/AffordableHousing-Alphington-Brochure.pdf.

[29] NHFIC is a corporate Commonwealth entity with the purpose of improving housing outcomes for Australians. NHFIC provides long-term and low-cost finance, and capability building assistance, to registered community housing providers (CHPs) to support the provision of more social and affordable housing. It lends, invests, and provides grants to help finance the critical infrastructure needed to unlock and accelerate new housing supply. NHFIC also administers the Home Guarantee Scheme on behalf of the Australian Government, supporting eligible home buyers purchase a home sooner, and undertakes independent research into housing supply, demand, and affordability in Australia.

[30] https://www.cbussuper.com.au/super/my-investment-options/investing-in-australia.

[31] https://www.hesta.com.au/stories/making-a-home.

[32] https://www.socialventures.com.au/impact-investing/social-impact-investment-trust/.

[33] https://www.socialventures.com.au/news/impact-investment-to-grow-supply-of-affordable-housing/.

[34] https://www.socialventures.com.au/news/investing-in-scalable-model-to-help-address-housing-affordability/.

Table 10: Case study - Summary of Aware Super's investments in affordable housing

Category	Comments
Investment philosophy	Primary objective is to deliver strongest risk-adjusted returns for its 1.1 million members. Additional consideration also given to investing in assets which strengthen the communities where its members live, work, and retire. Aware Super's diversified property portfolio allocates to residential property / build-to-rent (BTR) under its strategic Essential Worker Housing Program.
Total investment value	~ A$1.5 billion (0.6% of total FUM) into its Essential Worker Housing Program.
Housing outputs	> 1,800 essential worker housing rental units (completed and under construction) across 15 sites.
Rents	80% of market rent to eligible essential workers.
Timeframe	2018 – present.
Geographic allocation	• Sydney, Melbourne, Canberra, and Perth. • Periphery of CBD markets. • Close to hospitals, educational facilities, and transport hubs.
Opportunistic approach	• Aware Super was the first institutional investor to allocate to Australia's build-to-rent sector in 2018. • During the COVID-19 pandemic, Aware Super was able to leverage this experience and its scale and available capital to quickly deploy funds for the acquisition of several heavily discounted units from distressed developers. This allowed it to rent the units via its Essential Worker Housing Program. • In other projects, Aware Super has acquired 'to-be completed' units at a discount within a development, enabling the developer to secure financing to proceed with the project. • Focus on developments with institutional partners to participate on private markets and BTR` developments, enabling greater control over management, building quality and control and sustainability standards (aligning with ESG objectives and targets). • Launched Aware Real Estate in September 2022 to directly manage its Australian living, industrial, office and mixed-use property portfolio including its Essential Worker Housing Program, to lower fees and drive strong returns for portfolio.
Government inputs	None. They have not accessed any subsidies or planning incentives.
Private-for-profit inputs	• Capital to acquire and build. • Their first project was in partnership with Altis Property Partners (a well-known institutional property owner and developer) – Delivered 102 units across 2 towers in Miranda, Sydney. – 50% allocation to essential worker housing. – Essential worker housing component partially financed by market sales of the private residential units.
CHP/Not-for-profit inputs	Tenancy allocation/management.
Wider outcomes	• Direct benefit to members (their membership base are essential workers, such as nurses, firefighters, and teachers). • Helps to meet broader ESG corporate goals. • Energy, water and building efficiencies. • Demonstrates responsible ownership in business.
Financial outcomes	Aware Super has not disclosed returns/yields on their affordable housing investments except that they are delivering "strong long-term risk-adjusted returns to members".
Benefits of investing in affordable housing, as cited by Aware Super	• Higher levels of occupancy over a longer term (reducing long-term risk). • Stickier tenant base, generating long-term demand for the product. • Lower letting up times. • Strong tailwinds (population growth, essential worker base). • While rents are offered at 80% market rate to eligible essential workers, they are subject to annual rent reviews, offering a hedge against inflation.

Source: Benedict, R., Gurran, N., Gilbert, C., Hamilton, C., Rowley, S. and Liu, S. (2022) Private sector involvement in social and affordable housing; Australian Housing and Urban Research Institute Limited: https://aware.com.au/member/investments-and-performance/our-approach-responsible-ownership/affordable-housing.

