Life Settlements and Longevity Structures

Pricing and Risk Management

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Introduction

by Con Keating

The proverb usually attributed to Benjamin Franklin that "*In this world nothing can be said to be certain, except death and taxes*" is apposite in the context of life assurance and offers some cold comfort from the uncertainty and financial market turmoil of recent times. As trust broke down, the very role of bank "inside money", in resolving the questions of uncertainty central to exchange in financial markets, came to be questioned. With volatility in financial markets surging to unprecedented levels, financial risk management for most assets became more black art than quantitative science. The mutual dependence of so many financial asset prices upon a common international liquidity became painfully evident with prices moving in near total lock-step; diversification, the workhorse of sound risk and investment management, has recently proved to be a very elusive concept in practice – and its value all the higher.

The search for investment assets that are not highly dependent upon the vagaries of the "animal spirits" evident in traditional financial markets is now more important than ever. Unfortunately the alternative investment world of hedge funds and private equity has proved disappointing to many; perhaps this should not have been a surprise given their dependence on credit from their prime brokers and bankers when executing their chosen investment strategies.

The essential risk process in any individual's life assurance policy is, of course, independent of the course of financial events. People live and die according to the natural rhythms of their life-cycles, unrelated to the performance of financial markets. Life settlements satisfy *the* primary requirement for risk diversification to be present and enduring.

It is important to realize, however, that some elements of the life assurance contract are affected by financial conditions more generally, and that complete independence of performance in consequence is not to be expected. For example, there is the obvious role of interest rates in discounting cash flows – as rates decline, this discount process results in higher present values for the cash flows expected under the policy, and vice versa. Indeed, as returns available elsewhere in financial markets vary, so the relative attraction of life settlements will co-vary and with that their quoted and traded prices.

The credit standing of the insurance company that has written the policy is a central issue, and of course also not entirely independent of the state of other financial markets. But it should nevertheless be noted that the recent much publicised difficulties of a few companies in the

insurance world do seem to have arisen more from their forays into financial engineering than from their traditional insurance activities. The principal liquidity route to bank insolvency, the depositor run, is of course not a relevant concern for insurance companies.

There has always been a strange ambivalence evident to the development of secondary markets in life assurance policies. Often precisely those people who advocate the use of life assurance in personal life-cycle financial management resist inchoately the development of secondary markets. For some this may cynically be viewed as preservation of the status quo and their profitability; poor surrender value and uncompetitive markets go far in enhancing insurance company profits and the remuneration of their managements. For others, however, it appears little more than some social taboo associated with death. Notwithstanding that resistance, the life settlements market in the USA is hardly recognizable when compared to the mid-1990s; the growth is quite remarkable, and seems likely to continue.

A particular problem for this market, and one that has delayed or slowed its development, has been the absence of a single authoritative source of description and analysis. The life settlements market has also widely adopted and adapted techniques more familiar in capital markets and actuarial science; the diverse professional backgrounds of the authors of this book are particularly relevant in this context. The ambition of the book is to provide that single authoritative introductory source to life settlements, together with an elementary explanation of the financial techniques in use in this market, while remaining accessible to a broad readership.

The US insurance market has a unique character which arises in part from its state by state authorization, regulation and supervision. Against this background it is most useful to have the historic development of these products and markets outlined, together with some discussion of the principal issues surrounding this development. Chapter 1 addresses this history and the practices that have developed over time, and ends with a synopsis of the principal legal issues; this sets the institutional and contractual scene within which the modelling and analysis of subsequent chapters is framed.

Readers are introduced in Chapter 2 to the elementary mathematics of mortality and survival. The analogous relationship between credit, default and corporate survival is exploited supplying motivation for many of the models subsequently discussed. Somewhat irreverently, the difference between human and corporate mortality was once described to me as being "largely the extent to which resurrection is possible and credible". Certainly one of the more intriguing analytical aspects of credit risk insurance is the extent to which the likelihood of default and/or the magnitude of recovery post-default can be influenced by the active intervention of the insurer. This, of course, is largely a question of the corporate insolvency laws applicable within a particular jurisdiction to life settlements which is outside the scope of this book. However, it should be remembered that their legal status is not identical: both have the rights of individuals but their responsibilities differ, which some argue was a contributing factor to the incentive distortions that inflated the credit crunch.

Chapter 2 ends with a discussion of transaction rating. The role and relevance of ratings agencies, or statistical ratings organizations (SROs) as they are more formally known, has been the subject of much debate recently and indeed there are proposals extant from, among many others, the European Commission (EC) to introduce regulation. The urge to regulate in the wake of any series of financial problems is entirely understandable, but of course the history of the world has long been littered with instances of regulation written in haste which subsequently caused mayhem themselves. The financial economists' roundtable (FER) has recently produced a considered paper which sees the need for three types of reform and whose

proposals are worth reproducing here in their entirety as this blueprint for regulation is clearly superior to that advanced by the EC:

> *First, FER supports strategies designed to improve SRO incentives by increasing the transparency of their modelling practices and holding their managements accountable for negligent ratings errors.*
>
> *Second, the FER challenges the wisdom of incorporating SRO ratings in securities and banking regulations issued by governmental entities. By outsourcing public authority to private firms, this practice intensifies the conflicts of interest that SRO personnel must resolve.*
>
> *Finally, to acknowledge differences in the degree of leverage that is embedded in different issues of securitized debt, FER recommends that SROs be required to state an express margin for error in their ratings for every tranche of securitized instruments.*

If nothing else, these proposals may serve as useful measures and metrics for the likely efficacy of any regulations ultimately adopted.

