

## Social Housing Finance in Australia as a Missing or Incomplete Market: A Review of the Literature

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**ABSTRACT:** Currently, there is a severe shortage of social housing in Australia. In order to address this pressing problem, there is an urgent need for huge investment into this sector, which would require the participation of private institutional investors. This paper analyses this issue from a new perspective or a new lens. It applies the “missing market or incomplete market” theory to review the existing literature relating to social housing finance. The existing studies on social finance, while very useful and having important practical outcomes, are often not solidly guided by scientific theory. This paper therefore fills this gap. It attempts to identify the plausible reasons which cause missing/incomplete markets, in general, and in relation to the social housing finance area, in particular. The review also pinpoints potential solutions to the missing or incomplete social housing finance market and recommends potential areas for future research.

### 1. INTRODUCTION

Markets are the central institutions of economies, allowing people to buy and sell goods and services in a manner that potentially makes everyone better off. However, markets can only be formed under certain conditions, and when these conditions are absent, markets may struggle to exist or the conditions may lead to market failures. This is the basic underlying principle of missing or incomplete markets; that is, failure to produce some goods and services despite being needed or wanted. It is well known that microeconomic equilibrium occurs when the demand for goods is equal to the supply. A missing market, therefore, is a sign that the market is out of equilibrium; a situation where markets do not exist or where the equilibrium price is not related to either marginal social benefits or marginal social costs.

For decades, Australia has been failing to meet the housing needs of its lowest income residents, and the situation is getting steadily worse. The most recent statistics show that 240,000 households across the country are on waiting lists for public and community housing (Milligan et al., 2015).<sup>1</sup> Nevertheless, around 6% of these people needing long-term accommodation who seek help from homelessness services actually receive it.<sup>2</sup> Social housing is something which is typically provided by local councils and by bodies such as housing associations for a subsidised<sup>3</sup> value. Many people on low incomes cannot afford to buy their own homes, and housing rents have also become

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<sup>1</sup> Refer to the Addressing Housing Affordability in Australia: A 4-point plan for the next 5-years discussion paper.

<sup>2</sup> Refer to the response to the Queensland Housing Strategy Discussion Paper ‘Working Together for Better Housing and Sustainable Communities’ from Mission Australia and Mission Australia Housing.

<sup>3</sup> A subsidy can be justified on the grounds that inequality of income and wealth prevents people from finding suitable, basic, affordable places to live. It helps to cover some of the monthly rental cost and will provide financial relief for poorer families. Thus, subsidy is a form of government intervention used when it is argued that the allocation of scarce resources in a free market economy is inequitable.

increasingly unaffordable in recent years. Therefore, by definition, sustainable housing means that everyone should have the opportunity to live in a decent home at a price they can afford, in a place in which they want to live and work. However, the current social housing situation suggests that this issue is only partially addressing the growing demand for social housing. Social housing evolves through various channels in Australia. In 2003 the Commonwealth State Housing Agreement (CSHA) established an agreement to meet the housing needs of people for the duration of their needs. This arrangement provided access to safe and affordable accommodation as an alternative to private rental. The CSHA lasted for five years, providing 400,000 dwellings on a yearly basis to households in need (Australia Institute of Housing and Welfare, 2010). During this five-year period, over 170,000 households were on a waiting list for social housing. However, over time, funding for the management of CSHA was depleted and was exacerbated by the property price hike, which tightened supply and created the potential for an increase in homelessness across Australia.

In order to address this acute shortage of social housing in Australia, there is a need to boost social housing supply and it is estimated that this would require around A\$7 billion of investment annually. However, government subsidies for social housing are declining in financial terms (Financing affordable housing: a critical comparative review of the United Kingdom and Australia, Australian Housing and Urban Research Institute (AHURI), 2014). Private sector institutional investment has also been insignificant (Earl, 2014). Hence, the social housing finance market in Australia is a clear case of a missing or an incomplete market. There is an urgent need for innovative financing mechanisms to be created in order to address this missing or incomplete market phenomenon in social housing finance.

Our paper reviews the existing literature in the context of social housing finance and analyses the present situation using a new lens, eventually suggesting the need for innovative financing models, which can be used to bridge the gap in financing. In Section 2 of this paper, we examine the factors that limit/cause missing markets and provide a discussion of the modelling approaches to incomplete/missing markets. In Section 3, we review the literature related to social housing finance as a missing market, and propose a model which can be used to solve the financing constraints of the social housing market. Section 4 concludes the paper.

## 2. THEORY OF A MISSING OR INCOMPLETE MARKET

### 2.1 *Factors that limit formation and completion of markets*

Market failure occurs when some costs and/or benefits are not fully reflected in the market price. For environmental assets, markets can fail if prices do not communicate society's desires and constraints accurately. Prices often understate the full range of services provided by an asset, or do not exist to send a signal to the market place about the value of an asset. That is, market failure is any feature of the market that reduces allocative efficiency.<sup>4</sup> This is the basic underlying principle of market failure. Theoretically, government intervention can increase these benefits (economic welfare). However, in practice and in some cases, this is debatable. In such cases, incentives become distorted and buyers and sellers exchange quantities that end up making them collectively worse off. The entrepreneur who can both identify a missing market and supply it stands to make a fortune. Sometimes reaching that market is a race. Any entrepreneur who can first supply the required product at a desirable price will have a leg up on the competition. The real money is to be made in developing a new product after identifying a missing market for it.

