Are Indexed Insurance Products the Next "Big Thing?"

by Richard M. Weber, MBA, CLU®, AEP (Distinguished)

For the first 220 or so years that life insurance was offered in the U.S., there were two basic policy choices for providing death benefits:

- **Term** — temporary coverage for a fixed period of time; and
- **Whole Life**[1] — a higher-priced-to-start coverage that provides protection for a guaranteed (level) premium no matter how long you live, while accumulating substantial "cash value." *(More on that shortly.)*

Over the last 5 years or so, the life insurance industry has virtually turned its products into high-tech marvels that require computer-driven output (i.e., "illustrations") to explain how they work.

How the newer life insurance products work

One of the ways today's four or five variations on "flexible premium universal life" distinguish themselves from their term and whole life predecessors is that they should be managed. There's a guaranteed premium variety (essentially, lifetime term insurance with a level, guaranteed premium) and non-guaranteed variations.

Common to all these high-tech policy styles is the policy illustration – a computer-generated package of 18-30 pages consisting of some narrative and lengthy streams of numbers that would make even Stephen Hawking flinch.

Indexed Universal Life (IUL)

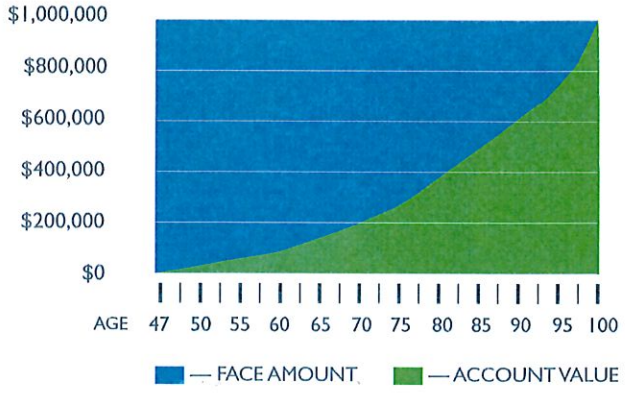
The newest evolution of flexible premium universal life products are Indexed Universal Life (IUL) products that derive their "credit" from a variety of policy owner-selected external financial indices. Unlike some other policy types, IUL insurers invest in very conservative bonds and other high-grade fixed-return assets. The policy's "credit" comes from sophisticated hedging of policy premiums in excess of what's required to guarantee (for example) a 0% return on its reserve – and the appearance of an opportunity to participate in a portion of "the market's" gains, while not suffering market losses.

In a typical IUL scenario, a consumer might be interested in paying as low a premium as possible for a certain death benefit. Because flexible premium universal life policies don't have stipulated and guaranteed premiums, the policy illustration is invariably used to estimate a planned premium that would maintain the policy until death. The "return" that an agent is allowed to use when creating the illustration is often the average of a common stock index, such as the S&P 500® Index ("S&P 500"). Over the last 25-30 years (and in spite of some tough equity losses in 2000-2002 and 2008-2009), it was not uncommon to see IUL illustrations assume a "long-term average" of 8%, 8.5%, and even 9%. While now regulated to more modest projections, the rate shown in a specific IUL illustration is always shown in a specific IUL illustration is always show in calculations as a constant. Incidentally, S&P 500 Index typically used in these products does not include dividends paid by the underlying 500 "large-cap" stocks.

Let's look at a few graphic representations to understand the difference between calculating a planned premium at the currently allowed maximum of 6.48% for a policy with a 0% minimum guarantee and a current Cap of 11% - versus the up-and-down experience that, over time, might average 6.48%.

Illustration: $1 million face amount; "6.48% planned premium" solution

In this first view, a 6.48% planned premium" solution was used to answer a healthy 47-year-old man's question: "How much is this $1 million policy going to cost me?" The illustrated solution is $8,797. For a desired lifetime of coverage, that's a lot less over the next 53 years of his age group's life expectancy than whole life or even term.