Chapter 3 is most ambitious in scope and complexity, but introduces complex subjects with simple vanilla products and models. The distinction between securitizations and structured products is important, and is often overlooked by other commentators. The need for error estimates associated with model forecasts, contained also in the last sentence of the above FER statement on ratings, should be a salutary caution for all when journeying into the land of financial models. Rather more generally, George Box offered the observation that: *"Essentially, all models are wrong, but some are useful*." The November 2008 Financial Reporting Council consultation paper entitled *Modelling* is recommended to those interested in the broader detail of the evaluation of model construction, robustness and fitness for purpose.

It is refreshing to see the introduction of complex and newer areas of financial modelling such as neural networks and levy processes, although, in the spirit of William of Ockham, it should be recognized that complexity is not usually a virtue in a model. Indeed with many models, one should be questioning in the formal mathematical sense the very existence of the statistic or parameter being estimated; never more was this true than with the recent major market equity index volatilities of 60%, 70% and 80%. Put rather simplistically, with volatility this high and unstable, it is reasonable to question whether the variance of the distributions is well defined. We should not lose sight of one of the overarching principles of stochastic control systems: simplicity is a virtue and is often a prerequisite for effective control – something that does not yet appear to have percolated through broadly to the financial risk regulatory authorities.

Chapter 4 illustrates some commonly utilized investment structures for life settlements and focuses attention upon differences in their financial risk aspects. In offering this introduction I feel that I can use this opportunity to make a few brief but general points about risk and risk management in a financial context. Many commentators have recently compared financial risk management to gambling, although this is badly misguided. With a game of chance we can specify ahead of the gamble all possible outcomes and assign probabilities to them. This is the mathematics of closed systems and the principal theorems of academic finance – Arrow-Debreu and Lucas's rational expectations – are of this fixed point closed system form. The reality is that we cannot specify all future possible outcomes, let alone assign probabilities to them; this is the land of open systems with far greater complexity than a casino. In only too many cases in financial risk management are closed system models applied in the wrong circumstances, but with life settlements or mortality risk more generally we are not faced

by such open system risk management concerns – unless immortality becomes a realistic prospect. Indeed the effect of the time value of money is to limit the effect of mortality risk on current values.

The discussions of Chapters 5 and 6 – which are centred respectively on capital market mechanisms for the limitation of the risks of life settlements portfolios and the use of life settlement portfolios in mitigating the risks of traditional capital market instruments – are some of the strengths of this book. More often than not life settlements are first encountered in one of these settings.

The newest area of development in mortality and longevity analysis and risk management has been the development of derivatives which have, as their underlying, these risk factors. While there has undoubtedly been much discussion of these techniques and instruments, there is, to date, little evidence of their use in the execution of commercial business. However, going forward, if the obvious counterparty credit exposure concerns can be remedied, it is clear that these techniques have applications far broader than just life settlements.

The final chapter is concerned with hedging and risk management and includes methods for the evaluation of hedging effectiveness. This latter aspect is rather important. If we take nothing else away from the credit crisis, it should be that credit risk did not diversify as the rating agency models implied – and of course the similarity between credit "risk" and longevity "risk" is more than passing.

1

Life Insurance: Primary and Secondary Markets

INTRODUCTION

This chapter explores the background to the development of the market for life settlements – the sale of life insurance policies to financial investors. It describes the parties involved in a typical life settlement transaction and the associated process. It concludes with a review of some of the legal and practical issues associated with life settlements.

1.1 HISTORY, APPLICATION AND TERMINATION OF LIFE INSURANCE POLICIES

1.1.1 History: Early Life Insurance

Risk protection has been a primary goal of humans and institutions throughout history. Protecting against risk is the reason for insurance. One of the first records of life insurance was in Rome, where burial clubs were formed, known as *Fratres*. These clubs were set up by the poor to pay for the funerals of their members and to help the surviving family members financially.

Following the fall of Rome most types of insurance were abandoned. Around 450 AD, guilds began to be established for the various types of highly skilled trades. Accounts from that date suggest that these guilds helped their members with various types of insurance, including life and disability.

Insurance in Asia can be traced back to the Vedas, the oldest sacred texts of Hinduism. For instance, Yogakshema, the name of Life Insurance Corporation of India's corporate headquarters, is derived from references within the Rigveda, one of the texts. It is suggested that a form of "community insurance" was prevalent in India around 1000 BC, practised by the Aryans.

