Who Reaps the Value of Your Life?

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Abstract

Life insurance is among the most valuable assets of U.S. households, following only housing and retirement savings accounts. And yet, households regularly terminate their contracts prematurely instead of selling them in the secondary market—which they legally have the option to do—thus foregoing substantial values. A life insurance policy's worth resembles a swap's mark-to-market value, where the winning counterparty (the policyholder) routinely forgoes gains. We create a model of this market, and quantify these losses at both aggregate and household levels, highlighting their economic magnitude and disproportionate impact on vulnerable groups. Finally, we propose market-design improvements to mitigate this household financial mistake.

1 Introduction

Life insurance is one of the most widely held assets of U.S. households. S&P Capital IQ Pro (2025) reports approximately 256 million of in-force life insurance policies for 2024,[1] which are, on average, more than two per household.[2] However, year after year, life insurance policyholders forfeit significant value through premature contract terminations. In 2024 alone, more than 20 million policies, representing almost $2.2 trillion in face amount, were lapsed or surrendered (S&P Capital IQ Pro, 2025). This situation persists despite policyholders having long been able to sell life insurance contracts in the secondary market through a transaction called a life settlement. Life settlements generate significantly larger proceeds for the policyholder than lapsing or surrendering. However, up through present day, few individuals take advantage of this option.

We examine the financial consequences of the underutilization of the life settlement market and the factors preventing its broader adoption. Our research makes three key contributions to household finance. First, we quantify the economic value lost due to premature policy terminations at both the household and aggregate levels, comparing these losses to well-known benchmarks. Second, we identify the core frictions impeding market development, including search barriers on the policyholder side and high transaction costs on the investor side, which together limit market efficiency. Third, we propose market design solutions to mitigate these frictions, ultimately enabling policyholders to retain more of their policies' economic value and limiting wealth transfers to insurers and intermediaries.

An intuitive way to illustrate the foregone value in life insurance policies is to consider an analogy with swaps. In a swap agreement, two parties exchange financial obligations, and as market conditions evolve, one counterparty may find itself in a favorable position where it stands to gain from the value of the agreement. In the life insurance market, the insured effectively holds a similar position; the policy's value may increase as his or her age and health status change over time. However, unlike the typical scenario in financial markets where the winning counterparty capitalizes on their gains, many policyholders

[1] This figure does not include group life policies.

[2] The U.S. Census Bureau estimates that there were 127 million U.S. households in 2023.

in the life insurance market fail to do so. Instead, they terminate their policies prematurely, foregoing substantial value akin to a swap participant not collecting their winning position. This widespread behavior results in significant lost wealth for U.S. households.

To size the problem, we rely on an actuarial valuation model, which allows us to estimate the economic value and the surrender value of policies. We implement the model with mortality rates (Valuation Basic Table) and lapse rates from the Society of Actuaries (SOA). The SOA also publishes the market-wide distribution of death benefits for all outstanding insured cohorts characterized by gender, smoking status, issue age, and attained age of the insured. In combination with the total market size obtained from the U.S. Life Industry Briefing Book of S&P, we are thus able to estimate the economic value of for each cohort and then aggregate up to the market level.

We find that the total economic value in the U.S. individual life insurance market as of end 2024, i.e., the theoretically monetizable value of all policies to their insureds, amounts to a staggering $12.6 trillion, or 33% of the aggregate death benefit.[3] Applying the average realized termination rate to this figure, we estimate the aggregate economic value of life insurance policies foregone by households due to lapsation to be $192 billion. This equals more than double the size of the national food stamp program and more than 30 percent of the volume of Medicaid. We further determine that the median value lost by households due to premature termination equals approximately $51,500. This figure is more than twice as large as the median value lost by households due to underdiversification of their investment portfolios. Similarly, it is more than four times as large as the value lost due to suboptimal mortgage refinancings or failure to prioritize the cheapest credit option.

When further investigating the distribution of value lost across policyholder types, we find that two particularly vulnerable populations are disproportionately impacted: the elderly and the low-income sector. Both these groups have heightened reasons for needing to retain the economic value inherent in their policies. For the low-income population, a life insurance policy might represent one of the few significant assets they possess, making the potential proceeds from a secondary market sale critically important to their over-

[3] See Figure 3. In this paper, we use "death benefit", "face amount", and "face value" interchangeably.

all financial stability. Similarly, for the elderly, often facing escalating healthcare costs, the opportunity to convert the economic value of their life insurance policy into cash offers a much-needed source of funding for their consumption needs. Consequently, it is vital that these groups are aware of, and can access, the secondary life insurance market.

We identify the key impediments to a more active secondary market and formalize them through a model that captures the constraints imposed by search and transaction frictions. The model assumes that search frictions arise because many policyholders are unaware of the secondary market or fail to act due to financial inertia, preventing policies from reaching potential buyers. Transaction frictions stem from high intermediation costs and market opacity. Investors impose an upper bound on the life expectancy of policies they are willing to purchase, as life expectancy is the key value driver in this market.[4] As a result, only policies with short life expectancies and high face values tend to be transacted, while others are surrender or lapse without being monetized—an outcome consistent with the empirical state of the market. The model further shows that the upper bound on tradable life expectancies, and consequently the overall number of policies traded, depends on the extent of search and transaction costs.

As long as these frictions are excessively high, the market will remain small. Reducing search and transaction costs through a reformed market design would increase efficiency and expand market participation. To this end, we propose a set of market design solutions aimed at reducing search and transaction frictions while expanding investor participation. On the supply side, we recommend a mandatory offer requirement, ensuring that policyholders receive a secondary market bid before lapsing or surrendering their policies. On the demand side, we propose standardized pricing frameworks, backloaded fee structures tied to realized death benefits, and a centralized transaction platform to enhance transparency, lower costs, and improve liquidity.

However, even with these reforms, investor aversion to negative-carry assets and ultra-long maturity policies would still leave about 50% of currently lapsed economic value unclaimed. To address this, we advocate for a government-sponsored entity (GSE) to pool

[4]Policies with long life expectancies are unattractive because they delay the death benefit payout and require ongoing premium payments, making them less valuable investments.

life settlements and securitize cash flows, improving tradability and attracting a broader investor base. Additionally, mortality-contingent surrender values could provide policyholders with alternative liquidity options while limiting reliance on secondary market transactions. These measures collectively aim to expand the secondary market, ensure fairer value retention for policyholders, and reduce unnecessary wealth transfers to insurers and intermediaries.

We contribute to the broad literature on household financial decision-making. In this area, we extend the strand that considers typical financial mistakes made by individuals and households. These include inefficient investment behavior (see Calvet et al., 2007, 2009; Von Gaudecker, 2015; Dimmock et al., 2016; Bhamra and Uppal, 2019), the tendency to undersave (see Thaler and Benartzi, 2004; Heimer et al., 2019), the failure to refinance mortgages when it is optimal to do so (see Keys et al., 2016; Agarwal et al., 2016; Andersen et al., 2020), and the failure to prioritize the lowest-cost borrowing option (see Gross and Souleles, 2002; Telyukova and Wright, 2008; Bertrand and Morse, 2011; Agarwal et al., 2009). In the paper at hand, we emphasize a hitherto neglected problem: the failure to recognize and unlock the value of an asset that is held by every second American.[5] According to our empirical estimates, the policy solutions we that we propose could help these people retain substantial value.

Moreover, we add to the literature on the economics of aging, which is concerned with the circumstances of individuals as they progress towards retirement, as well as the macroeconomic consequences of demographic change. Lee (2014) provides a purposeful overview of the issues associated with the rapidly aging population in the U.S. over the coming decades. One key strand of research in this area focuses on the challenges involved in saving for retirement consumption, given health risk and indispensable health care expenses as a determining factor (see De Nardi et al., 2010; Poterba, 2014; Yogo, 2016; Cocco and Lopes, 2020). Another important set of studies is centered on the strain that aging populations will exert on social security and health care systems (see Zweifel, 1990; Feldstein, 2005; Galasso, 2008; Goldman and Orszag, 2014). We deliver two essential insights in this area. First, many elderly exhibit much larger retirement savings, if one

[5] According to the Insurance Information Institute, 52 percent of the U.S. population owns life insurance.

takes into account the value hidden in their life insurance policies. Second, enabling individuals to retain this value should become a priority of policymakers, because, on the aggregate level, the relief for social security and welfare programs would be substantial.

Finally, our paper connects to the literature on life settlements. So far, scholars in this area have mainly focused on the valuation of these illiquid and heterogeneous assets (see Brockett et al., 2013; Zhu and Bauer, 2013; Braun et al., 2016; Braun and Xu, 2020), the historical risk and return profile of policy portfolios (see Braun et al., 2012; Giaccotto et al., 2015), and the hedging of the inherent micro-longevity risk (see MacMinn and Zhu, 2017). Moreover, extant work has analyzed the quality of life expectancy estimates (see Bauer et al., 2018; Xu, 2020), which are a key value driver, and the welfare effects created by the secondary market for life insurance policies (see Daily et al., 2008; Hong and Seog, 2018; Fang and Wu, 2020; Fang and Kung, 2018). We add a new perspective to this literature by estimating the value lost due to the persisting underutilization of the life settlement market and by suggesting ways for improvement.

