An actuarial approach to home equity release

In 2011 I became involved in the home equity release field, at a small company called Homesafe Solutions (Homesafe). I've found it to be an interesting field. The product I work with is the only one of its kind currently on offer in Australia, and not a product I had heard of previously. After a year of trying to explain the product whenever someone asks me where I work, I've realised that not many other people, actuaries included, are aware of it either. Some automatically assume that the product is a reverse mortgage, which it is not.

Working in this field has also led to me becoming more interested in the issue of retirement funding – which is much bigger than any single product, and not an issue I had previously given a lot of thought to.

This article considers the Homesafe product, covering those aspects of the product that I hope will be of interest to actuaries, and ends with my thoughts around the potential use of the family home as part of retirement funding. As outlined in many forums recently, dynamics including large numbers of retirees and increasing longevity will lead to the funding of retirees being a challenge both from an individual perspective and, increasingly, from a community perspective.

There is no easy solution. Increased use of the equity in the family home could be part of the solution – at the current time in Australia though, this is an emotive and contentious issue.

The Actuaries Institute White Paper *Australia's Longevity Tsunami – What Should We Do?* outlines (on page 10) three principles to guide retirement incomes policy. One of these is *"The need to encourage intergenerational equity whereby, to the extent possible, each generation funds their own cost of retirement."* It would be difficult to develop policies around retirement incomes, consistent with this principle, if the value that retirees have locked up in their homes is ignored.

There is a role for actuaries to play in developing mechanisms for home equity to be accessed. Solutions might lay in product design, or in changes to tax and legislative environments, for example perhaps lessening the friction costs involved in downsizing.

Long-term thinking is needed, the issues to consider are complex and there are parallels with the types of products actuaries have traditionally helped to develop. There may also be a role for actuaries to play in public policy surrounding this, whether individually or as a

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professional body. The opinions expressed in this article are my own.

PRODUCT OVERVIEW

Homesafe offers a single product; a debt-free equity release product for seniors. Customers are senior homeowners who sell a portion of the future sale proceeds of their homes in return for cash advances today. The product is suitable for asset-rich, cash poor retirees and is an alternative to a reverse mortgage, without the longevity and future interest rate risks of a reverse mortgage.

A special purpose investment vehicle ('the Trust') provides the funding for the cash advances. On entering into a contract with Homesafe in respect of a specific percentage of their home, a customer receives a cash advance, in exchange for that percentage of the sale proceeds when the home is sold ('the future sale proceeds').

The product is provided on a single or joint life basis, with the occasional triple life contract thrown in to keep the pricing interesting. The homeowner(s) retain the right to live in the home for life. The homeowner(s) may rent out the property, and are entitled to all rental income. The Trust receives its share of the sale proceeds when the contract completes – when the house is sold, either when the homeowner chooses to sell, or when it is sold by their estate.

Of course the cash advance paid to the homeowner(s) for a share of future sale proceeds is not equal to that share of the face value of the home today; what is being sold is a share of the reversionary interest, but not the life interest. The life interest is the right to use the assets (or the income produced by those assets) until the homeowner(s) die or sell the assets. This makes sense under classic actuarial theory but can be difficult to explain to people. I find that a simple pie chart often does the trick.

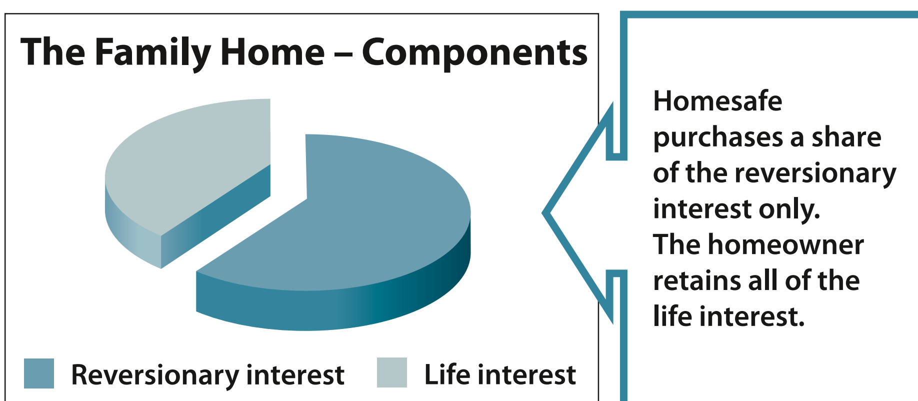
The proportion of the home represented by the reversionary interest is, naturally, higher for single life contracts than for joint life contracts, and for older homeowners than younger homeowners.

