

## INVESTOR NOTES

### Life Expectancy Underwriting

One of the most important variables in life settlement investing is the life expectancies resulting from underwriting. Life expectancy underwriting is the process of evaluating the medical history of an insured selling his or her life insurance policy and estimating the mortality distribution appropriate to that person, or more simply their remaining life.

The life expectancy estimate is used to determine the selling price of the life insurance policy being sold. For an investor, with a defined expected return, the longer the time until the death benefit is paid, the less can be paid for the policy; the shorter, the more can be paid.

Life expectancy underwriting must be accurate and consistent. If life mortality distribution estimates are too high, investors will overpay for policies and end up with lower returns than expected. Conversely, mortality distribution estimates that are too low will result in prices that are under the policies' economic value and sellers will not receive fair value for their policies.

Investors need to understand the methodologies used by life settlement underwriters in order to evaluate the legitimacy of the life expectancies they use in their analysis.

Life settlement underwriting is both similar to and different than underwriting for the purchase of a life insurance policy. The similarities relate to the general methodology used to evaluate risk, while the differences pertain to the demographic characteristics of the life insurance versus the life settlement market. For example, insureds who decide to sell their life

insurance policy in the life settlement market tend to have higher income levels than the average insured. This income differential correlates with longer life expectancies in the settlement market that has to be accounted for in the underwriting process.

The most common underwriting methodology used to evaluate both life insurance and life settlements is the debit/credit methodology. This is the process of taking the extra mortality associated with a range of impairments and converting that excess mortality to a percentage of standard, or normal, mortality. The excess mortality percentages are referred to as debits. In some instances, when a person has favorable health attributes, credits might be assigned to account for a better than average risk profile. If a person has mortality that is 200% of standard that means that 100 debits were estimated for the impairments associated with the medical conditions that person has. One hundred debits, when added to normal mortality (i.e., 100%), generates a mortality rating of 200%, which means that a population of people with the same impairments as this person would be expected to die at twice the death rates of people without any impairments.

The mortality rating is applied to a standard mortality table to generate the person's life expectancy. A standard mortality table is a compilation of the probabilities of survival (and death) in every year, starting with the year a person is evaluated, or underwritten,

and ending in that year when the entire population of people of a certain age would be expected to have died.

Although the debit methodology is common to both life insurance and life settlement underwriting, its application is more complex for a life settlement and requires more adjustments. Life insurance underwriting generally involves a younger, healthy population. Mortality rates therefore reflect the experience of this younger, healthier cohort group, which generally don't change dramatically from year to year. Life settlements, however, involve an older age population, generally ages 65 and older. The mortality rates of this older population are greater and increase at a faster rate than those of a younger, more traditional life insurance population.

Life settlement underwriting requires more adjustments to the debit methodology and underwriters with a higher level of medical experience. In an older population, impairments – for example, prostate cancer - often move more slowly than in a younger population. Also, the risk factors for life settlements are different. For example, for a 35 year old, there would be concern about cardiovascular risk factors, such as elevated cholesterol or a family history of heart attacks at a young age. However, by the time this person is 75 years old, cardiovascular risk factors would be less important. At this point the risk is based on actual cardiovascular impairments, not a risk factor suggesting a propensity for those impairments. If, on the other hand, cardiovascular disease has not manifested in the 75 year old, there is a lesser likelihood of developing cardiac disease, in spite of the risk factors.

Another important difference between life insurance and life settlement underwriting has to do with the shape of the mortality curve used to estimate life expectancy. The mortality rates associated with a life settlement population tend to be lower than those associated with a life insurance

population in the early years. The shape of the mortality curve tends to change as the overall level of impairments increases – a finding common to life settlements, but not reflected in life insurance mortality tables. Most of the life settlement underwriters have developed unique mortality curves based upon their own experience of mortality patterns.

The life expectancy estimate is one of the most important variables in pricing policies in the life settlement market. Therefore, it is important that investors understand the methodology and process used by life expectancy underwriters. It is also important that life expectancy underwriters provide transparency in making information available to investors about the results of their underwriting experience. ILMA has supported the concept of setting a standard of best practices for life expectancy underwriters to improve the integrity of the life settlement market.

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### **About the Institutional Life Markets Association, Inc. (ILMA)**

The Institutional Life Markets Association, Inc. (ILMA) is a not-for-profit trade association comprised of a number of the world's leading institutional investors and intermediaries in the longevity marketplace, formed to encourage the prudent and competitive development of a suite of evolving longevity related financial businesses, including the businesses of life settlements and premium finance. ILMA's members include: Credit Suisse; EFG Bank; Goldman, Sachs & Co.; JP Morgan Chase & Co.; Mizuho International plc; and WestLB AG.

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