The remainder of the manuscript is structured as follows. In Section 2, we briefly discuss the institutional background for this paper, including life insurance, the secondary market, and the value proposition of life settlements to investors. Next, in Section 3, we introduce our actuarial approach, describe our data, and quantify the substantial financial loss that households experience because they lapse or surrender their contracts rather than selling them in the secondary market. We provide a comparison of this loss at both the aggregate and household levels, drawing parallels to other household finance decisions, losses incurred from the real estate crisis, and the scale of major U.S. welfare programs. Section 4 introduces our model framework with which we identify search and transaction frictions as the main causes of the market failure. In Section 5, we propose an array of policy recommendations. These aim to mitigate the issues identified in the previous sections and enhance market participation, limit unnecessary wealth transfers, and ultimately, improve the welfare of U.S. life insurance policyholders. Lastly, in Section 6, we conclude the paper.

2 Institutional background

2.1 Life insurance as a tradable asset

Life insurance is one of the oldest businesses in the world. The origins of the modern industry in the U.S. can be traced back to the 1840s (Zanjani, 2007). Today, commanding a premium volume of $624 billion, the life insurance market is one of the largest markets in America (Insurance Information Institute). Both from an economic and societal standpoint, the industry serves an important purpose: it protects households against financial hardship if their critical income contributor dies unexpectedly.

Most life insurance products follow a relatively simple pattern. In exchange for regular premium payments, the insurance company agrees to pay a lump sum benefit to a designated beneficiary upon the death of the policyholder. Depending on the health condition of the latter, such contracts may become valuable assets over time. The shorter his or her life expectancy, the closer the embedded value of the policy will be to its face value (Braun et al., 2018b).

Historically, insured individuals who were no longer in need of their life insurance coverage only had two choices. On the one hand, they could stop paying the premiums and let the policy lapse, thereby foregoing any benefits. On the other hand, they could surrender the policy to their insurance carrier, who would typically buy it at a substantial discount from its economic value. This changed with the case Grigsby v. Russell in 1911, during which the U.S. Supreme Court ruled that life insurance policies were eligible for sale (Evans et al., 2013). Consequently, life insurance policies became tradable assets, creating the potential for buyers to enter into competition with insurance carriers, thus breaking up their monopsony power.

Today, the sale of a life insurance policy in the secondary market is known as a life settlement. A life settlement involves a buyer paying the existing policyholder a lump sum, along with taking over all future premium payments for his or her life insurance policy. In exchange, the buyer receives the policy's face value upon the death of the insured (Braun et al., 2012).

2.2 Major contract types

Secondary market investors mainly target lifelong contracts such as universal life or whole life insurance, as opposed to term life insurance contracts with a fixed maturity (Braun et al., 2012). Together, these two policy types account for almost 60 percent of the primary U.S. life insurance market (American Council of Life Insurers, 2021). In contrast to whole life policies, which exhibit premiums of constant size, universal life contracts allow owners to flexibly adjust premium payments, as long as the cash account embedded in the policy shows a positive balance (Braun et al., 2018b). In the early stages of a contract, policyholders usually pay a level premium, which is higher than the cost of insurance (COI). The part of the premium that exceeds the COI accumulates to form the policy's cash balance on which the insured earns interest. Should a policyholder miss a few premium payments, the cash balance is automatically drawn down to cover the ongoing COI. Once the cash balance is fully exhausted and no further premium payments are made, the contract lapses. When policyholders surrender their policy, they receive its remaining cash value less a surrender penalty.

2.3 Life settlements from the investor perspective

The key benefit of life settlement investments to investors is diversification.[6] Insureds' mortality rates (or life expectancies) are the key driver of policy values (Braun et al., 2012, 2016). As those are primarily influenced by personal health conditions and advances in medical technology, they do not respond to market volatility, interest rates, or economic cycles. Hence, life settlements are uncorrelated with traditional asset classes, such as stocks and bonds, and with the overall performance of the economy.

We briefly illustrate this point empirically in Figure 1, which includes the market betas of different equity industry indices and that of the life settlement performance index computed by Giaccotto et al. (2015). The beta estimates are based on a regression of monthly log excess returns of each index on the monthly log excess returns of the *S&P Total Market*

[6]While attractive returns are regularly stated as a reason to invest in life settlements as well, anecdotal evidence suggests that understated life expectancies, fraud cases, and high intermediation fees regularly prevent these returns from realizing on the investor side (see Braun et al., 2018b). We will shed more light on the latter point in Section 4.

Index (TMI).[7] The period is from June 30, 2011 to July 1, 2021 and all equity data has been obtained from S&P Dow Jones Indices. The life settlement index data by Giaccotto et al. (2015) has been requested from and provided by the authors.

The index series retrieved include the *S&P U.S. Treasury Bond Index* (TB), the *S&P Total Market Index* (TMI), the *S&P Consumer Finance Index* (CF), the *S&P Real Estate Index* (RE), the *S&P United States REIT* (REIT), the *Dow Jones U.S. Oil & Gas Index* (OG), the *Dow Jones Utility Average Index* (UA), the *Dow Jones U.S. Healthcare Index* (HC), and the *S&P Insurance Select Industry Index* (ISI). The S&P Industry Indices have betas ranging from 0.624 (UA) to 1.189 (OG). In contrast, the life settlement index of Giaccotto et al. (2015) only has a low 0.067. This is why life settlements are considered an attractive diversifier.

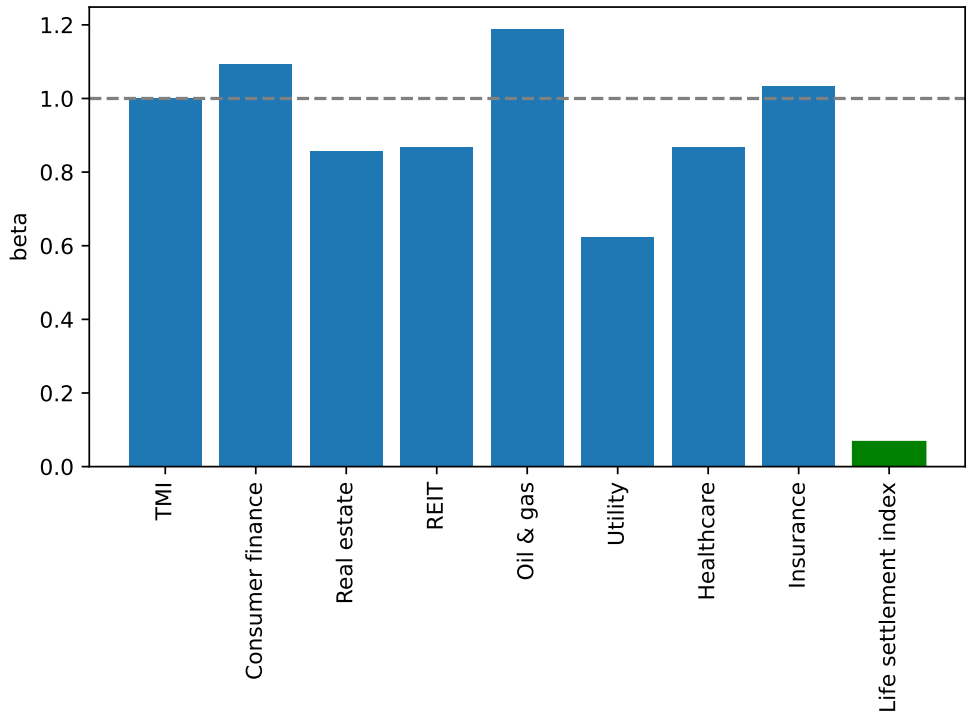


Figure 1: Betas of equity indices for different industry sectors compared with the beta of the life settlement index estimated in Giaccotto et al. (2015). Industry betas are estimated by means of bivariate regressions of the industry index excess returns on the returns of the S&P total market index (TMI).

[7] Excess returns are calculated over the S&P U.S. Treasury Bond Index.

2.4 The underdeveloped secondary market

The option to dispose of an unwanted policy should have started an active secondary life insurance market to the benefit of policyholders. However, this has not been the case until today, leaving a large inventory of assets held by U.S. households untapped. In 2024, aggregate life settlement face value amounted to $4.6 billion, less than 0.015 percent of the $34.4 trillion USD of face amount outstanding in the primary market and just slightly more than 0.25 percent of the $1.6 trillion of face amount lapsed in the same year (S&P Capital IQ Pro, 2025). Yet, the secondary market is not just astonishingly small and has been stagnating since 2019 (see Figure 2).

