Variable Annuity Market Update, Q2 2024

October 2024

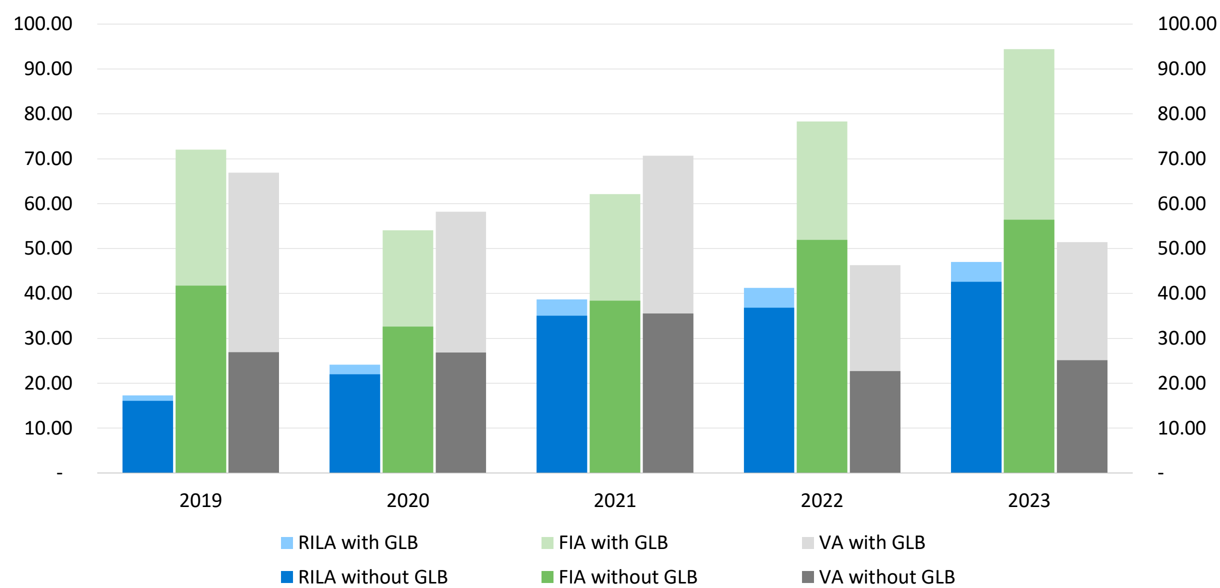
Featured article: GLWB Hedging and Capital Management under Different Annuity Contracts

Registered Index-Linked Annuities ("RILAs") have surged in popularity in recent years with sales steadily growing. The RILA crediting strategy that provides downside protection and upside potential results in a risk/return trade-off profile in-between that of traditional Variable Annuities ("VA") and Fixed Index Annuities ("FIA") and makes the RILA an attractive investment option for retirement planning. Additional living benefits, namely the Guaranteed Lifetime Withdrawal Benefit ("GLWB") option, have been added to the RILA similar to the FIA and VA product suites, and RILA with GLWB has grown quickly since 2019 to now representing around 10% of the total RILA sales. The volume of GLWB on RILA is expected to rise as the RILA market continues to grow. With RILA with GLWB sales volume reaching a critical level, it is now more important for companies to finalize hedging strategies for the riders on the portfolio.

Majority of FIA writers typically hedge the index crediting strategy only and not the GLWB rider, due to the lower volatility of the net amount at risk associated the GLWB. Although the index design of RILA is more analogous to that of the FIA, the risk profile and capital implications of attached GLWB are actually more similar to that of traditional VA. Our analysis has shown that hedging GLWB on RILA provides material benefits to RILA writers. Like those supporting hedging VA GLWB, there are strong rationales for hedging capital market risks associated with RILA GLWB.

This paper dives into the hedging and capital management for RILA with GLWB, with comparison against VA and FIA with GLWB.

FIGURE 1: ANNUITY SALES ($ BILLIONS)



Source: LIMRA

Note: The 2023 VA sales split between those with and without a guaranteed living benefit (GLB) is approximated based on the average split in 2022.

PRODUCT DESIGN AND VALUATION FRAMEWORK

In order to analyze the hedging and capital management implications of the products, it is important to understand the key product features and valuation frameworks. Table 1 below shows high level product and valuation approach for the three annuity products:

FIGURE 2: PRODUCT AND VALUATION COMPARISON OF ANNUITY PRODUCTS

	VA	RILA	FIA
UNDERLYING FUND RETURN PROFILE	Full equity participation opportunity without downside protection Typical investment mix is 60% equity (EQ)/40% fixed income (FI)	Vanilla design: 10% buffer Less than 100% equity participation on the upside	Full downside protection Less than 100% equity participation on the upside
GLWB RIDER DESIGNS	Return of Premium, Ratchet, Roll-up		
GLWB RIDER COST	Buffer design in RILA segments contributes to generally lower GLWB rider cost compared to the GLWB rider cost associated with Traditional VA with 60/40 EQ/FI fund allocation. Most RILA writers increase the guaranteed withdrawal rates on RILA GLWB to align the rider cost with Traditional VA GLWB. Rider cost for FIA GLWB is in between those of VA and RILA.		
VALUATION APPROACH	VM-21	VM-21, i.e. can be aggregated with VA valuation	AG-33/35 CARVM with prescribed assumptions. Overall, a conservative approach that reduces market risks.
STATUTORY CAPITAL	Subject to C1 on general account assets only C3 for market/interest rate risk based on 25% of CTE98 – CTE70	All deposits are subject to C1 C3 for market/interest rate risk based on 25% of CTE98 – CTE70	All deposits are subject to C1. C3 for market/interest rate risk based on prescribed factors.

