Executive Summary

Setting the Stage

A law firm referred us into the client's wealth manager. The client had four life insurance policies totaling $23,500,000 in total death benefit. Three of the policies were Hybrid Whole Life policies (mixture of whole life and term) all structured the same; $6,500,000 total death benefit with $4,500,000 of whole life and $2,000,000 of term. One was a Universal Life policy. The wealth management firm had been monitoring the policies to the best of their ability but dividends were decreasing, the illustrations were changing from year to year more significantly, and they did not have enough knowledge about how to interpret the in force illustrations and how to best optimize return. Especially in light of the fact that their client had just completed some major gifts and decided she no longer wanted to pay the premiums.

Scope of the Engagement

Figure out how to turn $200,000 of annual premiums into $0 annual premiums and maximize the amount of death benefit

Analysis Findings

Hybrid Whole Life can provide some challenges. It is a mixture of whole life and term. The term costs increase each year so the amount of term has to decrease. The amount of term is decreased by utilizing a portion of the dividend with the excess dividend reinvested along with the premium to continue the cash value of the policy to support the future costs. The objective is to convert enough the term so it decreases at the right "speed" based on premium and estimated future dividend payments. The challenge is as dividends have decreased if there is too much term in the original mix it will not decrease fast enough and the premium will have to increase or the death benefit will have to decrease.

One of the policies annual statements (John Hancock) said that the policy had $800,000 of term but in fact, upon further investigation, the term was actually all converted. I also came to discover that the insurance company had designed this policy to never have a dividend paid that was less than the year before! This required working with someone at the insurance company, which is very rare, to figure out how to best utilize this structure. Both of these discoveries gave me quite a bit to ponder.

The analysis boiled down to the following:

1. Do we keep the term rider premium on the policy and utilize the dividend to offset the premium?
2. Do we eliminate the term rider premium and convert the policy to a reduced paid-up death benefit which zeros out the premium but initially reduces the death benefit?

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Under scenario #1 the dividend was not quite large enough to offset the entire premium so some of the death benefit had to be surrendered annually to access enough cash value to offset the premium. Eventually the dividend would become large enough to offset the entire premium with any excess reinvested back into the policy.

We illustrated this structure with 3 different dividend scale assumptions; current dividend scale, 50 bps. (1/2%) below current, 100 bps. (1%) below current. Keeping the term rider premium on the policy allowed us to keep the policy death benefit higher than under scenario #2 but also meant that there was a larger drag on the policy because the premium that had to be offset was larger. The other risk was if the insurance company was to change their dividend policy because, in realty, the dividend should have been a lot lower based on the declining interest rate environment over the last 20 yrs. This dividend structure would continue to exist on a premium paying policy.

Scenario #2 means that we would eliminate the term rider premium therefore lowering the premium and convert the policy to reduce paid-up which means that the death benefit is reduced actuarially based on the amount of cash value. The dividend is adjusted downward because of the very nature of a reduced paid-up insurance and the policy is no longer a premium paying. The dividend, since there is contractually no premium to pay can now be 100% reinvested back into the policy.

We had to compare these 2 scenarios by finding where the crossover point is in the death benefit growth. Based on our proprietary life expectancy tables the insured could live into her late 90's which was 30+ years from now. The crossover point was 20 yrs. where the death benefit of the reduced paid-up policy (#2) would surpass the death benefit under scenario #1.

The second Hybrid Whole Life policy we analyzed did not have the same dividend structure, had a much higher premium for some reason, and had about $1mm of term still to be converted. Going through the same kind of analysis we discovered that the crossover point was at about the 26th to 28th year depending on the dividend scale assumption. This policy was better just eliminating the term and having the dividend pay the premium.

The third Hybrid Whole Life policy's premium had not been paid for the last 8 years. The past dividends had been used along with the current annual premium to pay the past 8 yrs. of premiums. The problem here was there were no dividends left to support the policy premium and the term insurance amount was at $1.8mm. Remember term premiums increase with age so the policy was at a point where the premium of the base whole life policy and the term insurance cost was going to reappear. Our analysis showed that the only option that would work would be to eliminate all the term and convert the policy to a reduced paid-up policy and have the dividend reinvested back into the policy to grow the death benefit.

The fourth policy was Universal Life. Based on the minimum guaranteed crediting rate of 5.5% which was also the current crediting rate my though was to not pay any future premiums. There was over a $1mm of cash value and I wanted to see if it would support all the future mortality costs. We discovered that the policy

would not run out of cash value until age 98. Normally Universal Life policies lapse with no value once the cash value is depleted.

