Optimizing Balance Sheet Risk & Fostering Growth

Presented by Bruce & Bruce Company
April 6, 2023

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Agenda

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Introductions

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Introduction

- **Bruce & Bruce Company**
  - Actuarial consulting firm that has been providing value-added consulting services for life and health companies since 1929
  - Experts in insurance products and retirement plans and provide guidance in these areas to help foster success and growth
- **Presenters**
  - Silvio Rodia; President
  - Vladimir Krepkiy, FSA, FCIA, MAAA, FCA; Consulting Actuary
  - Jonathan Rhoda, ASA, EA, FCA; Retirement Plan Consulting Actuary
  - Andrew Edelsberg, CPA, FLMI; SVP – Business Strategist
- **Today's Topics**
  - Reducing Balance Sheet Risk
  - Responding to Interest Rates & Inflation Changes
  - Hot Topics for Rating Agencies & Regulators

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Reducing Balance Sheet Risk

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Reducing Balance Sheet Risk

- **Asset Liability Management (ALM)** is a discipline by which an optimal portfolio of assets is constructed to hedge exposure of liabilities while meeting the investment requirements of a company
- **Total Portfolio Approach -** many small to medium insurance companies continue to use total portfolio approach to manage their liabilities
- **Asset Segmentation** involves splitting assets into sub-portfolios and managing them according to the needs of each line of business
- **Asset Segmentation Pros:**
  - Improve market risk management
  - May identify redundant reserves
  - Improved pricing
- **Asset Segmentations Cons:**
  - May create extra administrative cost
  - May create extra investment expenses
  - May limit crediting rate setting

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Asset Segmentation – Example

- Company X sells SPWL and Deferred Annuities
- Asset Adequacy Reserve (AAR) is based on a single scenario

	A: Total Portfolio Approach	B: Life	C: DA	D: B plus C
Reserves	55.5M	14.2M	41.3M	55.5M
Liability Duration	8.7	11.0	7.7	8.7
Asset Duration	10.5	11.6	7.9	8.8*
Liab vs Asset Duration	1.8	0.6	0.2	0.1
Earned Rate	3.6%	3.3%	4.0%	3.8%*
Surplus at year 30	-8.2M	-12.0M	+10.3M	-1.7M
Asset Adequacy Reserve	2.3M	n/a	n/a	0.8M

Key observations:

- Duration matching improved by 1.7 years (Column D minus Column A)
- By segmenting assets, the AAR was reduced by $1.5M (Column D minus Column A)
- The portfolio rate was improved by 0.2% (Column D minus Column A)
- Improved portfolio rate on DA (Column C minus Column A)

* Weighted Average

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Reinsurance Case Study

- **Company**
  - $230M in Liabilities of which $160M in deferred annuities ("DA")
  - Roughly half of the DA block had high guaranteed rates
  - The company needed help with boosting their surplus and managing high guarantee block, so reinsurance deal was sought
- **Initial Requested Parameters**
  - Reinsure DA block
  - Maximum surplus boost
  - Assets remain on the book of the ceding company
  - Transaction should be completed before year-end
  - No additional AAR
- **Reinsurers**
  - A list of 17 reinsurers was considered
  - Only 4 competed for the business

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Reinsurance Case Study

- **Some Key Hurdles**
  - The size of the block was too small for many reinsurers which limited the number of offers
  - Interest rates kept rising, decreasing the valuation
  - Board of Directors was hesitant to drop the asset base as they were concerned that the company would be viewed as too small
  - CFT Impact
  - Timing
- **Other Considerations**
  - Investment philosophy of a reinsurer
  - Regulatory: onshore vs. offshore
  - Licensed in a state of the ceding company domicile
  - Total Negative IMR post reinsurance deal: non-admitted assets treatment

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Reinsurance Case Study – Summary of Quotes

Consideration	Company A	Company B	Company C	Company D
Domiciled	Onshore	Offshore	Offshore, NAIC Certified*	Offshore
Structure	Coinsurance (cash)	Coinsurance (cash), Funds Withheld	Coinsurance (cash) Funds Withheld	Coinsurance, Funds Withheld, ModCo
Ceding Commission 100% of the block	12.5%	8.5%	8.5%	2.5%
High guarantee	8.00%	n/a	n/a	1.5%
Maintenance Allowance	Consistent with the ceding company per policy expenses	Consistent with the ceding company per policy expenses	Consistent with the ceding company per policy expenses	About $40 per policy less (consistent with the market)
Collateral	0% collateral	3%	No additional margin. NAIC Certified * Reinsurer status	• 2% Coinsurance • 0% FWH and ModCo
Rating	Non-rated	Rated	Rated	Non-rated