GLWB riders on RILAs have a very similar risk profile to GLWB riders on traditional VA products, and both are subject to the same valuation framework (VM-21). As such, the benefits of well-defined future hedging strategies under VM-21 are just as applicable to GLWB on RILAs as for the more traditional products.

FIA on the other hand follows the AG33/35 valuation and a factor-based capital approach, and hence the consideration is very different. Hedging benefits of the crediting strategy is implied in the valuation approach. There is no reserve or capital relief due to hedging directly either for WB or for the crediting strategy[1].

The rest of this paper focuses on comparison of RILA with GLWB to VA with GLWB where the provision for future hedging strategies are considered in a similar manner.

[1] Note that credits for hedging the WB within FIA is being considered in the draft principle-based reserving framework for FIA products (VM-22)

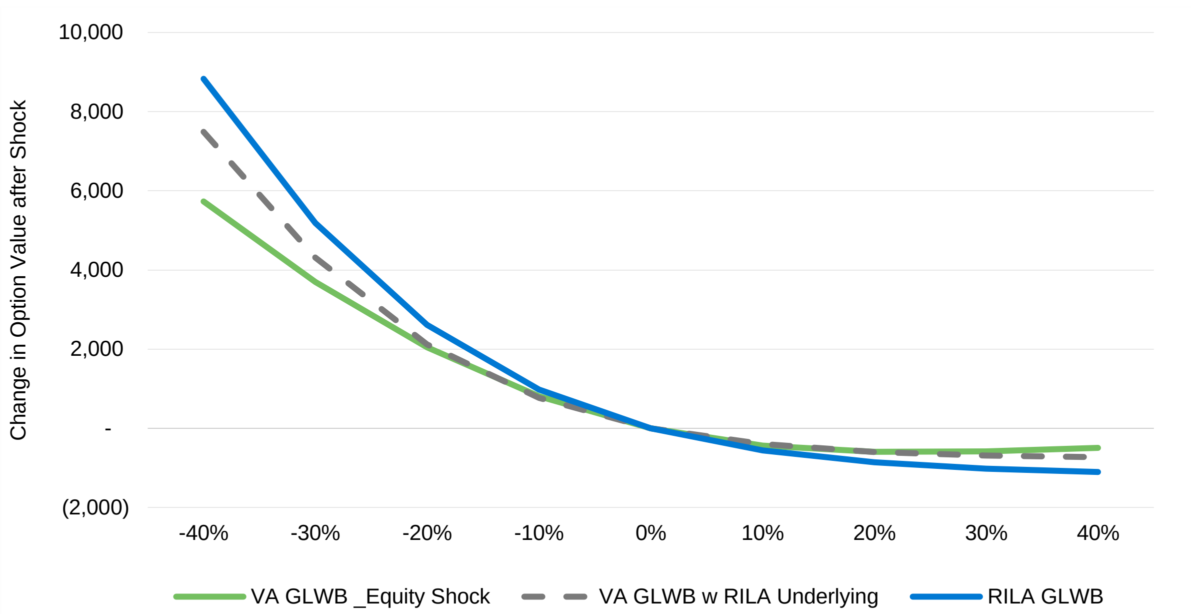
CONSIDERATIONS FOR HEDGING

Companies are still formulating hedging strategies for the GLWB rider attached to RILA, because the product is still relatively new and because the CSV floor on reserve/capital under VM-21 can provide some near-term insulation from capital consequences until hedge programs are in place.

However, it is in the interest of RILA with GLWB writers to develop a well-defined future hedging strategy that determines when and how hedge positions change for two key considerations:

1. The fair value profile of RILA GLWB looks similar to traditional VA GLWB so lessons from traditional VA GLWB hedging can be used to further our understanding of these risks. In fact, **RILA GLWB exhibits slightly more convexity** than VA GLWB. There are two key drivers for the higher convexity in RILA GLWB: 1) higher equity allocation in RILA and 2) more generous withdrawal rates offered in RILA. This is shown in Figure 1 comparing VA and RILA GLWB option values under various shocks. The grey dotted line captures VA GLWB w/ RILA underlying rider design, (mainly aligning withdrawal rates), shows a risk profile that's in between the VA with GLWB and RILA with GLWB.

FIGURE 3: COMPARISON OF VA AND RILA GLWB OPTION VALUES BY EQUITY SHOCK – STARTING ACCOUNT VALUE OF $100,000



2. For new business valuation on Statutory basis, the minimal capital on RILA with GLWB due to CSV floor can be a temporary situation just like for traditional VA (i.e. changes quickly with market conditions and as block ages).

To further examine the implication of hedging the GLWB rider attached to RILA, capital-at risk analysis on a hypothetical RILA with GLWB new issue block was performed. The new issue block consists of RILA with 1-Yr, 3-Yr and 6-Yr point-to-point crediting strategy linked to S&P index, with 10% buffer and 21%/125%/Uncapped for the 3 segments respectively.