1.1.2 Modern Insurance

Illegal almost everywhere else in Europe, life insurance came into its own in England, where it was vigorously promoted in the late seventeenth century. During this time, insurance began to be transacted at Edward Lloyd's Coffee House in Tower Street, London, where ship owners and underwriters (known as "backers") met to put together insurance contracts and other shipping and merchant-related business.

While serving as a means of risk avoidance, life insurance also appealed strongly to the gambling instincts of England's burgeoning middle class. Gambling was so rampant that when newspapers published names of prominent people who were seriously ill, bets were placed at Lloyd's Coffee House on their anticipated dates of death. Reacting against such practices, 79 merchant underwriters broke away in 1769 and two years later formed a "New Lloyd's Coffee House" that became known as the "real Lloyd's". Making wagers on people's deaths ceased in 1774 when Parliament forbade the practice in the Life Insurance Act of that same year.

Slightly more tolerably – as one assumes they had at least some vested interest in the survival of the individuals in question – those same gamblers had made use of mortality information drawn from John Graunt's *Observations on the Bills of Mortality*[1] (published in 1662) to bet on the survival rates of those captains to whom they entrusted their ships. The tables published in Graunt's book are often cited as the first recorded example of a population mortality table and his work led to his election as a Fellow of the Royal Society – no mean feat for a haberdasher, at a time when those engaged in trade were largely ignored by this august body.

Life insurance is not gambling, but its development has spurred the growth of the mathematical science of probability. Today this science has been refined through actuarial studies and has become the foundation of pricing technology for credit default swaps (CDSs).

1.1.3 Insurance Moves to America

The US insurance industry was built on the British model. The year 1732 saw the birth of the first insurance company in the American colonies in Charleston, South Carolina, providing fire insurance. In 1759, the Presbyterian Synods in Philadelphia and New York sponsored the creation of the Corporation for Relief of Poor and Distressed Widows and Children of Presbyterian Ministers – the first life insurance corporation in America established for the benefit of ministers and their dependents. The first recorded issue of a life insurance policy for the general public in the United States occurred in Philadelphia, on 22 May 1761.

1.1.4 Summary

Life insurance was originally dominated by the mutual life insurance companies – companies owned by their policyholders, who therefore received a pro rata share of the company's profits from underwriting life insurance. Similar to the mutual life insurance companies were fraternal life insurance companies, which were started by the various trade associations and fraternal orders to assist their members, the first example being the Ancient Order of United Workmen, organized in 1868 in Meadville, Pennsylvania (Zelizer, 1983). These should be distinguished from stock life insurance companies where the profits are made for the benefit of the stockholders.

Today life insurance has become a major industry across the globe, with many different types of policies available for the consumer and offered by a multitude of insurance carriers. However, most development of structured life insurance products has been driven by the US market, primarily owing to its size. By the end of 2007, total life insurance coverage in the USA reached US$19.5 trillion, including corporate and individual cover (ACLI, 2008).

Companies such as Lloyd's have been keeping statistics on life expectancies since the late nineteenth century. Actuarial estimation of life expectancies in the general population has therefore become a very exact science. The challenge for an investor is to apply this science to the much smaller populations involved in life settlements.

[1] The full title being "Natural and Political OBSERVATIONS Mentioned in a following INDEX, and made upon the Bills of Mortality". The Bills of Mortality published a list of deaths in London and surrounding areas, including cause of death. They were created by Charles II and his civil servants to provide an early warning system for the onset and spread of bubonic plague – Graunt used them to generate a statistically based estimation of the population of London.

1.1.5 Applications of Life Insurance

An individual might have several reasons for taking out a life insurance policy on his or her life. Examples of these reasons include:

(1) to provide financial support to dependents in the event of the early death of the breadwinner;
(2) to pay for funeral expenses, death and/or inheritance taxes;
(3) to facilitate other financial contracts – for example, many mortgage lenders require that a life insurance policy be taken out as a precondition to a mortgage loan;
(4) to provide compensation for the disruption to a business in the event of the death of a senior employee or director (known as "key man" insurance); and
(5) as a means of saving (often tied to retirement).

The reason for taking out life insurance will often drive the selection of the type of policy. Some policy types will be appropriate for one situation but not for another. For example, a policy that pays out only on death is appropriate for (2) above whereas a policy that pays out at a certain age, if the insured survives to that age, is appropriate for (5) above. Similarly, a term life policy (under which the policy terminates with no payment if the insured lives longer than the specified term) might be appropriate for (3) above but is unlikely to provide appropriate cover for (1) or (4).

With the spread of company-sponsored and private pension schemes, insurance to provide coverage for dependents (item (1) above) is now often part of a pension scheme and may also be included in the benefits package offered by some employers.

1.1.6 The Parties Involved in a Life Insurance Policy

Several parties are involved in the issue and maintenance of a life insurance policy and each has different roles, responsibilities and interests in the process.

