Life Insurance Technical Manual

Presented by
Daniel Tasciotti, CLU, ChFC, CFP, MBA

Estate Planning Council of Greater Miami
Study Session
5:30 – 6:20 p.m.
March 15, 2012

Daniel Tasciotti

Daniel Tasciotti, CLU, ChFC, CPF™, MBA, is a veteran Miami estate planning professional, now in his twenty-second year of practice. Prior to starting his firm, he enjoyed a successful sixteen year career as a television journalist, winning the Emmy award for excellence in broadcast journalism.

Unlike typical life insurance agents who stumble into the industry, Dan began a focused and disciplined pursuit of his field while under contract at WCKT-WSVN-TV in Miami. During his first year in the life insurance business he earned the Connecticut Mutual President's Honorary Award for sales achievement in the top one percent of his peer group.

During his twenty-two years of practice Dan has helped hundreds of Miami families and businesses with their long-term retirement and estate plans. He is well versed in investment, taxation, insurance, estate, and charitable gifting issues. His unique ability is in helping people achieve maximum financial potential with minimum risk.

He presently serves as president of the Estate Planning Council of Greater Miami, and is past president of the Children's Resources Center for developmentally disabled pre-school children, where he has been active for more than twenty-five years.

Within the life insurance industry Dan is recognized as an authority on life insurance technical and product design issues. His firm, Tasciotti Financial, is located in the Doral Center, serving clients throughout South Florida, and many former Miamians who have relocated throughout the country.

In his leisure time Dan enjoys singing with his four-part acapella barbershop quartet, and playing cocktail piano in a popular Miami Italian restaurant. He and his wife Jane have been happily married for thirty-three years. They have two children, Stephanie and J.D.

TECHNICAL ISSUES
SURROUNDING ONE OF THE BIGGEST ASSETS OWNED
BY SUCCESSFUL CLIENTS --
LIFE INSURANCE

I. Life Insurance

There are worse things in life than death. Have you ever spend an evening with an insurance salesman? ***Woody Allen***

A. Introduction

The life insurance industry could use a good public relations agent. Woody Allen spoke of the delights of spending an evening with a life insurance agent. I admit that I myself would not want to be trapped for an hour with many of the agents in our business. There are far too many in our field who are simple policy peddlers, annoyingly aggressive. There is far too much agent turnover. Only 12% survive in the industry beyond the third year. And of those who do survive few rise to the level of technical proficiency and professionalism that should be required of all. Most are poorly trained. Too many offer life insurance only as a sideline, lacking the expertise to use the product to it's full potential. Only a small percentage ever earn the industry's Chartered Life Underwriter (CLU) designation.

B. For the Non-Insurance Professional Advisor

Today we will present to you another side of the life insurance business. The material we will cover is dry and technical and boring. Even more dry and technical and boring than accounting – if that is possible. But it is information that a professional advisor needs, to make intelligent recommendations to clients about their life insurance.

Life insurance is not for everybody. Many people do not need it and many do not want it. But it is a perfectly legitimate and indeed a remarkable product when it is understood and used properly. Life insurance is nothing more than money that is purchased at a discount, for delivery at a time in the future that is uncertain. And there is no other financial product that does that.

There is no magic in the internal workings of a life insurance policy. It is a bit complicated, but not hard to understand if one makes the effort. Since most don't make the effort, it is misunderstood to the point that some have an irrational distaste for it. The product can be powerful if you know how to use it, and it can end up a mess if you don't.

Today's presentation is limited due to time. This will not be a comprehensive course in life insurance. It is a primer on what the products are and how they work. It will not address how to artfully use life insurance, or how to sell it. We will more heavily weight

our time to a detailed discussion of the life insurance product that is the most complicated, the most expensive, the most versatile, and generally most preferred by wealthy clients.

C. Matching Product to Objective

This presentation will cover the several different types of life insurance products. But the essence of a life insurance practice is not product alone. The essence is to understand a client's needs and wants, and to match those with the proper product. What is the client's objective? Is it estate planning, securing a loan, funding a buy-sell agreement? If for a buy-sell agreement, is the business owner trying to preserve his company for the next generation, or planning to sell it and walk away? Different objectives may call for different insurance design.

D. 1978 – 1982 A Turning Point

The period of 1978 – 1982 marked a dramatic turning point in the life insurance industry. Most of you know someone who bought a life insurance policy during that period with the promise of no more premiums after three, or seven, or ten years. Yet today, they are still paying.

The period of the late 70s, early 80s was the beginning of a transition in the industry where risk to a policyholder increased dramatically. Many of the policies sold today bear no resemblance to the polices of our fathers. Likewise the beliefs our fathers held regarding the security of life insurance do not always apply to today's products.

So let us begin our examination of the data, the actuarial structure, and pricing components of modern life insurance contracts. Many of which now shift risks from the insurance company – to the policyholder.

II. Components of Price

A. General Concepts

Almost all life insurance products have some guarantees. State laws require life insurance companies to use conservative assumptions in pricing life insurance products, and in developing the guarantees in the products. Companies also have a need for conservative assumptions beyond compliance with the law. A policy can be in force 75 to 100 years and the policy owner has been promised a result. When promising an outcome so distant in the future, companies need conservative assumptions.

Beyond the contractual guarantees in the policy nobody know what the product will ultimately cost. Companies set premiums using conservative assumptions to assure they will be able to pay benefits even under very adverse circumstances. If the premiums are more than adequate the policy holder receives a dividend.

Three Elements Determine Premium: 1. Mortality, 2. Expenses, 3. Investment Income.

1. Mortality

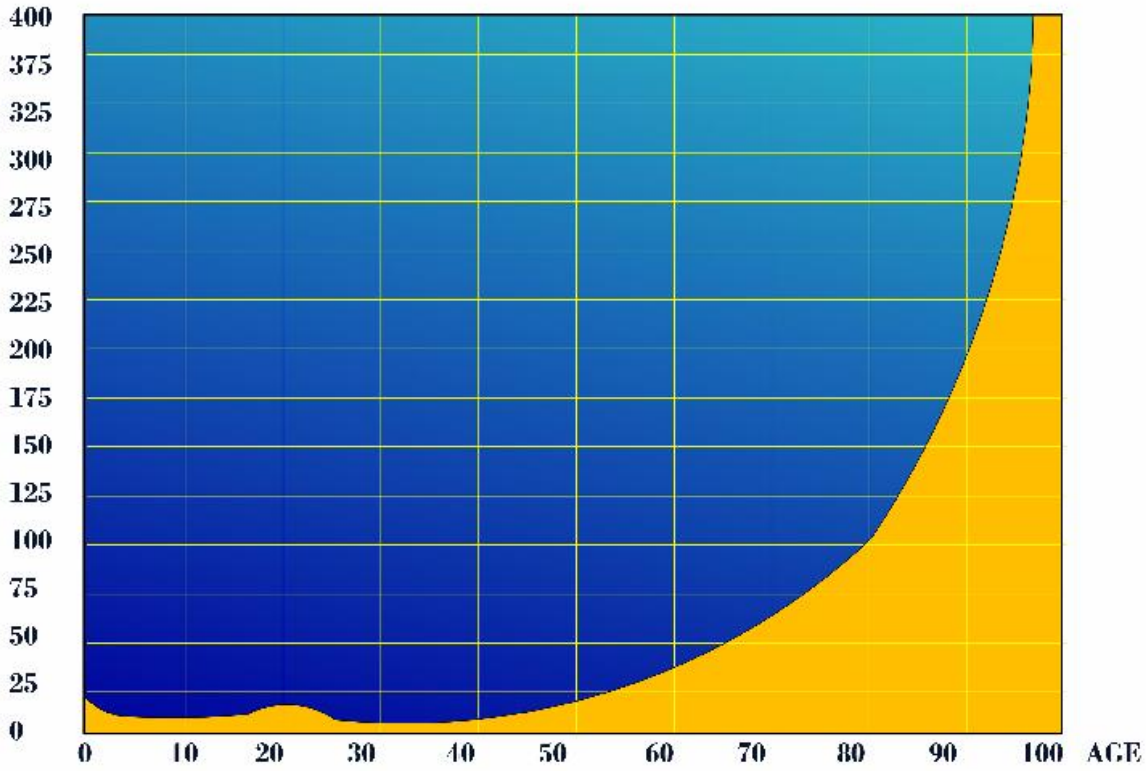
State laws and regulations requires guaranteed mortality cost assumptions in life insurance policies to be based on The Commissioner's Standard Ordinary Mortality Table (CSO Table). It is the same table for all insurance companies. This is a conservative table; it projects more deaths per thousand than insurers actually experience. In reality, companies experience better mortality than is reflected in the standard table.

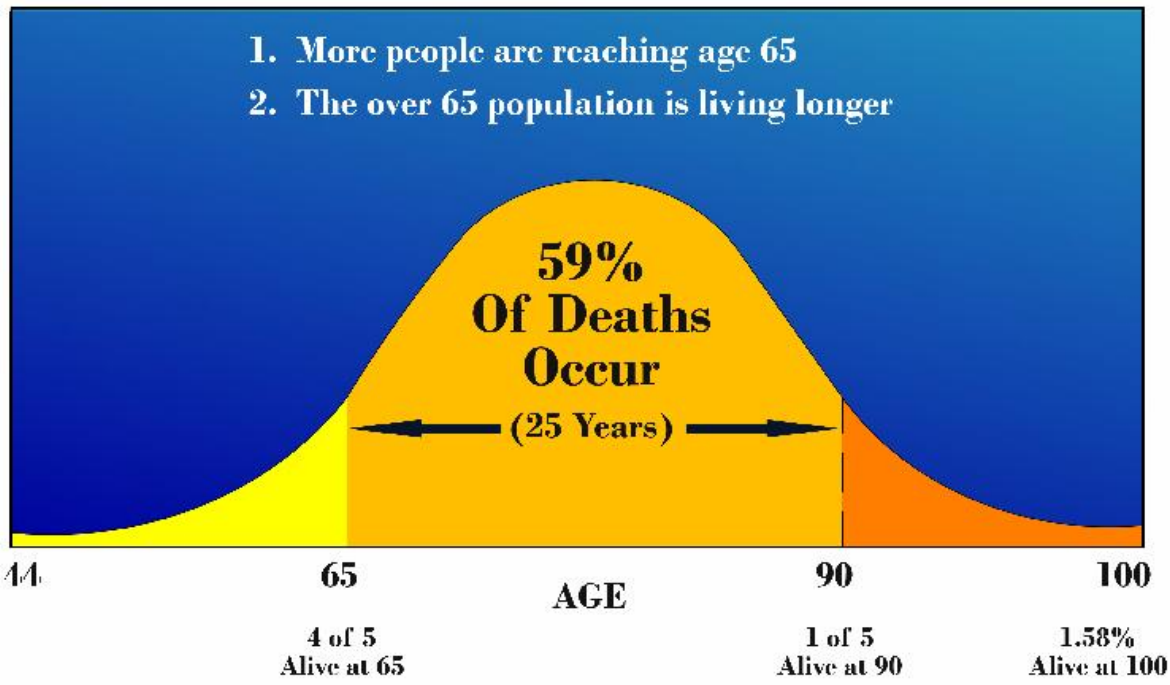
State laws and regulations also specify standard mortality tables be used to measure life insurance reserve liabilities that are required to be held by the insurance company, and reported in the financial statements that are required to be filed with state insurance regulators.

