Refining Core-Satellite Investing
Ronald J. Surz, PPCA Inc. ................................................................. Page 8
Traditional core-satellite investing uses a version of core that overlaps the satellite managers, diluting their decisions. By contrast, a centric core, that is in between value and growth, complements the satellites and delivers the same diversification as traditional core, with about one-fourth the allocation.

An Advanced Methodology for Fund Rating
Noël Amenc, EDHEC Graduate School of Business and Véronique Le Sourd, EDHEC Risk Institute. ............................................. Page 16
This article is a follow-up to an article on fund rating systems published in The Journal of Performance Measurement. That article provided a comparative analysis of a selection of leading rating systems, including Standard & Poor’s star rating, the Morningstar rating, and the Lipper Leader rating; it also addressed the properties required of an optimal rating system. This article is dedicated to the EuroPerformance-EDHEC style rating, a European rating system introduced in 2005. This rating was developed using the state-of-the-art technology in portfolio risk and performance measurement and intends to bring new insights into the area of fund rating.

Life Settlements: Valuation and Performance Reporting for an Emerging Asset Class
Darwin M. Bayston, CFA, AVS Underwriting LLC, Douglas R. Lempereur, CFA, CIPM, Franklin Templeton and Anthony Pecore, Franklin Advisers, Inc. ........................................... Page 32
The life settlements industry is an emerging asset class which, like others before it, is in the early stages of developing best industry practices specific to its unique characteristics. Best practices are needed for all aspects of a life settlement transaction: from initiation, to valuation/pricing, to transfer of ownership to an investor, to the measurement and reporting of performance, including providing appropriate disclosures.

The Characteristics of Factor Portfolios
Jose Menchero, Ph.D., CFA, MSCI ......................................................... Page 52
A key to deeper understanding of factor models lies in the concept of factor-mimicking portfolios, whose returns exactly replicate the payoffs to the factors. Factor-mimicking portfolios can be used to generate real-time factor returns and in principle could serve as the basis for exchange traded funds for capturing passive alpha or hedging risk. Simple factor portfolios are obtained by considering each factor in isolation, whereas pure factor portfolios are constructed by treating all factors jointly. In this paper, we derive the holdings of simple factor portfolios for the World factor, as well as for countries, industries, and styles.

Tailoring Manager Allocation to Market Conditions Using Alpha Optimization: Part 1
Eric A. Stubbs, Ph.D., RBC Wealth Management and Enrique Jaen, Ph.D., RBC Wealth Management ........................................ Page 63
The assessment of a manager’s performance against his/her benchmark and peers is a mainstay of manager search and selection. Such assessments assume that a manager’s performance history is informative as to the probability of future outperformance. However, a wealth of analysis has shown that the autocorrelation of manager returns is generally very low across styles and time periods. In this paper, we extend alpha optimization into a manager selection framework.
With offices in the New York City and Los Angeles metropolitan areas, The Spaulding Group, Inc is the leader in investment performance measurement products and services. TSG offers consulting services; publishes The Journal of Performance Measurement, a quarterly publication we launched in 1996; and hosts the Performance Measurement Forum. The firm also sponsors the annual Performance Measurement, Attribution and Risk (PMAR) conference and PMAR Europe which have come to be recognized as the leading performance measurement conferences in the industry. TSG’s Institute of Performance Measurement offers performance measurement training, including a fundamentals course on performance measurement, a course on performance attribution, and two CIPM exam preparation courses. Additional details about TSG’s services may be found on our website www.SpauldingGrp.com.
Life Settlements: Valuation and Performance Reporting for an Emerging Asset Class

The life settlements industry is an emerging asset class which, like others before it, is in the early stages of developing best industry practices specific to its unique characteristics. Best practices are needed for all aspects of a life settlement transaction: from initiation, to valuation/pricing, to transfer of ownership to an investor, to the measurement and reporting of performance, including providing appropriate disclosures. Best practices are not something that are easily developed, but they are certainly needed to improve transparency, encourage full disclosure and promote a higher standard of ethical behavior on the part of all participants. This paper seeks to delve into this relatively new asset class and address how market participants should deal with issues similar to what other new asset classes have had to face. A set of proposed Best Practices for Reporting Life Settlements Performance appears at the end of the paper, which is offered in the same spirit as the Global Investment Performance Standards that have been developed by the CFA Institute and are accepted worldwide for other asset classes (equities, fixed income, real estate and private equity).

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LIFE SETTLEMENTS, AN EMERGING ASSET
CLASS

Life Insurance

A life insurance policy is a financial contract between
an individual (insured) and a life insurance company. The policy owner agrees to pay periodic payments (pre-
miums) in exchange for the insurance company paying
a death benefit (the face value of the policy) at the death
of the insured.

Life insurance is a core part of the American financial
landscape. The first life insurance company in the U.S.
was established in 1759. By 1900, life insurance had
become an important consideration as protection from
the potential financial loss from the early or untimely
death of the insured. Today, life insurance is one of the
most important financial and risk investments for indi-
viduals, families, and businesses.

Life insurance has transformed over time into a complex
array of financial products that offer various combina-
tions of death benefit and investment savings. Life in-
surance competes with a broad range of savings and
wealth accumulation alternatives, including mutual
funds, equity and fixed income securities, and real es-
tate. The original purpose, that life insurance is prima-
arily used as protection from the financial risks of death,
remains intact and it continues to maintain its tax privi-
leged status given that the death benefit is tax-free to the
beneficiary. The death benefit becomes taxable only if
the policy is sold on the secondary life settlement market
to a third party prior to the death of the original insured.

As of the end of 2008, $10.3 trillion (face value) of in-
dividual life insurance was in force comprising 156 mil-
ion policies issued by 976 life insurance companies. Dur-
ing 2008 10.2 million new policies were issued, rep-
resenting $1.9 trillion of face value. Also during 2008,
$37.9 billion in payments were made on 2.46 million
policies to beneficiaries and $57.3 billion was paid on
individual policies surrendered.1

LIMRA International reports there were 7.6 million
households with a head over age 65 that had individual
life insurance at the end of 2004 (the most recent year
available for this statistic). The death benefit of the life
policies held by this segment of the total policy holder
population (representing the target market for life set-
tlements) was $1.46 trillion.2

Life Insurance as Private Property

In 1911, the United States Supreme Court issued a land-
mark decision relative to a life insurance policy. Justice
Holmes wrote in the Court Opinion, “…So far as rea-
sonable safety permits, it is desirable to give to life poli-
cies the ordinary characteristics of property. …To deny
the right to sell except to persons having such an interest
in the life of the insured (emphasis added) is to diminish
appreciably the value of the contract in the owner’s
hands.”3

Whereas public policy and regulations provide that an
insurable interest must be present at the time a life in-
surance policy is issued, the Supreme Court decision
gave an insured / policy owner the subsequent right to
sell their policy to a third party even if no insurable in-
terest exists with that third party, effectively creating a
life settlement.

