



M Financial Group™

November 2017

M Intelligence

Enhancing understanding of sophisticated planning strategies and their applications.

MVP IUL Accumulator: Differentiation and Best Practices

Executive Summary

In response to today's challenging low-interest-rate environment, MVP IUL-A—a new proprietary product introduced by Pacific Life in February 2017—provides a [unique structure](#) that introduces an extra policy charge to fund the purchase of additional option package units. The options leverage results in increased interest crediting potential in the form of a Performance Factor (PF). MVP IUL-A is designed for cash value accumulation and offers best-in-class illustrated income solves. The product also offers [best-in-class illustrated premium solves](#) in protection-focused designs, but has increased price sensitivity to the illustrated index rate over a traditional IUL product. This paper reviews risk/reward tradeoffs associated with seeking higher returns and recommends best practices for illustrating and funding.

The [risk/reward profile of this product](#) is very different compared to traditional IUL products. The leverage associated with purchasing additional call options on the equity index offers substantial upside in moderate-to-high return scenarios. However, when the index return is below the options budget rate (about 4.0%), the payout from additional options purchased is not enough to cover the additional charges, resulting in a drag on policy performance.

Evaluating a hypothetical UL product under a Traditional Index structure (without PF), a Leveraged Index structure (with PF), and a Variable investment structure across 10,000 stochastic S&P 500 returns, produces the following results:

- Leveraged Index has greater upside potential than Traditional Index, with ending cash value on average 30% higher
- Leveraged Index and Variable account investment structures were substantially more sensitive to early lapse and had greater volatility in cash value performance
- Funding at a more conservative rate than the AG 49 maximum substantially reduces vulnerability to early lapse and increases upside potential

Recommended Best Practices

- Illustrating and funding MVP IUL-A at a rate more conservative than the AG 49 maximum rate; AG 49 less 100 to 200 bps is suggested
- The sequence of returns matters more than the average return, making ongoing policy service essential

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- Adding the NLG rider at ~3% cost provides guaranteed protection to late 80s/early 90s, while maintaining best-in-class premium solves
- Fixed Account allocation can be used to deemphasize the option leverage

Introduction

Low interest rates continue to challenge the industry, with declining UL crediting rates, WL dividend interest rates, and IUL cap rates. Downward pressure continues, and finding yield without taking on investment risk is nearly impossible. IUL can provide a middle ground, offering upside yield potential with downside protection.

Pacific Life introduced an innovative proprietary product, MVP IUL Accumulator (MVP IUL-A), in February 2017. MVP IUL-A is designed for cash value accumulation, maximum funding, and offers best-in-class illustrated income solves. The product also offers best-in-class illustrated premium solves in protection-focused designs where funding may be minimized.¹ The investment strategy embedded in this product is different from other IUL products available and helps create this competitive performance; the purpose of this paper is to highlight these differences, speak to the performance drivers, and recommend a best practice for illustration.

Pacific Life is a strong Partner Carrier, focused on product innovation and growth within M Financial. MVP IUL-A attests to their creative drive to offer clients access to additional yield in a low interest rate environment, though it is important to understand the tradeoffs associated with seeking higher returns.

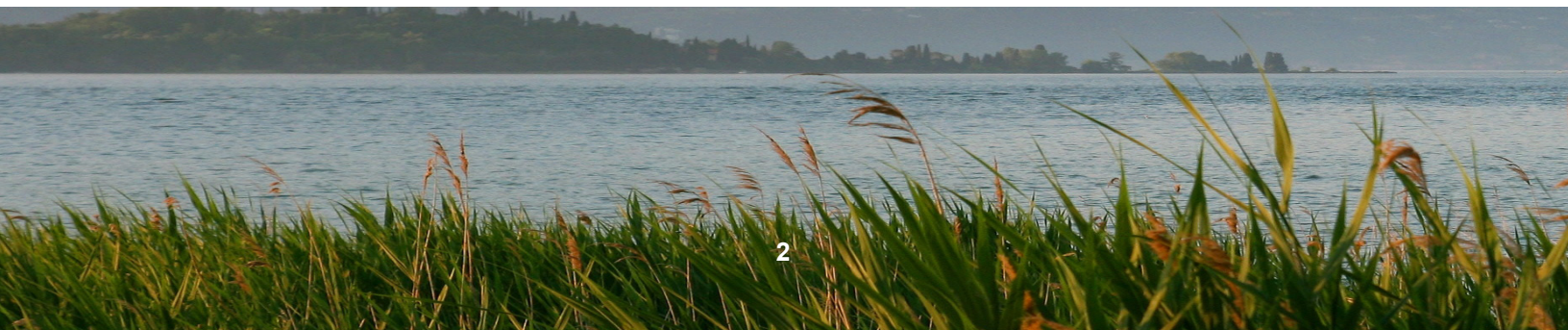
What is different about MVP IUL-A?