Many scholars state that the most extreme case of a missing market is in the case of pure public goods. Pure public goods clearly provide a benefit to the consumer, but, for several reasons, they are unlikely to exist in the market economy. It is a special case where there is a demand but no supply. The market mechanism is likely to fail to supply pure public goods because entrepreneurs are unlikely to enter the market, given the impossibility of charging consumers at the point of consumption. Because suppliers are not able to generate any revenue, or make a profit, a necessary

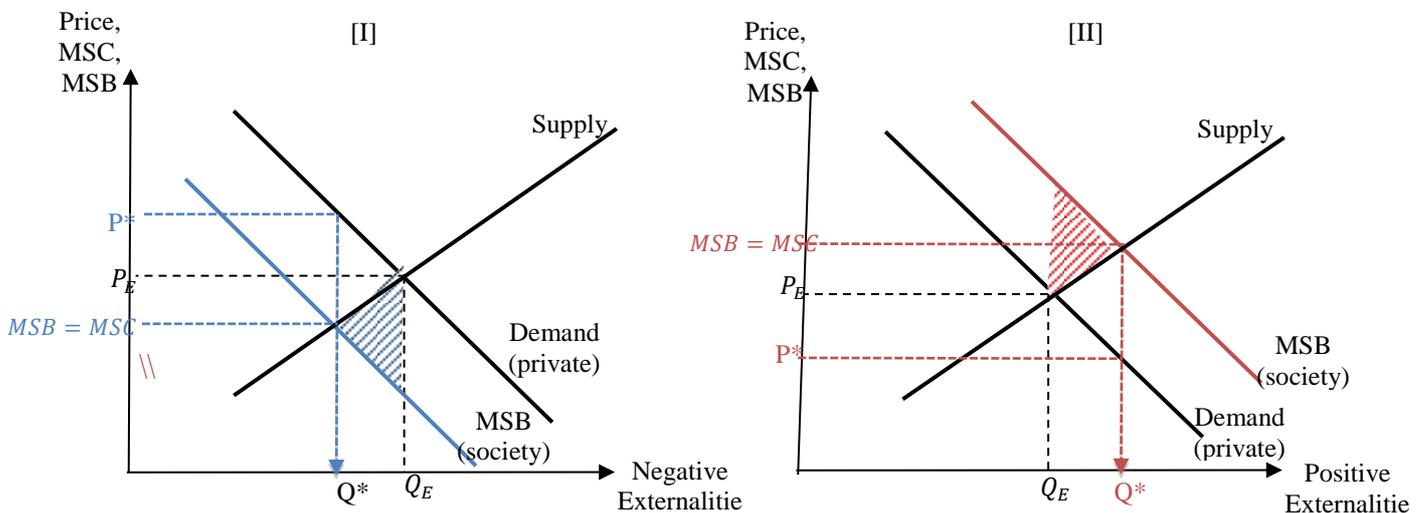
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<sup>4</sup> Efficiency is defined as Pareto optimality – the impossibility of reallocating resources to make one person better off without making anyone else worse off.

condition for the formation of a market is absent, namely the absence of a profit incentive. With no incentive, entry into the market is deterred, resulting in a missing market.

Bromley (1989) argues for intertemporal externalities as missing markets in which future generations are unable to enter bids to have their interests protected. Consider a situation where the present generation takes an action on certain costs - such action precluding, ten years hence, accounting certain damages to those living at that time. While the assumption of certainty here is unrealistic, it will simplify the story and help to focus attention on the pertinent analytical issue. The interests of the future are only protected by an entitlement structure that gives the present generation a *duty* to consider the interests of the future. Future generations thus obtain a correlated *right*. Thus, Bromley (1989) classifies two aspects of missing markets. The first is asymmetrical externalities - in which only the present generation is able to act so as to relieve the future of unwanted costs. The second aspect is when the present generation is faced with the choice of spending funds today that will have the effect of reducing (or eliminating) future damage. Because the future generation is not able to have its interests represented in this matter, Bromley (1989) suggest that in this instance, a missing market exists.

Figure 1: The case of goods with positive consumption externalities



Note. The shaded area in blue represents the welfare loss.  $P_E$  and  $Q_E$  are the equilibrium price and quantity respectively.  $P^*$  and  $Q^*$  (in blue) are the price and quantity after adjusting the negative externalities respectively.  $P^*$  and  $Q^*$  (in red) are the price and quantity after adjusting the positive externalities respectively.

Externalities and public goods are related because externalities tend to occur in public good media. (e.g., air or noise pollution, CO<sub>2</sub> buildup (negative externality) and education/training (positive externality)). This scenario is depicted in Figure 1-[I] shaded in blue, where beginning at fairly low output levels, others begin to be harmed by increasing consumption of the goods generating negative externalities. Hence, the true social benefit of consuming goods with negative externalities lies below the private benefits, as shown in the blue dashed line in Figure I-[I]. The equilibrium quantities of activities giving rise to negative externalities is too large at  $Q_E$ , relative to the socially optimal quantities, as shown as  $Q^*$  (in blue). The welfare loss from too much of the offending activity, which causes negative externalities, is represented in the area shaded in blue. The missing market here stems from the fact that negative impacts on those harmed do not register with those engaging in activities giving rise to those negative impacts. Thus, one way to correct this situation, first advanced by Pigou (1920) is to increase the price (by a "tax" or "fine") on those consuming the goods in an amount equal to the marginal damages they impose on those harmed. If a tax is charged in an amount equal to the vertical distance between  $Demand_{private}$  and  $MSB_{society}$  (in blue), those consuming the damaging goods will face a full price of  $P^*$  (in blue),

which will result in  $Q^*$  (in blue) of the offending activity being chosen. Therefore, the tax will replace the missing market, returning society to the desirable efficiency results of the perfect market case. That is, the goods will be valued by society at an amount that includes any remaining environmental damage. Similarly, the case of positive externality is represented in red in Figure 1- [III]. Pigou's (1920) policy implication is that the positive externality will subsidise the buyer of the goods, providing an incentive to purchase more goods.