Under the SIS Act, the obligation exists for superannuation funds to act in the best financial interest of their members. Superannuation funds are required by APRA to maintain returns at a certain level to remain in operation. They also have fiduciary duties to members that prevent investing resources in new market feasibilities or expensive transactions with uncertain outcomes. From a purely financial perspective, development feasibilities often do not currently align with investor returns. Traditionally, profits made by CHPs are reinvested for future projects. Thus, for-profit institutions have directed their attention to more profitable investment options when investing in commercial property, and not affordable housing.

This is not to say that affordable housing cannot be a financially rewarding investment option for superannuation funds. In the cases highlighted where superannuation funds have invested in affordable housing, they have been able to realise financially sustainable returns through partnerships with CHPs and institutional developers. Partnering with CHPs on affordable housing projects allows super funds to capitalise on the attractive incentives and grants offered to CHPs, making investment returns viable on these projects. Partnering with developers helps to mitigate against development and construction risk.

Positively, thus far, superannuation investments into affordable housing have been targeted and focused on areas of need. They can leverage their scale and relationships with private partners to bring innovation and a level of commercial acumen to the sector.

Benefits from investment in affordable housing

The benefits from superannuation fund investment into affordable and social housing are broad and can accrue to multiple different parties including governments, superannuation fund members, the public and the economy.

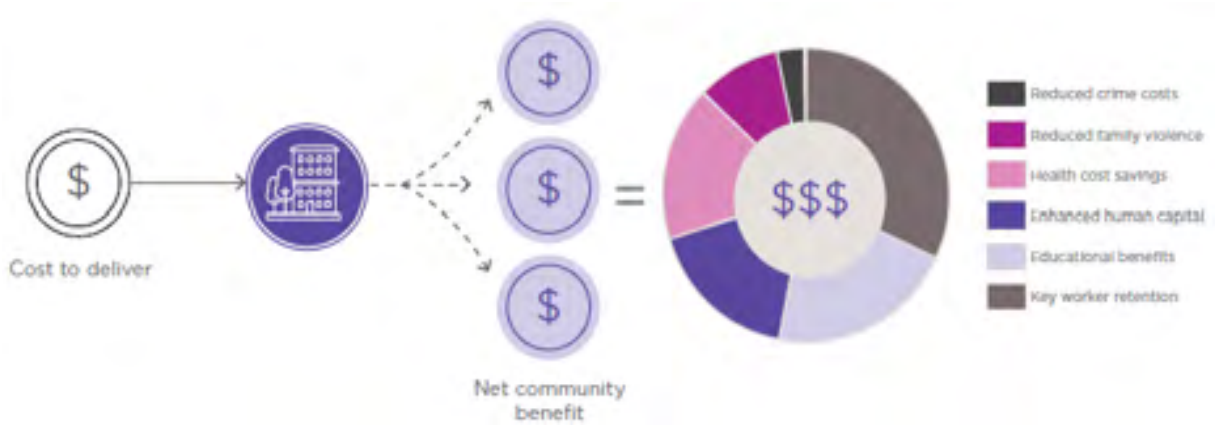
Housing outcomes impact human capital formation and productivity in the economy in various ways:

- increasing worker retention.
- educational benefits.
- enhanced human capital.
- health cost savings.
- reduced family violence.
- reduced crime.

While the exact economic and social benefits of affordable housing in Australia are not publicly available, studies highlight that for every dollar invested in affordable housing, the community benefits by two to three dollars (SGS, 2019, AHIRU, 2020).

Economic analysis (Chart 23) shows investments into affordable housing provides indirect benefits to the economy and governments by reducing negative externalities. Modelling by SGS Economics and Planning shows that for every dollar spent on affordable housing, three dollars of community benefit is provided (through indirect benefits).

Chart 23: Community benefits analysis



Source: SGS Economics and Planning, 2019.

There has been an overreliance on the private rental market in Australia. As one of the primary ways to build wealth, 'mum-and-dad' investors dominate the private rental market in Australia. Institutional investment into affordable and social housing not only provides financial benefits to superannuation funds, but also allows them to influence the economy and society in positive ways.

