Life settlement

Yesterday, Today and Tomorrow

Jiahua (Java) Xu

November 16, 2017
Introduction to life Settlements: a Market Primer
What will you do with an unwanted and/or unaffordable life insurance policy?
Life settlement: a brief history

- 1911: Grigsby v. Russell, 1st legal case involv. life settlement
  - decision: life policy granted characteristics of private property
- 1980s: outbreak of AIDS, patients sold policies for quick bucks
  - supply: beneficiaries (usually their parents) not in need of money, funds to pay end of life expenses desired – policies not worth keeping
  - demand: short life expectancy – investment of high value
  - trading policies from the terminally ill: viatical settlement
- 1999: Coventry First LLC carried out 1st non-viatical settlement
The mechanics of life settlements

The life insurance markets

**Figure 1**: Dynamics of life insurance submarkets

1. **Primary**: **Insurers** issue policies on **insureds** to **policyholders**
2. **Secondary**: **Policyholders** sell policies to **investors**
3. **Tertiary**: **Investors** trade policies between each other
Life settlement parties

Sell side

- **Policyholders** own the policies and pay premiums to keep their policies in force.
  - can be individual, trust, or corporation.

- **Life insurance agents** advise policyholders on their choice of policy and in some cases facilitate the settlement process.

- **Life settlements brokers** find the best bid for policyholders by soliciting competing offers from as many as buyers as possible.
Buy side

- **Investors** are policy buyers.
  - can be a natural person or, more commonly, a bank or a fund who may be fronted by a special purpose vehicle.

- **Life settlements providers** negotiate the price of a policy on behalf of the investor.
Third-party service providers

- **Medical underwriters** evaluate insureds’ health conditions and forecast their life expectancies.
- **Servicers** manage premium payments and process death claims.
- **Trustees** safeguard policy-related documents and sometimes act as the legal owner of policies while investors are the legal beneficiary.
- **Tracking agents** monitor changes in insureds’ health status, track deaths and obtain death certificates so death claims may be collected.

*Note: roles can merge.*
Other stakeholders

- **Insureds**’ lives are referenced by the policies.
- **Carriers**, or insurers, are insurance companies that issue the policies.

*Figure 2: Life settlement deal flow*
Life settlement valuation

An acturial model

\[ P = -C - \pi_0 + \sum_{i=1}^{\infty} \left( (i-1)p_x - ip_x \right) \cdot DB - ip_x \cdot \pi_i \cdot \frac{(1 + IRR)^i}{(1 + IRR)^i} \]

- **P**: purchase price.
- **C**: total transaction cost including fees paid to intermediaries.
- **DB**: death benefit.
- **\( ip_x \)**: the probability that the \( x \)-year-old insured will live \( i \) periods.
- **\( \pi_i \)**: premium to be paid at time \( i \).
- **IRR**: internal rate of return (discount rate).
Figure 3: Exemplified life settlement cash flow$^1$

Shorter life expectancy $\rightarrow$ higher return

Problematics and controversies

Legal issues

- Validity of settlement \(\xrightarrow{necessitate}\) validity of policy
  - honesty at policy application
    - Stephen Keller (Kelco Inc) allegedly encouraged HIV patients to lie
  - insurable interest
    - stranger-originated life insurance policies ("STOLIs")

![Figure 4: STOLI legal cases decided](image)

### Figure 4: STOLI legal cases decided
- Manipulation of life expectancy (LE)
  - Wide variance in life expectancies
    - Midwest Medical Review issued unreasonably short LEs
- Other regulatory issues
  - security regulation
    - fractional interests in life settlement policies
    - variable universal life
  - tax law
  - privacy law
Moral and societal disputes

- Negative image: “Wagering on death”
- premium increase ← lapse rate decrease
Moral and societal disputes

- Negative image: “Wagering on death”
- premium increase $\leftarrow$ lapse rate decrease

+ 
- liquidity $\rightarrow$ demand
- scrutiny of longevity risk
Life settlement as a financial tool