2001 Commissioners Standard Ordinary Mortality Table

Deaths per thousand

Age	Male	Female	Age	Male	Female	Age	Male	Female
0	0.97	0.48	40	1.65	1.30	80	70.14	43.86
1	0.56	0.35	41	1.79	1.38	81	78.19	49.11
2	0.39	0.26	42	1.96	1.48	82	86.54	54.95
3	0.27	0.20	43	2.15	1.59	83	95.51	60.81
4	0.21	0.19	44	2.39	1.72	84	105.43	67.27
5	0.21	0.18	45	2.65	1.87	85	116.57	74.45
6	0.22	0.18	46	2.90	2.05	86	128.91	80.99
7	0.22	0.21	47	3.17	2.27	87	142.35	90.79
8	0.22	0.21	48	3.33	2.50	88	156.73	101.07
9	0.23	0.21	49	3.52	2.78	89	171.88	112.02
10	0.23	0.22	50	3.76	3.08	90	187.66	121.92
11	0.27	0.23	51	4.06	3.41	91	202.44	126.85
12	0.33	0.27	52	4.47	3.79	92	217.83	136.88
13	0.39	0.30	53	4.93	4.20	93	234.04	151.64
14	0.47	0.33	54	5.50	4.63	94	251.14	170.31
15	0.61	0.35	55	6.17	5.10	95	269.17	193.66
16	0.74	0.39	56	6.88	5.63	96	285.64	215.66
17	0.87	0.41	57	7.64	6.19	97	303.18	238.48
18	0.94	0.43	58	8.27	6.80	98	321.88	242.16
19	0.98	0.46	59	8.99	7.39	99	341.85	255.23
20	1.00	0.47	60	9.86	8.01	100	363.19	275.73
21	1.00	0.48	61	10.94	8.68	101	380.08	297.84
22	1.02	0.50	62	12.25	9.39	102	398.06	322.21
23	1.03	0.50	63	13.71	10.14	103	417.20	349.06
24	1.05	0.52	64	15.24	10.96	104	437.56	378.61
25	1.07	0.54	65	16.85	11.85	105	459.21	410.57
26	1.12	0.56	66	18.47	12.82	106	482.22	443.33
27	1.17	0.60	67	20.09	13.89	107	506.69	476.89
28	1.17	0.63	68	21.85	15.07	108	532.69	510.65
29	1.15	0.66	69	23.64	16.36	109	560.31	545.81
30	1.14	0.68	70	25.77	17.81	110	589.64	581.77
31	1.13	0.73	71	28.15	19.47	111	620.79	616.33
32	1.13	0.77	72	31.32	21.30	112	653.84	649.85
33	1.15	0.82	73	34.62	23.30	113	688.94	680.37
34	1.18	0.88	74	38.08	25.50	114	726.18	723.39
35	1.21	0.97	75	41.91	27.90	115	765.70	763.41
36	1.28	1.03	76	46.08	30.53	116	807.61	804.93
37	1.34	1.11	77	50.92	33.41	117	852.07	850.44
38	1.44	1.17	78	56.56	36.58	118	899.23	892.44
39	1.54	1.23	79	63.06	40.05	119	949.22	935.11
						120	1000.00	1000.00


400
375
325
300
275
250
225
200
175
150
125
100
75
50
25
0
0
10
20
30
40
50
60
70
80
90
100
AGE


1. More people are reaching age 65
2. The over 65 population is living longer
59%
Of Deaths
Occur
(25 Years)
44
65
90
100
AGE
4 of 5
Alive at 65
1 of 5
Alive at 90
1.58%
Alive at 100

2. Expenses

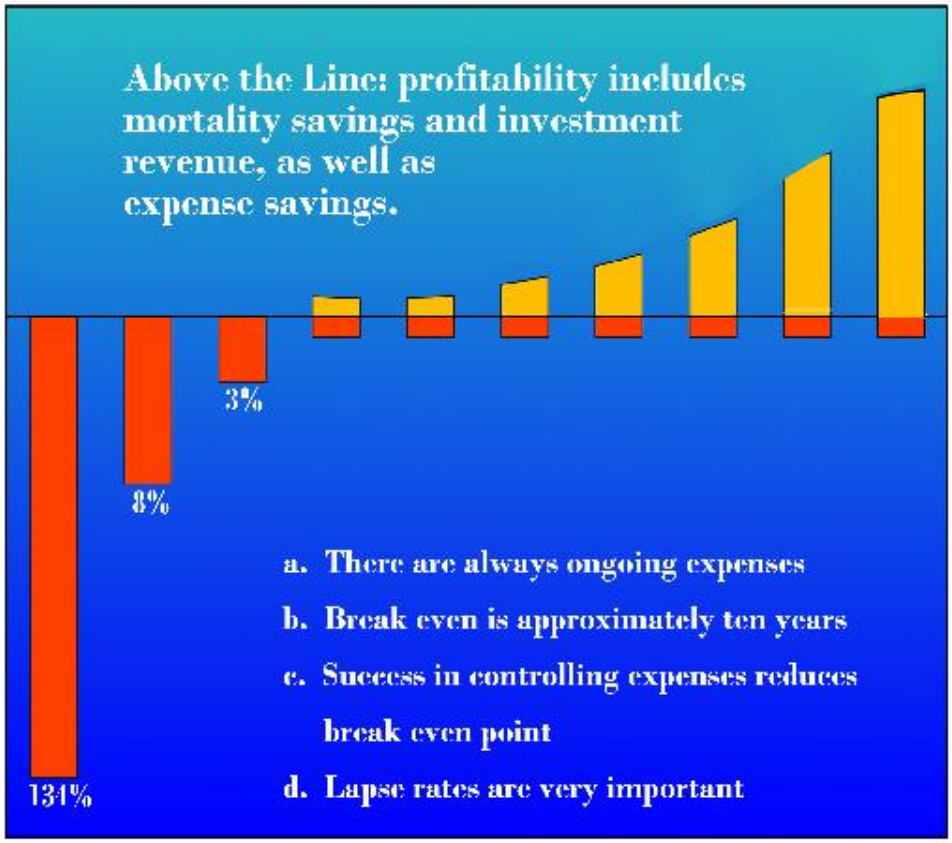
Insurance companies project their internal expenses for the purpose of setting their premiums.

a. Expenses are projected conservatively, that is, companies project high, and hope to manage expenses below the projection.
b. This creates a slightly higher premium.
c. The expense element of the premium must be projected out for decades.

All expenses are included in the projection:

a. Insurance company home office expenses, rent, salaries, supplies, legal, accounting, advertising, marketing, etc, etc.
b. Field and distribution expenses: commissions, sales management, field offices, and product expenses like underwriting medical exams, costs to acquire an applicant's medical records, attending physical statements, etc.

Policy Expenses


Above the Line: profitability includes mortality savings and investment revenue, as well as expense savings.
134%
8%
3%
a. There are always ongoing expenses
b. Break even is approximately ten years
c. Success in controlling expenses reduces break even point
d. Lapse rates are very important

3. Investment Income

   a) To set premiums, and to establish guaranteed cash values, all companies must work with a maximum guaranteed interest rate assumption dictated by insurance regulators. The higher the assumed rate, the lower the premium.

   b) Since 1941 the rate has been as high as 6% and as low as 2.5% Each time the rate is adjusted all companies must re-price all policies being sold. The current rate, based on the 2001 CSO Mortality Table is 4%.

   c) Conservative investments required by regulation. Insurance company general accounts are generally weighted heavily with bonds.

   d) Net Investment Yield – Dividend Interest Rate

   e) Net investment yield excludes policy loans which generate income at the policy fixed or adjustable interest rate.

   f) Dividend interest rate. Not the rate of return on the policy. The rate is expressed differently by different companies. Some quote gross rates, some quote rates net of investment expenses only, some quote rates that take other items into consideration. This makes it difficult to compare companies based on this factor.

Dividend Interest Rates for Participating Life Insurance Policies Issued by Massachusetts Mutual Life Insurance Company prior to March, 1996

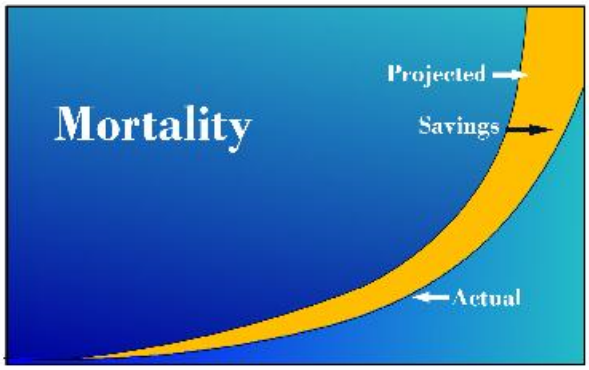
The dividend interest rate is used to determine the investment component of dividends; it is not the rate of return on the policy. Dividends include an investment component, a mortality component and an expense component. Therefore, dividend interest rates should not be used as the basis for comparing policies. Dividends are not guaranteed.

