Case study evaluation: new approaches to delivering shared equity opportunities in Western Australia

Technical Appendix

authored by

AHURI

with

PricewaterhouseCoopers

December 2013

AHURI
Australian Housing and Urban Research Institute

CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDIX 1: RESEARCH SYNTHESIS ON SHARED EQUITY HOME OWNERSHIP

Introduction

The past decade has witnessed a growing level of concern over the affordability of Australian housing. Shared equity schemes are one option for addressing these concerns. These initiatives have the potential to facilitate home ownership for those households who may have difficulty purchasing a home through the open market (AHURI 2010). In shared equity schemes, the consumer shares the capital cost of purchasing a home with an equity partner (either a financial institution or a government backed provider) in return for a share of any home price appreciation that occurs (Pinnegar et al. 2009, p.1).

This paper provides an overview of the various shared equity arrangements as they apply in Australia, the UK and the USA, highlighting the benefits and challenges and the preconditions for expanding the sector.

Background

Home ownership is the most common and most desired form of housing in Australia. There are a number of reasons home ownership is preferred over other tenures. In Australia, the private rental sector is characterised by relatively insecure occupancy compared to home ownership (Hulse et al. 2011). Home ownership provides its occupants with long-term security of tenure so long as they meet their mortgage repayments. Home ownership also provides taxation advantages: for example, capital gain on the family home is not taxed or preferentially treated and the receipt of value for living mortgage-free in the property (called 'imputed rent') is also tax free (Mowbray & Warren 2007). Home ownership is a major way of accumulating wealth.

However, affordability is a major barrier to home ownership. This concern has been manifest in escalating property values especially, but not exclusively, in the capital cities. A growing gap between house prices and household capacity to pay (as measured by household incomes) has been one of the biggest threats to the performance of the national economy over this time. While the average Australian home cost four times the average Australian household annual income in 1996, this had risen to seven times in 2006 (ALP 2007). Moreover, this decline in affordability generally has been accompanied by increasingly limited housing options for lower-income working households (Pinnegar et al. 2008).

The statistics on home ownership reflect this story. The 2011 ABS Census recorded that 67 per cent of Australian households are owner occupiers. The number of households who own their home outright has fallen since 1996 (Census of Population and Housing 2015.0 1996) from 41 per cent to 32 per cent, while the number of households who own their home with a mortgage has increased from 26 per cent to 34.9 per cent (ABS Census QuickStats 2011).

Indigenous households are under-represented in home ownership. In 2011, 36 per cent of Indigenous households were home owners, compared with 68 per cent of non-Indigenous home owners (ABS 2012). The lower level of Indigenous home ownership follows from lower income levels, geographical factors such as living in rural and remote areas, and land tenure—a number of Indigenous Australians live on land that is 'inalienable' freehold and which cannot be put forward as security to lenders (Mowbray & Warren 2007).

Despite growing recognition of the impacts of declining housing affordability, national housing policy has remained in stasis over the past decade, with the exception of the introduction of First Home Owner Grants in July 2000. In the absence of federal interest, many state and territory housing agencies have initiated alternative approaches to assist lower-income Australian households into home ownership, including the use of shared equity models (Pinnegar et al. 2008). Shared equity approaches also have attracted the attention of financial institutions seeking to develop new products and new markets. As a result, shared equity has emerged as a key response to the housing affordability crisis, with interest being driven from both state/territory governments and the private sector (Pinnegar et al. 2008).

What is shared equity?

The essential feature of shared equity models is that the consumer shares the capital cost of purchasing a home with an equity partner, thereby permitting households to buy into a home with lower income or equity than would be required otherwise (Pinnegar et al. 2008, p.6).

Shared equity arrangements cover the range of products, schemes and initiatives which 'enable the division of the value of a dwelling between more than one legal entity' (Whitehead & Yates 2007, p.16). This umbrella term is used to encompass government-backed and private sector-led schemes based on arrangements whereby the purchaser enters into an agreement with a partner (either a financial institution or a government backed provider) to share the cost of purchasing a property.

Shared equity products have the potential for managing portfolio risks across the market, not just to those at the bottom end. Evidence suggests that many investors and home owners desire shared equity arrangements over currently available mortgage products (Diamond 2009). Thus, the concept of shared equity housing has not been limited to the low-income homebuyer, but has spread to all segments of the market, including homebuyers looking for needed and efficient financing and investors looking to capitalise on historic housing returns (Diamond 2009).

However, shared equity initiatives are generally focussed in enabling low- to moderate-income households to gain a foothold on the property ladder. This paper focuses on these types of initiatives. The reason for concentrating on the lower end of the market is that the costs to this group of not managing the risk are far greater—and the alternatives available to them are far fewer (Whitehead 2010). Examples of target groups include:

- Younger first time buyers (Pinnegar et al. 2008).
- Previous owners who aspire to re-enter home ownership (Pinnegar et al. 2008).
- Those seeking to buy for the first time at a later life stage (Pinnegar et al. 2008).
- Existing social housing tenants and eligible applicants who are unlikely to be allocated social housing may also be targeted (Pinnegar et al. 2008).
- Indigenous people who desire home ownership (see Crabtree et al. 2012).
- Key workers such as nurses (Key worker equity scheme 2008).

Shared equity models

Shared equity schemes take diverse forms and it is a complex sector for which it is difficult to provide a typology. Firstly, the shared equity home ownership sector is in flux; new models, or new permutations of older models, appear regularly (Davis 2010a). Secondly, there are significant differences in the way shared equity schemes

are implemented in different geographic locations—between different countries, states and even local councils. And thirdly, each individual shared equity scheme is comprised of a unique combination of features.

Distinguishing features

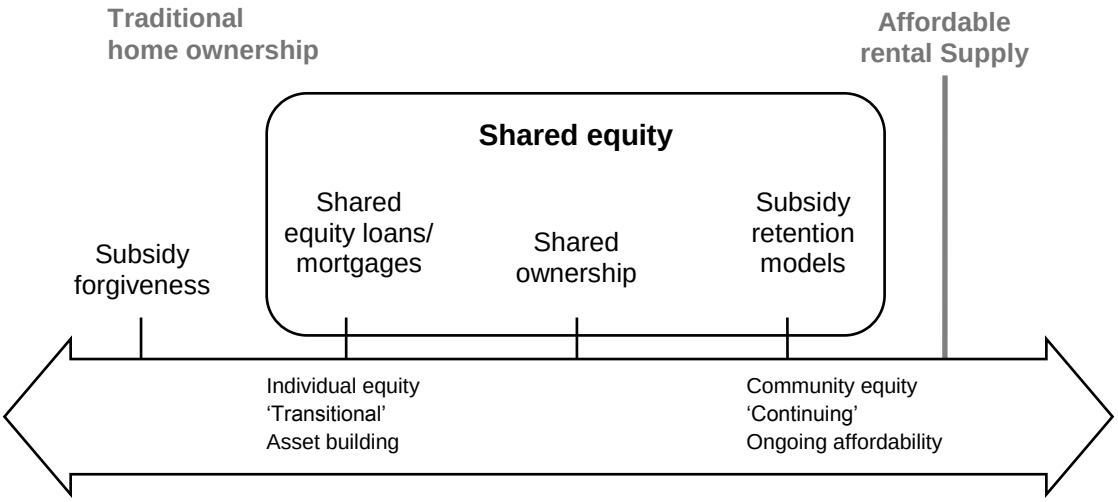
The main features that can differentiate between shared equity schemes are outlined below.

- *Rights and responsibilities*—How are these shared between the primary and secondary owner?
- *Expenditures*—How are these shared between the primary and secondary owner? For example, the majority of schemes require the primary owner to pay all the repairs and maintenance and other costs associated with ownership.
- *Risks*—How are risks shared? Risks are shared differently between the primary and secondary owners in different schemes. For example, in terms of current outgoings, some contracts include those that provide a minimum 'rental' return to the investor involving an interest charge on the proportion owned by the secondary owner. These compare to arrangements where all the benefits to the secondary owner lie in capital appreciation.
- *Investment returns*—At one extreme, there are schemes where both owners share any variation in house prices in proportion to capital values; those where the secondary owner only benefits from the capital appreciation and takes no downside risk; and those where there is an investor return built in so that the proportion of capital owned by the secondary owner increases over time to provide a near guaranteed return on their investment.
- *New build or existing stock*—Does the scheme incorporate new build or existing stock?
- *Government and private sector involvement*—Is the scheme led by the government? Or by the private sector (unsubsidised)?
- *Stewardship*—What are the arrangements for providing stewardship? In shared equity housing, a 'steward' retains an interest in the property, continuing to exercise a degree of control over how it is used, maintained and conveyed. The steward may be the municipality whose dollars/powers made the home affordable in the first place. More often, stewardship is assumed by a nongovernmental organisation or other nonprofit that performs important duties on the public's behalf. Stewardship duties include: monitoring and enforcing resale controls that keep the housing affordable; promoting sound maintenance; and intervening, if necessary, to prevent foreclosures (Davis 2010a).
- *Opportunity for full ownership*—Does the primary purchaser have the right to 'staircase' up to a full 100 per cent when they wish?
- *Transitional/individual vs. continuing/community arrangements*—Does the scheme aim to help consumers gain a foothold on the property ladder and facilitate asset accumulation by the purchaser ('transitional' arrangements where the gains follow the individual household rather than being retained in the property purchased); or does the scheme aim to protect affordable home ownership opportunities and supply into the future (subsidy retention or 'continuing' arrangements where the affordability in the housing stock is retained for future households).

Continuum of shared equity models

Pinnegar et al. (2009) put forward a way of mapping subsidised shared equity schemes along a continuum—from 'transitional'/'individual equity' schemes to 'continuing'/'community equity' schemes—in a diagram adapted from Jacobus and Lubell (2007). (See Figure A1).

Figure A1: Mapping shared equity schemes along a continuum



Source: adapted from Jacobus and Lubell 2007 as cited in Pinnegar et al. 2009, p.3

Individual or transitional models

At one end of the continuum are individual or transitional models, whereby gains follow the individual household that initially benefits from the scheme rather than being retained in the property purchased (Pinnegar et al. 2009, p.3). These aim to help consumers gain a foothold on the property ladder and facilitate asset accumulation by the purchaser (Pinnegar et al. 2009, p.18). Australia's government-backed schemes fall into this end of the continuum, geared towards providing individual households a step onto the property ladder.

Typical characteristics (Pinnegar et al. 2009, p.27):

- → focus is on access
- → lower/mid income households
- → promote staircasing
- → do not protect subsidy long-term
- → typically not tied to new housing supply.

Community or continuing models

At the other end of the continuum are community equity or continuing models, which protect affordable home ownership opportunities and preserve the supply into the future. In community equity schemes, the partner typically retains a greater proportion of equity, and ongoing interest, in the property. Subsidy is retained and equity gains to individual households limited through the use of predetermined price formulae or indices instead of being based upon open market values. Rather than the initial

subsidy dissipating if and when the household moves, the partner's ongoing interest ensures that affordability in that stock is retained for future households (Pinnegar et al. 2009, p.3). These models are well established in the USA, but have received little attention in Australia.

Typical characteristics (Pinnegar et al. 2009, p.27):

- focus on access plus ongoing affordability
- working lower income households
- promote stability
- protect subsidy in the long-term
- typically tied to new supply.

Three different types of shared equity are positioned along this continuum (Pinnegar et al. 2009, p.19).

Shared equity loans/mortgages

At the 'transitional' end, are shared equity loans and mortgages. These comprise a first mortgage taken out by the purchaser on a proportion of the full cost of the property, and a second, subordinate loan, set against the remaining portion of that cost.

Sometimes the secondary 'loan' may take the form of a covenant deed (as is the case in Western Australia's Keystart First Start loan). Either way, this second element, held by the partner, represents an equity share in the property for the loan period, which is recouped alongside a share in capital appreciation at the time of sale. Determination of return on the equity share is dependent on the nature of the contract. There is an expectation that purchasers will buy further equity tranches and progress to full ownership over time (Pinnegar et al. p.19).

Equity loans have been the predominant approach in Australia to date. They typically promote individual asset gain and provide less opportunity for protecting affordability over time than subsidy retention models, since any benefits of appreciation are extracted by the borrower and the lender (Pinnegar et al. p.19).

Shared ownership

In the middle of the continuum are shared ownership schemes. While the terms, 'shared ownership' and 'shared equity' are sometimes used interchangeably, Pinnegar et al. (2009, p.19) identify distinguishing characteristics:

- Shared ownership purchasers typically make repayments on the mortgage component, but pay rent on the remaining portion.
- In shared ownership, the partner has a stronger ongoing interest in the property, particularly at the time of selling on.
- In shared ownership, partners take a greater interest in the property at the time of sale, for example, in agreeing on the sale value, in having first right of refusal on buying the purchaser's share, and in determining the conditions of on-sale to any identified target groups.

Subsidy retention models

Shared equity mortgages (and to a lesser extent, shared ownership) offer approaches largely predicated on market growth as a means of assisting asset building by individual households. While subsidy retention models are based in principles of

equity sharing, they are predicated on the 'community's' share of the equity staying with the actual home, which acts to reduce the cost to the next buyer (Jacobus & Lubell 2007). Subsidy is retained by limiting the ability to sell properties on the 'open market', for example through applying pricing formulas. Such arrangements offer opportunities to provide and target new supply at households with lower incomes than would be required otherwise to support an equity loan, and to create a pool of lower cost home ownership opportunities for the long-term (Pinnegar et al. 2009, p.19).

Benefits of shared equity schemes

Literature related to shared equity schemes demonstrates a number of benefits for consumers, mortgage lenders and equity investors, and for policy development. As Davis states:

> It is not only the rewards of home ownership that are shared in [shared equity models], but the rights, responsibilities and risks of home ownership as well. It is not only affordability that is protected by these unconventional models of tenure but housing quality and home owner security as well (Davis 2010a, p.260).

