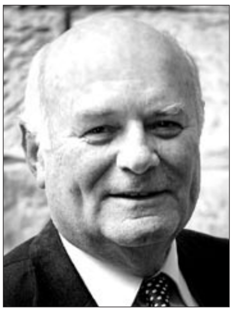
Key words: Equity financing; mortgage lending

Observations on residential housing: the shared equity loan

Most households rely on traditional interest-bearing debt which can expose them to significant risks, such as sudden changes in economic growth or interest rates. Such risks could be alleviated through a better mix of external debt and equity for households via shared equity loans. Shared equity loans also appear to be a good investment for the investment house sharing the equity. On the basis of limited data, they return significant abnormal returns or 'alpha' for their risk.[1]



R.R. OFFICER SF Fin is Professor Emeritus at the University of Melbourne, an Honorary Professor at the University of Queensland and Chair of Acorn Capital Ltd. Email: bobofficer@acorncapital.com.au[2]

IT IS NOT UNCOMMON to hear expressions of concern about the proportion of family income spent on housing or the amount of the nation's wealth tied up in housing, which amounts to the same thing. These concerns are generally not that the costs of production are unnecessarily high in that sector, although such criticisms may be justified at times. Rather, such concerns are based on the notion that housing or the provision of accommodation is 'unproductive'. This reflects ignorance of the axiom 'that the only reason for production or investment is consumption'.[3]

For most households, the decision as to what they spend/consume on housing services is the single most important decision they will make. The consumption of housing services remains relatively static over the life span of the typical family, rising as the standard of accommodation improves. The standard of housing is often set by the amount that the household can initially borrow.

The financing of the consumption of housing services through home ownership typically changes dramatically over the family lifetime. Initially, significant debt is incurred, with the cost of servicing this debt, including repayment of capital, absorbing a significant proportion of family income. Most housing loans are of a credit foncier type where both interest and capital repayment make up a constant repayment amount. This means that, as the loan matures, progressively less of the repayment goes towards interest and more is directed towards capital repayment. The consequence of this is that an increasing proportion of the house is owned by the mortgagor (i.e. borrower) and a greater proportion of the family's wealth (or assets) are held in the house. In effect, the investment portfolio of the average family is dominated by the value of the equity they have in their house.

The servicing of the debt and the repayment of capital results in the debt costs of the accommodation of housing becoming zero by the time the main breadwinner of the typical household reaches their mid-40s.[4] At this stage in the life of the family, the wealth tied up in the house is exactly equal to the value of the housing services consumed by the family whereas, prior to that, the value of the house owned by a family was proportionately less than the housing services they were consuming. It is not uncommon for households to decide to 'trade-up' at this stage of life and buy a better house, yielding greater housing services.

The transaction costs in such a 'trading-up' are significant[5] and, insofar as the standard of housing is limited by the initial borrowing ability, the problem could be overcome to the extent that the family was less constrained by capital. In raising external capital, households have been typically limited to the debt capital they can raise. That is, they do not ordinarily have access to external equity capital. In contrast, companies have used both debt and equity as external capital to fulfill their objectives.

A solution to this problem is a 'shared equity loan'. Households, like companies, can issue equity to external or outside shareholders, sharing the risks and returns of home ownership (i.e. residential housing) and not be constrained by their debt capacity. A number of economists[6] have recently argued that the reliance of almost all households on large amounts of traditional interest-bearing debt exposes them to significant economic vulnerabilities, such as sudden changes in economic growth or interest rates. This, in turn, introduces financial system risks that would be alleviated if households used a better mix of external debt and equity (rather than just debt) via shared equity loans.

Shared equity loans

Typically, in a shared equity loan, the 'lender' or equity investor provides finance for X% of the value of an owner-occupied property in exchange for Y% of the future capital gains on the property when the owner repays the loan. In return, there is no ongoing interest rate on the shared equity loan nor any monthly repayments required. In Australia, shared equity loans can be used to reduce a household's monthly repayments by up to 30% or more, or to buy a home that is up to 25% more valuable than that which they can afford using traditional forms of mortgage finance.[7]

There are three types of circumstance in which a shared equity loan is likely to be beneficial:

- A shared equity loan enables existing home owners, which represent about 70% of the market, to upgrade to a new house that allows them to maintain a standard of housing that is better suited to their current housing aspirations as a function of lifestyle changes, such as the desire to start or expand a family.
- In a similar vein, a shared equity loan can be used by first-time buyers who cannot raise sufficient finance through conventional debt to move out of the rental market and purchase their first home.
- Finally, a shared equity loan might be attractive to asset-rich baby boomers and retirees who want to release equity from their homes in order to boost disposable income while maintaining a minimum fixed proportion of equity in the house (e.g. 60%) no matter what future circumstances dictate. This is to be contrasted with reverse mortgages where the household risks losing 100% of the equity in their home if the debt compounds for long enough.