Customers access the product for a range of reasons, including:

- debt repayment;
- home alterations to cater for reduced mobility;
- to pay for medical treatment, or nursing or support services;
- to supplement retirement savings; and
- to provide financial support to family members.

Financial advice may be needed to understand the impact, if any, on pension and social security entitlements. Customers are required to obtain independent legal advice in order to transact.

The product is only offered on a lump sum basis. To offer an income stream would expose customers to a credit risk with the Trust, and would require quite a different set up, as an income stream offering would effectively be an annuity purchased with a share of future sale proceeds. However, homeowners are able to transact on a lump sum basis more than once, subject to selling a maximum of 65% of the future sale proceeds of their homes.



REBATES

Something I've found refreshing at Homesafe is the effort that has gone into developing a 'fair' product – the product has been designed with a clear philosophy of aiming for equity between the homeowner and the Trust.

Homeowner and trust outcomes are considered in the context of a range of property return scenarios and a range of contract exit scenarios – contracts might remain in force for less than a year, or they might be in force for nearly 50 years, or perhaps more with longevity improvements. 'Fairness' has been developed as an integral part of the product via two rebates which might apply; when the property is sold, Homesafe's share of the sale proceeds will be reduced by the amounts of the rebates.

The first rebate is an Early Sale Rebate which applies if the home is sold in the early years of the contract. For a 'younger' homeowner taking out a contract in their 60s there might be a rebate for 20 years, whereas for a homeowner taking out a contract in their 90s there might only be a rebate for a few years. This rebate is designed to ensure that the Trust does not make a windfall gain if a customer dies, or sells the home, early on. In the very early years this rebate can be substantial. The rebate also works to protect the yield of the Trust. If the contract completes in the early years and the growth in the property value over that period has been low, or even negative, then the Early Sale Rebate is reduced.

