

VARIABLE ANNUITIES TRENDS IN THE CURRENT ECONOMIC ENVIRONMENT

ACHS Fall 2023 Meeting

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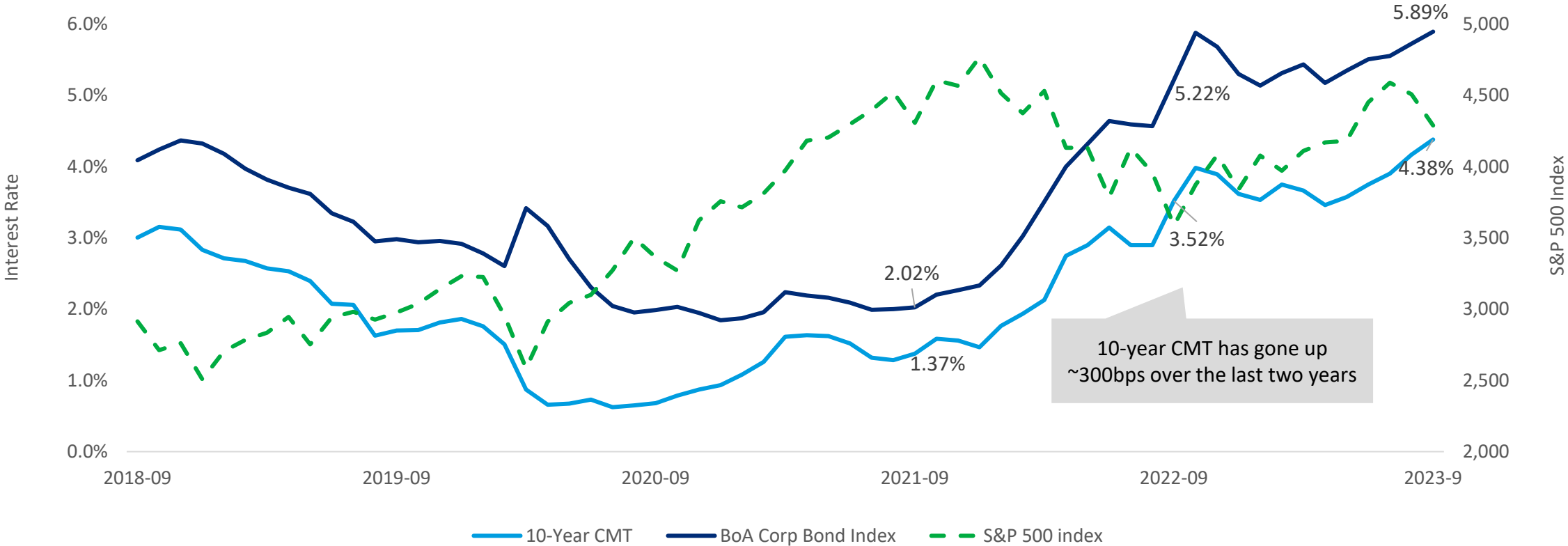
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CURRENT ECONOMIC ENVIRONMENT

Interest rates have gone up significantly over the last two years, coupled with a volatile equity market

Historical Interest Rates and Equity Market¹

2018/9 – 2023/9



1. Interest rates shown are monthly average of 10-year Constant Maturity Treasury rates. The S&P index is shown at the end of the month. Data source: fred.stlouisfed.org.



VA TRENDS – TOPICS FOR TODAY

We will examine VA trends in a few areas, sharing insights from the 2023 Oliver Wyman VA management survey