A Life Settlement

A life settlement is the sale of a life insurance policy to
a third party for a value in excess of the policy’s cash
surrender value, but less than its face value (death ben-
efit). A policy owner receives a cash payment, while the
purchaser assumes all future premium payments and re-
ceives the death benefit at the death of the insured.

There are many reasons a life policy owner may con-
selling his or her insurance policy:

• The original purpose for which the policy was purchased no longer exists.

• Premiums become onerous and funds are needed for other purposes such as long-term health care, retirement or other financial needs.

• Estate planning needs may have changed.

• Beneficiary circumstances may have changed by divorce, death, or business-related reasons.

• An alternative policy construct may better suit the specific needs of the insured or result in a lesser financial burden.

• An insured may want to donate a life policy to a charitable organization, who would then want to sell the policy for its financial value.

Life settlements are not available for everyone. To qualify for a life settlement, a policy must be able to be sold for a price sufficient to pay future premiums, servicing and management expenses, and provide a specified return to the investor. One of the most important considerations in the price of a life settlement is the expected time until the death benefit will be paid. It determines how much will have to be paid in future premiums as well as how long until the investor’s funds will be paid back in the form of the death benefit.

The typical profile of an insured whose policy is being considered for sale includes:

• A policy with a face value greater than $250,000 (could be as low as $100,000).

• A male or female insured over the age of 70, with some health impairments.

• A policy with annual premiums less than 10% of face value.

• An insured whose life expectancy is less than 12 years.

For example, the fair value of a $250,000 face value policy for a 70 year old male with annual premiums equal to 4% of face value, and whose investor requires a 12% annual return would be as follows for various health impairment levels, as determined by a reputable medical underwriter:

<table>
<thead>
<tr>
<th>Impairment Level</th>
<th>Fair Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without impairments</td>
<td>No Value</td>
</tr>
<tr>
<td>Moderate impairments</td>
<td>$11,600</td>
</tr>
<tr>
<td>Severe impairments</td>
<td>$42,000</td>
</tr>
</tbody>
</table>

Note: No transaction costs are assumed in the above valuations.

It is important to distinguish between a life settlement (for seniors and impaired individuals) and a viatical settlement. A viatical settlement is a policy whose insured is expected to live less than 2 years. In the late 1980’s and early 1990’s, insureds with HIV/AIDS who were expected to live less than 2 years sold their policies as viatical settlements. Some insurance carriers allow for some payment if the insured is expected to live less than 2 years and some states mandate minimum payments for viatical policies. In contrast to normal life settlements, the proceeds of a viatical settlement are tax-free to the seller.

A large part of the viatical market disappeared as improved medicines and treatments extended the expected life of HIV/AIDS patients by many years and beyond a point where the policies had a value.

Life settlements possess characteristics that make them an attractive investment:

• Attractive investment returns compared to other long duration investments with similar risk.

• Favorable credit quality for policies issued by highly rated life insurance companies.

• Back-stop support of life insurance policies by states who guarantee some payment amount (typically $300,000) in case of insurance company failure.

• Life settlement returns that are relatively uncorrelated to other investment asset classes.

• Demographics that favor continuing supply of policies as millions of baby-boomers retire and search
Figure 1: Annual Life Settlement Volume

for medical, retirement, and other financial resources.

- Ability to identify, quantify, and prudently manage the variable components of valuing a life settlement given careful analysis and judgment.

A detailed discussion of the valuation of a life settlement is addressed later in this paper. Suffice it to say, that life expectancy (the point at which the investment will mature) is the most important consideration when pricing a life settlement and will have the greatest impact upon the return from a portfolio of life policies.

**Life Settlement Market**

While the concept of life settlements did not flourish until the 1990’s, the market has developed into a multi-billion dollar industry. The industry grew from an annual volume of approximately $2 billion in 2002 to approaching $12 billion in 2008, with a moderate decline expected in 2009, according to the 2009 Conning Report and InvestmentNews.5

Despite the expected decline in 2009, the Conning Report also suggests that the annual volume of life settlement transactions for the ten year period ended 2017 will average approximately $21 billion.

An earlier 2006 Conning Report estimated that $188 billion of in force life insurance may be attractive as life settlements.6 A Sanford Bernstein report issued in 2005 estimates that the life settlement market “...will grow more than ten-fold to $160 billion over the next several years.”7

With the senior population expected to continue to grow over the next several years as the baby boomer generation ages, demographics suggest there is and will continue to be a large supply of life insurance policies available as life settlements. In addition, retirees will need significant additional financial resources to provide for retirement and health care needs.

Of great significance is the general lack of awareness by insureds that a life insurance policy may have financial value prior to their death. Most policyholders are aware of cash surrender values, but there is a general perception that, other than cash values, a life policy only has value when the insured dies and the death benefit is paid.

**Regulatory Framework**

A single life settlement transaction is not considered a security, unless the sale is made as fragmented shares to individual investors. Life settlements, therefore, are regulated by state insurance regulations. The number of states that regulate life settlements is continuously increasing. As of December 31, 2009, 39 states have enacted life settlement regulations.8

There have been instances where federal regulatory authorities have brought action in life settlement cases. In
2006, the principals of Mutual Benefits Corporation pleaded guilty to securities laws violations, including the sale of fragmented shares to individual investors, falsifying life expectancies, and other serious violations. The action against Mutual Benefits accelerated state regulations of all aspects of life settlement transactions.

Two important legal and regulatory factors are key to a life settlement transaction. First, an insurable interest must exist at the time a life insurance policy is issued. A policy owner / beneficiary would have an insurable interest if they would suffer a financial loss from the death of the insured, including spouses, dependents and business relationships. An insurable interest, however, is not necessary for the sale of a life insurance policy in the secondary market.

Second, insurance policies by regulation typically have a 2-year contestability period, after which the death benefit must be paid upon the death of the insured (with the exception of fraud). It is considered a high risk if a life settlement policy is purchased before the end of the contestability period, as the policy may be rescinded and the investment lost.