The benefits for different stakeholder groups are identified below:

For consumers

- According to Whitehead and Yates (2007) shared equity provides the only way for some consumers to become owner occupiers and to access higher valued, larger properties.
- Research by Pinnegar et al. (2008; 2009) amongst existing consumers of shared equity schemes in Western Australia, South Australia and Northern Territory found considerable satisfaction and value in enabling consumers to purchase through the open market. Schemes had enabled consumers to purchase housing suitable to their household needs, although many had had to move out to areas where prices were more affordable.
- Compared to conventional mortgage arrangements, shared equity can enhance affordability for homebuyers by reducing both deposit requirements costs (Pinnegar et al. 2009) and repayments (Whitehead & Yates 2007).
- The mortgage taken out by consumers of shared equity schemes is typically less than in the normal market, meaning there will be less exposure to the risks of high mortgage borrowing (Bramley & Dunmore 1996). Compared to conventional mortgage arrangements, shared equity can enhance affordability for home buyers by reducing both deposit requirements and ongoing housing costs (Pinnegar et al. 2009).
- Shared ownership takes many forms and these enable a range of ways of separating the rights and responsibilities associated with home ownership (Whitehead & Yates 2007). In particular, it provides a means of:
  - Varying the primary owner's expenditure in line with their financial situation.
  - Switching between the risks of debt (e.g. from interest rates rises) and equity financing (i.e. from variations in house prices).
  - Transferring some of the risks of house price volatility away from the primary owner.
- Housing market volatility and the risks associated with a particular dwelling can both be addressed through shared equity because these involve the transfer of

some of the commitment and therefore some of the impact of price change to another (usually known as the secondary) owner (Whitehead 2010). Managing portfolio risks is something that applies across the market, not just to those at the bottom end. The reason for concentrating on the lower end of the market is that the costs to this group of not managing the risk are far greater—and the alternatives available to them are far fewer (Whitehead 2010).

- In some cases, shared equity enables the possibility of equity release (Whitehead & Yates 2007).

For mortgage lenders and equity investors

- Shared equity offers the potential for mortgage lenders to expand into new markets and offer equity investors a more flexible opportunity to investment in residential real estate, other than through direct investment (Pinnegar et al. 2009).
- For equity investors, shared equity enables greater diversification through access to an asset that is not fully correlated with other investments and which is tradable and divisible (Whitehead & Yates 2007).
- For the mortgage and investment industries, shared equity provides an opportunity to expand into new markets and enables access to shared appreciation and other derivative products that can reduce the costs of financing (Whitehead & Yates 2007).

From a policy perspective

- From a policy perspective, shared equity offers the potential to widen home ownership (Bramley & Dunmore 1996) and can provide a means of leveraging in more, and more appropriate, forms of affordable housing (Pinnegar et al. 2008).
- Shared equity schemes can help extend or support the market for new housing building output (Bramley & Dunmore 1996).
- Shared equity schemes can provide government with the opportunity to lever in private finance either from individual households or capital markets to reduce the strain on limited housing assistance programs (Pinnegar et al. 2008)
- Shared equity schemes help governments to lever in private finance and to provide low subsidy and even no subsidy products to households facing cash flow constraints or concerned about housing risk; it also reduces the numbers of households in need in the rented sectors and potentially limits the government's long-term commitments to older households (Whitehead & Yates 2007).

Compared to the First Home Owners Grant

Research by Wood et al. (2003) used AHURI's Housing Market Microsimulation Model (AHURI-3M) to assess which tenants might be assisted into home ownership by the First Home Owners Grant (FHOG) or a shared equity scheme. The research found that:

- A shared equity scheme will have a greater impact on the home ownership rate than the FHOG, provided financial institutions are willing to take a high share of the equity in a house.
- A shared equity scheme is more likely to be taken up by lower income households than the FHOG.
- A shared equity scheme is less likely to simply bring forward home purchase decisions (AHURI 2003).

Challenges of shared equity

Whilst there are a number of benefits to shared equity schemes, some weaknesses or potential challenges include (Whitehead & Yates 2007; Pinnegar et al. 2008; 2009):

- Shared ownership products are inherently more complicated than traditional mortgage and leasehold approaches.
- Higher transaction costs
- Asymmetric information between the purchaser and provider of the shared equity product.
- Risks for consumers primarily arise from unanticipated changes in house prices and interest rates.
- Risks for investors mainly arise from the uncertainties associated with the scale and timing of returns from the financing instruments employed.
- The potential for post contractual difficulties—notably moral hazard in relation to the resale value of the dwelling.
- The likely thinness of resale market for products, which continue to be partially owned.
- The question of whether partial ownership undermines the perceived benefits to the owner-occupier who wants to feel that they have full ownership and control over their property (Whitehead & Yates 2007).
- Increases the risks associated with owner-occupation unless subsidy is enough offset these risk and/or instruments are modified to address the risks more effectively (Whitehead 2010).
- A shared equity mortgage requires three parties—a borrower, a lender and an equity provider. However, significant alliances between lenders and major property funds have yet to develop, meaning shared equity schemes are not provided in high volumes.
- There is limited appetite amongst private firms to hold the shared equity segment. Lenders accept credit risk, but may be uncomfortable with long-term exposure to property risk.

Perceptions of different models

As part of their research Pinnegar et al. (2009) held focus group discussions with potential consumers about two shared equity models—representing individual and community equity perspectives. The focus group participants expressed a clear preference for individual equity models rather than community equity models. According to Pinnegar et al. (2009) focus group participants consistently sought to balance the two leading motivations behind their aspirations for home ownership—a place of one's own and security on the one hand, and as a mechanism for asset accumulation on the other.

In terms of the community equity model, the involvement of a Trust or not-for-profit organisation; that it was tied to specific units/supply in new development and targeted towards lower income groups raised associations with social housing. For focus group participants, this failed to tap into implicit aspirations associated with being a home owner and meant that participants felt that this option was not what they would choose. Differentiation from the wider housing market reinforced this sense of 'other' and the idea that this was not the housing experience they were seeking to attain through home ownership.

The individual equity model was recognised by participants as providing a stepping stone to outright ownership. For many, a significant factor in their desire to enter home ownership was the understanding that it could be entirely theirs further down the line. Being able to select a property on the open market as a normal purchaser, rather than having to be tied to a particular product was central to the appeal of the individual equity model presented. In addition, participants valued the freedom offered to treat their homes bought under shared equity arrangements as other home owners in terms of being able to renovate, enhance and add value over time.

Shared equity in Australia

In the last few years, shared equity arrangements have seen significant growth in Australia. Shared equity models are being promoted in both the public and the private sector. Most states and territories now have schemes operating, although a number remain on a relatively modest scale. There is a lack of publicly available evidence on the effectiveness of these schemes.

Government-backed schemes

Australia's government-backed schemes are essentially designed as 'transitional' arrangements, geared towards providing a step onto the property ladder, rather than subsidy retention models (Pinnegar et al. 2009, p.21). Most states and territories have introduced shared equity initiatives to assist lower-income households in purchasing their first home (see Table A1).

In Australia, a key characteristic of government-backed shared equity schemes is that they are targeted: eligibility criteria are set, either on income levels with consideration of other liabilities or assets, maximum price limits on the property being purchased, or a combination of both. Crucially, the size of loans provided are determined, and limited, by applying affordability criteria (ensuring that purchasers are not stretched). This creates a fairly well defined window (but one that shifts in different economic and market contexts) in terms of eligible households and properties (Pinnegar et al. 2009).

Table A1: Government shared equity loan products/scheme, Australia

State	Provider	Shared equity products	Website
Western Australia	Keystart Home Loands	Good Start First Start Restart	www.keystart.com.au
South Australia	Home Start Finance	Breakthrough Equity Start	www.homestart.com.au
Northern Territory	Department of Housing	Home Build Access	http://www.housing.nt.gov.au/housing_choices/buy/homebuild_access
Queensland	Queensland Department of Housing	Pathways	http://www.qld.gov.au/housing/buying-owning-home/pathways-shared-equity-loan/
Tasmania	Housing Tasmania	Homeshare	www.homesharetas.com.au

Source: adapted from Pinnegar et al. 2009, p.20

More substantive engagement has occurred in jurisdictions where 'government-backed' but arms-length agencies, such as HomeStart in South Australia and Keystart in Western Australia, remain an integral part of local institutional and mortgage finance frameworks. In states and territories without these organisations, initiatives have been smaller in scale with respective Housing Departments typically taking the lead. Alongside these policy-directed initiatives, unsubsidised private sector-led shared equity initiatives have also emerged; however, the global financial crisis has slowed development in this area (Pinnegar et al. 2009, p.14).

Australian state/territory shared equity initiatives have adopted broadly consistent eligibility criteria to achieve a targeted approach. Most are based upon a range of parameters—maximum household income, maximum property value and maximum proportion of equity share that can be held by another partner (Pinnegar et al. 2009, p.48).

Private-led schemes

It was anticipated that private lenders might play an increasingly prominent role in the provision of shared equity schemes. Despite the arrival of Australia's first unsubsidised product in 2007 (Rismark's Equity Finance Mortgage), interest has remained cautious and the appetite for innovation limited. The impact of the subprime fallout in the US, credit crunch, and global recession on both financial and housing markets has further curtailed activity. It has acted to highlight that assumptions regarding risk sharing and market efficiencies need to be better understood rather than simply accepted (Pinnegar et al. 2009, p.2).

With the arrival of Rismark's EFM product, there was a degree of expectation that private-sector led products would help expand the reach of shared equity in the coming years. Indeed, late 2007 and early 2008 saw the EFM winning a number of awards: 'the most innovative lending product in 15 years' (InfoChoice 2007, quoted by Rismark on their website); and 'Best new product of the year' (Money Magazine 2007). Commenting on this success, Christopher Joye noted that 'we're [Rismark] proud to be Australia's shared equity pioneer' (Mortgage Professional Australia 2008, p.14). By 2008, two thousand mortgage brokers had been accredited to sell EFM nationally, but how this has translated into actual demand for the product to date is less clear (Pinnegar et al. 2009, p.70).

Shared equity in the UK

Shared ownership and shared equity products have been a part of UK housing policy for at least three decades (Whitehead 2010). Most recently, shared ownership and shared equity products have been used as a means of providing shallow subsidy to increase home ownership rates by enabling marginal purchasers to buy as house prices rose faster than incomes and more households were excluded (NAO 2006 in Whitehead 2010, p.2).

While there have been many different versions over the years, government policy has concentrated on two core models:

- Shared ownership where the purchaser buys a proportion of the property with a traditional mortgage, while the other portion is owned by a social landlord who receives rent on this element.
- Shared equity where the purchaser buys 100 per cent of the property but obtains an equity loan to cover part of the value.

Shared ownership has only been available on designated new and rehabilitated properties while originally shared equity loans were available mainly for existing units. This has now changed so even shared equity loans are also almost entirely for new dwellings. In both cases purchasers may increase or 'staircase' their ownership to 100 per cent. Both schemes reduce initial outgoings and, at least in principle, the deposit required (Whitehead 2010, p.2).

A rather different strand of shared ownership/shared equity, which has been available for even longer, is that which aims to provide affordable housing into perpetuity. The purchaser is allowed to buy only a proportion of the property—keeping the land element, or simply a proportion of the value, in social ownership. This model includes Community Land Trusts and some forms of co-operatives as well as low-cost home ownership for older people. At the other extreme are short-term schemes that address the problems of unsold properties when the housing market turns down. In the current recession this approach is reflected in HomeBuy Direct (a shared equity product part-funded by the Government and part by the developer), as well as purely market-based schemes put forward by developers (Burgess et al. 2009 in Whitehead 2010, p.2).

The core policy objective of shared ownership/shared equity programs has been to extend owner-occupation to those who otherwise could not achieve it, by overcoming access and affordability problems in early years. This approach increases the risks associated with owner-occupation unless subsidy is enough to offset these risks and/or instruments are modified to address the risks more effectively (Whitehead 2010, p.2).

Whitehead (2010) concludes that current shared ownership/shared equity products have been both relatively poorly designed and poorly targeted. In particular their value as risk management tools both for consumers and producers has been underestimated (Whitehead 2010, p.13). Evidence suggests there are market and regulatory failures which have made it difficult to develop market-based products to any scale.

Key areas for reform include: a simplified, standardised product; re-enabling shared equity on existing homes; more transparent regulation and subsidy; and the development of a better resale market for shared ownership and shared equity products (Whitehead 2010, p.1).

Evidence on UK shared equity schemes

Low-cost Initiative for First Time Buyers (LIFT) (Scotland)

LIFT aims to help people on low to moderate incomes to buy a home, where this is sustainable for them. It includes shared ownership and shared equity schemes (Scott et al 2011).

- New Supply Shared Equity (NSSE) scheme (formerly Homestake) was launched 2005. It allows Registered Social Landlords (RSL) to build or buy new homes for sale on a shared equity basis. This means that purchasers can (generally) buy a majority stake of the equity, depending on their income. The remaining equity is held by the Scottish Government. The purchaser owns the property outright, but the interests of the Scottish Government are secured by a mortgage (or standard security) on the property. There are three types of NSSE schemes:
  - RSLs build new properties for sale on a shared equity basis;
  - RSLs purchase properties from private developers (at an appropriate discount) for onward shared equity sale; and

- RSLs develop new properties for sale on a shared equity basis to existing owners whose homes are scheduled for demolition.

→ The Open Market Shared Equity Pilot (OMSEP), set up in 2005, operates on the same principles as the NSSE. It allows eligible purchasers to acquire a property on the open market rather than through an RSL's new built properties. The scheme is administered locally by RSL's. Scottish Ministers hold the equity stake, but the RSLs enter into an agreement to enable them to act for Scottish Ministers. Owners then enter into an agreement with Scottish Ministers.

The Scottish Government commissioned an evaluation of the LIFT schemes in 2010 and the findings are reported in Scott et al. (2011).

The evaluation found the following:

→ Between 2005/06 and 2009/10, a total of 7268 properties were provided through LIFT. Almost half (44%) were Open Market Shared Equity Pilot (OMSEP) properties; a third were New Supply Shared Equity (NSSE) properties; and smaller proportions were grants for owner occupation and shared ownership.

→ Satisfaction with LIFT—OMSEP and NSSE generally supported people into positive, sustainable housing situations.

→ Meeting long-term housing needs—Most OMSEP, NSSE and shared ownership purchasers see LIFT as a medium to long-term housing solution.

→ Meeting particular housing needs—OMSEP significantly contributed to meeting the housing needs of people with disabilities.