Coase (1960) first proposes a theory to solve problems of externalities and the provision of public goods. He states, "It is always possible to modify by transactions on the market the initial legal delimitation of rights. And, of course, if such market transactions are costless, such a rearrangement of rights will always take place if it would lead to an increase in the value of production" (Coase 1960, p.15). Essentially, the Coase theorem asserts that in the absence of transactions costs, the capacity to offer other agents inducements to change their behaviour provides the functional equivalent of the missing market(s) in external effects. Thus, the circumstances under which Coase's theorem is operable is somewhat limited.

Coase's (1960) analysis is illustrated in Example 1.1, a resort and a paper mill, which may operate on a certain lake or which may relocate. The resort would be willing to pay the paper mill up to  $\alpha_2 - \alpha_1$ , to operate elsewhere, and the paper mill would be willing to do so for any payment of at least  $\beta_2 - \beta_1$ . Therefore, the resort can profitably (for both firms) induce the paper mill to relocate if and only if  $\alpha_2 + \beta_1 \geq \alpha_1 + \beta_2$ , which is the necessary and sufficient condition for relocation of the paper mill to be efficient. In Example 1.1, the actions of the paper mill operator affect the payoffs of the resort owner but not vice versa, so only one market is missing, the market for control of the paper mill's pollution.

Example 1.1: The paper mill and resort problem

		The paper mill (PM)	
		On the lake ( $j = 1$ )	Elsewhere ( $j = 2$ )
	$\beta_2 > \beta_1$ $\alpha_2 > \alpha_1$ $\alpha_1 > \alpha_0$		
The resort (R)	On the lake ( $i = 1$ )	$PM\ Profit = \beta_2$ $R\ Profit = \alpha_0$	$PM\ Profit = \beta_1$ $R\ Profit = \alpha_2$
	Elsewhere ( $i = 2$ )	$PM\ Profit = \beta_2$ $R\ Profit = \alpha_1$	$PM\ Profit = \beta_1$ $R\ Profit = \alpha_1$

Source: Bigelow (1993) p. 2.

The Coase theorem is only derived when only one market is missing. Bigelow (1993) modifies the Coase theorem to a scenario where more than one market is missing. He introduces side payments using a bimatrix game involving externalities, and the resulting equilibrium is called an induced equilibrium. When induced equilibria exist, they weakly Pareto-dominate the Nash equilibrium of the original game without side payments. When, because of externalities, one market is missing, an induced equilibrium always exists, is uniquely valued, and is Pareto-efficient. When more than one market is missing, induced equilibrium may not exist, may be Pareto-inefficient, and may be Pareto ranked. Bigelow (1993) suggests that it is the possibility that one agent could "buy out" the other. The buying agent would then internalize all the costs and benefits and she (he) would have an incentive to bring about an efficient outcome.

Missing market phenomenon can be caused by simple demand shifts, or the effects of timing on the market. Similarly, missing markets can be attributed to much more complex factors. One example is the electric car. Customers may wish to purchase these cars, but are hesitant to do so because of a lack of information about their long-term performance, as well as the availability of charging stations. Suppliers, on the other hand, are hesitant to produce these cars because customers are still unsure about the future of these vehicles. This lack of coordination and communication has created a missing market in the car industry. A missing market can also be caused by lack of technology to produce a good, or by a lack of information. Moreover, people impacted by air and water pollution (negative externalities) may demand the service of remediation

of the current pollution levels. A missing market exists in this example because of the difficulty in identifying who is responsible for the pollution. Stiglitz et al. (2000) categorize market failures into six groups — failure of competition, public goods, externalities, incomplete markets, information asymmetries and unemployment and other macroeconomic disturbance. Morey (2015) identifies six categories of market failure — common property, externalities, public commodities, excess market power, lack of markets, and distortions in capital markets.

Using a health insurance market as an example, Frakt (2011) categorizes the reasons for market failures into three groups—failure of competition, incomplete markets and information asymmetries. According to Frakt (2011), in the sphere of health insurance, the competition can never be perfect. Insurance policies are not identical. Thus, one can think of each policy as a unique product with its own degree of monopoly power. However, there are lots of proposed solutions to this, such as: antitrust enforcement, competition across state lines, deregulation at various levels, including elimination of minimum benefits standards, and so on. Frakt (2011) defines an incomplete market as being one where the consumers would be willing to pay more than the cost of a good or service, but it is not provided. In the US, the market for prescription drug insurance for Medicare beneficiaries was glaringly incomplete until 2006. The market for hospital and physician services insurance for the elderly was also incomplete until 1996. Government responses in all these cases (banning medical underwriting, encouraging exchanges, offering Medicare) are designed to address the incompleteness of health insurance markets. The third reason Frakt (2011) identifies as a cause of market failure is information asymmetry. Information asymmetry exists when one participant in a market transaction knows more than another in ways that pertain to cost or price. Such asymmetries abound in health insurance. Individuals have private knowledge about expected utilization that insurers lack, leading to adverse selection. Individuals also may know more about their personal value of the insured services than do insurers, leading to moral hazard. Providers know more than insurers about cost and quality, leading to inefficient levels of reimbursement. Private entities are likely to be just as capable of limiting moral hazard (e.g., by cost sharing or care management) and discovering cost and quality information (e.g., combating fraud) as government. Private entities can also address the degree of selection into their products, but not without exacerbating the problem of incomplete markets (e.g., not offering services that attract high risk enrollees or attempting to shed high risks).