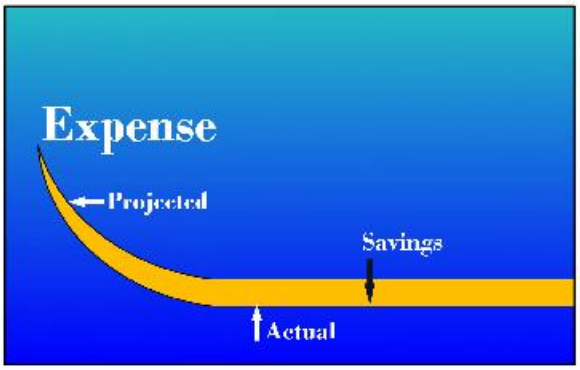
The way companies apply dividend interest rates to calculate dividends varies. Some companies quote gross rates. Others, including MassMutual, quote rates that are net of investment expenses only, while yet others quote rates that take additional items into consideration.

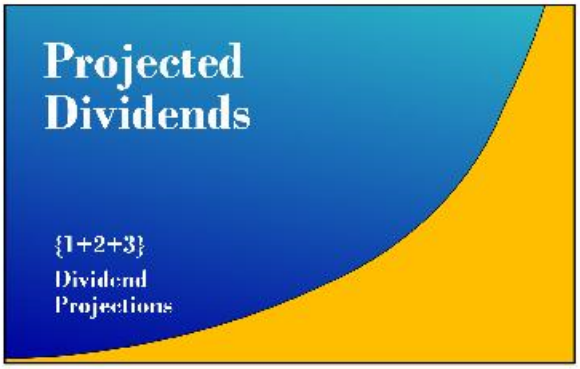
Year	Dividend Interest Rate	Year	Dividend Interest Rate
1980	8.27%	1995	9.00%
1981	8.27%	1996	8.40%
1982	9.22%	1997	8.40%
1983	11.60%	1998	8.40%
1984	11.60%	1999	8.40%
1985	12.20%	2000	8.30%
1986	12.20%	2001	8.30%
1987	12.20%	2002	8.10%
1988	11.35%	2003	7.90%
1989	11.15%	2004	7.50%
1990	10.50%	2005	7.00%
1991	10.50%	2006	7.55%
1992	9.95%	2007	7.55%
1993	9.45%	2008	7.90%
1994	9.30%		

Rates starting in 1983 assume an Adjustable Loan Rate.

Policies in this block of business are no longer sold.







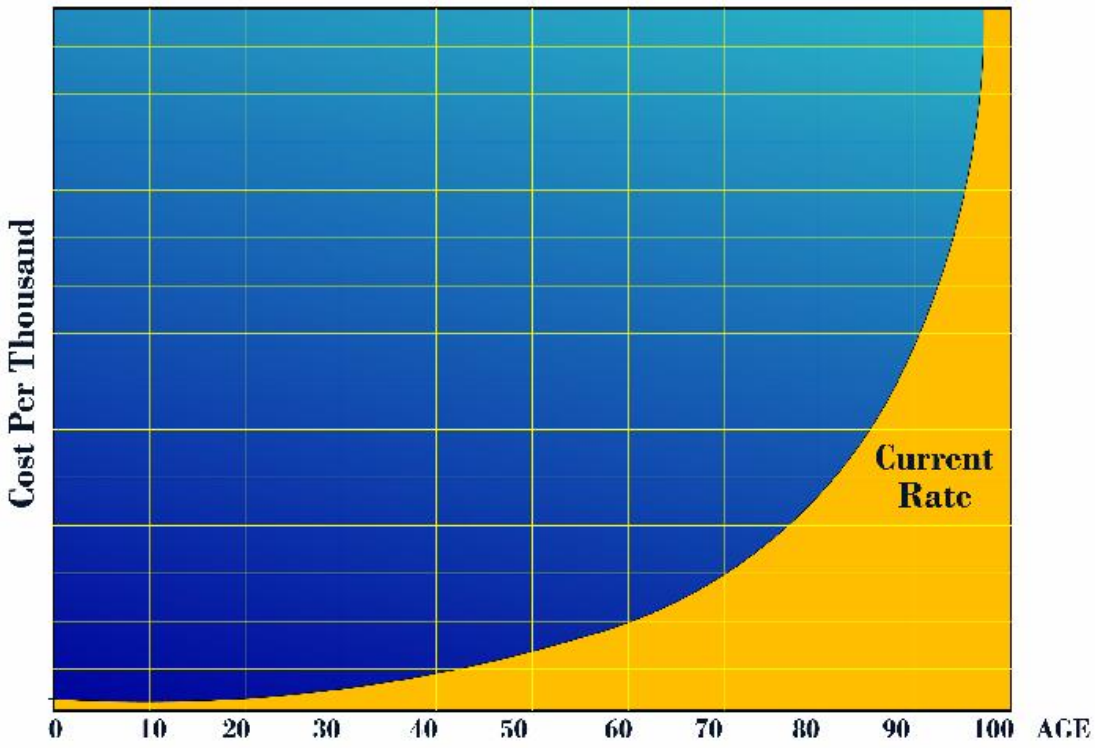
III. **Generic Product Forms**

A life insurance policy is a vehicle to shift the risk of death from an individual who cannot pinpoint when death will occur, to a group of individuals which when statistically large enough and with sufficient historical experience can accurately predict how many deaths will occur each year at every age.

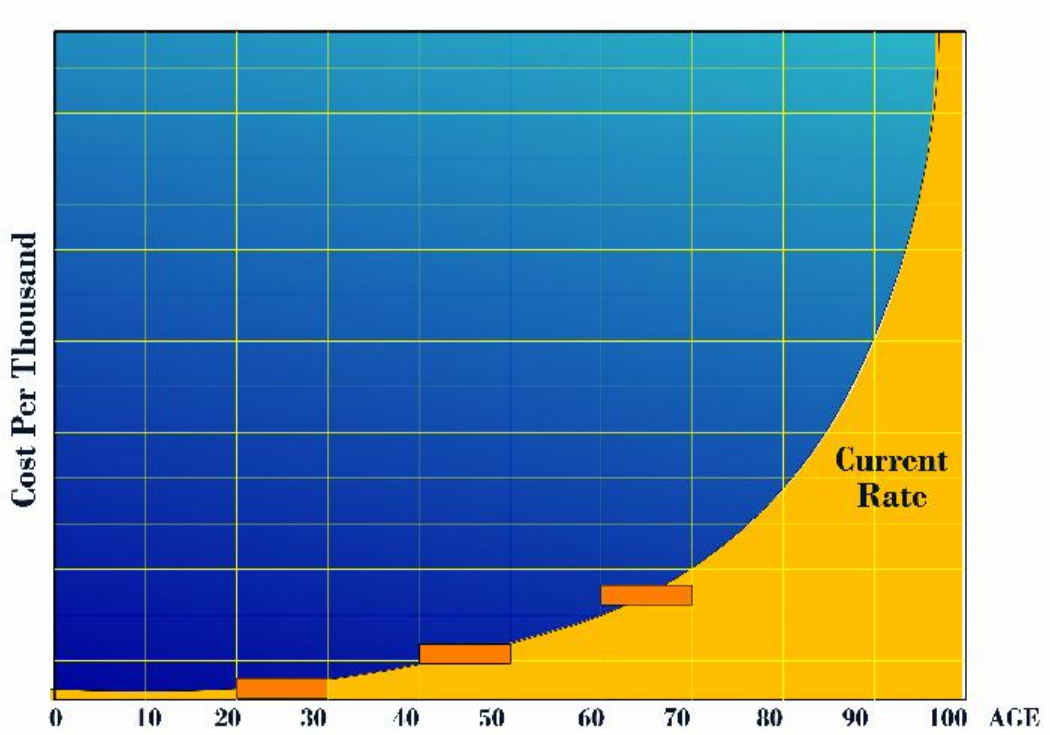
Another way to put it: If a life insurance company were to invite 75,000 thirty-five year old men to a football game, and on the way out gave each of them a ticket to return for a game one year later when they were all thirty-six, the insurance company knows with certainty that death will cause 70 empty seats next year.

Now assume that the 75,000 thirty-five year olds are all of the type that would like to protect their families against the risk that their seat will be empty next year. The sponsoring insurance company has several generically different products from which to choose.

A. Term Insurance



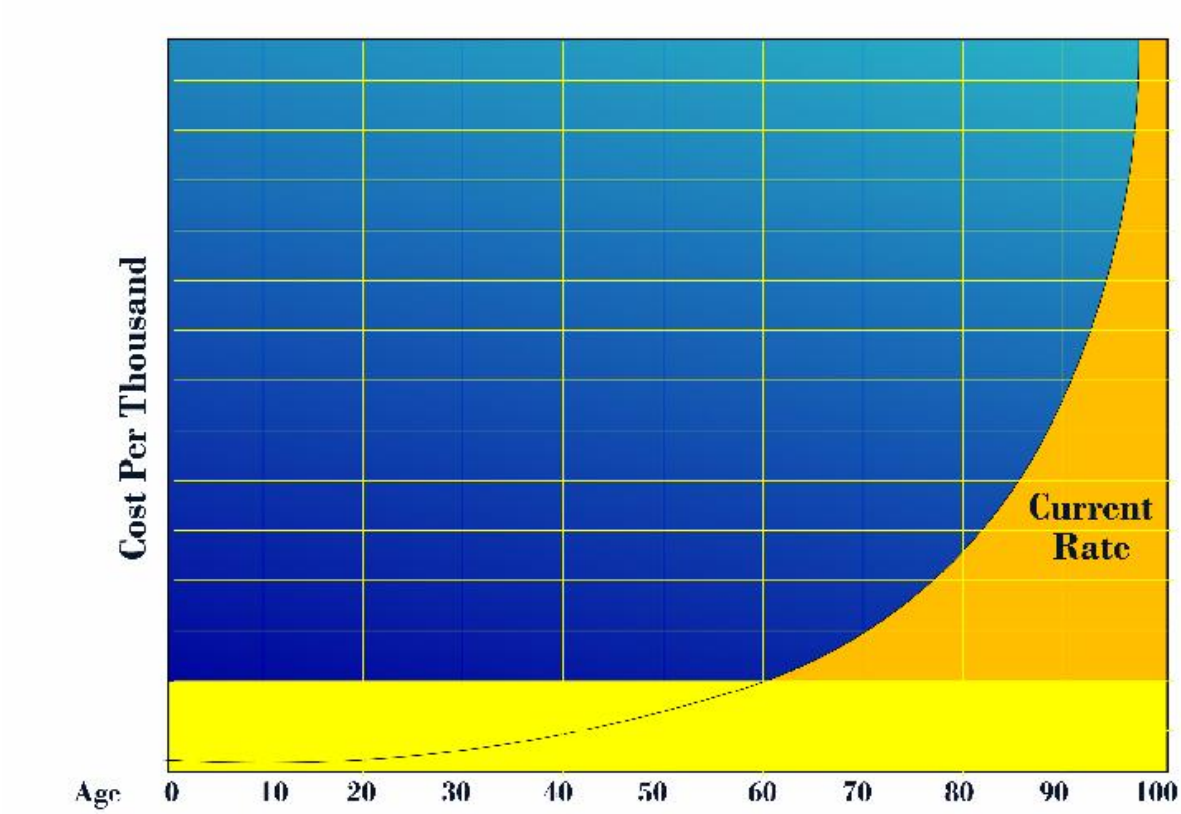
1. A graphic depiction of term insurance looks much like the pure mortality curve, since annually renewable term insurance is simply mortality plus expenses.
2. The rate is very low until the forties, then it starts upward. Notice the bubble in the early twenties. This reflects mortality from youthful motor vehicle deaths.
3. When illustrated, annually renewable term often shows only twenty years. When all years are shown, the sharp steep mortality curve is revealed. There are extremely high premium (pure mortality and expense) at the older ages. Many companies cannot illustrate more than twenty years.