→ Mobility—LIFT purchasers are experiencing many of the same barriers to mobility as other owners due to housing market conditions. However, the OMSEP and NSSE schemes have created conditions where some owners do not see it in their interest to consider other housing options due to the good value offered by their current circumstances.

→ Affordability—Average purchaser prices and purchaser contributions were lower for OMSEP than NSSE properties, perhaps reflecting that the former include a far higher proportion of second hand and lower quality houses than new build NSSE properties. Most shared equity purchasers felt that their housing costs were affordable.

→ Value for money—OMSEP is a particularly cost effective option. While its upfront subsidy costs are around one third lower than NSSE, its long-term costs are estimated to be around one half. However, the impact OMSEP is having on overall supply is less clear.

Shared equity in the USA

Community equity models—in which the partner representing the community interest retains a greater proportion of equity gain—are well developed in the US (Pinnegar et al. 2009).

In the USA, the three main models of shared equity identified in the literature are: price-restricted homes with affordability covenants; community land trusts; and limited equity cooperatives (Davis 2010b).

→ Price-restricted homes with affordability covenants—Deed restrictions or covenants are mechanisms involving a restriction in the deed or covenant linked to the property that regulates the resale price of the home and specifies who can purchase and live in the home (e.g. requirement that the home be sold to another low- or moderate-income buyer and must remain occupied by the owner). This

mechanism is a common method used to maintain affordability in affordable housing programs and inclusionary zoning programs in the USA (Sheriff 2010).

- Community Land Trusts (CLTs)—The CLT model incorporates price restrictions (as in the deed restriction/covenant model) which are incorporated into a long-term ground lease. A non-profit organisation owns the underlying land and rents it—usually for nominal amount—to the buyer, who owns only the home lying on the land. As long as the organisation maintains ownership of the land, the home owner must abide by the resale restrictions and other regulations (e.g. owner occupancy) contained in the ground lease.
- Limited equity cooperatives (LECs)—This model is typically applied in the context of an apartment or other multifamily development. Families purchase a 'share' in a cooperative building or community rather than purchasing a single property. Each member of the cooperative receives a right to occupy one unit, as well as a vote on matters of common interest. The shares must be sold at affordable levels to assist future low- and moderate-income buyers. Usually, the cooperative is financed with a below-market rate interest loan and may be otherwise subsidised in order to provide long-term affordability for cooperative owners.

Evidence on shared equity in the USA

Urban Institute study (USA)

The Urban Institute conducted a year-long study, supported by NCB Capital Impact and the Ford Foundation, examining the performance of CLTs, LECs and deed-restricted home ownership programs in eight communities (Davis 2010b).

The study evaluated seven affordable home ownership programs that seek to preserve long-term affordability. These are:

- Champlain Housing Trust (CHT)—Burlington, Vermont.
- Northern Communities Land Trust (NCLT) —Duluth, Minnesota.
- Thistle Community Housing—Boulder, Colorado.
- Dos Pinos Housing Cooperative—Davis, California.
- Wildwood Park Towne Houses—Atlanta, Georgia.
- A Regional Coalition for Housing (ARCH) —eastern King County, Washington.
- San Francisco Citywide Inclusionary Affordable Housing Program.

The study by Temkin et al. (2010) shows that it is possible for these programs to effectively preserve affordability for future buyers while offering wealth building and mobility for today's owners.

The evaluation focused on the household-level benefits of these models. That is, their effectiveness in relation to:

- Preserving affordability.
- Reducing foreclosures.
- Building personal wealth.
- Enabling the sellers of shared equity homes to move into housing and neighbourhoods of choice.

The study produced the following findings (Temkin et al. 2010).

- Creating sustainable home ownership—Only a very small number of shared equity home owners lose their home because of foreclosure; over 90 per cent of buyers were still home owners after five years.
- Offering asset building opportunities—Owners earned appreciation on the (restricted) value of their homes and also accumulated wealth by paying down their mortgages; the programs offered average annual internal rates of return on the buyer's investment ranging from 6.5 per cent and 59.6 per cent; the great majority of buyers earned far more than they would have if they had invested in the stock market instead.
- Preserving affordability—The programs were able to preserve affordability in order to assist future low income buyers; by preserving affordability, the programs were able to save millions of dollars in public subsidy and offer ownership assistance to significantly more families.
- Supporting home owner mobility—Assisted owners sell their homes with the same frequency and for the same reasons as other owners; in the three programs for which data was available, over two-thirds of owners were able to purchase unassisted, market-rate homes after reselling their affordable homes.

Evaluation of Lands in Trust, Homes that Last (USA)

The Champlain Housing Trust (CHT) (Vermont, USA), has completed an evaluation of its own program, Lands in Trust, Homes that Last (Davis 2010b). Its study examined the performance of 410 resale-restricted, owner-occupied houses and apartments developed by CHT between 1984 and 2008, focusing on the 205 homes that changed hands during that period. The study's key findings include the following:

- Expanding home ownership—Access to home ownership for persons excluded from the market was expanded. All of the households CHT served earned less than 100 per cent of area median income (AMI). Most earned considerably less.
- Preserving affordability—During years when prices for market-rate homes climbed sharply, CHT's homes remained affordable. On initial sale, the average CHT home was affordable to a household earning 56.6 per cent of AMI. On resale, it was affordable to a household earning 53.4 per cent of AMI.
- Creating personal wealth—Most home owners departed CHT with more wealth than they had possessed when buying their home. The average home owner, reselling after five and a half years, recouped her down payment of $2300 and received a net gain in equity of nearly $12 000.
- Retaining community wealth – subsidies invested in CHT houses and apartments stayed in the homes across multiple resales. Had these subsidies not been retained, the public investment necessary to serve the same number of households at the same level of income would have been five times greater.
- Enabling mobility—Two-thirds (67.4%) of the home owners who resold a CHT home bought market-rate homes within six months of leaving; another 5.7 per cent traded their first resale-restricted home for another, choosing to stay within CHT.
- Enhancing stability—All the land and 97 per cent of the homes CHT developed between 1984 and 2008 remained securely under CHT's stewardship. Defaults were rare. When they happened, CHT acted swiftly to protect its investment and the lender's and home owner's. There were only nine foreclosures in 25 years. No home has ever been lost from CHT's portfolio because of foreclosure.

Preconditions for expanding the sector

The potential for the development of different types of shared equity products depends on a number of factors (Whitehead & Yates 2007). These include:

- The types of mortgages available.
- The legal and administrative system that applies to the housing and finance markets.
- The development of an appropriate regulatory framework for the financial instruments.
- The way shared equity products are handled by the tax and benefit system.
- The government's commitment to facilitate the growth of shared equity markets and to see the approach as an important set of instruments in their toolkit for ensuring the provision of affordable housing.

Conclusion

According to research by Pinnegar et al. (2009), there is consumer appetite for shared equity schemes in Australia, with particular interest in models that keep normal home-ownership within reach. For this reason, there is interest in schemes that allow the consumer to: staircase up to full ownership at a later stage; choose their own house on the private market (rather than be limited to particular stock); and capture equity gains by selling into an open market.

The fragmented nature of shared equity schemes across different jurisdictions suggests that there is a role for national leadership at a policy and regulatory level, and potential for state and territory government involvement in supporting government run schemes (AHURI 2010). However, housing market trends are not uniform across a state/territory or between and within cities. The design of shared equity products needs to take into account differences in incomes and house price characteristics across city sub-markets (AHURI 2010).

Purchasers need to have the long-term financial capacity to service housing related debt. Therefore targeted eligibility criteria are important. Schemes need to be geared towards those with incomes below, but not significantly below, median incomes and enable purchase of properties in the lower quartile to median price range. Shared equity schemes should not be driven by a policy to assist those in most housing need (AHURI 2010).

References

ABS (2012) Census of population and housing: characteristics of Aboriginal and Torres Strait Islander Australians, 2011 (Cat. No. 2067.0).

AHURI (2010) *How can shared equity schemes facilitate home ownership in Australia?* AHURI Research and Policy Bulletin No. 124

AHURI (2003) *Predicting the outcomes of home purchase assistance schemes* AHURI Research and Policy Bulletin No. 30

Davis, J. (2010a) 'More than money: what is shared in shared equity homeownership?' *Journal of Affordable Housing and Community Development Law.* Spring/Summer 2010, Vol. 19(3/4), pp. 259-277

Davis, J. (2010b) *Shared equity housing: designed to last* Communities and Banking

Diamond, M. (2009) 'The meaning and nature of property: homeownership and shared equity in the context of poverty' *Saint Louis University Public Law Review*, Vol 29, pp. 85-112

Hulse, K., Milligan, V. & Easthope, H. (2011) *Secure occupancy in rental housing: conceptual foundations and comparative perspectives.* AHURI Final Report No. 170, Australian Housing and Urban Research Institute

Jacobus, R. & Lubell, J. (2007) *Preservation of affordable homeownership: a continuum of strategies*. Policy brief April 2007. Center for Housing Policy.

'Key worker equity scheme helps share mortgage burden' (2008) *Nursing Standard*, Vol 22(28), 19 March, p. 7

Mowbray, R. & Warren, N. (2007) Shared-equity home-ownership: welfare and consumer protection issues. Sydney: Shelter NSW Inc.

Pinnegar, S., Easthope, H., Randolph, B., Williams, P. and Yates, J. (2009) *innovative financing for homeownership: the potential for shared equity initiatives in Australia* AHURI Final Report no. 137 Melbourne: Australian Housing and Urban Research Institute

Pinnegar, S., Milligan, V., Quintal, D., Randolph, B. Williams, P. and Yates, J. (2008) *Innovative financing for home ownership: the potential for shared equity initiatives in Australia* AHURI Positioning Paper no. 106 Melbourne: Australian housing and Urban Research Institute

Scott, J., MacMillian, K. & Reid, S. (2011) The evaluation of Low Cost Initiative for First Time Buyers (LIFT). Scottish Government Social Research

Sherriff, R. (2010) 'Shared equity homeownership state policy review' *Journal of Affordable Housing and Community Development Law*, Spring/Summer, Vol. 19 (3/4), pp. 279-308

Temkin, K., Theodos, B. & Price, D. (2010) *Balancing affordability and opportunity: an evaluation of affordable homeownership programs with long-term affordability controls. Cross-site report. Final Report*, October 2010. Washington, DC: The Urban Institute

Whitehead, C. (2010) 'Shared ownership and shared equity: reducing the risks of home-ownership?' *Viewpoint: informing debate*. September 2010, Joseph Rowntree Foundation

Whitehead, C. & Yates, J. (2007) 'Increasing affordability problems – a role for shared equity products? Experience in Australia and the UK', *Housing Finance International*, September 2007, pp. 16-20

Wood, G. Watson, R. and Flatau, P. (2003) A microsimulation model of the Australian housing market with applications to Commonwealth and State policy initiatives, Final Report 33, AHURI, Melbourne

Zahos, E. (2004) 'A piece of the house' Money, Issue 11, November 2004

APPENDIX 2: MODULE 2 MODELLING METHODOLOGY

Behavioural and financial modelling

This section provides more detailed background on the behavioural and financial modelling undertaken to derive the projected buyer and Department of Housing financial impacts of the Shared Equity EOI reported in Sections 5 and 6 of this report.

Modelling of the net benefit of home ownership

The modelling of the decisions of shared equity buyers is based on the following benefit and cost components that collectively determine the financial benefit of home ownership:

- The benefit derived from the dwelling as a source of shelter (the stream of housing services).
- The benefit from the increase in wealth that is experienced when house prices increase (capital appreciation).
- The cost of repaying the mortgage.
- Recurrent expenditure associated with home ownership.

Further detail on how each of these components has been estimated is provided below. The baseline assumptions for the model parameters and the basis for these assumptions are also reported below.

Summing these components over an expected holding period (assumed to be 25 years for the purposes of the modelling) and discounting appropriately generates an estimate of the Net Present Value (NPV) of home ownership.

However, for the purposes of assessing the actual net benefit for each shared equity buyer, the NPV of an alternative strategy for procuring housing must be subtracted from the NPV of shared equity home ownership.

For the purposes of the estimates presented in this report, this alternative has been defined as renting a comparable property until such time as the potential buyer's income and savings will allow them to purchase the property outright.

The stream of housing services

Any dwelling generates a stream of housing services that can be consumed over time. We have modelled the value of this stream of housing services (referred to as an imputed rent) in the following way:

- The imputed rent for these housing services is assumed to be equal to the rent that the property would attract on the market.
- The market rent is determined by multiplying the market value of the property by a constant gross rental yield required by investors.
- Maintaining a constant gross rental yield requires that the market rent increases at the same rate as house prices over the expected holding period.

Capital appreciation

The financial returns to home ownership have both consumption and store of wealth components. Our modelling captures this latter component using an assumption about

the long-run average growth rate of house prices, which is documented in the Assumptions section below.

The cost of the mortgage

The cost of the mortgage taken out by the homebuyer to purchase the property depends on the loan principal amount, the interest rate and the term of the loan.

In calculating the mortgage repayment for the homebuyer, our modelling calculates the principal based on the 2 per cent deposit requirement for a Keystart loan and a 30-year loan period.

The interest rate Keystart charges its borrowers is determined based on a set of principles. At the time of writing, this interest rate was 5.86 per cent, reflecting the average interest rate on a standard variable home loan for the four major banks. The interest rate assumption used in our modelling allows for an average rate over the life of the loan, and is documented below.

The periodic loan repayment associated with these parameters is then calculated in the normal way.

Non-mortgage costs of home ownership

Home owners incur certain recurrent costs that are not directly incurred by rental tenants. These costs, which are incorporated into our modelling include:

- repairs and maintenance
- building insurance
- local government rates.

