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July 2010

A horizontal decorative bar with a blue gradient, featuring a repeating pattern of tree silhouettes.

Insurance-Linked Strategies

Life settlements

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Executive summary

One of the fallouts of the global financial crisis was the realization that many of the more traditional alternative asset classes failed to provide adequate portfolio diversification. We believe investors should continue to investigate the use of investments, such as life settlements, to gain exposure to real alternative risk premia.

There is an underlying risk premia that investors in the life settlements asset class can capture. This risk premia can be described in two separate components: a structural pricing inefficiency and a liquidity premia.

The structural pricing inefficiency originates from the pricing approaches adopted by the life insurance industry. The approach is based on the wider benefits that insurance brings to society and is structured to promote life insurance penetration by increasing life insurance premium affordability.

Policy profitability is a balance between charging lower premiums and offering higher surrender values. If higher premiums are charged, profitability will increase while the policy remains in force, but would likely result in a lower take-up of insurance coverage or a significant reduction in business due to competitive pressures. Decreasing the surrender value will also impact profitability, but only at the point the policy owner allows the policy to lapse. This practice is referred to as *lapse-supported pricing*.

In order to increase the uptake of life insurance, the industry (including regulators) supports lower premiums. This means that, overall, the insurance industry will either generate less profit or a larger proportion of the profit will need to be sourced from policy lapses. The lapse profitability is generated by offering lower surrender values. This structure can be exploited by investors who can purchase policies in the life settlements market that have a significant element of lapse financing in the pricing structure and then hold the policy to maturity.

This structural pricing inefficiency is further exploited as individual insurance policies cannot be repriced once issued, even in the case where the insurance company is aware of new information, such as a new medical impairment of the insured, that would impact the value of the policy. As a result, for existing policies, insurance companies are prohibited from adjusting surrender values for post-issue conditions that were not recognized or specified at the inception of the insurance contract. The insurer is unable to offer the policy owner an amount higher than the surrender value specified under the original insurance contract. The policy owner is therefore restricted to accessing the life settlements market to unlock any value not reflected in the surrender value offered for the policy.

Investors in the life settlements market should be able to benefit from this structural pricing inefficiency by purchasing policies with low surrender values from individuals with impaired mortality profiles. This is effectively an arbitrage against the insurance company.

Executive summary

This risk premia should remain over the medium term – however, short-term imbalances in supply and demand could cause significant fluctuations in the level of the risk premia available to the investor.

Importantly, investors in life settlements need to be cognizant that they are bearing longevity risk. Understanding the intricacies of managing exposure to longevity risk is critical to a successful investment in this asset class.

As the market is relatively new and continuing to develop as an asset class, which means the dynamics continue to evolve (increased regulation, stranger-originated life insurance, disinter-mediation), investors need to establish relationships with partners (investment managers/investment banks/life settlements providers/life expectancy providers/insurance and actuarial experts) who can assist in overcoming the significant information asymmetries that currently exist in the market.

The life settlements asset class is new and relatively untested from a mainstream institutional investor context. While data and asset class history continue to accrue, the risks are perceived to be high. Investors need to be comfortable that the returns available are sufficient compensation for the risk involved in being an early adopter or investor in life settlements.

Mercer believes there are close parallels between a life settlement investment strategy and successful implementation strategies for other areas of alternative investments, such as private equity or hedge funds. For example, well-considered implementation is critical as always and access to high-quality managers and careful due diligence are of paramount importance.

We believe this asset class has the potential to deliver attractive diversification characteristics and to offer an attractive return stream that is not correlated with the traditional capital markets. However, this asset class may be worth consideration only by investors who have an appreciation of its risks and complexity.

Life settlements represent a potential investment opportunity for pension or superannuation funds (and other investors with longevity exposure) due to the availability of an alternative risk premia, but **not on the basis of an investment that is expected to hedge exposure to longevity risk.**

Sector overview

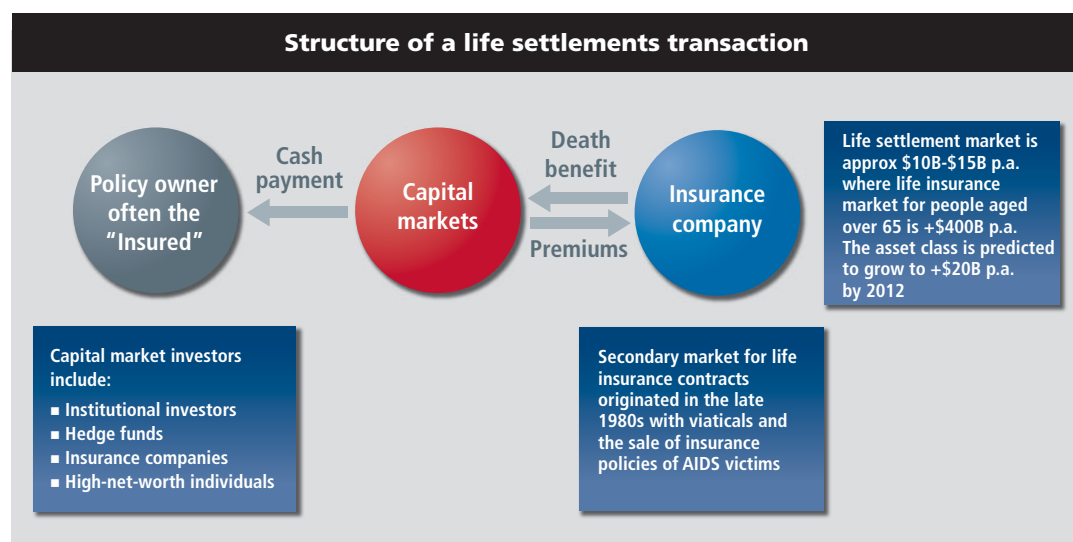
Asset class background

The topic of insurance-linked strategies (ILS) is particularly interesting in light of the recent extreme market dislocation driven by a global credit crunch, where correlations among supposedly uncorrelated asset classes have risen sharply.

This paper provides an introduction to the life settlements sector of the ILS alternative asset class: investments that offer a return stream, based on longevity risk, which is not correlated with the traditional capital markets.

Life settlements, in general terms, represent a secondary market for life insurance contracts. The owner of the life insurance policy sells it to a third-party investor for a cash payment. This transaction occurs in place of allowing the contract to lapse or surrendering the policy to the insurance company for its cash value.

Insurance-linked securities typically refers to investments where insurance risk is transferred to a capital-market-based security, vehicle or fund separate from that of the insurance originator. A life settlement transaction does not involve the transfer of insurance risk; rather it is a direct participation in the insurance market. Investors in life settlements become the insurance policy owner and beneficiary, and gain longevity exposure by paying outstanding premiums and then collecting the death benefit of the insured.



Longevity as an asset class

One of the fallouts of the global financial crisis was the realization that many of the more traditional alternative asset classes failed to provide adequate portfolio diversification. We believe investors should continue to investigate the use of longevity-linked investments, such as life settlements, to gain exposure to real alternative risk premia.

Longevity-linked investments are increasingly becoming a part of the larger ILS asset class that has seen increased volumes as this type of risk gains acceptance by a wider range of capital markets investors. Longevity risk has low correlation to other traditional assets, which offers high diversification value to investment portfolios. This is due to the slow progression of changes to mortality rates – improvement trends often take years to analyze and identify.



When performing actuarial analysis, it is conventionally assumed that there is zero correlation between mortality rates and the capital markets. This is generally supported by historic data since mortality rates have steadily and fairly smoothly decreased, while equity markets have behaved erratically in the short term and grown exponentially in the long term and interest rates have tended to revert to the mean. There seems little prospect of identifying a meaningful connection between mortality [...] and financial risk drivers.

Source: Deloitte, May 2005



The secondary market for life insurance is a subset of the longevity-linked asset class; an investment in the life settlements asset class is defined as ownership of insurance policies (whether physical policy or synthetic exposure) that results in an exposure to longevity risk. Longevity risk is the risk that life expectancy improves more than actuarially anticipated.

Life settlements represent a potential investment opportunity for pension or superannuation funds (and other investors with longevity exposure) due to the availability of an alternative risk premia that is not correlated with capital market, but **not on the basis of an investment that is expected to hedge exposure to longevity risk.**

Typical life settlements transaction

Life settlements typically involve the sale of policies insuring the lives of the elderly (normally the people insured are 65 years and older; average age at sale is approximately 80 years) via the life settlements market to an investor.

The seller of the policy receives a one-off cash payment from the investor. This one-off payment is typically substantially higher than the surrender value of the policy offered by the insurance company.

The investor continues to service the policy (i.e., continues to pay insurance premiums) and in exchange receives the insurance benefits (face value of the policy) upon death.

Policies are typically universal life, with face amount of at least \$500,000 (however, face amount can be as low as \$50,000), and tend to have a low cash surrender value.

Example 1

- Universal life insurance
- Male age: 79
- Life expectancy: 9.2 years
- Policy face amount: \$2.0 million
- Surrender/cash value: nil
- Life settlement payment: \$270,000

Example 2

- Universal life insurance
- Female age: 80
- Life expectancy: 12.5 years
- Policy face amount: \$3.0 million
- Surrender/cash value: \$147,000
- Life settlement payment: \$400,000

Life insurance primer

Universal life insurance policies

Universal life policies represent the bulk of policies transacted in the life settlements market (estimated between 85% and 95% of the market); these are a form of permanent life insurance. For investors outside of the United States, the structure and complexities of whole or universal life insurance policies may be foreign, as much of the insurance purchased nowadays in geographies such as Australia is term insurance. Term life insurance provides coverage at a set premium level for a specified period of time; at expiration the contract has no value if the insured has not died. Whole or universal life insurance policies¹ cover the duration of the life of the insured¹; if the policy is kept in

¹ Whole or universal policies typically have an end date of around ages 105 to 110. This date is often extendable.

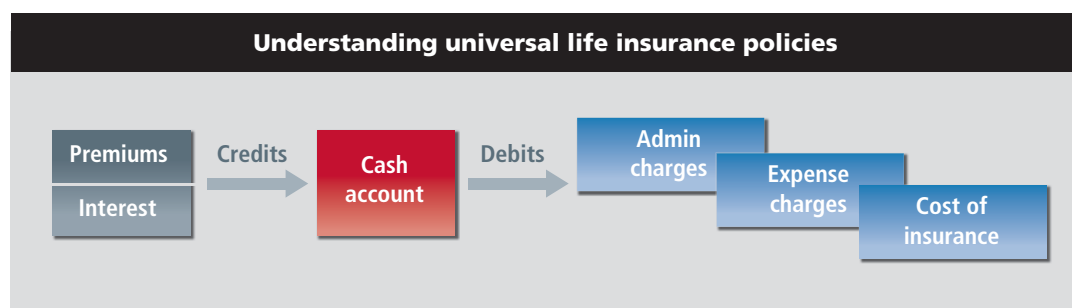
Sector overview

force, payout is assured at maturity of the policy. Policies typically accrue a cash value as premiums are paid. Whole life insurance policies typically provide a preset payment schedule and guaranteed cash accumulation levels. Universal life insurance policies were introduced to provide a more flexible structure – which allows for insurance premiums to be variable.

Life settlements can also include life insurance policies such as: whole life, term life (typically policies that can be converted to universal life), joint survivorship and group policies.

Universal life policies typically work as follows:

- Insurance policy has a predetermined death benefit and is set up with a “cash account.”
- Premiums are paid into the cash account. Interest is credited to the cash account at a rate specified by the insurance company.
- Cost of insurance and administrative and expense costs are then debited from the cash account.
- Surrender value of the policy is then typically the amount remaining in the cash account less any applicable surrender charges.
- Insurance value (face value) is fixed and guaranteed on maturity, provided that premiums are maintained.

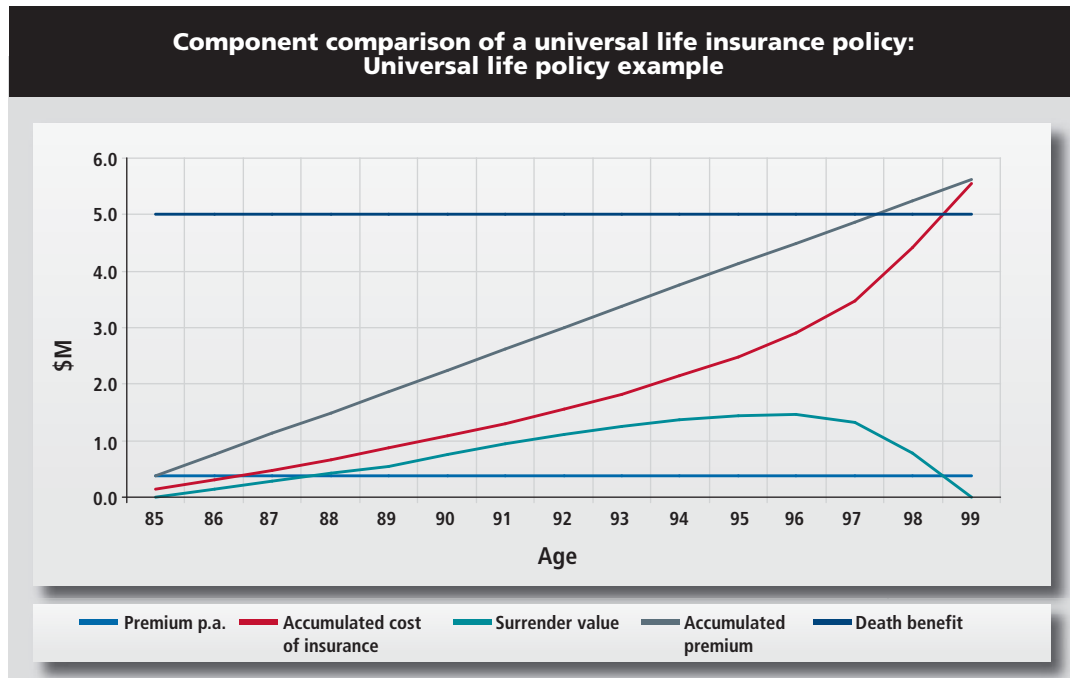


Surrender values

Surrender value is the amount paid to the policy owner of the life insurance policy that is canceled before it has run its full term – for universal life insurance policies, that is prior to death. In a universal life insurance policy this amount is normally calculated as the cash balance less the cost of insurance, administration and expenses charges, and any surrender charge. The surrender charge is used to cover costs incurred by the insurance company during the origination process of the insurance contract. Costs typically include underwriting, policy issue, sales and distribution.

Sector overview

The amount of the surrender charge typically varies over the life of the policy and tends to allow for a significant initial expense that declines over time. There is often little or no surrender value to a life insurance policy in its early years. The following chart illustrates a simplified example of a universal life insurance policy.



Source: Mercer

Types of insurance

The types of insurance available are summarized in the table below.

Types of insurance			
	Whole life*	Universal life*	Term insurance
Description	Life insurance that provides coverage for an individual's whole life, rather than a specified term	Universal life is similar in structure to that of whole life but provides additional flexibility with premiums and death benefit	A life insurance policy that provides coverage for a specified time period
Premiums	Premiums are fixed for the term of the coverage	Premiums are flexible and can be adjusted to either build up a cash balance in the policy or to only pay the minimum cost of insurance	Premiums are generally fixed for the term of the coverage
Cash value	Typically cash values are guaranteed and specified in the policy documentation	Cash value is a function of premiums paid and cost of insurance. Value builds up if premiums are paid at higher amount	No cash value accrues. If policy expires, no benefit is paid
Applicable for life settlements?	Yes – whole life policies are transacted as life settlements	Yes – as much as 95% of the life settlements market is universal life policies. The flexible structure and cash value transparency is preferred	Yes – typically if convertible to universal or whole life or if the life expectancy is significantly shorter than term of policy

* While the description refers to "whole life," both universal and whole life policies typically have an end date of around ages 105 to 110. This date is often extendable.

The US life settlements market

Relatively few countries have a secondary market for life insurance policies, and while there have been examples of “life settlement” transactions in Australia, the UK, Japan and various other regions, the US market is by far the most developed.

Secondary markets are typically based around life products that commonly exist in other countries, particularly in markets where the uptake of life insurance is widespread. For example, in the United Kingdom, target policies are mainly limited to with-profits and participating endowment contracts with fixed time to maturity, and the secondary market is regulated by the Financial Services Authority (FSA).

A secondary market for life insurance cannot emerge in every country. Several factors are essential to the success of the life settlement market. These factors include supply, demand, and regulatory and legal prerequisites. The key characteristics of the US life settlement market that make it a suitable secondary market for life insurance policies are the size of the market and the type of policies typically purchased in the US market.

The primary market in the US represents the largest life insurance market worldwide, making up nearly 25% of the global premium volume in 2007. The insurance market for people aged over 65 is estimated to be greater than \$400 billion p.a. A large percentage of the life insurance market is in permanent insurance policies, such as universal and whole life policies.

Other factors required to establish a secondary market for life insurance are supportive legal, tax and regulatory conditions. These include insurable interest considerations that stipulate that an insurable interest must be satisfied at policy inception only, and is then not required for subsequent assignees.

History of the asset class

The early years to now

1911: Grigsby v. Russell – Justice Holmes. The US Supreme Court rules that life insurance policies are assets. Like all assets, policies are freely assignable for value.

1980s: Viatical settlements and accelerated death benefits are invented to meet the financial needs of policy owners with AIDS who need to access immediate cash. However, numerous cases of fraud and abuse were uncovered during the period, leading to calls for greater state regulation.

1995: Legislation passes that exempts viatical settlements and accelerated death benefits from federal income tax. Treatment of life settlements varies by state. The Viatical Association of America (VAA) is founded as a non-profit trade group for the viatical industry.

Sector overview

Late 1990s: With advances in HIV/AIDS drugs, the viatical market slows down. Life settlements evolve as a way to continue to grow the industry.

2000: The National Conference of Insurance Legislators (NCOIL) adopts a Life Settlements Model Act outlining good business practices for the emerging industry. The VAA changes its name to the Viatical and Life Settlement Association of America (VLSAA) to reflect the emerging life settlement market.

2001: The National Association of Insurance Commissioners (NAIC) issues the first Viatical Settlements Model Act, defining good business practices such as licensing, prohibited practices, advertising guidelines, fraud prevention and unfair trade practices.

2004: NCOIL revises its Life Settlements Model Act. The VLSAA changes its name to the Life Insurance Settlement Association of America (LISA), reflecting the shrinking market for viaticals.

2007: Investment banks create the Institutional Life Markets Associations (ILMA), a trade group focusing on regulation and industry “best practices” for life settlements and other financial products. LISA estimates that the market has now become 95% life settlements. A significant number of states have adopted the original NAIC model act.

June 2007: NAIC passes a Viatical Settlements Model Act revision to address the burgeoning life settlement market. It strengthens consumer protections and addresses concerns about STOLI by imposing a five-year ban on settling certain life insurance policies.