The National Association of Insurance Commissioners (NAIC) and the National Conference of Insurance Legislators (NCOIL) are two organizations that have been responsible for providing the framework for most state regulation of life settlements. NAIC is comprised of state commissioners who are responsible for the regulation of state insurance laws. NCOIL is an organization comprised of state legislators responsible for formulating and passing state insurance laws.

The NCOIL adopted a Life Settlements Model Act in 2000, outlining good business practices for the emerging industry. A number of revisions and amendments have been made to the NCOIL Act since that time. The NAIC adopted the Viatical Settlements Model Act in 2001. The Life Settlements Model Act of 2000 defined good business practices such as licensing, prohibited practices, advertising guidelines, fraud prevention and unfair trade practices. Major revisions and amendments have been made to the Model Act of 2000 in 2004 and 2007. Both NCOIL and NAIC continuously examine their respective Acts to strengthen consumer protection and awareness and to improve the prevention of abuses (such as were evident in the Mutual Benefits case cited earlier) in the conduct of life settlement transactions.

Recently, the life settlements market has started to attract the attention of government regulators. In July 2010, the United States Governmental Accountability Office (GAO) and the Securities and Exchange Commission (SEC) issued reports that indicated that life settlements...
provide a benefit to policyholders. The reports also discusses the benefits and risks of life settlements and expressed some concerns about the fragmented and inconsistent regulatory environment.

**Life Settlement Participants**

The core participants of a life settlement transaction include the policy owner/seller who is selling the policy for value and the investor, who is purchasing the policy to receive a return on investment. Numerous intermediaries function within the settlement transaction.

Figure 2 illustrates, in simple form, the participants in a life settlement transaction.

The policy owner may be the original insured or may be different than the original insured if the policy has been passed to a trust or to a third party as a result of a previous transaction.

Life settlement brokers (who may also be life insurance producers/agents) have a fiduciary responsibility to the policy holder and provide the link between the insured (policy owner) and provider. It is the role of the broker/producer to provide the necessary documentation to effect a successful transaction and obtain the best price available for the seller of the policy. Life settlement brokers are required by regulation to be registered under state life settlement regulations, except in jurisdictions where there are no regulations.

Life settlement providers have become a required intermediary or “agent” in life settlement transactions in those states that regulate life settlements and may exist also in states that are not regulated. These providers bridge the gap between investors, for whom they serve, and brokers. Providers assemble all documentation to consummate the transfer of ownership from the seller of the policy to the investor. Providers also obtain life expectancy reports and play a role in the pricing of the life settlement policy.

In some cases, providers act as principal, purchasing policies for their own account with the intent to re-sell the policies to investors. There is some tendency to collapse the role of life settlement brokers and providers to increase market efficiency and reduce transaction costs.

A combined broker/provider can cause potential conflict in whose interests are represented, the seller of the policy or the investor.

Other intermediaries include life expectancy (or medical) underwriters (who provide life expectancy statistics), custodians, and death tracking firms (which collect actual mortality experience for comparison against what was expected).

**RISKS AND RETURNS ASSOCIATED WITH LIFE SETTLEMENTS**

The purchase price of a life settlement is the net present value of the death benefit, less the net present value of the future premium payments; in effect the net present value of all the expected cash flows. The annual return is a function of the pattern of the cash flows over the life of the investment.

Valuations of life settlements have progressed over the past ten years from simplistic present value analysis to Monte Carlo simulation techniques. Returns, on the other hand, are reported in an inconsistent manner and lack a common standard of consistent and fully disclosed information.

**Valuation**

The value of a life settlement policy is the net present value of the expected policy cash flows. The policy cash flows include the periodic premium payments while the insured is alive and the receipt of the death benefit when the insured dies (at the maturity of the policy). The net present value of the expected cash flows is the summation of each expected cash flow using a single discount rate $r$.

The expected cash flow in a given year is the probability weighted value of the death benefit less the probability weighted value of the policy premiums. As an example, the expected value of the premium payment is the probability that the insured is alive at the beginning of the 5th year times the premium due at the beginning of the fifth year. Similarly, the expected value of the death benefit in the 5th year is the probability the insured dies during year 5 times the death benefit that would be paid in that year.
The key drivers of a policy value are:

1. life expectancy (mortality) of the insured
2. expected death benefit payable at the maturity of the policy
3. expected future premiums required to keep the policy in force
4. investor’s required discount rate (IRR)

The formula for fair value may be expressed as follows:

\[
IFV = F \cdot (e^{-rt}) - \sum_{t=0}^{T} prem_t \cdot e^{-rt}
\]

\( T \) represents the time in years to maturity of the policy (when the insured dies)

\( \lceil T \rceil \) represents the greatest integer less than or equal to \( T \).

\( F \) is the face value of the policy,

\( r \) is the required discount rate or IRR, and

\( prem_t \) for \( t = 0 \) to \( T \) represents the stream of premium payments for the policy.

It is assumed that the premiums are paid on the first day of each year.

The death benefit and IRR are known and defined factors. Premiums are set and provided as illustrations by the issuing carrier. Life expectancy is the variable of greatest uncertainty and volatility.

Premiums are expressed as a level premium or minimum cost of insurance. A policy illustration shows how a policy account grows and depletes over time as the level premium is paid annually. In its simplest form, level premium is a constant % of the policy face value until either the insured matures (passes away) or the policy expires, which may occur at age 95, 100, of even older (age 100 is typical). Level premium X is set by the issuing insurance carrier and exceeds the true cost of insurance in early years. The excess amount allows the policy to build a cash value which is drawn down in later years when the level premium X is less than the true cost of insurance.

Minimum cost of insurance (MCOI) is the true cost of insurance for one year based on the chance an insured dies in that year, plus fees. Universal policies allow the policy owner to pay only the MCOI in any given year. Part of the valuation process is determining the minimum cost of insurance to keep the policy in force, derived typically from a policy illustration provided by the issuing carrier.

Life expectancy (LE) is the most significant variable in the valuation of a life settlement. LEs are also the most misunderstood concept in valuation methods. Two components comprise an LE. The first is a % mortality rating which is a statistical definition of the health status of the insured. The second is the LE expressed in either months or years of expected remaining life.

In the early development of the life settlement industry, valuation methods (based on deterministic models) used the LE as the point in time when the policy was expected to have matured. The value was determined by discounting the expected death benefits and subtracting the expected premium payments to the date of the LE. These methods were significantly flawed as the LE represented the median point of the remaining expected life. Experience demonstrated that people lived longer than the LE causing significantly greater premiums to be paid and a delay in receiving the death benefit. Returns were severely impacted.