The *owner* of a life insurance policy (also described as the *policyholder*) is the person responsible for making premium payments under that policy. This person is often – but not always – the same as the *insured*, the individual whose life is the subject of the life insurance policy. On occasion, the owner of a life insurance policy may be a trust or a corporation (a so-called "non-natural person"), which is typically the case in policies issued for retirement or tax planning and, of course, for "key man" policies which are usually owned by the employer company.

There may be more than one person insured under a life insurance policy (see "Life Insurance Products and Underwriting" below for a discussion of "first-to-die" and "second-to-die" policies). There will also be at least one (and potentially more than one) *beneficiary*. The beneficiary receives the payout on the policy if it matures through the death of the insured(s) during the prescribed term. The owner has the right to designate the beneficiary of the policy and to change the beneficiary at any time. The company that has issued the life insurance policy is referred to as the *carrier* or the *insurer*. As life insurance is heavily regulated in most jurisdictions, the carrier will need to be licensed to issue life insurance in the relevant territory. In the United States, a carrier wishing to underwrite life insurance throughout the nation will require licensing in each of the fifty states and Washington DC as well as territories such as Puerto Rico.

In many cases – certainly in the case of "traditional" life insurance policies – the owner and the insured will be the same person and the beneficiary or beneficiaries will be dependents of the owner/insured. It is also possible for the owner and the beneficiary to be the same

person – for example, where the dependent son takes out a life insurance policy on his parent in order to meet funeral expenses or where a company takes out a life insurance policy on several of its key employees. It is theoretically possible for the same person to be owner, insured and beneficiary under a life insurance policy, but this is rarely seen. It is, however, important to remember that the same person may play two roles in respect of a life insurance policy, as will be seen when considering the process involved in a life settlement.

1.1.7 Life Insurance and Life Assurance

In the United Kingdom, insurance market participants may refer to "life assurance" – not a term that exists in the United States. *Assurance* policies are designed to provide a payout upon the occurrence of an event which is certain, but where the timing is uncertain – hence the term "life assurance", as death is a certainty but the timing of death is uncertain. By contrast, *insurance* policies are designed to provide a payout upon the occurrence of an event which is uncertain, for example, buildings insurance or contents insurance where it is not certain that your house will collapse or that you will suffer a loss as a result of fire, flood or burglary. In this book we will refer to insurance policies throughout – the distinction between assurance and insurance being irrelevant to life settlements, securitization and/or derivatives.

1.1.8 Termination and Surrender of Life Insurance Policies

There are many reasons why the owner of a life insurance policy may find that policy surplus to requirements. The owner may have taken out insurance in relation to a house purchase or his or her own business. At a later date the policy may no longer be required: the house may have been sold, or the related mortgage loan paid down as the owner's income rose; dependents may have grown up or the insured's marriage may have broken down; a company may have evolved to a point where "key man" insurance is no longer appropriate; or the owner may be seriously ill and may need to realize investments to pay for medical expenses. A variety of reasons can exist for selling an asset and – except to the extent that the insured's state of health affects the value – these reasons should be irrelevant to the calculation of that sale price.

Until recently (the late 1980s), the only option was to surrender the policy to the life insurance company. This involves returning the policy to the carrier – literally, surrendering the right to receive payments under the policy – in exchange for a cash payment, known as the *cash surrender value*. Calculation of this cash surrender value is based upon the specific terms of the policy, but it will certainly depend upon the total amount of premiums paid into that policy since inception (among other factors). The cash surrender value may, in some cases, be zero (if, for example, the policy has only recently been issued and it is therefore subject to high surrender penalties). The cash surrender value will **not** take account of the health status of the insured; its calculation is prescribed in the policy document and the carrier is required to treat all owners of the same policy equally. This goes some way towards explaining why cash surrender values are low. Because the carrier cannot take into account the health status of the insured in calculating the cash surrender value, it must be conservative and therefore assume that it has given up a significant asset – the right to receive ongoing premium payments for many years to come – in exchange for being released from an insignificant liability such as the obligation to pay out the net death benefit at some date, potentially many years in the future. Simply discounting the respective asset and liability flows will show why it is rational for the carrier to be reluctant to surrender the right to receive those ongoing premium payments.

While the carrier is proscribed from incorporating current insured health status in the calculation of its cash surrender values, third parties are not so proscribed. Accordingly, in the late 1980s early 1990s, investors began to consider the risks and rewards of owning life insurance policies and found the returns to be highly significant, even on a risk-adjusted basis – as we will see when we look at the development of the viatical and life settlements markets later.

1.2 LIFE INSURANCE POLICY TYPES AND UNDERWRITING

There are several types of life insurance products that may feature in a secondary market transaction. The type of product is usually more relevant to physical transactions (such as the sale of legal and beneficial interest in a policy through a life settlement) rather than a derivative transaction (such as the assumption of longevity risk through an index swap, of which more later). The purchase of a physical policy exposes the buyer to all of the terms and conditions of ownership of that policy (including, for example, the risk that the carrier defaults upon its obligations under the policy), whereas the majority of derivative contracts focus more on the transfer of longevity risk as we will see in later chapters. It is important to note that very rarely are any two life insurance products created equally. Carriers have a vast range of policy options available, and as the design of a life insurance product is not usually based upon ease of access to the secondary market, it is vital to review the terms of each policy in detail before making a buying decision.