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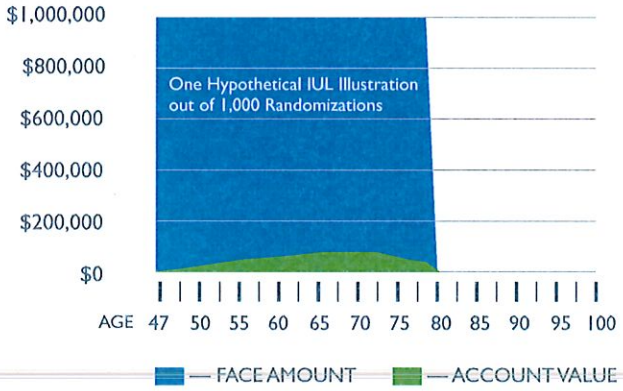
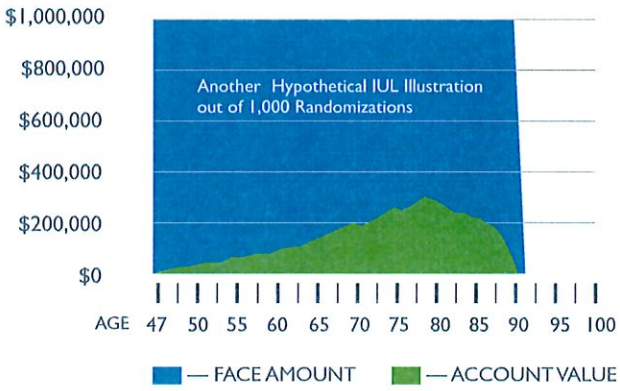
Forgotten in the enthusiasm about such a low outlay for this amount of life insurance is that: 1) the calculated planned premium is *not* guaranteed; and 2) the sufficiency of a calculated planned premium depends on a *constant* 6.48% – not the inevitable swings in returns that equities experience (even when restricted to 0% on the low end and 10% on the high end).

So let's introduce a little real-world volatility and use a common statistical approach to assessing uncertainties. It's called stochastic analysis – and more commonly, Monte Carlo Analysis. Essentially, it uses an electronic Bingo cube cage to randomize historic one-year "point-to-point" S&P 500 Index returns (the common index used in IUL) to run a sufficient number of hypothetical illustrations[2] with an assumed planned premium such as $8,797 – to see how many of 1,000 illustrations will theoretically keep the policy going to at least the insured's age 100. Here are just two of those 1,000 hypotheticals – the first approximating the first lapse out of 1,000, and the second approximating a policy lapse at the average life expectancy (for this group) of age 88.



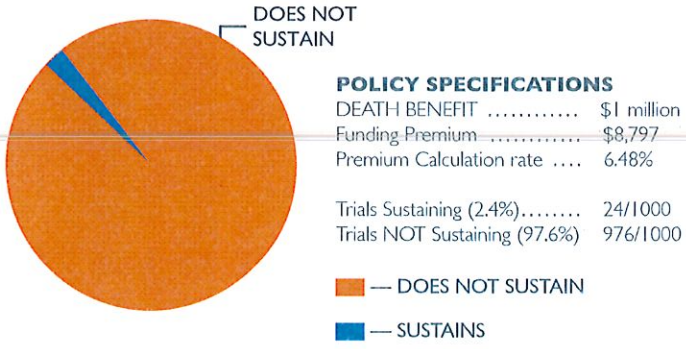
How many of those 1,000 illustrations will theoretically keep the policy going to at least the insured's age 100? It turns out that, according to Monte Carlo Analysis, not many!



The chart below shows the result of tallying the number of "successful" randomly generated hypothetical illustrations deploying $8,797 on our 47-year-old client. The only difference in each of the 1,000 illustrations is the sequence of *actual* one-year S&P 500 Index returns that have occurred since 1951.

As seen, very few hypothetical illustrations "made it" to age 100, and in fact, the first *lapse* occurred at age 82 (as contrasted to the average age-88 life expectancy of a large group of healthy, 37-year-old males). Ninety percent (90%) of the lapses occurred before average life expectancy. *That's* the difference between a constant return assumption and the *reality* of volatile returns.

Random Trials



Average returns are not the same as the individual yearly returns credited to the policy. With a "planned premium" calculated at a seemingly reasonable average rate of 6.48%, the actual fluctuations between 0% and 10% are insufficient to make up for the monthly expense deductions – including monthly *cost of insurance* – that increases every year as an individual ages.