- **Long-term risk-adjusted returns.** From a financial perspective, there are several positive factors for investing in affordable and social housing, despite lower initial yields (which are somewhat offset by greater resilience of the sector and lower risk once developments are completed and leased out).
  - Income returns from affordable housing are more stable and less volatile than traditional commercial property sectors (retail, industrial and office).
  - Higher rates of initial and ongoing occupancy rates ensuring a secure long-term cash flow (guaranteed by government).
  - Annual market rent reviews are usually linked at or above inflation.
  - Faster initial lease-ups in affordable housing (compared to traditional residential leasing).
  - Signing of long-term leases with CHPs that are backed by governments.
  - Support and long-term commitments from government means there is a form of income guarantee.
  - Returns are less volatile (less risky).
  - Housing is a basic and long-term need that in its nature, is non-cyclical.
  - Demand will continue to grow in line with population growth.
  - A survey of funds investing in social and affordable housing in the UK highlights median target returns in the range of 6 to 8% p.a. and assuming the same risk profile, on a like-for-like basis these would be expected to be higher in Australia due to interest rate differentials.
- **Enabling institutional investment is a faster way to build social and affordable housing**. Australia's social and affordable housing needs are urgent and partnering with institutional investors, as well as other stakeholders will expedite the development process. This should be

aided by the Federal Government's recently announced intention to invest A$10 billion in a newly created Housing Australia Future Fund, to be managed by the Future Fund Management Agency, to generate returns to fund the delivery of these homes.

Current government initiatives – Housing Australia Future Fund

In the 2022 Federal Budget, the Federal Government confirmed its commitment to deliver 40,000 new social and affordable homes, including 30,000 homes from the Housing Australia Future Fund and an additional 10,000 dwellings under a new Housing Accord.

The Government has indicated it will invest A$10 billion in the Housing Australia Future Fund to generate returns from building 30,000 new social and affordable homes in the Fund's first five years. This includes 20,000 social housing properties – including 4,000 properties for women and children fleeing domestic and family violence, and older women on low incomes who are at risk of homelessness – and 10,000 affordable homes for frontline workers like police, nurses, and cleaners.

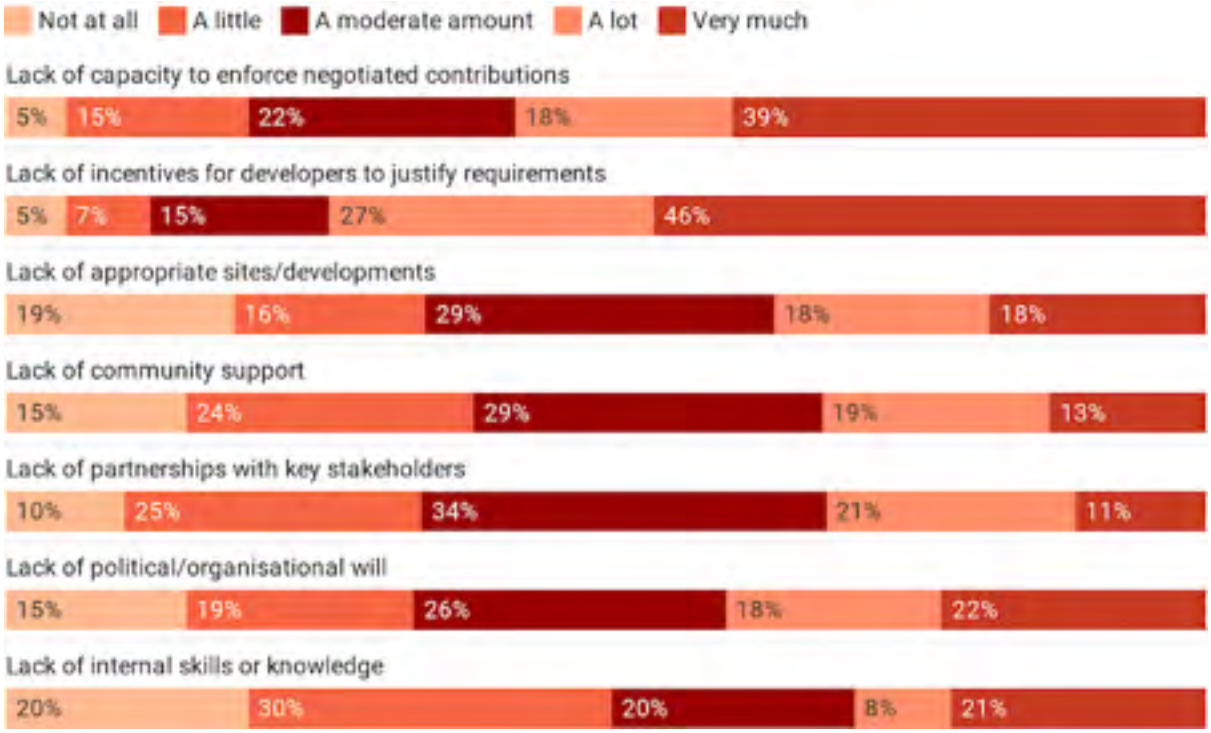
The Federal Government has also indicated it will expand the remit of the National Housing Infrastructure Facility to unlock A$575 million in funding for social and affordable housing. Collectively, the Housing Australia Future Fund, National Housing Infrastructure Facility, state and territory governments, local government, and representatives from the superannuation and construction industries, will seek to draw in institutional capital and accelerate housing supply.

