

EDUCATING AND SUPPORTING OLDER PEOPLE FOR RETIREMENT HOUSING DECISIONS, A CASE STUDY IN AUSTRALIA

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Many countries around the world are experiencing problems associated with the aging of the population, which necessitates developing post retirement accommodation solutions. In developed countries, retirement villages followed by aged care facilities are a common solution. Relocation to one of these can involve significant expense and financial risk for consumers. Most of them lack the knowledge and skills to make informed decisions about this. The purpose of this paper is to show how publicly available data, such as the Australian Bureau of Statistics data on mortality and disability, may be used to create a comparison rent metric for consumers considering a move into a retirement village in a user friendly web-based calculator to enhance their financial planning by using statistics relating to lifespan and health.

INTRODUCTION

Increasing life expectancy and the aging of the population is creating new opportunities for business, especially in developed countries. One such opportunity is related to accommodation and other services for the aged. This includes Retirement Villages (RVs) and Aged Care Facilities (ACFs). Retirement villages are intended to provide accommodation for healthy retirees, those able to live independently and who don't need medical care or other services. Retirement villages and similar organisations exist in the UK, USA, Canada, Australia, New Zealand and South Africa.

Many older Australians hold high value real estate assets but otherwise have inadequate retirement savings and retirement income. As people age and their children leave home, many find that their home is bigger than required for their lifestyle, not 'age friendly' in terms of suitability for the frail aged, and maintaining it can become a burden. They may be 'asset rich but income poor' and have a lot of their wealth tied up in an illiquid real estate asset (ABS, 2016). A solution, which is common in Australia, is for people to move into a 'retirement village' (RV). This is a complex of apartments and a community of older residents. A retiree can sell their home, use the proceeds to finance their move into a retirement village, and possibly have a substantial amount of money left over to finance their lifestyle during their retirement.

Australian Bureau of Statistics (ABS) produces official reports related to the mortality rates, disability rates, unemployment rates and housing availability, and some of them make their data available for public use. However it would be naïve to assume that the publicly available data can be utilised by all (ordinary citizens) to make evidence based decisions, not just due to complexity of the analysis required for moving into a RV decisions but lack of (computer) skills and knowledge (statistics, finance) barriers (Nicholson, Ridgway, McCusker, 2014). Therefore there is a need to provide easy to use tools for citizens to help them become better informed about their society and their options (GapMinder, Maxmen 2016) and use the resources available to them to make decisions about their own future, such as identifying the best RV contract for themselves.

In this paper, we describe a methodology for a metric which uses publicly available data which can be used to reduce the complexity of the contract's payment structure to a single number, the comparison rent. This is a pay as you go monthly rental paid over the term of the consumer's residence in the RV. Our focus, for this paper is Australia where RVs are separate from ACFs and are lightly regulated by state governments. Also they are not publicly subsidised. Our methodology and user friendly free web based calculator can be used in other countries by adopting or adapting it to their country's requirements.

THE PROBLEM

We obtained and analysed a large sample of over 100 retirement village contracts from

around Australia. We also interviewed many retirement village managers and residents about the structure of their contracts. Australian retirement village contracts are complex, involve the resident paying a substantial 'deposit' and committing to pay recurrent fees each month. In return the residents get the right to reside in (but not ownership of) the retirement village apartment until they either die, become incapable of living independently, or voluntarily relocate to some other accommodation. Incapacity for independent living results in termination of residency and forced exit from the retirement village. On exit from the RV, they receive a partial refund of the deposit they paid. The partial refund is calculated according to some formula in the contract and it reduces in amount with the duration of the residence. In addition the resident may receive some share of the capital gain and be obligated to pay some share of the capital loss (if applicable) on the resale of their apartment. In effect, the retirement village contract provides the resident with a 'life interest' in the apartment, albeit one that lasts for the person's 'healthy life span', not their full life span. The amount of the initial deposit is often substantial and comparable with the cost of buying a similar sized apartment outside of the retirement village.