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Reducing Balance Sheet Risk – Final Remarks

- Connect your actuaries with your investment managers
- Collaboration among all stakeholders may lead to an improved balance sheet
- Asset segmentation may reduce redundant reserves
- If your company needs to improve surplus, reinsurance may provide a solution
- There are reinsurance players that have appetite for small blocks of businesses
- Some off-shore reinsurers are NAIC certified and rated. Don't cross off-shore reinsurers off your list
- Reinsurers can customize the deals to meet your goals
- Do not expect the value of your block be consistent across the competing players; the range of offers may be wide
- Be proactive – planning and forecasting are great tools to prepare for what is coming

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Responding to Interest Rate & Inflation Changes

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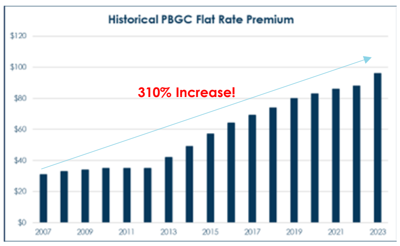
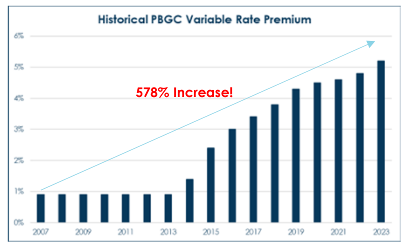
Defined Benefit Pension Plans

- **Pension Benefit Guarantee Corporation (PBGC)**
    - Federal insurance program (like the FDIC) for defined benefit pension plans
    - Typically, the largest administrative expense for defined benefit pension plans
        - Annual Flat Rate Premium: Per participant premium of $96 (in 2023)
        - Annual Variable Rate Premium: Unfunded liability premium of 5.2%





**Premium rates for 2024 (and beyond) are indexed annually based on changes in the National Average Wage Index.*

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Defined Benefit Pension Plans

- **PBGC Variable Rate Premium Interest Rate Options**[1]
    - Interest rates are used to measure the pension plan's PBGC liability for Variable Rate Premium purposes
    - Standard Method: Spot Segment Rates
        - 2023: 4.84% (for years 0 – 5) / 5.15% (for years 5 – 20) / 4.85% (for years 20+)
        - 2022: 1.16% (for years 0 – 5) / 2.72% (for years 5 – 20) / 3.10% (for years 20+)
    - Alternative Method: 24-Month Average Segment Rates
        - 2023: 2.13% (for years 0 – 5) / 3.62% (for years 5 – 20) / 3.93% (for years 20+)
        - 2022: 0.88% (for years 0 – 5) / 2.61% (for years 5 – 20) / 3.27% (for years 20+)
- **PBGC Savings Case Study**
    - Company historically followed the Alternative Method
    - Initial 2023 PBGC funded status of $738,000 underfunded
    - Initial 2023 PBGC Variable Rate Premium of $38,376 (5.2% X $738,000)
    - Switching to the Standard Method
        - 2023 PBGC funded status of $312,000 overfunded
        - 2023 PBGC Variable Rate Premium of $0
        - **Savings of $38,376!**

[1]For pension plans that have a calendar plan year.

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Defined Benefit Pension Plans

- **Other PBGC Premium Reduction Strategies**
  - Reduce number of participants to reduce the Flat Rate Premium
    - Terminated Vested Lump Sum Window
      - Terminated vested participants no longer work for the company but are due a pension benefit in the future
      - Offer lump sum to remove them from the pension plan (and reduce PBGC Flat Rate Premium)
      - Lump sum interest rates increase approx. 200 basis points from 2022 to 2023
    - Purchase Annuities
  - Improve the funded status of the pension plan to reduce the Variable Rate Premium
    - Contribute additional funds to help improve the funded status
    - Additional funds can come from other company assets, or some companies have borrowed money

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Defined Contribution Pension Plans

- **Rising Inflation Impacts**
  - Harder for employees to save during high inflation
  - Employers are focusing on financial wellbeing initiatives, increasing their education efforts to employees on retirement planning
- **Employee Savings Rates Case Study**
  - Very simple analysis (even an intern can do it!) to review your employee workforce retirement savings tendencies
  - Employee savings rate example: $5,000 annual savings while earning $100,000 – equals a 5% savings rate
  - How do the savings rates compare to benchmarks?
- **Employer Actions**
  - Retirement Plan Changes
    - Automatic Enrollment (force employees to opt-out of the plan)
    - Automatic Escalation (automatic increases to employee savings rates)
  - Retirement Plan Education
    - One-on-one employee conversations
    - Retirement Income Projections