- **Socially aligned investments.** Investments into social housing made in the best financial interest of member allows superannuation funds to align their fiduciary duty with ESG-aligned goals.
- **Partnerships between capital providers creates scale and efficiency.** In many cases, superannuation funds partner with institutional property owners to develop and invest in the core property sectors (retail, industrial and office). This allows them to take less development risk and leverage the expertise of institutional owners and developers to maximise efficiencies in the delivery of such stock. This can be extended to the affordable housing sector. For sustainable long-term income flows to be viable, there need to be ongoing partnerships with government, not-for-profits, and CHPs.
- **Job creation.** As is the case with infrastructure, real estate investing involves the construction of new buildings (greenfield) or investment in existing buildings (brownfield). Greenfield investing will generate numerous construction jobs as well as other roles such as design and engineering. Brownfield investing will involve ongoing maintenance as well as potentially refurbishing or repositioning assets, all of which generates employment. Often brownfield assets will be acquired with a pipeline of capital expenditure in mind to add value to the asset.
- **Social improvements.** Investment into affordable housing helps resolve the acute housing shortage for low-to-moderate income households, which helps improve capital formation and increases productivity in the economy. Housing is a basic need which, when met, allows people to focus their energies on more productive endeavours.
- **Diversification of portfolio.** A key benefit is that affordable housing helps to diversify a property portfolio made up traditional property assets. Affordable housing has very different return and risk metrics, economic and market drivers to the office, industrial and retail property sectors. Additionally, the underlying investment characteristics are also very different.

Impediments to institutional investment in affordable housing

There are numerous reasons why superannuation funds have not been investing in affordable housing on a greater scale (despite the numerous social and economic benefits outlined). According to a survey of almost 150 affordable housing stakeholders conducted by *The Conversation* in 2020, there are many barriers (perceived and otherwise) to greater development of affordable housing in Victoria as shown in Chart 24.

Chart 24: Assessments of barriers to affordable housing agreements



Source: https://theconversation.com/confusing-and-not-delivering-enough-developers-and-councils-want-new-affordable-housing-rules-139762.

The key impediments that have limited superannuation funds and institutional investors from investing in the affordable housing sector include:

- **Lower total returns and higher perceived risk, compared to other traditional property sectors.** Superannuation fund investments into affordable housing have been limited, due to:
  - limited incentives and initiatives favouring investors.
  - relatively higher development and construction risk associated with new affordable housing build, given a lack of existing stock for superannuation funds to invest in.
- **Lack of consistency and transparency.** In Australia, there is also a lack of transparency and consistency around regulations, land taxes, stamp duty and other tax offsets that would entice institutional involvement.
- **Variability of definitions and regulations.** There is significant variability in the definition of a key worker nationally. This inconsistency is an impediment when local councils are deciding who to put into existing and new affordable housing developments. Take for example a recently developed large residential building in Melbourne, the key worker housing component (circa 100 units) has been sitting empty for three to four months because local councils cannot decide on who is an eligible key worker. This is exacerbated by the fragmented nature of regulatory authorities, advisory boards and CHPs across states and even local councils. CHPs, in particular, are fragmented geographically, which is a big impediment in regional areas.

- **Lack of targets from states, territories, and local councils.** Institutional investors are reluctant to pursue affordable housing developments because there are alternative investments with more attractive return profiles. In Australia, there are no consistent targets for affordable housing across states, territories, and local council areas. In other international cities (e.g., New York, London and Vancouver), there are clear targets that BTR developers may be required to meet to commence a development, but these do not necessarily result in superior return outcomes to the investor. Land is often priced below market price such that meeting affordable housing requirements doesn't hamper the financial return to the developer nor the developers' access to government subsidies and/or incentives. In these cities, developers have a great deal of transparency around requirements prior to commencing a development, and can negotiate to buy extra density and height for a development to meet affordable housing requirements.

