



FEATURE: INSURANCE

By **Kenneth R. Samuelson, Jr.** & **Vivian Huang**

A Closer Look at Indexed Universal Life Insurance

What's changed in the past 10 years?

What a difference a few years makes. Back in 2010, we co-authored an article in *Trusts & Estates* entitled “Do Your Homework on Indexed Universal Life Insurance,” which covered everything from the basic mechanics of the product all the way up to advanced planning applications for indexed universal life (IUL) using premium financing.¹ It was a timely piece. Although IUL had been available since the mid-1990s, it had only just begun to experience substantial growth as more life insurers created their own variants of the product. By 2010, there was no doubt that IUL was the ascendant new life insurance product.

Why So Popular?

According to LIMRA, IUL sales accounted for just 6% of total life insurance sales in 2010.² By the end of 2020, IUL comprised 25% of total life insurance sales, second only to whole life (WL) and outselling its traditional UL counterpart by nearly three to one.³ Why has IUL become so popular? One interpretation—and certainly the interpretation currently favored by many folks in the life insurance industry—is simply that IUL is a new and superior technology that’s naturally superseding the products that came before it. In that view, IUL isn’t just a different product, it’s a fundamentally better product.

It’s also a product that has been positioned as a “cure-all” for a variety of planning needs. IUL has traditionally been used in accumulation-oriented

sales in which the goal of the life insurance placement is to generate a stream of tax-free income, but it’s also become commonly used in estate and business planning applications for low cost, permanent death benefit coverage. Furthermore, both accumulation and death benefit designs using IUL are often coupled with premium financing arrangements.

Much of the positioning and popularity for IUL comes down to one key fact—IUL illustrates better performance than any other fixed life insurance policy. Its illustrated performance advantage is what’s made it the product of choice for virtually every planning application to illustrate benefits that are far beyond what can be illustrated in traditional fixed life insurance policies. But illustrations aren’t reality. They aren’t even designed or intended to be used as performance projections. They’re simply hypothetical scenarios. To really understand IUL, its performance potential and its planning applications, we have to dig below the illustration to the product itself. Only then will its true colors show.

Traditional UL vs. IUL?

As our 2010 article details, IUL is nearly identical in structure to traditional UL. Both policies: allow for flexible premiums; have stated policy charges that are deducted from the policy on a monthly basis; allow for premiums paid in excess of policy charges to accrue as a policy account value; invest policyholder account values in a broad portfolio backed by generally fixed income investments; use the yield from the portfolio to credit interest to the policy account value; and give the life insurer near-complete discretion in setting non-guaranteed rates that determine or impact the interest actually credited to the policy.

Where traditional UL and IUL differ is exactly *how* the portfolio yield is translated into credited

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interest on the policy account value. With traditional UL, interest is credited on a monthly or daily basis in the form of a declared, non-guaranteed rate that mirrors the book yield of the portfolio. With IUL, the yield is used to purchase call options to provide exposure to the movements of an external index, subject to a guaranteed floor, usually 0%. The actual degree of exposure to index performance provided by the carrier depends on the portfolio yield and the market price of call options. If portfolio yields fall and/or call options become more expensive, index exposure will fall and vice versa.

Use of Caps

The vast majority of IUL products have historically calibrated the policyholder’s exposure to the external index—most commonly the S&P 500—by using a cap. The idea behind a cap is very straightforward. If the index performance exceeds the cap, then the client receives the cap as an indexed credit. If the index performance is below the floor, usually 0%, then the client receives the floor. And if the index performance is between the cap and the floor, then the client receives the same percentage increase as the index.