Furman (2008) highlights three specific reasons for market failures<sup>5</sup>. He states that laws/regulations can impact upon the formation of markets. Laws or regulations, either deliberately or inadvertently, can favour certain products or financial instruments, making it harder for alternative and potentially more attractive markets to develop. One example, according to a 2008 Hamilton Project paper by Caplin, Cunningham, Engler, and Pollock (2008) is the way that householders finance their house purchases. Caplin et al. (2008) argue that an attractive way to finance a house is through “shared-equity mortgages,” a product that would allow families to mitigate some of the financial risk associated with buying a home by having to repay the bank less money in the event that the house falls in value. But shared-equity mortgages are virtually nonexistent today, in part because they have a hard time competing against the tax benefits that are reserved exclusively for traditional, pure-debt mortgages. Caplin et al. (2008) propose levelling the playing field in the mortgage market by allowing tax deductions for shared-equity mortgages, and other regulatory reforms that they believe would allow the private market to alleviate some of the risks of home ownership.

Second, Furman (2008) states that market failures could impede the creation of a market. One classic example of this scenario in insurance markets is “adverse selection”, a phenomenon that occurs when individuals know more about their own risks than the insurer does. Those individuals with the lowest level of risk may decide it is not worth buying insurance. When they drop out, people with higher levels of risk remain in the pool and drive up insurance prices, leading even more people to drop out and driving prices still higher. The result can be to eliminate potentially

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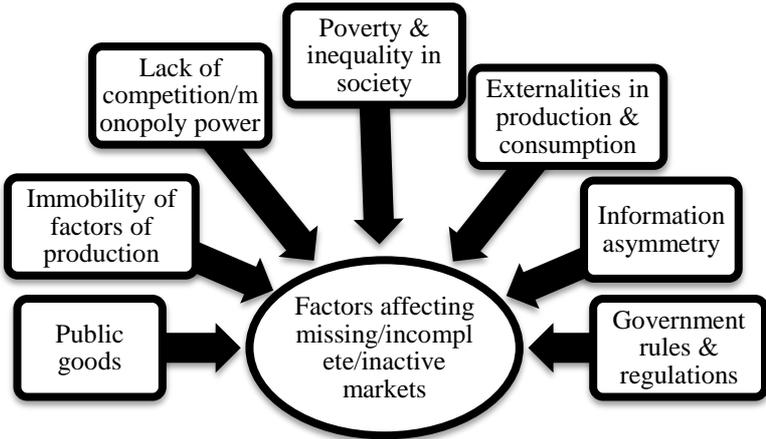
<sup>5</sup> ‘Missing markets: why markets that can reduce risks are missing and what can be done about it’. Discussion paper released by The Hamilton Project.

valuable markets. Adverse selection is a major issue in health insurance, but it is one that can potentially be overcome with the right government policies. For example, another Hamilton Project discussion paper by Emanuel and Fuchs (2007) proposes giving individuals risk-adjusted vouchers to buy health insurance from private firms, a process that would enable private market competition to focus on improving quality rather than just attracting the healthiest workers.

Third, behavioural obstacles might impede the creation of valuable markets. This problem may particularly afflict markets designed to reduce risks and provide financial services, since people may have predictable biases that lead them to avoid purchasing particular products. Gale et al. (2006) identify behavioural biases as being another impediment to the development of the market for lifetime income products. Individuals may be reluctant to turn a large sum of money into a series of smaller monthly payouts, despite the many benefits of this system. One way to help overcome these behavioural obstacles is through institutional mechanisms that default people into lifetime income payments, and through inertial decision-making, encouraging them to stay with the product. In conclusion, market-based or market-like solutions can be an attractive way to help solve a number of social problems and reduce the risks faced by individuals and communities. In some cases, this is just a matter of eliminating the obstacles to these markets. But in many other cases, market failures and behavioural obstacles make a “free-market” solution untenable, leaving a critical role for an effective government to help create the conditions for sound markets to flourish. Market-based solutions are a useful complement to the traditional, critical role of an effective government in fostering broad-based economic growth and economic security.

Many economists consider that information asymmetry is a major source of market failures as it affects how individuals assess the quality of goods and services available in the market place (Akerlof, 1970; Spence, 1976; Stiglitz, 2000). However, it is observed that asymmetric information also creates the conditions for entrepreneurs to search for new business opportunities, leading them to find ways to acquire ‘more and more accurate and complete mutual knowledge of potential demand and supply attitudes’ (Kirzner, 1997). Therefore, Barbaroux (2014) claims that information asymmetry plays a dual role as it raises transaction costs and generates market failures but at the same time, creates market opportunities, providing incentives to develop innovations through the creation of new ventures. Figure 2 depicts the factors affecting the missing market concept in generic form.

