

# Deloitte.

---

Consulting

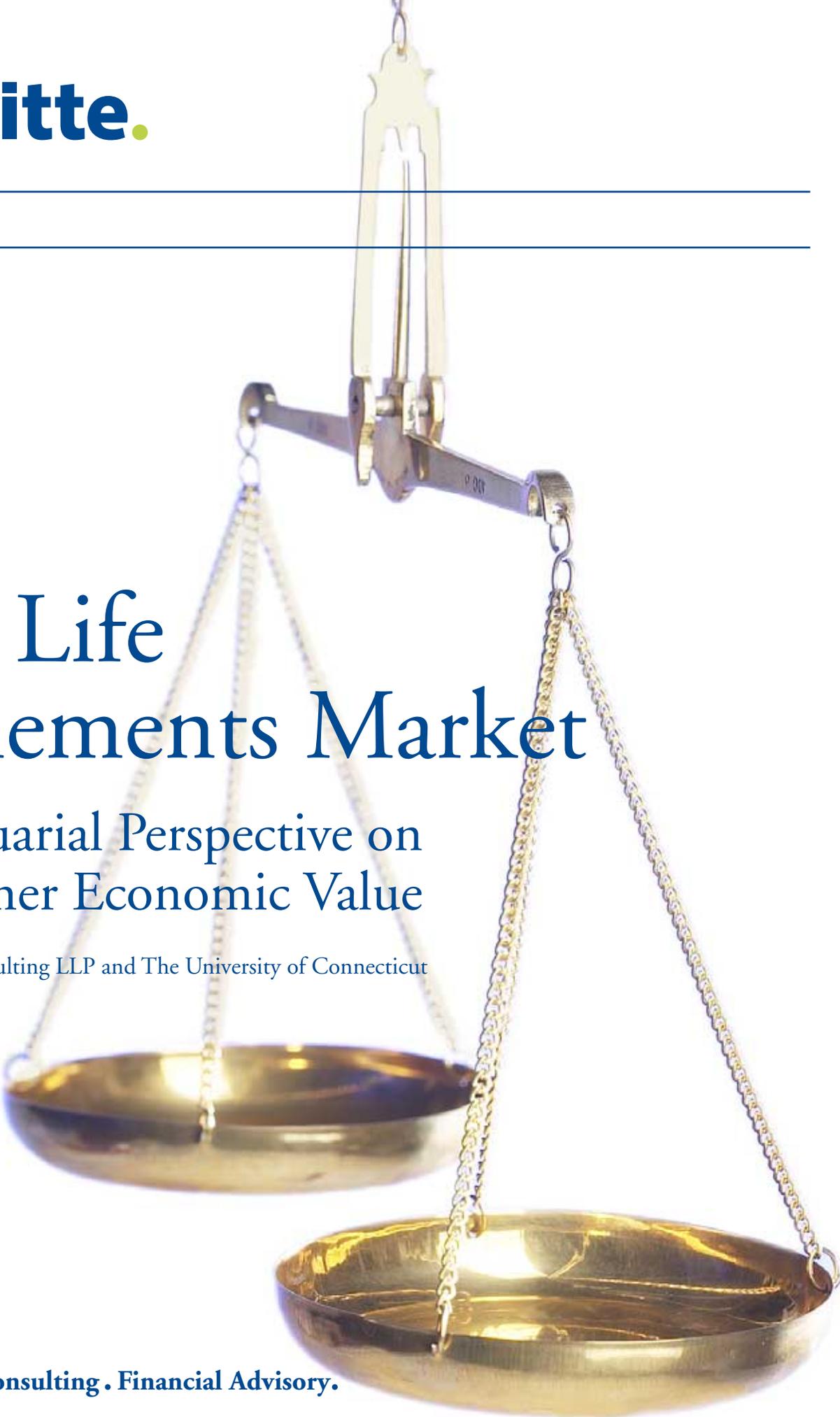
---

# The Life Settlements Market

## An Actuarial Perspective on Consumer Economic Value

By Deloitte Consulting LLP and The University of Connecticut

**Audit . Tax . Consulting . Financial Advisory.**



# Table of Contents

- Preface ..... 1
- Executive Summary ..... 1
- Introduction and Background ..... 3
- Perceived Benefits of Life Settlements ..... 3
- Actuarial Valuation ..... 4
- Finance Theory Approach ..... 6
- Empirical Analysis ..... 7
- Marketing Materials and Solicitations ..... 10
- Regulations and Disclosures ..... 10
- Limitations of Current Regulations and Disclosure Requirements ..... 11
- Perceived Benefits of Life Settlements Revisited ..... 11
- Misconceptions on Lapse Experience, Pricing Techniques,  
and Profitability of Life Insurance Companies ..... 12
- Conclusion ..... 13
- Acknowledgments ..... 14
- Bibliography ..... 15

## Preface

This joint study was conducted by Deloitte Consulting LLP and the University of Connecticut (UConn) through the Deloitte - UConn Actuarial Center (the Center). The Center is a collaborative arrangement between UConn and Deloitte Consulting whose objectives include:

- Integrating the academic resources at UConn with the deep industry knowledge of Deloitte Consulting
- Developing more effective approaches in insurance education, training, applied research, and risk management

The study was conducted under the direction of Jay Vadiveloo, Professor and Director of the Center and a Senior Manager with Deloitte Consulting. This study utilized faculty and students from the Departments of Actuarial Science and Finance at UConn and key professionals from Deloitte Consulting. The study reflects our integrated approach to applied actuarial research by ensuring that every assertion and analysis meets all professional and academic standards, and focuses on real life issues raised by the Life Settlements industry.



## Executive Summary

In this study, we have conducted a comprehensive actuarial analysis of the Life Settlements industry. This enables us to better quantify the value provided by the sale of a life insurance policy to a Life Settlements company, relative to other options available to a policyholder. Current literature focuses on comparing only two options: the Life Settlements Value (LSV) and the Cash Surrender Value (CSV) of a life insurance policy. In our study, we have quantified the value of a third option: retaining the policy until death. We refer to the value of this third option as the Intrinsic Economic Value (IEV). Our study has focused on comparing the IEV with the LSV. The difference between the IEV and LSV is referred to as the Lost Economic Value (LEV).