A more accurate and sophisticated method is a probabilistic approach. For this approach, an LE represents the mortality rating reference point on a mortality table that provides the probability distribution that an insured dies in a given year, based on a set of population cohorts of similar characteristics, i.e., age, gender and smoker status. With a known cohort, an actuarial study can show that of say 10,000 lives, 9700 survived until the next year and 300 matured, indicating a 3% mortality rate. This mortality rate is the probability of the insured of the same cohort passing in a year. The collection of these rates is known as an actuarial table. The most widely referenced basic risk table used by the life settlement industry is from the Society of Actuaries and is
Medical underwriters play a critical role in the life settlement industry. They review each insured’s medical records to identify medical impairments which increase or decrease the insured’s mortality rate relative to the base table. To take an example, if an insured is deemed to be of standard health, they are assigned a mortality multiplier of 1 (or 100%). Multiplying the base table by 1 implies the insured will face the same mortality rates as the base table. A mortality multiplier of 2 (or 200%) implies the insured will face mortality rates twice that of the base table. With a multiplier or relative risk number and base table in hand, quantities such as the life expectancy and cumulative probabilities of survival can be calculated.

An example comparing the value of a life settlement for a male, age 75, with mortality ratings (or multipliers, designated as M in the table below) of 100%, 200% or 300% using the probabilistic method is as follows (assuming an expected IRR of 11 percent):

IRR = 11%
Policy Face Value $500,000
Premiums – level (per year) $15,000
Policy Value -> M = 100% $19,750
Policy Value -> M = 200% $80,567
Policy Value -> M = 300% $119,246

Two large sources of error in the medical underwriter process arise from either choosing an inappropriate base table, or lacking the skill to correctly identify the correct health impairments (i.e., relative risk). The only way to judge the skill of the medical underwriter is to perform an actuarial study of all the lives underwritten and compare the actual mortality rate to the expected mortality rates. From this study, one can identify finer and finer cohorts based not only on age and gender, but also disease category and assigned relative risk. Of course, the finer the cohort definition and the lower the sample size, the lower the confidence a study can provide. In the early 2000’s, no medical underwriter had enough lives underwritten to judge their skill. Ten years later, several underwriters have over 100,000 lives and many thousands of observed maturities.

With so many lives, one could abandon the process of applying the relative risk to a base table, but rather use the experience of a cohort drawn directly from 100,000 underwritten lives. Valuation models in other markets have evolved in similar ways. In the earliest days of the mortgage market, investors could only guess at the prepay behavior of borrowers. Over time, real data became

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Figure 3: The forward value of a policy with no initial cash surrender value with a purchase price of $38,000, assuming 12% constant IRR, policy contract maturity at age 101, paying MCOI and assuming a flat multiplier of 200% of the VBT2008 Male Non-Smoker Table.
prevalent in the markets and models were subject to a higher test: does the model fit past data?

A discussion of the appropriate discount rate (IRR) in the context of highly illiquid life settlement investments must begin with the reminder that assets are purchased with dollars, not IRR’s. While investors may deduce an IRR to judge relative value between similar assets and private expectations, comparing IRR’s from different investors is challenging. For the same price and policy details, differing opinions in underlying mortality rate can result in wildly differing implied IRR’s. Only with an industry accepted expectation as to life expectancy can IRR’s between investors be compared. Nevertheless, for an expected cash flow and known price, an IRR can always be deduced. Only time will tell whether the fund’s realized cash flow are in line with expected IRR.

A final point about the value of a life settlement policy is the accretion factor. A policy accretes by some amount each year as the policy is one year closer to paying the death benefit and there is one year less of premiums that will need to be paid. Accretion can be illustrated with the following graph.

The policy accretes to 60% of face value, but then loses value as the MCOI begins to increase and the chance that the contract reaches the age limit (typically 100) prior to the passing of the insured figures more into the future cash flows and the valuation. One feature of this pricing approach is that the policy value remains less than the policy face, which must be true for a negative carry asset, discounted using a positive discount rate. Surprisingly, some practitioners have proposed and patented valuation models which predict values in excess of the face value.

Risks

Life settlement investments are generally considered to include less risk than other asset classes such as equities, corporate bonds, or real estate. The risks are very different than for these other investments and relate to either the delay or loss of receiving the final maturity value of the policy.

Key risk factors include:

1. Misestimation of LEs – the risk that LE underwriters systematically underestimate LEs.

2. Longevity risk – the risk that insureds live longer than the LEs estimated.

3. Origination risk – risk of inadequate safeguards that would prevent investors from receiving death benefits when the insured dies.

4. Credit risk – risk of default of death benefit payment by life insurance carriers.

5. Servicer risk – risk of non-performance of servicers including non-payment of premiums, tracking deaths, and collection of death benefits, resulting in loss of (or late payment of) benefits to the investor.

6. Liquidity risk – life settlements are illiquid instruments for which there is no organized market to the same degree as for equities or fixed income.

The risks of a single life settlement policy are significant. Given the probability pattern of death over the remaining life of a single insured and as illustrated below,
there is a 1% probability the insured will die at age 76. In addition, there is also a 1% probability the insured will die at age 100. The distribution of probabilities of death at any given age is illustrated as follows, showing that the probability of death peaks at approximately 6.7% at age 89-90.

The risks of a single policy can be mitigated by combining a portfolio of policies. An example of how a large number of policies impact the risk is illustrated below.

Figure 5 shows the expected probability of a policy on a 75 year old non-smoking male to mature in a given year. With one life, the chart shows, once again, about a 6.7% chance of the policy maturing between age 89 and 90 (same as in Figure 4). With 500 lives for the same cohort, the 2 standard deviation band (comprising 95% of the possible outcomes) around the 6.7% probability (34 lives, or 6.7% times 500) equates to a range of 3.8% (19 lives) to 9.6% (48 lives). With 1000 lives, the band tightens to a range of 5.1% (51 lives) to 8.2% (82 lives) maturing between age 89 and 90. As the number of lives increase, the variability of the realized mortality decreases reducing the probability of an unexpected outcome. This is, of course, an expression of the law of large numbers.

Performance

The reporting of performance has been erratic and inconsistent throughout the life settlement industry. Some investors determine the performance based on the “assumed” increase in value over the life of the portfolio and adjust for death benefits and premiums at the time a policy matures.

A life settlement is a negative carry asset. Performance is a function of the aggregate net cash flows for each period and the value used at the end of each valuation period. The value for each period should accrete by some amount as a result of being one year closer to maturity.