From the perspective of policyholders

Usage

▶ economically a more Pareto-efficient option than lapsing
▶ removes the policy from the taxable estate

Considerations

▶ selling vs. keeping
▶ if selling, through broker, or “consumer-direct”
From the perspective of investors

Usage

- low correlation with other assets $\rightarrow$ portfolio diversification
- **theoretically** decent returns

Considerations

- open-end vs. close-end
- risks
  - longevity risk
  - premium risk
  - default risk
  - rescission risk
  - liquidity risk
  - exchange risk
  - legal and political risk
Life Settlement Outlook
Data

Life settlement market data

1. AA-Partners life settlement transaction data
2. LISA conference proceedings
**Life insurance data**

**Main data**

1. SNL Financial - U.S. Life Industry Briefing Book (from NAIC)
   - pro: representative (complete sample); up-to-date
   - con: crude

2. SOA & LIMRA - U.S. Individual Life Insurance Persistency
   - pro: relatively granular
   - con: unrepresentative (incomplete sample); obsolete

**Supporting data**

1. ACLI - Life Insurers Fact Book (from NAIC)
Life settlement landscape 1

Figure 5: Life settlement by state

Wealthy regions preferred
Life settlement landscape II

![Life settlement age distribution](image)

**Figure 6**: Life settlement age distribution

*Senior lives preferred*
Life settlement landscape III

Figure 7: Life settlement face amount distribution

*Total life settlement face in force: $100bn*
Life insurance termination

Figure 8: Annual face amount terminated 2006-2016

- Total face value terminated in 2016: $2,624bn
- Real estate market value loss each year 2007-2009: $2,325bn
**Figure 9:** Annual face amount terminated 2009-2016

1. ordinary: individual life insurance
2. group: often offered through the workplace
3. credit: primarily offered by lending companies
4. industrial: burial insurance
Total face value terminated: 1,691 billion USD

Figure 10: Face amount of ordinary life policies terminated in 2016
**Estimator of untapped life settlement market size**

Total face amount of ordinary life insurance terminated by seniors above 65: $114bn

- Not all the terminated policies within the scope worth settling (overestimation)
- Some terminated policies beyond this scope worth settling (underestimation)

**Estimator of untapped life settlement value**

$114 \times 18\% = $21bn

medicine invoice spending for long-term care$^2$: $16.7bn

---

$^2$Source: QuintilesIMS Institute (2017) Medicines Use and Spending in the U.S.
Proposal

How to capture the lost value?

Proposal: mandated secondary sale

- Sounder legal ground: not forbidding → regulating / allowing → encouraging / enforcing
- Higher efficiency: disintermediation
- Fairness: value loss through termination would otherwise be used to cover death benefits for others
  - analogous to airline overbooking

Impact on the primary life insurance industry?
## Lapse-supported pricing

### 30-year term profit present value

<table>
<thead>
<tr>
<th></th>
<th>5%</th>
<th>8%</th>
<th>11%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net Revenue</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pricing Lapse</td>
<td>912</td>
<td>872</td>
<td>12</td>
</tr>
<tr>
<td>0% Lapse</td>
<td>2,244</td>
<td>1,947</td>
<td>1,521</td>
</tr>
<tr>
<td><strong>Net Benefits</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pricing Lapse</td>
<td>(1,036)</td>
<td>(769)</td>
<td>(574)</td>
</tr>
<tr>
<td>0% Lapse</td>
<td>(4,026)</td>
<td>(2,889)</td>
<td>(2,040)</td>
</tr>
<tr>
<td><strong>Net Income</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pricing Lapse</td>
<td>(125)</td>
<td>103</td>
<td>107</td>
</tr>
<tr>
<td>0% Lapse</td>
<td>(1,782)</td>
<td>(942)</td>
<td>(520)</td>
</tr>
</tbody>
</table>

With all its potential realized, life settlement would be detrimental to the primary life insurance industry, ... 

**Figure 11:** Life insurance industry transition

... but not if insurers act accordingly (and they will).