Traditional IUL crediting rate mechanics are supported by a combination of investing in the general account (same as CAUL) and purchasing a package of actively traded call options on an equity index. A portion of the account value is allocated to the general account, which earns a portfolio yield based primarily on investment grade bonds and mortgages. The general account yield supports the 0% floor. The remainder of the account value is used to purchase a package of call options on an equity index. The package of call options supports the index return, providing a return that will not credit below the floor, but also does not credit above the cap rate.

MVP IUL-A is different in that it purchases additional units of the call option package and provides a multiple, the Performance Factor (PF), of the index return to be passed back directly to the client at segment maturity. Depending on market returns, these units may expire with no value. The PF is guaranteed to never be less than one, i.e. the index credit rate will never be less than that of standard IUL crediting mechanics with floor, cap, and participation rates.

The funds to purchase additional call option packages are provided by an additional coverage charge (ACC) built into the product. The ACC varies by age, gender, risk class, face amount, death benefit option, and policy year. This investment structure is embedded in the product, so it applies on all indexed accounts and no allocation strategy or special index fund election is required by the client. However the unique mechanics are combined with standard IUL credit rate mechanics in the illustration system (see a breakout of illustrated charges in [Appendix](#)).

1. <https://mpower.mfin.com/sites/m-analytics/Pages/KPC.aspx>



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Here is a hypothetical example to demonstrate the concept:

- Assume an account value of \$1,000
- Traditional IUL
 - Options are purchased to cover the \$1,000 account value at a cost of \$40
 - Indexed interest credits at segment maturity
 - *6% Indexed return * \$1,000 = \$60.00. Account value = \$1,000 + \$60 = \$1,060*
 - *0% Indexed return * \$1,000 = \$0. Account value = \$1,000 + \$0 = \$1,000*
- MVP IUL-A
 - \$10 ACC is deducted, resulting in an account value of \$990
 - \$40 standard options budget + \$10 ACC purchases more options, resulting in a PF multiple of 1.25 ($\$50 / 40 = 1.25$)
 - Indexed interest credits at segment maturity reflect the PF = 1.25
 - *6% Indexed return * 1.25 PF * \$990 = \$74.25. Account value = \$990 + \$74.25 = \$1,064.25*
 - *0% Indexed return * 1.25 PF * \$990 = \$0. Account value = \$990 + \$0 = \$990*

Note the PF, versus without PF, provides an additional index credit and resulting higher account value with a 6% index return assumption. Also note the PF lowers the guaranteed floor by the amount of the ACC (\$1,000 – \$10 = \$990 floor).

What is driving the performance of this product?

The ACC charge purchasing additional call options on the equity index offers substantial upside compared to traditional IUL products in moderate-to-high return scenarios, which is often the illustrated scenario. However, in scenarios where the index return is below the options budget rate (about 4.0%), the payout from additional options purchased is not enough to cover the ACC charges, resulting in a drag on policy performance.

The following premium solve example illustrates the competitive potential of MVP IUL-A and also the sensitivity to assumed index returns supporting the product performance.

Male, 55, Preferred Best, 10-Pay to Endow at Age 120, \$2 million Face, 75% Base

Illustrated Rate	MVP IUL-A Premium	Increase (%)	MVP IUL LTP 2 Premium	Increase (%)	MVP IUL-A vs. MVP IUL LTP 2
6%	\$37,705		\$50,028		-25%
5%	\$54,185	44%	\$60,651	21%	-11%
4%	\$77,320	105%	\$75,379	51%	3%

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At 6%, MVP IUL-A has a 25% lower premium solve than MVP IUL LTP 2, a comparable product without the Performance Factor, however has greater sensitivity to illustrated index rate and when illustrated at 4% the premium solves are similar. Long-term market returns supporting the index are historically higher than 4% (the AG 49 historical lookback rate is between 6.00% and 6.50% for current cap rates). However, it is something to be aware of and supports consideration of funding at a more conservative rate to help prevent the policy from lapsing prematurely.