- **Lack of ongoing and reliable government funding.** State and territory capital funding for new and social affordable housing to 2025 amounts to circa A$11.3 billion, with a target to build 33,925 new homes across both social and affordable housing. This is considerably below that of developed market peers as a percentage of GDP. While the establishment of NHFIC is a step in the right direction and raises low-cost debt finance for CHPs, it is not enough to meet the projected needs for affordable housing in Australia over the medium to long term. Government co-investments are needed to bridge the funding gap and improve the financial feasibility of projects for private participants. Experts have long cited the need for government subsidies, planning incentives, capital contribution and/or access to government land to increase financial viability of affordable housing projects.

- **An evolving community housing sector with further room to mature.** Affordable housing is structured in Australia so residential owners/developers sign leases with the relevant CHP, who are then effectively sub-leasing the units to eligible key workers. While this is advantageous from a stable long-term cash flow perspective, it can reduce the efficiency of the overall process. The maturity of CHPs continues to grow in Australia and there is an opportunity (in part through government policies) to help encourage further scale and consistency across the operations of different CHPs in different states and council areas.

- **Delays in procurement processes and uncertainty in planning approvals.** Constraints in state planning legislation limit the delivery of affordable housing supply in Australia. This increases risk and holding costs, particularly for mixed tenure projects. Mixed tenure projects have been the most successful, scalable, and cost-efficient ways other international cities have been able to improve housing affordability.

- **Reputational risk.** Given the high visibility of the sector and community sensitivity around social needs, potential reputational risks for superannuation funds are of high concern. The recent Royal Commission into the aged-care sector is a good illustration of the scrutiny and resultant loss of reputation for governments and private market participants alike. While super funds can undertake detailed due diligence to mitigate against reputational risk arising from the management of affordable housing investments, this can be expensive and not entirely fail-proof.

- **Lack of continuity across political leadership and government departments.** The lack of a stable national program of gap funding to complete feasibility on affordable housing projects holds back supply, and this undermines the opportunity for private investors. A lack of continuity means scale cannot be achieved efficiently and in a timely manner. For example, the introduction of the National Rental Affordability Scheme (NRAS) in 2008 sought to encourage the development of 50,000 new affordable rental dwellings (to be offered at a 20% discount over a ten-year period) in return for an indexed Australian Government payment to be paid as a tax offset. The NRAS initiative worked well because incentives were used to target locations of high housing need, by supporting higher density transport-oriented developments in key metropolitan employment markets. However, this scheme was discontinued in 2014 after a change in government. *Certainty is essential for investor confidence, across all regulatory and program settings.*

What could governments do to encourage investment in affordable housing?

There are a range of initiatives governments could undertake to encourage greater investment by superannuation funds into affordable and social housing. Several of these would encourage investment more generally, while some initiatives would specifically encourage superannuation funds.

- **Improve the long-term return prospects for investors.** In the US, the Low-Income Housing Tax Credits (LIHTC) scheme has been long used to address affordable housing supply shortages. The LIHTC program is a US Federal Government program to encourage private capital to invest in the development and preservation of affordable rental housing for low-income households and has been cited as the most important tool in creating affordable housing in the US. The program works well, not only because it delivers a minimum 15-year outcome, but because social and affordable housing developers utilise recurring tax subsidies towards funding of new projects and by selling them to investors who can apply them to tax liabilities. There is no equivalent scheme in Australia. The few tax subsidies that are available in Australia are limited to ten years.

- **Encourage mixed tenure development and cross-subsidies.** Mixed tenure developments are viewed as an attractive model to reduce risk because an acceptable rate of return is achieved from blending a return from a develop-to-sell with long-term affordable rental housing (Aware Super's development in Miranda is a good example). Cross-subsidisation between affordable and social housing is a common and successful practice in the UK. This is achieved through various capital grants given by the government that need not be paid back. The gap payments by the UK Government are used to bridge the gap between operating rents and what the tenant can afford to pay. They help to reduce the risks taken on by CHPs and developers because of heavy government involvement and thus increase the financial feasibility of such projects.