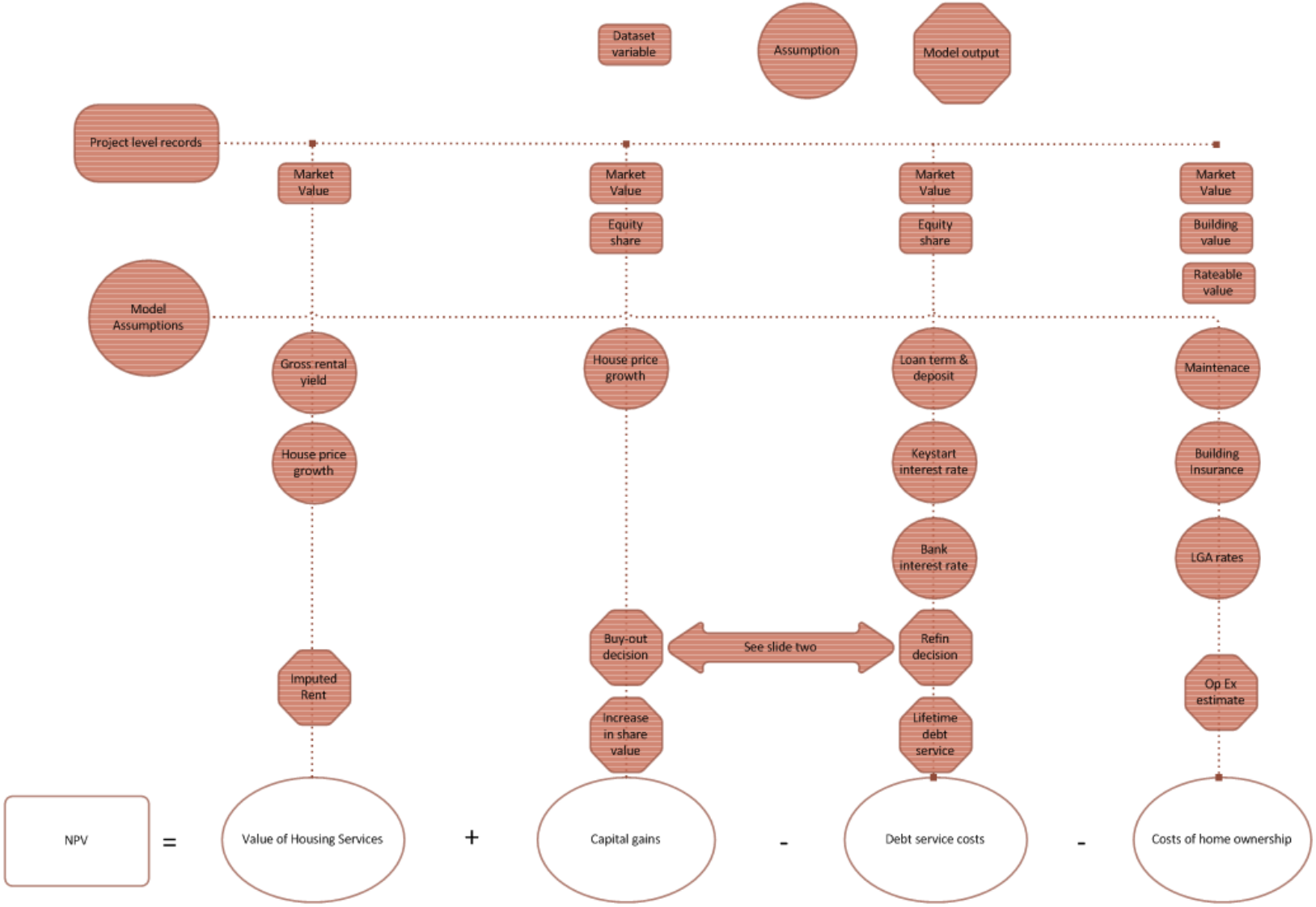
Shared equity buyers are responsible for the full cost of these outgoings (i.e. the Department is not liable for the share of these costs that could be related back to its equity share).

Both the imputed cost of repairs and maintenance and the building insurance premium are calculated as a percentage of the building value, (information for which is directly available from the program data provided by the Department). Local government rates are calculated as a share of gross rental value based on the average rate for local governments for 2012–13 reported by the Western Australian Local Government Grants Commission.

Over time, both repairs and maintenance expenses and the cost of building insurance are assumed to increase at the rate of inflation. Local government rates are also assumed to grow at this rate, effectively assuming that local governments set rates to recover their costs which are increasing at the rate of inflation. An alternative assumption would be that local governments maintain constant rates, so that it is increases in rateable values that drive any increase in the rates for a property.

Figure A2 on the following page provides a schematic depiction of how the net present value of home ownership is calculated by the model.

Figure A2: Modelling of the net present value of home ownership



Shared equity buyers' decisions to refinance and purchase the Department's equity share

Shared equity purchasers have the option to buy out the Department's equity share at a future date. In addition, shared equity buyers also have an incentive to refinance with a private sector lender when they do buy out the Department's equity share, because the interest rate applied to mortgages by Keystart is higher than the lowest variable mortgage interest rates available from private sector lenders.

The timing of refinancing and equity share purchase decisions has an impact on both the NPV of home ownership for the buyer and the cost of the program for the Department.[1]

However, to be able to buy out the Department's share and refinance it must be the case that the shared equity buyer:

- must be able to afford the mortgage payments required after refinancing and purchase of the Department's equity share, and the required repayments must be below the repayment to income thresholds applied by private sector lenders;
- has accumulated equity on their initial share of the property that is equivalent to 20 per cent of the total market value of the property at the time of refinancing (while it is possible to borrow with a smaller equity share this incurs mortgage lender insurance and we have assumed that buyers always avoid this); and
- expects to receive a higher net financial benefit if the Department's share is bought out and the loan refinanced.

It is not necessarily the case that shared equity buyers are always better off buying the Department's equity share and refinancing. While buying the Department's share allows them to capture the future capital gains at lower levels of initial equity share, the increase in mortgage principal required can more than offset the benefits of the lower private sector interest rate, resulting in mortgage repayments increasing.

In addition, a buyer living in a shared equity property is receiving an implicit subsidy from the Department of Housing as they do not have to pay for the housing services related to that proportion of the house.

Accordingly, whether buying out and refinancing is better than remaining as a shared equity buyer depends on both the initial equity share (which makes the implicit subsidy to housing services larger and also makes it more likely that the required mortgage payments will increase) and house price growth (which increases the value of the housing services subsidy, but also increases the expected capital gains following purchase of the Department's share.

Accumulated equity

The refinancing and equity buy-out decision is partly determined by the equity that the shared equity buyer has accumulated in the dwelling.

The modelling accounts for the contribution of three components to growth in this equity share, which are:

- changes in house prices on the existing ownership share
- amortisation of the loan principal amount

[1] The net present value for the Department is sensitive to refinancing and purchase decisions as a result of both the Keystart mortgage and the equity share. The impact on net present value is assessed in Section 3.1.3 below.

→ changes in house prices (on the value of the Department's equity share).

Figure A3 shows how the assumed rate of house price growth and the size of the initial equity share impact upon the time it takes to accumulate a 20 per cent equity share. It is not unexpected that the smaller the homebuyer's equity share and the lower the assumed house price growth rate, the longer it takes to accumulate a 20 per cent equity share in the property.

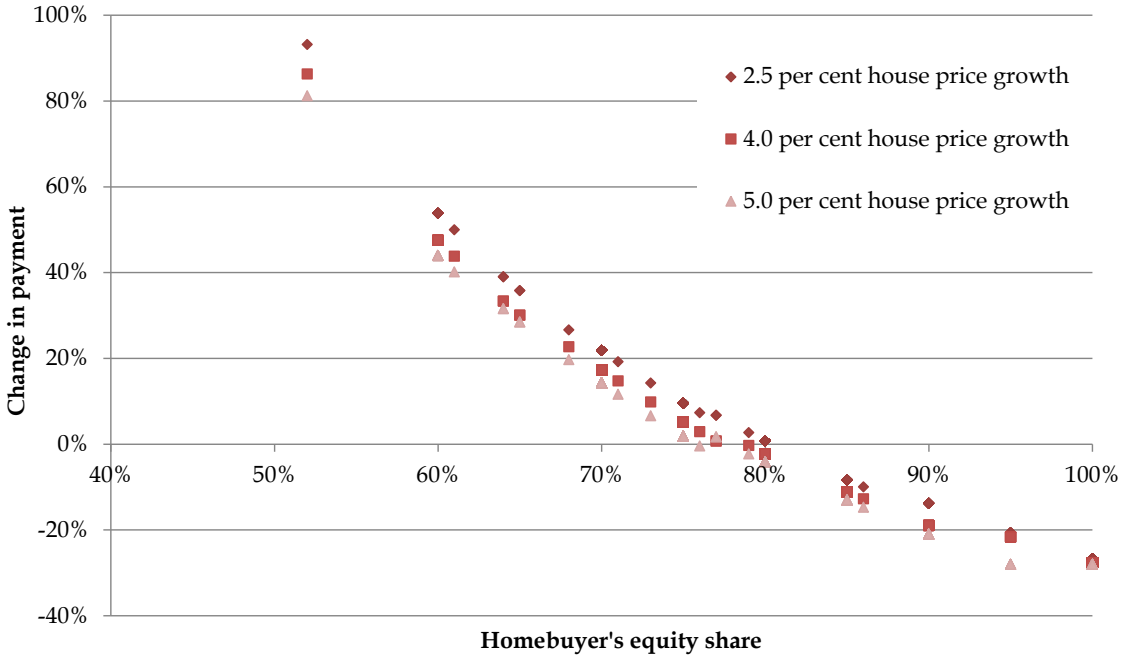
Figure A3: Time taken to generate a 20 per cent equity share under alternative house price growth assumptions

Source: Department of Housing, PwC calculations

In addition to influencing the time it takes to generate a 20 per cent equity share, there is also a relationship between the assumed rate of house price growth and the increase in the regular mortgage repayment required to service the loan following refinancing and equity buy-out.

Figure A4 shows how the weekly mortgage payment changes upon refinancing and purchase of the Department's equity share, taking into account the need to accumulate a 20 per cent equity share.

Figure A4: Change in weekly mortgage payment upon refinancing and equity buy-out under alternative house price growth assumptions



Source: Department of Housing, PwC calculations

Figure A4 shows that, as should be expected, if a buyer was to purchase a property in full using a Keystart loan, they will always be better off refinancing with a private sector loan with a lower interest rate. Furthermore, irrespective of whether house prices are increasing in real terms, shared equity buyers with an equity share of 80 per cent or above will also be able to refinance to a mortgage with a lower periodic repayment, even though they purchase the Department's equity share at the same time.[2]

It is only when the home buyers' equity share is less than 80 per cent that the periodic mortgage repayment is higher following refinancing, as the lower interest rate no longer offsets the increase in the payment due to the need to buy-out the Department's equity share.

The larger increases in the periodic mortgage repayment following refinancing by shared equity buyers raises the prospect that for some, the increase may be unaffordable. In such cases, refinancing and the buy-out of the Department's equity share may not be possible even though a buyer has accumulated equity equivalent to 20 per cent of the total property value.

Table A2 examines this issue, based on assumptions about disposable household income growth and house price growth rates.

If household disposable income growth increases at the assumed rate of inflation (2.5%), then at the higher rates of house price growth in the table (4.0% and 5.5%), around a third of households would not be able to afford the mortgage repayment after refinancing.[3]

[2] The mortgage payment after refinancing and equity buy-out is calculated on the basis of maintaining a 30-year mortgage period across the Keystart and refinanced loans.

[3] This analysis assumes that households do not have sufficient disposable income to increase their repayment capacity by reducing savings or consumption expenditure.

If disposable income increases at 4 per cent per annum, then very few households are unable to afford the repayment following buy-out of the Department's equity share and refinancing.

Table A2: Proportion of share equity buyers unable to afford the repayment on a refinanced mortgage (n=693)

	House price growth rate		
	2.5%	**4.0%**	**5.5%**
2.5% growth in disposable income	2.6%	31.0%	31.0%
4.0% growth in disposable income	1.9%	2.2%	2.5%

Source: Department of Housing, PwC calculations

Evidence from the Household Income and Income Distribution Survey shows that for Western Australian households in the second and third income quintiles (corresponding to mean annual gross household incomes in 2011–12 of $55 260 and $86 864 respectively) real household disposable incomes increased by 5.2 per cent and 5.0 per cent annually over the period 1994–95 to 2011–12.[4]

Given this increase, growth in nominal household incomes could be assumed to comfortably exceed the level at which buyers participating in the Shared Equity EOI would find the repayment on a refinanced mortgage unaffordable.

Reality testing the model

Two hypotheses can be made about the predictions that our model should make in the event that house prices are assumed to be static to check the validity of the underlying modelling. These are:

- with no house price growth, the accumulation of the 20 per cent equity share required for refinancing should solely reflect the amortisation of the loan principal
- on financial grounds, the majority of shared equity buyers should never choose to purchase the Department's equity share.

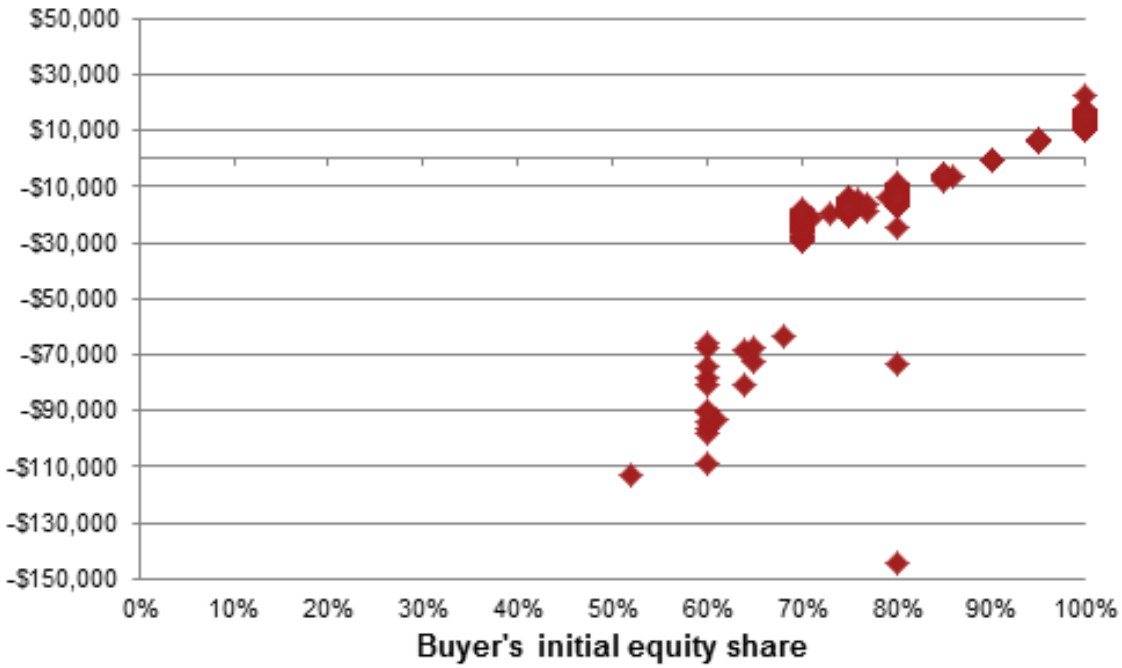
The second of these hypotheses follows from the observation that being a shared equity buyer involves a trade-off between the subsidised stream of housing services and foregone capital gains on the Department's share. When house price growth is zero, so is the value of the foregone capital gains.