There were three key takeaways which demonstrated clear benefits in hedging the GLWB attached to RILA:

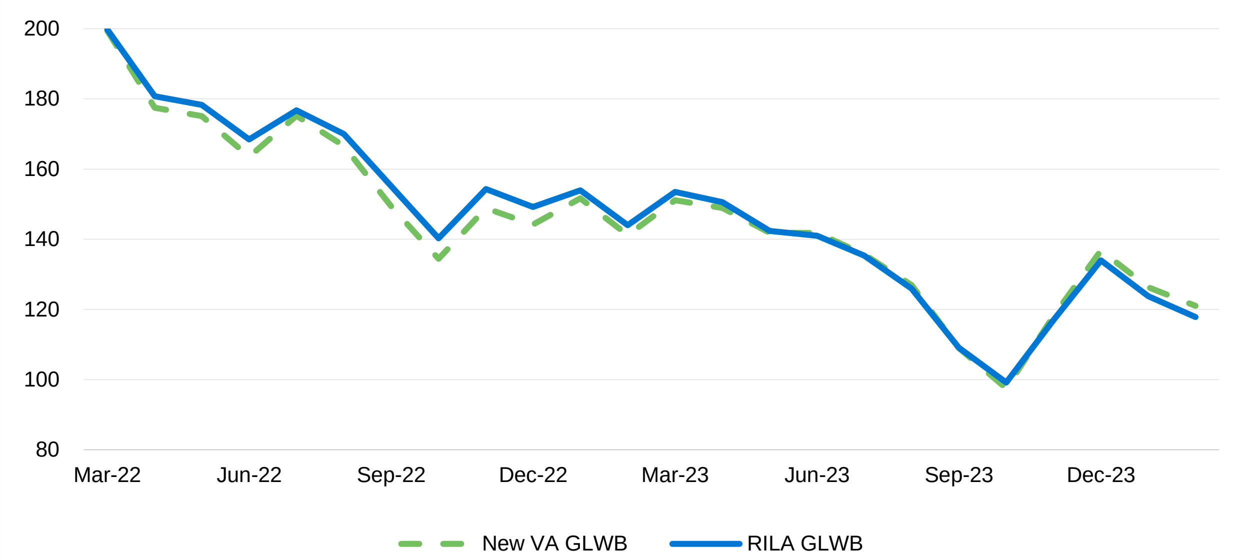
- Unfloored CTE98 requirement is reduced significantly when the GLWB is hedged. This is similar to the VA valuation results, where there is hedge benefit when reflecting a future hedging strategy for the GLWB in the valuation.
- Hedging the GLWB rider helps reduce market sensitivities in the required capital, like observations for VA.
- Hedging helps minimize the likelihood of capital requirement going above the CSV floor when market falls. This reduces the gamma costs associated with macro hedge programs that deal with the capital requirement oscillating around the CSV floor.

MILLIMAN HEDGE COST INDEX (MHCI) FOR RILA GLWB

Given the increasing popularity in GLWB on RILA and risk management considerations discussed above, Milliman has expanded the hedge cost index to include a new chassis for GLWB on RILA. The new index provides the expected hedge cost for a hypothetical RILA GLWB block. The MHCI for GLWB on RILA is available starting the end of March 2024.

Based on the current designs, the RILA index and updated VA index closely track each other over the past two-year period. Please note that the VA index reflects the recent design update by Milliman[2].

FIGURE 4: MHCI (BASIS POINTS)



[2] The MHCI methodology document can be found at: https://www.milliman.com/mhci-methodology/.

U.S. market update

- Q1 2024 year-to-date (YTD) sales were up 21.5% to $28.2 billion from $23.2 billion in Q1 2023.
- Registered index-linked annuity (RILA) sales exceeded traditional variable annuity (VA) sales for the first time.

FIGURE 5: U.S. VARIABLE ANNUITY SALES ($ BILLIONS)

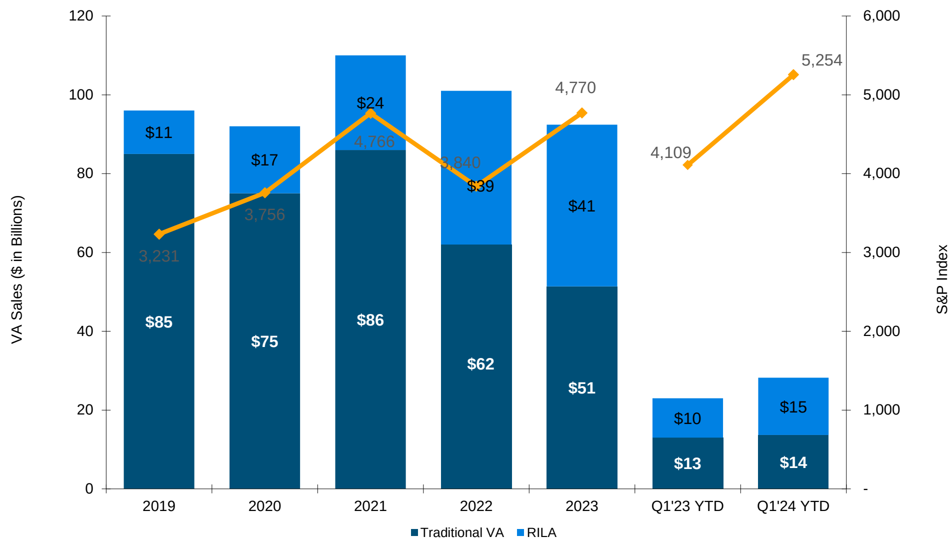


FIGURE 6: U.S. VARIABLE ANNUITY SALES BY COMPANY ($ MILLIONS)