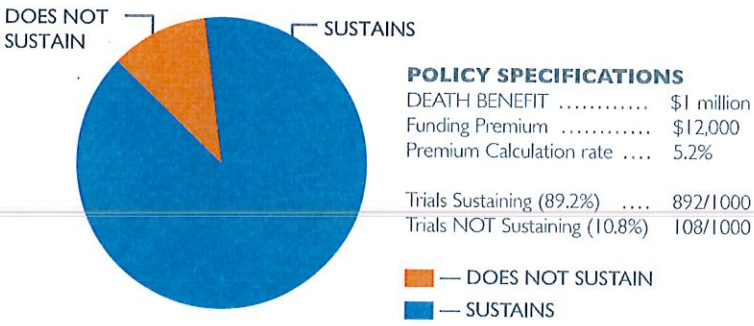
While the Cap of the assessed illustration is 11% (current), the Monte Carlo calculations assume a somewhat more conservative (but still current) Cap of 10% and average industry expenses.

Is this a bad type of policy? No, it just doesn't lend itself to simple definition or calculation. We can take one more spin at the Bingo cube cage with one additional piece of information from the prospective buyer: If you consider a 2.4% likelihood that the policy will last until age 100 to be unsatisfactory, what would be an acceptable probability?

Many consumers we survey will say at *least* 90% (and we often hear 100%). Allowing for the slightly lower threshold, let's go back to the Monte Carlo process and ask the question: What is the planned premium that will give us a 90% success probability?

That number is $12,000. "Ouch," you say, "... that's one-third more than the first number. I like that first number – let's use that one!"

Yes, but you see $8,797 was never the *right* number. We actually don't know for sure just *what* the right number is; only actual future returns credited into these IUL policies will ultimately allow us to calculate that. But while we know $12,000 isn't "right," it's *more right* than that first number! Incidentally, the initially recommended planned premium that will statistically produce a 90% probability of success can be calculated, in this specific example, in an IUL illustration with a 5.2%, rather than a 6.48%, crediting rate. By inference, then, IUL illustrations overstate the crediting rate by as much as 130 basis points for (1.30%) purposes of calculating a *reasonable initial planned premium.*



In this brief study, we can better appreciate that a constant return assumption for purposes of calculating a planned premium – even if spoken in terms of an "average" – does not produce the expected result.

How does the randomization work in these examples?

The IUL investment database consists of 15,000+ individual 1-year point-to-point returns since 1951 in the S&P 500 (without credit for dividends) and those historic 365-day returns are randomized "on the fly" for each of the annual periods.

The formula for the number of randomizations is "(Age) 100 minus current age" for each hypothetical illustration. If the insured is now age 40, there will be 60 random return values for each of the 1,000 hypothetical illustrations that are generated. Think of a Bingo cage offering up cubes with individual year-to-year random historic returns, from which each illustrated return will be calculated. When Bingo "cubes" are selected and read, they are returned to the cage before another spin. The entire randomization process takes less than 10 seconds!

Of course, we have to recognize that Monte Carlo Analysis is useful in terms of probabilities, but not in terms of predicting an exact outcome. The validity of the statistical data also depends on future "markets" performing within one or two standard deviations of historic numbers. When there is a "black swan" event or there are several "tail" results from either side of the bell curve, the statistical probabilities will not be predictive. This is just one reason why ongoing management with updated account information is very important.

This piece was created with the help of Richard M. Weber, MBA, CLU®, AEP (Distinguished). Mr. Weber is Managing Member of Ethical Edge Insurance Solutions, LLC, and was the 2012–2013 President of the 10,000 - member Society of Financial Service Professionals. With Mr. Weber's 50 years of experience in sales, training, product design, senior management and compliance, his firm provides training and consulting services empowering life insurance agents, financial planners, advisors and their clients to explore and view life insurance in the broader context of financial planning.

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[1] Whole life insurance base guaranteed cash values may not be available in the first two policy years. In addition, dividends, which are not guaranteed, may not be paid in the first two policy years. Whole life cash accumulation should be considered for its long-term values.

[2] This is a hypothetical indexed universal life illustration (IUL) and is not representative of an actual IUL insurance policy. This hypothetical illustration is intended to show, in general terms, how a typical IUL policy might work. It shows a continuation of currently illustrated non-guaranteed elements, such as interest rates and cost of insurance. If purchase of an IUL policy is being considered, a full illustration with guaranteed values and other important information must be provided.

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