We would stress that this second hypothesis is solely a test of the validity of our modelling of financial choice. In practice, non-financial benefits such as pride in owning a home may result in the shared equity buyer purchasing the Department's share, even when house prices are not expected to increase in the future.

Figure A5 reports the difference between the NPVs under optimal refinancing and equity buy-out and the no refinancing or buy-out alternative.

[4] Australian Bureau of Statistics, Cat.no. 6523.0 – Detailed Tables. Household income growth will be the subject of sensitivity testing once the Department has confirmed the appropriateness of the baseline assumptions.

Figure A5: Net benefit from refinancing and the purchase of the Department's equity share (expected house price growth = 0)



Source: Department of Housing, PwC calculations

As expected, shared equity purchasers do not benefit from purchasing the Department's share of the property when house price growth is expected to be zero, except where the Department's share of the property is low enough that the lower interest rate applied to the mortgage debt offsets the increase in repayments resulting from the increase in loan principal following refinancing.

Calculation of Net Present Value

For both full sale and shared equity homebuyers the NPV of home ownership is calculated as:

NPV= PV(Housing Services + Capital Gains) – PV(Mortgage Costs+ Recurrent Costs of Home ownership)

Present values are calculated over a 25-year holding period subject to discounting.

Comparators

The net financial benefit (or cost) to buyers who purchased a home under the Shared Equity EOI depends both on the financial benefit of home ownership and the financial benefit of an alternative means of securing housing.

We calculate two alternatives for use as comparators, which are:

- Renting the same property (or at least a property yielding the same value of housing services) and investing any residual income in an interest bearing deposit.
- Renting the same property until such time as the household is able to purchase the property outright through a private sector lender.

The first comparator requires an assumption about how household cashflows evolve over time. This assumption is necessary because market rents in our modelling

increase at the rate of house price growth, maintaining a constant gross rental yield. As mortgage payments are fixed and the recurrent costs of home ownership (with the exception of local government rates) increase at the rate of inflation, at some point in time it becomes more expensive to rent the property than to be an owner.[5]

We therefore assume that household cashflow is always sufficient to meet the cost of the tenure with the greatest out of pocket expenses. As a result, under the rental comparator households have surplus income, which is saved until such time as the out of pocket expenses of renting exceed those of owning. At this point, no further saving occurs.[6]

A second feature of the rental comparator is that interest income is taxable. Accordingly, after-tax interest income is calculated using an effective marginal tax rate. The basis for the assumed effective marginal tax rate is documented in the following section.

The second comparator effectively represents the traditional pathway into home ownership. Operationalising this alternative requires assumptions about the existing liquid wealth of households, and the rate at which they accumulate additional wealth over time through additions to savings and the return earned on their stock of liquid wealth. The trigger for home purchase is the accumulation of sufficient savings to meet the 2 per cent minimum deposit requirement for a Keystart loan for the full value of the property.

The buyers' existing savings are estimated by noting that they had to meet the 2 per cent deposit requirement for their shared equity purchase, a calculation that automatically factors in any eligibility for the First Home Owners Grant and any up-front fees associated with the Keystart loan.[7] On this basis, median initial savings are $5525.

Evidence on savings behaviour for households who would qualify for a shared equity loan is difficult to identify, as the Australian Bureau of Statistics does not measure savings directly and other data sources lack the necessary granularity.

However, it is possible to infer savings capacity from Household Expenditure Survey data.[8] Western Australian renters with private landlords had an implied savings capacity of $93 per week, implying annual savings of $4838.

An alternative assumption would be to note that the calculated weekly cash costs of home purchase exceed the imputed weekly rent in our model. This would imply a median savings capacity of $140 per week for shared equity buyers.

Figure A6 suggests that whether households are able to save at their estimated savings capacity or at the rate implied by the Household Expenditure Survey, this would make little difference to how long it would take them to save the balance of the

[5] As long as the rate of house price growth is higher than the rate of inflation.

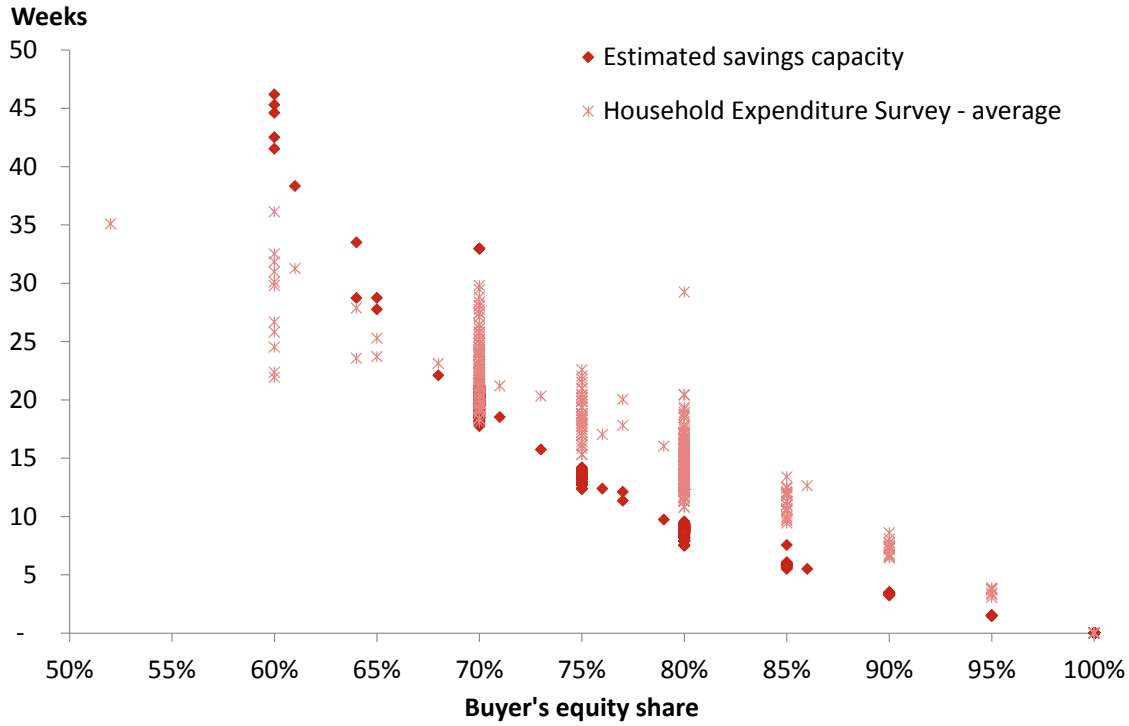
[6] An alternative assumption would be that households always have sufficient income to service the mortgage and meet the recurrent costs of home ownership. However, under this assumption, the rental comparator involves households running down their savings once renting becomes more expensive than being an owner (potentially, under this assumption households may need to begin borrowing to be able to continue to afford to rent the property).

[7] It is justifiable to assume that this deposit requirement was the same as, or at least a close approximation, of total household savings given that had this not been the case, the buyer should have either purchased a higher value property or a larger equity share in the property purchased.

[8] ABS cat.no.65300D001_200910, Table 15: Tenure and Landlord Type, Household Expenditure, Western Australia.

deposit required for a Keystart loan for the full property value.[9] The majority of households are comfortably able to save the balance of the required deposit within a year of their shared equity purchase.

Figure A6: Time required to save a 2 per cent deposit required for full purchase



Source: Department of Housing, PwC calculations

It is unlikely that home buyers would choose to take out a shared equity loan, when in only a matter of months they would have accumulated a deposit that would allow them to buy the property outright. To do so would be to forgo the opportunity for capital gains on the full value of the property.

It therefore appears to be more likely that the choice of a shared equity purchase occurs because households lack the disposable income required to meet the periodic repayments on a mortgage for 98 per cent of the property value.

Households' capacity to meet such a repayment constraint depends upon maximum repayment to income ratios and the rate of growth of income over time relative to the rate of growth of house prices.

Maximum repayment to income ratios for Keystart loans depend upon household structure (i.e. whether the buyer is a single person or couple), income and other debts of the household.

The information available to us includes information on household structure for the buyers (or future buyers) for 614 properties as of 1 September 2013. Of these households, 422 (69%) were single buyers. This split between single buyer and couple buyer households is consistent with survey responses, of which 67 per cent of respondents were single buyers. Information in relation to other debts of the buyers was not available.

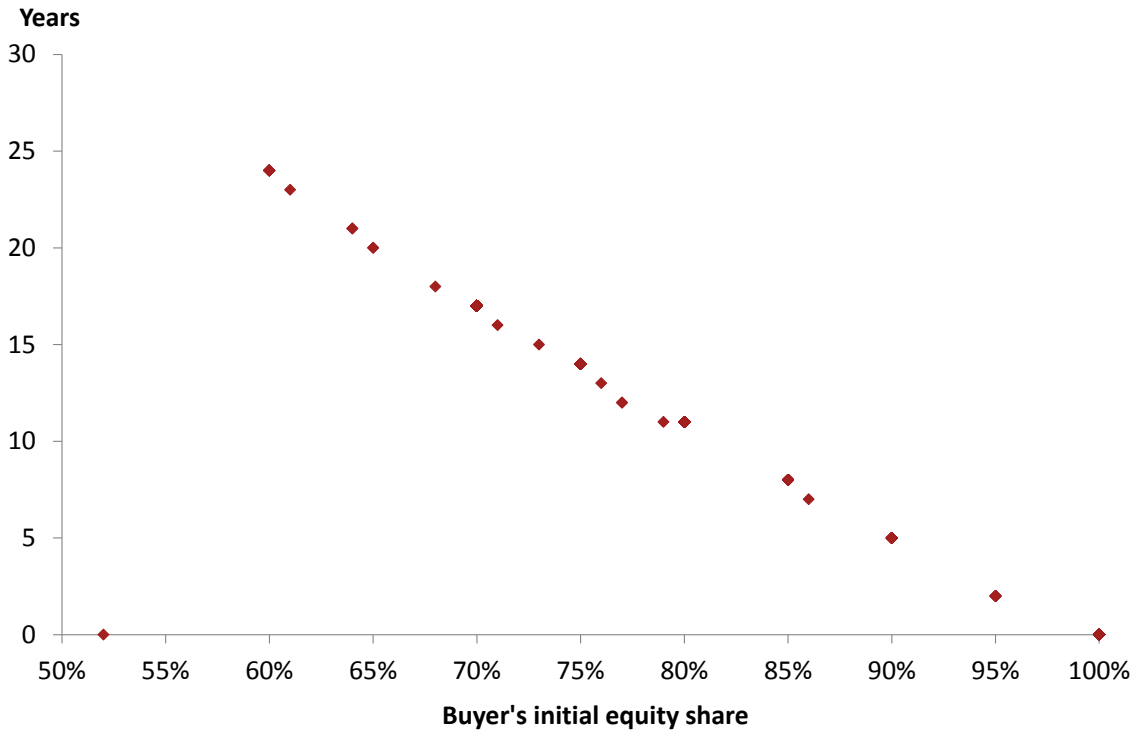
[9] If a Keystart loan wasn't available then the time required to save a deposit of sufficient size to take out a loan with a private sector lender without the need to pay mortgage insurance would be measured in years, rather than weeks.

Household income and maximum periodic mortgage repayments have been calculated in the following manner:

- Average maximum repayment to income ratios were calculated using a maximum borrowing calculator available from the Keystart website for single and couple buyers (these ratios are reported in the following section).
- Income at the time of purchase was then calculated on the basis that shared equity buyers purchase their share of the property based on the maximum share they can afford given the repayment constraint.
- Household disposable income is then assumed to increase at the average rate of increase over the period 1994–95 to 2011–12 for the second and third quintiles for Western Australian households, reported in the Australian Bureau of Statistics Household Income and Income Distribution Survey, 2011–12 (6.2% per annum).
- For properties for which no buyer had been identified as of 1 September 2013, single and couple buyers are randomly allocated based on the observed 69/31 split.

Figure A7 reports the time, measured in years, that it would take the income of buyers of shared equity properties under the EOI to increase to the point where they could meet the repayment constraint for full purchase using a Keystart low deposit mortgage.

Figure A7: Time required to meet the repayment constraint for full purchase



Source: Department of Housing, PwC calculations

Figure A7 emphasises how effective shared equity is for bringing forward the home purchases of households with moderate incomes. For those households who could afford an equity share of 80 per cent or less, access to shared equity allows them to enter home ownership at least 10 years before they could do so as an outright purchaser.

Figure A7 also illustrates how shared equity purchases are a highly effective hedge against future house price growth for vulnerable households. Figure A7 above showed that all shared equity buyers are able to buy out the Department's share and refinance with a private sector lender within 10 years of their initial purchase. This is possible because shared equity purchase means that the home buyer is no longer disadvantaged by future house price growth.[10]

Assumptions

Assumptions for key parameters in the modelling and the basis for these assumptions are reported in Table A3.