Q1'24 Rank	Company	Q12024	Q12023	YoY	2023	2022	2021
1	Equitable Financial	$5,284	$3,779	40%	$17,882	$15,094	$14,566
2	Jackson National Life	3,419	2,896	18%	11,926	14,540	19,026
3	Allianz Life of North America	2,210	1,442	53%	7,910	5,867	7,011
4	Brighthouse Financial	2,023	1,752	15%	7,528	7,062	8,312
5	Lincoln Financial Group	1,929	1,902	1%	7,242	8,770	10,971
6	Prudential Annuities	1,769	1,129	57%	6,795	5,274	6,344
7	TIAA	1,768	1,876	-6%	5,033	7,626	7,901
8	Nationwide	1,467	1,018	44%	4,951	5,199	8,003
9	New York Life	1,246	1,368	-9%	4,701	5,060	5,264
10	RiverSource Life Insurance	1,160	873	33%	3,981	4,046	5,968
11	Corebridge Financial	908	1,142	-21%	3,865	5,631	8,009
12	Pacific Life	816	699	17%	2,774	3,376	5,578
13	Transamerica	508	305	66%	1,461	703	1,259
14	Fidelity Investments Life	455	240	90%	1,439	1,228	2,424
15	Thrivent Financial for Lutherans	337	413	-18%	1,322	2,106	2,821
16	Athene Annuity & Life	291	217	34%	1,031	903	566
17	TruStage	271	244	11%	968	1,296	1,565
18	Protective Life	261	169	54%	851	748	1,027
19	Massachusetts Mutual Life	252	197	27%	782	1,162	778
20	Principal Financial Group	217	NA	NA	746	NA	NA
	Other	1,611	1,539	5%	5,612	7,207	7,908
	Total	**28,200**	**23,200**	**22%**	**98,800**	**102,900**	**125,300**

Product trends of U.S. VA guarantee benefits

TRADITIONAL VARIABLE ANNUITIES

Lincoln

Lincoln increased withdrawal rates on its ProtectedPay series of guaranteed living withdrawal benefits (GLWBs). Example rates for single life ages 65 to 69 are below.

- Select Core: 6.00%.
- Secure Core: 6.10%.
- Select Plus: 7.65%; if AV falls to zero: 4.50%.
- Secure Plus: 7.50%; if AV falls to zero: 5.00%.
- Select Max: 8.30%; if AV falls to zero: 3.50%.
- Secure Max: 8.50%; if AV falls to zero: 3.50%.

Pacific Life

Pacific Life made changes to its riders:

- Future Income Generator GLWB: Allows access to the full, expanded investment-option lineup—with some options offering up to 100% equity exposure
- Increased rates:
  - Single life ages 65-69: 5.75% (joint: 50 bps lower)
  - Single life ages 70+: 6.0% (joint: 50 bps lower)
  - Corresponding New York rates were also increased
- Enhanced Income Select 2 GLWB: Increased withdrawal percentages. Examples:
  - Single life ages 65-69: 8.50% (joint: 50 bps lower)
  - Single life ages 70+: 8.80% (joint: 50 bps lower)
- Protected Investment Benefit in New York, a guaranteed minimum accumulation benefit (GMAB): Offers 100% downside protection with unlimited growth potential and up to 80% equity exposure with the 7-year term option
- Increased rates on Future Income Generator

REGISTERED INDEX-LINKED ANNUITIES

Allianz

- Allianz made some updates to its Index Advantage+, Index Advantage+ NF, Index Advantage+ Income, and Index Advantage Income ADV RILAs:
  - Added 20% and 30% buffers to the Index Dual Precision Strategy, which is offered for a 1-year term. The 10% buffer remains available for this strategy.
- Allianz launched an RILA in New York called Allianz Index Advantage+ New York. It features:
  - Three strategies: Index Performance, Index Precision, and Index Dual Precision
    - All three are available with a 1-year term and the choice of four indices: S&P 500, Russell 2000, Nasdaq-100, and EURO STOXX 50. The Performance strategy offers a 10%, 20%, or 30% buffer, while the other two strategies offer just the 10% buffer.
    - The Index Performance strategy is also available with 3- and 6-year terms and all three buffers, but with only two indices: the S&P 500 and the Russell 2000.
  - A Performance Lock feature
  - M&E fee on the variable option, a money market fund: 1.25%.
  - Surrender charge schedule: 8%, 7%, 6%, 5%, 3%, 1%, 0%.

Nationwide

Nationwide launched Defined Protection 2.0. Both Annexus and the Genesis Development Group helped to create the product. It features daily protection and floor levels. Additional features include:

- Index options: BlackRock Select Factor, J.P. Morgan Mozaic II, MSCI EAFE, NYSE Zebra Edge, SG Macro Compass, S&P 500 Average Daily Risk Control 10% USD Price Return, and S&P 500 Price Index. A fixed rate is also available.
- Protection levels: 100%, 95%, and 90% (the equivalent of 0%, 5%, and 10% buffers).
- Strategy terms: 1- or 3-year durations, offered with each protection level.
- Performance Lock feature: Allows clients to capture index gains during a strategy duration and transfer them to a fixed account option.
- A variety of participation rates apply based on the index and strategy term elected. Strategies with lower protection levels offer higher participation rates. Clients may also choose a spread rate.
- Return of premium death benefit for ages 75 and under.
- Annual free withdrawals of up to 10% of the contract value. Free withdrawals are also available for long-term care or a terminal illness.