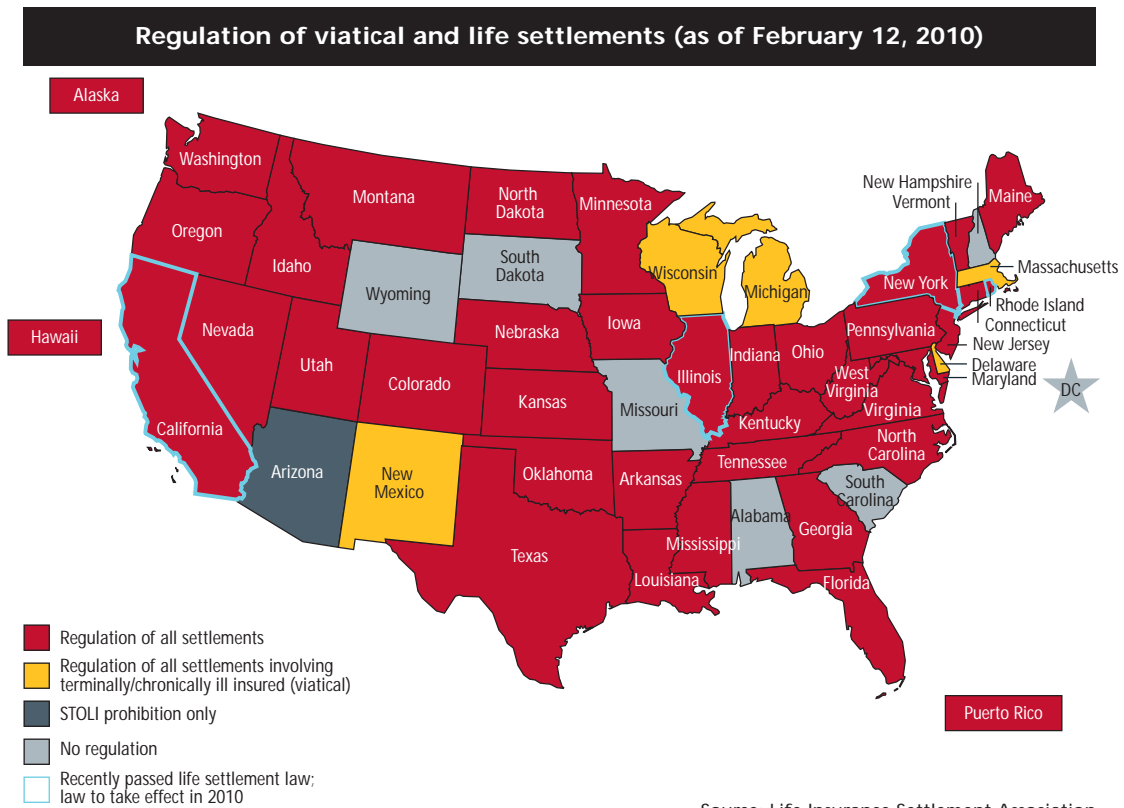
November 2007: NCOIL passes a revision of its Life Settlements Model Act that also officially defines STOLI. It calls for a two-year moratorium on life settlements after a policy is purchased. The act outlines recommended provider and broker licensing and disclosures to policy owners.

November 2008: NCOIL reports that lawmakers in 20 states have introduced legislation regulating and restricting life settlements and STOLI.

2009: During 2009 the following states passed legislation regulating life settlements: California, Illinois, Minnesota, Oregon, New York, North Dakota, Rhode Island, Vermont and Washington; making a total of 39 jurisdictions that regulate life settlements.

- Washington State legislation requires that life insurers notify those who are insured aged 60 and up that they have alternatives to giving up or cashing in their policy.
- While policy language varies state by state, nearly all states have specified that life insurance policy owners may not enter a settlement agreement within two years of receiving their policy (except in limited circumstances).

Sector overview



Market participants

Origination process

The prepurchase process of a life settlement involves a number of parties:

- Starting point is normally a conversation between the policy owner and their insurance broker or financial planner.
- Insurance policy has typically been deemed to either be unnecessary insurance or too expensive to continue paying the premiums.
- Each step in the process normally involves brokerage or professional fees.

Life settlements providers (if appropriately licensed) may deal directly with the policy owners or financial planners and avoid the fees paid to brokers and potentially to financial planners. Upon receipt of medical records, life expectancy quotes and policy documentation, life settlements providers submit competing bids for the purchase of the policy.

Sector overview

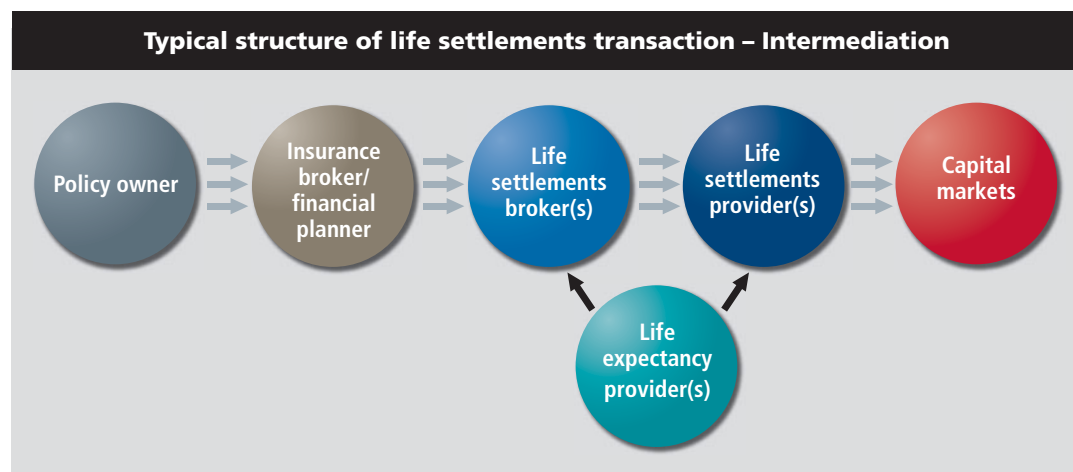
One of the most important stages of the transaction is that between the life settlements broker or financial planner, in a fiduciary role (acting on the behalf of the policy owner), and the life settlements provider: This is where the policy changes hands.

The process of sourcing policies from the market is typically called origination. Origination includes the following steps (for the life settlements broker):

- Locate the policies and screen for eligibility
- Submit eligible cases to the life expectancy provider for LE calculation
- Verify with the insurance carrier that the policy is in force
- Obtain contractual consents and acknowledgment of required disclosures from policy owners and beneficiaries
- Receive insured's consent permitting the servicer to monitor, or "track," the health status of the insured individual
- Obtain and submit transfer documents to the custodian/escrow agent/insurance company

Life settlements providers will follow an origination process similar to that of the life settlements broker; the provider will also undertake additional due diligence to protect against fraud and to confirm insurable interest (to avoid STOLI policies). The origination process has evolved over time as licensing and disclosure requirements have increased. Life settlements providers are increasingly internalizing the origination process – i.e., interacting directly with the policy owner or financial adviser and bypassing the life settlements brokers. This reduces overall cost of the origination process and provides greater control to the life settlements providers over how policies are sourced.

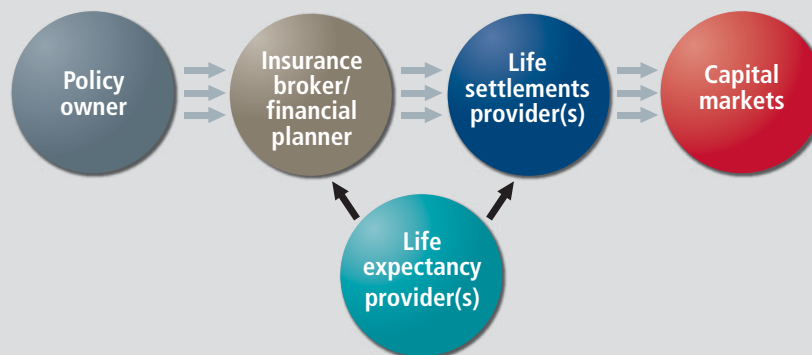
Increasing disintermediation



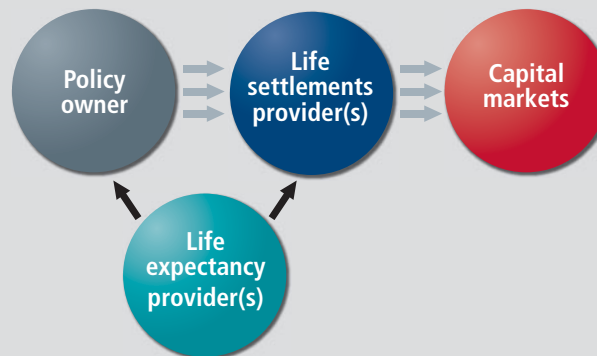
Sector overview

Origination processes are becoming increasingly disintermediated. Life settlements providers have started to develop internal origination capabilities. The life settlements broker model is also under pressure as legislation and licensing requirements have increased. Capital markets typically include investment managers and sophisticated institutional investors.

Example 1: Provider deals directly with insurance broker/financial planner



Example 2: Provider deals directly with policy owner



Life settlements brokers

Life settlements brokers are intermediaries who represent the policy owner looking to sell their policy. The life settlements broker typically transacts with a life settlements provider. In exchange for a commission that is negotiated with the client,² life settlements brokers

² Some states and some providers require compensation disclosure to the policy owner and require sign-off from the policy owner on the amount the broker is being paid.

Sector overview

will seek bids from various life settlements providers, in a fashion similar to an insurance broker when purchasing the initial policy. To act as a life settlements broker requires a license in many states. Licensing requirements vary significantly state to state, but typically specify the level of disclosure required and provide guidance on the procedures and documentation.

Life settlements providers

Life settlements providers (providers) typically serve as the purchaser in a life settlement transaction. Providers perform analysis and apply various valuation techniques to calculate the value of the policy and place a bid for purchase of the policy. Most providers rely on in-house expertise (legal, actuarial, compliance) to carefully review transactions as part of the pricing and due diligence process.

Life settlements providers must be licensed in the state where the policy owner resides. Approximately 39 states have regulations in place regarding the sale of life insurance policies to third parties.

Life expectancy providers

Life expectancy (LE) providers issue life expectancy reports that provide an estimate of the insured's life expectancy. This estimate is based on the insured's medical records/history.

LE is a key component in the pricing of a life settlement. LE for an individual is the expected number of years of life remaining at a given age based on an assumed mortality curve/probability distribution. LE is calculated as the average survival time of a particular risk cohort, where the cohort reflects the medical impairments of the policy owner. Risk cohorts are typically grouped by age, gender, smoking habits and relative health/morbidity. LE is determined by calculating a mortality multiplier that is used to adjust the "standard" mortality distribution and determine an LE for the insured.

LE providers typically employ a combination of actuaries, doctors and medical underwriters who utilize actuarial models based on published or proprietary mortality tables, as well as medical underwriting based on various debits/credits for various morbidity characteristics. This process is similar to the medical underwriting performed by life insurance company underwriters and reinsurance underwriters.

The main LE providers (by size) are AVS, 21st Services, Fasano, EMSI and ISC Services, the first three being the most commonly used.

Sector overview

Servicers/tracking agents

Once the policy has been purchased from the original policy owner, it is typically the responsibility of the purchaser to keep the policy in force and not allow it to lapse. This task is often outsourced to specialist firms called servicers. Servicers are typically responsible for the following: policy maintenance, medical record/LE updates/retrieval, mortality tracking and claims filing. The role of the servicer is to ensure each individual insurance policy remains in force, which often includes contacting each insurance company to confirm that premium payment is received and applied to the correct policy. This can be a very manual process – payments are often made by check and the servicer is responsible for ensuring that the payment is applied to the right policy and that the policy remains in force.

Servicers are typically charged with tracking lives of the insureds and processing claims once deaths occur. Death benefit claims processing typically involves tracking Social Security databases, and contacting the policy owner or close relatives. Servicers will also routinely contact the insured's doctors or caregiver and monitor other databases. Servicers are also responsible for claims management, including retrieval of death certificates and processing the required forms for submitting a claim.

Life expectancy providers

One of the key risks in life settlements is longevity, specifically how accurately LE providers can predict the life expectancy of an individual/cohort of lives. At a macro level, the role of the LE providers is the same as that of the equivalent actuarial/underwriting function at any insurance or reinsurance company – pricing of an insurance policy depends on life expectancy or mortality.

It is accepted that mortality varies by age, sex, smoking status and a variety of other factors; insurance companies have long been collecting these data from their policy owners to better understand policy owner mortality rates. This “experience data” is used to create tables that can be used to probabilistically assess future life expectancy for a group of individuals. Various mortality tables have been created to reflect the population as a whole or that of the typical life insurance policy owner.

Sector overview

Mortality tables have evolved over time and are updated from time to time to reflect changes in mortality rates (recent studies have shown that mortality has been improving). Mortality tables are constructed using hundreds of thousands of data points; the key to accuracy being the use of a large number of data points. At the population level, censuses are done at the country or state level; insurance companies will pool data to create tables such as the valuation basic table (VBT) for pricing insurance policies. VBT is a set of mortality tables that are used for individual life insurance products.

The life settlements industry does not have access to nearly as much relevant data as that of the wider insurance industry – given that the primary focus of the asset class is a small subset of the overall population (i.e., elderly impaired insured lives). The lack of data is due to the relatively young age of the industry and the fact that most insurance companies do not track elderly impaired lives, as these lives do not normally pass initial underwriting and data is discarded. However, it is worth noting that the LE providers have compiled more data in recent years than what was available from the insurance industry when the most recent VBT tables were created.

LE providers versus insurance underwriters

Insurance underwriters evaluate the risk and exposures of insurance carriers. The underwriting process typically involves stringent screening of potential clients – focusing on evaluating the health status of the insured. Information used for this process is gathered from a mixture of questionnaires and medical tests – typically driven by internal processes and evaluations. An insurance carrier may reject the application from the potential customer if they do not meet the underwriting criteria or represent a risk category the carrier is not seeking exposure to.

LE providers are responsible for calculating an LE based on all information provided by the party requesting the LE quote as opposed to the information submitted by the individual. LE providers are often dealing with impaired lives and must assess individuals that a normal insurance underwriter would simply reject.

Sector overview

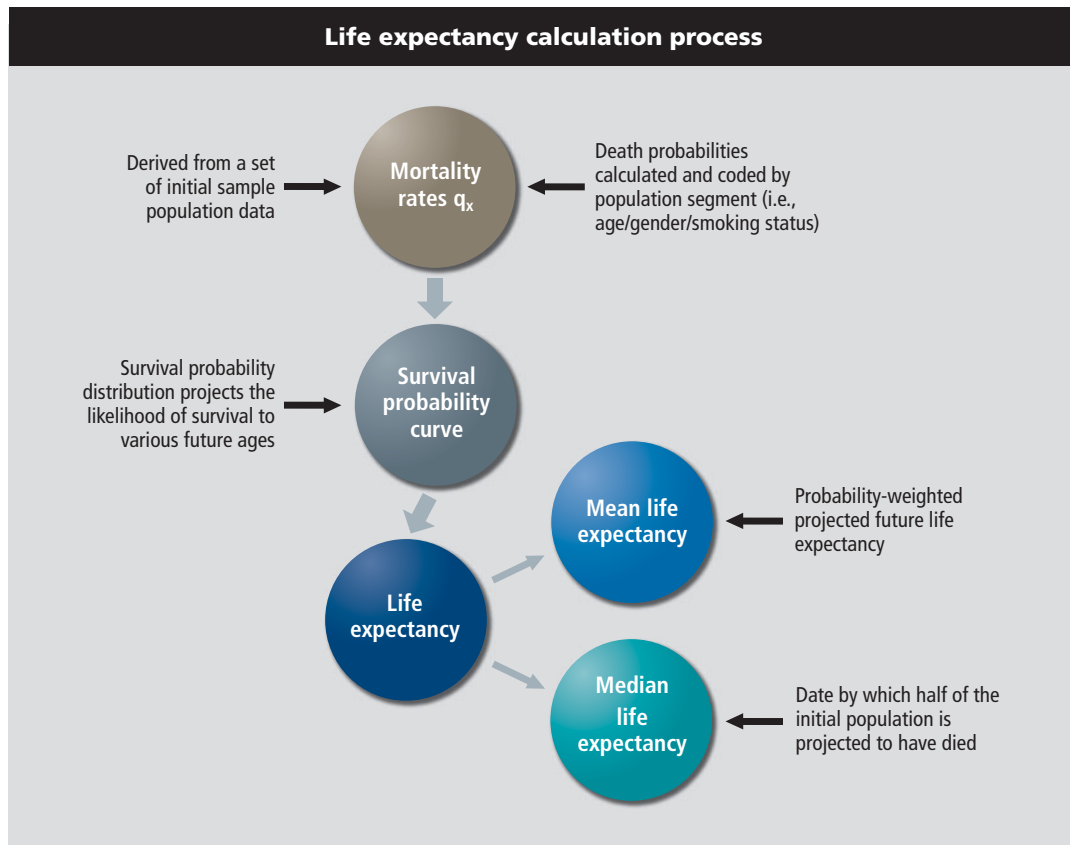
Who are the main LE providers?

- American Viatical Services (AVS)
 - Founded 1994, based in Kennesaw, GA
 - Methods based on a comprehensive underwriting manual, but includes a degree of subjective input for unique cases
 - Future Mortality Improvement assumptions - flat assumptions across ages/impairments
 - Proprietary mortality tables (adjusted from 2008 VBT)

- 21st Services
 - Founded 1998, based in Minneapolis, MN
 - Rules based underwriting process, very little subjectivity (quotes should be repeatable regardless of who is performing the underwriting)
 - Future Mortality Improvement assumptions - age- and gender-specific improvement factors
 - Proprietary mortality tables (adjusted from 2008 VBT)

- Fasano
 - Began life settlement underwriting in 2001, based in Washington, DC
 - Hands-on approach to underwriting; underwriting manual is supplemented by medical doctor's assessments.
 - Future Mortality Improvement assumptions - impairment-specific improvement factors
 - Proprietary mortality tables (adjusted from 2008 VBT) - vary by impairment

Sector overview

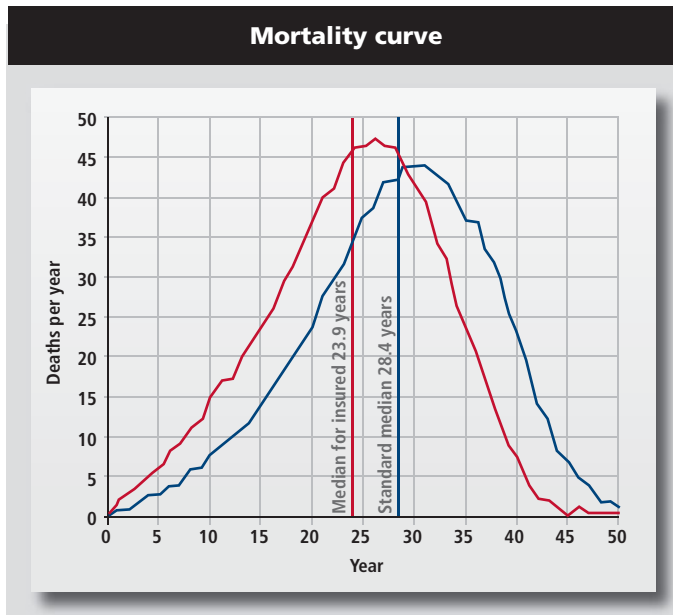


The life settlements broker gathers the policy documentation, current policy illustration, medical records and recent LE calculations. LE quotes are typically provided by one or more of three main life expectancy providers (21st, AVS, Fasano). The policyholder's medical files are thoroughly reviewed and assessed against a number of underwriting criteria to determine a mortality factor. The mortality factor is used to gauge the level of impairment relative to the LE provider's standard mortality table. The mortality tables used by the LE providers are typically based on 2008 VBT adjusted for proprietary factors derived from the LE provider's experience data, including an allowance for future improvement of mortality.