Sales/new business



Inforce management



Hedging/ALM

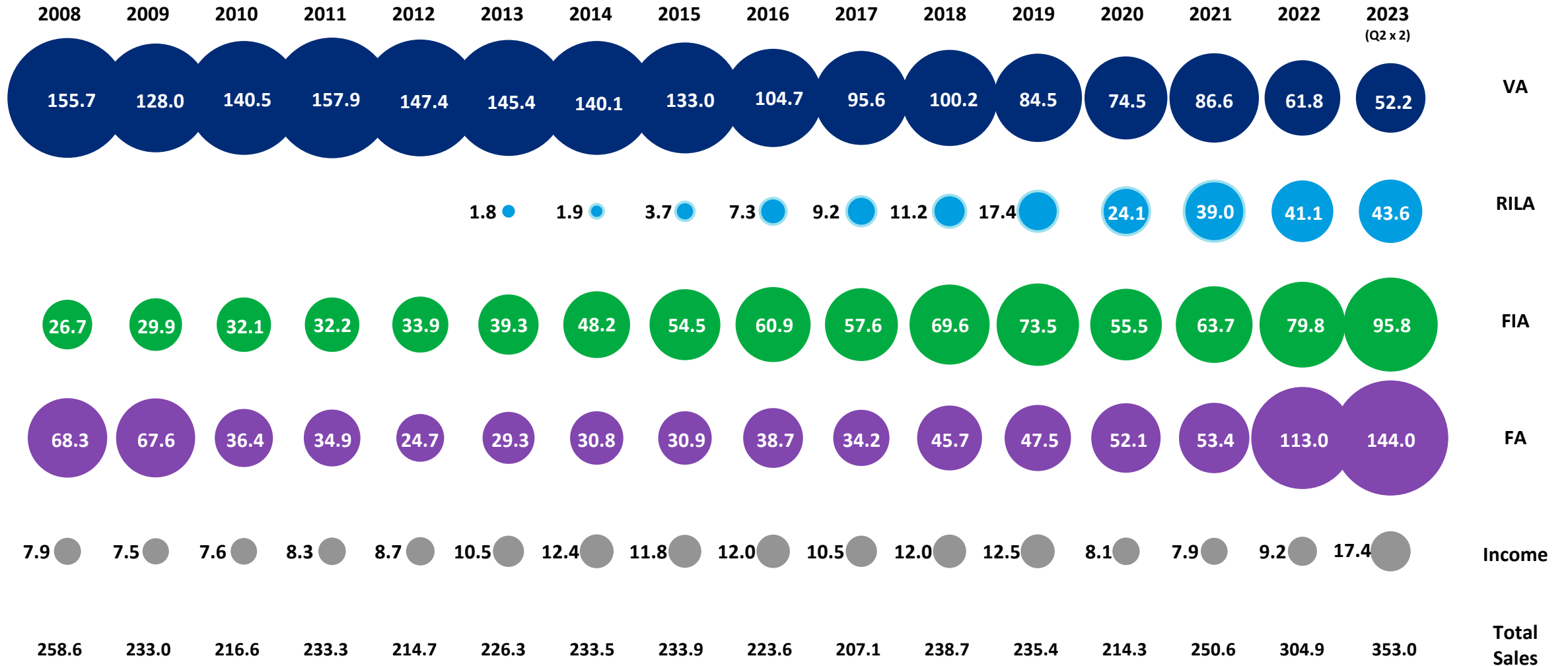


NAIC regulatory updates



ANNUITY SALES

VA sales have suffered from recent equity volatility and RILA growth. RILA growth has slowed due to increased interest rates





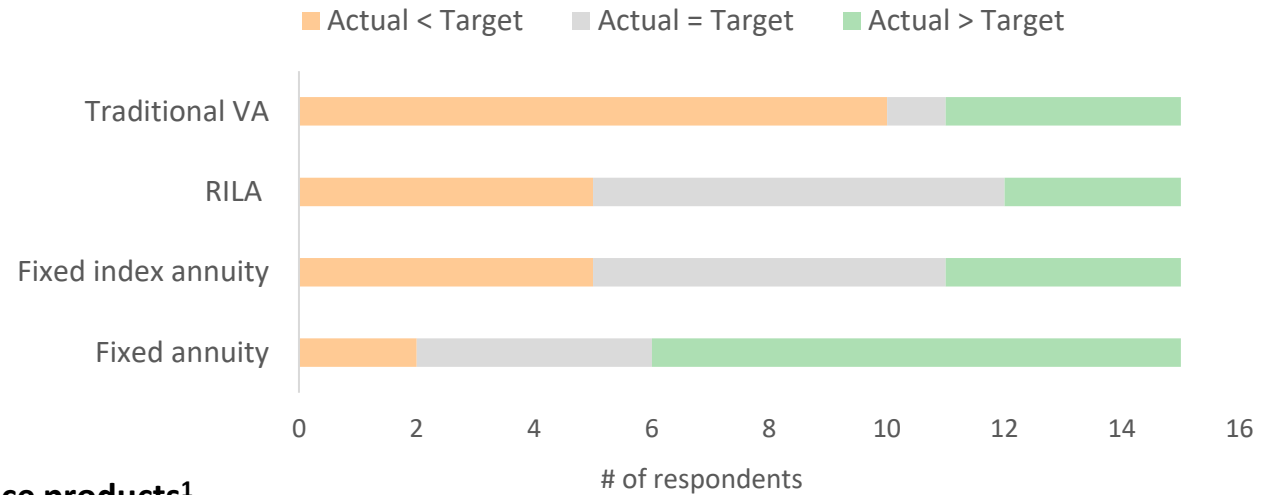
SALES – SURVEY RESULTS

VA sales have fallen short of target for most participants while fixed annuity exceeded; majority of the participants believe RILA is still the next growth area with more customized and innovative designs being the differentiators