We conducted three types of analyses to compare the IEV with the LSV:

1. An actuarial valuation and probabilistic analysis
2. An analysis from a finance theory perspective
3. An empirical analysis using data from actual filings of Life Settlements contracts with the New York Department of Insurance

The results of our analyses show the following:

- For all issue ages, varying attained ages of policy sale, and varying levels of impairment, the actuarial valuation shows that the IEV always exceeds the LSV. The actuarial valuation captures only the first year commissions, taxes, and the hurdle rate in determining the LSV. The IEV ranges from 113 percent to 165 percent of the LSV for the selected examples in our analysis. Our analysis also indicates it is highly probable that the realized IEV when the policyholder dies will exceed the LSV.
- The finance theory approach reinforces the conclusions of the actuarial valuation. This analysis demonstrates that the yield from a life insurance policy of an impaired policyholder that is maintained until death is likely to exceed any return realized by investing the Life Settlements proceeds in a variety of investment options.
- The empirical analysis shows that for all Life Settlements sales in calendar years 2000 through 2003, Life Settlements companies paid an average of 20 cents per dollar of face amount of insurance, while the IEV averaged 64 cents on the dollar. In terms of benefits paid, the Life Settlements companies paid out only \$45.7 million in benefits while the IEV was \$143.2 million, resulting in a LEV of \$98.5 million. The results were similar for the empirical analysis of all Life Settlements deaths in calendar years 2000 through 2003. The empirical analysis shows a significantly wider disparity between the IEV and LSV as compared to the actuarial valuation. This is attributable to other nonstandard transaction costs such as provider's origination fees, servicing fees, financial underwriter fees, etc., that are ignored in the actuarial valuation.

Further research into the LEV generated from a Life Settlements sale shows that it arises from the high transaction costs involved in the sale. The risk profit component (i.e. the pure profit earned in the absence of any transaction costs) represents only 30 percent of the LEV. The remaining 70 percent represents transaction costs in the form of expenses, commissions, taxes, and the expense profit component (i.e. profit that Life Settlements companies require as compensation for financing the up-front transaction costs). These combined profit and transaction costs represent between 50 percent to 67 percent of the Intrinsic Economic Value of the insurance contract. Relative to other asset transaction costs, including illiquid assets such as Art that incur costs only in the 10 percent to 15 percent range, Life Settlements transaction costs are significantly higher.

The study includes an extensive Web site review of marketing materials and solicitations of Life Settlements companies to analyze the common assertion made by the Life Settlements industry that it targets senior citizens who are already planning to lapse or surrender their life insurance contract. It is clear from our review that the Life Settlements industry is targeting a larger market than this select group of policyholders. These marketing materials offer multiple reasons, other than lapse avoidance, to encourage a policyholder with impaired health to sell a life insurance policy.

Our study analyzes current proposed regulations and disclosure requirements for Life Settlements companies. Based on our research, the study discusses limitations of these current regulations in providing appropriate disclosure requirements of Life Settlements transactions and in ensuring that Life Settlements agents have the necessary specialized training to provide proper financial advice to policyholders.

Our study also analyzes from an actuarial perspective, several assertions made in current Life Settlements literature regarding experience lapse rates of life insurance companies, pricing techniques, and the policyholder profile of lapsed contracts. A widely quoted common misconception is that less than 12 percent of universal life contracts actually pay a death benefit and roughly 88 percent lapse or surrender their contract.<sup>1</sup> This reinforces the assertion made by the Life Settlements industry that it targets senior citizens who are planning to lapse or surrender their contract in the first place. Based on the fact that policyholders in the target market of the Life Settlements industry tend to exhibit ultimate lapse experience of life insurance companies, our analysis shows that more than 65 percent of this segment receives a death benefit. This 65 percent includes policyholders with impaired health who are currently being targeted by the Life Settlements Industry.

Our study clarifies one of the generally established actuarial principles of life insurance pricing: healthy lives tend to lapse and unhealthy lives tend to persist. Hence, a Life Settlements transaction that results in the persistency of an impaired policyholder has minimal impact on the anticipated profitability of a life insurance contract. While there may not be a material financial impact, life insurance companies are concerned that policyholders may not receive complete information from properly trained agents on the suitability of a Life Settlements transaction.

The study concludes with an analysis of the study's impact on policyholders in the Life Settlements target market, beneficiaries of life insurance policies, financial advisors, insurance regulators, and the future of the Life Settlements industry. The policyholder with impaired health could maximize her estate value if other assets are liquidated and the life insurance policy is maintained until death. A beneficiary who assists an impaired policyholder in maintaining her life insurance contract will experience a return on investment that is likely to exceed any other investment option. Our study can lead to enhanced regulations and disclosure requirements that will benefit financial advisors by helping them better educate the policyholder concerning the benefits or consequences of selling her life insurance policy. Because our analysis shows that for the majority of policyholders with impaired health, the greatest economic value results from retaining the contract until death, it is likely that the target market that could truly benefit from the Life Settlements industry is significantly smaller than currently perceived. The life insurance industry, however, is well positioned to create a more efficient secondary market for impaired policyholders similar to accelerated death benefits for Viaticals or a loan to the policyholder using the face amount of the policy as collateral.



## Introduction and Background

The Life Settlements industry evolved in the late 1990s as an extension of the Viatical industry. According to a Conning study, both Life Settlements and Viaticals refer to “the transfer of an existing life insurance policy under circumstances where the insured has an impaired life expectancy”.<sup>2</sup> The different characteristics between Viaticals and Life Settlements are summarized in Exhibit 1:

Exhibit 1: Viaticals versus Life Settlements <sup>3</sup>		
	Viaticals	Life Settlements
<b>Policy Size</b>	< \$100,000 and usually between \$25,000-\$50,000	> \$100,000 and usually over \$250,000
<b>Policyholder</b>	AIDS patients in the 25-44 age band	Senior citizens over age 65
<b>Life Expectancies</b>	< 2 years and usually 12 months or less	> 2 years and as high as 12-15 years

The Viatical industry has faced challenges from medical breakthroughs in the diagnosis and treatment of HIV/AIDS, which adds to the uncertainty of predicting life expectancies of terminally ill policyholders. In addition, the life insurance industry has responded to the need for liquidity by terminally ill policyholders by offering accelerated death benefits in their policies.

On the other hand, the Life Settlements industry has developed a more organized insurance resale market by focusing on the purchase of life insurance policies in the over age 65 market with impaired mortality, but not terminally ill. It focuses on large face amount policies where transaction and administrative costs can be more effectively spread out and managed.

The growth rates reported by the Life Settlements industry are significant. The Conning study estimates that Life Settlements transactions in 2002 approximated \$2 billion in face amount of insurance, which reflects a 19 percent compound growth rate since 1998. As a reflection of the potential market for Life Settlements, the Wharton study<sup>4</sup> estimates the total value of life insurance policies held by senior citizens with impaired mortality to be as large as \$100 billion.

## Perceived Benefits of Life Settlements

The Wharton study<sup>5</sup> describes the following benefits offered by the Life Settlements industry to a policyholder and society as a whole:

1. Introduces an organized secondary market for life insurance that otherwise would have been available only informally or from life insurance companies through surrender of a life insurance policy.
2. Provides liquidity to an insurance contract that is a relatively illiquid asset. This could increase the value of a life insurance contract in the primary market as well.
3. Offers significantly higher resale values in the secondary market for policies of people with impaired lives, compared to the cash surrender values of the policies. This is because cash surrender values are fixed by regulation and cannot be conditioned on health impairment.
4. Establishes an efficient secondary market in the financial services industry that could improve the economic welfare of consumers in general, as well as the value of the corresponding asset in the primary market.