Some LE providers only provide a point estimate of the future life expectancy and mortality rating factor, while others provide the distribution and mortality curve applied.

Sector overview

Sample LE quote



Median life expectancy value	287 months or 23.9 years
Mean life expectancy value	279 months or 23.3 years
Mortality multiplier	2.13

Median →

Year	Lives	Deaths	Accum. deaths
0	1000	0	0
1	998	2	2
2	995	3	5
3	991	4	9
4	986	5	14
5	980	6	20
6	972	8	28
7	963	9	37
8	952	11	48
9	940	12	60
10	925	15	75
11	908	17	90
12	891	17	109
13	871	20	129
14	849	22	151
15	825	22	175
16	799	26	201
17	770	29	230
18	739	31	261
19	705	34	295
20	668	37	332
21	628	40	372
22	587	41	413
23	543	44	457
24	497	46	503
25	451	46	549
26	404	47	596
27	358	46	642
28	312	46	688
29	269	43	731
30	228	41	772

The table on the right is an example of the output from a life expectancy quote.

Source: 21st Services

Moving to 2008 VBT

Until mid-2008, the most common mortality table used was the 2001 VBT, which was published by the Society of Actuaries and was based on data supplied by a number of life insurance companies. In 2008, the Society of Actuaries published a new table, the 2008 VBT. This table is based on 695,000 lives representing \$7.4 trillion in death benefits, which is almost three times more lives than the former 2001 VBT. 2008 VBT does not include an assumption for future improvements in mortality past 2008.

The 2008 VBT was adopted by most LE providers and incorporated into their own experience data and used (with other factors) to create proprietary mortality tables used for the life expectancy calculations. LE providers typically adjust the VBT mortality curves, which were created for insurable lives (i.e., not impaired lives), with data sourced from the life settlements market. The overall adjustments resulted in a significant lengthening of average life expectancies in the fourth quarter of 2008. The impact varied by LE provider, with some experiencing more significant adjustments than others.

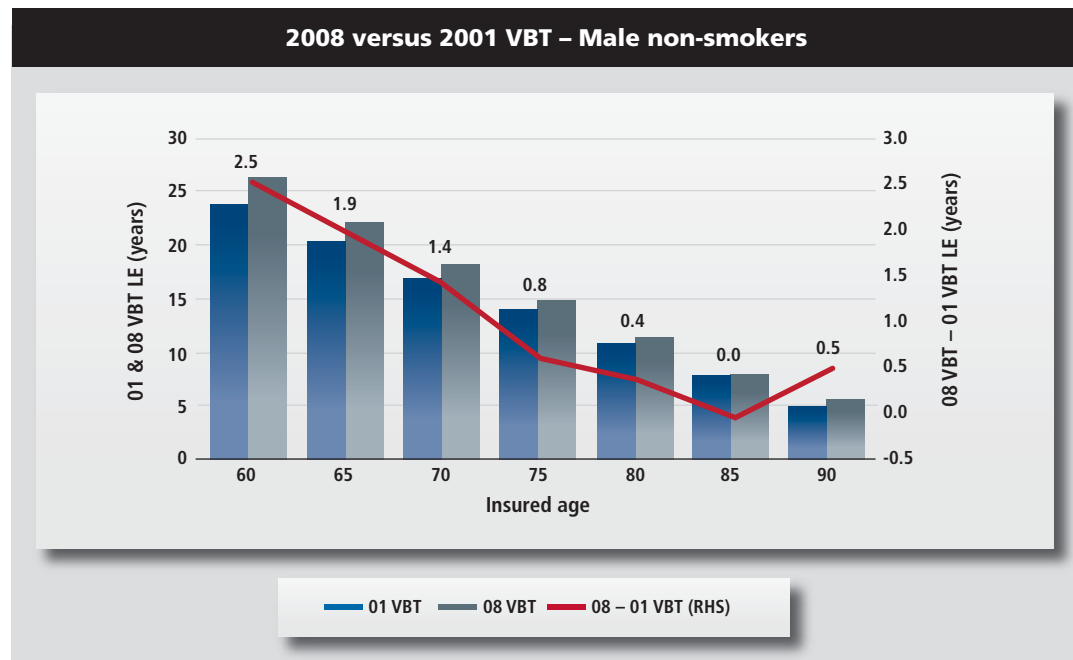
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From October 2008, a number of life settlements funds reported significant (“mark to model”) losses due to extensions in life expectancies. This was due to changes in the mortality assumptions used by the LE providers and many of the life settlement funds.

The Society of Actuaries has not formally communicated the timing of the next update to VBT. However, this is likely to occur within the next seven years (e.g., 2015 VBT) but could be as soon as 2012.

Changes to VBT

The following chart shows the pure impact of the change in mortality tables (i.e., the move from 2001 VBT to 2008 VBT) and does not incorporate any methodology or proprietary mortality table adjustments undertaken by the LE providers. Impact varies by age, but by and large, the majority of life expectancies increased. Change was as much as an 11% increase for non-smoking males age 60 to a 5% decrease in life expectancy for non-smoking females aged 85.



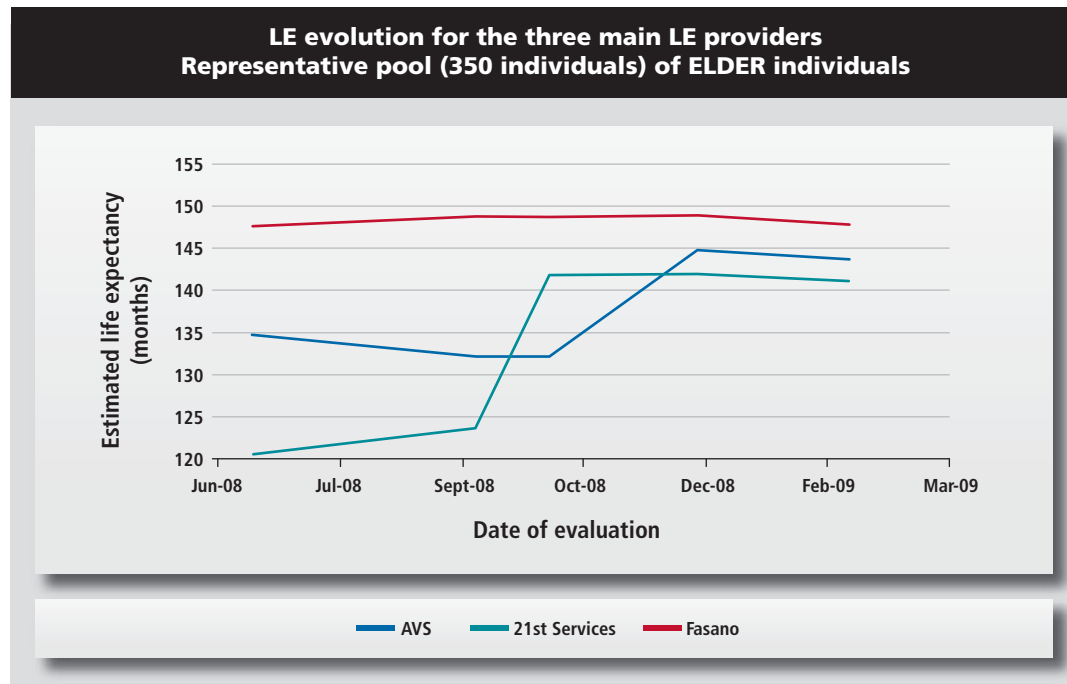
Sector overview

Male non-smoker				
Insured age	01 VBT	08 VBT	08-01 VBT (RHS)	% change
60	23.44	25.95	2.51	11%
65	20.00	21.94	1.95	10%
70	16.67	18.05	1.39	8%
75	13.85	14.43	0.58	4%
80	10.69	11.05	0.36	3%
85	7.70	7.66	(0.04)	(1%)
90	4.87	5.36	0.49	10%

Source: The Society of Actuaries

Changes to VBT and LE providers

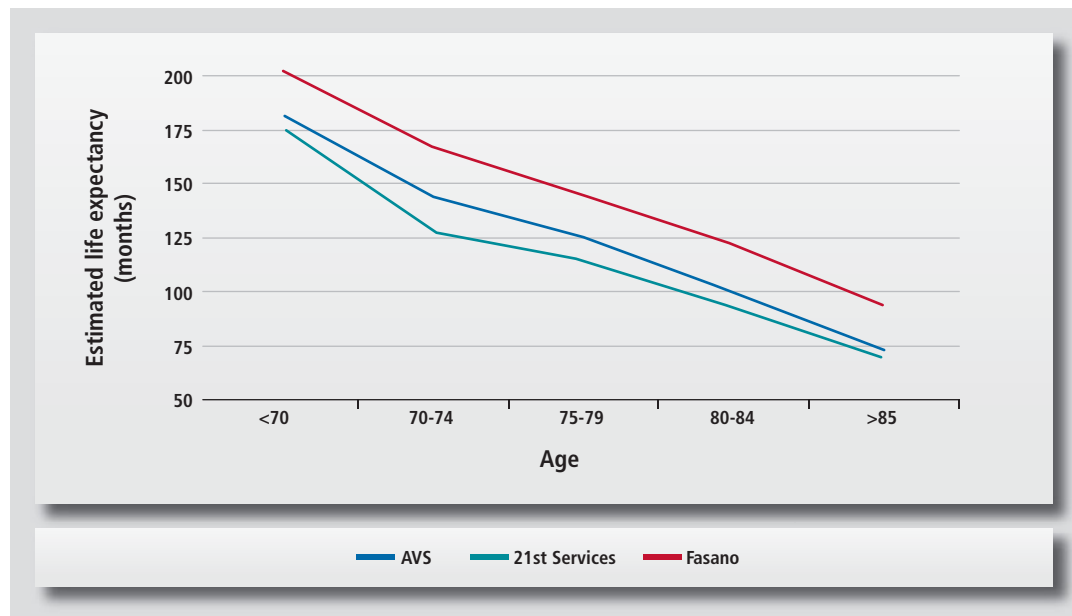
The following chart shows both the impact of moving to 2008 VBT and any proprietary adjustments applied to the mortality curves by the LE providers.



Source: AXA Investment Management

Sector overview

The chart below shows that, following the move to 2008 VBT, there has been convergence among the three main LE providers.



Source: Fasano

A.M. Best study

A.M. Best, an insurance ratings agency, undertook a study³ that compared the life expectancies issued by three major LE providers (21st, AVS and Fasano) in 2007. The study looked at the life expectancy quotes provided by each firm for a sample of 909 lives (each firm calculated a life expectancy for each individual for the same pool of lives).

The pool included lives with ages ranging from 75 to 79, and had a male/female split of 66%/34%. A.M. Best suggests that this is the typical age and gender distribution found in life settlement pools. The results of the study showed that there was, in certain cases, significant variation of life expectancy for the same life for each of the three LE providers. The largest individual differences of average life expectancies issued by any two LE providers was 24 months. The smallest difference was eight months.

In 2009, A.M. Best undertook an updated study that looked at a smaller pool of lives, with approximately the same profile as the prior study. The study compared life expectancies issued by the same LE providers on 200 lives after the move to the 2008 VBT and other methodology changes made by some LE providers at the end of 2008. After calculating the

³ A.M. Best Methodology, Criteria – Insurance-Linked Securities, Life Settlement Securitization, November 24, 2009.

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average life expectancies for each of the three medical underwriters, the largest difference in average life expectancies issued by any two medical underwriters was about 10 months. The smallest difference was about three months.

Comparison of life expectancies issued by major medical underwriters		
Underwriter	Originated in 2007 or earlier	Originated from year-end 2008
Underwriter with longest LE	–	–
Underwriter with second longest LE	8 months shorter	3 months shorter
Underwriter with shortest LE	24 months shorter	10 months shorter

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How LE quotes impact bidding

The life expectancy is one of the main determinants in the calculation of how much should be paid for any policy. A longer life expectancy indicates that the policy is expected to remain in force for a longer period of time, which also means the policy owner will be required to pay premiums for a longer period – all other things being equal, the amount paid for this policy would need to be lower to generate the target IRR, compared to a policy with a shorter life expectancy.

In a very competitive marketplace where policies are scarce, some providers may be incentivized (through commission-based origination fee income) to encourage the use of lower life expectancies for pricing purposes, which provides a better chance of winning the bidding contest for the policies at the target IRR threshold set by the clients or investor. However, a shorter LE is less conservative than a longer LE (both may end up being wrong).

The relationship between life expectancies and IRRs will vary, depending on a host of factors. In another A.M. Best study of a pool of 150 policies with premiums optimized to be equal to the cost of insurance – a 12-month life expectancy extension resulted in a 3% p.a. drop in expected return. An illustrative example of the impact of the LE is shown below:

- Policy owner details
 - Male, age 75, face value of policy \$1 million
 - Mortality multiplier: 350
 - Life expectancy 7.13 years, with no mortality improvement assumed
- At a 12% p.a. IRR the policy would be priced at \$187,000 – in other words, the investor would have to be able to purchase the policy for \$187,000 and the policy would mature in 7.13 years to achieve a 12% p.a. IRR.

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- Using the same policy as above, but with a 1.5% mortality improvement factor (in addition to any improvement assumed by the LE provider). At a 12% IRR, the policy would be priced at \$107,000.
- Assumptions used will dictate the price for the policy:
 - Overly conservative assumptions will typically constrain the ability to acquire policies, as bidders with less conservative assumptions will tend to offer a higher price for the policy.
 - Offers using aggressive assumptions will tend to acquire policies but leave little room for error in the underlying assumptions (i.e., if LE is wrong, IRR will quickly decline).

Effect of life expectancy increase on internal rate of return	
Increase in LE (months)	Internal rate of return
0	12.4
3	11.6
6	10.7
9	10.0
12	9.2
15	8.5
18	7.8
21	7.1
24	6.5
27	5.9
30	5.3
33	4.7
36	4.3

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Life settlements versus viaticals

A viatical is the sale of a life insurance policy to a third party by a terminally ill person, typically for an individual who has a life expectancy that is less than 24 months. The concept of life settlements and viaticals is very similar. Both involve the owner of an insurance policy and transferring ownership of a life insurance policy to a purchaser in exchange for a sum of money. The difference between the two is based upon the expected life span of the insured. If the insured's expected life span is short, generally less than two years, the transaction is referred to as a viatical. If the insured is elderly (65+) and has a life expectancy of 2-15+ years, the transaction is normally deemed to be a life settlement.

Viaticals grew in popularity in the United States in the late 1980s, when the AIDS epidemic peaked. Viaticals offered a way to extract value from a policy while the policy owner was still alive. At the time, the AIDS mortality rate was very high, and life

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expectancy after diagnosis was typically short. Initially, there was a reasonably high probability that the death benefit would be payable in a relatively short time. In the late 1990s the advances in HIV/AIDS drugs increased life expectancies and the viaticals market slowed down significantly.

Effect of the life settlements industry on life insurers

Understanding the profitability of an individual line of insurance policies or type of insurance coverage is based on a number of actuarial assumptions that are used to price life insurance policies, one of which is expected lapse rates. Life insurers price various types of policies using an assumption that some policy owners will lapse (discontinue paying premiums) rather than keep the policy in force until death. The introduction of the life settlements market could potentially make the estimation of lapse assumptions more difficult, as policy owners will now have the option of selling the policy in the life settlements market rather than allowing it to lapse.

If insurers price policies based on significantly lower lapse assumptions than are realized, insurers lose. This could possibly lead to higher premiums or insurance companies increasing reserves to pay claims.

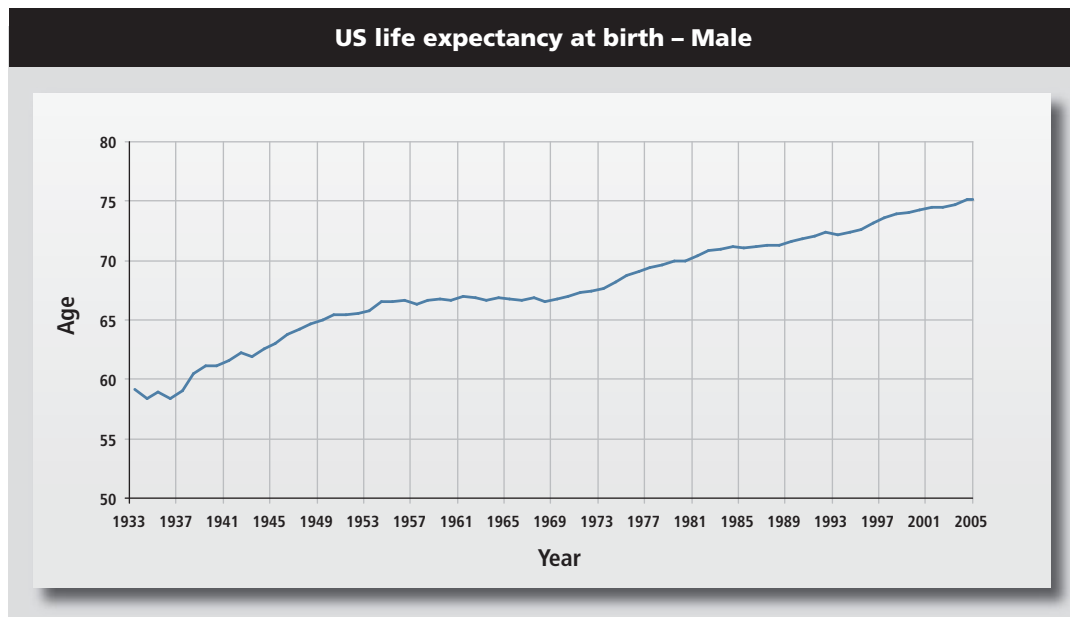
Also worth consideration is that the life settlements market is highly unlikely to significantly impact lapse behavior for policy owners with characteristics outside of the life settlements market (i.e., policy owners at younger ages). Life insurance companies do, however, have an important role to play in the wider development of the life settlements industry and may even look to increase participation over time – possibly purchasing policies on impaired lives to hedge against increased mortality risk. The life settlements market is a very small component of the overall insurance industry (circa \$15 billion out of a total life insurance market in excess of \$2 trillion p.a.). Hence, the current impact to life insurers is relatively small at this stage. Insurance companies continue to keep a watchful eye on the asset class.