Not taking full advantage of the secondary market to access the value embedded in a life insurance contract implies a severe financial impairment for households that no longer need their policies. The moment the cash account is drained and policyholders stop paying premiums, the asset's value collapses on their household balance sheet. This is much different from other important assets, such as housing. Even if households stop paying off their mortgage and face foreclosure, they are still entitled to the remaining home equity. In the next section, we will estimate the cost of this blatant underdevelopment to life insurance policyholders each year.

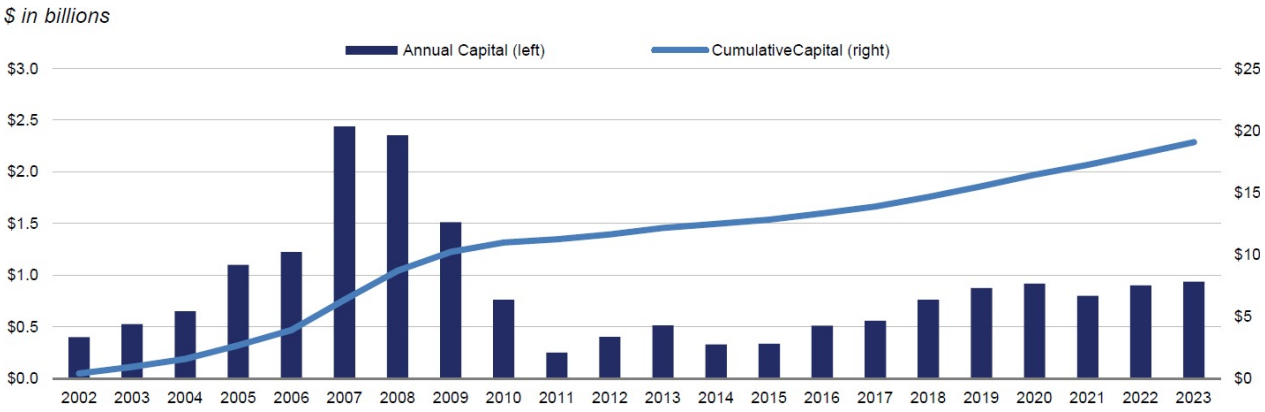


Figure 2: Life settlement committed capital (Conning, 2024)

3 Sizing the problem

3.1 Actuarial valuation model

We draw on an actuarial approach to estimate cohort-level economic values. Every insured cohort is characterized by their mortality curve $\{{}_{t|}q_x\}$ and lapse curve $\{{}_{t|}l_x\}$. x denotes the insured age at policy issuance, ${}_{t|}q_x$ is the probability of the age-x insured having died at age $x+t+1$ given their survival at $x+t$, and ${}_{t|}l_x$ is the probability of the insurance policy having been lapsed when the insured reaches $x+t+1$ given that it is in force at $x+t$. The mortality rates $\{{}_{t|}q_x\}$ of a cohort depend on its demographical traits such as gender, age and smoking status. We use ${}_tp_x$ to denote the probability that the age-x insured's policy is still in force at age $x+t$; naturally, ${}_tp_x = \begin{cases} 1, & t=0 \\ \sum_{j=0}^{t-1}(1-{}_{t|}q_x), & t \geq 1 \end{cases}$.

We use $\{{}_{t|}q_x^E\}$ to denote the estimated mortality rates of an insured cohort at issuance of the policy and $\{{}_{t|}q_x^A\}$ to denote the actual mortality rates at the time of the policy sale. We normalize the death benefits to 1 and assume that they are paid in arrears, whereas premiums are paid in advance. The present value of both the premium rate leg (PV_π^{I}) and the death benefit leg (PV_{DB}^{I}) of a cohort's insurance policy from the perspective of the insurance company (hence subscript "I") can then be computed as follows:[8]

$$PV_\pi^{\mathrm{I}} = \pi_0 + \sum_{t=1}^{\infty} \frac{\pi_t \cdot \prod_{i=-1}^{t-1}\left[(1-{}_{i|}l_x)\cdot(1-{}_{i|}q_x^E)\right]}{(1+r_t^{\mathrm{I}})^t} \tag{1}$$

$$PV_{DB}^{\mathrm{I}} = \sum_{t=1}^{\infty} \frac{{}_{t-1|}q_x^E \cdot \prod_{i=-1}^{t-2}\left[(1-{}_{i|}l_x)\cdot(1-{}_{i|}q_x^E)\right]}{(1+r_t^{\mathrm{I}})^t} \tag{2}$$

where π_t is the premium rate curve, and r_t^{I} is the statutory valuation rate.

Next, let π denote the level premium rate ($\pi_t \equiv \pi$,) such that present values of the two

[8] Note that ${}_{t|}q_x$, ${}_{t|}l_x = 0$ for $t < 0$.

legs match. Setting $PV^{\mathrm{I}}_{DB} = PV^{\mathrm{I}}_{\pi}$ and solving for π delivers:

$$\pi = \left(\sum_{t=1}^{\infty} \frac{\prod_{i=-1}^{t-2} \left[(1 - {}_{i|}l_x) \cdot (1 - {}_{i|}q^E_x) \right] \cdot {}_{t-1|}q^E_x}{(1 + r^{\mathrm{I}}_t)^t} \right) \Bigg/ \left(1 + \sum_{t=1}^{\infty} \frac{(1 - {}_{i|}q^E_x) \cdot \prod_{i=-1}^{t-1} \left[(1 - {}_{i|}l_x) \right]}{(1 + r^{\mathrm{I}}_t)^t} \right) \tag{3}$$

Similarly, let π^*_t denote a stream of variable premium rates, which ensures that the premium payment in each period offsets the death benefit. We obtain π^*_t for $t = 0, 1, 2, ..$ by setting $PV^{\mathrm{I}}_{DB} = PV^{\mathrm{I}}_{\pi}$ and rearranging:

$$\pi^*_t = \begin{cases} 0, & t = 0 \\ \frac{{}_{t-1|}q^E_x}{(1 - {}_{t-1|}l_x) \cdot (1 - {}_{t-1|}q^E_x)}, & t \geq 1 \end{cases} \tag{4}$$

π^*_t is the COI and increases with t. Insureds commonly pay the level premium π which entails front-loading. Namely, $\pi > \pi^*_t$ in the earlier periods of the insurance coverage, and $\pi < \pi^*_t$ at a later stage.

We now switch to the perspective of the insured. His age at the time when he contemplates terminating the policy is x'. The corresponding present values of the premium leg (PV^{P}_{π}) and the death benefit leg (PV^{P}_{DB}) from the perspective of the insured (hence subscript "P") can be expressed as:

$$PV^{\mathrm{P}}_{\pi} = \pi \cdot \sum_{t=0}^{\infty} \frac{{}_tp^A_{x'}}{(1 + r^{\mathrm{P}}_t)^t} \tag{5}$$

$$PV^{\mathrm{P}}_{DB} = \sum_{t=1}^{\infty} \frac{{}_{t-1}p^A_{x'} \cdot {}_{t-1|}q^a_{x'}}{(1 + r^{\mathrm{P}}_t)^t}, \tag{6}$$

where r^{P}_t denotes the insured's discount rate. Note that the insured does not factor in lapse rates. Moreover, from his or her perspective, the actual mortality rates $\{{}_{t|}q^A_{x'}\}$ enter the valuation of the policy. $PV^{\mathrm{P}}_{DB} - PV^{\mathrm{P}}_{\pi}$ equals the economic value of the policy. Equations (5) and (6) highlight the analogy to a swap: The contract exhibits a positive value from the policyholder's perspective, if $PV^{\mathrm{P}}_{DB} > PV^{\mathrm{P}}_{\pi}$.