Policies can be divided into *permanent insurance* and *term insurance*. Permanent insurance policies continue for the duration of the insured's life (subject to a contractual maturity date, generally after what would be the insured's 100th birthday). Permanent insurance policies generally accrue a cash value. Payout of the accumulated cash value is assured at the end of the policy, and as long as the policy is kept in force the carrier pays out the contractual death benefit upon the death of the insured and retains the accumulated cash value. Term insurance, by contrast, only pays out the death benefit in the event that the insured dies during the specified term of the policy, and no cash value accrues to the owner. It is often possible to convert term insurance into permanent insurance, by following a procedure laid out in the policy document.

Policies can also be divided into *participating* and *non-participating*. A participating policy allows the policyholder to share in the carrier's surplus – the policy owner receives a dividend representing that portion of the carrier's premium income that is not needed to cover death benefit payments, additions to reserves or administrative expenses. It is very similar to participating in the carrier's investment returns. The vast majority of individual life policies purchased today are non-participating policies.[2]

1.2.1 Universal Life

Universal life policies are a type of permanent life insurance and are usually, but not always, non-participating. Universal life policies account for over 95% of the life insurance policies transacted in the life settlements markets and represent the majority of in-force life insurance policies in the United States (ACLI, 2008). Universal life policies can be described as combining a savings account (which we refer to here as the *cash account*) with a life insurance policy.

[2] 79% of individual life policies purchased in 2007 were non-participating (see Life Insurers Fact Book, 2008).

At this time, we should introduce a concept that may be new to those not experienced with life insurance terms – the *cost of insurance*, or "COI". Generally, the owner of a life insurance policy will describe the cost of that policy in terms of the amount of premium that he or she pays to the carrier, be it annual, semi-annual, quarterly or monthly. The uninitiated might assume, with some justification, that this premium is to compensate the carrier for agreeing to pay the net death benefit upon the death of the insured – indeed, the amount of the first year's premium payment is often the deciding factor when it comes to selecting the carrier for a new life insurance policy. In the case of a universal life policy, however, the premium is paid into the cash account and that cash account balance (the *account value*) then attracts interest at a given rate (the *current crediting rate*). The current crediting rate is set by the carrier based upon the performance of its investments, which, in the case of universal life policies, are usually long-term fixed interest assets, e.g., higher rated corporate and government debt instruments. The carrier then debits the cash account to meet expenses, typically an administrative charge on each premium payment and further monthly charges to meet the cost of maintaining and administering the policy. The carrier also debits the cash account with the COI – a specified amount of money that reflects the mortality risk assumed by the carrier (i.e. the risk that the insured dies earlier than the carrier expected, causing the carrier to lose money on the policy). For this reason, in calculating required premium payments, the carrier will apply the COI to the *net amount at risk* – the amount by which the contractual death benefit payment exceeds the account value that has been built up in the policy. The higher the account value, the less the carrier has at risk (as the carrier retains all of the account value upon the death of the insured). The distinction between premium payments and the cost of insurance is critical to the correct evaluation and pricing of a policy for a prospective life settlement, for reasons that will be explained in subsequent chapters.

We referred earlier to the cash surrender value of the policy, being the amount that a carrier will typically pay out were the owner to surrender the policy. The cash surrender value of a universal life policy is always less than or equal to the account value (it may be reduced by the amount of any *surrender charges* that are applied to the policy). Carriers typically impose surrender charges on newly issued policies during the first few years of issue (potentially as long as 15 years, depending upon the product). These surrender charges are imposed to offset the costs incurred by the carrier in issuing the policy – processing the application, underwriting the insured(s) and paying commission to the *producer* (the life insurance agent who introduced the new owner/insured to the carrier).

Universal life policies typically have a *policy maturity date*, which is defined by reference to the date on which the policy was first issued (the *policy issue date*). The policy maturity date is typically the first anniversary of the policy issue date (a *policy anniversary*) after the insured's 100th birthday. Policies issued before 2001 will occasionally have an earlier maturity date – for example, the policy anniversary after the insured's 99th, 97th, 95th or even 90th birthday.[3] If the insured survives beyond the policy maturity date, coverage under a universal life policy typically ceases, and after this time the carrier may be obliged to make no payment on the death of the insured, or may only pay out the cash surrender value.

The amount paid by the carrier upon the death of the insured depends on the terms of the policy. It may be a fixed amount (referred to as *level death benefit*) or a variable amount. If

[3] Insurance carriers have gradually migrated from the 1956 mortality tables to the 2001 mortality tables. The 1956 tables have much higher levels of expected mortality in earlier durations than the 2001 tables, so policies issued before the introduction of the 2001 tables generally set a maturity date well before the insured's 100th birthday as the tables assumed that the probability of living to age 100 was statistically insignificant.

variable, it may be described as *increasing death benefit* (in which case it usually equals the fixed amount stated on the policy plus the then current account value) or in the case of policies issued recently, as *return of premium* (ROP), in which case the death benefit payable at any time is a function of a stated amount plus the total amount of premium payments made up to that date. Policies with a ROP component typically have a limit on the total amount to be paid out, such that the ROP component stops within a few years of issue, with the policy usually reverting to a level death benefit payout.