Future improvements in mortality

Managing longevity risk is key to the life settlements asset class. Understanding the impact of future improvements will play an important role in successfully investing in life settlements. Actuaries have had a track record of systematically underestimating gains in life expectancy; failure to incorporate appropriate allowances for future improvements in mortality could negatively impact future investment performance.

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Past analysis of mortality has demonstrated that mortality improvement has historically been **neither constant nor consistent**. Rates of improvement fluctuate by age and sex and vary from year to year. This volatility can affect the value of an individual policy and/or life settlements portfolio. While the primary focus of the life settlements asset class is on insurance policies of senior citizens above age 65 with below-average life expectancy, those with longer life expectancies are more susceptible to changes in future underlying mortality. A life settlement portfolio may be subject to significant volatility associated with mortality improvements, and expected returns for the asset class need to reflect this risk exposure and the potential for future volatility.

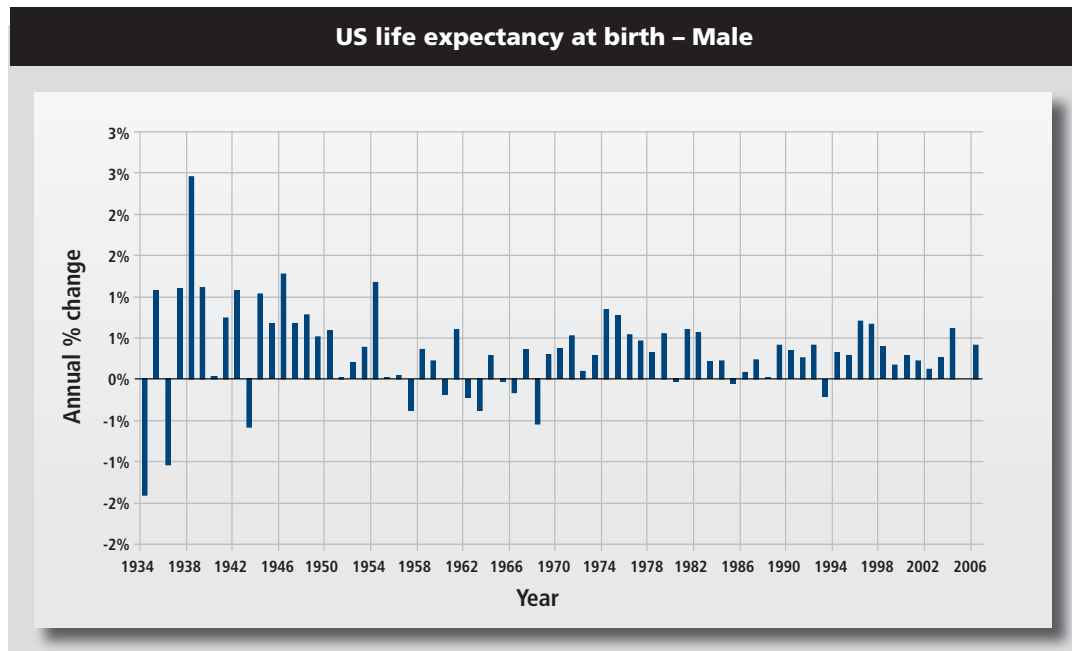


Source: Human Mortality Database⁴

Male life expectancy at birth in 1933 – 59.2 years; 2006 – 75.5 years.

⁴ *Human Mortality Database*. University of California, Berkeley (USA), and Max Planck Institute for Demographic Research (Germany). Available at www.mortality.org or www.humanmortality.de (June 2010).

Sector overview



Source: Human Mortality Database⁴

Average annual increase in life expectancy at birth for males was 0.3% p.a.

Premium finance

Premium finance is an arrangement where the premiums to pay for a life insurance policy are financed from an external source. This may include a financing company loaning an individual funds for the purpose of purchasing a life insurance policy.

One type of premium finance is stranger-originated life insurance (STOLI), which is a life insurance policy that was not originated for the benefit of the insured, their family or other appropriately related party but for an investor. The term premium finance is often used interchangeably with STOLI, which is not an appropriate classification. Certain premium finance arrangements may be STOLI; however there exist methods of premium finance that are legal ways of financing an insurance policy, typically in situations where the insurance policy is not expected to be sold in the life settlements market.

Premium finance typically makes sense when the interest rate charged on the loan is lower than the rate the client would expect to earn on the assets that would be required to be liquidated in order to pay the life insurance premiums. Premium financing structures typically break down into three main categories: full recourse, non-recourse and hybrid premium finance. In two later categories, the life settlement market value of the

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insurance policy is often used as collateral for the loan. Premium financed policies can be broken down in a number of risk categories:

- Low risk would include structures where the loan is full recourse and 100% collateralized.
- Medium risk would include structures where the lender does not have any interest in brokering the settlement of the policy or any portion of the settlement proceeds.
- High risk would include policies where insurable interest is at risk via presence of broker rights, contingent ownership fees, contemplation of settlement in documents, and upfront inducement.

STOLI

If the original policy owner has no insurable interest, the contract is void.

With a STOLI policy, a third party (with no relationship to the insured person) typically initiates the purchase of the policy by paying the premiums. In effect, STOLI could be seen as wagering on human life. Transactions of this type violate insurance law, which is specifically designed to ensure that the person buying the life insurance policy, or the beneficiary of the policy, gains benefit out of the death benefit and has an economic interest, or an interest engendered by love and affection, in the continued life and not death of the insured. This is often referred to as the insurable interest test.

In an effort to prevent STOLI transactions, states have enacted laws requiring, for example, waiting periods of between two and five years before a policy can be sold to a third party. Logically, STOLI policies should not make financial sense to the life settlements market. A newly issued life insurance policy that has been properly priced and underwritten should have no value in the life settlement market, as there should exist no information or pricing advantage.

It should be noted that STOLI as a practice is shrinking. Legislation, aversion to policies with potential insurable interest risk and convergence within the LE providers have dramatically reduced origination of new STOLI policies. A 2008 survey by the Life Policy Dynamics⁵ found that premium financed settlement (which in certain cases can be an indicator of STOLI) volumes had dropped by nearly 70% from 2007 to 2008. Proper due diligence is critical for determining the origins of the life insurance policy – if a STOLI policy is purchased in the life settlements market, there is risk that the insurance company will contest the policy – potentially rendering it worthless.

⁵ Life Policy Dynamics, LLC, 2008 Market Analysis Report.

Market participants

While the headline figure of the amount of life settlements transacted on a yearly basis is typically reported by a number of sources, such as Connings (an insurance research and asset management firm), the underlying investor data is harder to come by. However, based on the research we have seen, the investor base for life settlements has grown more diverse as the market continues to develop.

Historically, two of the largest investors in this asset class are Berkshire Hathaway and AIG. Berkshire Hathaway has both owned policies directly (at its highest point it had a portfolio in excess of \$1 billion of face value) and invested via provider companies (Life Equity). AIG became the first company to successfully securitize a pool of life settlements, but this was a purely internal transaction. The Fieldstone Securitization deal was completed in January of 2009 and has a face value of policies of over \$8 billion. As of December 31, 2008, AIG had a life settlement portfolio of \$11.8 billion in face value. Other early investors in the space include individuals and institutional investors based primarily in Europe (historically Germany) and increasingly throughout Asia. For a period of time German investors had a tax advantage for this asset class; demand increased dramatically in the years prior to 2006 (following the change in the tax law). Over time investors from the United Kingdom, the Netherlands, Switzerland, Canada, Australia and New Zealand have started to invest in the asset class, typically by institutional investors such as super-annuation/pension funds or sovereign wealth funds.

Bad press

Shortly after the emergence of this asset class in the early 1990s there were numerous cases of fraud and abuse, leading to calls for greater regulation. And while in recent years there has been a regulatory response, it has taken time for legislation to be passed, which is done at the individual state level. Overall, the industry is still transitioning from an environment that was previously self-regulated to a highly regulated institutional asset class.

The initial bad press was largely associated with viaticals, often relating to situations where policies were fraudulently obtained. In the mid-2000s the asset class was dubbed the nickname “death bonds.” This label associated investments in life settlements as a payment contingent on the death of the insured, which led to a significant increase in press coverage for the asset class. In 2006, Coventry First, LLC, the largest life settlements provider, was charged with alleged payment of secret commissions that unfairly reduced the amounts owners received for the policies. Then New York Attorney General Eliot Spitzer led the investigation, which was settled in 2009. SLS Capital/Keydata and PEMGROUP/Danny Pang are several examples of alleged fraud in the asset class. Both

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cases are currently active, and involve investment funds that raised capital to invest in the asset class. Allegations suggest that policies were not purchased with the capital raised and investors have been defrauded. Victoria Funds Management Corporation (VFMC), the fund manager of assets for Victorian public authorities in Australia, is an example of the implication of exposure to the headline risk associated with this asset class. In December 2008, a story appeared in an Australian paper⁶ with the following lead: “Victorian public servants’ superannuation is under threat after the state’s investment arm ploughed more than half a billion dollars into an obscure Gold Coast ‘death fund’.” The attack came after the Life Settlements Wholesale Fund wrote down investments by around 18% to reflect the move to 2008 VBT.

Wall Street and securitization

Recently, there has been significant focus on the securitization of a pool of life settlements – in fact this structure has been referred to as the “next mortgage-backed securities” by the *New York Times*.⁷ In follow up to the *New York Times* article, the United States House of Representatives formed a committee to examine the implications of growth in the life settlements securitization market. The committee heard from a number of market participants and insurance representatives; overall, participants conveyed a message that the life settlements securitization market posed no systemic threat and estimated that just over \$1 billion of life settlements have been securitized since 2000 (excluding the AIG securitization mentioned previously).

In addition to addressing the potential for a significant securitization market, the hearings covered both regulation and consumer benefits of the life settlements market. The SEC stated that it had formed a task force that would focus on whether market practices and regulatory oversight within the life settlements market could be improved. Moreover, no one at the hearing denied that, with proper regulation and supervision, there were significant benefits offered by the life settlements industry to seniors.

The final outcome of the hearing was to establish a Life Settlements Task Force that would be charged with addressing emerging issues raised as the asset class continues to develop – which may include the impact of further growth of a securitized market. However, from the institutional investor’s perspective, life settlement securitizations are relatively uncommon – with only one currently in existence (AIG’s \$8.4 billion pool of life settlement policies, which is held on the balance sheet of AIG, and is not available for public investment).

⁶ Baker R and Mackenzie N. “Millions May Be Lost in Super Fund Blow,” *The Age*, December 4, 2008. Available at <http://www.theage.com.au/national/millions-may-be-lost-in-super-fund-blow-20081203-6qo4.html> (accessed July 20, 2010).

⁷ Anderson J. “Wall Street Pursues Profits in Bundles of Life Insurance,” *The New York Times*, September 5, 2009. Available at http://www.nytimes.com/2009/09/06/business/06insurance.html?_r=1 (accessed July 20, 2010).

Why invest and what is the underlying risk premia?

The underlying risk premia, which investors in the life settlements asset class are aiming to capture, can be described in two separate components: structural pricing inefficiency and liquidity premia.

Structural pricing inefficiency

There exists a structural pricing inefficiency that originates from the pricing approaches adopted by the life insurance industry. The approach is based on the wider benefits that insurance brings to society and is structured to promote life insurance penetration by increasing life insurance premium affordability.

Policy profitability is a balance between charging lower premiums and offering higher surrender values. If higher premiums are charged, profitability will increase while the policy remains in force, but would likely result in a lower take-up of insurance coverage or a significant reduction in business due to competitive pressures. Decreasing the surrender value will also improve profitability but only at the point the policy owner allows the policy to lapse. This practice is referred to as *lapse-supported pricing*.

In order to increase the uptake of life insurance, the industry (including regulators) supports lower premiums. This means that, overall, the insurance industry will either generate less profit or a larger proportion of the profit needs to be sourced from policy lapses. The lapse profitability is generated by offering lower surrender values. This structure can be exploited by investors who can purchase policies in the life settlements market that have a significant element of lapse financing in the pricing structure and then hold the policy to maturity.

This structural pricing inefficiency is further exploited as insurance policies cannot be repriced once issued, even in the case where the insurance company is aware of new information that would impact the value of the policy. As a result, for existing policies, insurance companies are prohibited from adjusting surrender values for post-issue conditions that were not recognized or specified at the inception of the insurance contract. The insurer is unable to offer the policy owner an amount higher than the surrender value specified under the original insurance contract. The policy owner is therefore restricted to accessing the life settlements market to unlock any value not reflected in the surrender value offered for the policy. The life settlements market is able to capture this premium by utilizing the data unavailable or unusable to the life insurer (updated medical records, wealth status, etc.) and offer the policyholder a price higher than the surrender value, but often lower than the pure actuarial value of the policy. Investors in the life settlements market should be able to benefit from this structural pricing inefficiency by purchasing policies with low surrender values for individuals with impaired mortality profiles. This is effectively an arbitrage against the insurance company.

Why invest and what is the underlying risk premia?

Liquidity premia

Life insurance contracts are an illiquid asset in the hands of the policy owner. Historically, if a policy owner wanted to liquidate this asset, the only option was to surrender the policy back to the insurance company and receive the surrender value, which is a payout equal to the accumulated cash value in the policy less the (often large) surrender charge. The life settlements market exists to provide liquidity to the policy owner, similar to the secondary market for private equity. Motivations for selling a life insurance policy will vary; however, reasons will typically relate to a change in financial or personal situation rendering the policy unnecessary. The change in situation may often be related to financial and/or medical distress.

Policies will typically be offered to the secondary market at a discount to the asset's economic value. This discount should compensate for the transfer of illiquidity and address the information asymmetry (the policy owner will likely have more information about the health status of the insured than the potential acquirer will).

Is this a sustainable risk premia?

The risk premia will exist as long as the structural pricing inefficiencies within the life insurance industry remain. The majority (estimated as high as 80%) of life insurance policy owners either let their policies lapse or surrender their policies for a minimal cash value. This is a source of significant profit to the insurance companies (as it results in no payment of the death benefit).

The life settlements market is a very small component of the overall insurance industry (circa \$15 billion out of a total life insurance market in excess of \$2 trillion p.a.). Hence, the value transferred from the insurance companies to the life settlement markets participants is relatively small at this stage.

The current size of the market, however, has not stopped insurance companies from keeping a watchful eye on the asset class. Insurance companies have started to take steps to slow down competition from the life settlements market, whether through better identifying STOLI policies, modifying underwriting assumptions, altering commission structures to reward policy retention or offering accelerated death benefits to the policyholder whose health has been significantly impaired post-issue. Some insurance companies have already begun the move toward increasing surrender values on new policies, with an aim in the future of removing the attractiveness of the secondary market.

Simply adjusting the surrender values after issuing the policy to remove the attractiveness of the life settlements market is not possible. The National Association of Insurance Commissioners non-forfeiture law restricts post-issue price discrimination. Hence,

Why invest and what is the underlying risk premia?

insurance companies are prohibited from offering cash values that are adjusted post-issue for conditions that were not recognized and specified in the insurance contract at inception. This same legislation has slowed the direct participation by the life insurance industry into the life settlements market; however, life insurance companies, such as AIG, are expected to increase participation over time.

It is reasonable to assume policy owners will continue to look to the life settlements market for liquidity should there remain a significant gap between the surrender value offered by the insurance companies and the amount the life settlements market will pay to acquire the policy. Congressman Kanjorski, Chairman of the Subcommittee on Capital Markets, Insurance and GSEs, noted that “life settlements can provide retirees with a source of liquidity to fund unexpected expenses or to sell an asset that they no longer need, at a better price.”⁸ Structurally the risk premia will remain over the medium term; however, short-term imbalances in supply and demand could cause significant fluctuations in the level of the risk premia available to the investor.

Structural consideration

Understanding the US life insurance market

In the US, life insurance is a tax-favored “product” and is often a very important part of estate planning. In the situation of a universal life policy: firstly, the cash value growth within the policy (i.e., premiums paid in excess of the cost of insurance and policy charges) is not subject to current taxation as long as the cash balance remains within the policy. A second, more important, tax benefit is that death benefits are generally tax-free when paid to the hands of the beneficiary of the policy.

The tax-free status upon payment of the death benefit has become an important consideration when planning for estate or inheritance tax. Estate tax is payable in the US upon the transfer of the wealth of a deceased person. The tax rate applied varies by the amount of wealth transferred but can be as high as 55%. Life insurance policies are often purchased as part of the estate planning process to provide an offset for the estate tax payable upon death.

The National Association of Insurance Commissioners estimates that the US life insurance market currently includes \$19 trillion of outstanding policies, with nearly \$2 trillion in face value of life insurance policies issued in 2006 alone.⁹ The average holding

⁸ Credit Suisse, Regulatory Commentary, Life settlements. October 2009.

⁹ American Council of Life Insurers Fact Book, 2009.

Why invest and what is the underlying risk premia?

period for a new life insurance policy is around six years, and while there are a number of tax-effective methods of rolling existing policies into new policies, a large number of insurance policies are surrendered for little or no value.

Insurance policies purchased enter the life settlements market for a variety of reasons. The most common reason tends to be that the policy owner's circumstances have changed and there is no longer a need for the life insurance policy. Other reasons for selling a life insurance policy are¹⁰:

- Individuals
 - Financial needs for major expenses (e.g., medical treatments)
 - Outlived need for coverage
 - Requires different coverage/different policy features
 - Financial distress/unable to meet future payments
- Family/Estate
 - Change in beneficiaries (divorce or death of dependent)
 - Second-to-die policy owner (i.e., spouse) has passed away
 - Material change in the value of the estate
- Business
 - Changes to key executives/partners
 - Change in succession plan
 - Need cash/seek to monetize assets

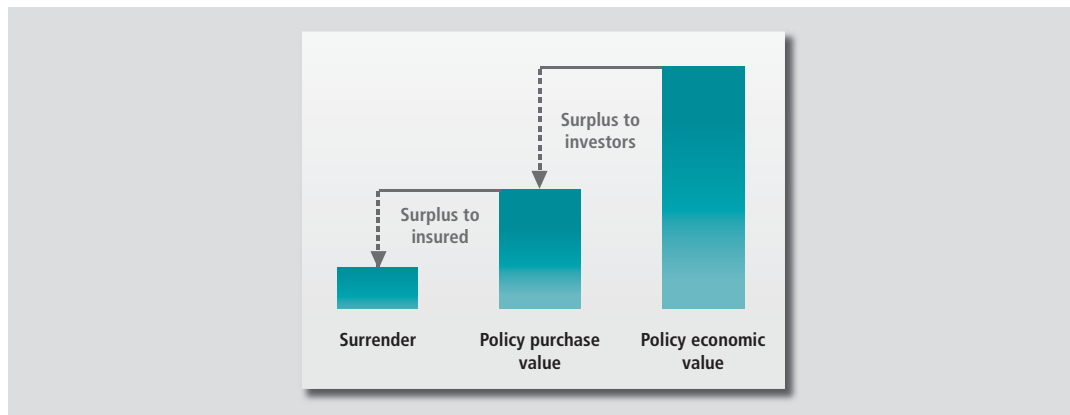
The policy owner is typically looking to extract more of the embedded capital value of the policy than what is available if the policy is surrendered or is allowed to lapse.