Is the risk/reward profile different from traditional IUL products available?

As a result of the leverage supporting the strong product performance, on the spectrum of investment risk and return, MVP IUL-A with Performance Factor is between a traditional IUL and a separate account investment structure:

UL → IUL → MVP IUL-A → VUL

To better understand the sensitivity to volatility in economic returns and the cost of the leveraged structure in MVP IUL-A, we evaluated a hypothetical UL product across 10,000 independent equity scenarios (simulating S&P 500 Total Return)² and compared three different crediting structures:

- Traditional Index Account (without PF/ACC, 0% Floor/10.25% Cap)
- Leveraged Index Account (with PF/ACC, 0% Floor/10.25% Cap)
- Variable Account (no PF/ACC, no floor/cap)—*for reference only, variable accounts are not offered in MVP IUL-A*

S&P 500 Economic Scenarios:

- Calibrated to actual S&P 500 history
- 25-year Compound Annual Growth Rates (CAGR) below for reference
 - S&P 500 Total Returns (with dividends)
 - Average = 7.7% gross (7.42% net of investment expenses)
 - Minimum = -3.6%
 - Maximum = 20.7%
 - Index Interest Crediting Rates (without dividends, 100% par, 0% floor, and 10.25% cap)
 - Average = 5.4%
 - Minimum = 2.0%
 - Maximum = 8.8%

2. American Academy of Actuaries Economic Scenario Generator (Diversified Large Capitalized U.S. Equity); additional information on the construction of these scenarios can be found at http://www.actuary.org/pdf/life/c3supp_jan06.pdf
<https://www.soa.org/tables-calcs-tools/research-scenario/>

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Product assumptions:

- Male, Issue Age 55, Preferred Best
- \$2 million Face, 40% Base/60% Term (similar to low-base, comp-matched scenarios in KPCs)
- 10-Pay premium solve to Endow at A120 when run at average scenario rates (baseline) and AG 49 maximum rates:

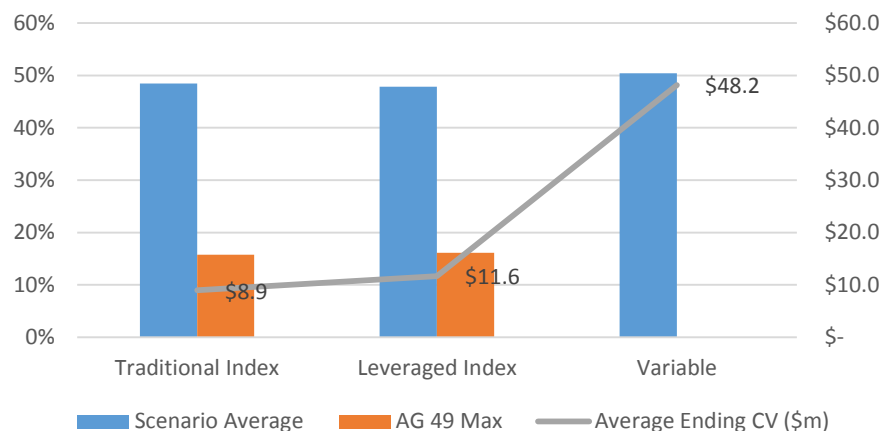
Illustrated Rate	Traditional Index	Leveraged Index	Variable
Scenario Average	\$50,584	\$41,228	\$34,359
AG 49 Max	\$43,106	\$29,622	

- Variable account reflects S&P 500 Total Return (dividends reinvested); Index accounts reflect S&P 500 Price Return (without dividends)

Reaching the Target Age

At the scenario average rate premium solves for the three structures, about 50% of scenarios carry the policy to age 121. Note the upside potential for Leveraged Index, with 30% greater-ending cash value on average than Traditional Index. The sensitivity reflecting AG 49 max rate premium solves is substantial, with less than 20% of scenarios carrying to age 121.