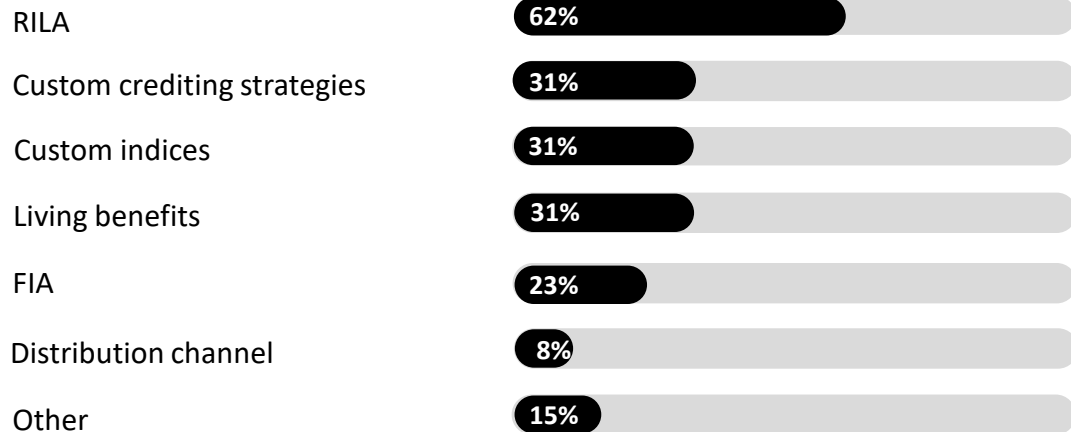
Sales mix (% premiums)

Product type	Actual ¹	Target ¹	Actual vs Target
Traditional VA	43%	45%	-2%
Indexed VA (RILA)	19%	23%	-4%
Fixed index annuity	15%	16%	-1%
Fixed annuity	23%	16%	7%

1. Average of 15 valid responses



Where do you see the next growth area to be in equity-linked insurance products¹



1. As % of 13 respondents

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- Majority still believe that RILA is the next growth area
- About 1/3 respondents believe custom crediting strategies, custom indices or living benefits are the next big growth areas and differentiators
- Other potential growth areas include fee-based product, inflation protection and contingent deferred annuity



INFORCE MANAGEMENT – MAJOR LEVERS

Hedging & capital management

Hedging and capital management tools help manage risk

03

02

Sales/reinsurance

Risk transfer achieved through sales or reinsurance of inforce block

Buybacks

Successful buyback programs help reduce risk exposure

01



VA BUYBACKS

Carriers have launched VA buyback offers across a variety of guarantee types, with take rates typically around 10-20%

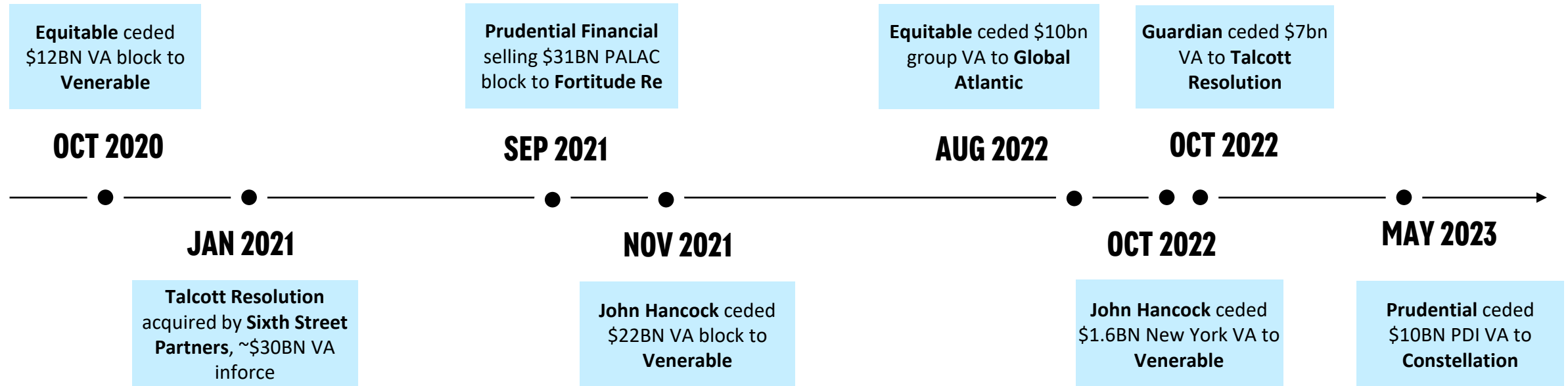
Sample VA guarantee buybacks

Company	Scope	Type
1 Hartford	Lifetime GMWBs	Lump sum
2 AXA	Standalone roll-up GMDBs (2 offers)	Lump sum for both offers
	Dollar-for-dollar GMIBs (2 offers)	Lump sum for both offers
3 VOYA	Traditional GMIBs	Enhanced annuitization
	Traditional GMIBs	Lump sum
4 AEGON/Transamerica	Traditional GMIBs	Lump sum or policy exchange
	Traditional GMIBs	Lump sum
5 Zurich	Dollar-for-dollar GMIBs and roll-up GMDBs	Lump sum
6 Ohio National	GMIB	Lump sum