Accrual of interest on the account value for a universal life policy is generally tax free in the United States, making this a good policy for estate planning.

1.2.2 Variable Universal Life

Variable universal life policies – also a type of permanent life insurance – have many of the same characteristics as universal life policies. The difference arises in the management of money in the cash account. As mentioned, cash account balances in universal life policies are typically invested by the carrier in long-term, fixed rate instruments with minimal credit risk. Accordingly, the current crediting rate on those policies tends to be reasonably low albeit – it is to be hoped – relatively stable. Variable universal life policies introduce an element of discretion for the owner as it is possible to invest the balance in the cash account across a number of different sub-accounts, managed by the carrier. These sub-accounts will have exposure to different investment strategies and asset classes, potentially including short-, medium- and long-term fixed rate instruments, equities, commodities and corporate credit. The opportunity to vary the mix of investments creates a greater potential rate of return, albeit with higher volatility.

Universal life and variable universal life policies have flexible premiums and for that reason are often described as *flexible premium adjustable life policies*.

1.2.3 Term Insurance

Term insurance is frequently used for "key man" policies and for policies purchased to support a fixed term mortgage loan. The phrase describes a policy with a fixed term, which pays out a prescribed amount to the beneficiary following the death of the insured within that term. There is no accumulated account value for term insurance and the insurance coverage is terminated at a specific date with no further payment if the insured survives beyond this date. Owners of term policies pay premiums based solely on what the carrier determines is required to cover the risk of the insured's death during the term, given the insured's age and medical history (as underwritten just prior to issue of the policy) based upon a fixed death benefit amount. As a result, younger persons and shorter terms will generally attract lower insurance premiums.

1.2.4 Endowment Insurance

An endowment policy has a fixed term, like a term policy, but unlike a term policy it pays a defined amount in the event that the insured survives to the end of the fixed term. Premiums are higher – often substantially higher – than term insurance contracts, as there is certainty that an amount will be paid out by the carrier. However, the amount to be paid is frequently uncertain, as it is usually dependent upon the performance of investments made by the carrier.

Endowment policies were commonly issued in the UK to support interest-only mortgage loans. Such policies were often sold to UK homeowners during the 1990s on the basis that the endowment would increase in value over the term of 15, 20 or 25 years such that it would repay the principal amount due on the mortgage loan at its maturity. Poor performance of the underlying investments and a litany of mis-selling complaints, as well as a change in the tax treatment, caused endowment policies to fall out of fashion and very few have been issued in the UK in the last five years (ABI, 2008).

The widespread use of endowment policies in the UK created one of the first secondary markets for insurance instruments – the traded endowment policies, or "TEPs" market. TEPs were bought and sold at auctions conducted by specialist endowment brokers. Such auctions continue today, although compared to the US life settlements market, the value and number of the endowment policies traded is very low.

1.2.5 Whole Life

Whole life insurance is the generic name for a policy that continues until the death of the life assured. Such policies have increasing accumulated value as the insured ages. The premium payments are structured to "overpay", such that the account value will build up to the contractual death benefit amount by a defined age (usually 100), progressively reducing the carrier's net amount at risk.

The most common type of policy sold in the USA is the whole life policy. Here the policy holder pays a fixed annual premium over his or her life in exchange for a whole life policy with specific death benefits or face amount as stated on the policy. The beneficiary of the policy receives full benefit from the policy regardless of the date of death. Premiums are usually constant, based upon the average actuarial premium amount needed to cover claims for the policy holder's entire life – as a result premiums are larger than needed to cover the mortality risk in the early years. The excess premium is invested at a pre-stated rate and as this cash surrender value grows it can be used for other possibilities.

Whole life insurance combines features of both term insurance (where the premiums are fixed) and permanent life insurance (where a cash value accrues within the policy and payout of the cash value is assured at expiration of the policy). In the life settlements market, participating policies are most often whole life policies rather than universal life policies.

1.2.6 Policy Riders

Carriers will frequently offer extra options with their insurance products, to be added at issue. These are commonly known as "riders", such as:

- *Extended Death Benefit Rider:* In this case, if the insured lives past a certain date (typically the first policy anniversary after he or she has attained the age of 100), no further premium payments are due but the carrier remains obliged to pay the net death benefit (or some other amount, depending on the terms of the rider) if the insured dies before a later policy anniversary date, e.g. age 105, 100, 115 or 125.
- *Term Rider:* If the insured dies within a short time after issue of the policy (say 5 or 10 years), the death benefit payment is increased by a fixed amount, equivalent to owning a separate term life insurance policy on the insured.