An example of the appropriate way returns should be calculated is as follows: Assume a $500,000 policy is purchased for $36,063, annual premiums are paid at the beginning of each year (paying for policy coverage for...
the following year), and the policy is sold for the forward value at the end of the 9th year equal to $175,971.70 as indicated in Figure 6 above. No premium is indicated for year 9 since the premium paid at the end of year 8 covers year 9 and the policy is valued on December 31 before the premium for the 10th year is due. With these assumptions in mind, the cash flows for such a single policy transaction would be as follows.

The IRR of resulting cash flow for this transaction is -4% per year. Now assume the individual dies December 31st of the 9th year (again before the premium is due for the 10th year) and proceeds of $500,000 are received at the end of the 9th year.

The IRR of resulting cash flow for this transaction is 15% per year.

Unless a policy is sold for more than the carrying value based on the IRR at purchase, the performance for a sin-
gle policy will be negative unless a maturity occurs.

The IRR of a portfolio is constructed by aggregating the cash flows for each policy. The portfolio illustrated in Figure 8 is made up of four policies. Each policy is valued assuming a non-smoking male with 200% mortality. Each policy contains the same MCOI schedule, though the premiums paid are a function of the age of the insureds. Each policy is assumed to have no cash value at purchase. Policies 1 and 2 are purchased at the beginning of the first year (labeled as year 0 in the table). Policy 3 is purchased at the beginning of the second year (equivalent to the end of year 1) and policy 4 is purchased at the beginning of the third year (equivalent to the end of year 2). Policy 1 matures at the end of the sixth year and the face value of $600,000 is received. The portfolio’s performance is evaluated at the end of the year 7. The remaining three policies are valued as of the end of the year 7 using the pricing methodology discussed in the valuation section. The policies are priced using the IRR at purchase and the most recent underwriting data.

In Figure 8, the since inception internal rates of return (SI-IRR) for the portfolio of four policies is shown through each respective year-end. To calculate this figure, all cash flows are aggregated through each respective year-end, including the terminal values of the four policies as of each year-end period. In the table above, the terminal values are only shown for the three remaining policies as of the end of year 7. For a more detailed table showing the year-end valuations through each respective year and the cash flows for each policy from which the SI-IRRs in the table above were derived, see the Appendix at the end of this article.

It is important to notice that prior to the first policy maturity, returns are consistently negative through each respective year shown. Only in year 6, when there is a maturity due to the death of the insured, does the return become positive. From year 6 to year 7, the return goes down somewhat because there is no maturity in that year. Maturities of policies are what tend to drive returns.

A question that one might ask is: why continue to use the IRR at purchase (which varies for each policy) when valuing the portfolio at any given point of time? Should there not be a “market-based” IRR?

To answer this question, it is important to remember some of the key points cited earlier, namely that life expectancy, is the most significant variable in the valuation of a life settlement. That life expectancy is itself a function of the assumed mortality rating which represents the probability distribution that an insured dies in a given year based on a set of population cohorts of similar characteristics. If the LE inputs are wrong, the pattern of the expected cash flows (in terms of how far they stretch out) will be wrong, significantly impacting the

<table>
<thead>
<tr>
<th>Face Value</th>
<th>Policy 1</th>
<th>Policy 2</th>
<th>Policy 3</th>
<th>Policy 4</th>
<th>Total</th>
<th>SI-IRR (Thru each respective year-end)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age at Purchase</td>
<td>$600,000</td>
<td>$850,000</td>
<td>$250,000</td>
<td>$750,000</td>
<td>$2,450,000</td>
<td></td>
</tr>
<tr>
<td>IRR @ Purchase</td>
<td>12%</td>
<td>15%</td>
<td>10%</td>
<td>13%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>$(61,275.43)</td>
<td>$(83,328.32)</td>
<td>$0</td>
<td>$0</td>
<td>$(144,603.75)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>$(19,291.92)</td>
<td>$(29,291.81)</td>
<td>$(49,679.44)</td>
<td>$0</td>
<td>$(98,263.17)</td>
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</tr>
<tr>
<td>2</td>
<td>$(20,876.57)</td>
<td>$(31,394.18)</td>
<td>$(9,233.58)</td>
<td>$(161,266.40)</td>
<td>$(222,570.73)</td>
<td>-3.33%</td>
</tr>
<tr>
<td>3</td>
<td>$(22,160.60)</td>
<td>$(33,647.45)</td>
<td>$(9,896.31)</td>
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<td>$(97,524.17)</td>
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</tr>
<tr>
<td>4</td>
<td>$(23,751.14)</td>
<td>$(36,062.45)</td>
<td>$(10,606.60)</td>
<td>$(34,103.62)</td>
<td>$(104,523.81)</td>
<td>-4.15%</td>
</tr>
<tr>
<td>5</td>
<td>$(25,455.84)</td>
<td>$(38,650.77)</td>
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<td>$(36,551.36)</td>
<td>$(112,025.85)</td>
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</tr>
<tr>
<td>6</td>
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<td>$(12,183.79)</td>
<td>$(39,174.78)</td>
<td>$507,216.57</td>
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<tr>
<td>7</td>
<td>$230,914.44</td>
<td>$88,117.80</td>
<td>$251,960.79</td>
<td>$570,993.04</td>
<td></td>
<td>7.85%</td>
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</tbody>
</table>
return. It is the cash flow pattern that is key; not the discount rate that is applied to those cash flows. An analogy would be that it is not likely that every private equity investment in a venture portfolio was purchased at the same assumed IRR, nor should every such investment be valued subsequently based on some notional market-based IRR.

The realized IRR for the portfolio will likely differ from what might be expected based on the IRRs assumed at purchase. Moreover, if LE assumptions prove to be incorrect or require adjustment, it could force a markdown that would lower the assumed IRR for a given policy or portfolio of policies. It is, therefore, best practice to establish the end or terminal values of each policy with the total transparency, particularly with respect to life expectancy assumptions and mortality rates. Any unwillingness of a manager to discuss and disclose terminal value pricing assumptions should be cause for concern.

Because of the illiquidity and specialized nature of the life settlement market place (where inputs such as life expectancy and mortality rates are relatively uncertain), comparing two managers, even ones that demonstrate a willingness to share all assumptions, may still be difficult due to honest differences in mortality expectations or assumed IRRs in the pricing of policies. Later in this paper, a series of best practices will be laid out to help put life settlements reporting on a more common footing.