Lincoln

Lincoln launched an updated version of its RILA product: Lincoln Level Advantage 2. Key features include:

- Industry's first indexed accounts that track the performance of Capital Group active exchange-traded funds (ETFs).
- Secure Lock+, the first RILA in the industry to offer a lock-in feature that allows investors to reset protection within their existing terms. It allows:
  - Locked-in performance: Flexibility to capture gains in indexed accounts any time and as often as once per year.
  - Reset of growth potential and downside protection: Continue the current indexed account term with a new crediting rate and reset the full protection level on the next monthly anniversary after a lock-in.
  - Hold and reallocate strategies: The locked-in indexed account value may be held until the next yearly anniversary if preferred to reallocate to a different indexed account.
  - Indices: S&P 500, Russell 2000, MSCI EAFE, Capital Strength, First Trust American Leadership, Capital Group Global Growth Equity ETF, and Capital Group Growth ETF.
  - Terms: 1-year, 3-year, 6-year, and 6-year annual lock.
  - Protection Levels: 10%, 15%, 20%, 30%, and 100%.

Jackson

Jackson launched +Income, a guaranteed lifetime income option now available on the RILA product suite (Jackson Market Link Pro II). The following are some key features:

- Single or joint life fee: 1.45%.
- Withdrawal rates are determined based on age when income starts. The period income is deferred from when the rider is elected: three, six, or nine years.
- Annual step-ups to AV
- Example: GLWB rate for ages 65 to 69 for the different deferral periods: Less than three years: 5.75%; three to six years: 6.25%; six-nine years: 7%; nine+ years: 7.50%.
- Jackson also launched the New York version of its Market Link Pro II and Pro II Advisory. The main differences from the countrywide versions are that there is no Performance Boost feature and no 10% floor option.

Principal

Principal launched its second RILA, Principal Strategic Income. It includes a guaranteed lifetime withdrawal benefit called the Secure Income Protector rider. Features include:

- The guaranteed living benefit (GLB) rider:
  - Fee of 1.50% for rider, which is automatically issued.
  - Benefit base step-up to account value on each segment end date, until later of age 85 or 12 years after contract issue.
  - Two income options: A level amount every year that never decreases or a tiered amount that provides higher income initially and then decreases if the account value reaches zero.
  - The income option may be changed one time before starting income payments.
  - Example: Single life age 65 level income option (as June 27): 6.00% with a 0.35% deferral credit.
  - Example: Single life age 65 tiered income option:
  - AV > zero: 7.50% with a 0.35% deferral credit.
  - AV = zero: 3.50% with a 0.35% deferral credit.
  - Each year the client doesn't take an income withdrawal, they receive a deferral credit, which is added to their initial withdrawal percentage.
  - May elect to have the annual withdrawal amount transferred to the fixed segment on the segment end date and withdrawn during the year to avoid equity adjustments.
- Three available indices: S&P 500, Russell 2000, and SG Smart Climate.
- A 1-year fixed option is also available
- Segment terms available: 1-, 3- or 6-year. Longer segments offer higher participation rates. Cap rates also apply to certain strategies.
- Protection options vary based on the index and term:
- Buffers: 10% and 20%, peak buffers.
- The peak buffer segment option offers positive credits even in down markets if within the protection of the buffer.
- Floors: 10% and 0%.
- Segment lock-ins allowed once per segment (enabling clients to lock in gains during a segment term).

Sammons

Sammons added the proprietary Nasdaq-100 Max 30 Index to its LiveWell Dynamic RILA. It is the only RILA on the market to offer a 30% volatility index. This index uses Salt Financial's truVol+, which is a risk measure based on intraday data featuring a same-day update. This allows quick reaction to sudden changes in the market, which helps maintain the volatility target. Sammons also added six new "Cycle" index account options, as follows:

- 1-year Cycle term with:
  - A 10% buffer and the Nasdaq-100 Max 30 Index. Cap rate applies.
  - A 30% buffer and the Nasdaq-100 Max 30 Index. Cap applies.
- 6-year Cycle term with:
  - a 10% buffer and the MSCI EAFE. Participation rate applies.
  - a 10% buffer and the Nasdaq-100 Max 30 Index. Participation rate applies.
  - a 20% buffer and the Nasdaq-100 Max 30 Index. Participation rate applies.
  - a 30% buffer and the Nasdaq-100 Max 30 Index. Cap Rate rate applies.

Transamerica

- Transamerica added the First Trust Equity Edge Index to its Transamerica Structured Index Advantage.
  - The index provides exposure to U.S. equities that exhibit high quality and value, consistent with a balanced investment approach.
- This approach, which combines two equally weighted methodologies, is sourced from the Value Line Dividend Index, a benchmark of quality high-yielding stocks in the Value Line universe, and the Nasdaq U.S. Rising Dividend Achievers Index, which tracks companies with a history of increasing dividends.

TruStage

TruStage enhanced its TruStage Zone Income RILA (underwritten by MEMBERS Life Insurance). Enhancements include:

- New index offerings: The Dimensional US Small Cap Value Systematic Index and the Barclays Risk Balanced Index.
- Can change from single to joint lifetime income any time before lifetime income begins.
- Surrender charges in the first two contract years were reduced from 9% to 8%.
- Declared rate account: Guaranteed for one year (was previously six years).

