Distribution of Resident Duration – Draft
Lois C Towart

Background

Valuation of retirement villages utilises a number of metrics including, resident duration and escalation rates of values and costs. To date there has been little independent research on average resident duration in retirement villages. It is normal for a valuer to be provided with a current residents' schedule; however this provides a snapshot of the village at that point in time looking backwards to when the current residents entered the village. What is required is time series analysis of villages to determine average resident duration.
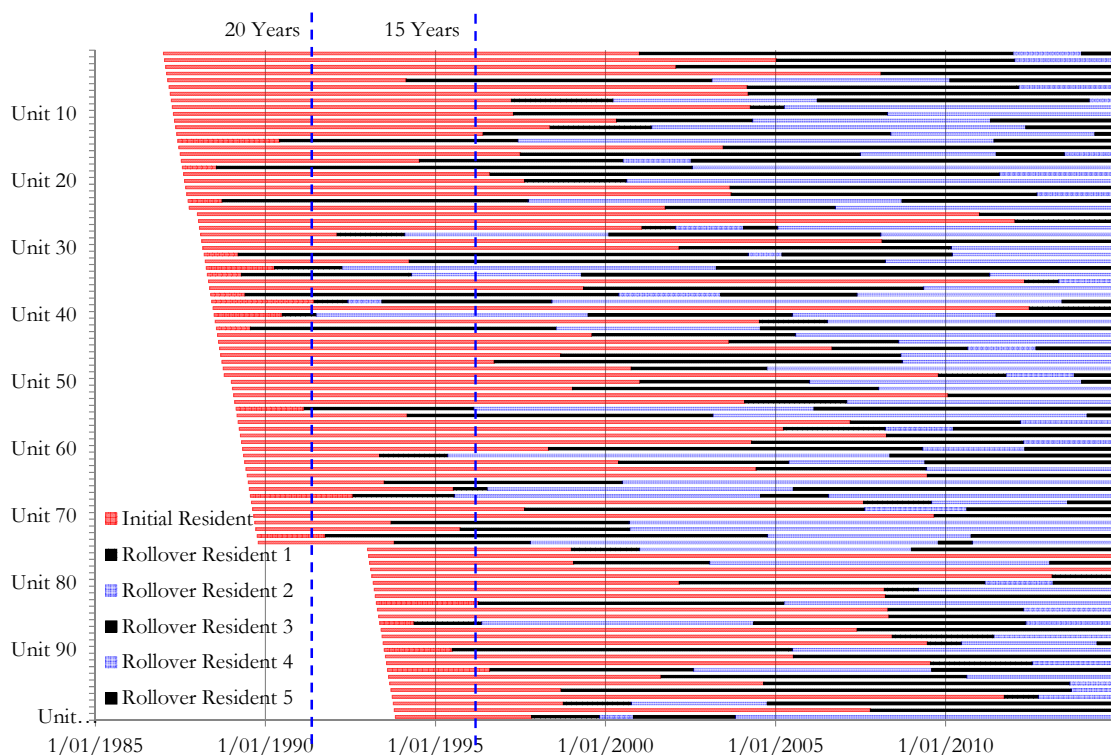
It is an industry held view that the distribution of resident duration is skewed and that there is a difference between initial residents (entering a new unit) and rollover residents (entering a second hand unit).

Methodology

Information was sourced from third party data providers for resident entry dates and sale prices for individual units within a village. A number of villages have been analysed and this initial discussion utilises seven villages in the greater Sydney area.

This information was analysed on a village by village basis using Excel. Initial sales were separated from rollover sales providing data on minimum, maximum and average durations for each data series. The difficulty then arises that with a maximum duration observed for initial residents in excess of 20 years, villages which have been operational for less than this period will provide a distorted distribution as there will be initial residents still in situ. Therefore data was sourced on villages that have been in operation for a sufficient period to allow residents to stay for the maximum period of time.

Chart 1 Retirement Village Resident Duration for Initial and Rollover Residents

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The majority of larger retirement villages are developed in stages, which results in a series of initial sales for each stage; as these initial residents exit the village their units are resold to rollover residents. Chart 1 displays this and shows the initial residents in red and the series of latter rollover residents in contrasting blue and black bands.

Initial and rollover residents stay for a range of time periods (duration) and the analysis looks at these two groups separately to compare duration distributions for each group.