PERFORMANCE REPORTING FOR LIFE SETTLEMENTS

Performance Reporting for Alternative Investments: A GIPS Perspective

As an emerging asset class, investment firms entering the life settlement market will be looking to report their performance to both existing and prospective clients. Reporting to existing clients is governed by SEC rules, to ensure that the performance is fairly represented in a manner that is not false or misleading. Reporting to prospective clients is governed by the same SEC rules. In addition, there is a set of standards known as the Global Investment Performance Standards (GIPS®) promulgated by the CFA Institute. GIPS promotes the

These standards, which had their origin in the late 1980s and were known for a time as the Performance Presentation Standards of the Association for Investment Management and Research (AIMR-PPS, with AIMR being the predecessor organization to the CFA Institute), focused initially on reporting performance for conventional asset classes like equities and fixed income, but over time they were extended to alternative investments such as real estate and private equity. The GIPS standards have also undergone an important evolution, going from country specific standards (so called country versions of GIPS such as AIMR-PPS, which were specific to the United States and Canada) to a set of global standards that sought to converge best practices at the country level with global standards that all countries could abide by. The standards are periodically revised, undergoing a full review on a five year cycle. The first truly global GIPS standards were issued in 2005, replacing the country versions of GIPS that each country had previously, and became effective January 1, 2006. Those standards were recently revised in 2010, to become effective January 1, 2011. Standards for alternative investments are enumerated in Section 6 for real estate and Section 7 for private equity.

Before focusing on the standards for alternative investments, it is important to note a new emphasis that came to the fore with the 2010 edition of the GIPS standards. Previously, the term “market value” was used to reference valuations for conventional assets such as equities and fixed income. For private equity, where determining market value is more problematic due to the illiquid nature of the assets and the fact that no traded market generally exists for positions, there was a section in the 2005 edition of the GIPS standards that laid out private equity valuation principles. In the 2010 edition of the standards, the concept of “fair value” was extended to all asset classes. What was Appendix D in the 2005 edition geared only to spelling out principles for private equity valuation, is now Chapter II in the 2010 edition and provides a hierarchy for valuing any asset. These revised valuation principles apply to all assets, conventional or alternative, and so, by extension, would cover
new assets such as life settlements. The first three levels of the five point hierarchy laid out in Chapter II relate to quoted prices, which, for life settlements, are difficult to find. The last two levels suggest using market-based (i.e., objective) inputs other than quoted prices, which for life settlements might include using industry standard life expectancy mortality tables, and, as a last resort, subjective unobservable inputs such as assumed IRRs for a policy’s expected cash flows at purchase.

Looking more closely at the standards for alternative investments, those that apply for real estate are specifically oriented to that asset class and real estate is quite different from life settlements. Therefore discussion of the real estate standards is not relevant to the topic of this article. Private equity, on the other hand, has characteristics that are similar to life settlements, so it is worth focusing on what the GIPS standards say about private equity.

**Characteristics of Private Equity**

Private equity investments are, by their nature, very illiquid and do not trade on any exchange or tertiary market, meaning a market where institutions would trade positions in private equity between themselves. There is generally no observable objective quoted market prices for the positions - not even for similar investments. There is frequently no active or even inactive market upon which similar positions trade. The best that one can expect to find as a basis for valuing private equity positions might be market-based inputs like price-to-cash-flow ratios for similar businesses, which is the fourth level down in the five level valuation hierarchy described in Chapter II of the 2010 edition of the standards. Firms may need to resort to the last level, which states that firms need to use subjective, unobservable inputs for investments where markets are not active.

Another characteristic of private equity relates to how positions are purchased. Typically, private equity positions are purchased through closed-end vehicles that have a lock up period, where investors (described as limited partners) have to commit capital upfront upon signing a private placement memorandum. The portfolio manager makes capital calls against those commitments as and when the portfolio manager finds private equity deals that meet his or her criteria for the particular investment objective of the private equity strategy. What is significant about this method of purchase is that it is the portfolio manager who effectively controls the timing of cash flows into the fund where the private equity investments are made. Prior to the drawdown, the capital is in a capital account or still with the limited partners, so it is ready for investment, but not yet invested.

This characteristic of private equity – purchase through a closed-end vehicle where the portfolio manager controls the timing of investments into the asset class – prompted the CFA Institute, when it issued standards for reporting private equity returns to prospective investors, to require the use of since inception internal rates of return (SI-IRRs), which are money-weighted returns, rather than requiring the use of time-weighted returns as in the case of conventional assets such as equities and fixed income.

**Time-Weighted Returns vs. Money-Weighted Returns**

The reason for requiring SI-IRRs for private equity relates to when it is appropriate to use more traditional time-weighted rates of returns (TWRs) and when it is appropriate to use money-weighted returns such as SI-IRRs. The table below describes the differences between these two types of returns. A simple example will help explain the difference between the types of return calculations. Consider an open-ended mutual fund that invests in conventional equities where investors can contribute or withdraw funds at any time. Such a mutual fund will experience frequent cash flows on a daily basis. To measure the performance of the portfolio manager, the unitized price for the fund, known as the net asset value (NAV) per share, is tracked on a daily basis, since that unitized price effectively represents a daily index showing how the fund is performing. The daily NAV will be adjusted each day for the subscriptions and redemptions that occur on that day and, as a result, it is cash flow neutral. The portfolio manager is therefore measured based on how the entire fund performed, excluding the impact of the daily flows. Linking the performance of the daily NAVs generates a time-weighted rate of return.

Now consider Investor A and Investor B, both of whom have invested $10,000 in this particular fund. For a given year, the performance of the entire fund, and the performance of Investor A and Investor B, will be the same if both investors made no changes to the amount they have invested in the fund during the entire year.
However, suppose Investor A invested an additional $5,000 in March, when the NAV was down, whereas Investor B invested an additional $5,000 in September, when the NAV was high. Then the NAV went down again by the end of the year. The returns realized by Investor A and Investor B will differ from each other on a money-weighted basis and will differ from the return of the entire fund that they have invested in, since the fund’s return overall is not impacted by the timing of interim cash flows of its constituent shareholders by virtue of the use of a unitized price. The returns for Investor A and B, therefore, are best measured by dollar-weighted returns, whereas the best measure for the portfolio manager of the fund as a whole is by using time-weighted rates of return.