Caps are non-guaranteed rates that the insurance company periodically declares in the same way that an

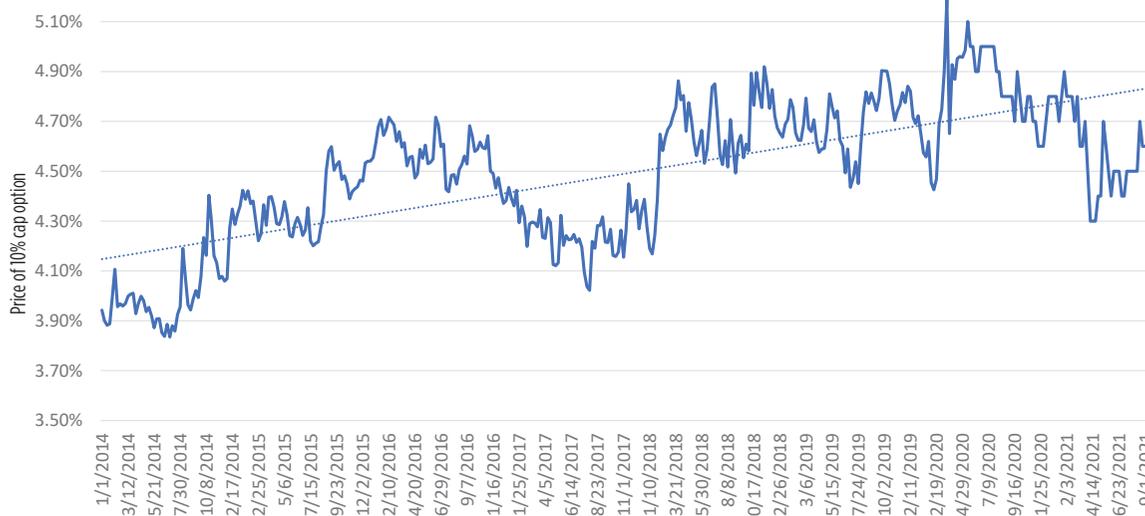
insurer would declare a crediting rate in a traditional UL policy. For life insurers, setting current caps is determined by matching the yield on the portfolio with the cost to hedge the cap using call options. If the hedges are more expensive than the portfolio yield, then the life insurer reduces the cap to bring the call option price back into line with the yield.

Why would caps fall? Because either portfolio yields are dropping, or option prices are increasing. As it turns out, both have been happening since 2014, which marked the nadir of option prices and, therefore, the zenith of caps. “Ups and Downs,” this page, shows the market option price of a 10% cap on the S&P 500 since 2014, using institutional options data provided by a third party and calculated using the Black-Scholes formula.⁴ The option price is quoted here as a percentage of the hedged notional which, in the case of an IUL product, is the policy account value. Caps are also quoted as a percentage of the account value.

As option prices increase, caps for IUL decrease, assuming the same yield is available to purchase options. But that hasn’t actually been the case. Since 2009, life insurer portfolio yields have been declining as a result of the current low interest rate environment. It’s a double-edged sword for IUL, and the consequences are profound. Clients who

Ups and Downs

Price of a 10% cap option over time



— Material aggregated by Kenneth R. Samuelson, Jr. & Vivian Huang



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purchased IUL in 2014 or before could expect caps on the S&P 500 in the 12% to 14% range. Now, those same policies generally have caps less than 10% and, in some cases, less than 8%.

The impact of falling caps varies by client. For clients with a full understanding of how IUL works, falling caps are a natural result of an environment of falling portfolio yields and rising option prices. They're evidence that the IUL policy is working the way that it's supposed to work. For these clients, falling caps aren't an existential threat because they always expected that caps would change over time and funded the policy accordingly.

However, clients who purchased IUL with a certain—although unfounded—expectation about the level and consistency of the cap itself, regardless of the rate and option price environment, are at risk. Those clients might view a cap reduction as fundamentally undermining of the product value proposition itself. Remediating the situation is exceedingly difficult. Clients and their advisors have no control over cap levels. The only question is how to respond to the falling cap. One option is to exchange the policy and start over, but that would incur new policy expenses that would make the exchange uneconomical. Another option is to reallocate the policy account values to other index-linked strategies that appear to be more attractive than the original strategy.