% of Scenarios that Carry to Age 121
With Average Ending Cash Value

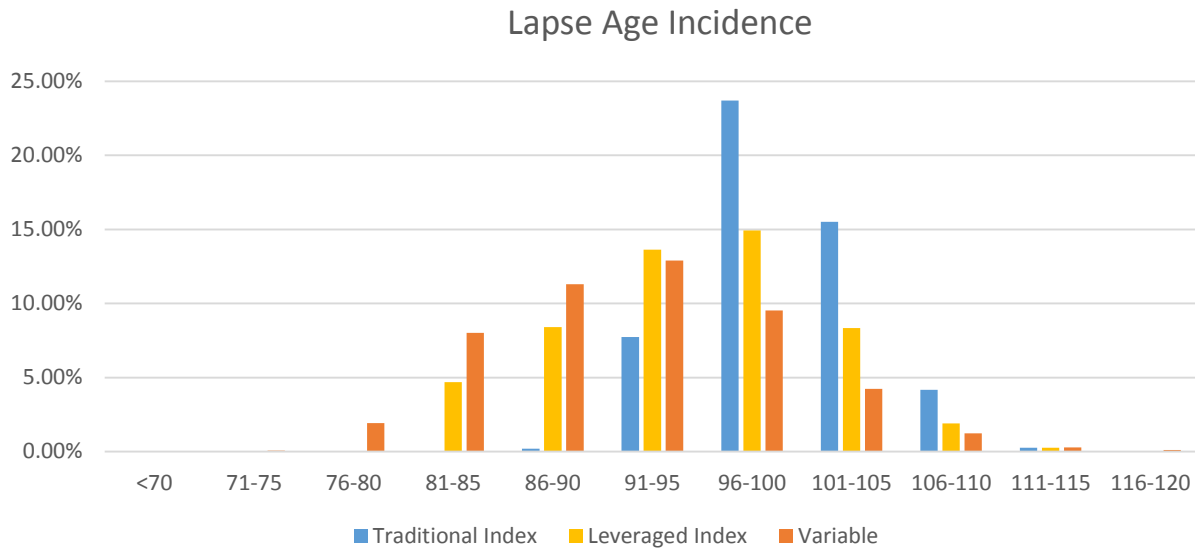


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Not Reaching the Target Age

For those scenarios that lapsed before age 121, how long did the policy last? The following graph shows the incidence of lapse age for the three investment structures (premium solves based on scenario average rates).



Leveraged Index and Variable account investment structures had substantially more variation than Traditional Index, which demonstrates the increased volatility risk of these structures. This can also be seen by reviewing the average lapse age for scenarios that lapsed before age 121:

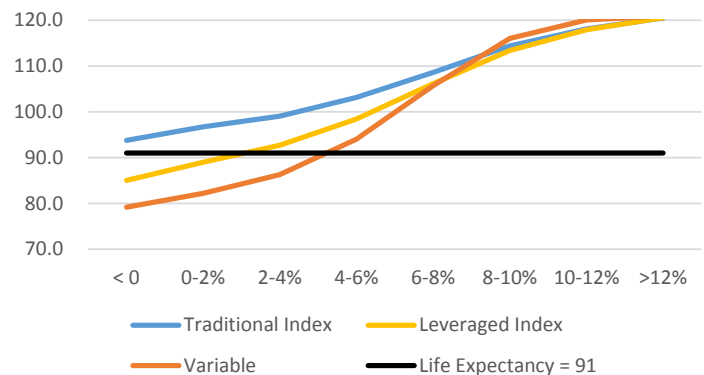
Average Lapse Age

Illustrated Rate	Traditional Index	Leveraged Index	Variable
Scenario Average	100	95	92
AG 49 Max	97	89	

* Long-term total returns are evaluated as the 25-year CAGR

* Life Expectancy Tool estimate for Preferred Best Male Age 55 assuming M mortality experience