The difficulty with this data is that it skews the sample towards more recent sales as these have occurred in relatively greater numbers over the life of the village; furthermore the sample excludes current residents (still in situ).
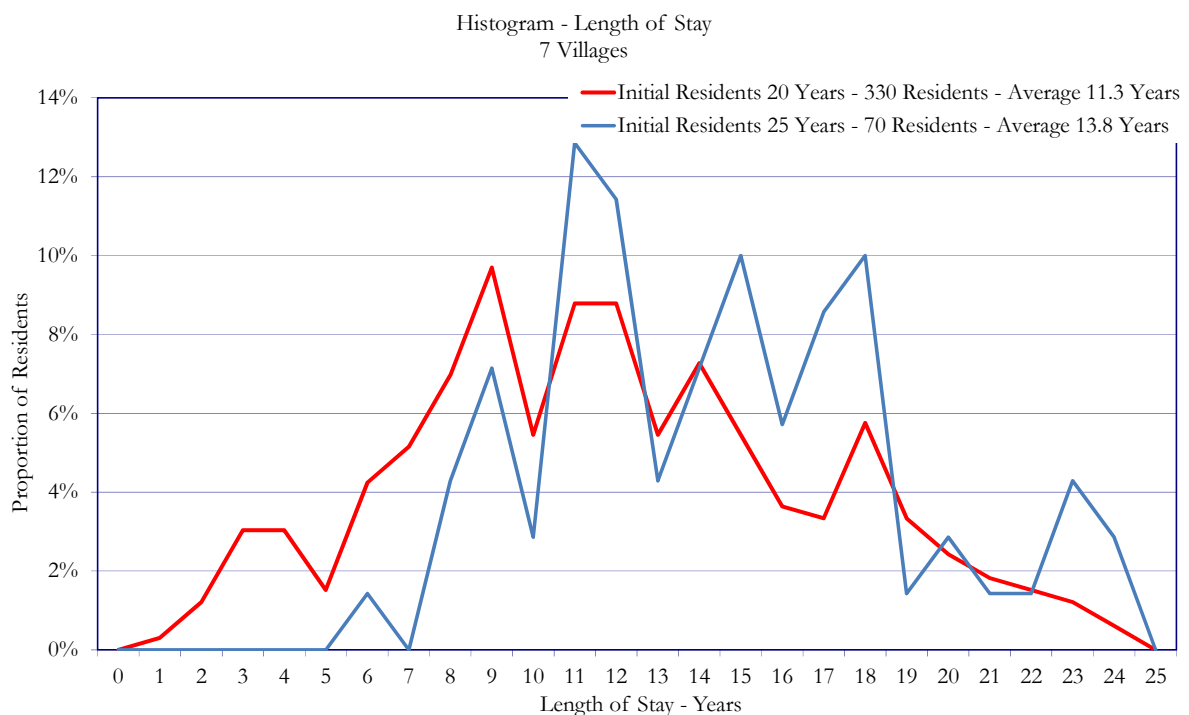
The analysis was modified so that each sample could include all initial or rollover residents and separate these samples into those that had occurred before benchmark dates which results in a sample where all sales have exited (no current residents). This removes the emphasis on the greater number of later sales and compares samples where the maximum duration could be achieved with unmodified samples.

Initial Residents

The maximum duration observed for initial residents was 24 years and the minimum was approximately 10 months. Two sample groups of initial residents were analysed: the group that entered a village more than 24 years previously which would create a sample set where all residents had the potential to stay for the maximum period, titled "24 Years"; and the group that entered a village more than 20 years previously, titled "20 Years".

The histogram of resident duration of both methods as shown in Chart 2 below.

Chart 2 Initial Resident Duration

Histogram - Length of Stay
7 Villages

— Initial Residents 20 Years - 330 Residents - Average 11.3 Years
— Initial Residents 25 Years - 70 Residents - Average 13.8 Years

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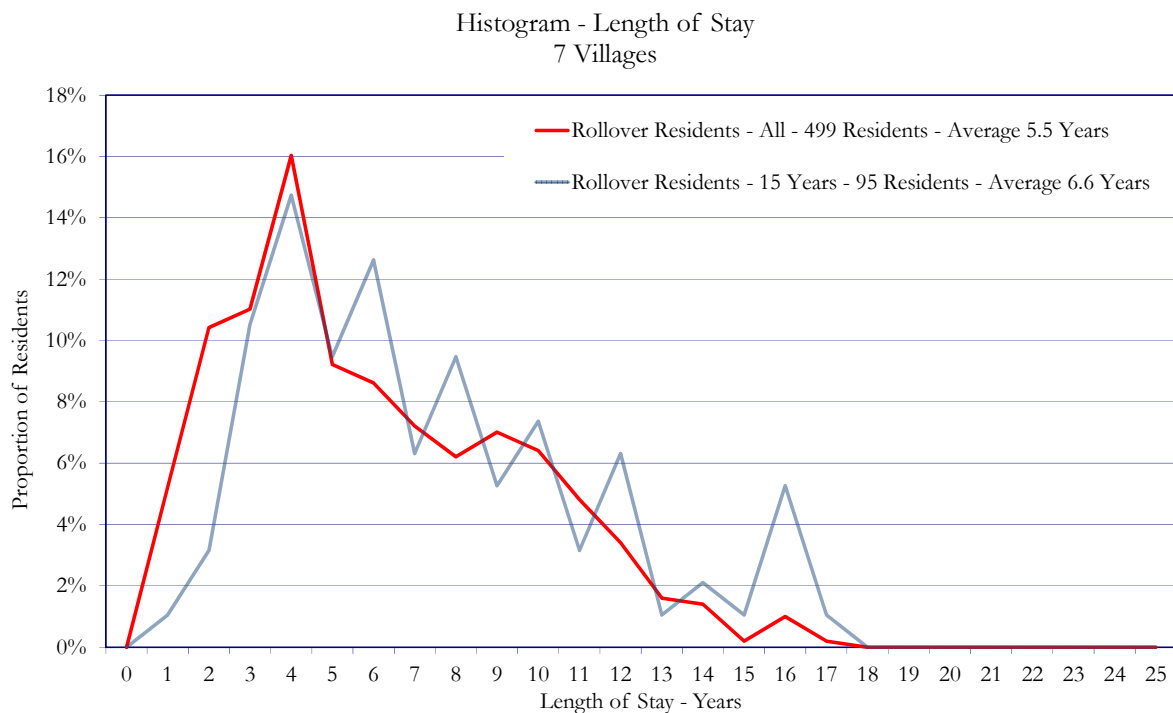| Sample Group	Sample Size	Mean	Median
Initial Residents 20 Years	330	11.3	11.0
Initial Residents 24 Years	70	13.8	13.9