# Actuarial Valuation

The actuarial valuation of the Life Settlements industry expands on the work done in previous studies that focused on comparisons between the value offered by a Life Settlements company and the value obtained from a life insurance company if the contract is surrendered. Our research recognizes three options available to a policyholder with impaired mortality:

1. The policyholder could surrender her contract to the life insurance company that issued the policy
2. The policyholder could sell her contract in the secondary market to a Life Settlements company
3. The policyholder could choose to retain her contract until death

The third option has never been analyzed or quantified in previous studies and this is the main thrust of this section of our research. We have used an actuarial perspective to quantify the value to the policyholder if she chooses to retain her contract until death. We call this value the Intrinsic Economic Value (IEV) and it is measured prospectively as:

$$IEV = APV \text{ of Future Death Benefits} - APV \text{ of Future Premiums}$$

where APV is the Actuarial Present Value

The Actuarial Present Value (APV), which discounts values using **both** interest and survivorship, uses the impaired mortality of the policyholder for survivorship and the risk-free interest rate for the choice of interest rate. A risk-free interest rate is appropriate because for most insurance products, the cash flows are known with certainty and do not fluctuate with the general economic cycle.

A related definition is the Lost Economic Value (LEV) that looks at the difference between the IEV and the Life Settlements Value (LSV). This is a measure of the value given up (or lost) by a policyholder who chooses to sell her insurance contract to a Life Settlements company instead of retaining it. As part of our research, we will analyze the various components that make up the LEV.

Before we describe the actuarial formulas needed to calculate the IEV and LSV, we will perform a qualitative analysis of some of the differences (and similarities) between these three measures of value of a life insurance contract – the Cash Surrender Value (CSV), the LSV, and the IEV. Exhibits 2 and 3 summarize these differences:

Exhibit 2	
Cash Surrender Value	Life Settlements Value
Determined at issue	Determined at settlement
Based on fully underwritten, standard mortality	Based on impaired mortality at settlement, possibly with margins for conservatism
Values set by regulation	Values set by Life Settlements company
Values do not change when the health status changes	Values vary depending on the level of impairment of the policyholder

Exhibit 3	
Intrinsic Economic Value	Life Settlements Value
Determined at settlement	Determined at settlement
Based on impaired mortality at settlement	Based on impaired mortality at settlement, possibly with margins for conservatism
Uses risk-free interest rate discounting	Uses Life Settlements company hurdle rate
No transaction costs	Recognizes impact of underwriting, reinsurance, commissions, expenses, taxes, etc.

To develop the actuarial model needed to calculate these three measures of value of a life insurance contract, we made the following assumptions:

1. The life insurance contract is a whole life insurance policy with level premiums payable for life.
2. The risk-free rate used to determine the IEV equals 5 percent.
3. The CSV equals the net level premium reserve based on the 1980 Commissioner's Standard Ordinary (CSO) mortality table and a 5 percent interest rate.
4. Impaired mortality for determining the LSV and IEV are based on mortality rates that are a factor (e.g. 5, 10, 15, 20) multiplied by the industry 75 – 80 Basic Mortality Table.
5. The annual gross premium is approximated by a 20 percent loading on the annual net premium calculated using the 1980 CSO mortality and a 5 percent interest rate.
6. Transaction costs included in determining the LSV are first year commissions of 4 percent of the face amount, 35 percent tax rate on death benefit net proceeds, and 8 percent interest rate for discounting cash flows. Other non-standard transaction costs such as provider's origination fees, servicing fees, financial underwriter fees, etc., are ignored in this analysis.

The actuarial formulas used in our calculation are shown below. All calculations are based on \$1 of face amount, issue age y, and current age x. An asterisk (\*) on a symbol denotes that impaired mortality was used.

$$P_y = \text{Valuation Premium} = A_y / \ddot{a}_y$$

where  $A_y$  = Net Single Premium at age y for \$1 face amount of insurance

$$\ddot{a}_y = \text{Net Single Premium for a \$1 life annuity due to y based on the 1980 CSO mortality table and a 5 percent interest rate}$$

$$CSV_x = A_x - P_y \ddot{a}_x$$

$$IEV_x = A_x^* - 1.2P_y \ddot{a}_x^*$$

where  $1.2P_y$  reflects a 20 percent loading for expenses and the risk-free rate of 5 percent is used for discounting

To calculate the LSV, we first calculate the tax expense to the Life Settlements company incurred at death of the policyholder. We assume that death occurs at the end of the impaired life expectancy.

$$\text{Tax} = 0.35(1 - 0.04 - \text{LSV}_x - e^*_x (1.2)P_y)$$

- The 0.04 reflects the 4 percent of face amount that is the assumed commission for Life Settlements contracts
- $e^*_x$  is the expected future lifetime for a life age  $x$
- 35 percent is the standard corporate tax rate

Then

$$\text{LSV}_x = (1 - \text{Tax}) A^*_x - 1.2P_y \ddot{a}^*_x - 0.04$$

where the hurdle rate of 8 percent is used for discounting

Note that LSV appears in the equation for Tax, so the final equation needs to be solved for LSV. This produces the formula:

$$\text{LSV}_x = \frac{(0.664 + 0.42P_y e^*_x) A^*_x - 1.2P_y \ddot{a}^*_x - 0.04}{1 - 0.35A^*_x}$$

Exhibits 4 and 5 show the ratio of the LSV to the CSV and the ratio of the IEV to the LSV. The ratios are shown for issue ages 45 and 55, varying levels of impairment, and varying attained ages of policy surrender/sale.

The following observations can be made:

1. The LSV always exceeds the CSV and the IEV always exceeds the LSV.
2. As the level of impairment increases, the ratio of LSV to CSV increases, while the ratio of IEV to LSV decreases.
3. For a given level of impairment, as the attained age at policy surrender/sale increases, the ratio to LSV to CSV decreases, and the ratio of IEV to LSV decreases as well.

**Exhibit 6: Probability That IEV Exceeds LSV**

Issue Age: 45 Years		
Attained Age	Impairment Level 10	Impairment Level 20
65	88.6%	96.3%
70	91.2%	97.3%
75	96.9%	100.0%
80	99.8%	100.0%

4. As the issue age of the policyholder increases, both the ratio of LSV to CSV and IEV to LSV increases for the same level of impairment and attained age at policy surrender/sale.

Another useful statistic is the probability that the realized IEV exceeds the LSV when the policyholder dies. This analysis recognizes that the LSV is realized immediately at sale of the contract to the Life Settlements company, while the IEV is an expected value of possible realizations of the economic value of the life insurance contract depending on when the policyholder dies. For instance, if the policyholder retains a contract and survives beyond some period, the realized IEV will become less than the LSV. Because we cannot predict when a policyholder will die with certainty, we calculate the probability that a policyholder will die within a period during which the realized IEV exceeds the LSV.