International VA markets

JAPAN

As of the end of June 2024, the following are the key companies in Japan with the highest VA/variable life (VL) underwriting balances and their separate account balances, along with the changes from March 2024:[3]

- MS Primary, JPY 1,446 billion (-3.6%).
- Daiichi Frontier, JPY 374 billion (-13.5%).
- Sony Life, JPY 4,834 billion (+7.5%). (Note that the balance of Sony Life's separate account includes the balance of variable insurance).
- Nippon Life, JPY 134 billion (+0.8%).
- Credit Agricole, JPY 115 billion (-20.8%).

TAIWAN

- First-year premium (FYP) sales of VAs as of Q1 2024 were around TWD 1.6 billion, 37.3% lower than Q1 2023.
- FYP sales of variable life as of Q1 2024 were around TWD 20.8 billion, 11.3% lower than Q1 2022.
- 2024 YTD sales of variable products have been 13.7% lower versus 2022 YTD.
- According to the disclosure from the Life Insurance Association R.O.C., the decrease in sales has been due to:
  - New regulations on variable products taking effect on January 7, 2023, has put restrictions on the fund choices and cash-back (in the form of automated partial withdrawal) and on bonus mechanisms. This has made variable products less attractive, and it takes time for potential customers to adopt.
  - With the investment outlook facing numerous uncertainties, policyholders are adopting a more conservative investment approach, contributing to the overall decline in initial premium income for unit-linked insurance products

3. Source: Q1 FY 2024 financial statement.

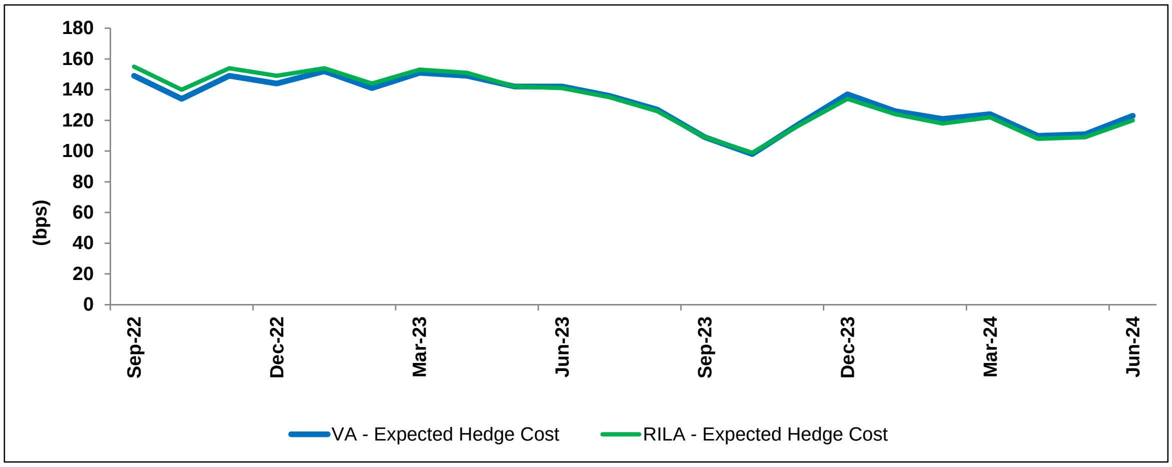
Risk management

MILLIMAN HEDGE COST INDEX™ AND U.S. MARKET COMMENTARY

June 2024 update

- In Q2 2024, U.S. equity markets showed mixed performance, shaped by fluctuating inflation expectations and labor market dynamics. The S&P 500 gained 3.92% for the quarter. Despite a -4.16% drop in April, the index rebounded with gains of 4.80% in May and 3.47% in June. The Nasdaq also saw notable swings, falling -4.41% in April but recovering with gains of 6.88% in May and 5.96% in June, ending the quarter up 8.26%. The Russell 2000 dropped by -7.09% in April, recovered 4.87% in May, but slipped again by -1.08% in June, closing Q2 down -3.62%. The Dow Jones followed a similar pattern, dropping -5.00% in April, recovering 2.30% in May, and rising 1.12% in June, ending the quarter down -1.73%. Market movements were influenced by softer inflation data and strong labor figures, although uncertainty persisted regarding potential rate cuts.
- Economic indicators showed a gradual easing of inflation. The consumer price index (CPI) remained above expectations at 3.5% year-over-year (YoY) in April, softening to 3.4% in May and 3.3% in June, with month-on-month (MoM) figures decreasing from 0.4% in April to 0.3% in May and 0.0% in June. The producer price index (PPI) eased, staying at or below expected levels, with YoY figures at 2.1% in April and 2.2% in May and June. The Federal Reserve's preferred inflation measure, the personal consumption expenditures price index (PCE), remained steady at 2.7% YoY in April and May and decreased to 2.6% in June. Q1 gross domestic product (GDP) growth was annualized at 1.4%, slightly below the expected 1.6%, while personal consumption lagged, reaching 1.5% in June against a 2.0% forecast.
- The labor market remained robust, with nonfarm payrolls exceeding expectations, adding 303,000 jobs in April, 175,000 in May, and 272,000 in June. The unemployment rate held steady at 3.9% throughout every month in Q2. ADP Employment Report change figures were mixed, at 184,000 in April, 192,000 in May, and 152,000 in June.
- In the industrial sector, production increased by 0.4% in April, remained flat in May, and rose significantly by 0.9% in June. Capacity utilization was stable, ending the quarter at 78.7%. The housing market showed mixed results: housing starts dropped sharply by -14.7% in April, rebounded by 5.7% in May, and fell again by -5.5% in June. Building permits steadily decreased, while existing home sales continued to decline, ending June down -0.7%.
- The Federal Reserve held a June Federal Open Market Committee (FOMC) meeting, keeping the federal funds rate at 5.25% to 5.50%. However, officials revised their median dot plot forecast, suggesting one rate cut this year instead of three as previously expected. The yield curve remained inverted with bear steepening; the 2-year yield ended the quarter at 4.76%, and the 10-year yield at 4.40%, leaving the 2s10s spread at -36 basis points (bps).
- In commodities and currencies, gold saw volatility, peaking at $2,425.31 in May and ending with a 4.34% gain at $2,326.75. The U.S. dollar index rose 1.26% over the quarter due to shifting expectations around Federal Reserve policy.
- The volatility index (VIX) remained relatively stable in Q2, closing at 12.44, down 0.57 points from the previous quarter. The term structure steepened, with minor fluctuations on both ends. The SPX 10-day realized volatility slightly declined, indicating reduced market uncertainty toward the end of the quarter.