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Hot Topics for Rating Agencies & Regulators

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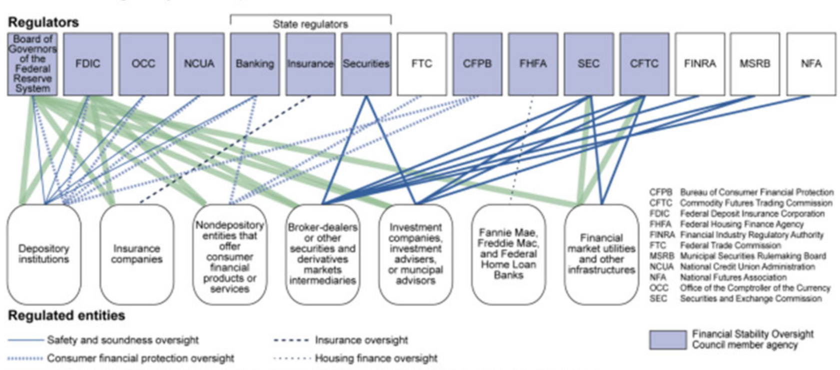
Financial Regulatory Structure Post-GFC

U.S. Financial Regulatory Structure, 2016



Source: GAO. | GAO-16-175

Note: This figure depicts the primary regulators in the U.S. financial regulatory structure, as well as their primary oversight responsibilities. "Regulators" generally refers to entities that have rulemaking, supervisory, and enforcement authorities over financial institutions or entities. There are additional agencies involved in regulating the financial markets and there may be other possible regulatory connections than those depicted in this figure.

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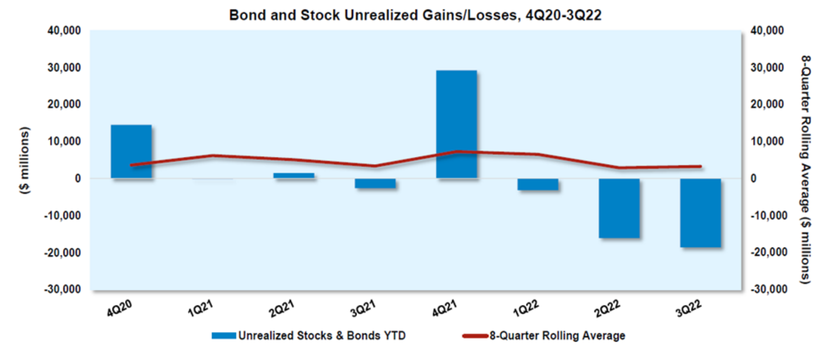
US Life/Annuity Sector Realized/Unrealized Losses



Source: AM Best

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ORSA – "Own Risk and Solvency Assessment"

- An internal process to assess the adequacy of an insurer's risk management and current and prospective solvency positions under normal and severe stress scenarios
- ORSA will require insurers to analyze all reasonably foreseeable and relevant material risks (i.e., underwriting, credit, market, operational, liquidity risks, etc.) that could have an impact on an insurer's ability to meet its policyholder obligations
- The ORSA has two primary goals:
    - **to foster an effective level of ERM at <u>all insurers</u>**, through which each insurer identifies, assesses, monitors, prioritizes and reports on its material and relevant risk identified by the insurer, using techniques that are appropriate to support risk and capital decisions
    - to provide a group-level perspective on risk and capital, as a supplement to the existing legal entity view

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Risk Solvency Assessment Best Practices

- Focus on the purpose – to understand your organization's risks, improve your ERM framework, and when necessary, recalibrate your exposure to risk
- Engage a wide range of stakeholders throughout the process, including the management team and the board
- Describe the top risks of the organization in specific terms, supplemented with explicit risk metrics, tolerances, and limits
- Develop a risk appetite statement that clearly states the appropriate amount of capital that the business owns or should own
- Describe specific areas where your organization needs to improve its ERM process.
- Demonstrate a competent understanding of your organization's risks and ERM challenges
- Build an effective reporting process around risk management