In order to compute the comparison rent metric, data on the mortality and disability rates for the segment of the population who choose retirement village living is required. However, the RV owners either don't collect such data or don't want it to be public, so such data is not publicly available. There are intangible benefits for RV residents in terms of their health and happiness, which may enhance their longevity. Some RVs have very good facilities and arrange various services and activities for their residents. The facilities, services and ready-made community are attractive features of RVs, but there is huge variation in this across the RV industry. However, there are also some intangible detriments of RV living, in particular the power imbalance between the residents and the RV operator compared with a pay as you go rental arrangement, their low financial literacy and the complexity of the contracts. Therefore, we have made use of the publicly available population level data on mortality rates and disability prevalence rates from the Australian Bureau of Statistics. This allows us to create survival functions allowing for death and disability, which can be used to estimate a new entrant's expected term of residence from their age and gender and hence estimate the comparison rent. The comparison rent metric has the merits of greatly simplifying the complex contract fee structure and that rent is a familiar concept for most consumers.

One of the authors obtained a grant for AUD\$128,000 to develop a free online retirement village financial calculator for the community to use, from Financial Literacy Australia, which in turn is funded by the Australian Securities and Investments Commission. We have launched it in July 2017 and it is available at <http://www.rvcalculator.org/#/>.

Structure of the Contracts

From a financial perspective, the retirement village contract can be thought of as a package of insurance products. The partial refund of the entry fee payable on exit is equivalent to an insurance policy which pays a benefit at the time of death or disability. The requirement to pay the maintenance fee during the term of residency is a negative income stream life annuity. The right to reside in the apartment is financially equivalent to an income stream life annuity of the rent the resident would otherwise have to pay for their future accommodation. This is what is known as a 'life interest'. The right to receive some share of the capital gain on the resale of the apartment when they leave is a complex hybrid of an insurance contract and an option contract. Using actuarial methods, it is possible to quantify the economic value of each of these components of the contract.

An alternative way to think about the contract is that it is a type of non-interest bearing loan by the tenant to the landlord for a particular term, at the end of which the tenant gets back less than what they lent originally. This would normally be a loss making transaction but the right to reside provides a periodic benefit similar to renting a house or a flat.

To quantify the cost via the comparison rent metric, some financial assumptions are to be made about parameters such as the appropriate interest rate, consumer price inflation, real estate price inflation and so on. Publicly available resources are used to estimate these parameters (such as the Reserve Bank of Australia (<http://www.rba.gov.au/>), the Australian Bureau of Statistics (<http://www.abs.gov.au/>) and the SQM research (<http://www.sqmresearch.com.au/>) websites).

Risks Associated with Retirement Village Contracts

Many contracts are lengthy, 100 pages or longer, legal documents. Consumers and their relatives typically do not understand the contract terms, the complex financial structure, or the risks they are exposed to. One of the big risks for the consumer is the risk of a lengthy delay in receiving the exit payment after leaving the retirement village. Delays of 6 months, 1 year or several years are common. During the delay, the RV can continue to charge the consumer maintenance fees. A resident who leaves due to ill health will desperately need the money to fund alternative accommodation, however, they may have to wait a long time to get their money. Consumers typically don't understand the long term financial implications of the contracts they sign up to, nor how to financially quantify aspects such as capital gains and losses, or the expected payment at the time of exit. Unfortunately, they have to make their decisions by gut-feelings and not evidence-based. Another risk to the consumer is that by paying up front for the right to reside, thereafter they are in a weak bargaining position relative to the landlord compared with a normal pay as you go rental arrangement, where the tenant could stop paying the rent when they decide not to live in the premises anymore. In this paper, we don't attempt to quantify these risks, however it is important to emphasise that they do exist. With the comparison rent metric, the consumers will be able to *compare* a number of RV contracts and choose the best one for themselves.