In each period, the difference between the level premium (π) and the COI (π^*_t) is cred-

ited to the insured's interest-accruing cash account, which typically first increases and then decreases, due to front-loading (see e.g. Hendel and Lizzeri, 2003; Gottlieb and Smetters, 2021). The balance of the cash account amounts to the policy's cash surrender value CSV when insured reaches age $x' \geq x$, which can be expressed in a recursive way as:

$$CSV_t = \begin{cases} \pi, & t = 0 \\ \max\left[CSV_{t-1} + (\pi - \pi_t^*), 0\right] \cdot (1 + r^{\text{cash}}), & t \geq 1 \end{cases} \tag{7}$$

where $t = x' - x$ represents time elapsed since policy issuance, and r^{cash} denotes the cash account's interest rate. We assume that CSV is floored at 0 as long as the policy is in force (i.e. the insured does not miss a premium payment). The excess economic value (EEV) of the policy over its cash surrender value (measured in percent of face amount) thus equals:

$$EEV = \max\left(PV_{DB}^P - PV_{\pi}^P - CSV, 0\right). \tag{8}$$

3.2 Data sources

To measure EEV, we collect data from various sources. We retrieve gender-, age-, smoking status-specific mortality data from the Valuation Basic Table (VBT) issued by the Society of Actuaries (SOA, 2021b). Specifically, we assume that $\{{}_{t|}q_x^E\}$ follow VBT-01, i.e. insurers used the 2001 tables for premium setting, whereas the actual mortality rates $\{{}_{t|}q_x^A\}$ follow the latest tables VBT-15.[9] In doing so, we capture the shift in mortality rates of the insured cohorts between the policy issuance dates (assumed to be in the 2000s) and the valuation date (assumed to be post-2015). Furthermore, we retrieve gender- and age-specific lapse data $\{{}_{t|}l_x\}$ from the 2009-13 U.S. Individual Life Persistency Report of the SOA (SOA, 2019). Similarly, the distribution of policy death benefits as well as number of policies for each insured cohort ($n = 651$ cohorts in total) characterized by gender, smoking status, issue age and attained age is available in the SOA's 2009-2016 Individual Life Insurance Mortality Experience Report (SOA, 2021a). We set $r_t^{\text{I}} = 3.5\%$, $\forall t$ according to Willis (2019) and $r^{\text{cash}} = 3\%$ based on privately collected U.S. life insurance policies issued

[9] In general VBT-15 exhibit lower mortality rates than VBT-01.

in the early 2000s.

Finally, we fit a Nelson-Siegel-Svensson model to the yield curve data issued by the U.S. Treasury (2021) to obtain r_t^{P}. As life settlement returns exhibit no covariance with the broader capital market (see Figure 1), we refrain from adding a risk premium.

3.3 Estimating the EEV of all life insurance policies

From the U.S. Life Industry Briefing Book collated by S&P Capital IQ Pro (2025), we obtain the size of the current U.S. individual life insurance market in 2024, which equals $37.57 trillion in death benefit. To better grasp this number, Figure 3 compares it to the size of selected financial markets in 2024. The life insurance market is more than three times larger than the U.S. corporate bond market and amounts to about 60% of the total U.S. equity market cap.

We then draw on Equation (8) to estimate the excess economic value $0 \leq EEV_i < 1$ in percent of face value for each cohort i ($i = 1, ..., n$) characterized by age at issuance, current age, gender, and smoking status. Subsequently, we determine how much of the total death benefit in the market DB^{tot} ($37.57 trillion) corresponds to each cohort, multiply with the cohort-level EEV_i, and sum up across the $n = 651$ cohorts to obtain the total EEV^{tot} in Dollar terms:

$$EEV^{tot} = DB^{tot} \sum_{i}^{n} (w_i \cdot EEV_i), \tag{9}$$

where w_i = is the weight of cohort i in the overall market, according to the cohort distribution from SOA (2021a). We find EEV^{tot}, i.e., the hidden, monetizable value of all in-force individual policies in the U.S. life insurance market to their insureds, to be $12.56 trillion or 33% of the aggregate death benefit.

3.4 Estimating the EEV of lapsed life insurance policies

Next, we estimate the excess economic value of lapsed life insurance policies, EEV^{lap}, in 2024. To this end, we apply the average cohort-level lapsation rates $\bar{l}_i$ (in percent of face amount) to our cohort-level EEV_i estimates (in percent of face amount), multiply with the total benefit per cohort $w_i DB^{tot}$, and aggregate the resulting lapsed values across all

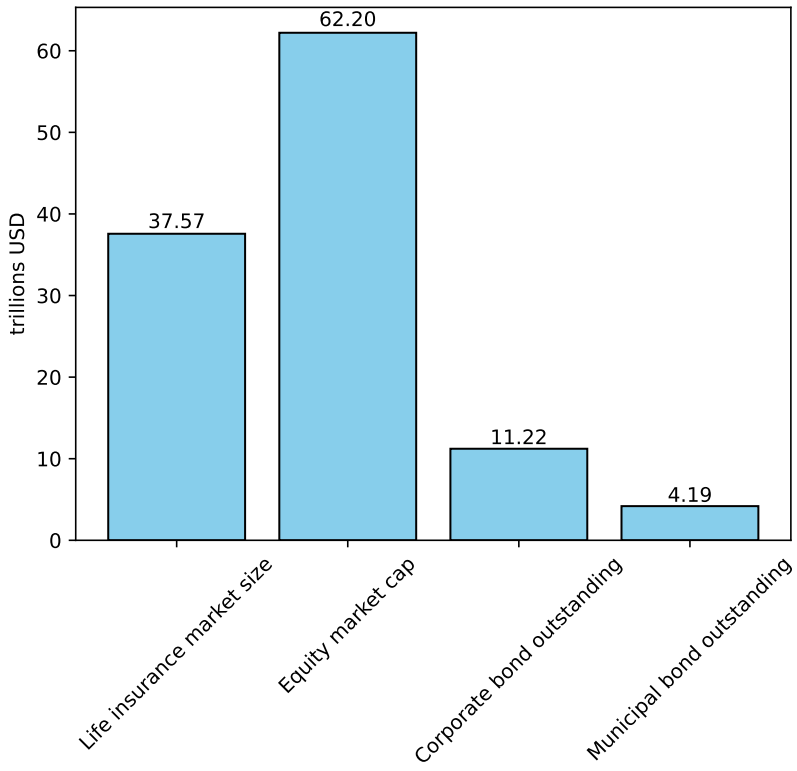


Figure 3: The 2024 U.S. individual life insurance market—retrieved from S&P Capital IQ Pro (2025)—is compared with various U.S. financial market data for year 2024—obtained from Securities Industry and Financial Markets Association (2025).

$n = 651$ cohorts:

$$EEV^{lap} = DB^{tot} \sum_{i}^{n} \left(w_i \cdot EEV_i \cdot \bar{l}_i \right), \tag{10}$$

By doing so, we arrive at an estimate for EEV^{lap} of \$192 billion. This is a lower bound for the value foregone by policyholders because it only includes lapsed policies. We do not have any information on the policies that were surrendered.

In Figure 4, we compare this number to the size of prominent national wealth transfer programs run by the U.S. government. The value transfer from policyholders to life insurance companies due to lapsation is more than twice the size of the Supplemental Nutrition Assistance Program (food stamps) of \$84 billion in 2020, and amounts to more than 20% and 30% of the 2019 Medicare and Medicaid spendings of \$799.4 and \$613.5 billion, respectively.

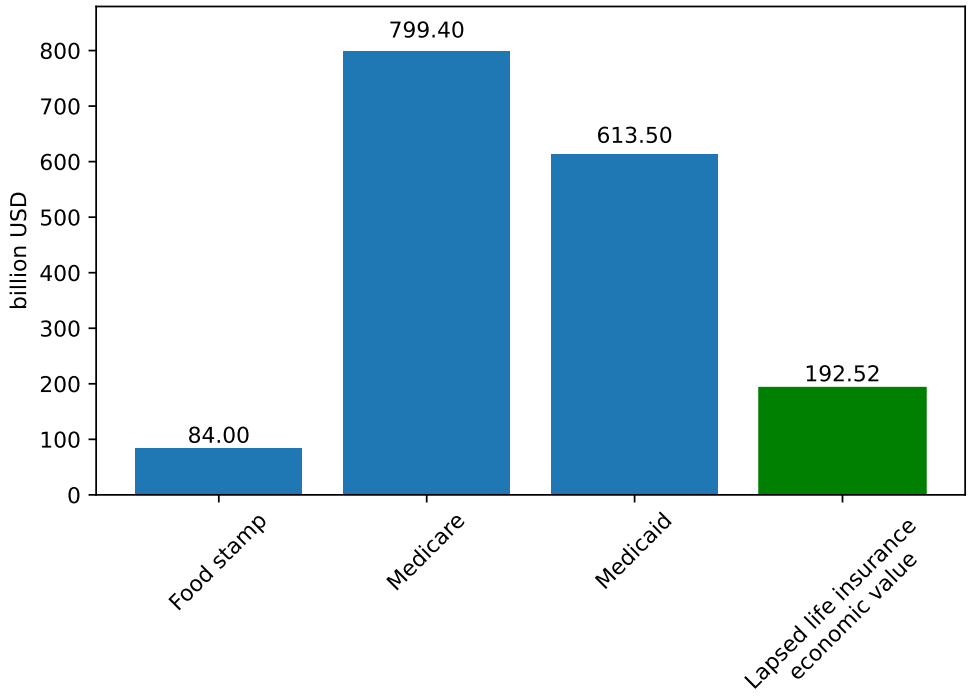


Figure 4: Wealth transfer program spendings compared with EV of lapsed insurance policies. Food stamp benefit is 2020 figure from U.S. Bureau of Labor Statistics (2021) retrieved from ALFRED. Medicare and Medicaid spendings are 2019 figures from the U.S. Centers for Medicare & Medicaid Services (CMS, 2021).