RECENT VA INFORCE TRANSACTIONS

2023 has been a slower VA transaction year relative to the last two years



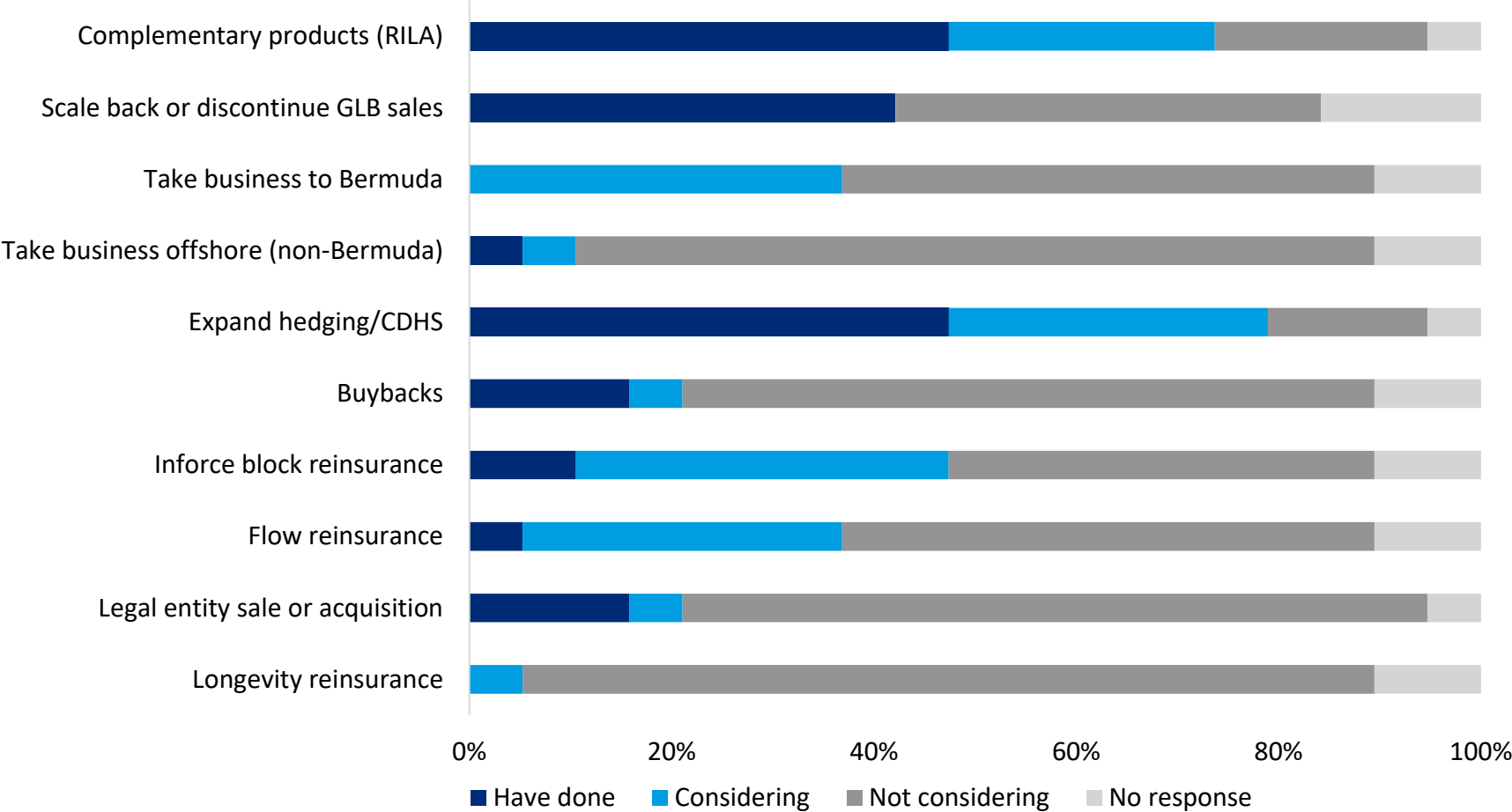
Dates are transaction announcement date



INFORCE MANAGEMENT ACTIONS – SURVEY RESULTS

Complementary RILA products and expanding hedging are the **most popular** actions participants have undertaken or are considering; longevity reinsurance and non-Bermuda offshoring are the **least popular** options

Have you done, are considering, or not considering the following actions?