DESCRIPTION OF THE METHODOLOGY WITH AN EXAMPLE

Consider the following not so hypothetical but typical retirement village contract. Residents aged 55 or older are eligible to become residents of the village. The RV offers new residents a modern two-bedroom apartment in a suburb close to the CBD of Sydney Australia. The entry fee is $D = \$1,000,000$. In addition, the resident pays a recurrent fee of $RF = \$500$ per month for maintenance of the facilities in the RV. The resident is not entitled to any share of the capital gain on the resale of the apartment when they exit from the village.

On exit from the village, the resident receives a partial refund of her/his entry fee calculated via the formula: $\text{partial refund} = D \times [1 - \min(DMF \times T, CAP)]$ where D is the entry fee, T is the duration of their RV tenancy, DMF is the 'deferred management fee' per year (typically 6%), CAP is the upper limit for the reduction in the deposit (typically 30%). From an economic perspective the entry fee is a non interest bearing loan to the RV operator but at the end of the term the RV operator pays back less than the full amount lent.

Given the entry fee of $D = \$1,000,000$, the amount by which the partially refundable deposit reduces each year for the first n years (5 in this case) is $D \times DMF$. The resident also pays recurrent fees of $RF \times 12$ each year. Over a 1 year time frame the resident pays $D + (RF \times 12) = \$1,000,6000$, and receives back $D \times [1 - \min(DMF \times T, CAP)] = 1000000 \times (1 - 0.06) = \$940,000$ at the end of 1 year. The economic value at the start of the year of the right to receive \$940,000 at the end of the year is \$903,202.15 if we use an interest rate of 4% p.a. convertible monthly. The cost of living in the RV for 1 year is $\$1,000,000.00 - \$903,202.15 = \$96,797.85$ expressed as an up-front payment. Note that this doesn't include the maintenance fee of \$500 per month. Expressed as a rent paid monthly in arrears over the 1 year term, the rent is \$8,242.33 per month and if we add the \$500 per month maintenance fee we get a figure of \$8,742.33 per month, which over a year amounts to \$104,907.93

Over a 5 year time frame the amount of the exit fee charged to the resident is $D \times DMF \times 5 = \$1,000,000 \times 0.06 \times 5 = \$300,000$. At the end of 5 years, the resident gets back \$700,000. Using an interest rate of 4% p.a. convertible monthly the economic value at the outset of the right to receive \$700,000 in 5 years is \$573,302.17 so that the cost of the 5 years residence is $\$1,000,000 - \$573,302.17 = \$426,697.83$ expressed as an upfront cost. We can convert this to a financially equivalent rent paid monthly in arrears over the 5 year term and this is \$7,858.29 per month not including the \$500 monthly maintenance fee. If we add this in, we get \$8,358.29 per month which is \$100,299.48 per year.

These examples illustrate that the cost expressed as a pay as you go rent is not cheap. Most consumers are not aware of the impact of compound interest or the true costs of this financial arrangement. In addition, most of the consumers would not be able to make such calculations due to lack of statistical and financial knowledge. Over a 10 year time frame, the monthly cost is a bit lower at \$4,320.11 per month excluding the maintenance fee or \$4,820.11 per month if we include

it. This is lower because the exit fee is capped at 30% (6% for 5 years).

This is typical of most RV contracts. The cost is higher for a short-term residence than it is for a longer term residence. It’s a better deal for younger old than for older old due to the difference in the expected term of residence. We have anecdotal evidence that RV operators prefer older new residents to younger new residents as they are more profitable.

In our freely available web-based RV calculator, the comparison rent is calculated for terms of 1, 7 and 15 years as well as the expected term of residence for the consumer based on their age and gender (and that of their partner if they are a couple) is provided to them. This allows the consumer to get an idea of the cost as an equivalent monthly rent and facilitates comparison with other RV contracts or with renting. Older consumers have low financial and low statistical literacy, but most of them are aware of the concept of life expectancy.