3.5 Benchmarking with suboptimal household finance decisions

We further estimate the median policy-level loss incurred due to lapsation and compare it with other losses households suffer due to various well-known financial mistakes. To this end, we divide the lapsed excess economic value in Dollars by the number of lapsed policies $npol_i \cdot \bar{l}_i$ in each cohort from SOA (2019). This delivers an estimate of the average lapsed economic value $AEEV^{lap}$ per policy for each cohort i:

$$AEEV_i^{lap} = \frac{DB^{tot} \cdot w_i \cdot EEV_i \cdot \bar{l}_i}{npol_i \cdot \bar{l}_i} = \frac{DB^{tot} \cdot w_i \cdot EEV_i}{npol_i}. \tag{11}$$

Given the distribution of these $AEEV_i^{lap}$ across the 651 cohorts, we estimate the median value of lapsed excess economic value per policy to be \$46,190. Figure 5 compares this number to the median losses suffered by households due to three common suboptimal financial decisions.

First, we calculate the annual loss of households due to their failure to prioritize the lowest-cost borrowing option based on data from Telyukova and Wright (2008).[10] Second, we include the median loss of households due to their failure to refinance mortgages from Keys et al. (2016). According to their estimates, the median household would save $160 per month over the remaining life of the mortgage, which we assume to be 25 years, for a total present value of relinquished savings of $11,500. Third, we estimate median losses due to underdiversification of investment portfolios based on data from Von Gaudecker (2015).[11] As for the mortgage case, we assume these losses to accumulate over a time period of 25 years. The resulting median value of $20,400, while notably exceeding the other two financial mistakes, is still less than half of the value that households forfeit through their failure to sell life insurance policies in the secondary market instead of prematurely terminating them.

3.6 Relevance for the elderly population

Among lapsed policies, those from senior policyholders embed the highest economic value due to the their relatively short life expectancy. At the same time, the elderly simultaneously face from two sources of financial distress: reduced income and increased health expenditure. Consumer expenditure surveys show that, people use an increasingly larger proportion of their income to cover healthcare costs as they age, from 3.2% for those below 25, to 16.1% for those aged 75 or older (see Figure 6). Unlocking the embedded economic value of life insurance is thus even more meaningful for senior policyholders because it can help to finance their growing healthcare and nursing expenses.

[10] Telyukova and Wright (2008) examine the credit card debt puzzle: with credit card interest rates at 14%, and bank account interest rates lingering around 1-2%, the question that arises is—why don't these households use their bank assets to decrease their more costly credit card debt?

[11] Von Gaudecker (2015) use the return loss, as defined by Calvet et al. (2007), as a comprehensive benchmark to measure a household's suboptimal investment decisions. Return loss is essentially the foregone expected return a household misses out on by not choosing a portfolio on the efficient frontier. In a graphical context, the return loss can be visualized as the vertical gap between the location of a household's actual portfolio and the efficient frontier, representing optimal portfolio choices at each level of risk.

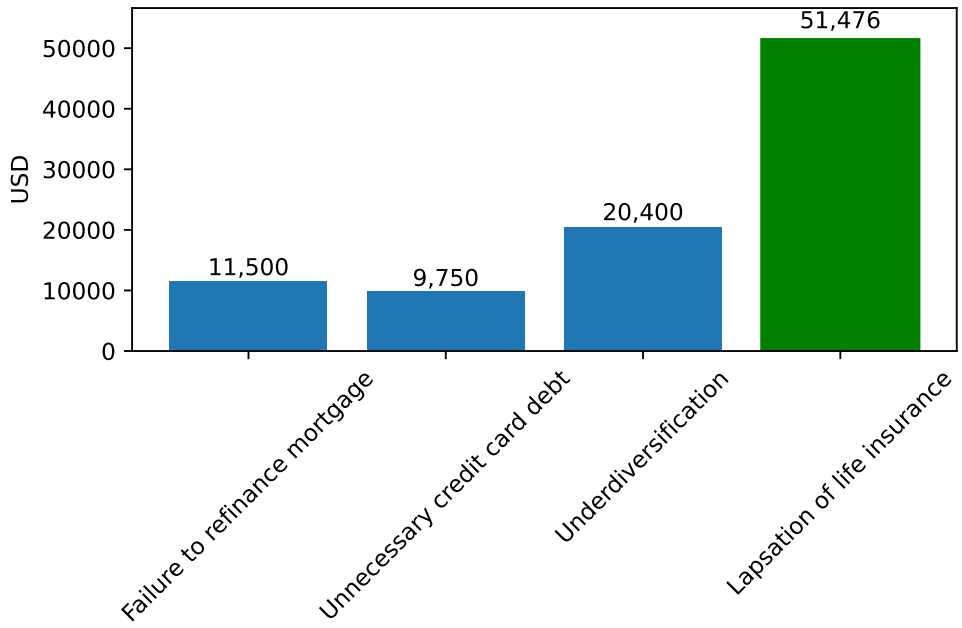


Figure 5: Median loss due to various financial mistakes made by household compared with that of policy lapsation. Median household loss due to *failure to refinance mortgage* is quoted from Keys et al. (2016); annual loss due to unnecessary credit card debt is calculated based on data from Telyukova and Wright (2008); annual loss due to underdiversification of investment portfolio is calculated based on data from Von Gaudecker (2015) and Pew Research Center (2020). For losses due to using credit card debt and due to underdiversification, we assume the loss to be accumulated for a period of 25 years.

3.7 Relevance for the low-income population

We further uncover an important, yet troubling, aspect of the life settlement market's current state, most vividly displayed in Figure 7: the disproportionate financial impact on the low-income population. The figure illuminates that for this demographic, the cash surrender value of life insurance policies makes up a larger share of their total household wealth compared to wealthier households. When these policyholders, many of whom are already economically vulnerable, lapse or surrender their policies without considering the secondary market, they inadvertently forfeit a significant portion of their limited wealth. Figure 7 underscores the urgency for meaningful market reforms to help these policyholders retain more of their hard-earned wealth and enhance their financial resilience.

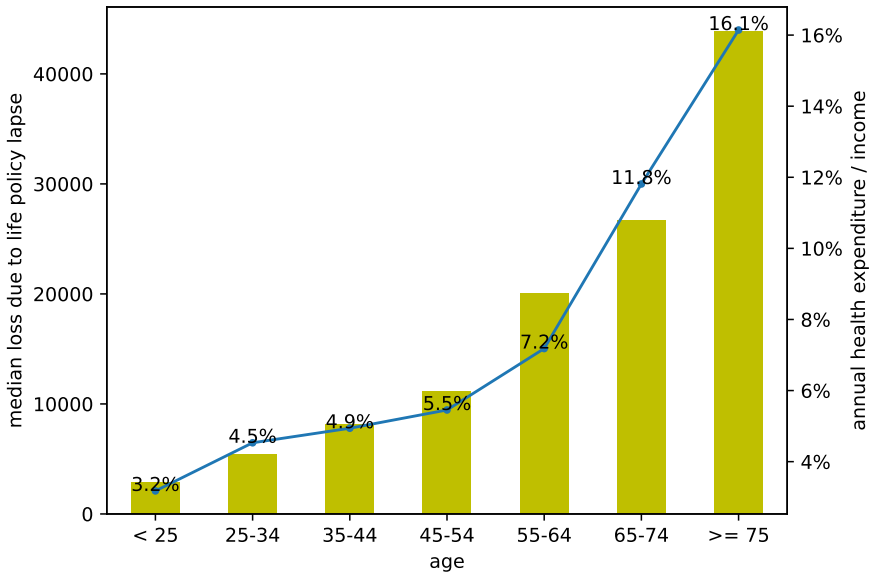


Figure 6: Annual health spending as a fraction of income by age. Health spending data are extracted from *Expenditures: Healthcare by Age*, and income data from *Consumer Unit Characteristics: Income After Taxes by Age*. Both data series are from Consumer Expenditure Surveys conducted by U.S. Bureau of Labor Statistics (2021), retrieved from ALFRED.