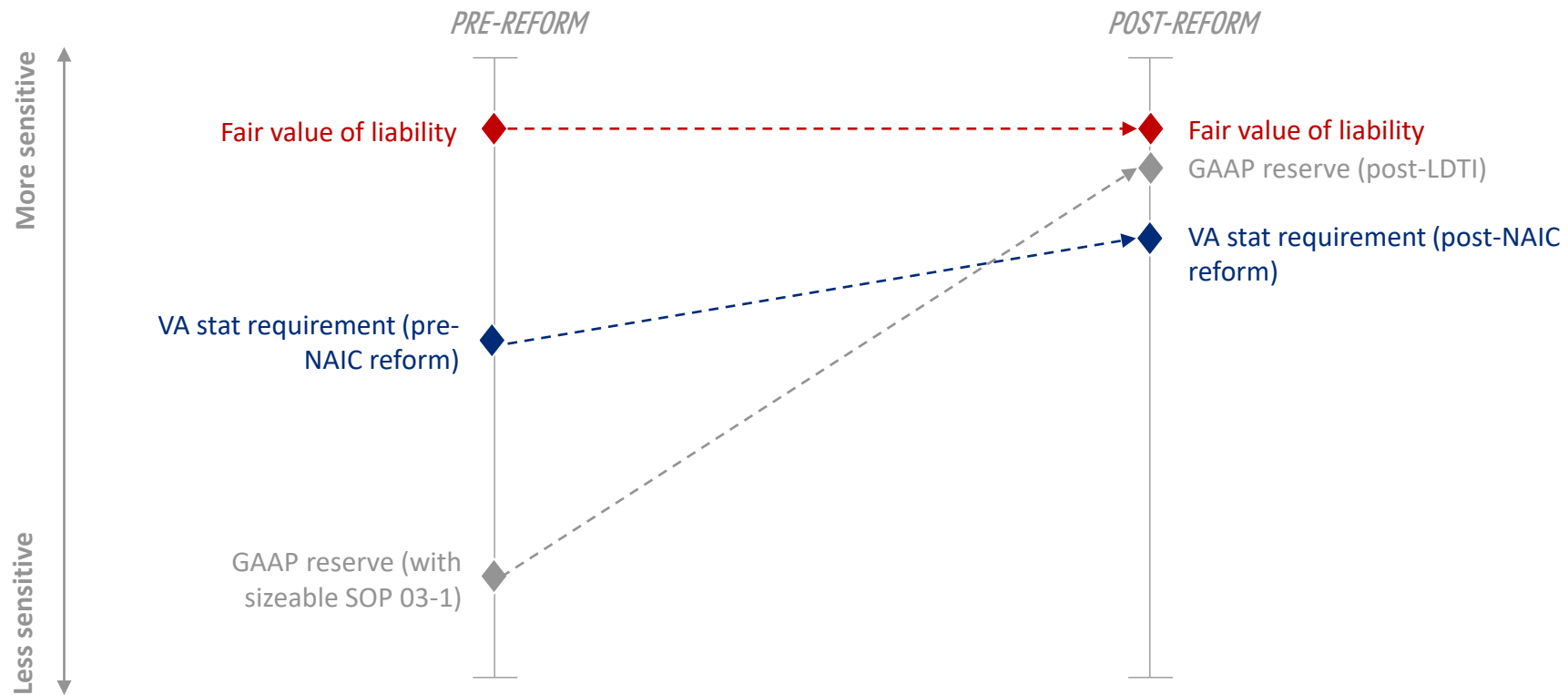


HEDGING – PRE VS POST VM-21/LDTI

LDTI, along with VM-21, helps align VA valuation lenses and encourages more fair value-based hedging

Market sensitivity of liability valuation

Across different valuation frameworks





HEDGING – MACRO INDUSTRY TRENDS

We expect two dominant hedging strategies post-NAIC reform and LDTI; public vs. private ownership will drive the strategy undertaken

Public ownership

- Primarily valuation lens is GAAP or IFRS, both of which will effectively be fair value-based; **decision needed whether to attempt to convert VA portfolio into a stable earnings stream, which would require fair value-based Delta and Rho hedging for all guarantees**
- The revised VA statutory framework no longer penalizes fair value-based hedging from a total asset requirement perspective
- Vega hedging will depend on how companies use market-quoted implied volatility to calculate fair value for the GAAP or IFRS reserve

Private ownership

- Primary protection goal is US statutory:
 - Equity sensitivity: high
 - Interest sensitivity: low
 - Vega sensitivity: zero to minimal
- Statutory-focused hedging; substantial open Rho risk due to differences in interest rate sensitivity between fair value and statutory valuation
- May orient towards tail protection-oriented ALM programs in lieu of first dollar protection