Figure 2: Summary of factors affecting missing markets (generic case)



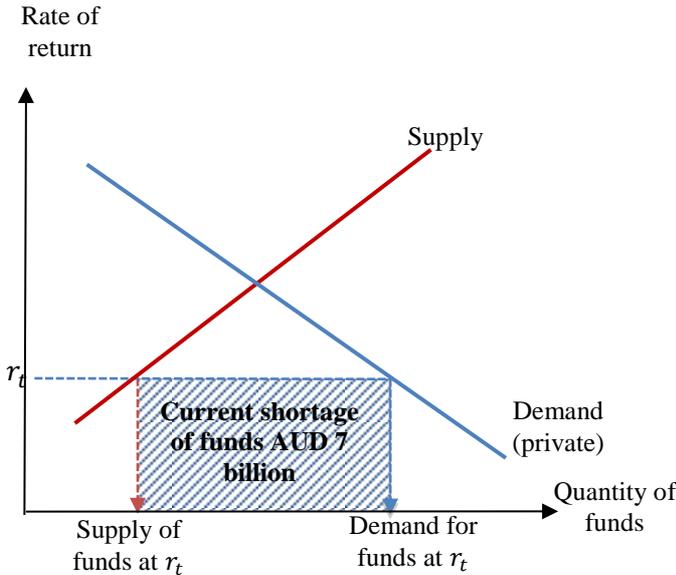
3. SOCIAL HOUSING FINANCE AS A MISSING OR INCOMPLETE MARKET

As mentioned, it is estimated that around AUD7 billion of investment is needed annually to address the social housing shortage. The national and state governments, given their budgetary challenges, will not be in a position to meet this funding need by themselves. Hence, there is an urgent need

for private sector institutional investment. As also mentioned, unfortunately at this stage, just a pittance is provided by the institutional investor sector (Earl, 2014).

Hence, the social housing finance market itself is missing or incomplete. There is a huge imbalance between the supply of and demand for social housing funds which can be represented by Figure 3 below. However, the estimated amount of AUD 7 billion could be even more if we account for the social demand. It is unclear whether the models and funding solutions discussed in the literature account for both private and social demand (accounting for possible externalities) or just for private demand only.

Figure 3: Supply of and demand for funds



A long-standing challenge in enabling affordable housing is to establish a sufficiently large and continuous stream of funding; which would ideally be predictable, sustainable and responsive in catering for the rising demand. It is well understood that government alone cannot cope up with the increasing demand for social housing financing. Hence, there is an urgent need to look at innovative ways to fund this need with the collaboration of private institutional investors. The AHURI research paper “Financing rental housing through institutional investment” outlines some key barriers to slowing down the private institutional investment in affordable housing in Australia (see Table 1 below).

Table 1: Key barriers to entry for the private institutional investors

Scale	Institutional investors require scale to justify the costs associated with new investment, as well as their need to diversify the portfolio risk.
Return	Investors require secure and predictable returns corresponding with similar investment classes and risk profiles.
Liquidity	While both retail investors and institutional investors are likely to hold investments for a long time span, regulation of many of these funds requires that only a certain proportion of the total portfolio be invested in assets that are illiquid, as institutional investors require the ability to disinvest quickly.
Investor awareness	As property exposure can be gained through other investment assets such as bank shares, investors should be convinced of and alerted to opportunities in affordable

	housing investment.
Long-term consistent policy settings	Stable, robust and consistent government commitment in order to manage and assess risks and returns.
Project pipelines	It may be necessary for affordable housing investment to be pre-planned and long-term, to ensure that it is worthwhile for the private sector to invest in expertise and capability in this asset class.
Governance	Institutional investors may be keen to see independent governance structures and improved transparency and reporting, to ensure decisions are made in the interests of maximizing the value of the property portfolio and the associated income streams.
Capacity	While the community housing sector has expanded significantly, it still remains only one quarter the size of the public housing system.

Source: AHURI March 2013, 'Financing rental housing through institutional investment' cited in Affordable Housing Working Group: Issues Paper by Council on Federal Financial Relations

Opportunely, compared with overseas jurisdictions including the United Kingdom and the United States, the scale and sophistication of social and affordable housing finance in Australia is limited. Australia's largest non-profit community housing providers (CHPs) each typically own or manage around 2,000-3,000 dwellings. On the supply side of the social housing finance market in Australia, Table 2 below provides a summary of the involvement of some institutional investors.

Table 2: Social housing fund supply in Australia

Institutional Investor	Potential social housing investment
Westpac Institutional Bank	<ul style="list-style-type: none"> <li>Announced a \$61 million loan facility to NSW community housing provider in 2013, St George Community Housing Ltd, for the development of 275 new dwellings.</li> <li>Further, they announced in 2013, that it would commit \$2 billion in lending to social and affordable housing by 2017.</li> </ul>
Australian super funds (Total of \$1.5 trillion in capital)	<ul style="list-style-type: none"> <li>\$200 billion in investment in social housing in total.</li> <li>The \$32 billion superannuation fund Health Employees Superannuation Trust Australia (HESTA) has made a \$30 million investment in Horizon Housing, a community housing provider in Queensland, which is managed by Social Ventures Australia.</li> <li>AustralianSuper plans to invest \$1 billion in residential master-planned community projects.</li> <li>Industry superannuation fund Hostplus is investing in a \$400 million joint venture with Villawood on the Gold Coast.</li> </ul>
The Ashwood Chadstone Gateway project in Victoria	<ul style="list-style-type: none"> <li>The largest non-profit housing development in Victoria, valued at around \$140 million. The project is a mix of 210 social housing units, 72 private dwellings, and a multi-function space which is</li> </ul>