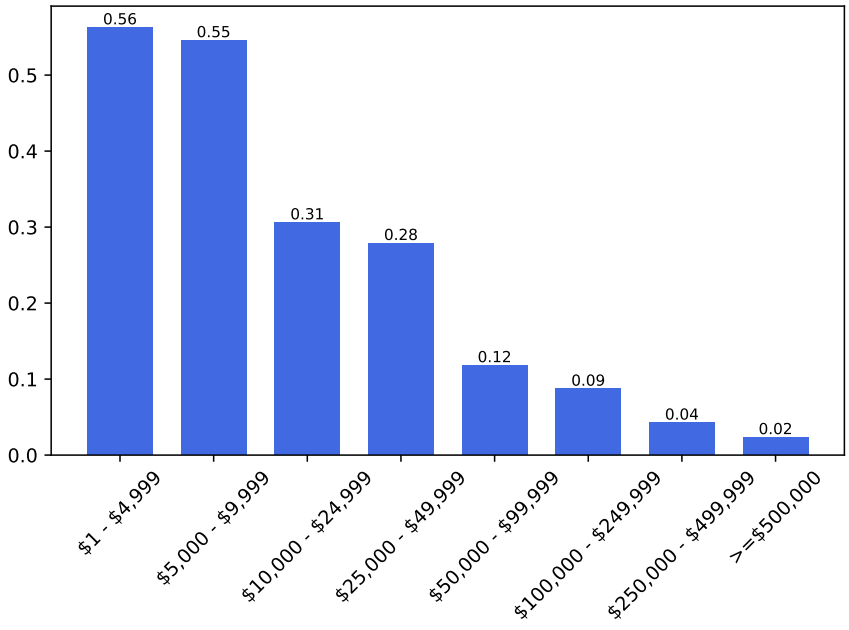


Figure 7: Cash value of life insurance as a fraction of household net wealth. We use the data from column *Net Worth* to divide data from column *Cash Value Life Insurance* of the table *Median Value of Assets for Households, by Type of Asset Owned and Selected Characteristics: 2019* to arrive at the ratio of each household net worth bin. Data retrieved from U.S. Census Bureau (2021).

4 The role of frictions

We conjecture that the main factors restraining the potential of the life settlement market are search costs and transaction costs. The former originate from the policy supply side and are driven by a lack of awareness and by inertia, a typical issue in household finance (Samuelson and Zeckhauser, 1988). To date, most policyholders do not recognize that life insurance policies are tradable assets and may contain substantial value, which can be accessed before the death of the insured (Braun et al., 2018b). Transaction costs are driven by market opacity[12] and triple intermediation. Policyholders seeking to sell their contracts are represented by brokers who negotiate with life settlement providers. The latter then transfer the policies to funds that manage portfolios on behalf of investors (Braun et al., 2012). The opaque and fragmented nature of the secondary market precludes investors' access to transparent pricing information and allows intermediaries to charge excessive fees. Braun et al. (2018b) estimate that sales commissions and third-party fees for life settlements can absorb up to almost 70 of a policy's economic value.[13]

Below, we develop a parsimonious model framework to underline how these frictions impact market equilibrium and allocations. Consider n heterogeneous life insurance policyholders pending premature termination of their contracts. The policyholders can either sell their policies to an investor in the secondary market or surrender them to their insurer. There is no information asymmetry between the insurer and the investor and no valuation risk: both know the economic value of the policy with certainty. There is also no strategic behavior by the insurer: it always offers the cash surrender value for a policy.

Consistent with our empirical analysis in Section 3, we focus on excess economic values. The economic value EEV_i of a policy i in excess of its cash surrender value CSV_i depends on the death benefit DB_i of the policy and the life expectancy LE_i of the insured

[12] There is extensive anecdotal evidence for cases in which investors where defrauded by life settlement providers or fund managers, exploiting the asset class' opacity through dubious disclosure and accounting practices. A typical problem, e.g., is the systematic and significant understatement of life expectancies for the purpose of artificially inflating portfolio values (Braun et al., 2012, 2016).

[13] We attempt an own estimation of the total value lost in transaction costs in the Appendix.

person, and cannot be negative (see Equation (8)):

$$EEV_i(DB_i, LE_i) \geq 0. \tag{12}$$

Let p_i denote the price the investor offers for policy i, in excess of cash surrender value. $\vec{p} = (p_1, p_2, ..., p_n)$ is the vector of all excess prices for the n policies. Apart from the excess purchase price p_i, the investor incurs costs c, driven by the search and transaction frictions. c is constant across policies. The investor aims to maximize its profit by offering the lowest possible excess purchase prices p_i and thus faces the following constrained optimization problem:

$$\max_{\vec{p}} \quad \sum_{i=1}^{n} [EEV_i - c - p_i] \quad s.t. \qquad (IN)$$

$$EEV_i - c \geq p_i \qquad (PC)$$

$$p_i \geq p_i^{\min} \qquad (IC).$$

The target function (IN) implies that the frictional costs c are ultimately borne by the investor. (PC) is the participation constraint, which ensures that the investor will not buy policies if he expects to make a loss. This creates an upper bound for the excess price, given by the excess economic value left after the frictional costs c. Finally, (IC) is the intermediary constraint, which captures the fact that the policyholders' interests are represented by brokers that will only channel policies to the investor if the excess price is above a threshold $p_i^{\min}$. We model this threshold as a fraction $\alpha \in (0,1)$ of the policy's death benefit, reflecting the brokers' negotiating power (Braun et al., 2018a):

$$p_i^{\min} = \alpha \cdot DB_i. \tag{13}$$

At the very minimum, $p_i^{\min}$ must be the cash surrender value offered by the insurer: $p_i^{\min} \geq CSV_i$. In reality, however, it is usually substantially higher than that.

To add structure, let EEV_i adhere to the following function of DB_i, CSV_i and LE_i,

including a mortality coefficient k:[14]

$$EEV_i = \frac{DB_i - CSV_i}{1 + k \cdot LE_i}. \tag{14}$$

with $\frac{\partial EEV_i}{\partial DB_i} > 0$ and $\frac{\partial EEV_i}{\partial LE_i} < 0$. For $LE_i \to \infty$, $EEV_i \to 0$. For $LE_i = 0$, $EEV_i = DB_i - CSV_i$. These properties of EEV_i are consistent with both theoretical and empirical life settlement values (see Braun and Xu, 2020).

We can now examine the impact of the frictional costs on the market outcome.

Lemma 1 *In the presence of substantial transaction and search frictions, only policies with a low life expectancy are purchased in the secondary market.*

Proof. Consider any policy i, insert the function for EEV_i from Equation (14) into (PC), and slightly rearrange to obtain

$$\frac{DB_i - CSV_i}{1 + k \cdot LE_i} - p_i - c \geq 0. \tag{15}$$

Substituting $p_i = p_i^{\min}$ (as (IC) is binding) and rearranging yields:

$$LE_i \leq \frac{DB_i - CSV_i - p_i^{\min} - c}{k \cdot (p_i^{\min} + c)}. \tag{16}$$

It is straightforward to see that the right hand side reflects an upper bound $LE_i^{\max}$ on LE_i above which the policy will not be transacted in the secondary market. This cap inversely depends on c such that high frictional costs lead to low life expectancies of traded policies:

$$\frac{\partial LE_i^{\max}}{\partial c} = -\frac{DB_i - CSV_i}{k \cdot (c + \alpha \cdot DB_i)^2} < 0. \tag{17}$$

■

Corollary 1 *Higher face values will relax the upper bound on LE_i that determines whether a policy will be transacted in the secondary market.*

[14] $k < 1$ implies health impairments that lead to a substandard life expectancy.

Proof. Insert Equation (13) into Equation (16) to express the upper bound for LE_i, $LE_i^{\max}$, as a function of DB_i:

$$LE_i^{\max} = \frac{DB_i - CSV_i - \alpha \cdot DB_i - c}{k \cdot (\alpha \cdot DB + c)}. \tag{18}$$

Form the partial derivative of $LE_i^{\max}$ with respect of DB_i:

$$\frac{\partial LE_i^{\max}}{\partial DB_i} = \frac{c + \alpha \cdot CSV_i}{k \cdot (c + \alpha \cdot DB_i)^2} > 0. \tag{19}$$

■

Lemma 2 *The presence of frictional costs limits the size of the secondary market.*

Proof. Since higher frictional costs decrease the upper bound for LE_i (see Lemma 1), they will automatically reduce the total number of policies that can be traded for any given distribution of life expectancies in the secondary market. ■

Lemma 1, **Corollary 1**, and **Lemma 2** are consistent with the empirical state of the market, where we see small volumes (see Section 2) and only policies with short life expectancies and high face values being transacted (see, e.g., Xu, 2020). These results suggest that frictional costs are indeed too large. If a reformed market design could lower the search and transaction frictions driving c, the upper bound on the life expectancy could become less binding and investors would consider purchasing more policies.

5 Potential market design solutions

5.1 Mandatory offer for secondary sale

On the policy supply side, we identified search cost frictions as the main reasons for the atrophied secondary market. These issues can be tackled through simple policy reform, ensuring that life insurance holders receive an offer from potential third-party buyers before their contracts can be lapsed or surrendered.

For example, a mandatory contractual provision that automatically places a contract in the secondary market when it is threatened to be terminated would help households monetize the associated value. Such a liquidity-enhancing provision would also make life insurance products more attractive in general. Mandating policies to be offered for secondary sale circumvents the monopsony problem faced by policyholders who are unaware of the life settlement market.