4. Level term. This product is similar in theory to annually renewable term. For three or four years you pay more than you would with annually renewable term, but over ten years the premium is lower. In year eleven the price goes back to the mortality curve.
5. Term rates by company. Here are some real rates from various companies

Male Age 30
$500,000
Ten Year Level Term

Savings Bank Life	$200
Banner Life	$215
Protective Life	$227
Union Central	$230
Principal	$255
United of Omaha	$262
Ohio National	$265
Mass Mutual	$285
MetLife	$294
Lincoln Benefit	$295
Prudential	$415
Nationwide	$460



6. Term to age 100. This is what it looks like if you level the premium to age 100, that is level for your whole life. And this is the product that was offered by most insurance companies when the industry began, in the 1800s. The public didn't like the idea of an increasing premium. They liked the low rates at the start, but they didn't like the fact that they were forced to drop the policy when the rate got so high at the older ages. So the industry developed level term for the whole of life.
7. In 1905 the Armstrong Committee of the legislature of the State of New York conducted a large scale investigation into life insurance. Consumers were paying premiums for years, then dropping their policies. Armstrong said that since policy owners, in essence, paid extra in the early years, with the idea that the money would be reserved to offset high premiums in the later years, they should have a non-forfeitable right to that reserved cash if they terminated their policy. Hence was born the concept of guaranteed, non-forfeitable cash value. Cash value was a reserve to assure payment of the death benefit, not a tool for "forced savings". The work of the Armstrong Committee made the reserve available to policy holders. Marketing people have since developed sales pitches for using the cash value (borrowing for example, like a home equity loan, they say) but it was never intended to be a savings or loan account.

Cash Value Confusion

There is a common misconception that the cash value belongs to the policyholder. Technically speaking, cash value represents the legal reserve that the insurance company must maintain to support the future death payment. The reserve cannot be

taken by the policy holder without consequence. The policy owner has a non-forfeitable right to the reserve only if the policy, or portions of it, is surrendered. It is not a bank account as is often promoted. So long as the liability (death claim obligation) of the insurance company exists, the reserve must be maintained. If the reserve is reduced or taken completely by the policy owner, the liability is released.

Policy owners think in terms of withdrawing cash from their life insurance policy "cash account". A pure withdrawal is actually a surrender of death benefit.

Example:

a) $600,000 policy death benefit with $200,000 reserved to pay the death claim (cash value).

"Withdraw" $100,000 of cash value, via a partial surrender of death benefit. $100,000 of reserve is released to the policy owner. Leaving a

b) $300,000 policy death benefit with $100,000 cash value.

Borrowing

Cash value can also be accessed by the policy owner without a surrender. The insurance contract provides the policy owner the right to borrow funds from the insurance company, using the cash value as collateral.

B. Traditional Whole Life Insurance

This product has been existence for more than 100 years – since the Armstrong hearings.

In a $250,000 policy the insurance company promises to pay $250,000 when death occurs, if the policy owner pays a premium that is fixed and guaranteed by the contract each and every year for life.

Guaranteed Cash Value

The guaranteed cash value is what the insurance company reserves for the claim based on the most conservative assumptions. Below we will discuss dividends, and we will see that actual cash value may be higher than the guaranteed cash value.

When the fixed premium is paid, the contract guarantees that the cash value will grow according the this schedule, so that at age 100 the reserve (cash value) in the contract is guaranteed to equal the death benefit. The insurance company bears the risk of future expenses, mortality costs, and investment results.

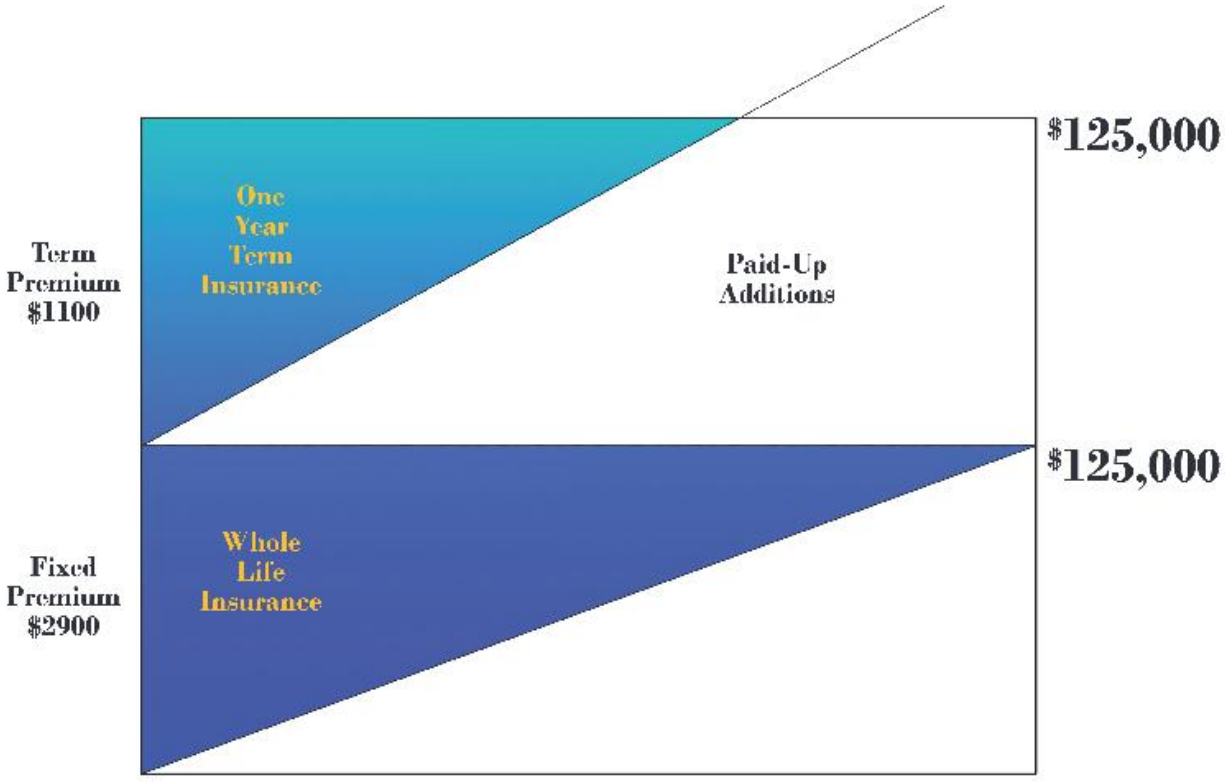
It is also important to note at this point that there are policies that - by contract - do not require a premium for one's whole life. The contract may require only ten payments, or twenty, or payments to age 65, for example. If, for example, the contract requires only ten premiums, what do you think would happen to the fixed contractual premium? Correct, it would be higher.

IMPORTANT: We will discuss below the concept of a vanishing premium, whereby dividends or excess interest earnings are used to pay premium. This is what you will most frequently see in a sales illustration. This is totally different from the limited-pay contract just described. The limited-pay contract is guaranteed to remain in force for your whole life, but with a premium guaranteed for a limited period of time.

Term-Whole Life Blends

Sometimes whole life insurance policies are sold with a term insurance component. For example, a policy with a $250,000 death benefit can be comprised of $125,000 of pure whole life insurance and $125,000 of term insurance. Blends can be smaller (90% whole - 10% term), or larger (40% whole - 60% term).