Exhibit 6 shows the probability that the realized IEV exceeds the LSV for a policyholder at issue age 45 with varying attained ages at policy sale, and impairment levels of 10 and 20.

It is clear that the realized IEV is virtually certain to exceed the LSV and this probability increases as the level of impairment worsens and the attained age at policy surrender / sale increases.

**Exhibit 4: Ratios of Life Settlements Value/Cash Surrender Value**

Attained Age	Issue Age: 45 Years Impairment Levels				Issue Age: 55 Years Impairment Levels			
	5	10	15	20	5	10	15	20
65	1.17	1.60	1.83	1.98	1.58	2.31	2.69	2.94
70	1.14	1.45	1.61	1.70	1.36	1.80	2.02	2.15
75	1.11	1.33	1.44	1.49	1.24	1.53	1.66	1.73
80	1.09	1.25	1.29	1.29	1.17	1.37	1.41	1.41

**Exhibit 5: Ratios of Intrinsic Economic Value/Life Settlements Value**

Attained Age	Issue Age: 45 Years Impairment Levels				Issue Age: 55 Years Impairment Levels			
	5	10	15	20	5	10	15	20
65	1.59	1.37	1.28	1.23	1.65	1.39	1.30	1.25
70	1.43	1.27	1.21	1.17	1.46	1.28	1.22	1.18
75	1.31	1.20	1.16	1.13	1.33	1.21	1.17	1.14
80	1.23	1.15	1.13	1.13	1.25	1.16	1.14	1.14

## Finance Theory Approach

A finance theory approach can also be used to compare the two options of selling a policy in the secondary market versus retaining it until death. We will assume a policyholder with a \$1 million whole life insurance policy and an impaired life expectancy of five years. For simplicity, we assume the annual gross premium is \$20 per \$1,000 of face amount, Life Settlements expenses equal to 4 percent of face amount for first year commissions, a 35 percent tax rate on net death benefit proceeds, and an 8 percent interest rate for discounting cash flows to calculate the LSV. To calculate the IEV, a 5 percent risk-free interest rate is used. We will also assume that with a five year impaired life expectancy, the insured is certain to die at the end of five years.

In this way, the IEV is determined to be approximately \$693,000 and the LSV equal to \$459,000. We first consider a policyholder who has estate needs, current liquidity needs, and has other choices of assets besides a life insurance contract to satisfy her liquidity needs. We will analyze the impact on the policyholder's ending estate if she chooses (1) to sell her life insurance contract and reinvest the proceeds, or (2) chooses to retain her contract and continue to pay premiums until her death at the end of five years.

To give this a finance theory perspective, we will explore five investment options for the Life Settlements proceeds – small stocks, large stocks, long-term bonds, and Treasury bills. The investment returns assumed on these instruments are derived from the *Stocks, Bonds, Bills and Inflation 2004 Yearbook* by Ibbotson Associates. We will further assume that if the policyholder chooses to retain her policy until death, the negative cash flows of the future premiums will be financed by assets from these same investment options. Hence, the ending estate value will vary under the different investment options if the policyholder chooses to retain her policy.

Exhibit 7 shows the results of this analysis. The Loss in Value measures the difference between the ending estate if the policyholder retains her contract, and the ending estate if she sold her contract to a Life Settlements company and reinvested the proceeds. This loss of value is also captured as a percentage of the ending estate created from the Life Settlements sale. The Probability of Loss is determined by using actual impaired mortality rates which would generate a life expectancy of five years at attained age 65.

The results clearly indicate that for a policyholder with impaired health, the life insurance contract is the highest yielding asset that would maximize the policyholder's ending estate. While the loss in value is modest for the most aggressive investment option, realistically speaking, the appropriate investment option for this target segment of the population would more likely be in safer investment options, such as long-term bonds or Treasury bills, where the loss in value is significant.

We can summarize the finance theory approach as follows:

1. If a policyholder has no estate needs whatsoever and has immediate liquidity needs, then selling a life insurance contract in the secondary market always provides more liquidity than surrendering the contract. It must be emphasized that having estate needs incorporates bequeathing to family, friends, charities, and institutions. While no statistics are readily available, because the Life Settlements market is focused on \$100,000+ face amount policies, it may be reasonable to assume that all but a small segment of the population over age 65 targeted by the Life Settlements industry have some estate needs.
2. If a policyholder has estate needs but no other sources of liquidity to meet a current liquidity demand, then selling her insurance contract in the secondary market would be the only available option. It must be emphasized here as well that because a life insurance contract is the highest yielding asset when a policyholder's health is impaired, the policyholder should consider other alternatives to preserve her life insurance contract in order to maximize her ending estate. Alternatives could include borrowing the required funds or taking a policy loan to meet current liquidity needs and pay future premiums, or getting the beneficiary or trustee to loan some of the proceeds and assume premium payments.
3. For the majority of policyholders in the Life Settlements target market who have estate needs and other sources of liquidity, our analysis has shown that a life insurance contract is generally the highest yielding asset and should be preserved. Retaining the insurance contract and continuing to pay premiums significantly outperforms the alternative strategy of selling the policy to a Life Settlements company and reinvesting the proceeds in a variety of investment options.

**Exhibit 7: Ending Estate in 000's of \$**

	Assumed Earned Rate of Return			
	Small Stocks 12.70%	Large Stocks 10.40%	Long-Term Bonds 5.70%	Treasury Bills 3.70%
Policy Retained	\$855	\$864	\$882	\$888
Sell to Life Settlements Co.	\$834	\$752	\$605	\$550
Loss in value (\$)	\$21	\$112	\$276	\$338
Loss as % of LS Estate Value	2%	15%	46%	61%
Probability of Loss	52%	61%	81%	93%

## Empirical Analysis

Our research so far has laid down the analytical foundation to quantify the three options available to a policyholder with impaired mortality – the Cash Surrender Value (CSV) if the policy is surrendered to the life insurance company, the Life Settlements Value (LSV) if the policy is sold in the secondary market, and the Intrinsic Economic Value (IEV) if the policy is retained until death. In this section, we will refine our underlying assumptions in the actuarial model and apply it to calculate the average IEV and Lost Economic Value (LEV) for actual Life Settlements sales and deaths. This empirical analysis uses Life Settlements transaction data from Schedules 7 and 8 of the New York Department of Insurance filings for calendar years 2000 to 2003. Schedule 7 lists all deaths occurring in a current calendar year from Life Settlements sales in the current as well as prior years. Schedule 8 lists all new Life Settlements sales in a calendar year. In order to distinguish Life Settlements data from Viatical data, we ignored all policy data that have an assumed life expectancy of less than 24 months.