But by far the most effective strategy is simply to adjust either the policy funding or the death benefit to reflect the new, lower expected performance of the policy. In simple terms, what isn't earned in policy credits has to be made up by client premiums. If expected performance falls, premiums must go up to maintain the same level of coverage for the same duration. The alternative is to reduce the death benefit, which is rarely an advisable strategy because a reduced death benefit can't be increased in the future back to the original level without underwriting.

Caps and Illustrated Rates

As we wrote in our 2010 article, illustrated performance is one of the key drivers of the appeal of IUL. The common practice in the industry was to use a backtesting methodology that combines the currently declared cap with actual historical index performance to generate the illustrated rate.

This methodology—which we called the “Hypothetical Historical Lookback Methodology” (HHLM)—is extremely problematic for several reasons. It creates inconsistencies in illustrations between IUL and other fixed products that don't use backtesting and allows IUL to have substantially higher illustrated rates. It relies on historical index performance that isn't realistic for future index returns. It uses the *average* of the backtested results, meaning that illustrating at the maximum rate for the product essentially bakes in a 50% chance of underperformance even if all of the other hypothetical assumptions hold true.

The HHLM is a risky, speculative and untested methodology for determining an illustrated rate. Nonetheless, at the behest of insurers writing IUL products, the National Association of Insurance Commissioners (NAIC) codified the HHLM as the regulatory basis for IUL illustrations by adopting Actuarial Guideline 49 (AG 49) in 2015. At the time, the life insurers writing IUL viewed AG 49 as a victory, but it would prove to be a pyrrhic one. That methodology was also upheld in the subsequent AG 49-A, which modified and clarified the original AG 49.

The illustrated rates produced by the HHLM depend on the currently declared cap. As caps fall, so do illustrated rates under the HHLM methodology. As discussed previously, caps can fall for two reasons—portfolio yields declining and option prices increasing. It's intuitive that falling portfolio yields would result in a reduction in the cap and, therefore, the illustrated rate for the product. But what isn't intuitive is that increasing option prices, which also reduce the cap, should reduce the illustrated rate. The fair market value (FMV) of a cap is the price to hedge it. If the price to hedge a cap increases, then the FMV of the cap also increases. If the carrier has to reduce the cap to keep the option price in line with the portfolio yield simply because option prices have increased, then the illustrated rate shouldn't decrease because the FMV of the strategy hasn't changed.

And yet, under the HHLM, rising option prices cause reductions in caps and, therefore, also in illustrated rates for IUL. When AG 49 was adopted in 2015, caps were generally 12% or higher, and illustrated rates for IUL were generally in excess of 7%. Now, caps



for major IUL writers are as low as 8.5%, which results in a maximum illustrated rate using the HHLM of less than 5.5%—despite the fact that the cost to hedge a 12% cap in 2015 is approximately the same as the cost to hedge an 8.5% cap today.

The reality is that the HHLM—which is universally used to illustrate IUL—is fatally flawed. We recommended in our 2010 article that IUL be illustrated similarly to traditional UL. Our recommendation remains unchanged. In an ideal world, life insurers would disclose their option budgets, which would provide an easy way to illustrate IUL comparably to traditional UL. However, IUL writers have been loathe to disclose their option budgets. This unwillingness to be transparent has left clients and their advisors to employ other tools, such as the Black-Scholes formula, to approximate an FMV for the caps. In lieu of those more financially complex tools, a best practice is simply to ask for an illustrated rate of 70% of the AG 49/AG 49-A maximum illustrated rate, a rough approximation in today’s environment of the FMV of the cap.

Premium Financing and IUL

As we wrote in our 2010 article, combining premium financing with IUL creates leverage-on-leverage and exacerbates the sensitivity of the structure to the performance of the IUL product. Fortunately, IUL has actually performed fairly well over the past decade for two reasons. First, caps have remained stubbornly high despite falling interest rates and rising option prices. How’s that possible? Because the portfolio yields used by life insurers move more slowly than market interest rates, creating a gap between the cost of borrowing premiums and the portfolio yield. This has created the impression that there’s some level of sustainable arbitrage between IUL and the cost to borrow premiums when, in fact, this arbitrage is transient and illusory. In a rising interest rate environment, the relationship between portfolio yields and market rates would go the other direction, potentially wreaking havoc on premium financing arrangements.