The RV calculator forces the consumers to pay attention to the financial features of the contract, something which they often don’t do carefully enough. It also focuses their attention on the issue of their life expectancy and expected term of residence in the RV. We have anecdotal evidence that many of the RV consumers think of the arrangement as ownership of their apartment when it is not but is instead a long-term rental arrangement. The upfront economic value of a fair rent payment per month for their likely term of residence is usually substantially lower than the deposit required by the retirement village.

CASE STUDIES

Comparison monthly rent

The comparison rent metric depends on the term of residency T, which in turn depends on the consumer’s age and gender and other factors. In the case of a couple the residency terminates when the last survivor of the two dies or becomes disabled or voluntarily exits. Residency terminates on death, disability or voluntary relocation, hence the expected term of residency may be lower than the resident’s expected lifespan. We can use either the resident’s expected lifespan or their expected healthy lifespan as the value of T in the calculation of the equivalent annual rent. The calculator uses the healthy lifespan. For a younger person, their expected lifespan and expected healthy lifespan are higher, therefore, the equivalent rent metric is cheaper than for an older person. RV marketing efforts seem to focus on recruiting older new residents. Industry statistics indicate the average age of new entrants to a RV is about 74 years despite the minimum entry age of 55.

We used the online RV calculator assuming an interest rate of 4% p.a. convertible monthly, an inflation rate of 3% p.a. effective, an ingoing fee of \$1m, an ongoing fee of \$500 per month and a deferred management fee (exit fee) of 6% of the entry fee for each year of residence subject to a cap of 5 years. We did this for males and females aged 65 and 85 and for couples where the male was 85 and the female 75 and vice versa, and for couples where both were the same age (either 75 or 85). The calculator provides the comparison monthly rent for terms of 1, 7 and 15 years for each of these cases and the expected term of residence in the village (Table 1).

Table 1: The comparison monthly rents and expected term of residences

| Term of residence in years | 1 | 7 | 15 |
|----------------------------|---------|---------|---------|
| Comparison rent per month | \$8,655 | \$6,513 | \$4,465 |

| Gender 1 | Male | Male | Female | Female | Male | Female | Female | Male |
|---------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Age 1 | 65 | 85 | 65 | 85 | 85 | 85 | 75 | 85 |
| Gender 2 | NA | NA | NA | NA | Female | Male | Male | Female |
| Age 2 | NA | NA | NA | NA | 75 | 75 | 75 | 85 |
| Expected term | 17.36 | 5.32 | 18.13 | 5.41 | 11.74 | 11.46 | 14.10 | 7.49 |
| Comparison rent per month | \$4,200 | \$7,674 | \$4,127 | \$7,594 | \$4,983 | \$5,040 | \$4,586 | \$6,270 |

The results show that the comparison rent, which is the financially equivalent monthly cost, payable over the expected term of residence, of being a retirement village resident,

- is lower for younger age at entry of the resident,
- is lower for couples than for singles,
- is lower for females than for males,
- is lower for longer expected term of residence than shorter expected term of residence.

Comparison of exit fees

The calculator shows the results for different terms of residence as user experience testing indicated that this would be more useful for users, indicating that we don't claim to predict how long they will be a resident for. The exit fee feature of RV contracts is the main cause of confusion for and complaints by consumers. We can illustrate the impact of changes to the exit fee by comparing a RV contract that has a fast exit fee of 10% per year of residence capped at 3 years to one with a slow exit fee of 3% per year of residence capped at 10 years, assuming the contract details are otherwise as above (Table 2).

Table 2: The comparison monthly rents for different exit fee structures

| Term of residence in years | 1 | 7 | 15 |
|--|----------|---------|---------|
| Comparison rent per month: fast exit fee | \$11,893 | \$6,513 | \$4,465 |
| Comparison rent per month: intermediate exit fee | \$8,655 | \$6,513 | \$4,465 |
| Comparison rent per month: slow exit fee | \$6,226 | \$5,643 | \$4,465 |
| Comparison rent per month: no exit fee | \$3,798 | \$3,615 | \$3,403 |

The results show that with the fast exit fee of 10% per year of residence capped at 3 years, the comparison rent over short terms of residence is substantially higher than it is for the slow exit fee of 3% per year spread over 10 years. There is a lot of variation in the exit fee structures across retirement villages, which makes it difficult for consumers to understand the financial implications and do comparison shopping.