Meanwhile, some states have begun to adopt laws that point in a similar direction. Georgia forbids carriers from penalizing insurance agents for assisting policyholders to lawfully secure policy benefits. Florida stipulates that carriers suggest policyholders to consult professionals before making a change to their policy.[15] Similarly, California demands that insurance carriers should not "make any false or misleading statement for the purpose of dissuading an owner or insured from a lawful life settlement contract" or "unreasonably delay effecting change of ownership or beneficiary with any life settlement contract [...]."[16] Such laws help to increase awareness of the secondary market and may pave the way for a mandated offer for secondary sale regime in the future. Colorado forbids carriers from penalizing insurance agents for assisting policyholders to lawfully secure policy benefits.[17]

5.2 Standardized Pricing and Valuation Frameworks

A key impediment to a more efficient secondary life insurance market is the absence of standardized pricing methodologies, leading to opaque valuations and inconsistencies across transactions (Braun et al., 2016; Braun and Xu, 2020). To address this, the adoption of industry-wide actuarial valuation standards is necessary, ensuring that all policies are priced using uniform mortality and discount rate assumptions. Regulators could mandate that all life settlement transactions disclose key valuation parameters, such as expected mortality rates and projected cash flows, allowing both policyholders and investors to assess policy values more accurately.

[15] Florida Statute 626.99292.
[16] California Insurance Code Section 10113.3.
[17] See Bill 971345.

5.3 Backloaded Fee Structures Based on Realized Death Benefits

Excessive intermediation fees significantly erode the economic value that policyholders can extract from their life insurance policies. Brokers, settlement providers, and investment funds often charge high upfront commissions, typically based on the policy's estimated valuation at the time of sale, rather than the actual realized death benefit. This structure incentivizes intermediaries to maximize transaction volumes rather than long-term value creation. A more effective approach would be for regulators to mandate a backloaded fee structure, where compensation is tied to the realized death benefit instead of pure valuation gains at the time of sale. This would better align intermediaries' incentives with those of policyholders and investors, encouraging more accurate life expectancy assessments and reducing aggressive pricing distortions. By ensuring that fees are linked to actual outcomes rather than speculative valuations, this measure would promote a more transparent and fair secondary market while still allowing intermediaries to be compensated for their role in facilitating transactions.

5.4 Centralized Transaction Platform

The fragmented nature of the secondary market, where brokers and life settlement providers dominate transactions, contributes to high search and transaction costs, as well as inefficient price discovery. A centralized transaction platform, similar to TRACE in the bond market, could facilitate direct interactions between policyholders and investors, improving liquidity and competition. Implementing an electronic auction-based marketplace, where investors bid on life settlements in a standardized format, would increase price transparency and reduce reliance on costly intermediaries. Such a system would also allow regulators to monitor transactions more effectively, ensuring compliance with fair pricing standards and reducing the risk of exploitative pricing practices.

5.5 Government-Sponsored Entity

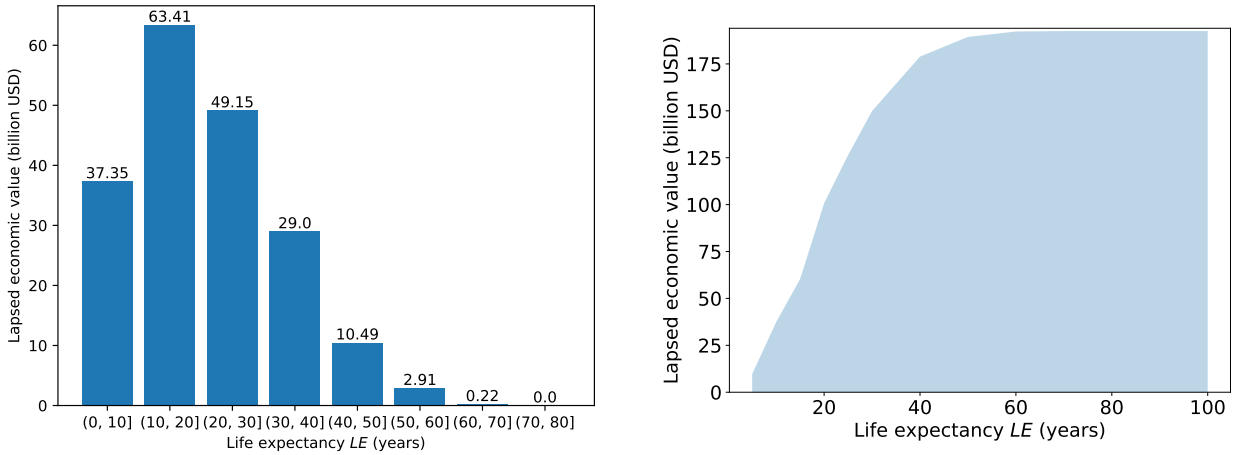
Even if transaction cost frictions are fully removed, a significant limitation will persist: investors exhibit a strong aversion to ultra-long maturities. Empirical evidence from fixed-

income markets suggests that a 20-year horizon is the upper bound for most institutional investors, beyond which liquidity concerns become prohibitive. Given our estimations, this constraint would still leave approximately 50% of the currently lapsed economic value unutilized (Figure 8).

To address this, a government-sponsored entity (GSE) could be established to pool life settlements and securitize their cash flows through time and risk tranching. By constructing portfolios that mix shorter and longer life expectancy (LE) policies, the entity could create tranches with different durations and risk-return profiles, attracting a broader range of investors. In Figure 9, we calculate the IRRs of a market portfolio, that is, the different types (differentiated by issuance age, gender, current age, smoking status etc) of insurance policies included in the portfolio would be proportionate what appear in the entire life insurance market.

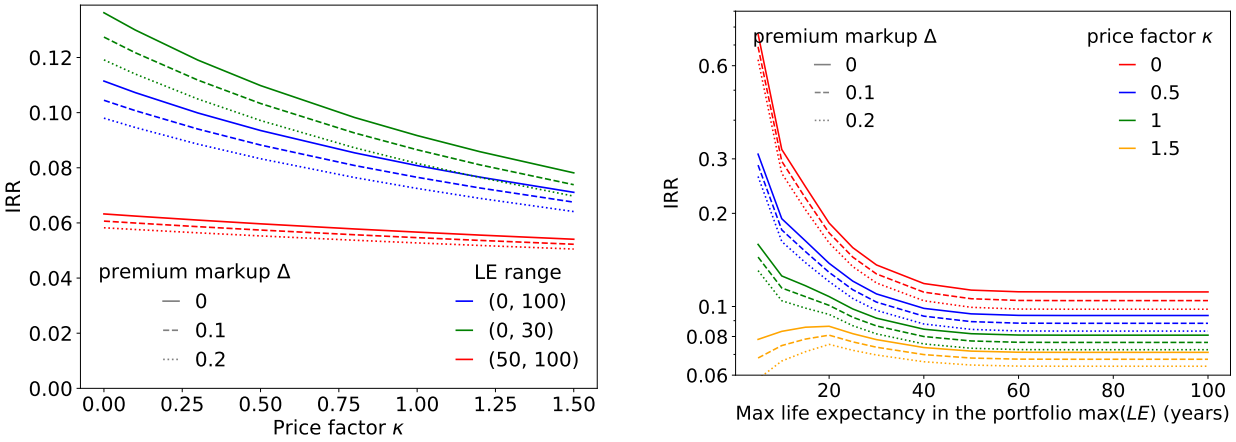
Such a structured approach could also provide enhanced tradability by issuing securities in a 144A bond format, akin to catastrophe bonds, which would facilitate secondary market transactions. Beyond improving liquidity, a GSE would substantially drive standardization and transparency in the market, setting clear pricing methodologies, disclosure requirements, and transaction protocols. This model is not unprecedented — GSEs such as Fannie Mae and Freddie Mac already play a similar role in the mortgage market, channeling private capital into housing finance. Applying this framework to life settlements would enable more efficient capital allocation, allowing households to unlock greater value from their policies while fostering a more liquid, standardized, and investable market for long-duration assets.

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(a) (b)

Figure 8: Histogram (a) and CDF (b) of lapsed life insurance value economic value. This figure illustrates the aggregate value of EEV of lapsed life insurance policies per life expectancy (LE) bin as calculated with Equation (10). LE is calculated using VBT15 assuming average health condition (i.e. mortality multiplier = 1).



(a) (b)

Figure 9: IRR of market portfolio based on the composition of life insurance policies by LE range, premium markup Δ, or price factor κ.

5.6 Mortality-contingent surrender values

Mortality-contingent monetization can be an alternative to a secondary sale. There are life insurance products with partial-to-full monetization features such as accelerated death benefits (ADB), carrier buyback, and enhanced cash surrender value, all being quasi "add-ons" that require morbidity-contingent nonforfeiture valuation. While most of these insurance products are subject to additional charges, ADB for terminally ill is usually attached as a free rider to a life insurance policy. It often comes in the form of a slightly discounted death benefits paid to the terminally ill, who can cash out to fund their treatment (Evans et al., 2013).