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Victoria, 20-unit building, 'Nightingale,' in Brunswick by Breathe Architects	• now used for a social enterprise to provide employment training to local youth. • To reduce costs on the development, Breathe are cutting out any marketing, sales, and real estate agent costs. The units will also not have individual laundries, or any basement car parking.
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Source: Compiled through the use of various online newspapers

In an attempt to provide finance for social housing, there have been a number of models which have been tried or proposed. These models have often involved collaborations between the private sector and governments, given that institutional investment in Australia's social housing is reported at less than 1% (Earl, 2014, in Kraatz, 2015). Yates (1999) states that, in the extant literature, the role of government in social housing financing is emphasized by two factors; efficiency and equity. Markets are subjected to fail due to imperfections such as asymmetric information between buyers and sellers, and to correct these inefficiencies, governments can interfere and ensure transparency. While restricted funding is not the only contributor to the chronic shortfall in social and affordable housing stock, improved access to capital is an important piece of the puzzle in addressing the challenge. There is tremendous potential to use private sector financing, including institutional capital, to help bridge the gap in supply. There are several challenges in attracting private capital; 1) less economies of scale for providers and a perception of increased credit risk from institutional investors, limiting the ability for community housing providers to access low cost capital over longer terms. Institutional investors are seeking large-scale (greater than \$100m) transactions lending (or investing) to organisations with a recognised credit rating. 2) Rental yields are significantly below market returns, making it a less attractive investment. 3) Institutional investors are attracted to markets and assets with stable regulatory environments and reliable cash flows. Short term measures and inconsistent policy direction create uncertainty, making investors nervous and unlikely to invest in such a market.

These financing models are briefly discussed below.

### 3.1 *Housing loan/bond aggregators*

The housing bonds aggregator is a popular way of attracting greater private sector investment in affordable housing in Australia. Individual housing providers often find it difficult to attract finance for expansion as the loans they are seeking are either too small for institutional investors, or are not worthwhile for the housing provider.

In the U.K., in 1987 the Housing Finance Corporation (THFC) established an independent, specialist, not-for-profit organization that makes loans to regulated housing associations which provide affordable housing throughout the country. THFC funds itself through the issue of bonds to private investors and by borrowing from banks.

Moreover, two Australia superannuation funds, Cbus and Industry Super Australia (ISA), favour debt financing in the form of this method. They propose a bond aggregator model. This model is effective at bringing greater institutional investment into affordable housing. The Affordable Housing Corporation in Australia helps to overcome collective action problems by assessing and aggregating funding proposals from affordable housing providers. Government credit support for bonds issued by the Corporation helps to address the risk/return challenge of affordable housing investment.

### 3.2 *Australian housing finance aggregator (AHFA)*

Similar to the housing bond aggregator, Social Ventures Australia (SVA) and the Macquarie Group propose a housing finance aggregator that would enable social and affordable housing providers to access lower cost debt for longer terms, unlocking desperately needed 'fit-for-purpose' funding into the sector. They state that this model is a viable solution that, with limited government support,

could greatly contribute to increasing the stock of social and affordable housing across the country. A housing finance aggregator has been successfully implemented in the U.K. and has been described as an effective and practical financing solution. The model would allow housing providers to access funding at lower interest rates and for longer terms.

It is clear that there is strong interest in the private sector investing in social and affordable housing if the right conditions and regulatory environment are in place. Informed by the experience internationally, notably in the U.K., the model proposed by SVA and the Macquarie Group addresses two cost types (financing costs and financing terms) that could contribute to a better flow of capital into the sector. A not for profit entity, the Australian Housing Finance Aggregator (AHFA) would coordinate with social and affordable housing providers (including community housing providers), and others to determine the amount of debt they seek to raise.<sup>6</sup> This model would aggregate these funding needs and source from superannuation funds and other institutional investors. The funds would be loaned to the relevant social and affordable housing providers in return for ongoing interest payments and the return of capital at the end of the loan life.

### *3.3 Housing trusts*

Housing trusts are proposed to overcome the current difficulties with scale, and the geographical diversity of assets required to attract large-scale investors into the provision of affordable housing. The establishment of a housing trust would allow for housing assets to be aggregated at an individual state or territory level, across several states and territories or even nationally by community, private sector or government providers of affordable housing. The trust structure also provides a vehicle for the aggregation of equity investment and allows investors to either purchase units in the income stream from the trust, or the capital assets of the trust, or both, depending on their investment profile. A housing trust structure would also allow the recycling of capital by governments, as well as being a means to access additional capital through the gearing of the assets held by the trust. Further, it facilitates the flexibility of having the housing assets of the trust managed by government, the community sector or the private sector. Once established, housing providers potentially transfer stock into the trust in return for the units of equivalent value to the transferred housing stock.