¹⁰ Bernstein Research Call, Life Insurance Long View – Life Settlements Need Not Be Unsettling. March 4, 2005.

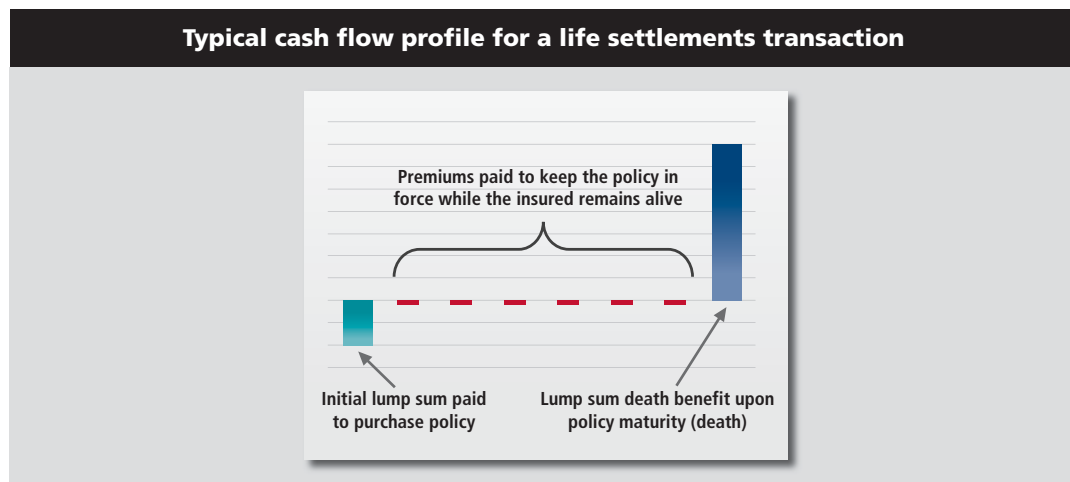
Why invest and what is the underlying risk premia?

Return profile

The cash flow profile of a life settlements transaction involves an initial cash payment, followed by a series of premium payments, and finally receipt of a lump sum once the policy matures (i.e., insured life dies).



Premiums are required for as long as the insured life is alive to keep the policy in force. Under the universal life policy, premiums can be reduced to the minimum cost of insurance; premium amount is normally optimized to maximize IRRs and minimize the amount of cash built up in the policy.

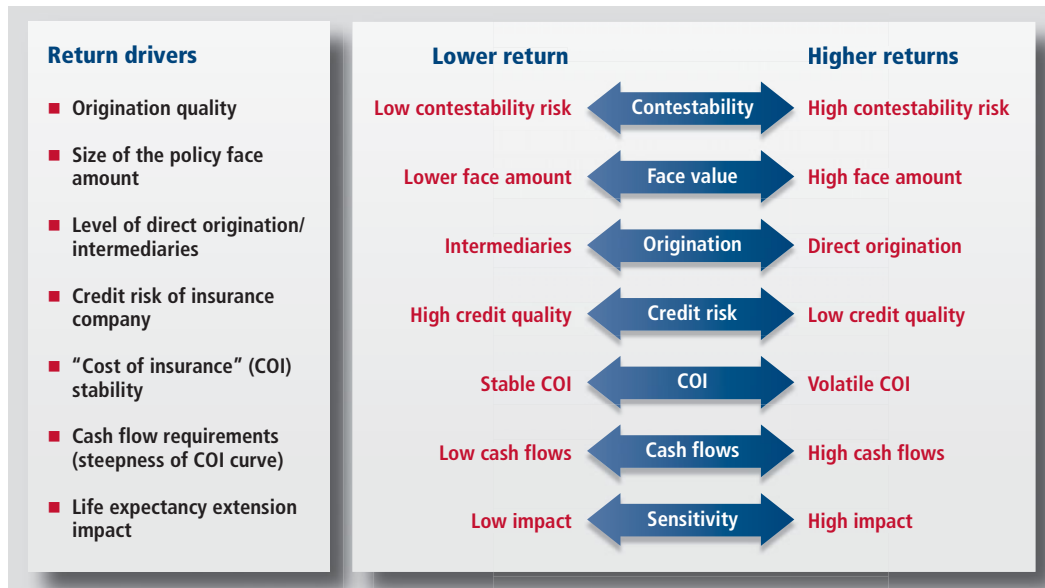


IRR is impacted by:

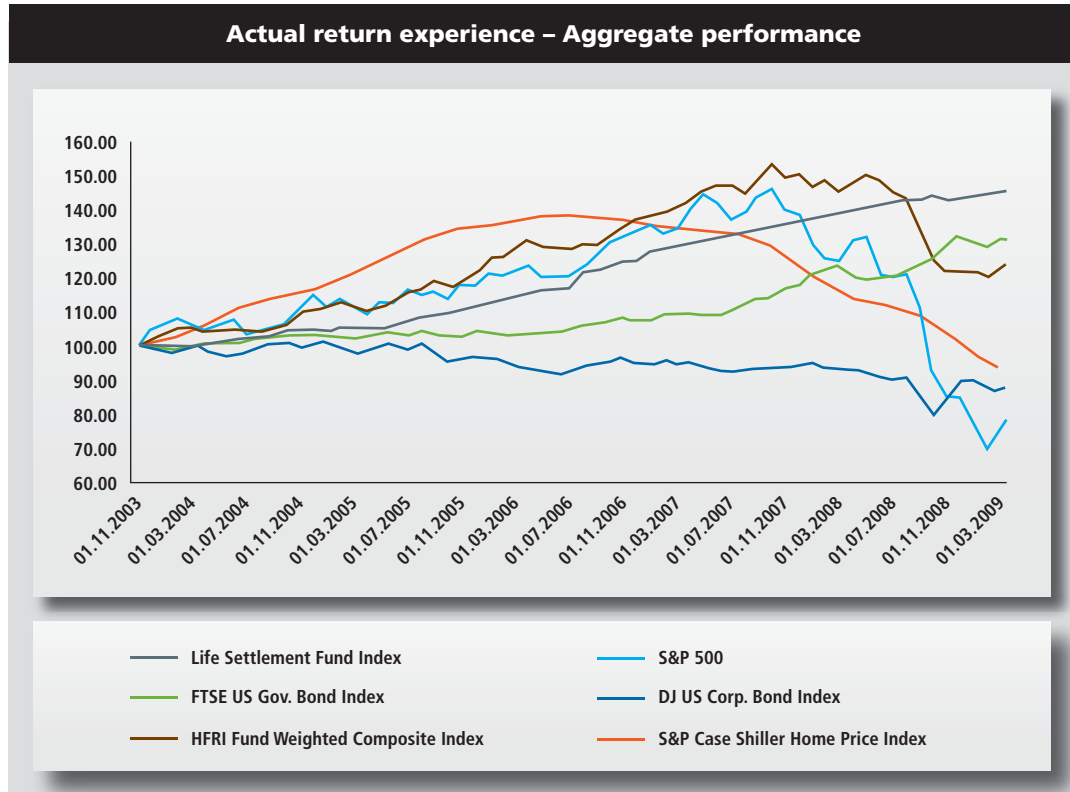
1. Amount of initial purchase price
2. Size and number of ongoing premiums
3. Timing and size of death benefit

Why invest and what is the underlying risk premia?

The chart below outlines how the value of a life settlements policy can change depending on a number of factors associated with the policy.



Why invest and what is the underlying risk premia?

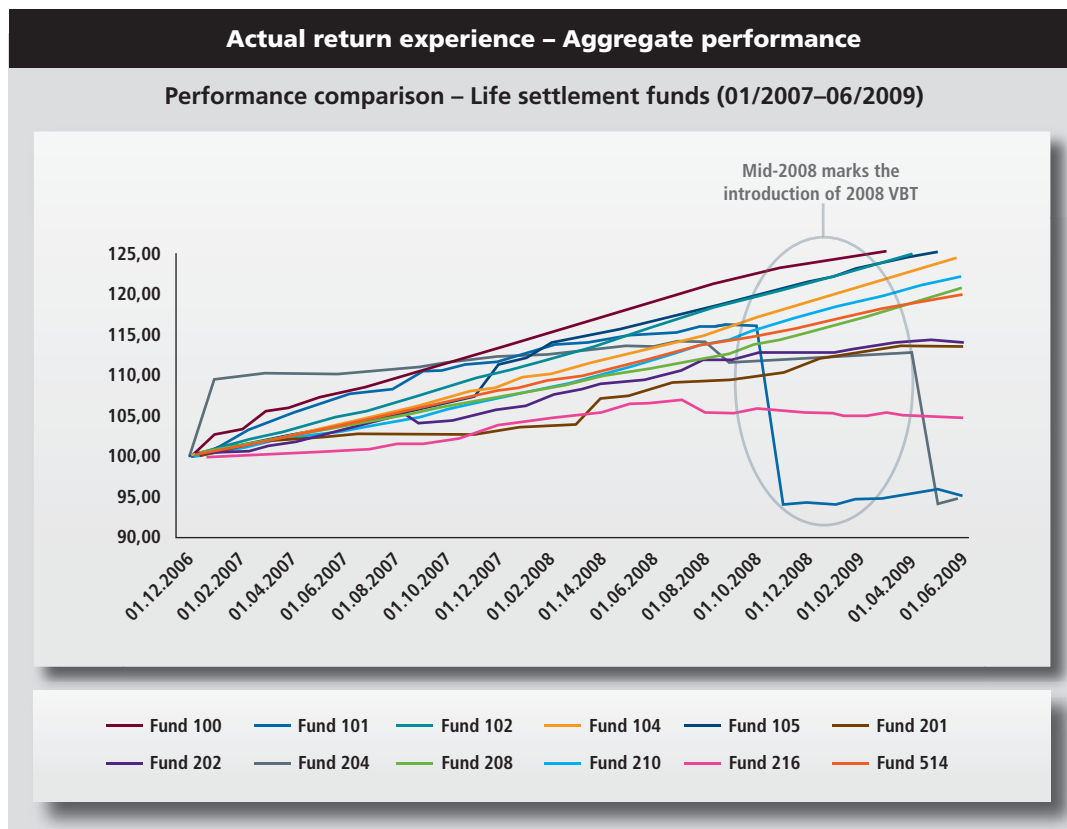


Source: University of St. Gallen¹¹

The chart above shows a composite of data on open-ended life settlement funds from AA-Partners AG. The dataset comprises monthly returns of 16 open-ended funds. This data has been sourced from AA-Partners AG and has not been independently verified by Mercer.

¹¹ Performance and Risk of Open-end Life Settlements Funds, Working Papers on Risk Management and Insurance No 73, University of St. Gallen, December 2009.

Why invest and what is the underlying risk premia?

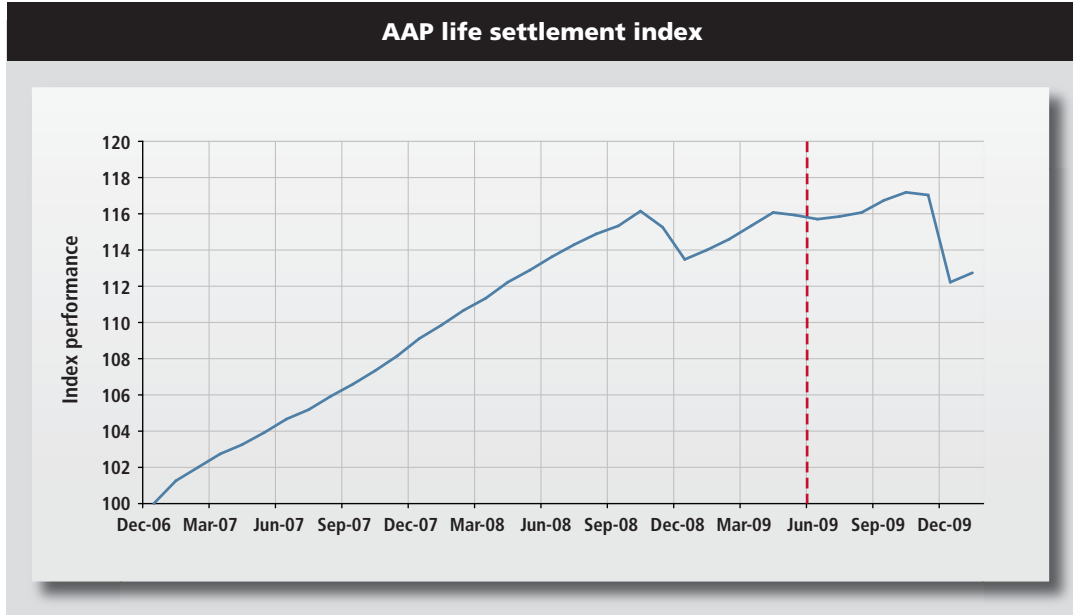


Source: University of St. Gallen¹¹

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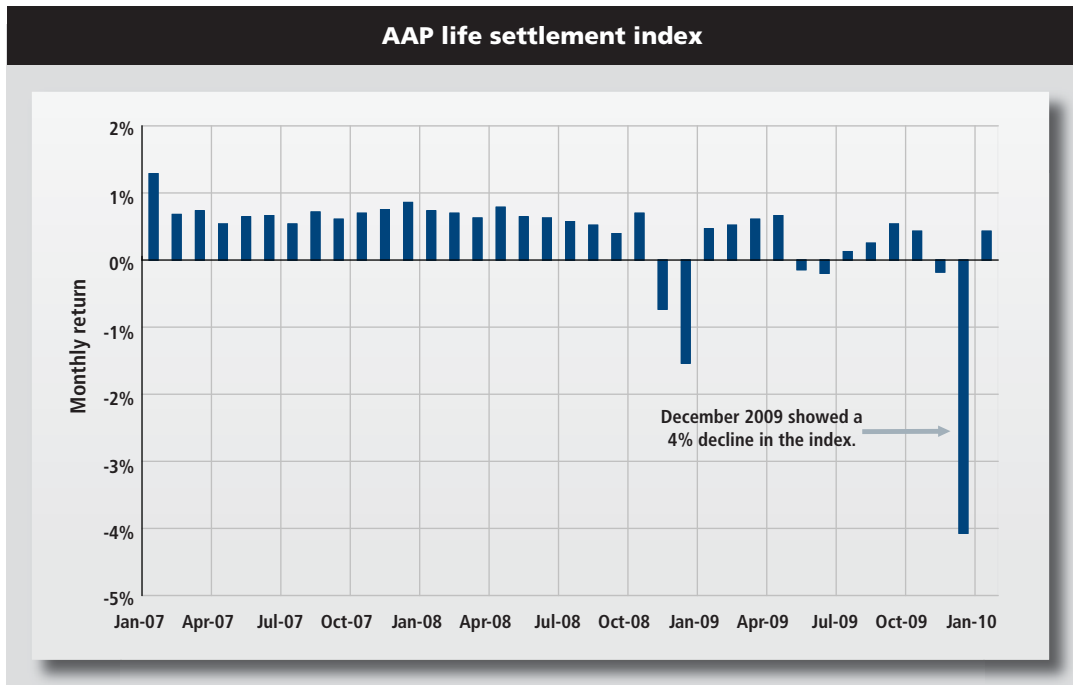
Note: most open-ended life settlements funds use a mark-to-model valuation process – these models will typically involve a combination of actuarial techniques and updating medical underwriting. It is not surprising that funds experienced significant negative performance post the introduction of 2008 VBT.

Why invest and what is the underlying risk premia?



Index data are sourced from www.structured-solutions.de.

The above chart shows AAP Life Settlement Index up until January 31, 2010. The red dotted line is the cut-off point for the performance data from the two previous charts. While the data for the individual funds included in the index are not publically available, we believe the recent decline in performance is due to increased mark-to-model updates, i.e., auditors are increasingly instructing funds to move to 2008 VBT-based valuations.



Index data are sourced from www.structured-solutions.de.

Why invest and what is the underlying risk premia?

Risk measurement

Longevity and policy risk management

Death is ultimately certain to happen; timing, however, is uncertain. One of the main risks is accurately predicting the timing of this event; however, there are also a number of other risks with this asset class which need to be monitored. Risk measurement is typically focused on two aspects of the life settlement transaction: longevity risk (ability to predict the life expectancy of an individual) and policy risk (will the policy pay out on maturity?).

Under each life settlement contract there is a significant amount of information known about the policy owner and the insurance policy. They are:

- Age, sex, location, wealth/financial status (as implied by policy face), medical history
- Size of policy/premiums
- Structure of the insurance policy

Risk management implications:

- Life expectancy can be modeled by using the policy owner information.
- Probability distribution of returns from an individual life has wide tails; however, the distribution for a portfolio of lives is much closer to normal.
- Understanding whether the policy will remain profitable if life expectancies are extended is critical. How sensitive is the policy to changes in mortality status?
- Careful modeling – deterministic and stochastic – is essential.

The purchase of a life settlement transfers the ownership of the policy to a third party, who typically has no direct relationship to the insured. Before the policy is purchased it is critical to have a detailed understanding of the structure of the insurance contract. Modeling the structure of the premiums and understanding the details of the insurance coverage are key to managing any policy-specific risk. Understanding the origination of the policy (i.e., the situation when the insured took out the policy) is important for assessing the motivations for sale (STOLI or premium financed). Avoiding policies with possible insurable interest issues – this risk can be managed via legal due diligence and background analysis.

The policy transfer process is another area that requires additional risk management focus. The process by which a policy is sold and transferred to a new owner is an extremely manual process, with as many as 20 different documents required to transfer ownership. Careful due diligence is required to ensure that the policy seller has the appropriate authority to sell the policy and the policy is transferred correctly. The risk that a policy does not pay out is largely binary. Careful due diligence is required to manage this risk.

Why invest and what is the underlying risk premia?

Risks

Longevity risk

Longevity risk is the risk that life expectancy improves more than actuarially anticipated. This risk can be separated into two components:

- Systemic risk – this risk arises from the potential for sudden or significant mortality improvement due to medical progress. This risk is often referred to as model risk, in that the LE providers underestimate improvement factors or a structural risk that the models used to predict life expectancy are wrong. This risk can be managed by selecting a pool that contains several different impairment categories and focusing on policies where, due to the age of the policy owner, the life expectancy is unlikely to be significantly impacted by medical advances.
- Specific or Idiosyncratic risk – the risk that an individual insured lives longer than what was reasonably predicted by LE providers. The longer the insured lives, the more premiums the owner of the life settlement will have to pay, and the further in the future the death benefits will be realized. This can be managed by the diversification effect of a large pool of life settlements, and avoiding concentration risk from significant exposure to policies with very large face amounts (relative to the average policy size of the portfolio).

Mortality risk

Mortality risk is the risk that an individual dies sooner than expected. In this context this risk is the opposite side of the longevity risk. If individuals die sooner than expected, this will have a positive impact on investment returns.

