An Approach for Estimating Gross Market Return for Life Settlements

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The real returns that can be realized with investments in life settlements are still a largely untapped area. The lack of respective information therefore opens a wide field for estimates, expectations and promises.

The purpose of this paper is to present an approach for estimating the gross return available from life settlements that is independent of life expectancy (LE) estimates. We first estimate the actual mortality experience seen in the life settlement market relative to a standard life settlement table. We then input the survival/mortality probabilities resulting from this estimated mortality experience into an IRR calculator, assuming a transaction price that is consistent with traded policies in the secondary market and in line with the cohort underlying the actual mortality. The primary sources of information for these calculations are the Fasano Associates and AA Partners databases.

Calculation of Mortality Experience

In order to calculate mortality experience for the secondary market we started with a subset of the Fasano database consisting of males between the ages of 75 and 85 who were underwritten from 2008 through the end of 2012. The Fasano life expectancy estimates had nothing to do with the calculation itself, but rather were used to identify transactions representative of those seen in the market. We chose a cohort in which the Fasano life expectancy estimates were between 90 and 126 months. It should be noted that the average life expectancy seen in the market is in the range of 96 months, which is approximately 12 months shorter than the average life expectancy from the Fasano cohort that we used, but is consistent with LE spreads in the market, which usually are based on a blend of AVS and 21st Services life expectancies, relative to Fasano.

We then took the actual mortality experienced from this cohort relative to the mortality that would be expected based on the Fasano life settlement mortality tables at a mortality rating of 100%. The actual mortality of this cohort turned out to be 145% of expected standard mortality, with no provision for IBNR (incurred but not reported deaths).

Policy Parameters

For the purposes of our calculations, we used the following policy parameters:

Gender	Male
Smoking status	Non-smoker
Age (ALB)	80 years
Market life expectancy	96 months
Policy type	Universal life (UL)
Face amount	$2,000,000
Premiums	Averaged projected premiums of a cohort of actually closed transactions and mirroring the above characteristics

We considered these to be a reasonable representation of actual transactions in the market. We assumed a purchase price equal to 12% of face amount, which we believe to be consistent with these policy parameters.

Estimation of IRR

We next took the survival/mortality probabilities associated with our policy parameters with a mortality rating of 145%, calculated from the Fasano life settlement mortality tables, and input these probabilities into the AA Partners IRR calculator. We input policy values consistent with those seen in the market.

Based on our assumed purchase price of 12% of face amount and our other policy parameters, the resulting IRR was estimated at 13.04%.

We then stress tested our results, inputting mortality ratings of 125% and 165%, which resulted in respective estimated IRRs of 10.60% and 15.53%. Last, we tested the impact of the likely spread in mortality ratings that would be found in the market place by estimating the IRR for a portfolio with an average mortality rating of 145%, but consisting of one policy with a mortality rating of 100% and another with a mortality rating of 190%. The estimated IRR of this hypothetical bipolar portfolio was 12.77%, versus 13.04% for a portfolio limited to mortality ratings of 145%.

Sensitivity of Projected IRR to Market Price Movements

The prices in the life settlement markets have changed over time. We therefore calculated how the projected IRR would change with changing purchase prices, keeping all other variables constant. For these calculations, we used the same policy parameters as in our initial IRR calculation, but varied the purchase price from 3% of face value ($60,000) to 21% ($420,000).

As would be expected, the projected IRR decreases with increasing purchase price and increases with decreasing purchase price. As summarized in Figure 1 (below), a purchase price of 21% of face value

results in a projected IRR of 7.97% and a purchase price of 3% of face value results in a projected IRR of 24.47%. This relation is not linear and the sensitivity of the projected IRR is significant. The purchase price therefore should be seen as a very important driver for investors' returns.