- **Encourage the broader BTR market.** The BTR market in Australia is underdeveloped and relatively immature in comparison to that in other developed markets. In other international cities, the BTR sector has stimulated affordable housing supply, aided by the government's provision of mandates and capital grants for affordable housing, which has led to BTR developments becoming financially viable. BTR development in Australia could be encouraged through several different avenues:

    - **Incentives:** providing one-off tax concessions to developers if this supply is put into the long-term rental supply.

    - **Government planning procedures:** streamlining planning process and reducing apartment project timeframes.

    - **Government guarantees:** public sector guarantees over a portion of pre-sales, which could become affordable or social housing.

    - **Project funding:** reducing red tape for bank funding conditions for large, institutional apartment developments.

- **Standardised capital grant schemes and mandates nationally.** In the UK, there are various mechanisms that have been successfully applied nationally, including:

    - **Capital grants.** These are most common in Scotland, which has the highest proportion of affordable housing stock in any region in the UK. These capital grants are given to proposed projects so developers can cover a portion of construction costs (subject to certain requirements).

    - **Mandates.** UK regulation places an obligation on developers to include affordable housing in a BTR development. These mandates vary by region and population. Developers can purchase additional height and density provisions through negotiations with local councils.

- **Using government land for affordable and social housing.** Governments at all levels have land banks that are often not developed for their best and highest use. By undertaking an audit of land holdings, land releases can be scheduled to develop and supply affordable housing stock to meet demand. This is the case in areas that are close to key employment hubs such as CBDs, hospitals and educational institutions. In these areas, land values are generally higher and thus rents are often prohibitively high for key and essential workers. Long-term leasing and/or selling of government land at a discount, for the purpose of developing affordable housing, promotes and financially incentivises developers to help meet affordable housing targets.

- **Introduce more attractive planning requirements that encourage private market participation.** Governments can introduce mandatory requirements to create a level playing field and enable land costs to be factored into feasibilities. Developers are generally supportive, provided these are phased over multiple years; do not discriminate against existing projects; and there are incentives such as density bonuses available. In NSW, the introduction of planning incentives has been used by both private developers and social housing providers to increase the yield of their projects. In South Australia, the mandatory inclusionary zoning scheme (which requires 15% of homes in new residential areas to be affordable and is a must on government land), gives developers and investors greater certainty around what needs to be delivered. It also makes it easier to assess project feasibility.

- **Encourage mergers between CHPs (within reason)**. Given the fragmented CHP landscape in Australia, private developers often struggle to keep abreast of local requirements. Consolidation of smaller CHPs in some geographic zones with similar requirements may be beneficial to increase efficiencies and build scale. Increased scale can help reduce the cost of debt, which in the current interest rate environment, is emerging as a major impediment in the feasibility of affordable housing projects. However, it is important to note that mergers are not always the answer. In the UK, the success of affordable housing is a result of a healthy balance between large and smaller CHPs allowing them to retain diversity in scale and focus. Large CHP organisations that have merged and have been successful, have only done so to address specific criteria in certain markets.

- **National standards around how the CHPs and government departments interact with private capital providers**. Often, private participants are hesitant to enter some markets because they are unaware of rules and requirements around affordable housing in those local areas. By standardising the processes followed by CHPs and government departments in their interactions with private participation, there is more certainty to private participants. This certainty allows them to operate more efficiently and reduce costs associated with things like due diligence that needs to be conducted prior to development applications are lodged.

- **Embed social and affordable housing contributions in all social and infrastructure planning.**

- **Set housing targets and make sure local governments meet them**. Housing targets for each council need to be linked to overall plans for the growth of the city. Each council then needs to identify how its target will translate into additional housing for each area within its jurisdiction. The government can use a ‘carrots and stick’ approach to ensure councils meet housing targets that align with long-term city plans. The introduction of independent planning panels (for assessing development applications where local councils fail to meet housing targets), shift the responsibility away from government and ensures consistency between governments.