Such an investment approach, i.e. investing in a house that yields housing services consistent with the family's lifetime aspiration for such a level of services, is simply following standard investment or portfolio theory of investing in a manner that covers expected liabilities. In this case, it is investing in a house that is expected to give the housing services that the family might reasonably expect[8] over their lifetime. The household's use of both debt and equity clearly broadens their financial horizons by enabling them to purchase a house that is more consistent with their life cycle aspirations than if they were simply constrained by debt.

The question then arises as to who might reasonably be expected to provide capital for such shared equity loans? Clearly, the provision of such funds must come from savings and, in this context, one looks to see what the funds management industry might find attractive in such capital to provide shared equity loans in housing. Ultimately, the attractiveness of investment is the return/risk trade-off when comparing investment types. It is in this context that I turn to an examination of the performance of investment in the provision of shared equity loans.

The performance of these investments

Unfortunately, we do not have an extensive data series of the performance of such investing, which was only introduced in Australia in March 2007. We do, however, have a reasonable surrogate in indexes of residential housing. The performance of such indexes could be expected to have a slightly higher variability[9] in returns because the composition of the housing they represent is not given the same scrutiny as an institutionally provided equity shared housing loan, which must satisfy the investor's credit and investment criteria prior to being approved.

On the basis of this data, an investor's portfolio risk could be reduced by investing in shared equity loans without significantly compromising profits or returns. Using an accumulation index[10] of the ASX All Ordinaries Index as a surrogate for share market investment, I compared the covariance risk (or β – risk) of the index with two housing price indexes.[11] The latter did not include rent because shared equity loans only participate in long-term capital returns, with an expected six to seven years[12] until repayment up to a maximum of 25 years. As noted above, investors are compensated by the proportion of their initial investment that is lower than the share of the future capital gains they are entitled to when the house is sold or the loan repaid. This means that the returns from a housing index will underestimate the returns from a shared equity loan portfolio. For example, if the initial value loaned under the equity shared loan was 20% of the value of the property, but the shared equity investor received 40% of the future capital growth of the property when it was sold 25 years later, and the property increased by an average 8% per annum, then the investor's return is about 10.7% per annum, which is well above the 8% property price appreciation attributable to the index.

The difference between the capital appreciation of the house and the return to the shared equity investor represents the rent foregone by the investor over the period of the loan. In the example above, this is about 2.7% – a useful measure of the opportunity cost that the borrower is facing. For example, if we reduced the term to seven years but maintained the other assumptions, the implied rental yield increases to 5.5% (given an expected shared equity return of 13.5%), which is a much greater opportunity cost to the borrower. It can be seen that there is a slow (indeed asymptotic) decline in the shared equity cost of capital over time, which is unlikely to have any material impact on borrower behaviour.[13]

As shown in the following tables, the results of investing in housing compared to share market investment were somewhat surprising. The two alternative investment classes (share market and the housing indexes) indicate no significant correlation or covariance risk between them. This would imply that the shared equity loans are an extraordinarily good investment,[14] returning significant abnormal returns or 'alpha' for their risk class. The data for housing may be compromised by 'smoothing' but, at this stage, I have no better data. It is also consistent with an English study[15] that found a relatively low correlation between housing and shares (equities) in a number of countries.

Table 1 shows the relationship between the All Ordinaries Share Index and the Residex data. Table 2 provides the statistics for both. Remember, the housing returns do not include an implicit rental which, in the case of a shared equity loan, is likely to be between 2.7% and 5.5% per annum based on the assumptions I have outlined above.

TABLE 1: Relationship between All Ordinaries Index and housing, annualised

Correlation	Covariance	Beta
-15.5%	-2.0%	-0.1

TABLE 2: Statistics for All Ordinaries Index and residential (Residex) housing, June 1986 to March 2008

	All Ords.	Housing
Arithmetic mean	12.6%	8.3%
Geometric mean	11.5%	8.0%
Median	13.0%	7.0%
Standard deviation	15.9%	8.0%

Similar results were obtained when the All Ordinaries was compared with the Quarterly BIS Shrapnel data, as shown in Table 3.