### *3.4 Impact investing models including social impact bonds*

Impact investing has recently gained prominence as a tool for governments and service providers to creatively explore improving both social outcomes and the economic efficiency of the investment. Impact investing models allow investors to pursue opportunities that provide both social and financing returns through either direct investment in not-for-profit or social enterprises, or through alternative intermediaries and social impact bonds. Social impact investment offers an opportunity to bring together capital and expertise from the public, private and not-for-profit sectors to deliver better outcomes for the community. It is an investment with the expectation of a social and financing return by attaching a value to defined outcomes and measuring both the outcomes and financing returns achieved. The key features for a viable social impact investment include robust measurement, value for money, a service likely to achieve social outcomes and appropriate sharing of risk and returns. Social impact bonds involve the public sector issuing a contract with non-government providers, in which a commitment is made to pay for improved social outcomes that result in public sector savings. The homelessness social impact bond project was launched in London in November 2012. It was designed to improve outcomes for persistent rough sleepers, a sample population of 830. This social impact bond helps the cohort access appropriate services via personalised recovery pathways to sustainable outcomes. Two participating organizations each

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<sup>6</sup> The proposed Australian housing finance aggregator is expected to carry out credit assessments on appropriate housing providers, issue debt instruments of different maturities to institutional investors, liaise with regulatory bodies to ensure improved governance and regulation of the social and affordable housing sector and ensure compliance to guarantee that housing providers are able to meet their debt obligations.

target half of the cohort, both utilizing a different financing structure. The first organization established a special purpose vehicle which holds the risk, while the second organization funds interventions through social investors' unsecured loans, whereby the risk is shared across parties. Both participating organizations invested their own funds. There are five outcomes for the two organizations to achieve, which include reducing rough sleeping, stable accommodation, reconnection, employment and health. Each of the five outcomes is allocated a different proportion of the overall funding available, and evidence must be provided before payment can occur across the individual outcomes.

### *3.5 Infrastructure bonds to finance social housing*

Bonds are a straightforward, long-term financial instrument. Affordable housing supply bonds are designed to reduce the cost of funding available for community housing providers, which enhances their capacity to increase the supply of affordable rental housing. The bonds would be attractive to retail and institutional investors through a mix of tax incentives and government guarantees. The Affordable Housing Finance Corporation (AHFC) issues three types of housing supply bonds; 1) zero interest loan bonds worth \$200m per year – called “social housing growth bonds” providing zero interest long term loans to non-profit housing organisations, public housing authorities, and affordable housing developers (10% of bonds issued); 2) tax smart housing supply bonds – long term, fixed term, fixed interest bonds (6% return) with a tax incentive (no tax is paid on the return) to appeal to retail investors (20% of bonds); 3) AAA housing supply bonds – fixed interest (5% return), long term, AAA rated (government guaranteed) bonds to appeal to institutional investors such as superannuation funds (70% of bonds issued).

### *3.6 The consortium model*

This model is proposed by the Affordable Housing National Research Consortium, to entail a capped Commonwealth outlay subsidy to the states and territories, enabling the latter to borrow and acquire dwellings for rent to low to moderate income households at income related (i.e., below market) rents. Along this line, Macquarie Bank has proposed that it will pool retail equity investment for the acquisition of rental dwellings managed by a community housing organization. However, this method requires substantial government subsidy to deliver the required return to investors.

### *3.9 Various forms of tax benefits*

This incentive scheme entails special tax benefits directed at private landlord-investors who rented their dwellings on long leases to community housing organizations or other non-profit providers for a minimum period of time, with the benefits to be split between the investor and provider in the form of lower than market rents. Similar to the US scheme, this would (according to initial microsimulation modelling) target most of the benefit to landlords, providing lower cost rental dwellings, encouraging private investment to flow into that sub-market. It would tend to deliver most benefit to investors providing lower rent stock, encouraging private investment to flow into that sub-market.

### *3.10 Shared equity model*

This method enables institutional investors to buy an equity share in a mixed-value pool of dwellings spread widely across the states and territories. In this model, the private equity investors receive their return in the form of a share in the growing capital value of the dwellings. Joint Property Australia recently formed a unique model addressing Australia's growing housing affordability needs by enabling the purchase of a property via a structure of shared ownership. Ownership is shared with second tier investors made up of either family, friends, work colleagues or investors.