Chart 1

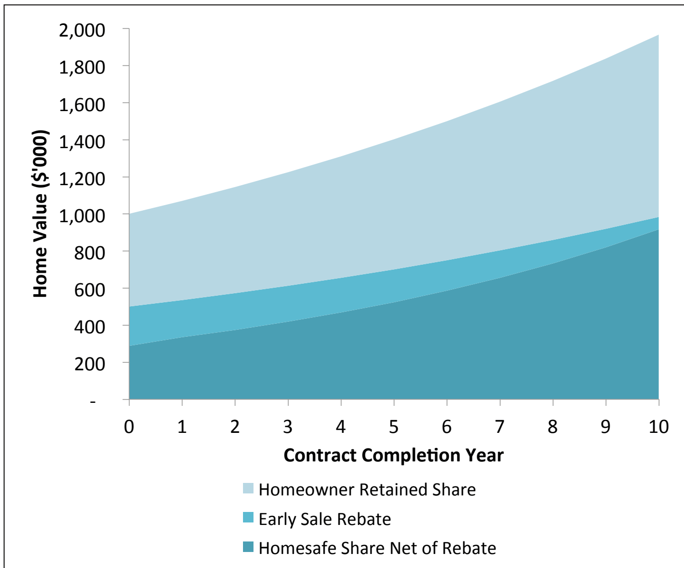


Chart 2

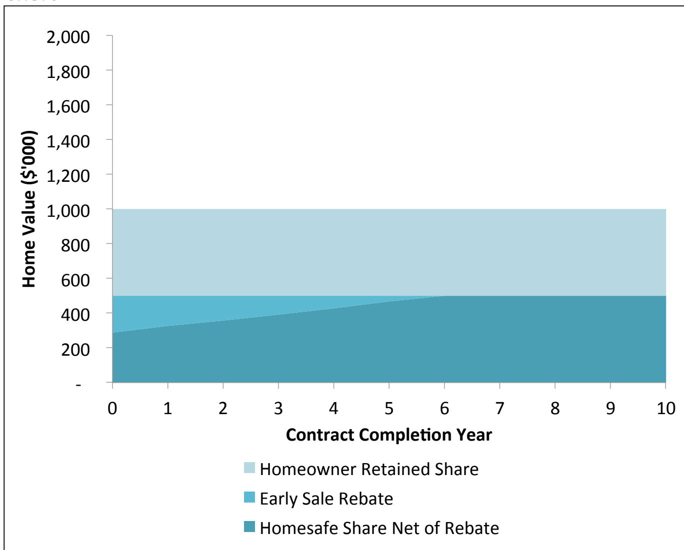
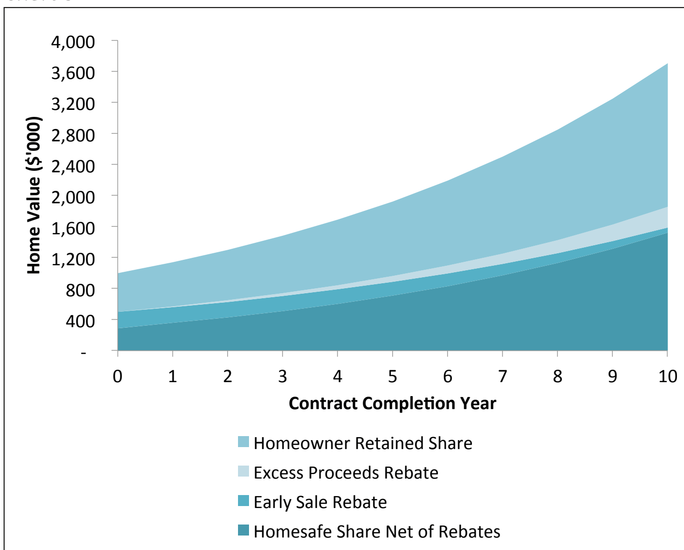


Chart 3



Charts 1 and 2, illustrate the Early Sale Rebate with an example contract relating to 50% of a property initially valued at one million dollars. In Chart 1, property appreciation is at 'expected' levels whereas in Chart 2 there is zero property appreciation.

The second rebate is an Excess Proceeds Rebate which shares with the customer, or the estate, the impact of very strong appreciation of the property value over the term of the contract. The Trust bears the risk of an underperforming asset and takes the initial portion of any excess performance, but after this the Trust and customer share in further excess performance. Chart 3 illustrates the operation of the Excess Proceeds Rebate where property returns are materially in excess of 'expected' levels.

The rebates that apply at contract completion are calculated in accordance with formulae which are set out in the contract. There are no discretions. The rebates cannot be negative. The homeowner/estate will therefore always receive, at a minimum, the retained share of the sale proceeds.

The formulae for the two rebates use minimum/maximum functions and while they are not particularly technical, they are rather complex, and have been developed by actuaries. A glance at them does not provide an intuitive understanding; rather they need to be worked through to appreciate their outworkings under different scenarios. Well, that was the case for me.

Whilst they work cleverly to manage equity between the homeowner and the Trust, there is a degree of paternalism about the rebates as few customers would understand them. Homeowners are provided with illustrations which can be tweaked to show the outcomes under a range of property return and exit scenarios, which should help, but realistically this would not help everyone.

RISK MANAGEMENT

As with any product development, there has been a strong focus on risk management in developing the Homesafe product. There has been a lot of thinking along the lines of 'what could go wrong' and also about brand protection. There is a clear intent to avoid the risk of the product being mis-sold to vulnerable homeowners.

There is a range of eligibility criteria that apply. Homeowners must be aged 60 or over to transact, and the product is currently offered only in certain postcodes in greater Melbourne and Sydney. The land value of the property must be at least 60% of the total value. There are also other criteria, and some subjectivity around accepting 'unusual' properties.

Clearly protection for the Trust is needed to ensure that when a property is sold, the appropriate share of the sale proceeds is actually received. All names on title must be parties to the contract. Homesafe registers a mortgage and lodges a caveat on the title of the home, to secure its share of the sale proceeds. (Use of the term 'mortgage' creates confusion from time to time as its use is commonly associated, not always correctly, with debt).

Salaried customer consultants liaise with homeowners. There are no incentives around the numbers/ values of contracts written. Along with the requirement for independent legal advice, it is intended that this removes the risk of a homeowner being/ feeling pressured to transact with Homesafe.

In time I could see the possibility that financial planners might become familiar with the Homesafe product and include it in their advice to seniors. This is more likely in a 'fee for service' world as the product does not have any inbuilt commissions. A challenge is that cash-poor, asset-rich seniors are less likely to seek advice from a financial planner

than more wealthy people who do not have the same need for the product.