IUL has also benefited from stellar performance in the S&P 500, which serves as the index of choice for the vast majority of IUL products and transactions. The following table compares S&P 500 price returns from 1927, 1980 and 2009:

	Average annual return	Annual returns greater than 0%	Annual returns less than 0%
Since 1927	7.87%	69%	31%
Since 1980	10.26%	78%	22%
Since 2009	13.44%	90%	10%

Despite these phenomenal returns, several high profile cases have been filed regarding premium financed IUL alleging exorbitant promises of policy performance and lackluster real-world returns. To make matters worse, strong IUL performance over the past 10 years has now been met with dramatically lower illustrated performance going forward due to falling caps. Premium financed IUL *may* have “worked” over the past 10 years, but its path forward is much more perilous.

In our 2010 article, we strongly cautioned against jumping into premium financing transactions without a full appreciation of the leverage and risks, and we believe that advice still holds and is even more pertinent today. Any premium financing proposal should be considered at illustrated rates that reflect more realistic long-term performance, such as 70% of the maximum AG 49/AG 49-A illustrated rate. Furthermore, any premium financing proposal should be illustrated with several years of lackluster performance to demonstrate potential collateral strain in adverse scenarios.

Decline in IUL

Life insurance products are cyclical. Macroeconomic and regulatory tailwinds and headwinds drive life insurance sales into one product and out of another in a never-ending quest for the best offering of the time. For IUL, the tailwinds of the last decade have turned into headwinds. Low interest rates have persisted for long enough that they’re finally beginning to erode the product fundamentals; equity volatility has picked up in the wake of COVID; and equity performance has faltered.

On top of that, several rounds of regulatory changes have finally culminated in a series of rules that have taken away tools—such as “multipliers”—that life insurers were using to blunt the damage from the deteriorating economics of the product. For the



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first time ever, IUL's share of permanent life insurance sales declined in 2020 and again through the second quarter of 2021. The cycle has officially begun to turn against IUL. "What's Selling?" this page, illustrates permanent life insurance sales since 1976.

In response, life insurers are scrambling to reinvent their IUL offerings to optimize them for the current macroeconomic and regulatory environment. One way to limit the impact of rising S&P 500 option costs is simply to pivot to offering bespoke indices created by major asset managers and investment banks. These indices have embedded mechanisms that allocate the index between fixed income and equity-based indices to maintain constant and low volatility. The primary benefit is that the cost to hedge these types of indices is lower and more stable than the cost to hedge the S&P 500, but at the expense of dramatically increasing the complexity and opacity of the index itself.

These indices have another benefit. The latest regulation on IUL illustrations, AG 49-A, is particularly friendly to these sorts of volatility controlled indices. A life insurer that uses a proprietary index in conjunction with a fixed interest bonus can expect to increase the illustrated cash value internal rate of return by 1% to 1.5% and illustrated income by 40% to 60%. However, these are purely illustrated gains and take advantage of the fact that these

proprietary indices weren't contemplated by AG 49-A. As we've seen with previous rounds of regulation for IUL, it's highly likely that future regulation will curtail or eliminate the illustrated (and illusory) benefits of these volatility controlled proprietary indices.