Table A3: Assumptions

Parameter	Assumption	Basis
Gross rental yield	4.6% Median imputed weekly rent = $305	Australian Property Monitors. Combining Real Estate Institute of Western Australia weekly rent data and ABS median house price data shows that gross rental yields have averaged 4.0 per cent since June 2003 and 4.6 per cent since June 2011.
Maintenance	1% of building value Median imputed annual maintenance = $1,551	The 2011–12 Survey of Housing Occupancy and Costs reported average weekly expenditure on repairs and maintenance of $37. Based on the 2011–12 median house price, this equates to expenditure of 0.4 per cent of total property value. In practice, this proves to yield similar weekly maintenance expenditure as the assumption of 1 per cent of building value.
Building insurance premium	0.4% of building value Median imputed annual premium= $620	CANSTAR Home and Contents Star Ratings (report no 5, September 2012). PwC calculation of premium rate based on the average premium for a building value of $150 000 in 2012 reported by CANSTAR.
Property rates	7.3% of gross rental value Median imputed annual rates = $1,158	Western Australian Local Government Grants Commission - 2012–13 Balanced Budget Spreadsheet - total rates ($) levied as a percentage of total valuations ($).
Interest rate on Keystart mortgage	6.52%	Reserve Bank of Australia - Table F5 Indicator Lending Rates - Average bank standard variable mortgage rate - average June 2012 to July 2012.
Interest rate on private lender mortgage	5.5%	Reserve Bank of Australia - Table F5 Indicator Lending Rates - Average mortgage managers basic variable rate - average June 2012 to July 2013.
Deposit ratio	2% of equity share	Keystart low deposit mortgage.
Mortgage period	30 years	Keystart low deposit mortgage.
Repayment to income ratio (singles)	55%	Average rate calculated using the Keystart maximum borrowing calculator.
Repayment to income ratio (couples)	47%	Average rate calculated using the Keystart maximum borrowing calculator.
Inflation rate	2.5%	Mid-point of the RBA's target band for inflation.
House price growth	4%	The ABS Perth median house price series has an

[10] In fact, the home buyer becomes a beneficiary of house price growth through capital gains on their share of the property.

Parameter	Assumption	Basis
		average annual rate of house price growth of 3.98 per cent since June 2009.
Discount rate	7%	
Interest on deposits	3.1%	Reserve Bank of Australia - Table F4 Retail Deposits and Investment Rates - On-line Savings Accounts - average June 2012 to July 2013.
Homebuyers effective marginal tax rate	31.5%	International Comparison of Australia's Taxes - Appendix Table 4.2.3 Single no child (67%) married no children (100%–33%).
Household disposable income growth	6.8%	ABS, Survey of Household Income and Income Distribution, 2011–12 -Western Australia. Average growth in disposable household income for the second and third quintiles over the period 1993–94 to 2011–12.

Sensitivity analysis

Sensitivity analysis was performed over the following individual parameters:

- House price growth.
- The gross rental yield.
- Nominal household income growth.
- The mortgage interest rate.
- The spread between the Keystart shared equity mortgage interest rate and the basic variable home loan interest rate (by holding the basic variable home loan rate constant and varying the shared equity mortgage rate.

Table A4: Sensitivity of key metrics to variations in the nominal house price growth assumption

	Nominal house price growth				
	2%	3%	**4%**	5%	6%
Shared Equity Buyers					
Average time to equity share buy-out (Years)	9.5	7.6	**6.2**	4.9	4.0
Average time required for household to be able to purchase outright (Years)	8.1	10.0	**15.1**	8.6	n.a.
NPV (Optimal Refinancing versus buying outright)	$27.6m	$62m	**$106.1m**	$185.8m	$301.9m
Department of Housing					
Internal Rate of Return	24%	19%	**25%**	31%	33%
Maximum net asset value	$96.3m	$143.4m	**$116.0m**	$73.4m	$71.7m

Table A5: Sensitivity of key metrics to variations in the gross rental yield assumption

	Gross rental yield				
	2.6%	3.6%	**4.6%**	5.6%	6.6%
Shared Equity Buyers					
Average time to equity share buy-out (Years)	6.2	6.2	**6.2**	6.2	6.2
Average time required for household to be able to purchase outright (Years)	14.1	14.1	**15.1**	14.1	14.1
NPV (Optimal Refinancing versus buying outright)	$59.4m	$81.2m	**$106.1m**	$124.9m	$146.7m
Department of Housing					
Internal Rate of Return	25%	25%	**25%**	25%	25%
Maximum net asset value	$116.0m	$116.0m	**$116.0m**	$116.0m	$116.0m

Table A6: Sensitivity of key metrics to variations in the household income growth

	Household income growth				
	4.8%	5.8%	**6.8%**	7.8%	8.8%
Shared Equity Buyers					
Average time to equity share buy-out (Years)	6.2	6.2	**6.2**	6.2	6.2
Average time required for household to be able to purchase outright (Years)	n.a.	7.8	**15.1**	10.6	8.1
NPV (Optimal Refinancing versus buying outright)	$122.7m	$120.5m	**$106.1m**	$92.1m	$83.0m
Department of Housing					
Internal Rate of Return	25%	25%	**25%**	25%	25%
Maximum net asset value	$116.0m	116.0	**$116.0m**	$116.0m	$116.0m

Table A7: Sensitivity of key metrics to variations in the mortgage interest rate

	Mortgage interest rate				
	4.52%	5.52%	6.52%	7.52%	8.52%
Shared Equity Buyers					
Average time to equity share buy-out (Years)	5.5	6.1	**6.2**	6.8	7.3
Average time required for household to be able to purchase outright (Years)	15.1	15.1	**15.1**	15.1	15.1
NPV (Optimal Refinancing versus buying outright)	$123.6m	$114.5m	**$106.1m**	$97.4m	$89.8m
Department of Housing					
Internal Rate of Return	23%	21%	**25%**	24%	29%
Maximum net asset value	$56.7m	$99.5m	**$116.0m**	$185.3m	$217.0m

Note: Analysis assumes that the basis point spread between the interest rates on a Keystart shared equity mortgage and the basic variable mortgage offered by private sector lenders is constant.

Table A8: Sensitivity of key metrics to variations in the difference between the Keystart and market mortgage interest rates

	Interest rate spread			
	3.0%	2.0%	**1.02%**	0%
Shared Equity Buyers				
Average time to equity share buy-out (Years)	6.6	5.9	**6.2**	6.4
Average time required for household to be able to purchase outright (Years)	15.1	15.1	**15.1**	15.1
NPV (Optimal Refinancing versus buying outright)	$110.8m	$106.5m	**$106.1m**	$108.8m
Department of Housing				
Internal Rate of Return	12%	32%	**25%**	35%
Maximum net asset value	$135.9m	$90.6m	**$116.0m**	$104.1m

Input-output modelling

Background to input-output modelling

Input-output models map interactions between sectors of the economy using detailed records of the sales and inputs of each sector (known as 'input-output tables'). They allow researchers to investigate the interrelationships between sectors of the economy and give insights into the impacts of one sector on other sectors in a particular region, state or country.

The key value of input-output models is providing insights into the relationships between the different sectors/industries, the flow-on impacts in one sector on other

sectors in the economy, and the importance of sectors to regional, state or national economies. It allows consideration of:

- The flow-on impacts of changes in one sector on others—what are the flow on benefits to other industries.
- Inter-dependencies and inter-linkages—that is what are the opportunities of vulnerabilities of one sector in relation to others.

Input-output models have several strengths that make them suited to regional economic analysis:

- The assumptions in the theory of input-output models mean that they are not suited to large open economies, where price adjusted factors are available in limited supply. However this makes them more realistic in smaller regional economies, which can draw factors from nearby regions.
- They offer a simple way of estimating economic impacts as the results of the input-output techniques are relatively easy to understand for a non-technical audience. This also makes the model relatively easy to apply for non-expert modellers. Similarly, it is a well-known technique, with an established literature.
- In most economic modelling exercises, a large proportion of the impacts can be estimated with relatively simple tools. While an input-output model might be simple, it will go a long way to estimating the likely impact.
- Input-output models also offer a convenient method of decomposing modelling results impact on the economy, as it can be broken down into first round, industrial support, consumption, and total impacts.
- Most importantly, due to the input-output tables underpinning the models, they can map the interconnections in an economy in a way that accurately reflects regional industry mixes.

There are however, some important limitations of input-output models, which should be considered.

- Input-output models assume that the economy can expand in proportion to its current make up, increasing all imports in fixed proportions to their initial level. This means that if an industry expands by a given percentage, then all costs of the industry (labour, capital, intermediate inputs) will expand by the same percentage. This does not reflect the real economy, where capacity constraints (often on labour supply), mean that costs are likely to increase by more than output increases, particularly if the inputs used in the additional production must be bid away from other regions or industries.
- They also assume that the prices of sales of intermediate inputs are unchanged by the level of activity. As output increases, it is increasingly likely that businesses will have to lower their prices to increase the volume that they sell.
- They do not include substitution possibilities between imports. Businesses are assumed to maintain the input mix that the input-output tables contain. As a result, there will not be substitution in favour of inputs that are more readily available, and toward imports from other regional economies.
- Household spending is assumed to be tied to labour payments, with an unchanged rate of consumption per dollar earned. This means that all consumers in the region will continue to use the same proportion of their income for consumption as the economy expands, and will continue to buy the exact same mix of goods (therefore excluding any price substitution).

In light of these limitations, it is important not to misinterpret the findings of input-output analysis. In particular, the flow-on impacts identified rely on the changes being relatively small, and therefore unlikely to materially change relative prices or occasion supply constraints.

Not all sectors and industries have the same flow-on impacts, for a given change in that sector, on the regional economies in which they are situated. The ability to generate flow-on impacts relates to the specific characteristics of the sector, such as the degree to which they employ imports from the sector.

Applicability of input-output modelling to the Shared Equity EOI

The Shared Equity EOI involves government induced residential construction activity that will also require inputs from other industries, particularly from suppliers lower down the value chain, to input into the construction process. Therefore the use of multipliers at a very high level makes intuitive sense. However, the limitations of using multipliers are apparent when the underlying assumptions of multipliers are considered in more detail.

- Opportunity cost—The opportunity cost of government spending is often not considered when undertaking input-output modelling and this is one of the reasons that benefits are often over estimated. In this instance however, while the economic activity is induced by the Government, the Government does not have any associated cash outlay that might otherwise be spent on other investment. In terms of the construction industry, most of the economic activity would most likely not been undertaken if not for the scheme.
- No consideration of capacity in the economy—Input-output modelling is sometimes use to predict the potential induced economic activity of hypothetical and future spending in the economy with limited consideration of whether the economy has the appropriate capacity. However, in this instance, the spending has already taken place, and therefore the capacity in the economy is evidently achievable.
- Marginal cost is the same as average cost—While this is still a simplifying assumption in the input-output multipliers, this assumption is still present in more advanced CGE modelling and therefore is not a disadvantage over those alternative techniques.

Given the timeframes and budget for this project, as well as the considerations above, input-output modelling and use of multipliers below is considered useful in providing an indicative understanding of the flow-on benefits for the economy. The results however, should be considered in light of the modelling limitations.

Types of multipliers

The quantum of flow-on impacts for a change in one sector is often represented by a multiplier. A multiplier is a measure of the degree of the impact that a given dollar of spending will have on the broader regional economy, after all the inter connections have been taken into account. Multipliers can be interpreted as the expected dollar impact on output, gross value added and/or employment income in the regional economy of one dollar of increased output in a certain sector.

PwC's input-output models consider impacts in terms of three key economic variables:

- **Output:** the total value of goods/services produced in/by that sector.

- **Value-added:** the value contribution made by the sector (ie the amount by which the value of goods/services exceeds the value of intermediate inputs to that sector.
- **Employment income:** wages and other compensation accruing to workers in that sector.

Output multipliers include large amounts of reuse of intermediate imports, effectively double counting these goods/services, and therefore overstate the impact on total regional output. Gross value added multipliers do not have this weakness, and therefore reflect the total impact on gross state product for a one dollar increase in output of that sector.

There are various multipliers that can be calculated from input-output models:

- Initial multiplier (M0)—The initial multiplier is the immediate, direct impact of spending in the economy. From an output perspective, this will always be 1: that is, the increase in output as a direct impact is the amount injected in to the sector. Outside of the output multipliers, the definition is less tautological. For example, the value added initial multiplier is the amount of value added directly created by an industry resulting from a $1 increase in output.
- First-round multiplier (M1)—The first round multiplier includes the impact of intermediate inputs used by the industry targeted by the spending in the economy. For example, if the automotive industry increases its output, it will need to purchase steel, glass, and leather to go into the construction of those automobiles. It is these first round intermediate input demands that form the first round multiplier.
- Industrial support multiplier (M2)—The industrial support multiplier includes the broader use of all other intermediate inputs in the economy, after the expansion has fully worked its way through the region. For example, if the automotive sector expands, it demands more steel as part of the first round multiplier (M1). However, as steel expands, it demands more iron ore and energy. As energy expands it demands more coal. As coal expands, it demands more automotive parts, and so on. It is the full accumulation of all of these subsequent interconnections between industries that form the industrial support multiplier.
- Consumption induced multiplier (M3)—The consumption induced multiplier is a measure of the economic impacts brought about by increases in household income in the region (resulting from economic expansion), which then feedback to consumption. For example, as the automotive, steel, energy and coal sectors expand, they make payments to labour, which are then spent on further consumption, inducing greater economic expansion.
- Simple multiplier—the simple multiplier is the summation of the initial, first round and industrial support multipliers, for a given unitary expansion in spending. In a sense, it is the expansion in the economy brought about by supply-side influences.
- Total multiplier—the total multiplier is the simple multiplier plus the consumption induced multiplier for a unitary expansion in spending. It can be thought of as the total of supply and demand-side expansion influences.

Most sectors have two forms of relationships: upstream and downstream. Upstream relationships refer to industry supplying input material and services required for that sector—additional output from a sector implies additional input materials and services will be sourced from the upstream sectors. On the other hand, downstream relationships refer to the industries that use (or demand) the product that industry supplies. Most sectors will therefore be in upstream and downstream relationships in

relation to other sectors. Input-output models capture both these effects, that is, changes in the sector are reflected in both upstream and downstream sectors.

It should also be noted that sectors can both have an impact on other sectors and experience the impact of other sectors. That is, they will provide opportunities and vulnerabilities to and from other sectors. Therefore, major sectors that impact on one sector may not be the same as those that experience the major impact of change in that sector.