But the actual in force illustration showed the premium reappearing at age 98 and the policy death benefit in force. We had to call the insurance company with the trustee on the phone to find out why. We came to understand that the insurance company had structured this Universal Life policy to only require the premium to be paid and the death benefit would stay in force even though there was $0 cash value!!!

The Bottom Line:

We were able to zero out all the premiums and maintain 86% of the original death benefit. By her 85% probability of death (age 97.4) the death benefit was equal to 92% - 97% of the original amount depending on future dividend scale assumptions.

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The
Efficient Edge
Protecting tomorrow begins today.

Life Insurance Analysis

Thomas Trust

Francis , Insured

Prepared By: The Efficient Edge
For:

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John Hancock, Sun Life, and Prudential

The three policies I analyzed from John Hancock, Prudential, and Sun Life are all Hybrid Whole Life policies. This means that they are mixture of term and whole life insurance. The basic premise of combining the low cost features of term and the guaranteed features (explained later) of whole life is to keep the premium commitment lower.

Your hybrid whole life policies were originally 70% Whole Life and 30% Term insurance. This is a good % mix; not too much term insurance.

Whole Life

A 100% pure Whole Life policy is the "granddaddy" of long-term permanent life insurance. Whole life is the original form of life insurance. Whole Life is built on guarantees and therefore, one of the least flexible of any of the types of life insurance. It integrates all the mathematical elements of life insurance: premium, cash value, investment returns, expenses and mortality. There is no transparency as with many of the other types of life insurance. Whole life insurance is priced to endow at age 100 (cash value equals death benefit) at a certain reserve rate of interest assuming no dividends paid. For example, if you had 100% whole life the promulgated premium at an assumed reserve rate of interest (depending on the year of issue it would be between 2.5% and 4%) the cash value will equal the death benefit. The policy generally pays dividends but they are not guaranteed so they will fluctuate with market conditions. The dividends are generally reinvested back into the contract in the form of paid-up additional life insurance which adds to both the cash value growth and death benefit growth. Paid-up life insurance means that each the dividend is used to purchase a small amount of paid-up death benefit and this little "policy" will add onto the guaranteed cash value of the base policy and the amount of each subsequent dividend will be larger as the total cash value grows. Therefore, you have a guaranteed cash value on the base face amount of life insurance bought and additional cash values that accumulate within the paid-up life insurance bought with each year's dividend.

In the simplest of form there are three basic components of whole life: mortality, expenses and cash value. The expense ratio built into the contract is based on many factors (profit margin, lapse assumptions, underwriting cost allocations, agent compensation, company benefits, etc…). The expense ratio is guaranteed, the insurance company factors in their expense ratio by averaging the total expenses to be paid over your life time estimated by the company's mortality expectations and "packing" it into the premium along with a certain profit margin. The mortality costs are built into your contract are based on the current mortality tables in use at that time, the companies own mortality experience, and a profit margin. This mortality cost is averaged over your life time and, again, this cost is "packed" into the premium with a profit margin. If the expense ratio or mortality cost factor built into the policy changes then the insurance company adjusts future dividends paid.

There are two pieces to the cash value component of whole life; the guaranteed cash value, mentioned above, is built into the contract and is based on many factors; regulations, accounting structure, and reserve requirements, investment cost structure and the cash value from the dividends paid into the policy. The cash value exists to support the level premium and decreasing net amount at risk structure based on regulatory reserve rates. The cash value is invested in the general account assets of the insurance company which have to follow conservative risk-based capital ratio investment guidelines. Based on current year expenses, claims paid, surplus requirements, required reserve allocations,

and returns generated by the insurance company the policy is paid a dividend. The dividend is a tax free return of premium and the only component ***not*** guaranteed in a Whole Life policy.

If any of the three components are not behaving as expected then the dividend is affected. The dividend can be used to; reduce premiums, accumulate in an interest bearing account, paid in cash, or reinvested back into the policy through paid-up life insurance.

Cash value in Whole Life insurance is created by the payment of a level premium that, in the early years, is significantly higher than the underlying cost of the yearly risk of death. The excess premiums accumulate each year and essentially earn the insurance carrier's contractually guaranteed rate of return, building a reserve for risk charges that will be substantially higher than the level premium in the insured's later years. Depending on dividends paid the policy may in fact become self-sustaining by future dividend payments. The risk lies in the fact that if you stop paying premiums and the dividends paid over time decrease then the policy "harvest" past dividends that have accumulated to pay the balance of the premium due. If you end up harvesting all the past dividends then the premium reappears.