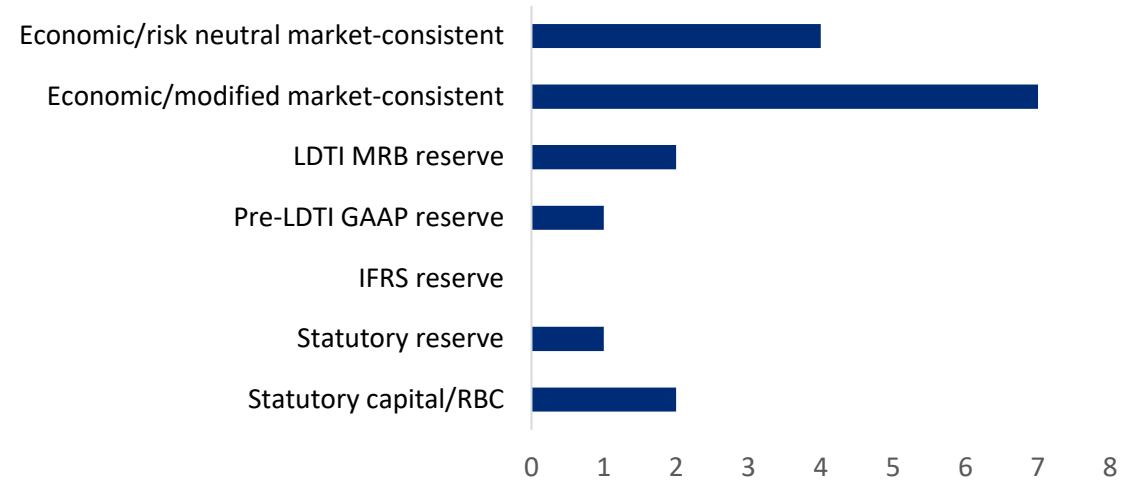
- **VA liability has increasingly transferred from public ownership to private ownership as evidenced in the last two years**
 - Landmark transactions have defined new transaction possibilities, with sale of Talcott and Voya CBVA, spinoff and IPO of Brighthouse and Equitable
 - Formation of specialized VA acquisition vehicles – i.e., Venerable Annuity – and increasing demand for VA as the fixed annuity credit trade becomes even more crowded. Validated by the Venerable/Equitable transaction announced in October 2020
 - Good supply of legacy VA portfolios that existing carriers are seeking to dispose, accelerated by GAAP and IFRS reforms



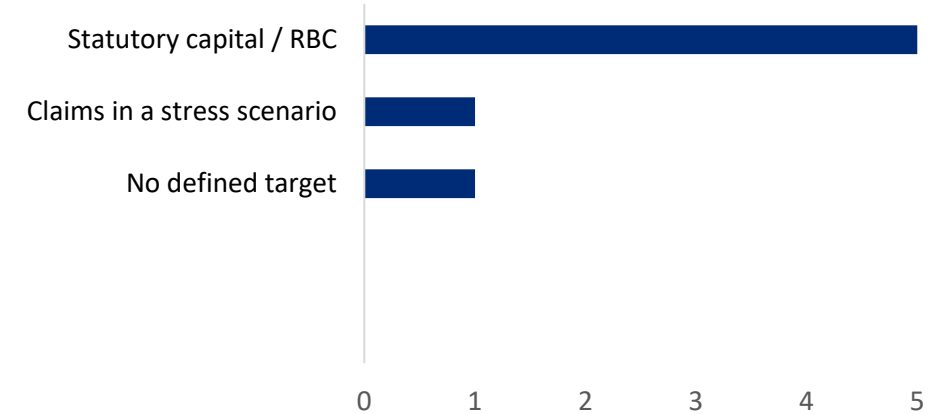
HEDGING – SURVEY RESULTS (1/2)

Vast majority of participants have a dynamic hedging program for traditional VA, with economic/risk neutral/modified risk neutral being the most popular primary targets; macro hedging programs are mostly statutory focused

Primary hedge target – dynamic hedging program



Primary hedge target – macro hedging program

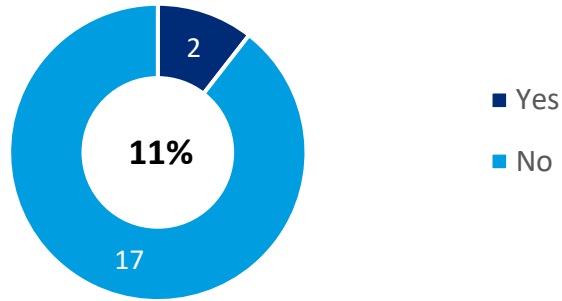




HEDGING – SURVEY RESULTS (2/2)

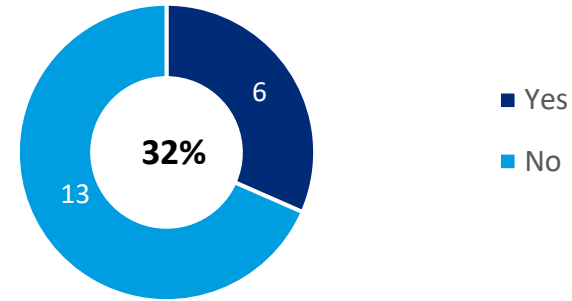
Only 2 participants indicated changes to hedging strategies due to LDTI; 32% have adjusted their hedging strategies due to rising interest rates, more commonly by increasing their Rho coverage

Have you changed your hedging strategies (dynamic hedging or macro hedging) **given LDTI**?