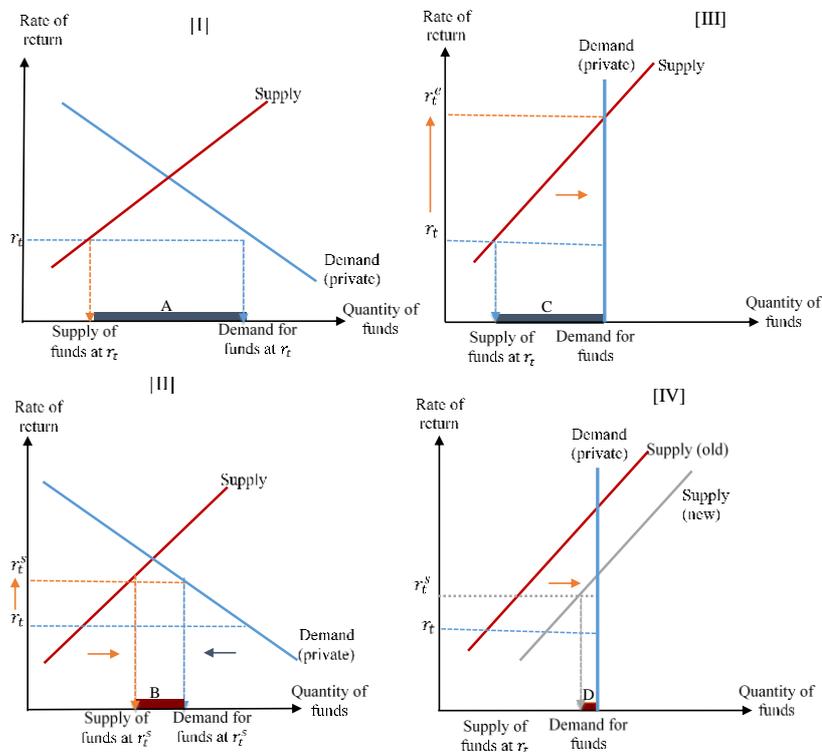
### 3.12 Superannuation funds

Australia’s not-for-profit superannuation sector has \$2.5 trillion funds that could be used as a potential investment in affordable housing nation wide with the establishment of government backed investment products. Industry Super Australia (ISA) said that tapping into Australia’s huge retirement savings pool could provide a reliable long-term funding source for the supply of social and affordable housing. They suggest the creation of government supported investment bonds that potential institutional investors such as superannuation funds would be interested in buying. These funds would receive a market rate of return, most likely through fixed interest payments, and the capital invested would be directed to third-party housing providers. Moreover, ISA proposes a direct equity investment model that could facilitate a pipeline of mixed housing developments using superannuation funds. They claim that this model focuses on increasing returns and creating a project pipeline by the “density recycling model (DRuM)” of existing development and recycling the proceeds. Another superannuation fund in Australia, Cbus, together with ISA proposes a debt financing of social housing in the form of a bond aggregator model (BAM). Furthermore, First State Super sees a role for a new “innovative” clearinghouse, and Christian Super suggests a “pathway to ownership” model that attempts to address the structure of the underlying investment and social program.

In Australia, most housing associations have bank financing at three to five years and as a result are constantly refinancing, which can make pricing unattractive. Thus, financing via superannuation funds can be seen as a promising alternative, as it has the ability to take a long-term view compared to the banks, but also earn an appropriate return. However, these models need to be supported by some degree of government support (e.g., potential land grants), at least in the initial stages as the market builds up scale and credibility.

## 4. CONCLUSION

Figure 4: Supply and demand for social housing finance



*Note:* Figure [I] shows a shortage of funds of \$A billion at a rate of return  $r_t$ . Figure [II] shows a shortage of funds of \$B billion at a rate of return  $r_t^s$ , where  $A > B$  and  $r_t^s > r_t$ . When the rate of return for the supply of funds increases, the shortage of funds decreases. Figure [III] shows a shortage of funds of \$C billion at a rate of return  $r_t$  accounting for the social demand and thereby assuming the demand is inelastic. Figure [IV] shows a shortage of funds of \$D billion at a rate of return  $r_t^s$ , where  $C > D$  and  $r_t^s > r_t$ . Comparing Figure [III] and Figure [IV] it can be seen that the equilibrium is set at a much lower level, by shifting the supply curve which makes the funds affordable to the investors.

We have shown in our review of the literature that there is a huge funding gap for social housing, and hence, there is an incomplete or missing market in social finance in Australia. Within the context of our demand and supply model, as shown in Figure 4, this is a situation where the return on funds is below the equilibrium, and therefore the demand for funds is far more than the supply of funds. If the shortage of funds is to be eliminated, there should be a movement towards equilibrium, which would require the return on funds invested in social housing to go up, as illustrated in Diagrams [I] and [II] as this creates an increase in the quantity of funds supplied while also decreasing the quantity of funds demanded. However, it is not clear whether the decrease in quantity of funds can actually happen since society considers social housing to be a necessity. If this is the case, this implies that the demand for social housing funds is actually more inelastic (a more vertical demand curve), as illustrated in Diagram [III]. In this scenario, as returns are increased towards equilibrium, the shortage is eliminated through the increase in quantity of funds supplied, but not by a simultaneous decrease in quantity of funds demanded. This would mean that suppliers of funds, i.e. institutional investors, would need to provide much higher funding, as indicated in Diagram [IV]. The challenge therefore is to reveal to what extent institutional investors are willing and able to provide this additional funding if indeed returns from social housing investments increase. At this stage, the existing literature does not provide a clear answer to this issue.

There is the more basic issue as to whether, in fact, increased financial returns on social housing can actually be achieved or accomplished. Again, the extant literature fails to provide any solid empirical evidence to address this issue. Existing studies have used traditional (net present value or internal rate of returns) models of financial evaluation and their results show that the returns on social housing are below those required by institutional investors. There is therefore a need for studies that would explore new models of evaluating the financial returns of social housing in order to obtain a clear picture of returns on social housing investment. Now, if it is not possible to obtain very high returns on social housing investment, then the challenge is how can this funding gap be eliminated, even if returns on social housing investment are relatively low? In the context of Figure 4, this would mean that the supply curve for social housing finance should shift to the right (downwards) as indicated in Diagram [IV]. Does this mean that suppliers of funds should still find it profitable to invest even if returns on social housing are relatively low? How can this be possible? This might mean that these providers of funds should be able to supply funding at a much lower cost (below market), which implies that government subsidies or guarantees are needed so that the risk facing them also diminishes.

However, at this stage, it is very difficult to provide a clear answer as to which course of action policymakers and other stakeholders can or should undertake. This is because there are a number of fundamental and important questions which are still to be answered by more systematic, scientifically and empirically grounded research within the context of the supply and demand model that we have presented. These questions are:

- RQ1: What is actually the shape (or elasticity) of the demand and supply curves for social housing? How elastic or inelastic (how vertical or horizontal) are they?
- RQ2: What factors or variables affect the demand and supply of funds/credit?
- RQ3: How can externalities (negative and positive) be minimised?

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