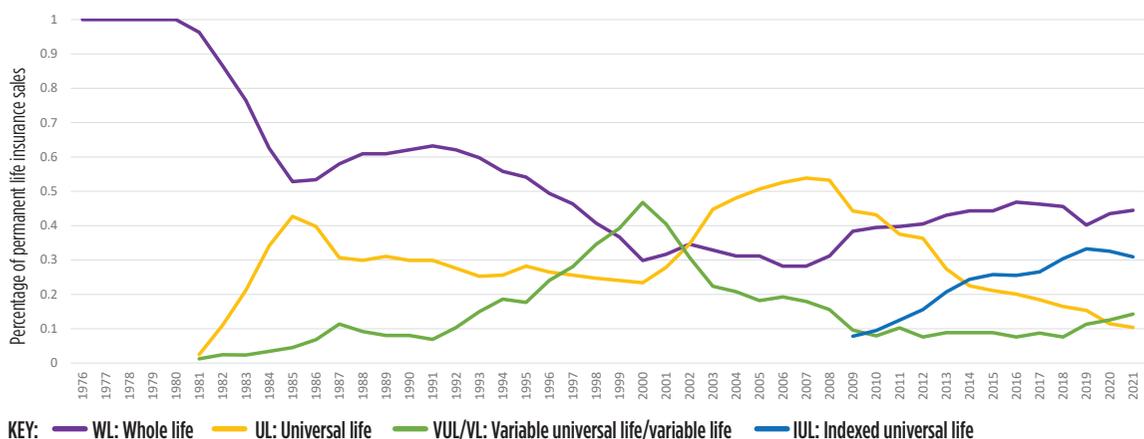
Managing IUL

The age of IUL may be coming to a close, but for policyholders who purchased an IUL in the last decade, their journey is just beginning. As with any life insurance policy, IUL is purchased with the intention of holding it for decades. The headwinds now facing IUL aren't just for new policies—they're just as impactful for the millions of in-force IUL policies containing billions of dollars of cash value and hundreds of billions of dollars in death benefit.

Consider a case study of the products written by a leading seller of IUL. In 2006, a small, mid-western company burst on to the IUL scene with a product sporting the highest cap in the industry—17%, when most life insurers were between 12% and 14%. At the time, the statutory filings for the company didn't show any direct hedges, but in 2009, the company started to directly hedge the cap, which by then had fallen to 16%. The statutory filings for the company trace both the history of the cap and the cost to hedge it as reported in Schedule DB of the filings, as illustrated in "Hedging the Cap," p. 33.

What's Selling?

Comparing different types of permanent life insurance



— Material aggregated by Kenneth R. Samuelson, Jr. & Vivian Huang



Since 2009, the cap has fallen from 16% to 8.5%, as derived from the option trades detailed in Schedule DB of the life insurer’s statutory filings. It’s also clear that spikes in the price to hedge a given cap level are immediate drivers of cap reductions, although it’s less clear that falling hedge prices result in an increasing cap. This story is almost universal across all IUL writers, although the sheer magnitude of the reduction in cap over the past 12 years is what makes this company stand out. And remember—this is a client’s story. There are tens of thousands of policies that were sold on the basis of caps of 13% or higher and illustrated rates north of 7%. Now, the illustrated rate for this policy with an 8.5% cap is just below 5.5%—and even that’s based on the aggressive HHLM we’ve detailed earlier. The practical reality is that these policies have underperformed original expectations and need increased premiums to restore the policies.

One response to this story is that IUL isn’t working, but we don’t believe that’s the correct interpretation. In fact, the data from this insurer proves that IUL is working exactly how it’s supposed to work. IUL is fundamentally a traditional UL in which the portfolio yield is used to purchase options that provide index-linked exposure rather than to pay an interest crediting rate. We would expect

falling portfolio yields and rising option prices to reduce the cap. That’s exactly what “Hedging the Cap” shows. The index-linked crediting methodology used in every IUL is engineered to deliver index-linked upside with downside protection. The level of index-linked upside was never and will never be guaranteed. The fact that the optics of the index-linked upside are less attractive than they were a decade ago isn’t a flaw in the product. It’s proof that the product is working the way it’s supposed to work.

The same could be said for UL and WL that was sold in the 1980s and subsequently experienced a continuous decline in policy performance relative to the initial expectations. And the same could be said for variable UL sold in the roaring 1990s that subsequently experienced years of equity declines and volatility. These stories are usually referenced as “failures” of life insurance when, in fact, they’re evidence that life insurance policies are financial instruments that are inevitably impacted by the macroeconomic market.