Changes made	# Responses
• From 100% of GMWB to 70% of GMDB/GLB	1
• From dynamic full GAAP hedge to a partial GAAP hedge and a macro hedge	1

Have you changed your hedging strategies (dynamic hedging or macro hedging) **due to rising interest rates**?



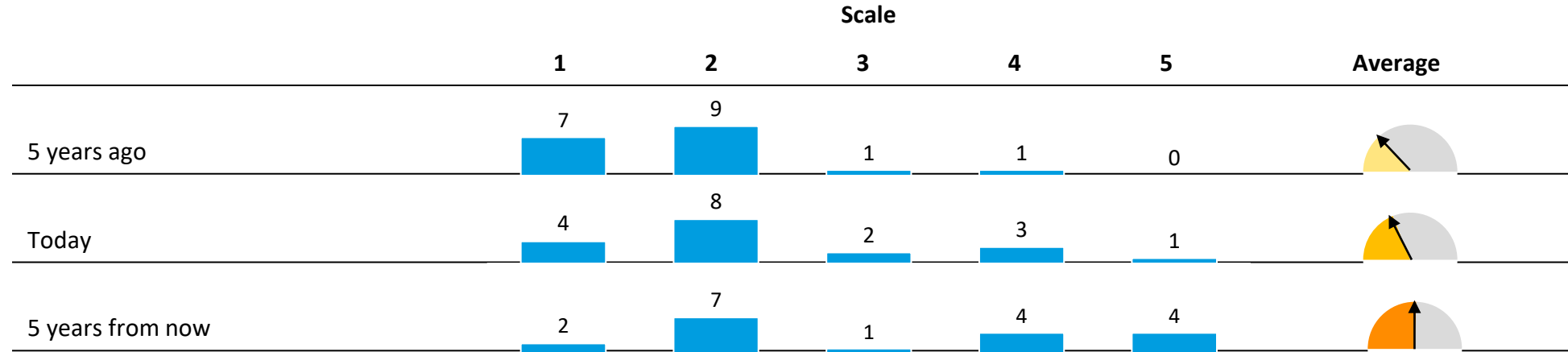
Changes made	# Responses
• Increased Rho coverage	4
• Reduced Rho coverage	1
• Adjusted hedge target to reflect potential loss for selling assets and benefit of investing at higher yields	1
• Expanded hedge tolerances	1



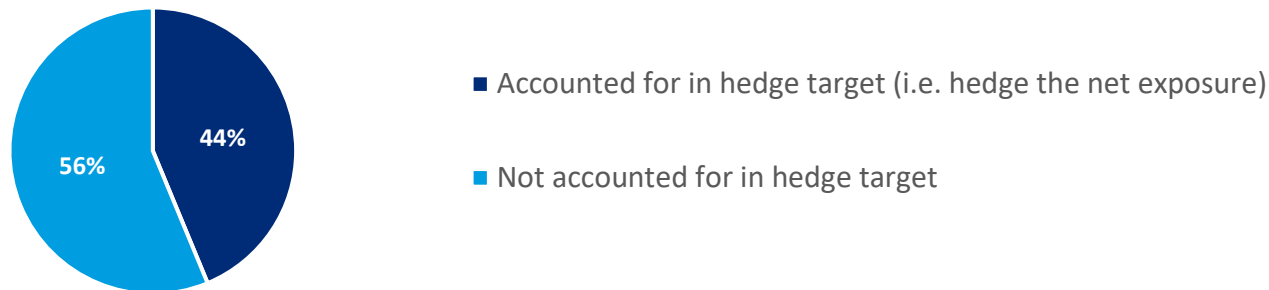
ALM – OUTLOOK, RHO HEDGE OFFSET

GA asset management for VA is becoming increasingly important over time, comparing 5 years ago, today and 5 years from now. More than half of those who hedge Rho do not consider GA assets offset in hedge target

How important is the management of your general account asset to variable annuity optimization and risk management?



How is the duration/cashflow coverage from your fixed income assets accounted for in Rho hedging measurement?¹



1. Percentage distribution excludes 3 participants who responded N/A (i.e. no Rho hedging)



NAIC REGULATORY UPDATES (1/2)