Average Lapse Age Under Various Long Term Total Return Scenarios



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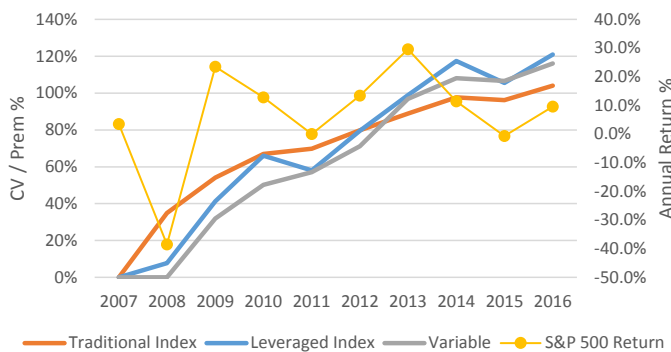
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In general:

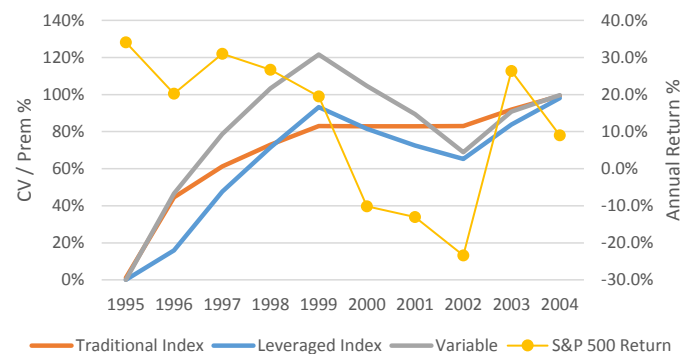
- Long-term bear market scenarios—Traditional Index is most likely to surpass life expectancy of 91, while Variable is most sensitive to early lapse
- Long-term bull market scenarios—Variable performs best

It should be noted that average age does not tell the entire story, and the path of simulated economic returns is important. In the context of actual S&P 500 year-end returns, we evaluated the three structures under two volatile periods in history: 2007–2016 (the “Great Recession” and recovery) and 1995–2004 (the Tech Bubble). See graphs below:

Cash Value to Cumulative Premium Ratio
S&P 500 Year-End Returns, 2007–2016



Cash Value to Cumulative Premium Ratio
S&P 500 Year-End Returns, 1995–2004

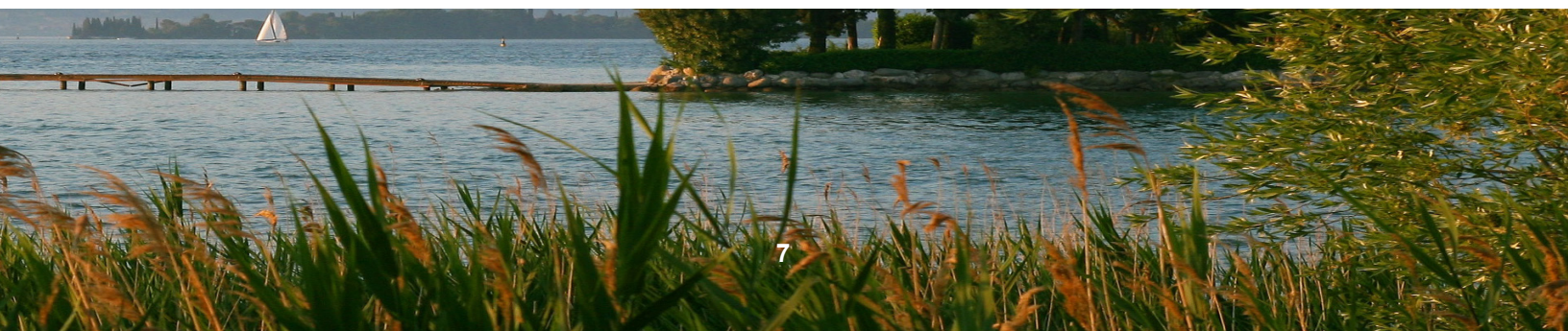


- During the 2007–2016 period, you see greater volatility in cash value performance for Leveraged Index, but over time this structure outperforms.
- During the 1995–2004 period, you see the greatest volatility with variable, moderate volatility with Leveraged Index, and the least volatility with Traditional Index.

Conclusion and Best Practices

MVP IUL-A has competitive illustrated premium and income solves, supported by an investment structure with PF and ACC that is more sensitive to volatility in economic returns than a traditional index structure without the PF/ACC. When MVP IUL-A lapses before target age, it lapses sooner on average than traditionally structured IUL products. When index returns are more favorable, MVP IUL-A will leverage those results providing substantially superior performance.