Carriers can also compete against life settlement investors by offering a fair surrender value. Their direct participation in secondary sales would increase market liquidity and efficiency. It is likely that own buy backs would be preferable to them, since in-force policies owned by investors cause ongoing operational costs. In addition, carriers should have a cost advantage over third-party purchasers because they can simply retire a policy without having to maintain it and thereby incurring servicing fees.

5.7 Consequences for lapse-supported pricing

Our proposed market design reforms would have general equilibrium implications because insurers rely on lapse-supported pricing. Lapse-supported pricing means that insurance carriers set competitively low premiums to gain market share, expecting that they will not have to disburse some of the death benefits (Gottlieb and Smetters, 2021). The idea is that the firms may at least break even on the transaction, should their assumptions regarding termination and mortality be accurate. Therefore, realized policy termination rates are a key driver of insurer profitability.

Carriers who extensively employ lapse-supported pricing are vulnerable to the unanticipated persistency of policies from individuals with impaired health and below-average life expectancies (Bakos and Parankirinathan, 2006). Exactly those contracts are attractive for life settlement investors. Consequently, The secondary market creates an adverse selection problem, implying that "bad risks" remain on the insurers' books. Gottlieb and

Smetters (2021) estimate a negative profit margin of -12.8% for life insurance carriers in the absence of policy lapsation.

We argue that the current reliance of insurers on lapse-supported pricing does not stand against a reform of the secondary market. That part of the insurers' net income attributable to gains from premature termination represents a covert value transfer from policyholders to shareholders. Owing to the zero-sum nature of the insurance business, policy terminators have surrendered valuable assets to "assist" insurance companies in achieving their current level of profitability. Lapse-supported pricing therefore leads to unjust wealth redistribution. Peer subsidization is a fundamental concept of insurance: through pooling, the fortunate support the unfortunate. With lapse-supported pricing, however, ill and senior policyholders — the unfortunate, who terminate their valuable policies that would otherwise benefit their estate — become the subsidizers of the competitively low premiums of other policyholders (Atmeh, 2011)

6 Conclusion

This paper is a comprehensive analysis of the size and root causes of untapped economic value hidden U.S. life insurance policies. We find that life insurance, an asset held by the vast majority of American households, regularly sees its economic value unrealized due to deficiencies of the secondary market. The financial magnitude of this loss, as we have demonstrated, is significant on both the household and the aggregate level and is particularly problematic for vulnerable groups such as the elderly and low-income parts of the population.

Upon turning to the market dynamics, we identified several supply- and demand-side factors contributing to this situation, with search and transaction frictions playing prominent roles. The current state of the life settlement market has led to an unfortunate and substantial redistribution of wealth from policyholders to insurance companies and intermediaries. This wealth transfer raises critical societal questions. Given that the vast majority of Americans hold life insurance policies, it is not an isolated issue affecting a small subset of the population but a widespread concern with extensive ramifications.

Moreover, the sheer scale of the problem underscores the imperative for immediate action. It necessitates comprehensive changes in market-design to ensure policyholders can fully realize the potential value of their life insurance policies.

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A Appendix

Quantifying Life Settlement Transaction Costs

As conjectured by our theory, a major demand-side impediment to a proper development of the life settlement market are transaction costs. Below we attempt to quantify these costs. In the absence of extant empirical evidence on the effect of fees on values received on the investor end, we run our own estimates. We compute the total broker fee (in Dollars) as the lower of 30% of policy death benefit, or 8% of policy EEV (see Braun et al., 2018a). Furthermore, we estimate the value consumed by management fees as the sum of the discounted future annual expected net asset values times an annual charge of 1.5%. Similarly, the absolute value lost through performance fees is calculated as the present value of future annual expected net asset value increases times an annual charge of 10%. The percentages for management and performance fee are based on industry sources and public information (see e.g. Colva Capital, 2023).

We project the future expected net asset values and their changes by means of our actuarial model. From the investor's perspective, the expected net asset value $\mathbb{E}[NAV_t]$ at any future time $t \geq 0$ equals the discounted expected net cash flows from the policy:

$$\mathbb{E}[NAV_t] = \frac{{}_{t-1|}q_x^A \cdot \prod_{i=-1}^{t-2}(1 - {}_{i|}q_x^A)}{(1 + r_t^{\text{insured}})^t} - \frac{\pi \cdot \prod_{i=-1}^{t-1}(1 - {}_{i|}q_x^A)}{(1 + r_t^{\text{insured}})^t}. \tag{20}$$

The expected net cash flow at each time t is the difference between the expected death benefit payout and the expected premium expenses, where the expectations are calculated with our actuarial mortality rates.

Naturally, the value of the policy and consequently our NAV estimate increases with the passage of time, due to the decreasing total expected premiums to paid and the decreasing expected time needed to receive the death benefit. Conditioned on insured's survival to time t, the following one-year change in the NAV Δ_t^{NAV}, i.e., from time $t-1$ to time t equals:

$$\Delta_t^{NAV} = \frac{(1 + r_t^{\text{insured}})^t \cdot \mathbb{E}[NAV_t]}{\prod_{i=-1}^{t-1}(1 - {}_{i|}q_{x'}^A)} - \frac{(1 + r_{t-1}^{\text{insured}})^{t-1} \cdot \mathbb{E}[NAV_{t-1}]}{\prod_{i=-1}^{t-2}(1 - {}_{i|}q_{x'}^A)} \tag{21}$$

The results of our estimation for the impact of the fees on the value reaching investors in expectation is displayed in Figure 10. The left bar reflects the $12.56 trillion of total monetizable value of all in-force individual policies in the U.S. life insurance market to their insureds. Given typical life settlement prices, the lump sums that policyholders would receive from this value amounts to $4.33 trillion. In addition, to represent the sell side in the respective transactions, brokers would collect $1.86 trillion in up-front fees. Thus, after life settlements approximately half of the pre-transaction excess economic value is left ($6.38 trillion). This value, however, is then entirely consumed by the management fees ($6.76 trillion) and performance fees ($1.16 trillion) of the life settlement fund managers, leaving investors with a negative expected profit.

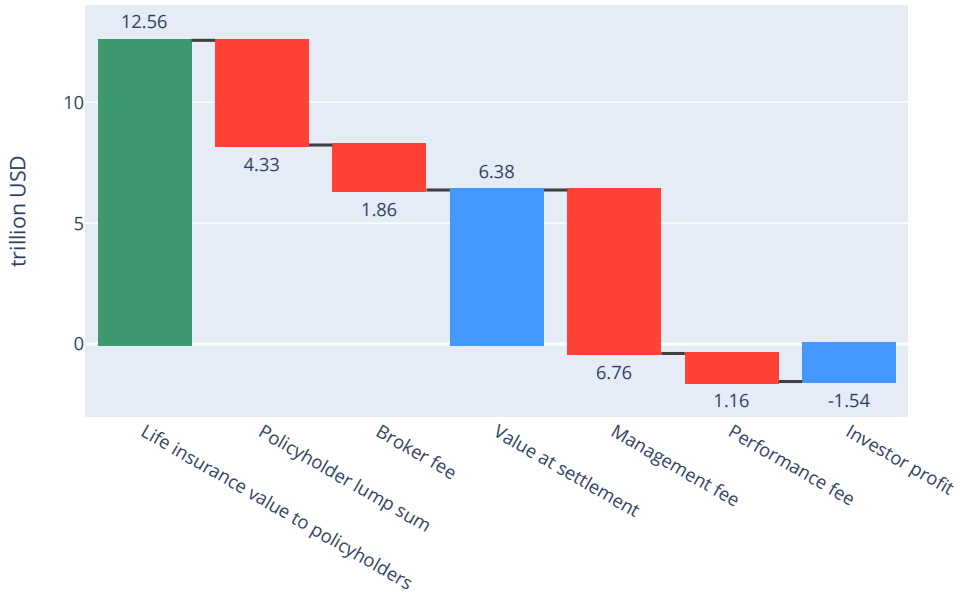


Figure 10: Investors' profit after transaction cost and various intermediary costs. Total broker fee is calculated as the lower of 30% of policy death benefit, or 8% of policy EV (see Braun et al., 2018a). The management and performance fee estimates in percentage terms are from industry sources as well public information (see e.g. Colva Capital, 2023). The absolute value consumed by management fees is calculated as the present value of the future annual expected net asset values times a charge of 1.5% p.a. Similarly, the performance fee is the present value of future annual expected net asset value increases times a performance charge of 10% p.a. Future NAVs and their changes have been estimated in line with Equations (20) and (21), respectively.