	Insurance Type	Premium	Death Benefit	Cash Accumulation	Investment Choice
Term	Level Term Insurance	Relatively low, fixed	Fixed during the term, then zero	No	No
	Renewable Term Insurance	Relatively low, increasing	Fixed	No	No
	Decreasing Term Insurance	Relatively low, decreasing	Decreasing during the term, then zero	No	No
Permanent	Whole Life Insurance	Relatively high, fixed	Fixed minimum amount, some upside	Yes	No
	Universal Life Insurance	Relatively high, flexible	Variable	Yes	No
	Variable Whole Life Insurance	Relatively high, fixed	Fluctuates with the performance of the investment	Yes	Yes
	Variable Universal Life Insurance	Relatively high, flexible	Fluctuates with the performance of the investment	Yes	Yes
Endowments	Level Term Insurance	Relatively high, fixed	Fixed during the term, then zero	Yes	No

Figure 1.1 A comparison of insurance products

Riders may be offered as incentives to purchase insurance from a particular carrier or offered as a "bolt-on" to a policy when first issued. We will look in later chapters at how riders can affect policy pricing. Figure 1.1 compares some characteristics of the different policy types.

1.3 DEVELOPMENT OF THE VIATICAL SETTLEMENT AND LIFE SETTLEMENT MARKETS

1.3.1 History and Inception

Although the secondary market for life insurance is relatively new, the judicial ruling in the Supreme Court case of Grigsby v. Russell in 1911 declared the policy owner's right to transfer legal ownership and beneficial interest to a third party at his or her own discretion.

The first of such transactions occurred amidst the devastating impact of the AIDS epidemic in the mid-to-late 1980s, when life insurance policies were purchased from terminally ill individuals, for an amount made up of a percentage of the policy face value. A key driver for this change was the requirement of vast sums of capital by terminally ill AIDS patients to primarily finance expensive health care fees. Subsequently, this type of transaction was given the term "viatical" and the viatical settlements industry was born.

However, it was only after the Health Insurance Portability and Accountability Act (HIPAA) was signed into law in 1996 that the life settlements market emerged. Aside from imposing a series of administrative, physical and technical safeguards on the storage and use of protected health information, HIPAA essentially confirmed the right of the owner of the life policy to transfer ownership/beneficial interest to a third party having no insurable interest in the life of the originally insured party, while determining the tax treatment of the corresponding gain. This effectively allows third party investors to freely purchase life insurance policies at the discretion of the policy owner and beneficiary, hence, creating a market for life settlements.

1.3.2 Negative Sentiments

The life settlements industry has had more than its fair share of negative sentiment. Early transactions in viatical settlements involved the sale of policies insuring the lives of AIDS patients to some retail investors, with the promise that the returns would be extremely high and realized in a very short period as long as the investors continued to pay the required premiums over this period. The "magic bullet" effect caused by the availability of highly active antiretroviral therapy (Palella *et al.,* 1998) to combat AIDS resulted in the insured individuals living much longer than the investors had been led to expect, leading to losses and the inevitable lawsuits from state and federal regulators.[4] Increasing regulation – as insurance is regulated at state level in the USA one is transacting in 50 separate markets rather than one – and the cross-over of insurance methodologies and experience has led to most of the bad apples being weeded out. However, the "headline risk" continues, with an enforcement action against a significant market participant brought by Eliot Spitzer[5] in 2006, resulted in a claim for $2.1 billion in triple damages under the federal RICO statute (Racketeer Influenced and Corrupt Organizations Act of 1970).[6]

The life insurance lobby has used these "bad apples" in support of its campaign to promote regulation that will effectively eliminate the life settlements industry, through the implementation of legislation at state level and via the National Association of Insurance Commissioners (NAIC) Model Act drafting process.[7] The life settlements industry has responded to this pressure through lobbying for appropriate regulation at state level – supporting consumer choice through maintaining the availability of life settlements in as many markets as possible.

[4] SEC v. Mutual Benefits Corp *et al*., Case No. 04-60573-CIV-MORENO: a widely reported lawsuit against Mutual Benefits Corp., its directors and affiliates over the mis-selling of viatical settlements to investors.

[5] The People of the State of New York by Eliot Spitzer v. Coventry First LLC, Montgomery Capital Inc. *et al*., index no. 404620/06 (New York State Supreme Court).

[6] Ritchie Capital Management, LLC *et al*. v. Coventry First LLC *et al*., ECF Case 07 Civ. 3493 (DLC) (USDC Southern District of New York).

[7] See the press release at: http://www.naic.org/Releases/2007_docs/viatical_settlements_model.htm. The NAIC treats the Model Act as under continuing development.

1.3.3 Market Size

Two recent surveys have estimated that the available market size will grow from an estimated $13 billion in 2004 to $161 billion over the next few decades; through a combination of population ageing and increasing market penetration (penetration is currently estimated at around 3% – see Bernstein Research (2005, 2006)). The face amount that cleared through the market grew from around $10 billion in 2005 to $12 billion in 2007.[8] In common with other asset classes, the life settlements market contracted significantly during 2008, as institutional investors fight to repair the damage to their balance sheets. However, life settlements is attracting a much wider audience within the investor community than was the case even two years ago, and once investor activity picks up again, growth in life settlements activity should be much more rapid than in other, more traditional, asset classes.