The Homesafe contract contains a number of other requirements which act to protect the interests of the Trust.

For the Trust, the biggest risk is of course the risk of low property appreciation. In the early years of a contract, this is largely mitigated by operation of the rebates, but a long period of sustained low appreciation will be reflected in the returns of the Trust.

The Trust is also taking on longevity risk. I initially expected the impact of this to be greater than it is; the longevity risk is swamped by the impact of property returns, and dampened by the operation of the Early Sale Rebate.

An advantage of taking on longevity risk the way that it is taken on by the Trust is that there is a natural hedge. If on average the sale proceeds are received, say, two years later than expected, there will have been an extra two years of property appreciation, and possibly a reduction in rebates. This is quite different from a product such as a life annuity, where an across the board two-year increase in life spans results in two extra years of payments on the liability side, with no corresponding asset side benefit.

THE ASSET

So far I have covered only the customer / product side of Homesafe but there is also an interesting asset being created in the Trust. With over $250m having been advanced to senior homeowners, a diversified pool of interests in residential property has been created, which provides exposure to properties without any of the management issues associated with being a landlord.

The return on this asset will differ from that of other property investments, as there is no concept of a rental or leasehold yield. As well as being impacted by house price increases, the return profile of the asset is driven by the pricing basis which applied when contracts were written and by the rate at which contracts complete. The operation of the Early Sale Rebate provides significant downside protection in respect of contracts that complete in the earlier years.

The asset is only suitable for long-term investors, at least until such time as the asset class becomes well developed in Australia, creating a liquid market. This needs to come about via a secondary market as the asset itself is not flexible in terms of liquidity. Homesafe has no influence over when contracts will complete. This also means that the asset is not as useful in matching long-term liabilities as it might otherwise be. Although Homesafe is starting to build credible experience around completion rates in the first few years of the contract, it will be many years before experience for the later contract years is credible. Experience to date suggests that more contracts are completing 'voluntarily' than due to death of the homeowner(s).

This type of asset could perhaps fit well in a large diversified asset portfolio, either as part of a property asset class or under the 'alternatives' banner. Perhaps its inclusion would help to reduce expected volatility in a diversified fund. It could also be useful to fund long-term liabilities, provided that cash flow matching is not required.

THE BIGGER PICTURE

Homesafe commenced operations in 2005 and, with 2000+ contracts written to date, has moved beyond proof of concept. However, it is still fairly niche, and not very significant in the scheme of Australian retirement funding. To date, reverse mortgages have played a greater role. In recent years, a number of lenders have withdrawn from the reverse mortgage market, limiting availability, and other lenders have increased the minimum ages applying to their offerings.

In the current climate of baby boomers retiring, often without substantial superannuation savings, discussion around the potential use of home equity to help fund retirement and aged care costs is starting to make its way into the public arena. This discussion, in my view, has a long way to go.

If Australia is to move in the direction of each generation funding its own retirement, consistent with the principles of the 'Australia's Longevity Tsunami' White Paper, then the current practice of retirees receiving taxpayer funded pensions and bequeathing substantial wealth in the form of the family home is problematic. It is also not equitable. As demographic changes lead to proportionally more retirees and less tax payers, nor will it be sustainable.

With the family home's complete exclusion from assets tests being seemingly sacrosanct in Australia, it will be a brave government that addresses this.

Long-term thinking is needed and perhaps this can be viewed as a classical actuarial problem of equity between different groups of people. On one hand you have the taxpayers – who could be viewed as one group or divided up (for example into those expecting to inherit nicely and those not, or into those with high household income and those with low household income). On the other hand you have the seniors seeking funding from the public purse. Some are homeowners and some are not.

In a 'negative tontine' effect, the proportion of taxpayers to seniors is gradually reducing over time. Policy development around this is an area for potential actuarial input.

If an increasing number of retirees seek to access the equity in their home, either by their own initiative or perhaps as a result of government encouragement, it will be interesting to watch the home equity release sector. New solutions will be needed, with plenty of capacity. I would hope that there would be new participants and a range of 'fair' products developed.

Home equity release is certainly a field that can benefit from actuarial involvement. Both policy development and product design need to take into account time horizons that stretch for decades, and a range of factors around which there is plenty of uncertainty and often little experience. A

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