We used the following data from the New York filings:

1. Year of Life Settlements sale
2. Assumed life expectancy of the policyholder selling the policy
3. Face amount of the policy being sold
4. Value offered by the Life Settlements company

Based on our research of several Web sites of Life Settlements companies, we streamlined the expense assumptions in a Life Settlements sale as follows:

1. Broker's commissions ranging from 4 percent to 8 percent of the face amount
2. Selling commissions ranging from 5 percent to 10 percent of gross proceeds
3. Provider's origination fees of approximately 5 percent of gross proceeds
4. Manager's and servicer's fees of approximately 5 percent of gross proceeds

We selected the following representative assumptions to calculate the IEV, LSV, LEV and the components of the various transaction costs that constitute the LEV:

1. Expenses
  - a. Brokers commission = 6 percent of face amount
  - b. Provider's origination fees = 5 percent of gross proceeds
  - c. Manager's and servicer's fees = 5 percent of gross proceeds
  - d. Selling commissions = 7.5 percent of gross proceeds where gross proceeds are defined as the present value of death benefit at a hurdle rate of 8 percent
2. IEV = (Present value of death benefit – Present value of gross premiums) calculated at a risk-free rate of 5 percent
3. Gross premiums = \$20 per \$1000 of face amount
4. Taxes = 35 percent \* Present value of net proceeds where net proceeds = Face Amount
  - Annual Premium \* Number of years premiums are paid
  - LSV
  - Total Expenses
5. Profit earned by the Life Settlements company is calculated as the difference between the LEV and the sum of expenses and taxes
6. The Life Settlements profit is split into two components:
  - a. Expense profit is the profit earned on the up-front expenses, assumed to be at the Life Settlements company's 8 percent hurdle rate. This reflects the profit that needs to be earned just to cover all the transaction costs involved in a Life Settlements sale.
  - b. Risk Profit is the difference between the Total Profit and the Expense Profit.

Most of the difference between the IEV and the LSV results from the transaction costs described above.

Exhibit 8 describes the many steps in the Life Settlements transaction process:

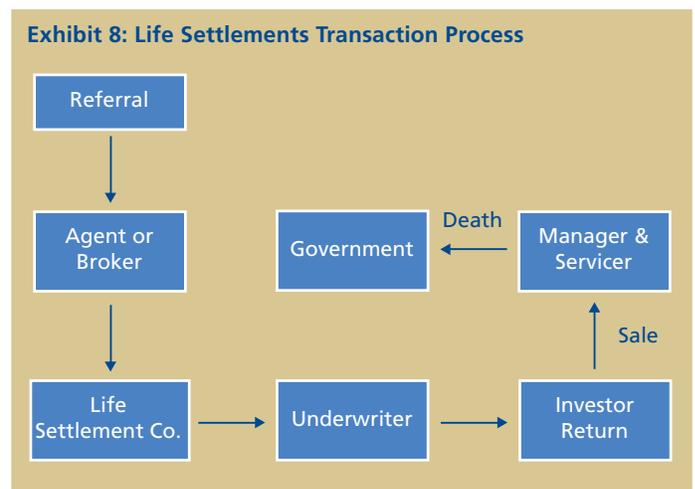


Exhibit 9 shows the results of our analysis applied to all Life Settlements sales shown in Schedule 8 of the New York Department of Insurance filings.

The results show that, on average, the IEV of policies sold is 64 percent of the face amount. Life Settlements companies paid out 20 percent of the face amount. This means that 44 percent of the face amount was lost (or not realized) due to the transaction costs (expenses, taxes and profits) involved in the Life Settlements sale. Put in another way, the LSV equal to 20 percent of the face amount represents 31 percent of the underlying IEV of the policies sold. The ratio of the IEV to the LSV of 3.2 is significantly higher than ratios shown in the Actuarial Valuation section of the study because all Life Settlements transaction costs are captured in the empirical analysis.

Exhibit 10 shows the estimated allocation of the LEV in Schedule 8 into its various components of expenses, taxes, and profits.

Some studies estimate the total value of life insurance policies held by senior citizens with impaired mortality to be as high as \$100 billion. Extrapolating from our Schedule 8 analysis, this implies that if all these policies were sold in the secondary market to Life Settlements companies, approximately \$44 billion of the IEV of \$64 billion would be lost because of the transaction costs of a Life Settlements sale.

**Exhibit 9: Summary of Schedule 8** (Dollars in 000's)

Year of Settlement	Intrinsic Economic Value (IEV)	Life Settlements Value (LSV)	Lost Economic Value (LEV)	Face Amount (FA)	Ratios		
					LEV/FA	LSV/FA	IEV/FA
2000	17,322	7,294	10,028	22,361	45%	33%	77%
2001	29,009	8,968	20,041	40,577	49%	22%	71%
2002	25,992	8,296	17,696	46,237	38%	18%	56%
2003	70,839	20,156	50,683	116,522	43%	17%	61%
<b>Total</b>	<b>143,163</b>	<b>44,714</b>	<b>98,449</b>	<b>225,697</b>	<b>44%</b>	<b>20%</b>	<b>64%</b>

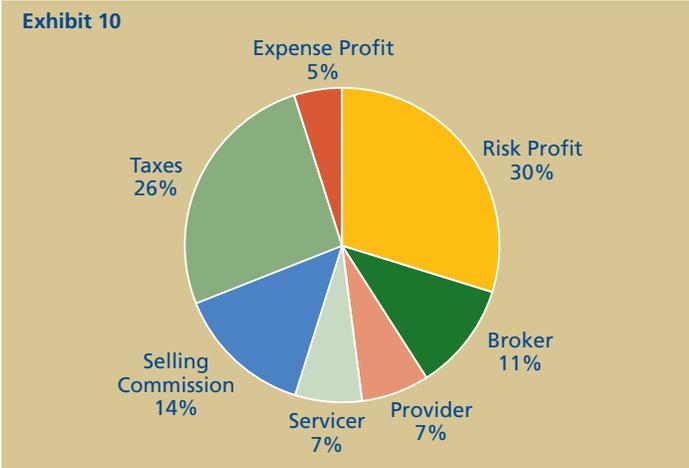


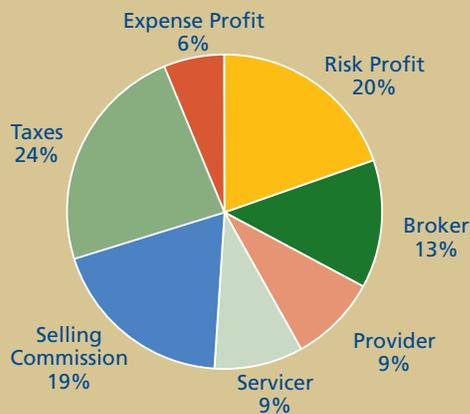
Exhibit 11 and 12 show the corresponding results for all deaths from Life Settlements sales as shown in Schedule 7 of the New York Department of Insurance filings.

Our study has shown so far, both analytically and empirically, that the inefficiency of a Life Settlements sale, as measured by the LEV, arises from the high transaction costs involved in the sale. It is interesting to compare these transaction costs with other common asset transaction costs. Exhibit 13 shows asset transaction costs measured as a percentage of the economic value of the asset.