Moral or ethical considerations

Adopting a view on the ethics of the mortality/longevity markets is typically one of the first steps involved when considering an investment in this asset class. While positions in mortality/longevity are not new (annuities, defined benefit pension plans, life insurance), US life settlements have grown out of a need to correct a structural inefficiency on surrender values. However, the market is new and during its early years has experienced additional degrees of scrutiny and been questioned on the morality of institutional investors investing in the length of an individual's life. It is important to note that the insured life (original policy owner) is party to the benefits of the life settlements market and receives an amount typically in the range of five to 10 times the cash surrender value, where value is defined as the policy offer amount minus the policy cash surrender value.

Why invest and what is the underlying risk premia?

In 2008, Life Policy Dynamics, a servicing and consulting firm, estimates \$460 million of value for policy owners was created in the market⁵ (which is generally considered a low estimate for the overall value created).

Headline risk

Headline risk is the possibility of a negative reaction to investing in this asset class. Given the ethical/moral considerations discussed above, there is a risk that investments in this asset class could result in negative press or scrutiny by peers.

Counterparty or credit risk

The life settlements exposure to counterparty risk depends on the structure of the investment. Physical policy investments are exposed to carrier counterparty risk (i.e., credit of the insurance company) in similar fashion as the original policy owner. The risk of default of an insurance company is an important consideration when purchasing an insurance policy on the secondary market. While we are unaware of the default of a significant carrier where policy owners did not receive entitled benefits, there have been situations where payment has been delayed. Risk of bankruptcy of the insurance company can be diversified away by gathering policies from a number of different life insurance companies. However, this risk is largely mitigated by the following factors: regulation at the state level by the insurance department in which the individual subsidiary is based; typically strong state-level support for the ongoing stability of an insurance company; in the event of a default, a high likelihood that obligations of an insurance company are taken up by another insurance company (typically with sponsorship from the state regulator); and the state's guarantee payment of death benefits up to a certain amount (normally up to \$500,000 but varies by state).

Synthetic transactions are exposed to credit risk via the counterparty to the synthetic transaction (typically an investment bank). Synthetic transactions are typically structured as a swap between two parties – which introduces similar credit risk to any over-the-counter transaction – the difference with a synthetic life settlements transaction is that if one of the parties to the deal has to be replaced, there are very few potential replacements in the market. There are ways to mitigate the counterparty risk in a synthetic risk via collateral provisions (where structures can be designed that are similar to standard OTC swap contracts).

Why invest and what is the underlying risk premia?

Portfolio concentration

Limited diversification at the portfolio level as a result of too few policies, concentration in specific diseases or policies with large face amounts can lead to increased risk of exposure to the volatility of individual policies.

Tax risk

Tax implications will depend on the jurisdiction of the investor and should not be ignored. Withholding tax implications are similar to those of asset classes, such as direct property in the US, and need to carefully be considered. As this is a relatively new asset class, tax law is still developing and often untested.

Liquidity

Life settlements is an illiquid asset class. There is no established tertiary market for life settlement policies. The asset class has a cash flow profile that initially requires funds to purchase policies and pay premiums; over time as policies mature, cash will be returned to investors. Maturity is a function of time, and while the timing of the event is unknown, it is certain that the event will occur. Cash flow management is critical to managing the liquidity risk.

Regulatory risk

The life settlements industry is largely unregulated compared to other more developed asset classes such as equities and bonds. Life settlements are not registered securities as defined by the SEC. Insurance is governed at the state level, which means there is a lack of consistent regulatory framework – essentially “best practices” are being developed as this asset class matures and many aspects of legislation have yet to be tested.

Interest rate risk

Most transactions are not directly linked to interest rates. One of the exceptions is for investments structures that use leverage to finance the purchase of policies (in addition to investor capital) – changes to the “risk-free” interest rates will affect the return (this risk is typically not hedged). Interest rate risk exposure can also exist within the assumptions used to optimize the premium payments. Insurance policies often have account balance crediting rate assumptions that may be determined by prevailing market conditions and vary over time.

Why invest and what is the underlying risk premia?

Origination risk

This covers a number of topics in the process of identifying and purchasing policies. The origination process can involve a number of parties and potentially a significant amount of separation between the original policy owner and the end purchaser. Ensuring that the origination process is of an “institutional quality” is critical to managing this risk. Origination that is transparent, legally compliant and maintains the fiduciary duties of all parties involved is essential.

Legal risk

Legal risk refers to issues surrounding insurable interest and non-contestability features. Failure to establish insurable interest at policy origination can render the policy worthless or can lead to family members of the insured seeking benefits of the policy even if the policy was transferred. In most cases, insurance companies are not permitted to contest a policy for misstatements in a policy application after the policy has been in force for two years. Nonetheless, any contestability risk is typically managed with careful and detailed due diligence before the policy is purchased – checking all of the specifics of the policy (i.e., name, DOB, etc.), contacting the previous beneficiaries of the policy and making them aware the policy is being sold.

Approaches to portfolio construction

- Diversification is critical with this asset class and should be approached with the same rigor as taken by an insurance company. Diversification by:
 - Disease
 - Insurance company
 - Number of lives
 - Policy size
- Longevity risk management – assessment of the impact of an LE extension
- Cash flow management
 - Liquidity – life settlements is an illiquid asset class
 - Premium optimization – maintaining a minimal cash balance in the policy
 - Adequate reserving – life settlements are cash flow intensive; policies are purchased with lump sum payments and kept in force with a series of premium payments. Availability of cash is typically restricted to capital raised and any policy maturities. Funds may also utilize a debt facility to smooth short-term cash flow issues.

Diversification

One of the founding risk management principles for an insurance company is diversification. In life insurance, diversification is achieved by gathering a very large pool of lives – large enough to minimize the dispersion of return to an acceptable level. Life insurance companies must rely on the law of large numbers to smooth any potential impact from outliers (i.e., events significantly different from the expected). This is done largely because the insurance company is unable to, at a later date, re-underwrite the insured lives. An insurance company must hope there is enough diversification that the experience as a whole is “normal” or at least within tolerance levels.

In life settlements the same principles apply – diversification remains extremely important. However, with a life settlement the manager is not as restricted and can update the underwriting and obtain updated life expectancy quotes as often as desired. This provides a life settlements manager with an advantage in that he or she can actively manage the portfolio characteristics and hence does not need to just blindly diversify.

Portfolio construction considerations

The table below shows an example of the types of disease limits that could be included as part of the diversification included in the portfolio construction approach.

Disease or category	Examples	Maximum limits
Cardiovascular	Coronary artery disease, arrhythmia, other (e.g., heart valve disease)	50%
Cerebrovascular	Stroke, carotid artery, transient ischemic attack	20%
Dementia	Alzheimer's, multi-infarct	20%
Cancer	Lung, prostate, breast, hematological, all other cancers	25%
Diabetes		10%
Respiratory diseases	Emphysema, asthma, sleep apnea, chronic obstructive pulmonary disease	20%
Neurological disorders (excluding Alzheimer's)	Parkinson's, Lou Gehrig's disease (ALS)	15%
Other	Renal failure, peripheral vascular, etc.	20%
No disease		100%
Multiple		40%
HIV/AIDS		0%

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What is enough diversification for a life settlements portfolio?

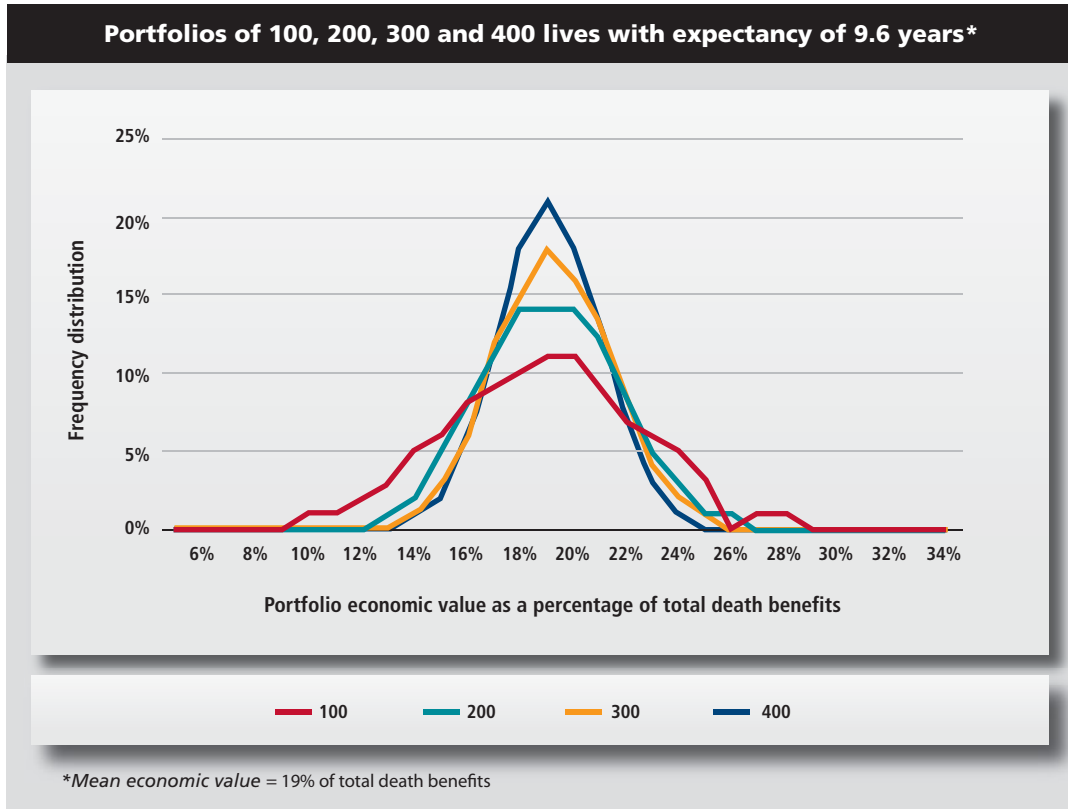
The number of lives in a portfolio of life settlements can help dampen the volatility of the cash flows and minimize the impact of tail events. The more lives in the pool, the narrower the range of returns around the portfolio's target return. However, the desire to have a large portfolio must be balanced with:

- Marginal benefit gained by including additional lives to the portfolio
- Time constraints involved in accumulating a sizable portfolio

A.M. Best suggests, in their securitization methodology,³ that a portfolio of at least 300 lives is optimal, where no one life is more than 3.3% of the face value of the entire pool. The optimal number of policies will depend on a number of considerations and will vary depending on the structure of the investment (physical policies or a synthetic structure). Synthetic investments can achieve diversification with fewer policies due to the ability to structure even face values. However, if life expectancy is systematically underestimated across all age groups and ailments, diversification will not protect investors.

Portfolio construction considerations

The following chart outlines sample portfolios modeled by A.M. Best.



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Longevity risk management

Longevity is one of the key risk factors for this asset class. Longevity risk is the risk that an insured lives longer than predicted by the life expectancy underwriters. The longer the insured lives, the more premiums the owner of the life settlement will have to pay, and the further in the future the death benefits will be realized. At the idiosyncratic level (i.e., individual insured life), this risk can be managed by the diversification effect of a large pool of life settlements and avoiding concentration risk with having significant exposure to policies with very large face amounts (relative to the average policy size of the portfolio).

Understanding this risk requires thorough analysis of the models used by companies for estimating life expectancies – identifying and testing assumptions used for future improvements of mortality, demographic specific traits, such as wealth or ethnic background. In addition, longevity risk management can be done using the following techniques:

- Multiple third-party life expectancy underwriting for all policies
- Stochastic and probabilistic models for the impact of LE extension
- Stress testing using scenario analyses

Deal pricing: Overview of the typical pricing model used by market participants

Life expectancy quotes

Pricing typically starts when a policy is announced for sale by a life settlements broker or other party acting on behalf of the policy owner. The life settlements broker gathers the policy documentation, current policy illustration, medical records and recent LE calculations. LE quotes are typically provided by one or more of three main life expectancy providers (21st, AVS, Fasano). The policyholder's medical files are thoroughly reviewed and assessed against a number of underwriting criteria to determine a mortality factor. The mortality factor is used to gauge the level of impairment relative to the LE provider's standard mortality table.

The mortality tables used by the LE providers are typically based on 2008 VBT adjusted for proprietary factors derived from the LE provider's experience data, including an allowance for future improvement of mortality. Some LE providers only provide a point estimate of the future life expectancy and mortality rating factor whereas others will provide the distribution and mortality curve applied.

Proprietary modeling and pricing

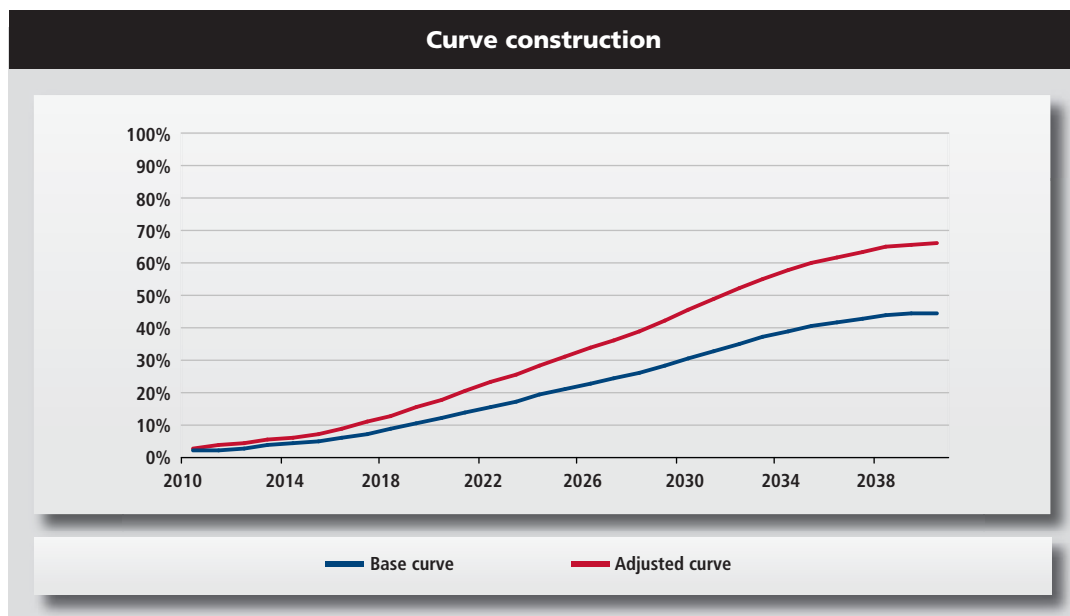
Pricing typically starts with the output from the LE provider and the insurance policy documents. Understanding the intricacies of an insurance policy requires a significant amount of insurance expertise. Policy documentation is typically complicated and often includes policy-specific premium and benefit structures. LE providers utilize actuarial software to analyze and project forward the required premium stream and accrued value in the policy. This analysis is used to determine the minimum cost of insurance, which is used to optimize cash flows. The projected stream of premium payments and the life expectancy are combined to determine a purchase price that corresponds to the target IRR for the policy.

Additional modeling is typically completed to test the policy's sensitivity to extensions to life expectancy. Attractive policies are those that provide a margin of error in the life expectancy estimate by maintaining a positive IRR for limited extensions. Upon completion of modeling and pricing, a bid is submitted to the broker for purchase of the policy.

Portfolio construction considerations

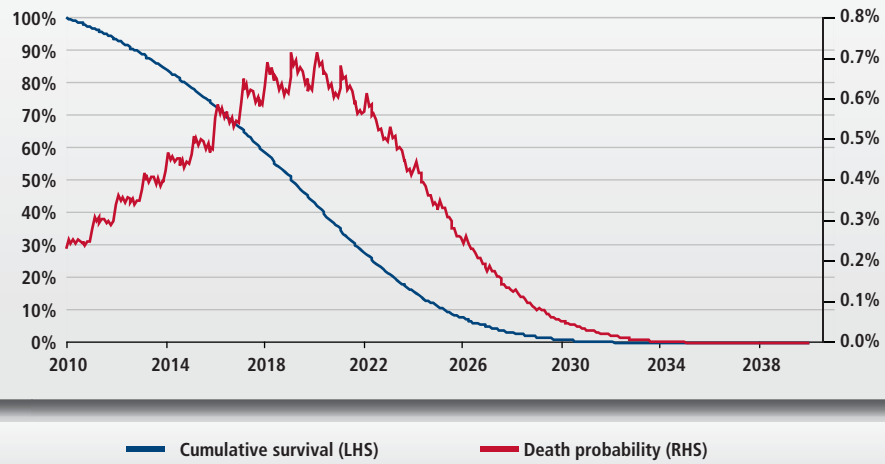
Pricing approaches tend to cover the following steps:

- Assess individual insured data/policy details.
- Extract a mortality curve based on a chosen mortality table and the insured's personal details. The chart below shows an example of mortality curve construction, where the base curve has been adjusted to reflect the mortality multiplier of the insured.
- Calculate survival and maturity probabilities.
- Calculate expected cash flows (premiums and death benefits) on both probabilistic and deterministic bases (see the next two charts).
- Finally, calculate the bid price using either a target IRR or a bid IRR.

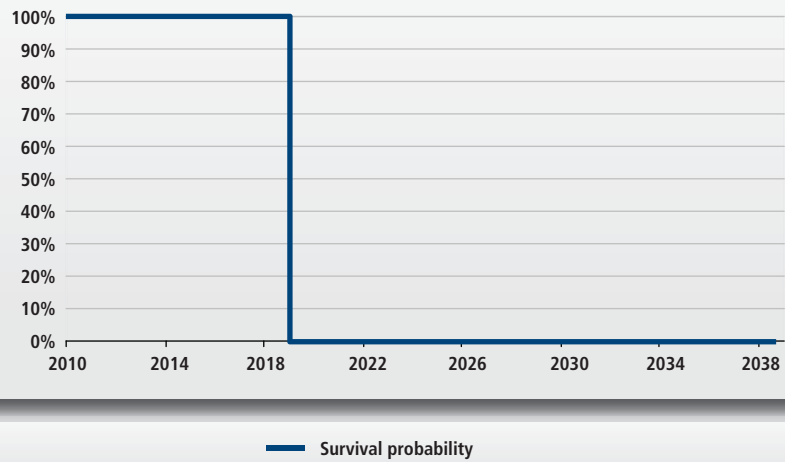


Portfolio construction considerations

Probabilistic approach



Deterministic approach



Portfolio construction considerations

Policy origination due diligence

Prior to the completion of the transaction, additional due diligence is undertaken – most bids are contingent on the success of further background analysis. Apart from verifying the policy documentation (correct dates of birth and names on the policy), the main focus is on ensuring there are no issues with insurable interest. Due diligence is focused on identifying any issues that render the policy worthless (a policy that fails the insurable interest test may be deemed to have never been in force and normally results in a return of all premiums paid during the life of the policy). Due diligence should cover the following topics: jurisdictional analysis (regulatory regime policy is acquired under), broker/agent/insured/policy owner review (who are the parties involved in this transaction), encumbrances, policy ownership history, medical review (review of medical files and life expectancy quotes), insurable interest review (examination of policy initial origination) and anti-fraud review.