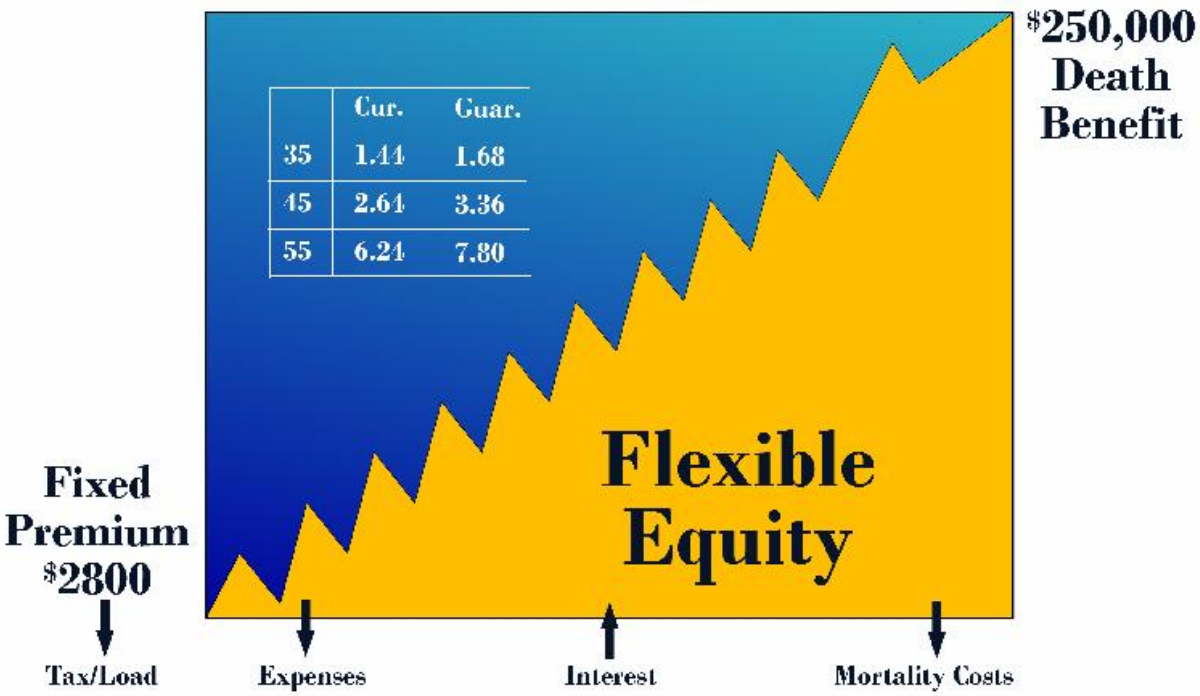
There can be variations, but a typical blended whole life policy requires a premium for the base whole life policy, a separate annual premium to pay the term cost, with the annual dividend used to purchase additional whole life insurance for the purpose of gradually replacing the term component. At some point, the additional whole life purchases may totally replace the term component, but this is not guaranteed. If the dividend replaces all of the term insurance, the policy is 100% whole life and dividends become available for other uses. Dividends will be discussed in more depth below.



If the dividend is insufficient to replace the term component, additional term insurance premium must be paid or the term portion of the death benefit is forfeited. In later policy years the term premium can be significant. Therefore, with larger blends of term insurance there is greater risk to the policy owner that the dividend will be insufficient to buy out the term component. Blended policies should be monitored regularly to assure that they will continue to perform as desired.

Blended whole life policies offer lower premiums than pure whole life insurance. However, they introduce additional risk to the policy owner. Their ultimate performance is tied to dividends, which are not guaranteed. In addition, the cost of the term insurance is typically not guaranteed. Since the dividend is need to buy out the term component, it is not available for other uses, such as premium reduction or death benefit increases.

C. Flexible Insurance – Interest Sensitive Universal Life, Variable Universal Life, Indexed Life Insurance



Interest Sensitive Contracts

Flexible premium products were introduced in the 1970s. In these products the components of interest, mortality, and expense are clearly exposed. In the pure flexible

premium $250,000 policy, the equity grows, but it is not guaranteed. It is entirely flexible, dependent on the variables – expenses, mortality, and interest which is credited to the equity component of the policy. In a flexible premium contract the premium is no longer fixed as in the traditional whole life policy. This structure allows the policy owner to put in less premium if interest mortality and expenses are favorable, but it may require more premium if interest, mortality, and expenses are less favorable. Computer illustrations are used to illustrate what level of premium may be required if interest rates remained at any given level.

These contracts provide total flexibility to the policy holder. But the risk is shifted from the insurance company to the policy owner. The owner can get "off the premium hook". He can put in less premium, or put in none at all. The insurance company can get "off the death benefit hook". This is a risk that the consumer was never exposed to, prior to the introduction of interest sensitive, unbundled, flexible policies.

Below we will discuss fluctuating interest rates and their effect on the flexible contract.

Flexible Insurance with Secondary Guarantees

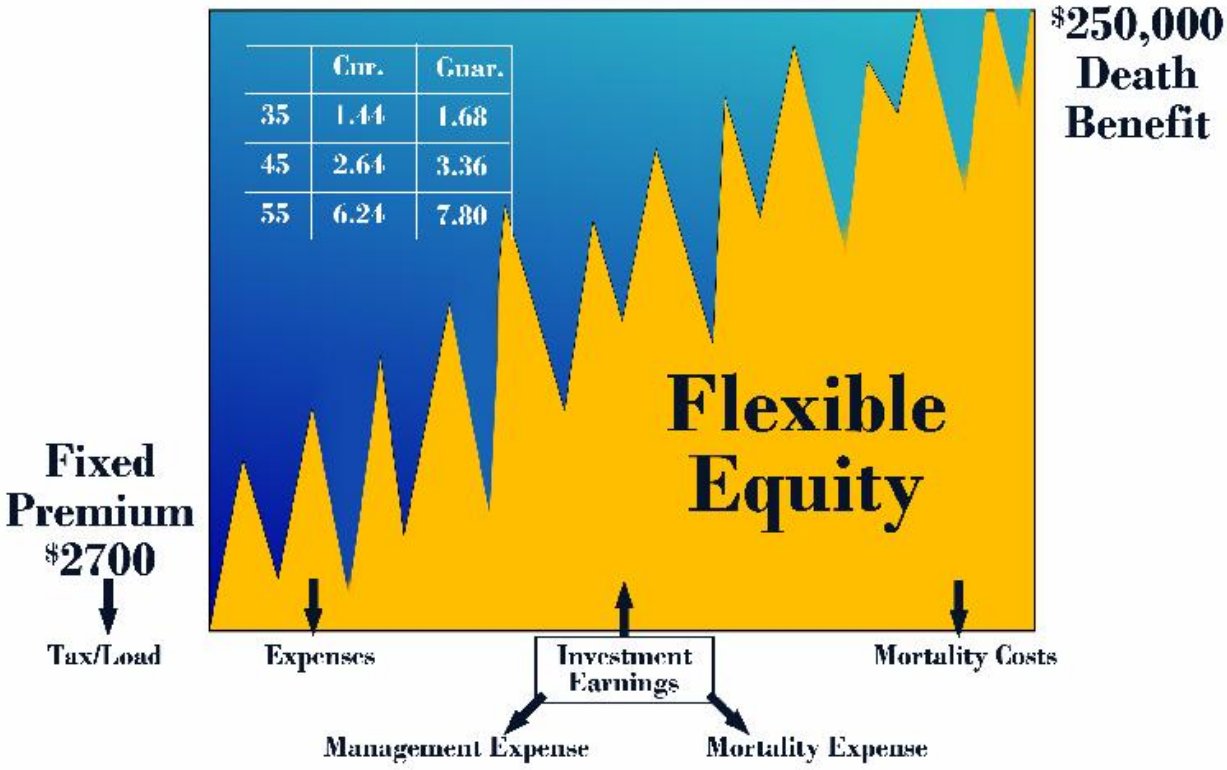
The latest incarnation of the flexible product design includes a concept called the secondary guarantee. This states that in return for some level of premium, fixed by contract, the death benefit will be guaranteed. The premium is typically low in comparison to the traditional whole life premium, and the contract typically has little or no cash value. This product is sometimes referred to as term to age one hundred, but it is not term insurance. Interestingly, this is precisely the product concept found to be so unpalatable by the Armstrong Committee in 1905. It is a contract for the whole of life with little or no non-forfeiture values.

The industry has come full circle. The modern-day market was demanding products guaranteed for the whole of life but with lower premiums. The actuarial answer was rescission of the non-forfeiture provisions, which was technically possible within the legal parameters of a flexible premium contract.

The performance of these contracts is based on narrow actuarial calculations. There is little leeway in the time value of money calculations. Therefore contracts with secondary guarantees include strict language voiding the guarantees if premiums are not paid on time.

Variable Life Insurance

With the stock market roaring in the 1990 variable life insurance became popular. This is a variation on the flexible premium design. Instead of policy values being tied to the fixed interest rate market, they are tied to the stock market. Quick to give the consumer what it wanted, many life insurance companies entered the variable life market, packaging up stock, bond, and money market funds to offer policy holders more flexibility and control over the investment component of the policy.



This is what variable life looks like graphically. There is the familiar deduction for the expense component, and mortality component (both the current and guaranteed cost), but instead of fixed interest crediting, the crediting is based on the investment fund performance. The investment component adds another layer of cost to the policy, namely investment management expense, and a new mortality cost, that is, the added mortality cost of liquidating investments in order to pay a death claim.

In this product the performance of the investment funds are not the responsibility of the insurance company. Policy reserves are held in so-called "separate accounts". These are accounts separate from the general account of the insurance company, where traditional policy reserves are held.

The variable policy offers the hope of lower premiums to the policy owner, and exposes the policy owner to more risk. The risk of investment performance is shifted from the insurance company to the policy owner.

Indexed Life Insurance

Recently another flexible product has been introduced to the market place. Equity indexed life insurance policies tie the policy fund value to an index of equities. Instead of fixed interest crediting, or stock market-based crediting, the fund crediting is based on the performance of an index defined by the policy. The concept involves forfeiting a portion of the market return when it is high, in return for protection against loss when the

market return is low. Indexed contracts typically include some level of guarantee but it is difficult to quantify and not always what it seems to be.

Definition of the crediting method varies widely from contract to contract, and is complicated. The contracts have many more variables than interest sensitive or variable universal life contracts, and therefore it is even more difficult to determine the ultimate cost of the contract. Indexed contracts are marketed to the consumer's hope that the index will perform well enough for them to pay less.

D. Second To Die Life Insurance

Second to die life insurance contracts insure two lives. They pay a death benefit at the death of the second insured. They were developed in the early 1980s upon the introduction of the unlimited marital deduction. Second to die contracts are available in traditional whole life, or flexible premium varieties. They are priced using the familiar components of interest, mortality and expense. Mortality costs however are based on joint mortality tables.

Overlooked Planning Consideration

There is a common misconception that second to die polices are always more efficient than single life policies. The premium is lower on a second to die policy, but in some cases a single life policy can produce a greater total benefit for the beneficiary.

This can occur due to the timing of death and the time value of money. When a single-life death benefit is received (sooner than a second-to-die benefit), it could be invested. Depending on the earning assumption, the ultimate capital sum with accumulated earnings, can be dramatically higher than the second to die benefit received at the end of the time period.