- **Encourage developments near critical public infrastructure**. State and local governments should change planning processes to allow more medium-density housing in established suburbs that are close to jobs and transport. Small-scale urban infill projects should not require development approvals and should instead be code-assessed. More dense development should be allowed ‘as of right’ along key transport corridors, with height limits set up front. Additionally,

the Federal Government should provide incentives to the states to encourage them to revise planning and other policies to permit greater density and increase housing supply**.**

- **Consolidate the numerous departments and agencies dealing with affordable housing at a state level and introduce consistent and transparent guidelines.**
- **Encourage Public Private Partnerships (PPPs).** While there have been limited examples of PPPs for affordable housing in Australia, there is strong private market demand for PPP-structured affordable housing projects. Traditionally, PPPs for social and affordable housing development have involved the redevelopment of existing public housing estates and/or the reconfiguration of government land, with responsibility shared. These redevelopments have had a greater proportion of private housing and are financially feasible because of government involvement and the provisions provided. There are several PPPs in the pipeline across NSW, Victoria, and Queensland but governments can encourage more of these projects as they allow private partners to bring in their expertise, skills, and efficiencies to such projects.

Of the list above, we believe prioritising the following initiatives may be most beneficial for governments to stimulate growth and returns in the affordable housing sector:

- Creation of meaningful and consistent government schemes (e.g., tax/land concessions) for housing (affordable and social) to provide an attractive return to private capital.
- Simplifying federal and state policies and systems to support investments across internal borders.
- Standardisation of processes and procedures in building affordable housing nationally.

Glossary

Glossary

Asset class

A group of investments with common characteristics. The best-known example of an asset class that most people will be familiar with is, listed equities, a collective of publicly investable companies listed on a stock exchange. Other asset classes include bonds (government, corporate, high yield) and cash. Real estate, infrastructure, and agriculture are classified as real asset classes (or alternative asset classes) since they mostly comprise real physical assets. Since these asset classes are often not publicly traded in the same way listed equities and bonds are, they are considered unlisted, and the amalgam of unlisted asset classes are commonly referred to as private markets. Superannuation funds invest on behalf of their constituent members into a diverse set of asset classes.

Geography is a key consideration for investors when investing in a certain asset class. For superannuation funds, Australian and international investments are considered distinct exposures of a given asset class. Superannuation funds have, historically, exercised home bias towards Australian investments and assets for a range of reasons including currency, operational complexity, ease of communication with Australian-based investment managers, easy access to investment data, familiarity with regulatory settings, visibility of underlying investments and, most importantly, lower cost relative to international investment products.

Alongside geography, sector allocation is another consideration for investors when investing in an asset class. Private market asset classes can typically be segmented into distinct sectors, such as Australian retail or office (real estate), transport or energy (infrastructure), or buyout or growth (private equity).

Route of investment

Superannuation funds invest via several access routes into asset classes. The most common route is via pooled 'funds', which are pools of capital managed by a third-party fund manager. Multiple different investors may supply capital for a third-party pooled fund. Superannuation funds select the appropriate pooled fund based on the capability of the fund manager, the investment strategy for the pooled fund, risk/return profile and various other characteristics. Another route for superannuation funds is to supply capital to a fund manager to invest exclusively on the superannuation fund's behalf, outside of a pooled fund. This is usually referred to as a 'mandate'. The superannuation fund has a lot more scope to tailor the terms and conditions of a mandate. Another popular access route today is direct investing, whereby the superannuation fund may choose to develop an internal investment capability, appoint experienced investment staff, and source and execute private market investments itself. An advantage of this approach is discretion on the construction and management of the investment portfolio, as well as the potential for lower costs.

Strategic asset allocation

A superannuation fund undertakes a robust process to determine how much of each asset class it will invest in. Typically, a diversified mix of asset classes (including fixed income, private markets, currency, and hedge funds) will produce a better aggregate return for the risk undertaken. The mix of asset classes is determined by the risk and return characteristics required, plus limits on other characteristics, a key one being 'liquidity'. The targeted mix of asset classes is typically referred to as the 'strategic asset allocation' (SAA) while the actual level of exposure to various asset classes is the 'actual asset allocation' (AAA). These are expressed in percentage terms, so the sum of the SAAs to all asset classes will equal 100%.

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Industry Super Australia commissioned Frontier Advisors to prepare this research paper.

Frontier is one of Australia's leading asset consultants. We offer a range of services and solutions to some of the nation's largest institutional investors including superannuation funds, charities, government / sovereign wealth funds and universities. Our services range from asset allocation and portfolio configuration advice, through to fund manager research and rating, investment auditing and assurance, quantitative modelling and analysis and general investment consulting advice. We have been providing investment advice to clients since 1994. Our advice is fully independent of product, manager, or broker conflicts which means our focus is firmly on tailoring optimal solutions and opportunities for our clients.

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