FIGURE 7: EXPECTED HEDGE COST* (123 BPS FOR VA AND 120 BPS FOR RILA AS OF JUNE 2024)[4]



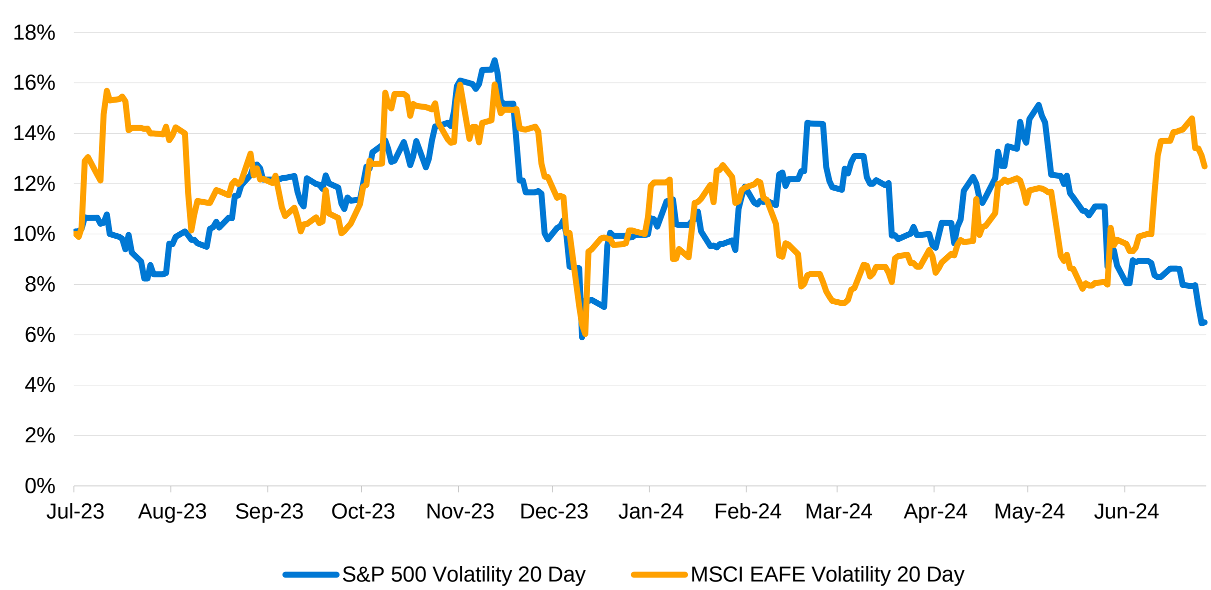
RISK-MANAGED FUNDS ON VA PLATFORMS

Risk-managed funds on VA platforms, Q2 2024

The U.S. variable annuity market experienced another quiet quarter in terms of new fund launches during Q2 2024. Investment managers launched no new risk-managed funds, and only a few new non-managed risk funds were launched during the quarter.

The graph in Figure 8 illustrates the average 20-day realized volatility for the S&P 500 and MSCI EAFE, as two representative indices. During Q2 2024, the average 20-day realized volatility for the S&P 500 and MSCI EAFE was 10.62% and 10.67%, respectively.

FIGURE 8: INDEX VOLATILITY



Source: Bloomberg.

[4] Milliman recently completed a review of the design of its Hedge Cost Index and implemented some changes to align product features and assumptions with those prevalent in the VA marketplace. Details regarding this update can be found in the Index Methodology document at milliman.com/mhci-methodology.