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Benefits of Stress Testing

- Helps management identify major risk exposures under various economic scenarios
  - Especially important for low frequency, high severity events
  - Can lead to meaningful change or reinforce comfort with current risk appetite and tolerances
- Leads to better risk-based decision-making processes (e.g., how much capital to hold, which lines of business are core vs. non-core, etc.)
- A risk management tool when properly utilized can greatly enhance a company's ERM framework
  - Leads to more proactive risk identification and action plans
  - Planning ahead helps you think through issues and reduces/eliminates emotional responses, which often include bias
  - Rating agencies and regulators are focused on ERM

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ERM Best Practices

- Understand your company's risk profile and use ERM for strategic and tactical decisions
- Checklists and risk mitigation are table stakes
  - Consider quantitative and qualitative tools
  - Make the risk information available to the decision makers
- Ensure risk culture penetrates all levels
  - Board/senior management need to be involved and aligned
- Practice predicting potential outcomes – the goal is to **be prepared to react!**
  - Proactive vs. Reactive
- Anticipate unintended consequences; try to identify emerging risks

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Lessons to be Learned from the Banking Sector

- There is a reason why regulators create rules and procedures for all sizes of companies to comply with
- Investment issues can occur even with high quality portfolios and low bond defaults
- Focus on ALM and liquidity management, which are part of overall ERM
- Diversification is essential – geography/customer base, products, asset and liability profiles
- Extensive stress testing is absolutely necessary to cover tail (severe) scenarios
- Risks are not always obvious or clear; always be on the lookout for emerging risks

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Appendix

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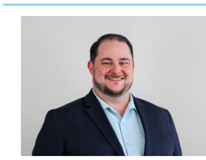
Presenter Bios



Silvio A. Rodia
President

Silvio joined Bruce & Bruce in June 2017 and became President in May 2021. He has over 20 years' experience in the insurance consulting industry, primarily supporting fraternal benefit societies. Silvio has an extensive background in financial reporting, policy administration, cash flow testing, risk management, and policy form filing. Throughout his career, he has prepared and filed quarterly, annual, and RBC statements for many small life insurers.

Since 2018, Silvio has also served as the Chief Risk Officer for ELCO Mutual Life & Annuity. He has contributed to developing more robust qualification and quantification metrics for ELCO's enterprise risk management program. He has created a liquidity plan and assisted with FHLB membership and related activities. In addition, he is on the team that presents to rating agencies KBRA and AM Best. Silvio enjoys solving problems that involve several components and facets of the company. He often finds cost-effective solutions that are resilient enough to handle today's challenges while flexible enough to accommodate future strategies.

Silvio is a graduate of The University of Illinois Chicago (UIC) where he received a Bachelor of Science in Computer Engineering. He was President of Eta Kappa Nu (UIC Chapter), an honors society of the Institute of Electrical and Electronics Engineers. In addition, he received a Masters of Science in Applied Mathematics from DePaul University. Silvio has passed several actuarial exams and has worked with and managed actuarial consulting teams for most of his career.

Feel free to reach out to Silvio (srodia@bruceandbruce.com) directly if you have any questions.

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Presenter Bios

Vladimir ("Vlad") Krepkiy, FSA, FCIA, MAAA, FCA
Consulting Actuary

Vlad has worked at Bruce & Bruce as a consulting actuary for 4+ years and is an Appointed Actuary for several clients. He has almost 15 years of experience working in different actuarial functions and owning a few businesses throughout his career.

Vlad has experience in valuation and reporting, in-force management, corporate risk oversight, as well as roles in which he directly supported the sales field. Vlad is an expert in pricing and product development, asset and liability management, valuation, risk management, and the actuarial platform, Moody's AXIS.

Vlad graduated from the University of Manitoba, Canada with a Bachelor of Science degree in Actuarial Science. He is a Fellow of the Society of Actuaries (FSA) and a Fellow of the Canadian Institute of Actuaries (FCIA). Vlad is also a Member of the American Academy of Actuaries (MAAA) and a Fellow of the Conference of Consulting Actuaries (FCA). Vlad is also an active member of the Society of Actuaries (SOA), where he is on the Marketing and Distribution leadership team.

Outside of work, Vlad is a family man. He is a father of a 3-year-old girl who is in total control of him and the household. Vlad is also a dog lover and is known by many of his friends as a "Dog Whisperer." Throughout Vlad's life, he has always had dogs, mainly large breeds. Currently, Vlad and his family have two dogs, an American Bulldog and a Boerboel (Mastiff). So, in theory, Vlad has 3 kids, though his wife says she has 4…needless to say, Vlad has his hands full! To rejuvenate from the full house and work, Vlad enjoys taking his motorcycle out for Sunday morning rides.