Example: 10 million second to die vs. 10 million single life

Male age 75
Female age 60

Scenario 1
Males dies age 90
Female dies age 90 (15 years later)
Beneficiary receives 10,000,000

Scenario 2
Male dies age 90
Beneficiary receives 1 million of single-life proceeds
Accumulated for 15 years (Female dies age 90)
At 4% = 18,009,435
At 5% = 20,789,280

At 7% = 27,590,315

E. Which Product Is Best

It is sometimes said that there are no deals in the life insurance business. From policy to policy the mortality cost is the same. Everything is a trade off between the premium you choose to pay and the amount of risk you either retain yourself, or shift to the larger group of insureds.

Why is the flexible premium product less premium? Because it shifts risk to the policy owner. Term offers a lower premium initially because early deaths are few, and the product has a high lapse rate (low risk of claim to the insurer). Whole life premiums are high because the product shifts the most risk to the insurance company. Second-to-die premium is lower because payment of the benefit is typically delayed.

IV. Product Performance

A. Traditional Products

1. Dividends

Mutual insurance companies set premiums based on conservative assumptions, to assure that enough will be collected to pay claims even under adverse future circumstances. In years when the premiums are more than adequate, the owner of a participating policy can receive a dividend. Dividends are not guaranteed. They are values over and above the guaranteed values in the contract.

2. Use of Dividends

Policy owners can elect to receive dividends in several different ways. Common dividend options are:

a) Cash
b) Applied to reduce premium
c) Accumulate at interest
d) Purchase paid-up additional death benefit
e) Purchase term insurance for one year

Here are four illustrations of the identical life insurance contract, each with the dividend applied differently.

MassMutual
FINANCIAL GROUP
MASSACHUSETTS MUTUAL LIFE INS. CO.

Whole Life Legacy 100
Life Insurance Illustration

Policy: Whole Life Legacy 100 with Premiums Payable to Age 100
Base Policy Face Amount: $250,000 Annual Premium: $5,815.00
Riders: ABR TIR

Tabular Values

Dividend Option: Policy dividends paid in Cash. **Dividends are not guaranteed and are subject to significant fluctuations over the lifetime of the policy. Changes in dividends will change all Non-Guaranteed values shown in this illustration.**

						———Non-Guaranteed Values———				
Year	Age End Year	Contract Premium Beg Year	Guaranteed Cash Value End Year	Guaranteed Death Benefit End Year	Dividend Paid in Cash Beg Year	Tax on Distribution Beg Year	Annual Net Outlay Beg Year	Total Cash Value End Year	Total Death Benefit End Year	Total Paid-Up Insurance End Year
26	76	5,815	134,300	250,000	6,459	0	-638	140,918	256,218	300,137
27	77	5,815	139,385	250,000	6,718	0	-903	146,748	256,963	304,367
28	78	5,815	143,905	250,000	6,997	0	-1,148	152,333	257,225	308,340
29	79	5,815	150,350	250,000	7,323	0	-1,410	[illegible]	257,518	313,015
30	80	5,815	155,685	250,000	7,518	0	-1,703	[illegible]	[illegible]	315,699
31	81	5,815	161,100	250,000	7,835	0	-2,020	[illegible]	258,318	319,206
32	82	5,815	166,035	250,000	8,318	0	-2,503	174,850	258,873	323,608
33	83	5,815	170,795	250,000	8,829	0	-3,008	180,088	259,290	325,773
34	84	5,815	175,450	250,000	9,300	0	-3,475	185,160	259,740	328,748
35	85	5,815	179,880	250,000	9,740	0	-3,925	190,090	260,180	331,540
36	86	5,815	184,145	250,000	10,180	0	-4,365	194,830	260,673	334,336
37	87	5,815	188,200	250,000	10,673	0	-4,858	199,365	261,165	336,748
38	88	5,815	192,035	250,000	11,165	0	-5,350	203,630	261,605	339,036
39	89	5,815	195,624	250,000	11,605	0	-5,790	207,649	262,020	341,148
40	90	5,815	199,000	250,000	12,020	0	-6,205	211,345	262,345	343,009

260,180

MassMutual
FINANCIAL GROUP
MASSACHUSETTS MUTUAL LIFE INS. CO.

Whole Life Legacy 100
Life Insurance Illustration

Policy: Whole Life Legacy 100 with Premiums Payable to Age 100
Base Policy Face Amount: $250,000 — Annual Premium: $5,815.00
Riders: ABR TIR

Tabular Values

Dividend Option: Prior year's policy dividend used to reduce current premium with excess used to purchase Paid-Up Additions. **Dividends are not guaranteed and are subject to significant fluctuations over the lifetime of the policy. Changes in dividends will change all Non-Guaranteed values shown in this illustration.**

					Non-Guaranteed Values						
Year	Age End Year	Contract Premium Beg Year	Guaranteed Cash Value End Year	Guaranteed Death Benefit End Year	Net Premium Beg Year	Annual Dividend End Year	Cash Value of Additions End Year	Total Cash Value End Year	Paid-Up Additions End Year	Total Death Benefit End Year	Total Paid-Up Insurance End Year
26	76	5,815	134,200	250,000	–	6,756	2,958	142,113	2,979	258,794	201,824
27	77	5,815	138,783	250,000		7,033	3,358	148,958	4,674	260,485	207,344
28	78	5,815	143,308	250,000	–	7,336	4,943	156,068	6,731	262,566	213,056
29	79	5,815	150,770	250,000		7,681	6,904	163,435	9,750	265,066	218,985
30	80	5,815	155,983	250,000	–	8,062	9,256	171,07[illegible]	[illegible]	[illegible]924	225,139
31	81	5,815	161,100	250,000	–	8,622	12,243	179,158	[illegible]	[illegible]656	231,808
32	82	5,815	166,078	250,000		9,224	15,832	187,694	20,181	275,956	238,961
33	83	5,815	170,258	250,000	–	9,808	20,091	196,703	25,1[illegible]	281,002	246,663
34	84	5,815	175,420	250,000		10,354	24,967	206,202	30,845	286,660	254,743
35	85	5,815	179,880	250,000	–	10,589	30,492	216,187	37,147	292,962	265,520
36	86	5,815	184,148	250,000		11,673	36,758	226,721	44,193	300,008	272,580
37	87	5,815	188,200	250,000	–	12,555	43,796	237,811	52,037	307,822	282,358
38	88	5,815	192,075	250,000		13,032	51,546	249,386	60,508	316,373	292,747
39	89	5,815	195,625	250,000	–	13,711	59,958	261,455	69,678	325,493	303,617
40	90	5,815	199,000	250,000		14,291	69,075	273,890	79,424	335,239	314,925

292,962

Policy: Whole Life Legacy 100 with Premiums Payable to Age 100
Base Policy Face Amount: $250,000 — Annual Premium: $5,815.00
Riders: ABR TIR

Tabular Values

Dividend Option: Policy dividends left to accumulate at interest. **Dividends are not guaranteed and are subject to significant fluctuations over the lifetime of the policy. Changes in dividends will change all Non-Guaranteed values shown in this illustration.**

					——Non Guaranteed Values——						
Year	Age End Year	Contract Premium Beg Year	Guaranteed Cash Value End Year	Guaranteed Death Benefit End Year	Annual Dividend End Year	Tax on Distribution Beg Year	Annual Net Outlay Beg Year	Cash Value of Accumulations End Year	Total Cash Value End Year	Total Death Benefit End Year	Total Paid Up Insurance End Year
26	76	5,815	134,200	250,000	6,718	813	5,822	100,439	234,639	350,439	333,225
27	77	5,815	139,585	250,000	6,960	912	5,727	111,015	250,600	361,015	349,105
28	78	5,815	145,305	250,000	7,225	1,012	5,527	122,239	267,544	372,239	365,235
29	79	5,815	150,720	250,000	7,518	1,119	6,034	134,155	284,875	384,155	381,651
30	80	5,815	155,585	250,000	7,835	1,232	7,047	146,815	[illegible]	[illegible]	398,532
31	81	5,815	161,100	250,000	8,215	1,352	7,167	160,122	[illegible]	[illegible]	416,011
32	82	5,815	166,025	250,000	8,823	1,480	7,296	175,020	341,045	425,020	434,201
33	83	5,815	170,795	250,000	9,290	1,617	7,432	190,611	361,406	440,611	453,051
34	84	5,815	175,420	250,000	9,740	1,761	7,579	207,213	382,633	457,213	472,705
35	85	5,815	179,880	250,000	10,180	1,921	7,726	224,853	404,733	474,853	493,065
36	86	5,815	184,147	250,000	10,673	2,089	7,904	243,620	427,767	493,620	514,292
37	87	5,815	188,200	250,000	11,162	2,267	8,082	263,555	451,755	513,555	536,456
38	88	5,815	192,025	250,000	11,605	2,456	8,271	284,648	476,673	534,648	559,554
39	89	5,815	195,623	250,000	12,020	2,657	8,472	306,915	502,538	556,915	583,620
40	90	5,815	199,000	250,000	12,345	2,868	8,684	330,309	529,309	580,309	608,611

474,853

MassMutual FINANCIAL GROUP
MASSACHUSETTS MUTUAL LIFE INS. CO.