Looking more specifically at private equity, it becomes evident why it is that money-weighted returns are more appropriate for that asset class. First, the portfolio manager controls the timing of when investments are made in private equity deals. Investors commit capital up-front, but investors don’t control when their capital is actually invested – the portfolio manager does. Second, private equity positions tend to be very illiquid. There is no organized exchange or tertiary market where positions are traded between investors. Once capital is committed, the portfolio manager tends to hold the position until final disposition. It is a buy and hold strategy. The since inception internal rate of return calculation avoids the necessity to do frequent interim valuations, which is impractical particularly since each drawdown of capital would typically constitute a large cash flow, so under conventional TWRR rules, the entire portfolio of private equity positions would need to be revalued, according to GIPS, on the date of every large cash flow if TWRR were used. Finally, private equity is typically purchased using closed-end vehicles, where once a group of investors has committed their

<table>
<thead>
<tr>
<th><strong>Time-Weighted Rates of Return (TWRR)</strong></th>
<th><strong>Money Weighted Returns (SI-IRR)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact of cash flows is minimized by either day-weighting cash flows or (required under GIPS beginning 1 Jan. 2010) revaluing the portfolio whenever large cash flows occur (daily valuation will eliminate impact of cash flows altogether).</td>
<td>Performance is affected by the timing and amounts of the cash flows.</td>
</tr>
<tr>
<td>Appropriate to use when portfolio manager does not control the timing of cash flows.</td>
<td>Appropriate to use when portfolio manager does control the timing of cash flows.</td>
</tr>
<tr>
<td>Requires interim valuations (at least monthly, and also on the date of any large cash flow according to GIPS).</td>
<td>No need to do interim valuations, just a terminal valuation as of the end of the performance measurement period.</td>
</tr>
<tr>
<td>Periodic returns (e.g., monthly returns, or sub-monthly returns between dates with large cash flows) are geometrically linked to show performance.</td>
<td>Performance is measured using a since inception internal rate return (as mandated by GIPS for private equity), derived by factoring in all capital contributions, subsequent payments (including fees for net of fees returns), disbursements (or return of capital) and the final terminal value.</td>
</tr>
</tbody>
</table>
capital the vehicle becomes closed to new investors. This again shows that investors do not have control of the timing of their cash flows - they have to commit their capital upfront, at which time it becomes locked up for a period of time. At the end of the term of the vehicle, they will get their capital back, but generally not until then.

What is Appropriate for Life Settlements?

How does private equity relate to life settlements? While not necessarily the case, many investors in life settlements structure their investment as a closed-end vehicle where capital is committed upfront and the portfolio manager feeds out the capital to life settlement contract deals (either individual policies or potentially pools of life policies purchased as a block) as and when the portfolio manager finds deals that meet his or her criteria, due to the illiquid nature of the market. Similar to private equity, there really is no tertiary market yet (although there are the beginnings of one developing). Portfolio managers generally purchase policies with the intention of holding them to maturity, i.e., until the insured dies and the death benefit is paid (occasionally, portfolio managers may seek to “warehouse” policies for quick resale, but this is the exception). Since there is no real organized market, policies cannot be valued based on observable prices, but rather must be valued according to the valuation criteria cited previously, namely by discounting expected cash flows based on life expectancy and mortality rates along with known past cash flows, such as initial purchase price and past premium payments. Revaluing policies on the dates of every large cash flow would be problematic for life settlements, just as it is for private equity.

Given the similarities between private equity and life settlements, money-weighted returns is clearly the most appropriate measure to use for life settlements, just as it is for private equity. The similarity of the two asset classes in terms of their characteristics and in terms of how they are purchased, including who is controlling the timing of the cash flows, cries out for using since-inception internal rates of returns for life settlements. Moreover, just as in the case of a private equity composite where all the cash flows for all the private equity investments are aggregated as if all the flows related to one investment, in life settlements all the historical cash flows and terminal values (based on future cash flows) are aggregated together as if they all related to one life insurance policy. This effectively generates a SI-IRR that is weighted for the relative importance of each individual policy, using the best available information with respect to the life expectancy for each policy as of the end of the period.

There are some differences, however, between private equity and life settlements. The most significant difference is that there is a need, in the case of life settlements, to make ongoing premium payments for the policies in the portfolio. Private equity investments may require periodic additional drawdowns of capital as the investment matures and the business in which the investment has been made requires a further capital infusion. There is nothing analogous in the private equity world, though, to making continuing premium payments, which may be assessed quarterly, semi-annually, or annually, depending on the policy (monthly may even occur in some instances). Moreover, the premium payment regime may change over time. Some policies are level pay, but others may see the premiums increase each year. Can these premium payments be regarded as capital drawdowns? These payments are not really capital infusions as they are the cost of carrying the capital already committed.

How should cash be accounted for in measuring the performance of life settlements? For conventional assets (stocks and bonds), the GIPS standards require, when representing the performance of a strategy (using a composite that is an aggregation of all fully discretionary accounts that follow that strategy), that the return on cash must be included in the performance calculation. This concept is further memorialized in the notion of carve-outs, where the return of a particular asset class is carved out from a larger portfolio to represent the performance of that asset class. Under GIPS, such carve-outs are allowed to represent the performance of the asset class being carved out if and only if the carve-out is managed with its own cash component. It is unrealistic to imagine that an asset class can be managed in a completely cashless manner, which is why GIPS instituted this requirement. Because many accounting systems could not easily handle multiple cash buckets for each asset class within a broader portfolio, GIPS previously allowed cash to be allocated according to a for-
mula with appropriate disclosure as to the method of allocation, but since January 1, 2010 that is no longer allowed.

Given the manner private equity returns are calculated, the calculation effectively measures only the capital that has been invested via capital drawdowns, not the capital that is committed upfront and set aside but not invested prior to the capital call by the portfolio manager. To that extent, the SI-IRR for private equity represents a pure return on the asset class, where there is no dragging down of the return coming from the cash that is committed but not invested.

To best measure the performance of life settlements, a similar approach is recommended. Avoid having the return dragged down by capital that needs to be set aside upfront but is not invested in life settlements until appropriate deals are identified. Some might argue that it would be appropriate to include in the calculation a drawdown for what could be called a premium reserve (to be distinguished from what could be the capital reserve representing capital that is committed to purchase policies themselves), where the funds drawn down to fund that reserve would be included in the SI-IRR calculation. To do so would complicate the calculation – how would the amount of the premium reserve be determined, (how would that reserve be invested? What is the return on that reserve?) and it would bring in such issues like how well the reserve matches the premium payment needs. What if the reserve was too large, or too small? The return of the pure asset class, the life settlements themselves, would be somewhat masked or distorted by what the returns on the premium reserve were and how large that reserve was in relation to the pool of policies.