The Initial Residents 24 Years Sample Set shows a greater degree of volatility therefore in these initial stages of the analysis the Initial Residents 20 Years sample has been the focus. The sample size comprised 330 data points with a mean of 11.3 years in a median of 11.0 years; the distribution is mildly skewed and relatively flat with all intervals below 10% of the total.

Rollover Residents

A similar method was used for analysing rollover resident duration; initial analysis showed a maximum duration of rollover residents at 17 years and the minimum duration of <6 months. Again two sample sets were analysed, a slightly lesser amount than the maximum observed of 15 years was used as a benchmark "15 Years" and compared with all rollover residents "All".

The histogram of resident duration of both methods is shown in Chart 3 below.

Chart 3 Rollover Resident Duration

Histogram - Length of Stay
7 Villages

— Rollover Residents - All - 499 Residents - Average 5.5 Years
····· Rollover Residents - 15 Years - 95 Residents - Average 6.6 Years

Sample Group	Sample Size	Mean	Median
Rollover Residents 15 Years	95	6.6	5.9
Rollover Residents All	499	5.5	4.8

This has produced a (familiar) skewed distribution and again the sample group with the smaller number of data observation shows a greater volatility. The sample group Rollover Residents 15 Years has a sample size of 95 data entries and a mean of 6.6 years and a median of 5.9 years. The sample group Rollover Residents All has 499 data entries and the lower mean of 5.5 years and a median of 4.8 years.

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Implications

The difference in probability of resident duration between initial residents and rollover residents is significant while it has been acknowledged that rollover residents stay on average less than initial residents that this difference would be in the vicinity of 50% is interesting.

This difference in resident duration has implications in setting DMF fees; while it is common to have DMF fees increasing over a ten-year period of residence this does not match the resident duration shown by the two groups. In order to maximise value for a new village and operator could utilise a free structure with a "tail"; this is where there are variable annual rates of DMF accrual, a greater amount 2.5%/3.0% p.a. In the initial 10 years with a smaller amount 0.25% p.a. for all remaining years in this way the longer resident duration contributes to the bottom line.

An operator with a well-established village would maximise value with the DMF structure that reaches a maximum in a period close to the men e.g. 8 years.

Data Veracity

All analysis is dependent upon the quality of initial data and transactions that were removed from the analysis included.
- Sales with the duration outside benchmarks, where the name of the historic purchaser did not match the latter vendor.
- Bulk sales involving operators.
- Sales involving operators; it has been noted that some operators purchase units off exiting residents, hold these for a short period of time (< 1 year) and then sell to an incoming resident.
- Sales involving survivorship, that is a transfer from two residents to one of these two residents.

This has resulted in approximately 20%-30% of original data being discarded.

Further Analysis

This study analyses villages which commenced operations in the late 1980s and early 1990s, this assumes that there is little difference in retirement age over time. To determine whether this is the case further analysis on average age of retirement and average age of entry into villages is required. This could also be augmented by an analysis of resident duration for each of all the years (1987 – 2012) of the sample.

The data has been sourced from third party data providers; this should be augmented by interviews with original developers of the subject retirement villages to determine whether other factors should be incorporated into the analysis.

The analyses is for villages in the Sydney basin, some initial analyses has been undertaken of villages in Western Australia and Queensland and it appears that resident duration differs between geographical areas. Further analysis is required to determine whether there is any significant variation in resident duration between regions of Australia.

In most instances a valuer or a potential purchaser is provided with the current resident schedule; it would be useful to know the degree to which historical resident durations correlate with current resident durations as this would then enable more accurate analysis to be undertaken with limited information.

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