By mixing in term insurance (Hybrid Whole Life), let's see what happens:

When you mix in term insurance the premium will be lower based on the ratio of term and whole life. The term insurance will increase in cost on an annual basis. In order to keep the premium level the dividend becomes the critical component. Dividends are estimated well into the future. Each year a portion of the dividend will be used to "buy down" or convert a small portion of the term insurance with excess reinvested. This decreases the term insurance so the premium can remain level and will allow the cash value to grow to support future term costs. If the dividend decreases, then over time the term will not be converted fast enough and eventually the term component may start to increase to keep the policy death benefit level. If the premium and dividend payment are not enough to pay down the term fast enough the term insurance which was decreasing as it was converted to whole life now starts to increase and when it is back at its original level the increasing term premium will cause the overall premium to increase.

The problem described above becomes even more problematic when you stop paying premiums and the dividends decrease over time. Now the dividend is the only component supporting the conversion of the term insurance. Soon enough the dividend is not large enough to convert the term and the term death benefit starts to increase back to the original 70/30 ratio and once the term is back to its original 30% the entire premium will increase due to the increasing premium nature of the term component. What happens, the consumer is generally unaware of this, is that as the dividend decreases the policy harvests a greater portion of the dividends that have accumulated in order to support the policy. The term eventually increases back towards the original 70/30 ratio until there are no further dividends to harvest and then the policy premium has to increase to support what is now30% term insurance and 70% whole life. The premium escalates dramatically as the insured ages and the term rates increase. In addition, the term rates are not guaranteed.

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John Hancock (JH)

Policy Type: Hybrid Whole Life
Base Face amount: $4,550,000
Paid-up Adds Death Benefit (PUA): $1,404,123
Rider Death Benefit: $807,523
Total Death Benefit: $6,761,646

Guaranteed Cash Value: $1,478,945
PUA Cash Value: $961,955
Total Cash Value: $2,440,900
Last Dividend: $41,490
Dividend Crediting Rate 2012: 5.85%

Premium: $49,351
Term Rider: $10,627
Total Premium: $59,979

Cost Basis: $1,319,538
Gain: $1,175,590 (taxed as ordinary income)

This policy is actually in good position. The cash value is significant, the term insurance no longer exists in this contract (it has been converted and confirmed by JH) and we can pay no future premiums based on the different assumed dividend scales I requested to review.

I requested the following illustrations to help me see how we could best optimize return:

1. Eliminate the term rider cost, convert the policy to reduced paid-up life (RPU) with dividends reinvested assuming the following dividend scales
    a. Current dividend
    b. .25% below
    c. .50% below
2. Eliminate the term rider cost, natural premium offset with excess dividends to PUA
    a. Current dividend
    b. .25% below
    c. .50% below

RPU means that contractually there are no future premiums to be paid. The death benefit is reduced based on the accumulated cash value to a paid-up amount. I requested that the dividend be reinvested back into the cash value as PUA. By converting to a RPU death benefit the dividend is reduced but does not have to be used to support any future premium payments, therefore, 100% of any future credited dividends are reinvested.

We compare that to the natural premium offset illustrations. When a policy premium offsets if the dividend is not larger that the premium then the policy harvests past dividends by surrendering enough paid-up life insurance whose cash value represents the balance of the premium due. The balancing act is to make sure we do not harvest all of the past dividends before the dividend is larger than the premium.

If the natural offset (the policy is self-sustaining based on estimated future dividends) is possible then we compare the long term death benefits provided by each scenario. The RPU option will initially provide a lower death benefit and the cash value and death benefit will grow over time. The natural offset will see the death benefit decrease for a period of time and then increase once there is excess dividend above the premium amount due. By eliminating the term rider and its cost we have a lower premium "bogey" to hit. *If we keep the rider and its associated cost there would be 4 more years of premium payments due before the policy would naturally offset.* The increase in death benefit over time is not worth the premium commitment.