To avoid these issues, and to arrive at a “pure” return for life settlements analogous to the “pure” return that is generated for private equity, it is recommended that premium payments be treated just like life policy purchases as outgoing cash flows in the internal rate of return calculation. This way, the portfolio manager is measured on how well he or she selected the policies that matched the sought for criteria, not on how well the cash component was managed, which is peripheral to the performance of the asset class.

Best Practices for Reporting Life Settlements Performance

As institutional investors become more involved in the life settlement market, it will become increasingly important to ensure that best practices are followed with respect to reporting performance for the asset class, to ensure fair representation and transparency. In that spirit, the following itemizes a recommended set of Best Practices for Reporting Life Settlements Performance, both with respect to calculation methodology and to related disclosures:

1. Life settlement contracts should be valued at the end of the measuring period based on industry standard tables that reflect current expectations for life expectancy and mortality rates. If life expectancies or mortality rates have changed since initial purchase, the valuation at the end of the performance period should reflect current life expectancies, not the expectancies assumed at the time of purchase. This is critical given the importance of the terminal value component to the overall SI-IRR calculation. Any changes in life expectancies or mortality rates would be fully documented, with disclosure as to the reasons for the changes.

2. Given the typical structure where life policies are purchased using a closed-end vehicle, where capital is committed upfront but where the portfolio manager controls the timing of the policy purchases as and when they become available, performance should be measured by aggregating all the cash flows and calculating a since inception internal rate of return (SI-IRR), similar to the method used for private equity. As is required for private equity under GIPS, this SI-IRR should be shown through each respective annual period since inception, just as was done in Figure 8 earlier in this article.

3. Portfolio managers should document and support all cash flows (policy purchase, premium payment, maturity, expenses) as to amount and date and be able to support the valuation of every policy as of the end date for the performance measurement period. These are based on industry standard life expectancy tables that are current as to life expectancy and mortality.
experience for the cohort (based on age, gender, smoking status and degree of medical impairment) each policy belongs to.

4. Portfolio managers should disclose the following information:

a. The life expectancy tables upon which the valuations were based (e.g., VBT 2008, or the tables of a particular underwriter such as AVS Underwriting, 21st Services, ISG, or Fasano Associates).

b. How many policy lives are in the portfolio (i.e., the number of policies).

c. The policy years for the portfolio (equal to policy lives times average holding period, e.g., if there were 100 lives with an average holding period of 1.5 years, that would represent 150 policy years). This in effect measures the weighted average time from date of purchase until the end of the measurement period for all policies in the portfolio.

d. The dollar policy years for the portfolio (similar to policy years, only by multiplying the holding period for each policy by the face amount of that policy, the statistic is effectively weighted by the face amount of the policies held). This measures the weighted average policy years from date of purchase until the end of the measurement period for all policies in the portfolio.

e. The percentile of actual outcomes to predicted outcomes based on life expectancy data. For example, if, based on the underlying policies held in a 300 policy portfolio, it was expected that there would be 12 maturities by the end of the second year, but this particular portfolio had 18 maturities, and that outcome was in the 85th percentile of possible outcomes, that figure would be disclosed.

f. Just as for the policy year calculation cited earlier, the percentile of actual outcomes to predicted maturities would again be calculated, but with each maturity expressed in dollars according to the face amount of the respective policies, vs. as simply a maturity. This would weight the percentile according to face amount of the policies vs. being based purely on the number of maturities without regard to the dollar amount of the policies. The percentile would be lower if the maturities had a face amount that was less than the average, or would be higher if the maturities had a dollar face amount that was more than average.

**SUMMARY**

Life Settlements is an emerging asset class that offers the potential for relatively high IRRs compared to investment grade alternatives and attractive diversification characteristics by virtue of its low correlation to other asset classes. The growing awareness of life policyholders to the opportunities for selling their policies assures the potential for growth in the future supply of policies. Given the way life settlements are typically purchased (through closed-end vehicles where capital is committed upfront and the portfolio manager controls the timing of investing committed capital as deals become available) and the fact that life settlements are a buy and hold asset that is not traded, since inception internal rates of return are the appropriate measure to use for reporting performance, vs. time-weighted returns that are appropriate for more conventional assets. The regulatory framework is becoming more robust, with the licensing of life settlements brokers and providers becoming more prevalent across the various states. Beyond having a more robust regulatory framework. However, it is also necessary to develop best practices for all aspects of the life settlement industry, particularly with respect to valuation and performance reporting, to raise ethical standards, increase transparency, and limit abuses that have occurred in the past. The best practices cited above are intended to be an important step in that direction. Participants increasingly recognize the value of using industry standard tables that reflect current life expectancy and mortality rates, so as to avoid valuation discrepancies caused by different participants using different tables. This would result in wide variations in valuation given the sensitivity to life expectancy assumptions. Beneficiaries of these trends should include both existing policy holders that seek to sell their policies, and institutional investors who seek to earn an above average return in an emerging asset class with attractive characteristics.
Appendix: Since-Inception Internal Rate of Return (SI-IRR) Calculation for a 4 Policy Portfolio

<table>
<thead>
<tr>
<th>Policy</th>
<th>CF Type</th>
<th>CF Date</th>
<th>CF / Face Value</th>
<th>$ Cash Flow</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
<th>Year 7</th>
</tr>
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<tbody>
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<td>(10,000.00)</td>
<td>(10,000.00)</td>
<td>(10,000.00)</td>
<td>(10,000.00)</td>
<td>(10,000.00)</td>
<td>(10,000.00)</td>
<td>(10,000.00)</td>
</tr>
<tr>
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<td>$ 440,227.48</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
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<td>purchase</td>
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<td>(41,064.24)</td>
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<td>(41,064.24)</td>
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<td>(8,615.24)</td>
<td>(8,615.24)</td>
<td>(8,615.24)</td>
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<td>(8,615.24)</td>
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<td>(8,615.24)</td>
<td>(8,615.24)</td>
</tr>
<tr>
<td>EY MV</td>
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<td>$ 230,129.94</td>
<td>$ 230,129.94</td>
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<td></td>
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</tr>
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</tr>
<tr>
<td>policy 3</td>
<td>premium</td>
<td>9/1/2002</td>
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REFERENCES


ENDNOTES


3 U.S. Supreme Court, Grisby vs. Russell, 222 U.S. 149 (1911).


6 Conning & Company LLC, Strategic Study Series, Life Settlements, the Concept Catches On, 2006.


11 Report to Special Committee on Aging, U.S. Senate, Life Insurance Settlements: Regulatory Inconsistencies May Pose a Number of Challenges, July 2010.


13 Ibid, P. 27.