Item	Effective Date	Description
1 APF 2020-12 Future hedging strategies	1/1/2023	<ul style="list-style-type: none"> • Update to refine how future hedging strategies are reflected under VM-20/VM-21 • Two key changes <ul style="list-style-type: none"> – Require all future hedging strategies be modeled for VM-20/VM-21 regardless of qualification as Clearly Defined Hedging Strategy (“CDHS”) – E factor will be increased to 1.0 for new hedging strategies, unless it is for a newly introduced or newly acquired product or block of business in which case the E factor can be as low as 0.3
2 APF 2023-05 Index credit hedging	1/1/2024	<ul style="list-style-type: none"> • Revisions to hedge modeling language under VM-21 to address index credit hedging for RILA products • Key changes <ul style="list-style-type: none"> – Clarify that index credit hedges should be reflected in cash flow modeling with the VM-21 “adjusted” run as well as the “best efforts” run – Require an index credit hedge margin by reducing hedge payoffs by a margin multiple; the margin percentage should be based on company experience subject to a 1.5% guardrail, and 20% minimum if there is no sufficient and credible company experience
3 NAIC ESG initiative	1/1/2025 the earliest	<ul style="list-style-type: none"> • Ongoing NAIC initiative since 2020 to replace the Academy Economic Scenario Generator (“ESG”) used for principle-based reserve (“PBR”) with Conning GEMS® ESG • Initial field test was concluded last year and results were shared with regulators • Additional field test is expected



NAIC REGULATORY UPDATES (2/2)

Item	Effective Date	Description
4 INT 23-01 Net Negative (Disallowed) IMR	Year-end 2023 through 2025	<ul style="list-style-type: none">• Updated interpretation of Statutory Accounting Principles regarding the treatment of negative IMR which was a non-admitted asset on statutory balance sheet under existing statutory accounting guidance• The update permits reporting entities to admit net negative (disallowed) IMR up to 10% of the reporting entity's adjusted general account capital and surplus, subject to certain adjustments and limitations• This is the regulators' interim solution to address the negative IMR issue facing life insurers caused by rising interest rates, while a permanent solution is being developed
5 APF 2023-08 Negative IMR in PBR	1/1/2025 (expected)	<ul style="list-style-type: none">• Revisions to VM-20 and VM-30 (and VM-21 by reference) to clarify the allocation of negative IMR• Non-admitted IMR will be excluded from VM-20 and VM-21

USEFUL REFERENCES

Recent publications, newsletters and industry surveys by Oliver Wyman

SOA publications

The first screenshot shows the title "RILA GLWB Designs and Market Risk Analysis" by Matt Heaphy, Nicholas Carbo, and David Elliott. The second screenshot shows "RILA and VA GMxB U.S. Statutory Reporting Offsets: Implications to Pricing and In-force Management" by Nicholas Carbo, Carson Cook, and David Elliott. The third screenshot shows "Negative IMR Considerations in a Higher Interest Rate Environment" by Charles Chacosky, Rey Malile and Yuan Tao, published in The Financial Reporter, June 2023.

VA Vantage newsletters

Distributed quarterly to a client list

The newsletter is titled "VA VANTAGE" and is dated Q2 2023. It features "Q1 2023 EARNINGS HIGHLIGHTS" with the following content:

- General trends**
 - The industry continued to experience strong RILA sales and lower traditional VA sales in 1Q23, primarily driven by volatile equity markets and shifting consumer product preferences to fixed annuities in a higher rate environment
 - Three companies discussed their annuity lapse experience, which was generally in line with expectations considering dynamic behavior under current interest rates
 - Several companies disclosed LDTI impacts with mixed future earnings expectations, but generally this was not a focus of discussion, despite of this being the first quarter of LDTI adoption
 - Almost all companies discussed extensively their liquidity position and exposure to commercial real estate investments given the recent banking crisis and macroeconomic conditions
 - Only about half the companies provided RBC ratio updates and most have not seen much change from year-end 2022
- Market movements 1Q 2023¹**
 - S&P 500: 4,109.31 ▲ 7%
 - 10-year treasury: 3.48% ▼ 40bps
 - ¹S&P 500 and treasury rate level as of March 31, 2023; changes are from December 31, 2022
- RBC ratio %¹**

Company	4Q22 estimate	1Q23 estimate	1Q23 estimate not available
Ameriprise	~550	~550	~550
Ameritas	~450	~450	~450
Avimex	~450	~450	~450
Cambridge	~450	~450	~450
Equitable	~450	~450	~450
JACKSON	~450	~450	~450
Lincoln	~450	~450	~450
MetLife	~450	~450	~450
Principal	~450	~450	~450
Prudential	~450	~450	~450
Sumitomo	~450	~450	~450

¹Mid-range of the estimates discussed at earnings call
- Company highlights**
 - Ameriprise** maintained its focus on VA without guaranteed living benefits (GLB) and structured VA (a.k.a RILA), which together account for 43% of total VA account value; total VA sales declined 13% from 1Q22 as a result of volatile market environment and management actions to reduce the risk profile of the business; VA hedging

Industry surveys

Available to participants

The first screenshot is for the "VARIABLE ANNUITY ACCOUNTING AND ASSET-LIABILITY MANAGEMENT SURVEY – 2019" dated August 16, 2019. The second screenshot is for the "OLIVER WYMAN VM-21 EMERGING PRACTICES SURVEY" dated June 2023, which is a VA Management Survey report.

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