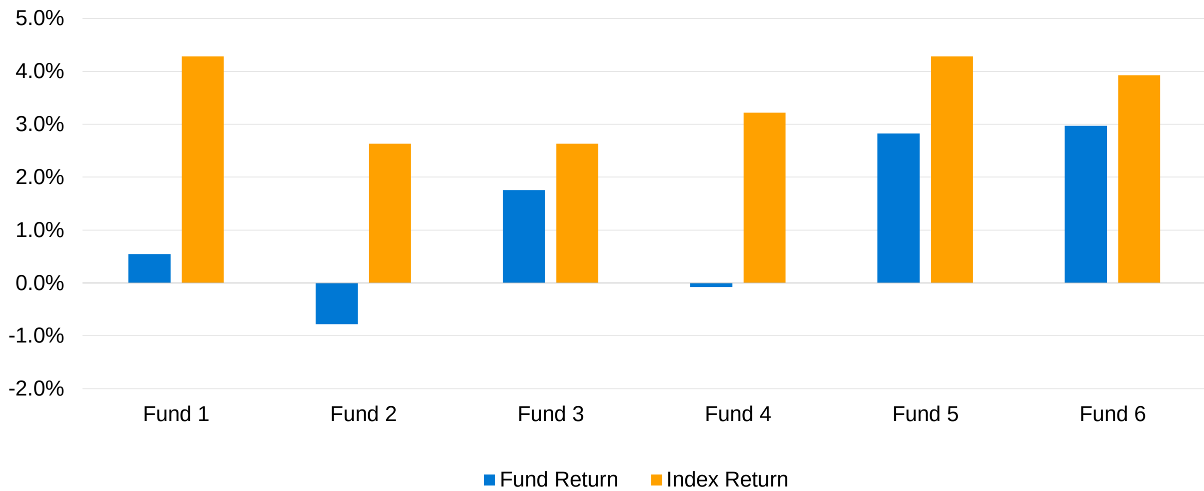
We selected six different indicative managed risk fund strategies available within VA products. Each fund's quarterly return and realized volatility profiles are shown below. The following notes were observed in Q2:

The outperformance seen in Funds 5 and 6 relative to the peer group was driven by the funds' single exposure to U.S. large-cap equities whereas all other funds in the peer group have multi-asset class exposures, which underperformed U.S. large-cap over Q2.

Fund 2 experienced the lowest return over the quarter, -0.78%. The fund's exposure to fixed income and the portfolio's tactical portfolio positioning were the fund's largest detractors to performance.

Fund 6, a defined outcome fund, was the best-performing fund on both risk-adjusted and absolute returns. As of June 30, 2024, the fund still had 4.8% left in its estimated upside cap.

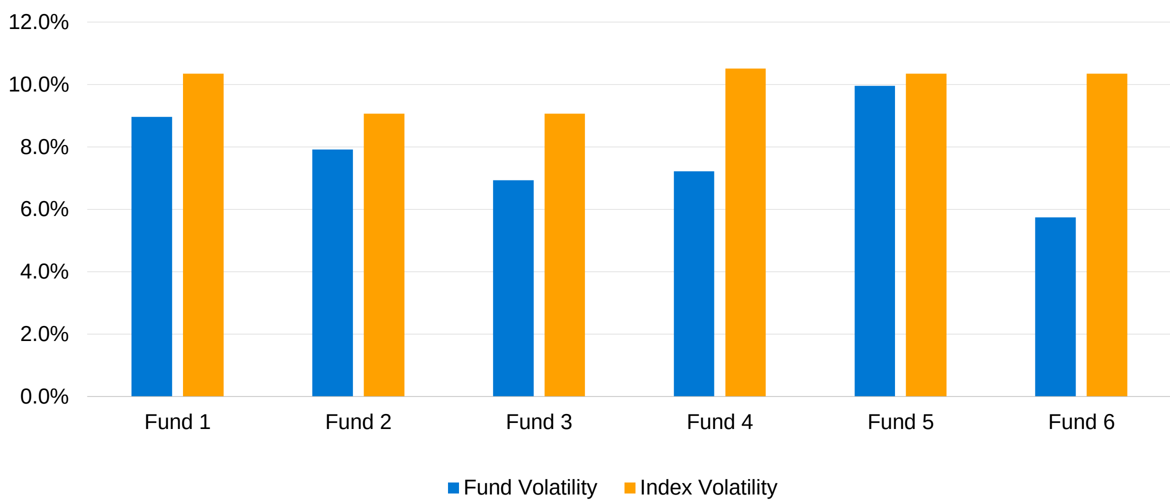
FIGURE 9: FUND RETURNS, Q2 2024



Source: Bloomberg.

Benchmarks: Fund 1: S&P 500 TR; Fund 2: MSCI World NR; Fund 3: MSCI World NR; Fund 4: Russell 3000 TR; Fund 5: S&P 500 TR;, Fund 6: S&P 500 PR.

FIGURE 10: FUND VOLATILITY, Q2 2024



Source: Bloomberg.

Benchmarks: Fund 1: S&P 500 TR; Fund 2: MSCI World NR; Fund 3: MSCI World NR; Fund 4: Russell 3000 TR; Fund 5: S&P 500 TR; Fund 6: S&P 500 PR.

Solutions for a world at risk™

Milliman leverages deep expertise, actuarial rigor, and advanced technology to develop solutions for a world at risk. We help clients in the public and private sectors navigate urgent, complex challenges—from extreme weather and market volatility to financial insecurity and rising health costs—so they can meet their business, financial, and social objectives. Our solutions encompass insurance, financial services, healthcare, life sciences, and employee benefits. Founded in 1947, Milliman is an independent firm with offices in major cities around the globe.

Data has been obtained from the following reports by LIMRA Secure Retirement Institute: U.S. Individual Annuity Sales (2018 Annual, 2019 Annual, 2020 Annual, 2021, 2022 Annual, 2023 Annual and 1Q 2024).

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FEATURED ARTICLE

GLWB HEDGING AND CAPITAL MANAGEMENT UNDER DIFFERENT ANNUITY CONTRACTS

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