**Exhibit 11: Summary of Schedule 7** (Dollars in 000's)

Year of Death	Intrinsic Economic Value (IEV)	Life Settlements Value (LSV)	Lost Economic Value (LEV)	Face Amount (FA)	Ratios		
					LEV/FA	LSV/FA	IEV/FA
2000	5,386	2,559	2,827	6,827	41%	37%	79%
2001	22,179	10,383	11,797	29,052	41%	36%	76%
2002	2,182	1,230	952	2,864	33%	43%	76%
2003	2,213	1,154	1,059	2,997	35%	38%	74%
<b>Total</b>	<b>31,986</b>	<b>15,325</b>	<b>16,636</b>	<b>41,740</b>	<b>40%</b>	<b>37%</b>	<b>77%</b>

**Exhibit 12**



**Exhibit 13: Comparison of Asset Transaction Costs**

Asset Type	Transaction Cost (%)
Stocks	0.01% – 1%
Bonds	1% – 2%
Mutual Funds	0% – 5%
Gold	3% – 5%
Residential Real Estate	4% – 8%
Art	10% – 15%
Life Settlements	50% – 67%

## Marketing Materials and Solicitations

One of the common assertions made in studies of the Life Settlements industry is that it targets senior citizens who are already planning to lapse or surrender their life insurance contract. The Life Settlements industry is basically stepping in to offer these policyholders an alternative that provides a larger value than the Cash Surrender Value (CSV).

To verify this assertion, we researched the majority of Web sites and marketing materials of Life Settlements companies and brokers who are members of the Viatical and Life Settlement Association of America (VLSA). In addition, we also examined several companies that were unaffiliated with the VLSA. Our research, based on a total of 27 companies, showed several common themes of marketing solicitations:

- The definition of a Life Settlements transaction
- Various reasons to sell a life insurance policy when a policyholder is impaired
- Examples of actual Life Settlements sales and comparisons of Life Settlements values with cash surrender values
- Interviews with individuals who sold their policy and how the proceeds were utilized
- The need to consult with a tax advisor on possible tax implications resulting from a Life Settlements transaction
- Questions on the performance of an individual's life insurance policy
- Materials focusing on the recruitment of Life Settlements agents
- Online policyholder surveys to determine qualifications for a Life Settlements sale

Several key themes were noticeably absent or underemphasized based on our analysis of these solicitation materials. Only one company mentioned the option of retaining a life insurance contract as a viable alternative to a Life Settlements sale when a policyholder has impaired mortality. Only two companies questioned whether the policyholder had any estate needs. Forty percent of the companies suggested using the proceeds from a Life Settlements sale to purchase a new life insurance contract. None of the companies suggesting the purchase of a new life insurance contract mentioned the need to comply with insurance replacement regulations. There were no materials that suggested having the beneficiary assume premium payments on the existing life insurance contract.

It is clearly evident from the marketing materials that, beyond lapse avoidance, multiple reasons are offered to encourage a policyholder with impaired health to sell her life insurance policy to a Life Settlements company. The typical options mentioned include using the proceeds to purchase a new life insurance contract or long-term care contract, collecting immediate cash, gifting to a family member or charity, creating funds to invest elsewhere, paying divorce costs, or reducing the insurance needed for estate taxes. Several of these options imply that the impaired policyholder has estate needs. Our analysis has demonstrated that the insurance contract is generally the highest yielding asset for an impaired policyholder and the greatest economic value is obtained by retaining the contract until death.

## Regulations and Disclosures

Currently, there are 23 states with Life Settlements laws, but no uniform regulation has been implemented for the Life Settlements industry. Both the National Conference of Insurance Legislators (NCOIL) and the National Association of Insurance Commissioners (NAIC) have model regulations currently in place.

The NCOIL Life Settlements Model Act was amended in July 2004 to include:

1. A provision requiring separate licensure to act as Life Settlements investment agent for those agents who recommend or sell Life Settlements
2. A requirement for Life Settlements brokers to complete 24 hours of pre-licensing education in life insurance, Life Settlements, and ethics, as well as continuing education on a biennium basis
3. A requirement that insurers disclose to policyholders the option of Life Settlements under certain circumstances
4. A provision prohibiting persons to enter into a sales contract if the policy were obtained by false, deceptive, or misleading means

Amendments were made in July 2004 to the NAIC Viatical Settlements Model Regulation to incorporate the following provisions:

1. Extending the existing regulation on Viaticals to include all sales of life insurance policies where the proceeds are less than the face amount
2. The verification of coverage form and a new consumer brochure
3. Allow licensed life insurance agents to serve as Life Settlements brokers without an additional license
4. Standards for the evaluation of reasonable payments to policyholders involved in a Life Settlements sale

We observe that both the NCOIL and NAIC regulations require the following:

- Existence of alternatives offered by a life insurance company, such as accelerated death benefits and policy loans
- Tax implications of a Life Settlements sale
- Possibility of adverse effects on an insured's eligibility for public assistance or government benefits such as Medicaid
- Possibility that proceeds from a Life Settlements transaction may be subject to creditor claims
- The right to rescind a Life Settlements contract within 15 days
- The amount and method of calculating a broker's compensation
- Licensing requirements for Life Settlements brokers
- Training requirements in life insurance, Life Settlements, and ethics
- Continuing education requirements for Life Settlements brokers

Both regulations provide exemptions for authorized life insurance agents on licensing, training, and continuing education requirements for Life Settlements sales.

## Limitations of Current Regulations and Disclosure Requirements

There are several important aspects surrounding disclosure and agent training requirements that both the NCOIL and NAIC fail to address in their regulations. Currently, neither the NCOIL nor the NAIC regulations explicitly state all three options available to an impaired policyholder:

1. Surrendering the contract to a life insurance company
2. Selling the contract to a Life Settlements company
3. Retaining the contract until death, as well as the various options available to keep a contract in force (e.g. having the beneficiary or trustee pay premiums, etc.)

These regulations do not require Life Settlements companies to quantify the value of retaining the life insurance contract for an impaired life, and disclosing the

Intrinsic Economic Value (IEV) and the Lost Economic Value (LEV). In addition, our research has shown that the transaction costs associated with a Life Settlements sale are significant and constitute the major component of the LEV. Current regulations do not require a detailed breakdown of these transaction costs.

If these disclosures were to be made, a policyholder with impaired health should be able to make an educated decision on the best option.

Both the NCOIL and NAIC regulations address agent licensing, training, and education in detail. However, neither of these regulations specifically requires the Life Settlements broker to be knowledgeable about the impact of a Life Settlements sale on the policyholder's estate requirements, or the suitability of a Life Settlements sale for impaired policyholders with estate needs. Furthermore, if as part of a Life Settlements sale, the broker advises and induces the policyholder to purchase another policy, the current regulations do not require that the broker comply with the NAIC Model Replacement Regulation.