Results

The cost of construction activity of the houses built under the EOI phase amounts to $149 million. This additional expenditure is referred to as the initial effect, in that it increases the amount of economic activity in the industry in which that money is spent. Therefore in this case it induces $149 million of additional activity in the construction industry.

The first round effect reflects the induced activity of the suppliers of the construction industry, as the construction industry requires materials to input into the construction process.

The largest supplier to residential building construction is construction services. In addition to this, other significant contributors are finance and insurance services, structural metal products, wood products, wholesale trade, professional, scientific and technical services, and other residential building construction. The relevant percentage of input into the construction industry as a percentage of total input is represented in Table A9.

Table A9: Supplier industries to the Residential Construction Industry

Industry	Value
Construction Services	0.229%
Auxiliary Finance and Insurance Services	0.065%
Structural Metal Product Manufacturing	0.056%
Other Wood Product Manufacturing	0.029%
Wholesale Trade	0.027%
Professional, Scientific and Technical Services	0.025%
Residential Building Construction	0.024%
Cement, Lime and Ready-Mixed Concrete Manufacturing	0.020%
Building Cleaning, Pest Control, Administrative and Other Support Services	0.020%
Non-Residential Property Operators and Real Estate Services	0.019%
Finance	0.019%
Road Transport	0.018%
Plaster and Concrete Product Manufacturing	0.018%
Heavy and Civil Engineering Construction	0.017%
Polymer Product Manufacturing	0.015%
Sawmill Product Manufacturing	0.014%
Iron and Steel Manufacturing	0.013%
Non-Residential Building Construction	0.010%

This induced economic activity of suppliers of the residential construction industry in Western Australia amounts to a further $112 million of induced activity in those industries.

The industrial support effect reflects the induced activity of providing inputs into those suppliers of the construction industry, as the suppliers too will need supplies and inputs into their own products. This amounts to a further $98 million of additional activity for those industries.

The summation of these effects results in what is referred to as the simple multiplier. A total of $360 million of induced activity within various sectors is required to meet the $149 million of additional demand for construction.

The only remaining impact is the impact on consumers spending. When economic activity increases, it also induces increased consumption from the wages and salaries paid to labour. When including this effect, the total multiplier estimates that the total increased activity in the economy to meet the increased demand in the construction sector will be around $466 million in total. These figures are shown in Table A10 below.

However, this total multiplier should be interpreted with caution. Due to the input-output assumptions, this multiplier is likely to over-estimate the total impact on the economy in the absence of capacity constraints in the modelling.

Table A10: Output multipliers

	Output multipliers	Value
Initial effect	1	$149,239,533
First round effect	0.75	$111,929,650
Industrial support effect	0.66	$98,498,092
Simple multiplier	2.41	$359,667,275
Total multipliers	3.12	$465,627,343#

Note that this figure should be used with caution due to the modelling assumptions and the likelihood that this figure over-estimates the impact on the economy.

We can also consider the impacts of the induced construction activity on employment. Using the same multipliers, it is estimated that the additional $149 million of construction activity supports 427 jobs directly in the construction industry, and a total of 1491 if we include all of the impacts in other sectors that support the construction industry. This is shown in Table A11 below.

Table A11: Employment multipliers

	Output multipliers	Value
Initial effect	2.86	427
First round effect	2.42	361
Industrial support effect	2.03	303
Simple multiplier	7.32	1,092
Total multipliers	9.99	1,491

Despite these results, it should be noted that in the absence of the scheme, it is highly likely that a percentage of those workers would have been able to find employment in other sectors of the economy.

The benefit of maintaining labour however is a benefit in terms of construction companies' ability to hold onto staff, so that when the industry activity increases, they are able to staff the work adequately.

While the residential construction industry has high utilisation of contract workers, it is also worth noting the many of the larger construction companies have large overhead costs (e.g. marketing, display homes, corporate costs, etc.) that still need to be covered year to year.

Some of the larger construction companies also own other parts of the supply chain, such as brick companies. These other companies that supply the construction business are much more likely to have permanent staff and therefore find it more difficult in times where there is a depressed demand for construction.

APPENDIX 3: POST-OCCUPANCY RESIDENT SURVEY

Evaluation of WA shared equity scheme

RESIDENT SURVEY

About the survey

The survey aims to gather information about your perceptions and experiences of the Department of Housing SharedStart home ownership scheme.

The survey should take no longer than 15 minutes to answer.

All your responses will be entirely anonymous and confidential. The Department will receive a report on the overall views of residents who have participated in the shared equity scheme. You will not be identified.

If you would like any help completing the survey, please contact Melanie Thomson at AHURI by email (melanie.thomson@ahuri.edu.au) or by phone (03) 9660 2314 and Melanie will call you back.

Completed surveys need to be received by **Wednesday 18 September**.

What do you need to do?

1. This survey only needs to be completed by one home owner per household. If there is more than one home owner in the household, please select one person to complete the survey.

2. You can complete the survey online. Just go to www.surveymonkey.com/s/sharedequity. Please complete the survey by Wednesday 18 September.

3. Alternatively, you can complete the paper version of the survey. Simply post it back to AHURI using the prepaid envelope provided. You do not need to attach a stamp. (AHURI, Level 1, 114 Flinders St, Melbourne, Vic 3000). Please put it in the post by Friday 13 September to ensure it arrives by Wednesday 18 September.

4. Please complete the survey as fully as possible. You can skip any questions that you would rather not answer.

As a thank you for your participation in this survey, you will receive a **$25 grocery voucher**. We will ask for your postal address at the end of the survey so we can send you the voucher.

Page 1

SURVEY ELIGIBILITY

In order to take part in this survey, you need to have a shared equity loan through the Department of Housing's SharedStart loan scheme.

1. Do you have a SharedStart loan?

◯ No. I have never had a SharedStart loan. [Thank you, no need to complete survey]

◯ No. I used to have a SharedStart loan but I no longer have a SharedStart loan. [Thank you, no need to complete survey]

◯ Yes. I have a SharedStart loan. [Please continue to complete survey]

INFORMATION ABOUT YOU AND YOUR HOUSEHOLD

2. Which of the following best describes your household?

- ◯ Single home owner with no children
- ◯ Two home owners with no children
- ◯ Single home owner with one child or more
- ◯ Two home owners with one child or more
- ◯ Other household type

If other household type, please specify

3. Your gender?

4. How old are you?

- ◯ 18-19
- ◯ 20-29
- ◯ 30-39
- ◯ 40-49
- ◯ 50-59
- ◯ 60-69
- ◯ 70+

5. Do you have a disability?

- ◯ Yes
- ◯ No

6. Does anyone else in your household have a disability?

- ◯ Yes
- ◯ No

7. Are you from an Aboriginal or Torres Strait Islander background?

- ◯ Yes
- ◯ No

8. Is anyone else in your household from an Aboriginal or Torres Strait Islander background?

- ◯ Yes
- ◯ No

INFORMATION ABOUT YOU AND YOUR HOUSEHOLD

9. Source of your income (please tick all that apply)

- ☐ Full time employment
- ☐ Part time employment
- ☐ Casual employment
- ☐ Government payments (such as the Disability Support Pension or Newstart)
- ☐ Other source of income

If other source of income, please specify

10. Are any of the owners of the house employed in any of the following occupations?

Nurse, Teacher, Police, Social worker, Psychologist / therapist, Urban planner, Firefighter, Environmental health officer, Emergency services, Not-for-profit workers

- ◯ Yes – at least one home owner is employed in one of these occupations
- ◯ No – there is no home owner employed in one of these occupations

11. What is the total gross income (before tax) for all home owners in the household?

- ◯ Less than $50,000
- ◯ $50,001 - $55,000
- ◯ $55,001 - $60,000
- ◯ $60,001 - $65,000
- ◯ $65,001 - $70,000
- ◯ $70,001 - $75,000
- ◯ $75,001 - $80,000
- ◯ $80,001 - $85,000
- ◯ $85,001 - $90,000
- ◯ $90,001 - $95,000
- ◯ $95,001 - $100,000
- ◯ $100,001 - $105,000
- ◯ $105,001 - $110,000
- ◯ $110,001+
- ◯ I would rather not say

Evaluation of WA shared equity scheme

INFORMATION ABOUT YOUR PROPERTY

12. What type of property do you live in?

- ◯ Apartment
- ◯ Semi-detached / duplex house (your house shares a wall with another house)
- ◯ Detached house (your house does not share a wall with another house)
- ◯ Other type of property

If other type of property, please specify

13. How many bedrooms does your property have?

- ◯ 1
- ◯ 2
- ◯ 3
- ◯ 4+

14. How many bathrooms does your property have?

- ◯ 1
- ◯ 2
- ◯ 3+

15. How long have you been living in this property?

- ◯ Less than 6 months
- ◯ 6 months to 12 months
- ◯ 1 year to 2 years
- ◯ Longer than 2 years

16. How did you purchase this property?

- ◯ Off the plan
- ◯ As a new build (no previous owners)
- ◯ Other

If other, please specify

17. Which of the following best describes the location of your property

- ◯ Urban area
- ◯ Inner suburban area
- ◯ Outer suburban area
- ◯ Regional area
- ◯ Rural area
- ◯ Other

If other, please specify

18. What is your postcode?

INFORMATION ABOUT YOUR HOME LOAN

19. What type of loan do you have?

- ◯ Flexible (you are able to increase your share of the property up to 100%)
- ◯ Fixed (you are not able to increase your share of the property up to 100%)
- ◯ Not sure

20. If you have a fixed home loan: Why did you choose a fixed home loan rather than a flexible home loan?

21. If you have a flexible home loan: Why did you choose a flexible home loan instead of a fixed home loan?

22. If you have a flexible loan: Have you increased the share you own since you signed your mortgage agreement?

- ◯ Yes
- ◯ No
- ◯ Not sure
- ◯ Not applicable - I have a fixed loan

23. If you have a flexible loan: Do you intend to increase the share you own in the future?

- ◯ No
- ◯ Yes, probably in the next 2 years
- ◯ Yes, probably in the next 4 years
- ◯ Yes, probably in the next 6 years
- ◯ Yes, probably in the next 8 years
- ◯ Yes, probably in 10 years or more
- ◯ Yes, in the future but I'm not sure when.
- ◯ Not sure
- ◯ Not applicable - I have a fixed loan

24. Would you be open to refinancing your home loan with a private financial institution in the future if it were financially favourable to do so?

- ◯ No, I would rather hold my mortgage with Keystart
- ◯ I would possibly be open to this
- ◯ Yes, I would definitely be open to this
- ◯ I have already done this
- ◯ Not sure

25. What was the amount of your home loan to buy this property?

- ◯ Under $200,000
- ◯ $200,001 - $220,000
- ◯ $220,001 - $240,000
- ◯ $240,001 - $260,000
- ◯ $260,001 - $280,000
- ◯ $280,001 - $300,000
- ◯ $290,001 - $300,000
- ◯ $300,001 - $310,000
- ◯ $310,001 - $320,000
- ◯ $320,001 - $330,000
- ◯ $330,001 – $340,000
- ◯ $340,001+
- ◯ I'd rather not say

YOUR HOUSING HISTORY

26. Are you a first home owner?

- ◯ Yes
- ◯ No

27. What has been your main housing arrangement over the last 10 years?

- ◯ Public housing that you rented (this includes paying rent to the government or to a community organisation)
- ◯ Private rental housing that you rented (this includes paying rent to a private landlord or real estate agent)
- ◯ Home that you owned with a mortgage through a different shared equity scheme
- ◯ Home that you owned with a mortgage that was not through a shared equity scheme
- ◯ Living with family or friends in their home
- ◯ Other

If other, please specify

28. What was your most recent housing arrangement before moving into your current home?

- ◯ Public housing that you rented
- ◯ Private rental housing that you rented
- ◯ Home that you owned with a mortgage through a different shared equity scheme
- ◯ Home that you owned with a mortgage that was not through a shared equity scheme
- ◯ Living with family or friends in their home
- ◯ Other

If other, please specify

29. If you were previously living in private rental housing, were you receiving any government payments to help with the rent?

- [ ] I was not receiving any government payments to assist with the rent
- [ ] I was receiving Commonwealth Rent Assistance
- [ ] I was receiving another form of government financial assistance to assist with the rent

Please specify the other form of government financial assistance you were receiving

MOTIVATIONS FOR ENTERING SHARED EQUITY HOME OWNERSHIP

30. How important were the following factors in making your decision to move out of your previous home and into your current home?

For any reasons that do not apply to your previous home, please select 'not applicable'.

	Not applicable	Not important	Somewhat important	Very important
Negative experiences related to living in public housing	○	○	○	○
Negative experiences related to living in private rental	○	○	○	○
Negative experiences related to previous home ownership arrangement	○	○	○	○
Negative experiences related to living with friends/family	○	○	○	○
Pride in owning my own home	○	○	○	○
Wanting greater independence and control	○	○	○	○
Opportunities to accumulate wealth through property ownership	○	○	○	○
Wanting a long-term financial investment	○	○	○	○
Greater financial security in retirement	○	○	○	○

31. How important were the following factors in making your decision to move out of your previous home and into your current home?

For any reasons that do not apply to your previous home, please select 'not applicable'.

	Not applicable	Not important	Somewhat important	Very important
Not wanting to pay off someone else's investment by renting	○	○	○	○
Wanting freedom to do things to the house (e.g. painting, renovations)	○	○	○	○
Wanting a home to pass down to the children or other family members	○	○	○	○
Wanting more affordable housing payments	○	○	○	○
Wanting a larger home	○	○	○	○
Wanting a home in a preferable location	○	○	○	○

Any other housing related motivations?

MOTIVATIONS FOR ENTERING SHARED EQUITY HOME OWNERSHIP

32. How important were the following factors in influencing your decision to enter the shared equity home ownership scheme?

For any factors that were not true of your situation, please select 'not applicable'.

	Not applicable	Not important	Somewhat important	Very important
My income increased	○	○	○	○
I received money or assets as a gift or inheritance	○	○	○	○
The location of my employment changed	○	○	○	○
Change in family circumstances or relationship status	○	○	○	○

Any other non-housing related motivations?