IUL and Illustrations

The problem is that they usually aren’t sold that way. Instead, clients are shown level-rate illustrations at inflated levels that are completely disconnected

Hedging the Cap

Case study of products



— Material aggregated by Kenneth R. Samuelson, Jr. & Vivian Huang



from the actual mechanics of the product and nearly impossible to achieve. Product cycles in life insurance are less about the actual financial underpinnings of the products and more about which product can illustrate the best performance at any particular point in time. The flaw in life insurance isn't the product—it's the illustration.

The solution, therefore, is to align the illustration with the product economics. In the case of IUL, that means illustrating rates that are achievable without making the hyper-aggressive assumptions about future caps and index returns that are embedded in the current illustration regulatory regime.

A responsible and supportable way to illustrate IUL is simply to illustrate at the approximate hedge budget that the life insurer is using to support the current cap. A quick rule of thumb is that 70% of the maximum AG 49/AG 49-A illustrated rate is approximately the cost to hedge the cap, although that number can bounce around quite a bit. Another option is simply to use the alternate ledger in the illustration as the baseline assumption. And finally, you can go a step further by calculating the approximate cost of the hedge using the Black-Scholes formula combined with market implied volatility data.

Illustrating IUL this way will provide a reasonable baseline for evaluating both proposed and in-force policies. If an IUL arrangement doesn't "work" without being illustrated at the maximum AG 49/AG 49-A rate, then it's highly unlikely to work in the real world. Illustrating IUL at more sustainable levels is the acid test for a proposed or in-force transaction. We recommended this approach in our 2010 article and recommend it even more adamantly today.

However, there's one caveat—today's caps aren't likely to be sustained in the long run. We've referenced IUL caps today as being between 8% and 10%. That's based on the fact that life insurers use portfolio yields to support the caps. If a life insurer were to actually match the yields they're earning on assets being invested today, caps would be between 5% and 6%, depending on the investment strategy used by the life insurer. These new money caps are a leading indicator of where caps on products supported by portfolio yields will be if the current environment persists. Therefore, a conservative baseline using current new money caps may be more appropriate for illustrating IUL.

Likely Underperformance

IUL is a product that's become very popular, but much of its popularity is driven by illustrating the products at performance rates that are likely to be unsustainable over the long term. This sets the stage for likely underperformance of the policy that eventually must be addressed, likely through increased premiums as the policy continues. A possible solution to these issues is to recalculate the premium based on a more conservative illustration methodology, whether a new purchase is under consideration or an existing policy is being remediated to make sure that it will have a higher probability of success. Using the carrier's general account rate as a proxy for the illustrated rate going forward is a reasonable methodology to put the policy on more stable footing. This will also help to adjust expectations around the cash flow required to sustain the policy and inform the gift tax strategies or financing strategies that are part of the planning process. As with all life insurance plans, IUL policies should be actively monitored, adjusted and restructured as needed to ensure the long-term success of the plan.

Life insurance has a history of working well when it's designed conservatively, implemented correctly and administered carefully with premium adjustments made along the way to keep the policy in a healthy and sustainable state to achieve its desired outcome. 

—This article is provided for informational purposes only and is not specific to any particular situation. All guarantees are based on the claims-paying ability of the issuing insurance company. The indices mentioned are unmanaged and cannot be invested into directly. Past performance is not indicative of future results.

Endnotes

1. Kenneth R. Samuelson, Jr., Bobby Samuelson and Brandon W. Davis, "Do Your Homework on Indexed Universal Life," *Trusts & Estates* (September 2010).
2. This LIMRA statistic isn't publicly available. Please contact the authors for questions or more information.
3. <https://www.limra.com/siteassets/newsroom/fact-tank/sales-data/2020/q4/fourth-quarter-ye-2020-individual-life-vfinal.pdf>.
4. The Black-Scholes formula was developed in 1973 and is widely used to price and value options.