Whole Life Legacy 100
Life Insurance Illustration

Policy: Whole Life Legacy 100 with Premiums Payable to Age 100
Base Policy Face Amount: $250,000 — Annual Premium: $5,815.00
Riders: ABR TIR

Tabular Values

Dividend Option: Dividends used to purchase Paid-Up Additions. **Dividends are not guaranteed and are subject to significant fluctuations over the lifetime of the policy. Changes in dividends will change all Non-Guaranteed values shown in this illustration.**

						—Non-Guaranteed Values—				
Year	Age End Year	Outlay Premium Beg Year	Guaranteed Cash Value End Year	Guaranteed Death Ben. $ End Year	Annual Dividend End Year	Cash Value of Additions End Year	Total Cash Value End Year	Paid-Up Additions End Year	Total Death Benefit End Year	Total Paid-Up Insurance End Year
26	26	5,815	134,200	250,000	10,343	170,139	254,533	170,638	420,638	361,225
27	27	5,815	139,285	250,000	10,928	175,561	275,350	185,918	435,918	380,983
28	28	5,815	145,308	250,000	11,647	182,846	295,153	201,852	451,852	400,198
29	29	5,815	150,720	250,000	12,400	163,037	313,757	218,446	468,446	420,389
30	80	5,815	155,985	250,000	13,207	179,182	335,162	[illegible]	[illegible]	441,125
31	81	5,815	161,100	250,000	14,199	196,464	357,564	[illegible]	[illegible]	462,643
32	82	5,815	166,028	250,000	15,272	214,933	380,962	275,642	525,642	485,018
33	83	5,815	170,798	250,000	16,417	234,588	405,385	294,099	544,099	508,224
34	84	5,815	175,420	250,000	17,578	255,436	430,856	313,567	563,567	532,282
35	85	5,815	179,880	250,000	18,454	277,482	457,362	338,049	588,049	557,188
36	86	5,815	184,148	250,000	19,800	300,933	485,123	361,854	611,854	585,249
37	87	5,815	188,200	250,000	21,255	325,956	514,156	387,071	637,071	610,552
38	88	5,815	192,025	250,000	22,412	352,150	544,175	413,379	663,379	638,793
39	89	5,815	195,625	250,000	23,574	379,573	575,145	440,757	690,757	667,942
40	90	5,815	199,000	250,000	24,695	407,987	606,987	469,106	719,106	697,971

588,049

3. Premium offset concepts (vanishing premium)

Life insurance is sold frequently on the concept that the premium will not need to be paid out-of-pocket permanently. As discussed previously, in a whole life contract the premium is due annually for the whole of life. If dividends and cash values are sufficient, these accumulated values can be used to offset the premium. It is important to understand that the premium has not been waived. It has not "vanished". The premium is due and payable. The policy owner has opted to pay it from account values rather than "out of pocket".

This can be a tricky proposition. Dividends are not guaranteed. Most companies have never missed an annual dividend, but the amount of the dividend varies. Here are two illustrations of the same policy in two different dividend environments. The first anticipates 14 years of out-of-pocket payments. The second anticipates 16 years of out-of-pocket payments. The careful advisor discusses the offset point as a range of years, not as an absolute.

MassMutual FINANCIAL GROUP®
MASSACHUSETTS MUTUAL LIFE INS. CO.

Whole Life Legacy 100
Life Insurance Illustration

Policy: Whole Life Legacy 100 with Premiums Payable to Age 100
Base Policy Face Amount: $250,000
Riders: ABR TIR

Annual Premium: $5,815.00

Supplemental Values

Dividend Option: Dividends used to purchase Paid-Up Additions. **Dividends are not guaranteed and are subject to significant fluctuations over the lifetime of the policy. Changes in dividends will change all Non-Guaranteed values shown in this illustration.**

		Guaranteed Values		Non-Guaranteed Values						
Year	Age End Year	Optional Premium Beg Year	Annual Surrender Beg Year	Annual Net Outlay Beg Year	Annual Dividend End Year	Base Policy Cash Value End Year	Total Cash Value of Additions End Year	Total Cash Value End Year	Total Paid-Up Additions End Year	Total Death Benefit End Year
1	51	5,815	0	5,815	0	0	0	0	0	250,000
2	52	5,815	0	5,815	0	530	0	530	0	250,000
3	53	5,815	0	5,815	595	5,703	595	6,298	1,545	251,545
4	54	5,815	0	5,815	798	10,590	1,404	12,394	3,533	253,533
5	55	5,815	0	5,815	1,015	16,378	2,463	18,841	6,002	256,002
6	56	5,815	0	5,815	1,270	21,953	3,810	25,662	9,010	259,010
7	57	5,815	0	5,815	1,402	27,420	5,328	32,748	12,228	262,228
8	58	5,815	0	5,815	1,548	33,075	7,035	40,110	15,677	265,677
9	59	5,815	0	5,815	1,651	38,863	8,395	47,258	19,250	269,250
10	60	5,815	0	5,815	1,774	44,778	10,941	55,720	22,979	272,979
11	61	5,815	0	5,815	1,965	50,178	14,210	64,388	26,989	276,989
12	62	5,815	0	5,815	2,196	55,650	15,782	71,432	31,350	281,350
13	63	5,815	0	5,815	2,482	61,103	18,208	79,310	36,158	286,158
14	64	5,815	0	5,815	2,806	66,583	22,019	88,602	41,458	291,458
15	65	5,815	5,815	–	2,952	72,070	19,584	91,654	45,902	295,902
16	66	5,815	5,815	–	3,497	77,573	17,622	95,194	51,492	301,492
17	67	5,815	5,815	–	4,022	83,109	16,127	99,236	58,116	308,116
18	68	5,815	5,815	–	4,510	88,690	15,078	103,768	65,649	315,649
19	69	5,815	5,815	–	5,012	94,323	14,502	108,824	74,079	324,079
20	70	5,815	5,815	–	5,474	100,023	14,371	114,393	83,298	333,298

MassMutual FINANCIAL GROUP
MASSACHUSETTS MUTUAL LIFE INS. CO.

Whole Life Legacy 100
Hypothetical Lower Scale Life Insurance Illustration

Policy: Whole Life Legacy 100 with Premiums Payable to Age 100
Base Policy Face Amount: $250,000
Riders: ADB TIR

Annual Premium: $5,815.00

Supplemental Values

Dividend Option: Dividends used to purchase Paid-Up Additions. **Dividends are not guaranteed and are subject to significant fluctuations over the lifetime of the policy. Changes in dividends will change all Non-Guaranteed values shown in this illustration.**

		Non Guaranteed Lower Scale Values								
Year	Age End Year	Contract Premium Beg Year	Annual Surrender Beg Year	Annual Net Outlay Beg Year	Annual Dividend End Year	Basic Policy Cash Value End Year	Total Cash Value of Additions End Year	Total Cash Value End Year	Total Paid Up Additions End Year	Total Death Benefit End Year
1	51	5,815	0	5,815	0	0	0	0	0	250,000
2	52	5,815	0	5,815	0	530	0	530	0	250,000
3	53	5,815	0	5,815	495	5,703	495	6,198	1,285	251,285
4	54	5,815	0	5,815	655	10,990	1,146	12,136	2,882	252,882
5	55	5,815	0	5,815	798	16,378	1,980	18,357	4,828	254,828
6	56	5,815	0	5,815	990	21,853	3,032	24,884	7,170	257,170
7	57	5,815	0	5,815	1,053	27,420	4,177	31,597	9,586	259,586
8	58	5,815	0	5,815	1,125	33,075	5,427	38,502	12,094	262,094
9	59	5,815	0	5,815	1,154	38,863	6,743	45,605	14,591	264,591
10	60	5,815	0	5,815	1,190	44,778	8,131	52,908	17,093	267,093
11	61	5,815	0	5,815	1,282	50,178	9,658	59,836	19,731	269,731
12	62	5,815	0	5,815	1,433	55,630	11,366	66,996	22,578	272,578
13	63	5,815	0	5,815	1,624	61,105	13,209	74,008	25,717	275,717
14	64	5,815	0	5,815	1,834	66,583	15,501	82,082	29,169	279,169
15	65	5,815	0	5,815	2,054	72,070	17,968	90,038	32,935	282,935
16	66	5,815	0	5,815	2,681	77,373	21,107	98,479	37,727	287,727
17	67	5,815	5,815	-	3,155	83,108	18,835	101,940	39,833	282,833
18	68	5,815	5,815	-	3,583	88,690	16,925	105,615	28,791	278,791
19	69	5,815	5,815	-	4,019	94,324	15,401	109,724	25,572	275,572
20	70	5,815	5,815	-	4,410	100,023	14,228	114,250	23,066	273,066

B. Flexible Products

1. Earnings

In a flexible premium contract insufficient earnings can cause increases in premium Failure to pay the higher premium will cause the policy to lapse. In the variable contract illustrated below, 8% earnings hold the death benefit beyond age 100. At 4% the policy lapses at age 85.

MassMutual FINANCIAL GROUP
MASSACHUSETTS MUTUAL LIFE INS. CO

Variable Universal Life III Insurance Illustration

Assuming Investment in Separate Account

Prepared for: John Smith

Male, 50, Select Preferred Non-Tobacco

Policy: Variable Universal Life III - Form P2-2008(FL)
Death Benefit Option: Level Death Benefit Option (1)
Face Amount: $250,000
Riders: ABR SIR

Planned Premium: $2,777.77
Premium Frequency: Annual

Values shown reflect current premium expense and policy charges, which are not guaranteed

				0% Hypothetical Gross Investment Return (-1.53% net)			4.00% Hypothetical Gross Investment Return (2.41% net)			8.00% Hypothetical Gross Investment Return (6.35% net)		
ar	Age	Face Amount Beg Year	Annual Premium Outlay	Account Value End Year	Net Surrender Value End Year	Death Benefit End Year	Account Value End Year	Net Surrender Value End Year	Death Benefit End Year	Account Value End Year	Net Surrender Value End Year	Death Benefit End Year
1	51	250,000	2,778	0	0	0	29,436	29,436	250,000	110,429	110,429	250,000
2	52	250,000	2,778	0	0	0	24,692	24,692	250,000	115,642	115,642	250,000
3	53	250,000	2,778	0	0	0	18,583	18,583	250,000	120,805	120,805	250,000
4	54	250,000	2,778	0	0	0	10,906	10,906	250,000	125,943	125,943	250,000
5	55	250,000	2,778	0	0	0	1,255	1,255	250,000	130,992	130,992	250,000
6	56	250,000	2,778	0	0	0	0	0	0	135,981	135,981	250,000
7	57	250,000	2,778	0	0	0	0	0	0	140,959	140,959	250,000
8	58	250,000	2,778	0	0	0	0	0	0	145,765	145,765	250,000
9	59	250,000	2,778	0	0	0	0	0	0	150,403	150,403	250,000
10	60	250,000	2,778	0	0	0	0	0	0	154,838	154,838	250,000
11	61	250,000	2,778	0	0	0	0	0	0	159,092	159,092	250,000
12	62	250,000	2,778	0	0	0	0	0	0	163,265	163,265	250,000
13	63	250,000	2,778	0	0	0	0	0	0	167,329	167,329	250,000
14	64	250,000	2,778	0	0	0	0	0	0	171,330	171,330	250,000
15	65	250,000	2,778	0	0	0	0	0	0	175,238	175,238	250,000
16	66	250,000	2,778	0	0	0	0	0	0	179,106	179,106	250,000
17	67	250,000	2,778	0	0	0	0	0	0	183,111	183,111	250,000
18	68	250,000	2,778	0	0	0	0	0	0	187,328	187,328	250,000
19	69	250,000	2,778	0	0	0	0	0	0	191,864	191,864	250,000
20	70	250,000	2,778	0	0	0	0	0	0	196,826	196,826	250,000
21	71	250,000	0	0	0	0	0	0	0	199,158	199,158	250,000
22	72	250,000	0	0	0	0	0	0	0	201,493	201,493	250,000
23	73	250,000	0	0	0	0	0	0	0	203,579	203,579	250,000
24	74	250,000	0	0	0	0	0	0	0	205,719	205,719	250,000
25	75	250,000	0	0	0	0	0	0	0	207,815	207,815	250,000
26	76	250,000	0	0	0	0	0	0	0	209,880	209,880	250,000
27	77	250,000	0	0	0	0	0	0	0	211,924	211,924	250,000
28	78	250,000	0	0	0	0	0	0	0	213,968	213,968	250,000
29	79	250,000	0	0	0	0	0	0	0	216,045	216,045	250,000
30	80	250,000	0	0	0	0	0	0	0	218,212	218,212	250,000

Even when investment performance is favorable flexible contracts can be effected by changes in mortality costs and expenses. Illustrated below is the identical contract with mortality costs and expense charges at the maximum allowed in the contract. At 8% the policy lapses at age 71. At 4% lapse occurs at age 68.