What is unusual about this policy, I found out through my research and as mentioned above, the term insurance is no longer exists so the cost of the rider is unencumbered by any cost so it goes directly into cash value. My research also informed me that this policy was structured (not guaranteed) so that the dividend on the guaranteed cash value on a premium paying policy (not RPU) would never be less than the year before. JH has not changed their business decision as to this particular structure. Therefore, I researched which design would be better; eliminate or maintain the term rider under the different scenarios where we do not want to pay any future premiums. What we found is that since the dividend would levelize due to the particular structure then having a higher cost to offset with the same dividend would not produce the best result.

Recommendation

Eliminate the term rider and compare the long term death benefits between the two ideal scenarios; RPU or natural offset. This will depend on her Life Expectancy (LE) (appendix A).

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Sun Life

Policy Type: Hybrid Whole Life
Base Face Amount: $4,550,000
Enhanced Life Rider (ELR): $1,852,740
PUA: $97,260
Total Death Benefit: $6,500,000
Guaranteed Cash Value: $1,331,830
PUA Cash Value: $97,706
Total Cash Value: $1,429,536
Last Dividend: $12,864
Premium: $47,986
ELR: $6,864
Total Premium: $54,850
Cost Basis: ???
Gain: ???

Since you stopped paying premiums the dividends have been almost exhausted and the term rider stands at about $1.8mm of death benefit. The increasing term insurance costs along with the decreases in the dividends over time have had a big impact on this policy. You can see the dividend crediting rate is 5.85% but the actual dividend on cash value is an anemic 1%. You cannot convert the term rider nor lower the amount. You either have to keep it all or drop the rider.

How do we optimize return? We looked at the following scenarios:

1. Eliminate 100% of the term, convert to RPU assuming:
    a. Current dividend scale
    b. .25% below
    c. .50% below
2. Eliminate the term rider, premium offset assuming:
    a. Current dividend scale
    b. .25% below
    c. .50% below
3. Eliminate the term rider and borrow the premium balance
    a. 5% loan rate which can be changed annually (policy anniversary)

Neither #2 nor #3 is viable. Under #2 the premium needs to be paid for 25+ years and under #3 the loan regime causes the death benefit to decrease significantly within her LE range. In addition the risk of the 5% loan interest rate increasing is significant. If the policy lapses with large loans outstanding there will be large amount of imputed income with no cash value to pay the ordinary income tax.

Recommendation

Eliminate the term rider, convert the policy to RPU status, and reinvest any dividends. The growth of the death benefit will be anemic but steady.

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Prudential

Policy Type: Hybrid Whole Life
Base Face Amount: $4,550,000
Term Rider: $1,071,626
PUA Death Benefit: $878,373
Total Death Benefit: $6,500,000

Premium: $90,492
Less Dividend: $45,227
Premium due: $45,265

Current Dividend on base policy: $48,958
PUA dividend: $4,322
Total Dividend: $53,280

Cash Value Base Policy: $1,447,264
PUA Cash Value: $445,273
Total Cash Value: $1,892,537 (Pru refers to this figure as guaranteed cash value)

Cost Basis: $1,043,689
Gain: $935,921

Policy issue date: 8/12/91

Note: You must have agreed to pay a set premium and the excess dividend has been applied to PUA

In reviewing the Prudential policy I do not understand why the premium was so much higher at the time than either Sun Life or John Hancock. The joint equal age priced into the Sun product was 43 and the JH product was probably the same (it was not indicated). The Pru on the other hand adjusted Francis's age up from 47 to 53 at time of issue on a select preferred basis. It just seems like there should have been some initial questioning as to this particular premium and policy structure. The Pru premium is more than 50% higher.

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Based on the premium flow of 50% of the premium the policy is good shape and we have some very good options.

We considered the following scenarios:

1. Eliminate the term rider, change the dividend from reduce to PUA and naturally offset the premium flow assuming the following:
    a. Current dividend scale
    b. 90% below
    c. 80% below
    d. Pru has a different illustration system and quotes different dividend scale assumptions different than anyone else
2. Eliminate the term rider and continue to use the dividends to reduce assuming:
    a. Current dividend scale
    b. 90% below
    c. 80% below
3. A single payment to convert the entire term rider (approx.. $1mm)and naturally offset assuming:
    a. Current dividend scale
    b. 90% below
    c. 80% below
4. A single payment to convert the entire term rider (approx.. $1mm), convert to RPU and dividends to reinvest assuming:
    a. Current dividend scale
    b. 90% below
    c. 80% below
5. *They did not send us the option; RPU, delete term rider, dividends to PUA*

Final Prudential Analysis

Based on the Reduced Paid-Up Life Insurance information I would recommend that you change to a natural premium offset with the deletion of the term rider. The cross over death benefit point between the RPU and the natural premium offset options happens much later for Prudential:

- **25 yrs. at the current dividend scale**
- **27 yrs. at 90% of current dividend scale**
- **28 yrs. at 80% of current dividend scale**

It will again depend on how long Francis lives but the longer the cross over point, the smaller difference in death benefits at her later stage in life.