In Sydney Australia, which is Australia's largest and most expensive city, house prices have recently experienced high growth rates and price growth has outpaced growth in rents. Various websites provide data on real estate prices, growth in prices, rents and rental yields in various postcodes / locations. Rental yields for apartments in most parts of Sydney are in the range from 3% to 4% based on the data from SQM research (<http://sqmresearch.com.au/free-statistics.php>). Based on this source, the average rent for an apartment in the same area of Sydney as the RV in the above examples is around \$2080 per month. Similar comparisons for other RVs shows that the equivalent rent for the RV is generally higher than rents for apartments in the same area outside the RV.

CONCLUSION

The cost of living in a retirement village will vary with the consumer's gender, age and health status at entry. Based on the comparison rent metric, we found that the cost of RV living is higher for males than for females, higher for singles than couples, higher for older persons than younger ones and higher for those in poorer health.

The online calculator had a public launch during July 2017. It was endorsed by various consumer organisations including the Consumer Action Law Center, the Australian Competition and Consumer Commission, The Council of the Aging, Financial Literacy Australia and the Retirement Villages Residents Associations of the states of NSW and Victoria.

We have been engaged in user acceptance testing of the calculator and we are currently building a more sophisticated version for legal practitioners, financial planners and accountants. The user feedback we have had so far is mostly positive with many respondents saying that they were surprised that the comparison rents were so high and stating that they are going to reconsider the option of retirement village living. Some older consumers are not sufficiently internet savvy to be able to use an online tool such as this and find it difficult to use. Most potential new RV customers do seek advice from a lawyer, accountant or financial planner. We are hoping that a free online tool for these advisory professionals will make it easier for consumers to receive quality

advice on the issue of retirement village living. Both consumers and their advisors need to be aware of the implications of how the consumer's life expectancy and health adjusted life expectancy impact on the financial assessment of the RV contract. Our tool assists to increase awareness of this important issue.

In using the online calculator, the first hurdle is to obtain the data about the contract so as to be able to use it, and to make an informed decision. This can be challenging. RV marketing material usually omits this information. This information may be buried deep within the long legal document and not easy to find, or it may be in some other associated document. The contracts for RVs vary across villages and across time within a particular RV. There is a lot of variation in the design of the contracts. The complexity of the contracts makes comparison shopping more difficult for consumers. The complexity benefits the seller more than it benefits the buyer.

The complex exit fee structure combined with the substantial initial deposit requirement could be replaced by a simple pay as you go rental model instead. This alternative business model can still be profitable for the owner but much more transparent for consumers. RV regulation should require proper disclosure of contract terms in a simple easily understood way and to offer consumers a financially equivalent pay as you go rental arrangement instead of the standard form of contract they currently offer.

Our goals in creating the calculator include making consumers aware of the true costs involved in retirement village contracts, making them aware of the impact of their age, gender and health status on the viability of it, to assist with comparison shopping and to make them more aware of issues such as their life expectancy, healthy life expectancy, future financial needs and the implications of the RV contract later in life if they leave the RV other than by death. We have tested it on various consumers and we have had positive feedback about the calculator and the goals behind its creation.

The complex contracts and various fees, especially exit fees are making older Australians and possibly older citizens of other countries vulnerable, especially when they need more care and less trouble (Ferguson & Danckert, 2017). A user friendly, easy to use online calculator could be used by older people or their carers to have better informed decisions based on evidence before they sign a RV contract where the required information from users are simple such as their age, gender and details from a RV contract such as entry fee, monthly maintenance fees, exit fee. Statistical and actuarial calculations are hidden behind the scene however without them there would have been no calculator.

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