Purchase procedures for policy acquisition will typically follow a due diligence checklist including the following documents:

- Life Insurance Policy Purchase Agreement
- Insured's authorization to release medical records
- Seller's authorization to release policy information
- Original complete copy of life insurance policy
- Insured's Divorce Decree (if applicable)
- Insured's spousal release and consent to change beneficiary
- Change of owner and beneficiary from the insurance carrier
- Verification of coverage from the insurance carrier
- Final confirmation of all values from the insurance carrier
- Written acknowledgement from the carrier as to the change of ownership of the policy
- Medical review and certification of life expectancy
- Copy of Life Expectancy Certificate
- Medical letter of insured's competency
- Authorization by the insured to track health
- Compensation disclosure form

Market inefficiencies

Farming beta or persistent alpha?

Case for beta

The risk premia (beta) of this asset class is founded on a structural inefficiency within the life insurance industry. Life insurance pricing is inherently inefficient – which is often exhibited by the large variability in quotes received when initially purchasing life insurance.

Price paid to purchase the policy is determined based on the individual's life expectancy at a level of return that is sufficient to compensate the investor for the longevity risk. The risk drivers do not depend on traditional risk premia such as equity risk, and a very low correlation to traditional markets is expected (and has been exhibited in recent periods). The argument for beta as defined as an investable index or a passive exposure is not as clear. At this stage there is no index that reflects the beta of this asset class, and any index created based on traded policies does not reflect the true beta of the entire life settlements asset class. Structures that are designed as longevity indices do not represent the beta of this asset class. These structures are often a directional trade based on a desire to hedge a long or short exposure to longevity, whereas the life settlement structure is looking to capture a profit from the policy pricing inefficiency.

The approach to accessing the “pure” beta of the life settlement market differs by manager. While the majority of asset managers look to exploit some degree of alpha (via portfolio construction and policy acquisition), some would argue that this is a buy-and-hold asset class, with minimal portfolio management required post policy acquisition.

Case for alpha

A case for active management in life settlements needs to address the following:

- Ability to capitalize on information asymmetries
- Deal flow/origination advantages
- Advanced portfolio construction techniques

The inefficiencies of this asset class are structural and expected to persist in the medium term (and possibly over the longer term). However, the case for alpha via traditional active management is not clear at this stage – for example, whether these policies can be actively traded in a tertiary market, or if better pricing can be gained from proprietary deal flow arrangements (without damaging the integrity of the origination process, i.e., risking claims of bid rigging).

Market inefficiencies

Farming beta or persistent alpha?

The life settlements market has a number of moving pieces (brokers, providers, life expectancies), where certain aspects are dominated by intermediaries. There are high levels of information asymmetry, and the techniques or methodologies to analyze and price investments are still being developed.

The role of active management is interlinked to assessing the beta of this asset class and designing portfolios or investment structure, but can be limited to varying degrees. Investment management approaches vary from a “buy and manage strategy” to a full “actively managed” approach. Manager skill is required at many stages in the investment process and there are a number of aspects of this asset class that are still developing as it matures; as such an entirely passive approach is not appropriate – and is likely to not even be possible.

Accessing the opportunity

Implementation considerations

Implementation: Types of investments compared			
	Physical policies	Synthetic transaction	Securitized investments
Description	Investment into physical policies via direct ownership. Policies are sourced from providers or originated directly from brokers. Portfolio is constructed based on policies bought in the open market.	Investment in a structured swap or note that is based on policies owned by the swap counterparty or issuer. Transaction is tailored to reflect the risk profile/structure needs of the investor.	Pooled investment in physical policies. Similar premise to other securitized investments – typically rated by a ratings company such as A.M. Best and potentially offered in varying risk profiles. Exposure is essentially the same as investment in physical policies.
Availability	Most common form of access to the life settlements market.	Various synthetic structures are available in the life settlements market.	Not currently available to investors. However, a number of securitizations are rumored to be coming to the market in the next few years.
Premium structure	Premiums are based on the underlying policies and vary with changes to the cost of insurance optimization.	Premiums are structured to reflect the preference of the investor. These may be level premiums or other structure as required.	Premiums are based on the underlying policies and vary with changes to the cost of insurance optimization.
Counterparty risk	Counterparty is the carrier insurance company. Risk of default is based on the credit risk of the individual insurance company. Diversification of carrier risk is a key portfolio construction consideration.	Counterparty is typically an investment bank or provider. Risk of default is based on credit risk of the investment bank/swap counterparty. Swap structure can provide an element of carrier credit risk protection.	Counterparty is the carrier insurance company. Risk of default is based on the credit risk of the individual insurance company. Diversification of carrier risk is a key portfolio construction consideration.
Tax	Complicated – potential withholding tax issues. Understanding the tax structure is critical. Countries with favorable treaties are preferred.	Less complicated – swap structure can be used to address withholding tax uncertainty issues (i.e., structure becomes a swap rather than a physical investment) – however, must be structured appropriately.	Less complicated (possibly) – investment is into a rated, securitized investment vehicle. However, there are currently no securitized vehicles publicly available for investors.
Transparency	Investors will typically have a direct ownership stake in physical insurance policies. A fund or segregated account structure should offer investors a high degree of transparency.	Transparency is typically limited in a synthetic structure. Structures will normally involve an indirect exposure to the underlying life settlement policies via the swap or note structure. Transparency to the actual policies backing the trade may or may not be available.	In theory, these structures should be similar to a physical policy investment. However, the potential use of “waterfall” risk structures and other typical features of securitized structures could impact the level of transparency available to the investor.
Diversification	A large number of policies are required to reduce idiosyncratic risks and individual policy return volatility. Policies must be purchased in a whole policy format (i.e., no fractional policy exposure). Return potentially impacted by the individual policy characteristics (i.e., face and premium levels).	Transactions can include synthetic or fractional exposures, which can reduce idiosyncratic risk and expected return dispersion of returns by standardizing policy characteristics (i.e., face and premium levels).	A large number of policies are required to reduce idiosyncratic risks and individual policy return volatility. Policies must be purchased in a whole-policy format (i.e., no fractional policy exposure). Return potentially impacted by individual policy characteristics (i.e., face and premium levels).
Ramp-up period	Medium/long – based on policies available in the market, which varies with time depending on supply/demand. A pool of 300 lives/policies could take an extended period of time to source.	Short – transactions are often structured from a pool of policies made available by the counterparty. Depending on the counterparty, a pool of 300 lives/policies could be sourced within a relatively short time frame.	Medium/long – based on policies available in the market which varies with time depending on supply/demand.

Accessing the opportunity

Implementation considerations

Implementation: Types of investments compared (cont'd)			
	Physical policies	Synthetic transaction	Securitized investments
Liquidity	Low/none – there is no established tertiary market for life settlements. Cash flow will be generated as policies mature. Policies tend to be held to maturity.	Limited – transactions can be designed to provide liquidity at agreed sizes for a fixed bid/offer spread. Cash flow will be generated as policies mature.	Low/none – while this market does not currently exist, it is expected that there will be limited liquidity.
Tailored risk profile	Moderate – portfolio construction approaches can be used to tailor risk profile/return characteristics. However, risk profile is based on a physical exposure – certain risks are difficult to hedge/remove (i.e., carrier exposure or legal risk).	High – transactions can typically be fully tailored to meet the risk profile desired by the investor. This can include operation risks (policy lapse risk), insurable interest risk or carrier risk exposure.	Possibly – securitized investments may offer multiple tranches and other tailored risk features. However, no products are currently available.
Data privacy	Individual policies are owned by the manager/investor. Data privacy needs to be managed accordingly.	Policies, or insured data, are owned by the swap counterparty. Swap counterparty responsible for managing data privacy issues.	Structures will likely vary, but will typically have the individual policies owned by the vehicle. Data privacy needs to be managed accordingly.
Pricing	Acquisition pricing based on market bids; valuations are then typically based on a mark-to-model approach. Limited “tertiary” market pricing data is available.	Price is determined based on a negotiation between the deal counterparties, which will typically reference the physical policy markets but will not be explicitly linked to it.	Relatively unknown at this stage, as there are no securitized structures available in the public market.

Accessing the opportunity

Implementation considerations

Policy acquisition

The supply/demand structure of the life settlements market has evolved over time and continues to change as the market develops. The disconnect between the supply of policies (policy owners motivated to sell) and the demand for policies (investors with capital to deploy) means that during certain market conditions there will either be excess supply or excess demand. Over time, as the number of investors and investment managers increases, access to policies will become more important. Understanding this dynamic has led to the development of internal policy origination capabilities by life settlements providers and investors.

Currently policies are acquired via the following channels:

- Purchased from life settlement brokers/providers
- Purchased from life settlement auctions
- Strategic broker/provider relationships
- Internal policy origination

The acquisition of policies is a relatively labor-intensive process that involves a number of parties and is relatively expensive (brokerage and transaction costs). The lengthy process of physical policy acquisition will continue to mean slow growth of pools of life settlement investments (regardless of whether policies are acquired for securitization or for investment funds). The key structural issues are as follows:

- The difficulty in acquiring the critical mass of life settlements necessary for statistically stable cash flows
- Significant insurable interest issues that must be addressed
- High transaction costs inherent in the acquisition of life settlements that potentially make securitization economically infeasible and impact investment returns to physical policy investors

Other issues that impact the emergence of a tertiary market relate to the wide range of opinions on life expectancies of legacy portfolios – such as the absence of industry-accepted valuation techniques, and the divergence of actual results from expected results for many of the historical investment pools – that were significantly impacted by the change to 2008 VBT and other adjustments made by the LE providers.

Accessing the opportunity

Implementation considerations

Transaction costs

Transaction cost can be very significant; fees are typically paid to the investment manager (for managing the portfolio, if the investment is in physical policies), origination process and policy management. Fees can be broken down into the following categories:

- Policy origination
 - Underwriting fee (LE quotes)
 - Actuarial and legal fees
 - Life settlement provider commission
 - Financial adviser/life settlement broker commission
 - Provider origination fees
- Investment manager fees
 - Management and administration fees
 - Performance fee
 - Buy/sell charge
- Policy management
 - Trustee and accounting/audit fees
 - Administrator fee

Life settlement brokers and providers have varying commission structures. While there is no industry-wide standard, there are three different structures brokers may choose from to charge the policy owner:

- Percentage of Face Amount: fee is based on a percentage of the face amount of the insurance policy (fees typically range from 2%–8%).
- Percentage of Offer: fee based on a percentage of the settlement offer (fees typically range from 10%–40%). This structure is designed to motivate the broker to achieve the highest offers possible; however, it does not adjust for the cash surrender value that was built up in the policy.
- Value Created: fee based on the difference between the settlement and the surrender value (fees typically range from 20%–40%). This structure rewards the broker for maximizing the value to the policy owner and does not “double count” the surrender value.

In recent years the life settlements industry has increased transparency of fee disclosures and many industry bodies have pushed to mandatory fee disclosure; for example to be a member of the Institutional Life Markets Association (ILMA), full fee disclosure is required. While there is limited published data on the fees paid to life settlements providers in the origination process, the fees have been observed at well above 5% of face value.

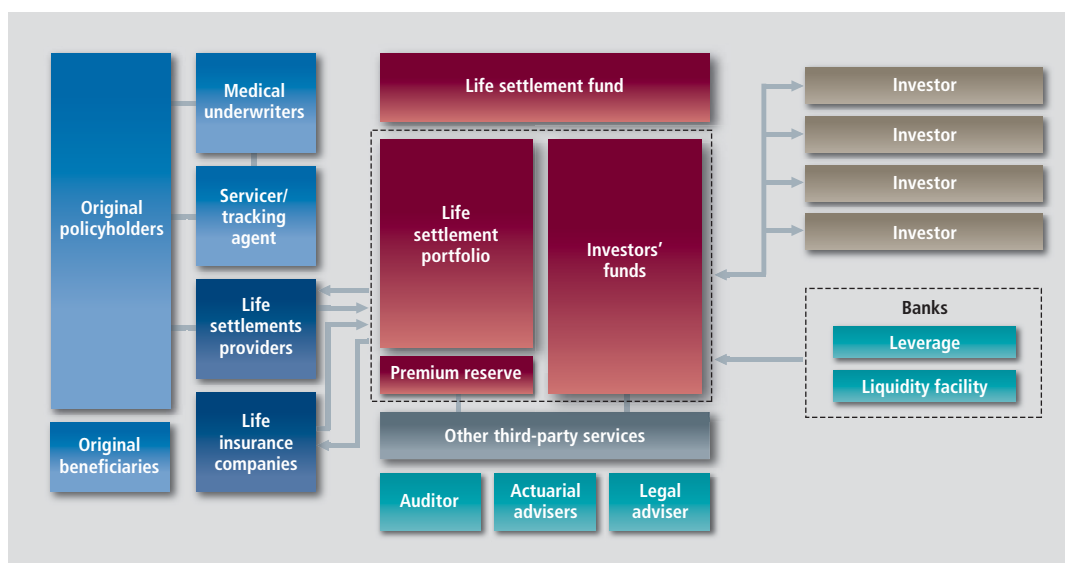
Accessing the opportunity

Implementation considerations

Types of investment structures

Physical investments

An investment into life settlements using physical policies structure as a “fund” will typically follow the format outlined in the diagram below.¹¹ In this type of structure investors have direct ownership of the underlying insurance policies and are exposed to the risks associated with owning a portfolio of life settlements. This type of structure can operate in either closed or open-ended forms.



Synthetic investments

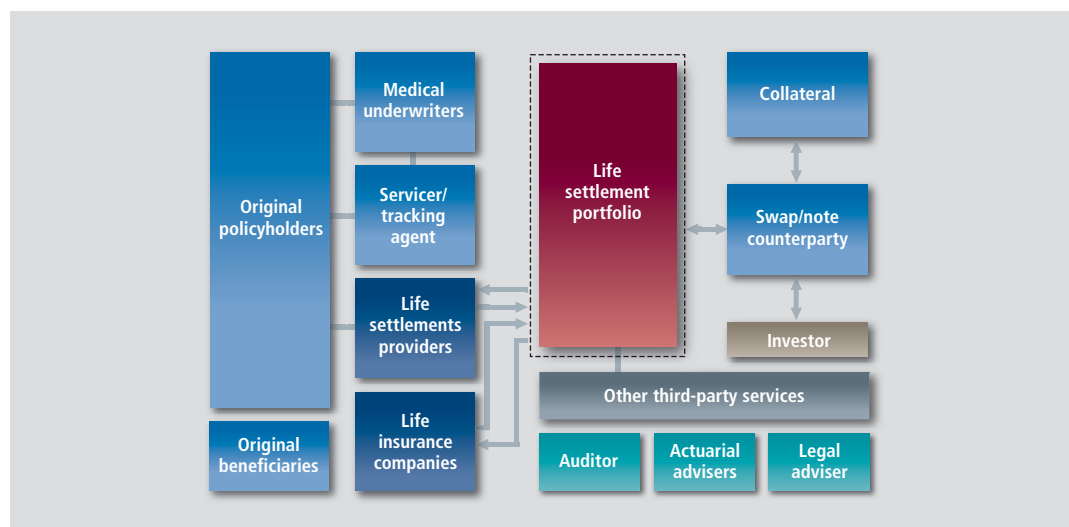
An investment into life settlements using a synthetic portfolio will typically be closed ended, and follow the format outlined in the diagram below. We have defined a synthetic investment as a structure that maintains an exposure to the underlying risk premia inherent in the life settlements asset class (i.e., is linked to or backed by a pool of physical insurance policies – either directly or indirectly). Structures that are designed as longevity indices (such as the Goldman Sachs QxX, which has recently been discontinued) do not represent the core risk premia of this asset class. These structures are often a directional trade based on a desire to hedge a long or short exposure to longevity, whereas an investment into physical or synthetic policies is looking to capture a profit from the policy pricing inefficiency.

Accessing the opportunity

Implementation considerations

Synthetic structures can potentially allow investors to manage certain risk factors – which can largely be customized to the needs of the investor. Risks that can be retained (for a cost) by the swap counterparty include carrier credit risk, minimum cost of insurance, and/or legal/insurable interest. The structure of a synthetic life settlements portfolio will vary significantly by counterparty.

The underlying portfolio will typically involve a complicated mix of physical policies, which may include multiple synthetic structures or owners. The transparency extended to investors will depend on the counterparty. Understanding the relationship structure in the synthetic investment can be complex. Synthetic structures should be assessed with at least the same rigor as an investment in physical policies.



Open-ended vs. closed-ended funds

Closed-ended funds are designed to raise a specified amount of capital, exist for a specified period of time and return capital to investors upon completion of the fund. Investors are often only able to commit capital prior to the commencement of the investment period. All investors are new investors at the establishment of the fund.

Open-ended funds are often structured to continue indefinitely. Investors are often able to withdraw capital after a specified lock-up period. Capital can be invested on an ongoing basis. New investors effectively purchase a share of the existing portfolio.

Pricing of life settlements are subject to pricing fluctuations and there is very limited market data available. Pricing is typically bid/offer based and often driven by market supply and demand conditions.

Accessing the opportunity

Implementation considerations

Portfolio management considerations

When constructing or managing a portfolio of life settlements or synthetic exposure, there are a number of points to consider.

- “J-curve” management: investment portfolios using expected cashflow based on standard mortality tables need to be adjusted for any selection bias in the underlying lives. Standard mortality tables will project a certain number of maturities during the first two to three years; however, experience has shown that portfolios will tend to underperform actual versus expected maturities during the first few years. This is typically due to a selection bias in the life settlements market, where policy owners who view themselves as unhealthy will tend to not participate in the life settlements market.
- Cash flow management: Life settlements asset class has a unique cashflow profile. The early stages of an investment will involve deployment of capital as policies are acquired. Further cash is then needed to pay premiums and keep policies in force. Cash is returned to investors as policies mature. Careful management of cashflow is required to ensure that sufficient cash reserves are maintained.
- Impact of preferred mortality: LE providers have developed models and underwriting methodologies to assess elderly impaired lives, i.e., insured lives with high mortality multipliers. These models have not been calibrated to assess healthy individuals – as such, most lives with no significant impairments will be categorized as standard mortality when in fact the insured could have preferred or super preferred mortality. Given the target policy size for the life settlements market (i.e., policies with face value of \$1 million and more) and the wealth effect (wealthy people tend to be healthier), policies with standard mortality should be carefully evaluated prior to purchase.
- Premium finance/STOLI: While there has been a significant move across the industry to avoid policies with potential insurable interest risk, policies that may have been premium financed (with no/minimal insurable interest risk) and fail to meet the criteria established as key to the overall asset class risk premia, i.e., elderly impaired liquidity motivated policy owners, are harder to detect. Policies of this type should be carefully evaluated and potentially avoided.
- LE is only a probability-weighted estimate of future life expectancy. An LE does not represent a prediction of when the policy will mature, but rather a weighted average of possible future outcomes.
- Future improvements in mortality are not constant or consistent. Improvement rates fluctuate by age and sex and vary from year to year. This volatility can affect the value of an individual policy and/or life settlements portfolio.