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Option #1

The policy will naturally offset under all dividend assumptions. We need to discuss how comfortable we are with the dividend assumptions. The death benefits provided will obviously decrease as we adjust the dividend scale.

Option #2

There will be decreasing premiums due under this scenario. We need to compare the IRR on the premium flow and additional death benefit provided to the natural offset death benefits.

IRR study

Eliminate term, natural offset at 100% vs. Eliminate term, dividends to reduce at 100%

- 10 years: 21.51%
- 15 years: 7.41%
- 20 years: 5.45%
- 25 years: 4.76%
- 30 years: 4.35%

Eliminate term, natural offset at 90% vs. Eliminate term, dividends to reduce at 90%

- 10 years: 20.18%
- 15 years: 6.53%
- 20 years: 5.24%
- 25 years: 4.54%
- 30 years: 4.11%

Eliminate term, natural offset at 80% vs. Eliminate term, dividends to reduce at 80%

- 10 years: 9.97%
- 15 years: 6.41%
- 20 years: 5.34%
- 25 years: 4.32%
- 30 years: 3.88%

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Jackson National Life

Product type: Universal Life
Death Benefit: $4,000,000
Minimum Guaranteed Crediting Rate: 5.5%
Current Crediting Rate: 5.5%
Policy Issue Date: 8/8/89
Premium: $26,440
Current Cash Value: $1,196,071 (per illustration 5/25/12)
Cost Basis: $634,560 (24 yrs. of premium payments per schedule provided)
Gain: $561,511

Your type of policy is Universal Life (UL) contract. Universal Life came into the market in the late 1970's during the high short term interest rate environment. The insurance industry designed this product as an attempt to react to the investment and economic landscape at the time. This is a pure performance based life insurance policy relying on proper funding, the interest rate credited to policy, and the monitoring of the cost factors, namely the expense factor and mortality charge factor (COI). As you can see, there are many moving parts within the policy design.

Let's think in terms of 3 major components; expenses, mortality, and cash value. Each company has built into the product their own internal cost structure for profit margins, fees, lapse assumptions, commissions, etc. The expense ratio and mortality cost components built into the policy are charged to the policy on a "current" basis with a **maximum level** set in the policy contract. The factors can change and need to be monitored. The cash value will fluctuate with the interest rate environment. The interest crediting rate can change on a monthly basis.

The issue in properly analyzing UL policies lies in the fact the policy illustrations are made in a static environment. The current market conditions and cost factors are "frozen" and assumed never to change on a go-forward basis. The linear rate of return assumed builds an expectation for the consumer as to the probable success of the product yet as the economic and market conditions ebb and flow they will impact the cash value returns and possibly the other cost factors which could compromise the future viability of the contract. The product lives in a dynamic environment affected by the economic and market conditions and yet the illustration system cannot accommodate how these different economic conditions impact the product. This is why when we analyze UL policies we request the illustrations either at the guaranteed interest rate stated in the policy or some variation of return depending on market conditions and the current crediting rate.

Here is how it works:

> Premiums are paid into the policy and before crediting the money to the policy there is a state and federal premium tax due of 2% and 1.25%, respectively. There would have been in the first year a commission charge of approximately 80% of the target premium (in your case it would have most likely been 80% of $26,000). The renewal commissions would range from 5% to 3% depending on the product series issues at that time. The "net" amount is then invested in the policy and monthly deductions are made for administrative expenses which are typically high in the first 5-10 yrs. and then they decrease significantly. The mortality costs become the main cost component to monitor.

The COI charges increase on an annual basis and are not guaranteed. The COI factor is a cost/$1000 of the net amount at risk (NAR). The NAR is calculated as the difference between the death benefit and the cash value. As the COI cost factor increases the NAR **MUST** decrease in order for the policy not to lapse. The NAR will fluctuate based on the changes in the crediting rate and changes in other cost factors. If your premium + interest credited does not support the cost charged for the NAR then the policy will pay the balance due "itself" as long as there is cash value in the policy. The risk is if interest rates decline and/or cost factors are increased the long term viability of the contract is in jeopardy.