1.3.4 Institutional Involvement

The bad press dealt to the life settlements industry might explain the historical lack of capital markets interest in what should be an attractive asset class – after all, credit derivative swap (CDS) pricing was derived from life insurance underwriting methodologies, so credit traders should feel that they understand the risks extremely well. Intensive regulatory and compliance requirements, the lack of market transparency and efficiency and extremely high barriers to entry have historically tended to turn most investors away from the product. In March 2007, the Institutional Life Markets Association (ILMA) was formed by six leading investment banks (Bear Stearns, Credit Suisse, Goldman Sachs, Mizuho International, UBS and West LB) to promote legislative initiatives and best practices in the life settlements and premium finance industry. ILMA is endeavouring to develop and agree higher standards of market practice and to enhance transparency in the industry through fee disclosure and standardized documents.

1.4 THE PARTIES INVOLVED IN A LIFE SETTLEMENT TRANSACTION

We will review the process associated with a typical life settlement transaction later in this chapter. First, let us introduce the parties involved in the transaction. For this purpose we assume that the transaction is a "traditional" life settlement, i.e. that the life insurance policy has not been originated through a premium finance programme. We divide the parties into *direct* participants (those directly involved with the movement of the policy and the transfer of title) and *indirect* participants (those who provide services that are associated with the transaction).

Direct participants in the transaction include:

- *Policy owner:* Also known as the "policy holder" and in the context of a life settlement transaction as the "seller", this person is the owner of the policy immediately prior to the transaction. The policy owner may be a natural or a non-natural person. Once the policy has been sold, this person has no further interest in the policy.
- *Agent:* This is usually the life insurance agent (often referred to by insurance companies as a "producer") who sold the policy to the policy owner, or with whom the policy owner has

[8] The 2007 figure was taken from Conning Research (October 8, 2008) Life Settlements: New Challenges to Growth; the 2005 figure was estimated on the basis of a poll of market participants.

an existing relationship. The agent's role is to introduce the seller to a broker and then to liaise between the seller and the broker as necessary to ensure successful completion of the transaction.

- *Broker:* A life settlements broker. If the policy owner is located in a state which regulates life settlements and/or viatical settlements, the broker will be required to be licensed in that state in order to participate in the transaction. The broker's role is to represent the interests of the seller in dealing with the provider. This includes soliciting the best offer for the policy by submitting the policy to as many providers as possible, in order to create a wide market for that policy.
- *Provider:* A life settlements provider. As for the broker, the provider may be required to be registered in the state in which the policy owner is located. The provider's role is to act as the buyer of the policy (with respect to the policy owner). It is the provider's responsibility to ensure that sale and transfer documentation conform to relevant state regulations relating to life settlement practice and procedure. The provider may also have an ongoing role in the transaction, as state regulation may require the provider to retain records and to assume responsibility for servicing the policy after completion of the transaction.
- *Investor:* Sometimes referred to as the "funder", the investor is usually the ultimate owner of the policy. The investor usually acquires the policy in a transaction with the provider which, although legally distinct, is often so close in time as to be virtually simultaneous with the acquisition from the seller. The investor may be a natural person, but more commonly is a bank, a large institutional investor, a hedge fund or an established special purpose vehicle (SPV).
- *Escrow agent:* All transactions in regulated states (i.e. transactions where the policy owner is resident or organized in a regulated state) are required to employ an escrow agent. The escrow agent receives the signed change of ownership (CoOwn) and change of beneficiary (COB) forms from the policy owner and releases these forms to the provider or trustee once the agreed purchase price for the policy has been received from the provider. The escrow agent holds the agreed purchase price until the change of ownership and change of beneficiary has been acknowledged by the carrier and then releases the agreed purchase price to the seller. The escrow agent is usually a bank and will often be affiliated with the trustee.
- *Trustee:* Frequently, an investor that is an institution, a fund or a SPV will engage a third party to act as trustee of the policy. The role of the trustee is to safeguard the documents associated with the policy (the policy form and/or policy certificate). In some structures, the trustee also becomes the legal owner of the policy itself, with the investor becoming the beneficial owner. This is usually done to comply with the financing structure of the investor; for example, debt issued by a SPV may be secured on the policies which the SPV acquires, in which case the trustee will function as trustee of the debt and will hold the policies for the benefit of the debt-holders. In this case, the trustee is responsible for completing and filing the change of ownership and beneficiary form with the carrier. The trustee becomes the owner of record of the policy with respect to the carrier and receives all of the policy correspondence (e.g. premium notices, grace notices and annual statements) from the carrier. In this case, the trustee will be required to work with the tracking agent to complete and submit the claim package in the event of the death of the insured (or both insureds, in the case of a "second to die" joint life policy).
- *Collateral manager:* A transaction which uses a SPV or a fund will usually employ a collateral manager (also referred to as the "investment manager" or "asset manager"). The