It is important for insurance regulators to address these limitations because of the economic vulnerability of senior citizens who are the target market of the Life Settlements industry. Our analysis has clearly shown the value of a life insurance contract for an impaired policyholder and the magnitude of the LEV because of the transaction costs involved in a Life Settlements sale. These enhanced disclosures and training requirements will ensure that a Life Settlements broker provides suitable advice to the policyholder, and that the policyholder is capable of making an informed decision to retain or sell her life insurance contract.

## Perceived Benefits of Life Settlements Revisited

Now that we have developed an analytical framework to compare a Life Settlements sale to the two other options of surrendering a policy or retaining a policy until death, we can analyze the various perceived benefits (described earlier) of Life Settlements from an actuarial and financial perspective.

1. It introduces an organized secondary market for life insurance that otherwise would have been available only informally or from life insurance companies through the surrender of a life insurance policy.

This perception is correct and is one of the most valuable contributions made by the Life Settlements industry. This secondary market is more efficient than the existing surrender option available in the policy. However, the expected IEV of retaining the life insurance contract always exceeds the Life Settlements value.

2. It provides liquidity to a life insurance contract which is a relatively illiquid asset by itself. This could increase the value of a life insurance contract in the primary market as well.

The Life Settlements transaction does provide liquidity. The notion that this sale could increase the value of the life insurance contract in the primary market needs to be qualified further. We have demonstrated that only policyholders with no estate needs or those who have estate and liquidity needs with no other sources of liquidity would benefit from a Life Settlements sale. Otherwise, retaining a policy until death is a higher yielding investment decision for a policyholder with impaired mortality. Even when a policyholder with estate needs has no other sources of liquidity, other alternatives should be considered to preserve her life insurance contract. These alternatives could include borrowing the required funds or taking a policy loan to meet current liquidity needs and pay future premiums, or getting the beneficiary or trustee to loan some of the proceeds and assume premium payments.

While it is difficult to estimate the subset of the Life Settlements market (i.e. greater than 65, impaired mortality, large face amount policies) that has no estate needs, it is reasonable to assume that it constitutes only a fraction of the potential \$100 billion market estimated by studies on the Life Settlements industry. It is unclear whether such a small subset of the Life Settlements market that will benefit from a Life Settlements sale would have any impact on the value of a life insurance contract in the primary market.

3. The resale values offered in the secondary market for life insurance policies of people with impaired health are significantly higher than the cash surrender values of the policies.

We have demonstrated in the Actuarial Valuation section of this paper that the LSV is always greater than the CSV. However, the IEV always exceeds the LSV as well. For a proper evaluation on the merits of selling a life insurance policy in the secondary market, the IEV of retaining the contract and the LEV caused by selling the policy to a Life Settlements company should be clearly disclosed to have a balanced picture of all the options available to a policyholder with impaired health.

4. The existence of an efficient secondary market in the financial services industry could improve the economic welfare of consumers in general, as well as the value of the corresponding asset in the primary market.

This statement is true only for policyholders with impaired mortality who have no estate needs. For senior citizens with estate needs and other sources of liquidity, selling a life insurance contract in the current secondary market could mean sacrificing the most lucrative asset owned by the policyholder for only a fraction of its IEV. The impact on the value of a life insurance contract in the primary market has been discussed in point (2) above.



## Misconceptions on Lapse Experience, Pricing Techniques, and Profitability of Life Insurance Companies

This section analyzes two common misconceptions in existing literature of the Life Settlements industry:

1. Roughly 88 percent of universal life contracts do not pay a death benefit.<sup>6</sup>
2. The profitability of life insurance companies is strained by the existence of the Life Settlements industry. One study goes a step further and claims that this is the primary reason why life insurance companies oppose Life Settlements transactions.

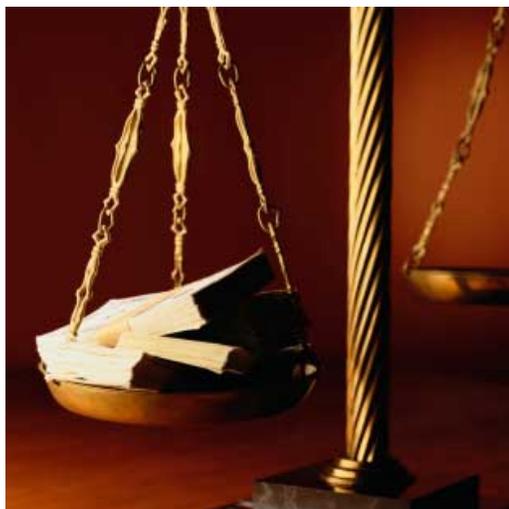
The first misconception reinforces the assertion made by the Life Settlements industry that it targets senior citizens who are planning to lapse or surrender their contract in any case. We analyzed this statistic using the male 75-80 Basic Table for mortality rates, issue age 40, and a set of representative lapse rates starting at 7 percent in duration 1 and grading down to 3 percent in durations 15 and later. Our results show that 25 percent of universal life contracts issued pay a death benefit under these assumptions. However, the relevant statistic to quote is the lapse experience of the age 65+ target market of the Life Settlements industry. Based on the fact that these policyholders tend to exhibit ultimate lapse experience of life insurance companies, we have demonstrated that more than 65 percent of this population receives a death benefit. This 65 percent includes policyholders with impaired health who are currently being targeted by the Life Settlements industry.

The second misconception arises from the claim that life insurance companies derive “economic rent” (difference between the IEV and the CSV) when a policyholder with impaired mortality lapses her contract. This “economic rent” exists because the CSV of a policy with impaired mortality is significantly smaller than its IEV. Clearly, a life insurance company will reap an economic benefit if an unhealthy policyholder chooses to lapse her policy. However, it is important to understand how underlying actuarial pricing assumptions impact a life insurance contract. Ultimately, these pricing assumptions determine the sources of profit and long-term viability of the life insurance company.

One of the key actuarial assumptions used in pricing a life insurance contract is the anticipation of lapse rates. The lapse rate assumption recognizes the anti-selective nature of lapses: healthy lives tend to lapse and unhealthy lives tend to persist.<sup>7</sup> Life insurance companies rely on their own lapse experience and industry lapse studies when determining appropriate lapse assumptions. A generally established principle of life insurance pricing is that “economic rent” is never built into a life insurance pricing model as a source of profit.

A Life Settlements transaction results in the persistency of an impaired policyholder. This generally has minimal or no impact on the anticipated profitability of a life insurance contract because the persistency of an unhealthy policyholder is precisely what is assumed at the time of original pricing. To the extent that unhealthy policyholders choose to lapse their contracts, an insurance company will reap “economic rent” over and above anticipated profits.