Your current policy is in good shape. The illustration I reviewed looks like it was run at the minimum guaranteed interest rate of 5.5% (Current UL contracts sold have guaranteed rates in the 2% to 3% range). I would recommend you verify that the illustrations you have on file were run at 5.5%.

The policy will exhaust itself, per the illustration, in 2043-44. I would recommend you discuss the projections in this time frame. Some contracts will stop charging a mortality cost at age 100 so if there is $1 of cash value the contract stays in force. The illustration shows the policy exhausting the cash value in 2043 with a premium due of $26,440 in 2044 and $0 premium being paid in 2045 yet the death benefit is maintained. This does seem make sense to me but it may just be the way their product is designed and the insured is over age 100 at that time.

The worst case scenario that was run is simply assuming that in the year the illustration is run the minimum interest rate is credited on a go forward basis and the assumed charges built into the contract are charged to the policy. There is not a UL policy that will not lapse if this assumption actually comes true. The charges cannot be changed on an individual policy basis. If the insurance company changes the cost factors they will change them on a "block" of business written at a certain time.

Recommendation

- Verify guaranteed minimum interest rate
- Verify that the illustrations were run at that rate
    - If not, then ask for a new in force illustration showing the minimum guaranteed interest rate
    - I will review for you (N/C)
- Monitor the COI cost factors
    - Call Jackson National each year or at least every other year to verify there have been no changes in the COI factors
    - If there has been a change request an in force ledger

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Conclusion

1. **Jackson National:** Maintain and monitor Jackson National Life annually or every other year. Continue to pay $0 premiums.
2. **John Hancock:** Compare RPU option to Natural Premium Offset death benefits based on LE information.
3. **Sun Life:** Eliminate term rider and convert to a RPU option with dividends to PUA
4. **Prudential**
    a. Analyze the information requested with regards to:
        i. RPU options
        ii. Premium needed to convert all the term rider
        iii. IRR study to be done.
    b. Compare the premium flow required for the "dividends to reduce" option to the natural offset and RPU options which will require an IRR study
5. **Open Market:** Since the original policies are joint life policies with joint mortality cost structure the open market did not produce any meaningful options

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The Life Expectancy (LE) Factor

In building The Efficient Edge I was concerned about life expectancy data because it plays a critical role in properly managing life insurance. It also plays an important role in retirement planning. Part of the science of life insurance is being able to more accurately judge one's life expectancy. Normal life expectancy indicates an age where 50% of a population is alive and 50% are passed. Managing life insurance to normal life expectancy means that many life insurance policies will die before the insured. So I embarked on more research.

I came to realize in my research and in my discussions with different actuarial firms a couple of important factors:

1. Using standard IRS life expectancy tables has been a standard approach for many people. Unfortunately, these tables are often inadequate in their representation of realistic probabilities and are also often misunderstood by the individuals using the tabular data. IRS tables use broad-based mortality data to determine their life expectancy (LE) data. While this is statistically accurate, these tables also take into account the broader population in general, including infant mortality, prisoner LE, and broad socio-economic classes to determine a median LE.
2. Using mortality tables supplied by insurance companies have a couple of problems:
    a. They are used to price a risk and profit from that risk. This is much different than judging life expectancy. An insurance company may say someone is "uninsurable" but they certainly have a life expectancy albeit a short one.
    b. The second discovery was that due to regulatory pricing models and to insure that proper accounting reserves are calculated there is a mortality margin built into insurance company tables, therefore, shortening life expectancy data.

In an effort to enhance our understanding of our clients' LE or longevity, our insurance and annuity analytics company, The Efficient Edge, commissioned an actuarial firm to provide us with graduated probabilities of 50%, 75%, 85% and 95% for male and female individuals, smokers and non-smokers. We asked the actuarial firm to build our LE tables that drew from a population of individuals who were affluent and owned life insurance. We also asked them to strip out the mortality margin (risk pricing vs. LE) built into mortality tables. Our LE tables help us more accurately reflect the socio-economic realities of our client base vs. the population in general. Not surprisingly, the data suggests longer life expectancies than the general population – an important factor when modeling life insurance viability or retirement income sustainability.

Based on our LE tables, a female age 69 in good health have the following LE probabilities:

Female

- 50% (normal LE): 89.8
- 75%: 95
- 85%: 97.4
- 95%: 101.5

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