In light of MVP IUL-A’s sensitivity to volatility in economic returns demonstrated above, M Financial recommends illustrating and funding the product at a rate more conservative than the AG 49 maximum rate. This is considered best practice for any IUL product, but is perhaps more important for MVP IUL-A. The AG 49 rate may be overly optimistic as it assumes enough payout from the additional options purchased to cover the ACC in each year, but



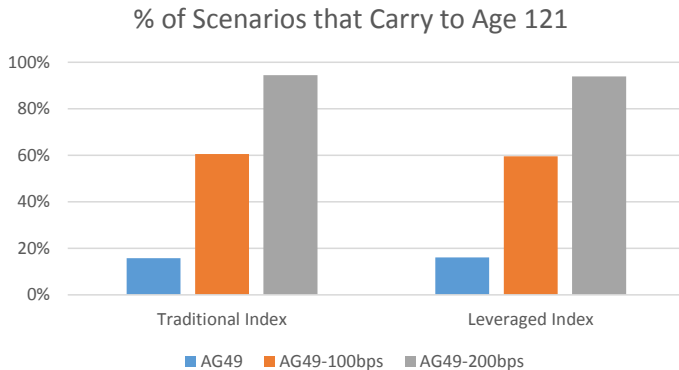
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realistically there may be periods where economic returns will not offset the ACC. The sequence of returns also matters more than the average return, making ongoing policy service essential.

Member Firms and their clients often use a constant-earned rate to develop an individualized approach to illustrating and managing the policy over the long term. It is impossible to say with certainty what illustration and funding rate will ensure the intended policy performance, however a prudent option is AG 49 less 100 to 200 bps.

Evaluating this practice under the 10,000 economic scenarios, the percentage of scenarios that carried the Leveraged Index investment structure to A121 increased substantially when funding at a rate 100-200 bps below the AG 49 rate, with greater upside potential.



Average Cash Value at Age 121 (\$millions)

Funding Rate	Traditional Index	Leveraged Index
AG49	\$7.7	\$9.9
AG49 – 100bps	\$9.4	\$12.3
AG49 – 200bps	\$12.6	\$17.2

For the scenarios that did not reach target age, the policies remained in force longer when funded at a rate below the AG 49 maximum rate.

Average Lapse Age for Scenarios Lapsing Before Age 121

Funding Rate	Traditional Index	Leveraged Index
AG 49	97	89
AG 49 – 100 bps	100	96
AG 49 – 200 bps	103	100

Other best practice considerations for downside protection:

- Adding the NLG rider at ~3% cost provides guaranteed protection to late 80s/early 90s, while maintaining best-in-class premium solves
- Fixed Account allocation can be used to deemphasize the option leverage

Additionally, M is working with Pacific Life to explore opportunities for improved transparency relating to the Performance Factor and how it might be reflected and illustrated in future IUL product releases. Pacific Life is committed to growth within the M community, and MVP IUL-A is a clear example of their innovative drive to offer clients access to additional yield in a low interest rate environment. Though it is important to understand the tradeoffs associated with seeking higher returns.

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Appendix: Illustrated Charges

Male, Issue Age 55, Preferred Best, \$75000 10-Pay, \$2 million Face, DB Option B, 40% Base, 5.17% illustrated rate