While there may not be a material financial impact, life insurance companies are concerned that policyholders may not receive complete information from properly trained agents on the suitability of a Life Settlements transaction. This is why current regulations and disclosure requirements should be enhanced to emphasize specialized agent training requirements to qualify as a Life Settlements agent and complete disclosures for the policyholder to determine the suitability of selling or retaining her life insurance contract.



## Conclusion

We conclude our study by identifying those who could benefit most from this analysis. This study impacts policyholders in the Life Settlements target market, beneficiaries of life insurance policies, financial advisors, insurance regulators, and the future of the Life Settlements industry.

The policyholder with impaired health could maximize her estate value if other assets are liquidated and the life insurance policy is maintained until death. The potential yield of a life insurance contract when the policyholder's health has deteriorated is so great that other creative options to preserve the contract should be explored before making any decision to sell a contract.

The beneficiary, who has a vested benefit in maintaining the life insurance contract, can help preserve a high-yielding, tax-free asset by securing funds to satisfy the liquidity needs of the policyholder or by assuming the premium payments on the life insurance policy. The return on the beneficiary's investments to preserve the life insurance contract is likely to exceed any other investment option.

Consumers and regulators can benefit from the development of better disclosure requirements for the Life Settlements industry and the requirement of more appropriate and specialized training for agents involved in Life Settlements sales. In effect, enhanced regulations can benefit life insurance agents, Life Settlements agents, and financial advisors, making them able to better educate the policyholder concerning the benefits or consequences of selling her life insurance policy. For senior citizens with impaired health who constitute the target market of the Life Settlements industry, an inappropriate decision could have severe, irreversible implications on the future estate needs of these policyholders.

The future of the Life Settlements industry is unknown. The Life Settlements industry should be given credit for creating a secondary market in an industry whose products and services are not actively traded. However, we have demonstrated in our study that this secondary market is inefficient because of the transaction costs involved in a Life Settlements sale. Our analysis has shown that for the majority of policyholders with impaired health, the greatest economic value results from retaining the contract until death. With proper education, training and disclosures, it is likely that the target market that could truly benefit from the Life Settlements industry is significantly smaller than currently perceived.

## Acknowledgments

Jay Vadiveloo, Professor and Director of the Deloitte – UConn Actuarial Center, wishes to acknowledge the following members of the research team for the several months of hard work and dedication in making this study possible:

### Faculty:

Professor Joseph Golec, Department of Finance

Professor Tom O'Brien, Chairman, Department of Finance

Professor Charles Vinsonhaler, Department of Mathematics

### Graduate Students:

Hugh Colaco, Finance

Chun Huang, Mathematics

Sudath Ranasinghe, Mathematics

Hui Shan, Mathematics

Xiumei Song, Economics

### Deloitte Consulting LLP:

John Bevaqua, Principal

Mark Charron, Principal

Maria Itteilag, Senior Consultant

Chrissy McPhaul, Consultant

Anita Sathe, Consultant

Sim Segal, Senior Manager

## End Notes

<sup>1</sup> Jim Connolly, "Single License Version of Viatical Reg Advances," National Underwriter Life & Health-Financial Services Edition, March 18, 2004.

<sup>2</sup> "Life Settlements, Additional Pressure on Life Profits," Conning Research & Consulting, Inc., 2003.

<sup>3</sup> Ibid.

<sup>4</sup> Neil A. Doherty, Hal J. Singer, "The Benefits of a Secondary Market For Life Insurance Policies," Wharton Financial Institutions Center, 2002.

<sup>5</sup> Ibid.

<sup>6</sup> Jim Connolly, "Single License Version of Viatical Reg Advances," National Underwriter Life & Health-Financial Services Edition, March 18, 2004.

<sup>7</sup> "SOA Record," Volume 24, No. 3, 1999. Faye Albert, David Bragg, and John Bragg, "Mortality Rates as a Function of Lapse Rates," March 1999 Volume 1.

## Bibliography

AMERIFIRST Fund LLC 10K 2003 Filing

Bowers et al, "Actuarial Mathematics", Society of Actuaries, 1997

Conning Research & Consulting, Inc., 2003, "Life Settlements, Additional Pressure on Life Profits".

Jim Connolly, "Single License Version of Viatical Reg Advances," National Underwriter Life & Health-Financial Services Edition, March 18, 2004.

Neil A. Doherty, Hal J. Singer, "The Benefits of a Secondary Market For Life Insurance Policies," Wharton Financial Institutions Center, 2002.

Ibbotson Associates, "Stocks, Bonds, Bills and Inflation 2004 Yearbook"

National Association of Insurance Commissioners "Viatical Settlements Model Regulation"

National Conference of Insurance Legislators "Life Settlements Model Act"

Schedules 7 & 8 of the New York Department of Insurance for calendar years 2000 – 2003

SOA Record Volume 24, No. 3, 1999. Faye Albert, David Bragg, and John Bragg, "Mortality Rates as a Function of Lapse Rates," ARCH 1999 Volume 1.

**About the University of Connecticut**

The University of Connecticut (UConn) is a prominent public research university located in the heart of the insurance industry in the United States. It has one of the oldest and most established actuarial science programs in the country, offering programs at the undergraduate, masters, and doctorate levels. UConn has been one of the leading sources of trained actuarial science practitioners for the insurance industry in the Northeast.

**About Deloitte**

In the United States, Deloitte & Touche USA LLP is the U.S. member firm of Deloitte Touche Tohmatsu, and services are provided by the subsidiaries of Deloitte & Touche USA LLP (Deloitte & Touche LLP, Deloitte Consulting LLP, Deloitte Tax LLP, and their subsidiaries) and not by Deloitte & Touche USA LLP. The subsidiaries of the U.S. member firm are among the nation's leading professional services firms, providing audit, tax, consulting, and financial advisory services through nearly 30,000 people in more than 80 cities. Known as employers of choice for innovative human resources programs, they are dedicated to helping their clients and their people excel. For more information, please visit the U.S. member firm's Web site at [www.deloitte.com/us](http://www.deloitte.com/us).

Deloitte refers to one or more of Deloitte Touche Tohmatsu, a Swiss Verein, its member firms, and their respective subsidiaries and affiliates. Deloitte Touche Tohmatsu is an organization of member firms around the world devoted to excellence in providing professional services and advice, focused on client service through a global strategy executed locally in nearly 150 countries. With access to the deep intellectual capital of 120,000 people worldwide, Deloitte delivers services in four professional areas—audit, tax, consulting, and financial advisory services—and serves more than one-half of the world's largest companies, as well as large national enterprises, public institutions, locally important clients, and successful, fast-growing global growth companies. Services are not provided by the Deloitte Touche Tohmatsu Verein, and, for regulatory and other reasons, certain member firms do not provide services in all four professional areas.

As a Swiss Verein (association), neither Deloitte Touche Tohmatsu nor any of its member firms has any liability for each other's acts or omissions. Each of the member firms is a separate and independent legal entity operating under the names "Deloitte," "Deloitte & Touche," "Deloitte Touche Tohmatsu," or other related names.