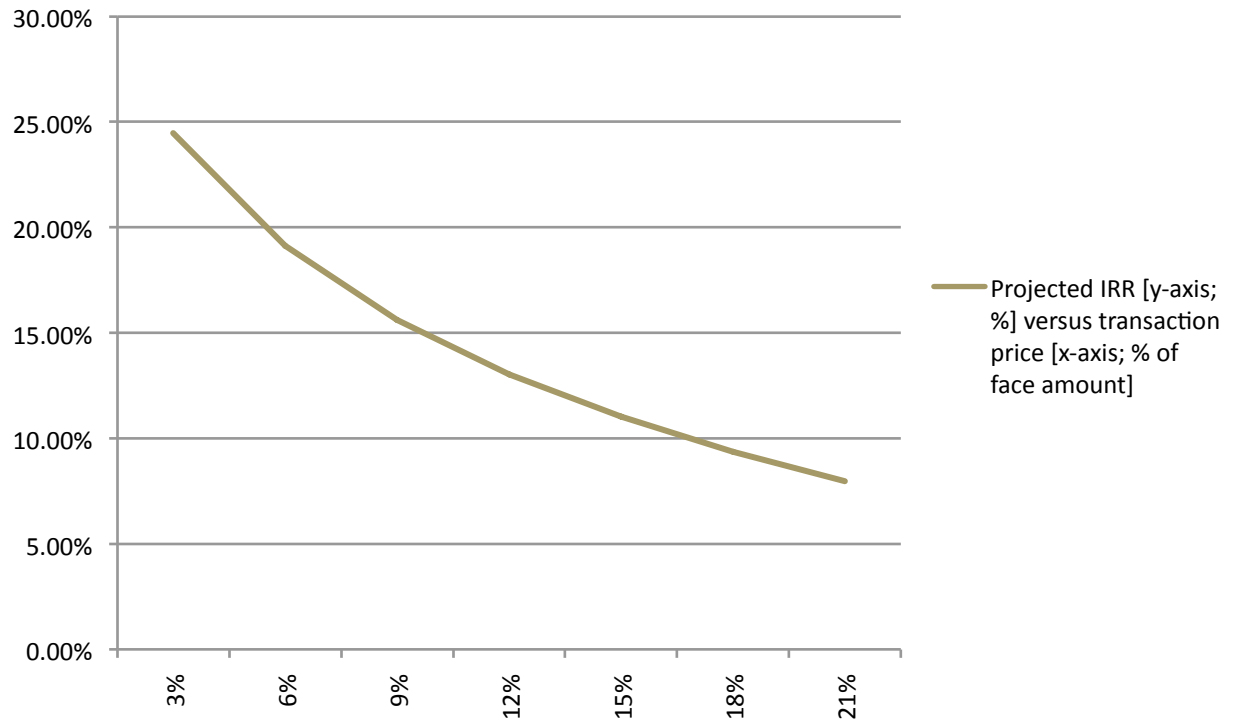

Fig. 1: Projected IRR in percent versus transaction price: The chart shows the projected IRR relating to different transaction prices, assuming the same mortality and projected premiums for all transaction prices before cost. A transaction price of 21% of face amount ($420,000) results in a projected IRR of 7.97%, a transaction price of 12% of face value ($240,000) results in a projected IRR of 13.04% and a transaction price of 3% of face value ($60,000) results in a projected IRR of 24.47%.

Net versus Gross Return: Impact of Portfolio Expenses on Realized Return

As with other asset classes, the net realized return for life settlements is affected by expenses associated with portfolio management; and given the fairly long duration of a life settlement investment, the impact of costs should not be underestimated. All of the calculations reflected in this paper have been made without regard to portfolio expenses and the calculated IRR therefore is a gross return. The net return to investors will always be lower than the gross return. The impact on investors' returns depend on the level of management and performance fees, the cost of the investment structures, the cost of tracking and servicing the portfolio and so forth. An investor therefore should carefully compare available investment opportunities taking into account all such expenses.

Another significant determinant of net investor return is the cash reserve that is held in escrow. Life settlements are usually cash flow negative in the early durations, and therefore a cash reserve is essential to keep a portfolio in force. However, because of the relatively low interest rate earned on the cash reserved, this requirement can be a drag on net return.

Need for Additional Analysis/Conclusion

As discussed above, this analysis does not address the impact of many variables that we know will affect portfolio return. These include:

- Anti-selection involved in the purchase;
- Structural and transactional expenses, including servicing, management, audit, legal and tax advice, custody, administration and the like;
- Reserve requirements;
- Mortality table sensitivity;
- Mortality improvement;
- Informational asymmetries favoring those who have access to LE underwriters' databases; and
- The analytic skills and resources of the portfolio manager.

As previously stated, the purpose of this paper was to present an approach for estimating the gross return available from life settlements that is independent of life expectancy (LE) estimates and instead related to actual mortality experience.

We hope that others will use this as a starting point for more refined analyses to estimate not just a range of gross returns that might be available in the market, but to estimate reasonably achievable net returns.

ELSA wishes to thank Mike Fasano of Fasano Associates for making the Fasano database and mortality tables available for the purpose of estimating the actual mortality experience in the life settlement market, and Beat Hess of AA Partners for making the AA Partners IRR Calculator available for the purpose of estimating gross market IRR.