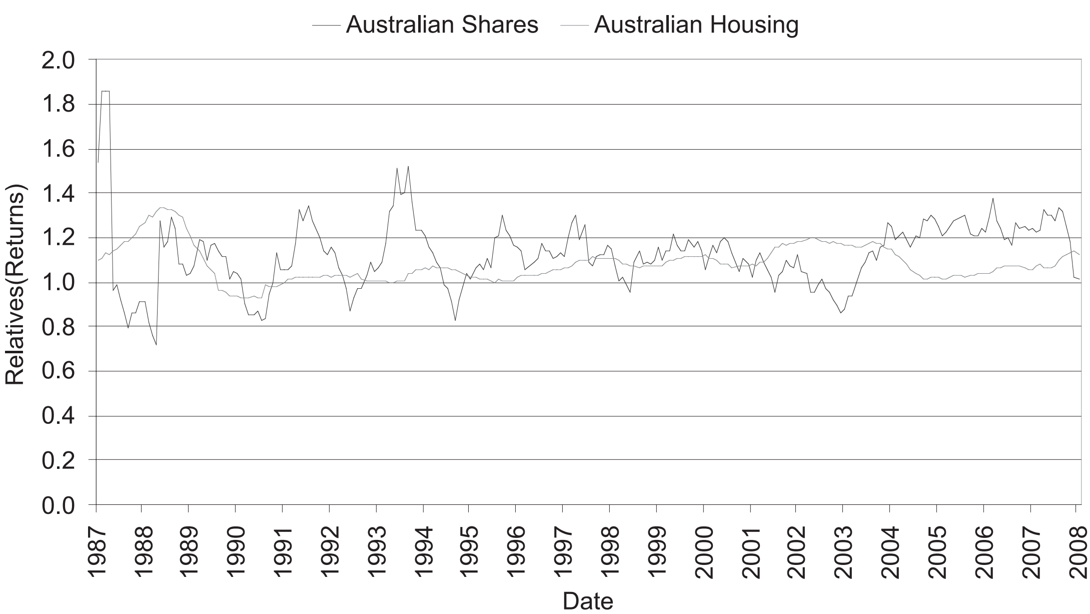
TABLE 3: Relationship between All Ordinaries Index and BIS Shrapnel housing data, annualised

Correlation	Covariance	Beta
-29.0%	-0.001%	-0.1

TABLE 4: BIS Shrapnel housing data, quarterly, June 1986 to March 2008

	Housing (annualised)
Arithmetic mean	8.9%
Geometric mean	8.0%
Median	8.5%
Standard deviation	6.8%

FIGURE 1: Annual 1986 – 2008 shares vs housing



Notes

1 I am indebted to Christopher Joye of Rismark International for useful and enlightening comments on earlier drafts, also Anthony Swan of Acorn Capital, and an unknown referee for comments on an early draft.

2 The author is on the Rismark International Advisory Board.

3 Consumption, of course, includes donations, leaving endowments and the distribution of wealth to heirs (and others).

4 This may have extended in recent years with greater household indebtedness.

5 Estimated as 12.5% of the value of the property – Global Property Index.

6 See, for example, Professor Luigi Zingales of the University of Chicago at www.voxeu.org/index.php?q=node/2390

7 See www.efm.info for more detail.

8 Given their expected wealth.

9 The indexes might also have lower returns than the equity shared loan because they represent a broader portfolio of residential property (i.e. that which underlies the index) than the more concentrated portfolio that would be represented by the shared equity loans.

10 An accumulation index includes dividends as well as prices in the index.

11 Two housing indexes were used:

a. A monthly Residex index of housing prices covering the eight capital cities in Australia.

b. A quarterly BIS Shrapnel housing price index using Real Estate Institute of Australia data.

12 Based on the past 40 years of sale data for New South Wales and Queensland, the average home is sold every six to seven years – RP Data Ltd.

13 This is also confirmed by shared equity repayment data in Australia, which broadly maps the distribution of historical home owner holding periods referred to in Endnote 10.

14 One could argue that a super fund, investing in housing will overexpose its members to housing because many of them already own homes. There are two flaws in this argument. Firstly, a significant number of members of super funds are renters and own no home. Secondly, there is an enormous difference in the variability of returns from a national portfolio of housing relative to an individual house that the fund member may own. It is a bit like comparing the risk profile of an individual share with the market portfolio of shares.

15 Tony Key 2008, 'New capital markets & the property cycle', Cass Business School, City University London, paper presented at Property Intelligence Conference, Sydney.