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			Non-		Non-	Non-						
			Guaranteed	Admin	Guaranteed	Guaranteed				Policy	Cash	
		Premium	Premium	and Rider	Coverage	Cost of	Total	Interest	Accumulated	Surrender	Surrender	
Yr	Age	Outlay*	Loads	Charges	Charge	Insurance	Charges	Credit	Value	Charge	Value	
1	55	75,000	-4,425	-90	-29,108	-1,893	-35,516	2,778	42,262	47,703	0	
2	56	75,000	-4,425	-90	-24,742	-2,276	-31,533	5,075	90,803	38,163	52,640	
3	57	75,000	-4,425	-90	-38,626	-2,353	-45,494	27,467	147,777	33,393	114,384	
4	58	75,000	-4,425	-90	-41,798	-2,000	-48,314	37,913	212,376	28,623	183,753	
5	59	75,000	-4,425	-90	-44,971	-1,205	-50,691	48,922	285,607	23,852	261,755	
6	60	75,000	-4,425	-90	-46,556	-1,564	-52,636	56,821	364,792	19,081	345,711	
7	61	75,000	-4,425	-90	-48,143	-2,017	-54,675	65,013	450,130	14,312	435,818	
8	62	75,000	-4,425	-90	-49,730	-2,488	-56,733	73,511	541,907	9,540	532,367	
9	63	75,000	-4,425	-90	-51,316	-3,075	-58,906	82,274	640,275	4,770	635,505	
10	64	75,000	-4,425	-90	-51,316	-3,831	-59,663	87,752	743,365	0	743,365	
11	65	0	0	-90	-60,833	-5,292	-66,215	111,089	788,239	0	788,239	
12	66	0	0	-90	-60,833	-6,501	-67,424	115,075	835,890	0	835,890	
13	67	0	0	-90	-60,833	-8,053	-68,975	119,341	886,255	0	886,255	
14	68	0	0	-90	-60,833	-9,843	-70,766	123,772	939,261	0	939,261	
15	69	0	0	-90	-60,833	-12,089	-73,011	128,473	994,722	0	994,722	
16	70	0	0	-90	-60,833	-15,129	-76,051	133,271	1,051,941	0	1,051,941	
17	71	0	0	-90	-45,624	-16,682	-62,396	120,734	1,110,280	0	1,110,280	
18	72	0	0	-90	-45,624	-18,347	-64,061	125,917	1,172,136	0	1,172,136	
19	73	0	0	-90	-45,624	-20,158	-65,872	131,324	1,237,588	0	1,237,588	
20	74	0	0	-90	-45,624	-22,148	-67,862	137,127	1,306,853	0	1,306,853	

MVP IUL LTP 2 (comparable product without Performance Factor)

			Non-		Non-	Non-						
			Guaranteed	Admin	Guaranteed	Guaranteed				Policy	Cash	
		Premium	Premium	and Rider	Coverage	Cost of	Total	Interest	Accumulated	Surrender	Surrender	
Yr	Age	Outlay*	Loads	Charges	Charge	Insurance	Charges	Credit	Value	Charge	Value	
1	55	75,000	-4,425	-90	-31,433	-1,893	-37,840	2,713	39,873	47,703	0	
2	56	75,000	-4,425	-90	-26,718	-2,276	-33,509	4,896	86,260	38,163	48,096	
3	57	75,000	-4,425	-90	-22,003	-2,353	-28,870	7,424	139,813	33,393	106,420	
4	58	75,000	-4,425	-90	-18,860	-2,000	-25,375	10,290	199,728	28,623	171,105	
5	59	75,000	-4,425	-90	-15,716	-1,205	-21,436	13,498	266,790	23,852	242,939	
6	60	75,000	-4,425	-90	-14,145	-1,564	-20,224	16,999	338,566	19,081	319,485	
7	61	75,000	-4,425	-90	-12,573	-2,017	-19,105	20,741	415,203	14,312	400,891	
8	62	75,000	-4,425	-90	-11,001	-2,489	-18,005	24,734	496,932	9,540	487,392	
9	63	75,000	-4,425	-90	-9,430	-3,075	-17,020	28,987	583,900	4,770	579,129	
10	64	75,000	-4,425	-90	-9,430	-3,832	-17,776	33,462	674,586	0	674,586	
11	65	0	0	-90	0	-5,292	-5,382	42,802	712,006	0	712,006	
12	66	0	0	-90	0	-6,501	-6,591	45,145	750,560	0	750,560	
13	67	0	0	-90	0	-8,053	-8,143	47,549	789,966	0	789,966	
14	68	0	0	-90	0	-9,844	-9,934	49,998	830,030	0	830,030	
15	69	0	0	-90	0	-12,089	-12,179	52,474	870,324	0	870,324	
16	70	0	0	-90	0	-15,130	-15,220	54,936	910,041	0	910,041	
17	71	0	0	-90	0	-16,683	-16,773	57,414	950,681	0	950,681	
18	72	0	0	-90	0	-18,349	-18,439	59,946	992,188	0	992,188	
19	73	0	0	-90	0	-20,161	-20,251	62,529	1,034,466	0	1,034,466	
20	74	0	0	-90	0	-22,152	-22,242	65,154	1,077,378	0	1,077,378	

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