33. Why did you choose shared equity home ownership instead of traditional home ownership from the private market? (please tick all that apply)

- ☐ I could never have afforded to buy a home from the private market
- ☐ I was unable to obtain mortgage approval to buy a home from the private market due to credit ratings
- ☐ I would have had to wait longer to save for the deposit
- ☐ I would have had to borrow money from friends or family in order to pay the deposit
- ☐ I would have had to buy a smaller home from the private market
- ☐ I would have had to buy a home in a less preferable location
- ☐ I felt more comfortable about having a mortgage agreement with a government lender than with a private lender

Any other reasons?

34. How important were the following features of SharedStart in motivating you to enter this scheme?

	Not important	Somewhat important	Very important
Low deposit	○	○	○
No savings history required	○	○	○
No lenders mortgage insurance	○	○	○
No monthly account keeping fees	○	○	○
The possibility of achieving full ownership over time	○	○	○
Having a contract with a state government lender rather than a private financial institution	○	○	○

MOTIVATIONS FOR ENTERING SHARED EQUITY HOME OWNERSHIP

35. If a shared equity home ownership opportunity had not been available to you, which of the following situations would be most likely in the short term (next 5 years)?

- ◯ Living in public housing
- ◯ Living in private rental housing
- ◯ Living in a house with a mortgage that was not secured through a shared equity scheme
- ◯ Living with family or friends in their home
- ◯ Not sure
- ◯ Other

If other, please specify

36. If a shared equity home ownership opportunity had not been available to you, which of the following situations would be most likely in the medium term (5-10 years from now)?

- ◯ Living in public housing
- ◯ Living in private rental housing
- ◯ Living in a house with a mortgage that was not secured through a shared equity scheme
- ◯ Living with family or friends in their home
- ◯ Not sure
- ◯ Other

If other, please specify

37. If a shared equity home ownership opportunity had not been available to you, which of the following situations would be most likely in the long term (longer than 10 years from now)?

- ◯ Living in public housing
- ◯ Living in private rental housing
- ◯ Living in a house with a mortgage that was not secured through a shared equity scheme
- ◯ Living with family or friends in their home
- ◯ Not sure
- ◯ Other

If other, please specify

ADVANTAGES AND DISADVANTAGES OF SHARED EQUITY HOME OWNERSHIP

38. How does your current home compare to your previous home in terms of costs?

	Costs are much higher now	Costs are slightly higher now	Costs are about the same	Costs are slightly lower now	Costs are much lower now
Cost of housing payments	○	○	○	○	○
Transport costs	○	○	○	○	○
Maintenance costs	○	○	○	○	○
Cost to run the house (e.g. power bills)	○	○	○	○	○
Cost of council rates	○	○	○	○	○

39. How does your current home compare to your previous home in terms of the following features?

	My situation is much better now	My situation is slightly better now	My situation is about the same	My situation is slightly worse now	My situation is much worse now
Size of the property	○	○	○	○	○
Quality of the property	○	○	○	○	○
Proximity to shops and services	○	○	○	○	○
Proximity to leisure opportunities	○	○	○	○	○
Proximity to education	○	○	○	○	○
Proximity to parks and green spaces	○	○	○	○	○
Proximity to employment opportunities	○	○	○	○	○
Proximity to public transport	○	○	○	○	○
Time spent commuting to and from work	○	○	○	○	○

Has anything else improved or worsened?

ADVANTAGES AND DISADVANTAGES OF SHARED EQUITY HOME OWNERSHIP

40. What do you see as the main *advantages* of your current housing arrangement compared to your previous housing arrangement?

41. What do you see as the main *disadvantages* of your current housing arrangement compared to your previous housing arrangement?

ADVANTAGES AND DISADVANTAGES OF SHARED EQUITY HOME OWNERSHIP

42. What do you see as the main *advantages* of shared equity home ownership compared to traditional home ownership in the private market?

43. What do you see as the main *disadvantages* of shared equity home ownership compared to traditional home ownership in the private market?

YOUR OVERALL EXPERIENCE

44. How much do you agree with the following statements about the SharedStart scheme?

	Strongly disagree	Disagree	Neither agree/disagree	Agree	Strongly Agree
I was satisfied with the choice of locations	○	○	○	○	○
I was satisfied with the choice of housing types	○	○	○	○	○
I was satisfied with the choice of housing sizes	○	○	○	○	○
I was satisfied with the information and advice provided	○	○	○	○	○
I found it easy to navigate the application process	○	○	○	○	○
I would recommend this shared equity scheme to others	○	○	○	○	○

45. How much do you agree with the following statements about your home?

	Strongly disagree	Disagree	Neither agree/disagree	Agree	Strongly agree
My mortgage payments are affordable	○	○	○	○	○
Appropriate support is available if I am having difficulties with mortgage repayments	○	○	○	○	○
My home is affordable to run (e.g. in terms of power bills)	○	○	○	○	○
I am satisfied with the size of my home	○	○	○	○	○
My home is well designed	○	○	○	○	○
My home feels like good quality	○	○	○	○	○
My home is accessible for people with restricted movement (e.g. people with disabilities)	○	○	○	○	○
Overall my housing arrangement meets my household's needs	○	○	○	○	○

46. How much do you agree with the following statements about the location of your home?

	Strongly disagree	Disagree	Neither agree/disagree	Agree	Strongly Agree
My home is close enough to shops and services	○	○	○	○	○
My home is close enough to public transport	○	○	○	○	○
My home is close enough to employment opportunities	○	○	○	○	○
My home is close enough to parks and green spaces	○	○	○	○	○
My home is close enough to education	○	○	○	○	○
My home is close enough to leisure opportunities	○	○	○	○	○
Overall the location of my home meets my household's needs	○	○	○	○	○

Evaluation of WA shared equity scheme

YOUR OVERALL EXPERIENCE

47. Do any of the following aspects of the SharedStart scheme need improvement? (please tick all that apply)

- ☐ Access to information
- ☐ Choice of housing types
- ☐ Choice of locations
- ☐ The application process
- ☐ Provision of support and advice about my mortgage

Please explain your answer

48. Anything else you'd like to tell us?

Page 26

Evaluation of WA shared equity scheme

OTHER SHARED EQUITY SCHEMES

49. Are you aware of any of the following WA shared equity schemes? (please tick all that apply)

- ☐ Aboriginal Home Loan
- ☐ Disability Home Loan
- ☐ Sole Parent Home Loan
- ☐ GoodStart Home Loan

50. Is there any reason you chose the SharedStart Home Loan instead of one of the other shared equity schemes offered in Western Australia?

Thank you very much for completing the survey. Your participation will help the Department of Housing to improve the shared equity home ownership scheme.

Evaluation of WA shared equity scheme

FOLLOW-UP INTERVIEW

Would you be willing to take part in a short follow-up interview?

The Department of Housing is very interested in your views.

A researcher from AHURI would call at a time convenient to you and conduct a telephone interview. It would take no longer than 30 minutes.

The interview would gather your perceptions and experiences of the shared equity home ownership scheme. This could help the Department of Housing improve the scheme to meet households' needs.

You would be offered an *additional $25 voucher* for your participation in the interview.

Information would be anonymous and confidential. Any details you provide during the interview would only be used to develop general themes. You would not be identified.

51. I would be willing to take part in a short follow-up interview

◯ Yes

◯ No

52. To receive your $25 voucher, please provide your name and postal address below.

53. To participate in a follow-up interview, please provide your phone number and email address below.

Thank you very much again for your participation!

APPENDIX 4: RESIDENT FOLLOW-UP INTERVIEW SCHEDULE

Introduction

Hello, my name is [interviewer], I'm from AHURI, which is an independent, not-for-profit research organisation. We have been contracted by the Department of Housing to carry out an evaluation of their shared equity scheme. You recently completed a survey about the shared equity scheme, which was part of this evaluation – thank you very much for completing the survey. You indicated that you would be willing to participate in a follow-up interview. I'm wondering if now is an okay time to do the interview or if you'd like to make another time? The interview will last up to 30 mins. If there are any questions you would prefer not to answer, that's no problem. All of your answers will remain anonymous and confidential. Resident responses will be summarised in a report for the Department. Your name will not be mentioned. The report will help the Department make improvements to the scheme. If it's okay with you, I'd like to record the interview just to ensure accuracy. Is this okay? Before we start the interview, did you have any questions for me?

Interview questions

Profile of household

- Could you start off by telling me a bit about your household? (e.g. who lives in the house, how many adults/kids, how many incomes, occupations). [Refer to responses to survey questions: Q2, Q9, Q10]

Housing history

- You've indicated that your main housing arrangement in the last 10 years was [HO/PR/PH etc.]—can you tell me a bit about that? [Refer to responses to survey questions: Q26, Q27, Q28]
- And your most recent housing arrangement was [HO/PR/PH/]—can you tell me a bit about that and about the transition into this shared equity home ownership scheme?
- What has it been like to transition from [public housing/private rental/living with family/full home ownership] into this home ownership arrangement? Any challenges or unexpected difficulties? Any need for support (i.e. practical support with maintenance, financial support, information/advice]? [Refer to responses to survey questions: Q27, Q28]
- [If there is a second home owner—ask about brief housing history of the second home owner. Want to know about if they had lived together previously or if they formed a household when they moved into this house]
- [For first home owners only] Before you discovered this shared equity scheme, had you thought about buying a home before? … Had you started saving for a deposit? [Refer to responses to survey questions: Q26]

Motivation to enter shared equity scheme

- Can you tell me what your main motivation was to enter this shared equity scheme? [Refer to responses to survey questions: Q30–Q36] [Probe about answers to Q32].

- What sorts of things were you willing to sacrifice in order to take up this shared equity opportunity? [Refer to responses to survey questions: Q37, Q38]
- Were there any housing related things that you would not have been willing to sacrifice in order to take up this opportunity? (e.g. security, parking, proximity to shops, etc.).

Information about the property and location

- Can you tell me a bit about your house/apartment? Are you happy with the size, design and quality of the house? How does it compare to your previous housing? [Refer to responses to survey questions: Q12, Q14, Q44]
- Do you remember the name of the builder or land developer or real estate agent? What's the name of your development?
- Can you tell me a bit about the area you live in? How does it compare to the area you lived in previously? [Refer to responses to survey questions: Q17, Q38, Q45]

Information about the home loan

- [If flexible loan, probe about intentions to increase their equity share] Are you aware of the incentives to increase your equity share? [Refer to responses to survey questions: Q23]. [If flexible loan, probe about intentions to refinance] [Refer to responses to survey questions: Q24]
- You have indicated that it is [important/not important] to have a loan with a government lender, can you say more about why this is important/not important? [Refer to responses to survey questions: Q24, Q32, Q33]
- You have indicated that you [agree/disagree] that appropriate support is available if you are having difficulties with your mortgage – can you say more about this? Have you taken advantage of any of the supports offered by Keystart? [Refer to responses to survey questions: Q44]

Impacts of the scheme

- Would you say your current housing arrangement is meeting your household's needs? [Refer to responses to survey questions: Q44, Q45]
- Would you say your current housing arrangement is affordable? [Refer to responses to survey questions: Q44]
- What would you say are the main benefits of the scheme for you and your household? [Refer to responses to survey questions: Q39]

Suggestions for improvement

- In the survey you suggested that [element of scheme] could be improved, can you expand on this at all? [Refer to responses to survey questions: Q46].

Thanks very much for your time today, it is very much appreciated. You will be sent an additional grocery voucher in the post. If you have any questions please don't hesitate to be in touch.

APPENDIX 5: STAKEHOLDER INTERVIEW SCHEDULE

Introduction

The Department of Housing has contracted AHURI to undertake a case study evaluation of their share equity initiative and the associated EOI. AHURI is an independent, not for profit organisation that carries out research on housing and urban issues.

Interviews are being conducted with a range of stakeholders involved in the initiative, including:

- department of Housing staff
- builders
- peak industry bodies
- real estate agents
- land developers.

The purpose of the stakeholder interviews is to obtain views about the following:

- Policy context in which the initiative was developed.
- Purpose and impacts of the initiative.
- Strengths and limitations of this approach to shared equity.

The interview will last up to 30mins and be recorded—with your permission—to ensure accuracy. Responses will be analysed to determine perceptions and experiences of this approach to shared equity. Individual interview responses will remain anonymous. However, a report will be submitted to the Department of Housing outlining key themes and findings from the project overall.

Interview questions

Introductory questions

- Description of the organisation in its industry context (e.g. in terms of size, geographical coverage).
- Could you briefly describe your role and involvement with the shared equity EOI scheme?
- [For organisations that had a choice] What motivated your organisation to be involved with the shared equity EOI initiative?

The overall purpose of the exercise and intended outcomes

- What is your understanding of the purpose of the scheme?
- What is your understanding of the intended outcomes? (e.g. in relation to increasing affordable housing supply; in relation to target groups).

Experience of being involved

- Could you describe your experience of being involved in the shared equity EOI initiative? For example, what was entailed in meeting the housing requirements set out in the EOI? (e.g. design, construction and financing mechanisms).

Effectiveness

- To what extent would you say the initiative has achieved its aims? For example, in relation to: providing opportunities for aspiring home owners; increasing affordable housing supply; promoting innovation; responding to WA's changing housing market; meeting the affordable housing needs of one and two person households and families; achieving outcomes for particular target groups.

Benefits of the initiative

- What would you say are the benefits of the initiative for your organisation/industry? (e.g. in relation to promoting innovation).
- What do you see as the wider benefits of the initiative? (e.g. savings to government, job creation and economic activity through the procurement process).

Critical success factors for effectiveness

- From the perspective of your organisation/industry, what would you say were the preconditions that allowed this scheme to work? In other words, what had to be in place in order for this to be a viable/attractive option for your organisation?
- From the perspective of your organisation/industry, what are the essential features of the scheme that have contributed to its success?

Challenges and barriers

- What would you say were some of the key challenges and barriers for your organisation/industry during this process? Were there ways of addressing these?

Progress and implementation

- Do you have any comments on the progress and implementation of the scheme?
- Do you have any suggestions for improvement or recommendations to inform future development of the scheme?

Handover of relevant documents

- Any publicly available documents such as Annual Reports that detail achievements in relation to this scheme?

Australian Housing and Urban Research Institute

Level 1 114 Flinders Street, Melbourne Victoria 3000

Phone +61 3 9660 2300 Fax +61 3 9663 5488

Email information@ahuri.edu.au Web www.ahuri.edu.au