Accessing the opportunity

Implementation considerations

- Origination fees are significant and can potentially erode a significant amount of the policy value.
- Mark-to-model valuation techniques vary significantly and limited open market data is available. This makes investments into existing open-ended investment vehicles very complicated.

Taxation of life settlements

Tax implications for investors need to be carefully considered and often require significant oversight from taxation professionals. The tax treatment of an investment in physical policies must be understood prior to any investment; synthetic investments can potentially simplify tax uncertainties in certain jurisdictions, if structured correctly. From a life settlement investor's point of view the main issue stems from withholding tax treatment. Until recently there was very limited guidance from the IRS as to tax treatment of life settlements. On May 1, 2009, the IRS issued a pair of Revenue Rulings addressing the tax treatment of life settlement transactions – this ruling both complicated and simplified the tax implications.

The issues for foreign life settlements investors vary significantly by tax jurisdiction and at a high level can be separated into jurisdictions with a favorable US tax treaty and those without. Implications for jurisdictions with no treaty with the US are now well defined. Tax treaties typically include two provisions that may govern the taxation of life settlements: “Business Profits” and “Other Income.”

Business profits relate to business that is not attributable to a permanent business within the USA – legal opinions vary as to whether life settlements fall under the business profits clause.

A favorable tax treaty can be described as one that, in addition to the business profits clause, also has an “Other Income Provision” that stipulates that only the home jurisdiction (i.e., domicile of the investor) can tax the income – for example, the UK/US treaty is worded this way. An unfavorable “Other Income Provision” would suggest that either or both regions can tax the income – this is the structure of the AUS/US treaty and a number of other Asian countries. **Mercer is not a tax adviser and highly recommends that investors seek tax advice prior to any investment into this asset class.**

Defining an investment strategy

Portfolio risk management considerations

Role within a portfolio: Where does life settlements fit?

Our view is that a life settlements portfolio is not a fixed income substitute and is best placed in the alternative or opportunistic bucket.

It is suitable for clients who:

- Already have an established allocation to alternative/opportunistic investments
- Are able to include life settlements as part of a diversified asset portfolio

It is not suitable for clients who:

- Are in de-risking mode
- Have liquidity issues, as a life settlement strategy is effectively an illiquid investment and will tend to have an average duration of seven to 10+ years
- Do not have an appreciation of the risks and complexity
- Have a strong aversion to deriving income from a financial position on mortality

What is an appropriate level of risk/return hurdle?

Return profile/risk budget allocation

For a very large diversified portfolio of life settlements, the return distribution is more akin to that of a normal distribution; however, given premiums and death benefits will vary by individual for physical life settlements. The distribution will not be perfectly normal. Individual policies will have fat tails and will display a degree of convexity, as the likelihood of a favorable result is greater than an extreme negative result (i.e., the probability of a random early death is higher than that the person will live to be 150 years old).

As with many asset classes, the expected return generated by a portfolio of life settlements is directly linked to the price paid for the policy and its inherent risk. On average, the expected return increases with the level of risk taken. However, risk is not typically defined relative to a specified benchmark (i.e., a tracking error) but on an absolute basis (i.e., the probability of 12-month life expectancy extension).

Given the risk return profile of a life settlements portfolio, the level of risk/return hurdle should be determined in line with the amount of the risk budget allocated to this asset class. A life settlements portfolio can have a variable risk/return and, hence, there is

Defining an investment strategy

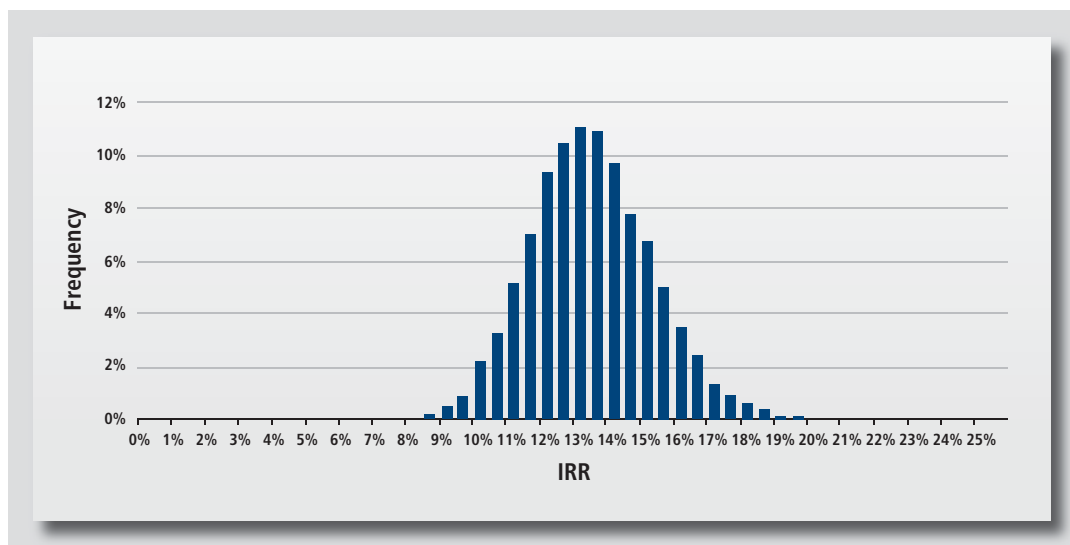
Portfolio risk management considerations

potential to play multiple roles within a diversified investment portfolio. A well-diversified portfolio, which could withstand significant LE extension, could be used to enhance diversification within an absolute return portfolio or within the opportunistic alternatives allocation. A higher-risk portfolio, which could withstand much lower LE extension, could be utilized as an equity diversifier within the growth/return enhancing alternatives (i.e., a similar expected return potential with no correlation to traditional equity markets).

At a total portfolio level, quantifying the marginal risk contribution of a life settlements portfolio is not straightforward. Traditional risk measures are less effective; most of the commonly used risk/efficiency measures are unsuitable – portfolio simulation and stress testing will provide better estimates of downside risk. Risk assessment should be done by analyzing key points along the return distribution and the key drivers of potential negative performance.

Risk analysis

Understanding the simulated return distribution is key to analyzing the risk profile of the portfolio. Investment managers should be able to provide detailed simulation output that corresponds to the expected behavior of the portfolio. Most portfolios can be modeled using Monte Carlo simulation techniques; these return distributions can be incorporated with traditional portfolio modeling. A hypothetical illustration of a portfolio return distribution is shown in the chart below.



Source: Credit Suisse

Each life settlements portfolio will have unique characteristics, and should be modeled accordingly.

General considerations for building a life settlements investment strategy

General considerations that an institutional investor should think of when building exposure to life settlements are:

- Investors in life settlements are exposed to longevity risk. An investor has to be comfortable with exposure to what is very much a developing asset class – the data used to project life expectancy for elderly impaired lives is only starting to approach statistically reliable levels.
- We believe this asset class has potential to deliver attractive diversification characteristics. For investors who have an appreciation of the risks and complexity of the asset class, this truly uncorrelated alternative asset strategy is potentially worth further consideration.
- Given the supply/demand constraints of the market, investors should be patient and apply an opportunistic approach to securing policies/structuring risk exposure – whether synthetic or physical exposure. It is important that this philosophy is built into the governance structure for life settlements investing.
- Specify suitable investment objectives
 - The kind of return-focused investment objective that appears reasonable in the life settlement markets for an investor looking to enhance returns:
“Build/structure a portfolio of life settlements risks with sound diversification across disease/risk categories, life expectancy, mortality multipliers and age distribution; with a target return of [10%–16%] p.a. and an expectation of low correlation of return with other asset classes.”
 - Additional investment strategy consideration should be specified to reflect a risk-based investment objectives such as:
“The expected reduction in IRR from a 12-month life expectancy extension could be capped at [2%–10%].”
 - Other formulations of risk constraints are clearly possible.
“The exposure to a single policy should not breach [2%] of the total fund, and exposure to any disease class should not exceed [20%] of the overall fund.”

Note: The above investment objectives are shown as examples only and should be tailored to fit the risk/return profile of the individual life settlements portfolio.

Defining an investment strategy

Portfolio risk management considerations

Recommended approach

1. Adopt a long-term investment philosophy

- At a portfolio level, the allocation to life settlements should represent a small proportion of the total portfolio.
- The investment strategy should be flexible enough to be adapted as the market evolves over time and continues to mature and develop as an asset class.

2. Develop investment objectives

- Develop a set of investment objectives that reflects the loss aversion of the total portfolio. Portfolio risk characteristics should reflect the risk appetite and risk budget of the alternatives portfolio.

Selecting a life settlements manager

Skills and types of managers

Required skill set and alignment of interest

Manager selection is vital to a successful life settlement investment strategy (regardless of exposure – physical policies or synthetic). Managers who are able to analyze complex deal structures, understand the insurance industry and have experience in insurance underwriting are preferred. Managers need specialist actuarial skills to construct and originate a portfolio of life settlements.

- Key skills:
 - Fundamental insurance industry expertise (underwriters, brokers, actuaries, etc.)
 - Access to specialist skills – actuaries, medical professionals, lawyers, underwriting, risk assessment and insurance/life settlement experts
 - Sophisticated modeling and programming knowledge
 - Proprietary models and access to industry-accepted modeling tools
 - Proficient knowledge and understanding of the history and drivers of the life settlements industry
- The ability to accurately value complex insurance contracts and manage longevity risk exposure is required.
- “Skin in the game” – based on the complex structure of this asset class, an approach that aligns interest, capital invested in the fund or an appropriately structured performance fee.
- A strong balance of alignment between the fees generated via origination (if applicable) and the long-term performance of the investment is absolutely critical.
 - Currently many market participants (brokers and providers) are largely incentivized to acquire/originate policies, and there is no link to long-term returns of these policies.
 - Preferred investment structures will look to balance a mixture of:
 - Performance fees
 - Co-investment
 - Employee ownership

The investment manager universe is very diverse and involves a large number of different types of managers.

Current market conditions

The general trends that are continuing in the life settlements market are worth emphasizing. These include:

- Supply and demand imbalance – the estimated deal flow in 2009 dropped to \$8 billion from \$11.7 billion in 2008, which was an increase from \$5.5 billion in 2005. There were three main drivers to the drop in activity for 2009:
 - Many of the life settlements funds had a difficult time raising capital in 2009, partially because of overall market issues and the after-effects of extensions of life expectancies in late 2008.
 - Attractive investment opportunities existed across a number of asset classes, which presented strong competition for new asset classes such as life settlements.
 - Many pension or superannuation funds and other institutional investors were caught up in the aftermath of the global financial crisis and did not deploy capital into illiquid asset classes until mid-2009.
- Increasing convergence (but slow) of institutional capital markets and life settlements markets. The speed with which capital can be transferred from the institutional market to the life settlements market has increased over the past 10 years. While the makeup of the investors has changed over time (from hedge funds and wealthy private investors to investment banks and investment managers), the overall “quality” and level of sophistication has increased as the market continues to develop.
- Convergence in the LE quotes provided by the main LE providers, as a result of a “critical mass” of data used to construct the current mortality tables, could lead to a reduction in volatility for the asset class (due to the data now available, an LE extension of similar magnitude to when 2008 VBT was introduced is less likely). This could lead to an overall reduction in risk premium; however, this has not been reflected in the returns to date.
- Increased “spotlight” and continuing investor/consumer education. Significant resources are being dedicated to investor education and further development of life settlements as a mainstream asset class.
- Regulatory scrutiny will continue to increase; this may serve to increasingly relax investors considering allocations to the new asset class.

Market trends and future developments in the life settlements asset class

Market predictions for 2010 and beyond

Overall, it is expected that the life settlements market will rebound during 2010 and likely produce volumes closer to 2008 levels. There are a number of predictions that market participants continue to support. These include the following:

- Capital-raising activity among dedicated funds will continue to increase.
- Asset managers will continue to establish life settlement/longevity funds as their clients seek low correlation assets.
- Pension/superannuation funds and other institutional investors will further deploy capital, looking for investment strategies offering low correlation to traditional asset classes.
- Large-scale life settlement securitization will fail to develop during 2010, but will bring increased attention to the industry.
- The increased buying activity will continue to focus on quality policies rather than broadening the average life settlement provider's buying parameters to include higher-risk policies. As capital comes into the market and buying competition increases, buyers will lower target IRR's rather than chasing 20%+ IRR's with higher-risk, less competitive policies.
- Growing statutory and regulatory governance of life settlements will push many life settlement brokers and life settlement providers out of business or force them to conform.
- The appeal of premium financed policies will continue to erode in the broader market as investors stay risk averse.
- A select few buyers will seize the opportunity to acquire the out-of-favor policies for pennies on the dollar.
- Intermediary commissions will shrink due to increased competition, transparency and electronic platforms.

Conclusions

Is there an investment opportunity in life settlements?

There is an underlying risk premia that investors in the life settlements asset class can capture. This risk premia can be described in two separate components: a structural pricing inefficiency and a liquidity premia. Investors in the life settlements market should be able to benefit from the structural pricing inefficiency by purchasing policies with low surrender values for individuals with impaired mortality profiles. The opportunity is effectively an arbitrage against the insurance company. Structurally, the risk premia should remain over the medium term; however, short-term imbalances in supply and demand could cause significant fluctuations in the level of the risk premia available to the investor. The risk premia available in this alternative asset class has potential to offer an attractive return stream that is not correlated with the traditional capital markets.

What are the key things investors need to know about the asset class?

It is important that investors in life settlements be cognizant that they are bearing longevity risk. Understanding the intricacies of managing exposure to longevity risk is critical to a successful investment in this asset class. As the market is relatively new and continuing to develop as an asset class, which means dynamics continue to evolve (increased regulation, STOLI, disintermediation), investors need to establish relationships with partners (investment managers, investment banks, life settlements providers, life expectancy providers, insurance and actuarial experts) who can assist in overcoming the significant information asymmetries that currently exist in the market.

What could go wrong with an investment in life settlements?

The life settlements asset class is new and relatively untested from a mainstream institutional investor context. While data and asset class history continue to accrue, the risks are perceived to be high. Investors need to be comfortable that the returns available are sufficient compensation for the risk involved in being an early adopter or investor in life settlements.

Mercer believes there are close parallels between a life settlement investment strategy and successful implementation strategies for other areas of alternative investments, such as private equity or hedge funds. As always, for example, well-considered implementation is critical, and access to high-quality managers and careful due diligence are of paramount importance.

Who is investment in life settlements appropriate for?

Mercer believes this asset class has potential to deliver attractive diversification characteristics and has the potential to offer an attractive return stream that is not correlated with the traditional capital markets. However, this asset class is potentially worth consideration only by investors who have an appreciation of its risks and complexity.

Conclusions

Life settlements represent a potential investment opportunity for pension/superannuation funds (and other investors with longevity exposure) due to the availability of an alternative risk premia that is not correlated with capital markets, but **not on the basis of an investment that is expected to hedge exposure to longevity risk.**

Is now the right time to invest?

One of the fallouts of the global financial crisis was the realization that many of the more traditional alternative asset classes failed to provide adequate portfolio diversification. We believe that investors should continue to investigate the use of investments such as life settlements to gain exposure to real alternative risk premia.

About the author



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Appendix A. Glossary

Cohort – a group of people sharing a common temporal demographic experience who are observed through time. For example, smoking males aged 80 to 85 is a commonly used cohort.

Contestability period – within most US states, for the first two years of an insurance policy, the insurance company has the right to investigate a death claim for fraud and misrepresentation in the policy application. The contestability period allows the insurance company to deny claims that are fraudulent. Generally, insurance companies will investigate death claims within the first two years. The burden of proof for denying a claim is on the insurance company. Most insurance policies will not pay if the insured commits suicide within the first two years.

Face value – the amount of insurance listed in the policy and applied for by the purchaser. The face value is the same as the death benefit. Face values can be any amount subject to certain specific limitations set forth by the insurance company.

HIPAA – an acronym for the Health Insurance Portability and Accountability Act of 1996. The HIPAA Privacy Rule was established to address the uses and disclosures of protected health information by organizations. This rule ensures that individuals' health information is properly protected, while allowing this information to be shared with others to provide and promote high-quality health care. This rule establishes restrictions for the disclosure of an individual's protected health information and requires that this information only be shared if the subject of the information authorizes it.

Insurable interest – when a policy is procured, the original owner must have an interest in the continued life of the insured, engendered by love and affection (e.g., family member or spouse) or a reasonable expectation to profit from the continued life of the insured (e.g., key employee). In the United States, once a policy is purchased, the policy owner is free to designate anyone he or she wishes as beneficiary. Policy ownership can be transferred after the policy has been issued; insurable interest is not retested.

Insured – the person covered under the policy being considered for a life settlement.

Life expectancy – or LE is an estimate made by actuaries as to the expected duration that an individual is likely to live. LE is only a probability weighted estimate of future life expectancy. LE does not represent a prediction of when the policy will mature but rather a weighted average of possible future outcomes. Assessments are generally made based upon demographic statistics as well as a review of the individual's medical records.

Life expectancy providers – companies that specialize in providing life expectancy estimates so that a life settlement provider can calculate a bid price.

Life settlement – a life settlement is a transaction in which an existing life insurance policy that is no longer needed or is in danger of lapsing is offered for sale to investors in the secondary market. Individuals over the age of 70 with moderate health concerns who own such insurance might find that their policy is worth as much as 25% of the current death benefit. The financial enterprises that purchase life settlements will maintain such policies until the insured's death.

Life settlement providers – a company whose primary business activity involves purchasing life insurance policies through life settlement transactions. Life settlement providers may purchase policies for their own account or on behalf of financing entity clients.

Maturity – an insured person “matures” when they die. For the purposes of life settlements a life policy “matures” when it pays out the death claim.

Mortality multiplier – a measure of the degree of adjustment made to the base mortality table. A mortality multiplier of 1 (or 100%) represents mortality in line with the mortality table. A mortality multiplier less than one denotes preferred mortality and greater than one denotes impaired mortality status or mortality greater than the mortality table.

Mortality table – a statistical listing of anticipated death rates for various age groupings, normally expressed as deaths per thousand. 2008 VBT is an example of a mortality table that is commonly used in the life settlements industry.

Policy owner – the person or entity that owns the policy being considered for a life settlement and has the authority to sell the policy or designate beneficiaries.

STOLI – stranger-originated life insurance, which is a life insurance policy that was not originated for the benefit of the insured, their family or other appropriately related party but for an investor. With a STOLI policy a third party (with no relationship to the insured person) typically initiates the purchase of the policy by paying the premiums. In effect, STOLI could be seen as wagering on human life.

Universal life – a flexible-premium whole life insurance policy that allows the policyholder to change the death benefit and vary the amount or timing of premium payments. There are a number of variations of universal life contracts. The basic premise is that premiums accumulate at a stated interest rate. There are a series of deductions from this account, including the “cost of insurance,” expenses and sales loads. Universal life policies typically have an end date of around ages 105 to 110. This date is often extendable.

VBT – the valuation basic table (VBT) is a set of mortality tables that are used for individual life insurance products.

Viatical – the sale of a life insurance policy to a third party by a terminally ill person, typically who has a life expectancy that is less than 24 months.

Appendix B. Suggested readings

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