MassMutual FINANCIAL GROUP
MASSACHUSETTS MUTUAL LIFE INS. CO

Variable Universal Life III Insurance Illustration

Assuming Investment in Separate Account

Prepared for: John Smith

Male, 50, Select Preferred Non-Tobacco

Policy: Variable Universal Life III - Form P2-2008(FL)
Death Benefit Option: Level Death Benefit Option (1)
Face Amount: $250,000
Riders: ABR SIR

Planned Premium: $2,777.77
Premium Frequency: Annual

Values shown reflect guaranteed premium expense and policy charges.

				0% Hypothetical Gross Investment Return (-1.72% net)			4.00% Hypothetical Gross Investment Return (2.21% net)			8.00% Hypothetical Gross Investment Return (6.14% net)		
Yr	Age	Face Amount Beg Year	Annual Premium Outlay	Account Value End Year	Net Surrender Value End Year	Death Benefit End Year	Account Value End Year	Net Surrender Value End Year	Death Benefit End Year	Account Value End Year	Net Surrender Value End Year	Death Benefit End Year
1	51	250,000	2,778	339	0	250,000	386	0	250,000	437	0	250,000
2	52	250,000	2,778	587	0	250,000	707	0	250,000	833	0	250,000
3	53	250,000	2,778	1,128	0	250,000	1,343	0	250,000	1,564	0	250,000
4	54	250,000	2,778	1,585	0	250,000	1,895	0	250,000	2,241	0	250,000
5	55	250,000	2,778	1,898	0	250,000	2,225	0	250,000	2,632	0	250,000
6	56	250,000	2,778	2,860	0	250,000	3,452	0	250,000	4,145	0	250,000
7	57	250,000	2,778	3,655	0	250,000	4,442	738	250,000	5,383	1,679	250,000
8	58	250,000	2,778	4,274	1,895	250,000	5,289	2,809	250,000	6,473	4,063	250,000
9	59	250,000	2,778	4,744	3,309	250,000	6,016	4,782	250,000	7,513	6,378	250,000
10	60	250,000	2,778	5,044	5,044	250,000	6,598	6,598	250,000	8,599	8,599	250,000
11	61	250,000	2,778	5,175	5,175	250,000	7,025	7,025	250,000	9,504	9,504	250,000	
12	62	250,000	2,778	5,063	5,063	250,000	7,245	7,245	250,000	10,231	10,231	250,000	
13	63	250,000	2,778	4,656	4,656	250,000	7,163	7,163	250,000	10,715	10,715	250,000	
14	64	250,000	2,778	3,915	3,915	250,000	6,741	6,741	250,000	10,892	10,892	250,000	
15	65	250,000	2,778	2,833	2,833	250,000	5,947	5,947	250,000	10,739	10,739	250,000	
16	66	250,000	2,778	1,355	1,355	250,000	4,743	4,743	250,000	10,182	10,182	250,000	
17	67	250,000	2,778	0	0	0	3,103	3,103	250,000	9,203	9,203	250,000	
18	68	250,000	2,778	0	0	0	997	997	250,000	7,731	7,731	250,000	
19	69	250,000	2,778	0	0	0	0	0	0	5,750	5,750	250,000	
20	70	250,000	2,778	0	0	0	0	0	0	3,129	3,129	250,000	
21	71	250,000	2,778	0	0	0	0	0	0	0	0	0	
			38,233									

2. Effect on Premium

Policy illustration software in the hands of a skillful agent can be used to gauge how much premium should be paid if the policy owner wishes to pay for a shorter period of time, say ten years, or twenty years, or even one single payment. But when real-world conditions differ from the assumptions, premium has to be adjusted or everything unravels.

Lower earnings can cause the premium to increase. Mortality and expense charges can increase, resulting in the need for higher premium.

The amount and timing of premiums can produce substantially different results. For example the difference between paying monthly and annually can be significant. Skipping an annual payment, or paying a slightly lower premium for a period can produce dramatically different results.

3. Offset Point

Flexible products have the potential to offset premium as well. An out of pocket premium will offset (vanish) if the policy fund is large enough to carry the mortality and expense charges. If the fund is low, due to poor performance or too little premium, the result to the policy owner is different from a failed vanish in a traditional product.

In a traditional contract if dividends change, the policy owner runs the risk of having to resume payment of the fixed contractual premium. In the flexible contract the premium will not re-emerge at the fixed level as it does in the traditional contract. Instead it will re-emerge at the pure term premium for the full face amount. If the fund cannot cover the mortality cost the policy owner must pay the full term premium or lose the death benefit.

Flexible products must be monitored. Illustrations should be re-run regularly to see what is happening with the components of interest, expense, and mortality so mid-course corrections can be made if necessary.

Causes of Underfunding:

- Lack of understanding by the client
- Lack of understanding by the agent
- Client over optimism
- Agent over optimism
- Agent misleading
- Client looking for the "easy way". I'll skip a payment and worry about it later.

V. Insurance Company Performance Issues

When doing Business with life insurance companies there are several things to look for, among them, financial strength, historical performance, and how they conduct daily operations.

A. Financial Strength

1. Ratings - Ratings are important. But ratings are not the only answer. If they were, how would we explain the failure of Executive Life, Mutual Benefit, or Confederation Life. Ratings agencies labeled them AAA or AA only a couple years before they were taken over by state regulators.

2. Lapse ratios – they are important to the actuary. The lapse ratio is a calculated assumption that some contracts will remain in force, while others will lapse, allowing the claim reserve (liability) to be released. If this lapse estimate is incorrect it can jeopardize the projections, or even the solvency of the insurer. This has happened recently. Some companies ceased operations, after contract

owners held annuity contracts to maturity in numbers higher than anticipated. Sometimes carriers will respond to this risk by terminating sales of a product line.

3. Other factors:

a) Market Behavior

Market behavior is another indicator of a potential problem with an insurer.

i. Why would a company project very high results? For short term gain, i.e. premium revenue. But that can result in long term loses, bad relative performance, and disappointed policyholders and agents.
ii. Why would a company take bad underwriting risks, e.g. award premium rate classifications to applicants who don't warrant them? For short term gain, i.e. premium revenue. In the long term loss are higher because future claims may be higher.
iii. Why would a company over spend to attract new business, e.g. advertising, sales incentives, etc.?

Companies always try to justify these behaviors. But in the world of large life insurance companies with billions of dollars of investments, with more than a hundred years of mortality experience, and with expenses constantly monitored by comptrollers, actuaries, cpas, compliance attorneys, and budget committees, is it really possible for one company to suddenly find a way to compete in the short run without paying the price in the long run? There is no free lunch.

b) Too Hungry for business:

Professional advisors should be alert to companies that are to hungry for business. It can be a sign of underlying issues not yet reflected in the company ratings.

c) Overexposure to one line of business:

Some companies limit their product offerings. For example they may be heavily weighted in sales of term insurance, flexible life, annuities, whole life, disability insurance, long term care insurance, etc. Companies with broader product offerings generally tolerate market pressures and economic cycles more favorably, due to the diversified nature of their offerings.

B. Historical performance

A evaluation of historical performance is an attempt to answer the question: how did a company really do with mortality expense and investment, and how much of the profit did they pass back to the policy holders.

Performance evaluation is complicated. Even within the same company the same policy will look different historically, depending on the period chosen for examination. Different policies within the same company will perform differently over the same time periods. Comparing policies of different companies is even more difficult since product offerings tend to vary dramatically. Apples to apples comparisons are almost never possible.

C. Daily Operations

Daily operations of an insurance company are often overlooked, but they are important to policy owners and their professional advisors.

1. Claims - How quickly are they paid? 7 days or 45 days?
2. Sales Illustrations – can a company illustrate a variety of "what ifs" or just "vanilla".
3. Policy Change options - are they available? Can they be illustrated? E.g. some companies won't reduce the face amount of a term policy after it has been issued.
4. In Force Illustrations – Does the company charge for them? Can they illustrate new options on old policies.
5. Communications - are agents copied on policy owner communications? Many companies save costs by not informing agents of important issue affecting an in force contract – lapse notices for example.
6. Attitude toward policy holder - Who is on the other end of the 1-800 number? Is the customer service phone rep expert with their product, or just reading info from the screen? Is their attitude "can do" or "sorry Charlie".

VI. Summary

The objective of this paper has been to review the technical aspects of life insurance products for the non-insurance professional. Life insurance can be one of the largest assets owned by successful clients. Knowledge of life insurance fundamentals can help professionals guide their clients and alert them to red flags that arise commonly.

Life insurance is priced logically. There is no magic and no free lunch. There is a trade off between the amount of premium and the amount of risk - born by the insurance company or retained by the policy owner.

Professional life insurance design is the skillful matching of an appropriate product for the given situation. When done well, life insurance design is much more than acquiring three quotes and choosing the one in the middle.

VII. Questions - Discussion