Vlad is inspired by taking on any challenge thrown his way. If you have any actuarial, business or behavioral questions about your dog, feel free to reach out to Vlad (vkrepkiy@bruceandbruce.com). If you have any advice on how not to have a 3-year-old run your life, feel free to reach out to him with tips as well!

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Presenter Bios

Jonathan B. Rhoda, ASA, EA, FCA
Retirement Plan Consulting Actuary

Jon joined Bruce & Bruce in January 2021. Before joining Bruce & Bruce, he was a retirement plan consulting actuary for 13 years at Aon Consulting, Inc. Jon prides himself in being very consultative and strategic. He is always looking for ways to help his clients' cut costs and effectively manage the risks associated with sponsoring retiree benefit programs.

Jon's career started out with helping Fortune 500 companies manage their retiree benefit programs. He has extensive experience in the administration, financial and government reporting regulations that govern employer sponsored retiree benefit programs. Jon's expertise in helping manage some of the largest U.S. retiree benefit programs is an asset to his clients no matter what their size.

Jon is a graduate of South Dakota State University (SDSU) where he received a Bachelor of Science in Mathematics. During his career, he has earned Associate of the Society of Actuaries (ASA) and Enrolled Actuary (EA) designations. He is also a Fellow of the Conference of Consulting Actuaries (FCA).

Jon and his family live in Denver, Colorado where they enjoy skiing, hiking and all the wonderful outdoor activities that Colorado has to offer.

Please do not hesitate to reach out to Jon (jrhoda@bruceandbruce.com) with any questions. He loves helping his clients find cost effective solutions to their problems.

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Presenter Bios

Andrew Edelsberg, CPA, FLMI
Senior Vice President – Business Strategist

Andrew joined the company in September 2022 to lead the expansion of Bruce & Bruce's consulting services to include rating agency and strategic advisory. He has over 30 years of experience in the insurance industry, having spent the early part of his career working as an auditor at a large public accounting firm and as an actuarial student at a medium-sized life insurer.

In 1998, Andrew began his rating agency tenure at Moody's (2 years), followed by a 16-year stint at AM Best. In 2015, he started the insurance rating vertical at Kroll Bond Rating Agency (KBRA) – the team currently supports over 100 insurance ratings globally. Just prior to joining Bruce & Bruce, Andrew worked as a VP in the finance department of Kemper Life & Health where he helped develop Board messaging and was responsible for budgeting, forecasting and financial reporting for the segment.

Andrew and his team will provide guidance to insurers in the areas of strategic development, enterprise risk management, capital efficiency, and rating agency advisory. He will leverage his extensive experience to assist with capital optimization, risk management solutions, and M&A transaction evaluation as well as navigation of financial, regulatory, and rating agency matters. Although many types of insurers can benefit from Andrew's experience and direction, our emphasis will be to assist small to medium-sized life insurance companies in achieving their goals.

Andrew is a graduate of The Wharton School of the University of Pennsylvania, with concentrations in accounting and actuarial science. During his career, he has earned Certified Public Accountant and Fellow, Life Management Institute designations. He has also passed exams under the Society of Actuaries' ASA curriculum and the Level I exam of the Chartered Financial Analyst program. Finally, Andrew was a guest lecturer for two classes of the Columbia University School of Professional Studies Enterprise Risk Management program.

In his free time, Andrew enjoys spending time with his family – his wife, 2 grown daughters, and 2 cats. He also enjoys the outdoors, music, movies, fantasy baseball/football, trivia games, and watching/playing sports.

Reach out to Andrew (aedelsberg@bruceandbruce.com) to learn more about how he can help your business!

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Importance of Ratings for Life Insurers

- Rating agencies provide an **independent view** of an insurance carrier's financial solvency
- Ratings and reports are marketing tools for agents; highly relevant for independent producers/IMOs
- Financial advisers and wealth managers use ratings in their product suitability reviews
- Life insurance policies and annuities are long-term obligations; strong ratings are an indicator that the company is built to last
- Companies with higher ratings may command higher premiums
- Other stakeholders consider ratings, such as banks, brokers, vendors, regulators
- Although financial strength ratings are "forward looking," they are based on assumptions are **not a guarantee** of an insurer's future performance
- Insurance company ratings reflect the insurer's ability to pay claims; they are not a measure of the quality of an insurer's claim handling services.

Bruce & Bruce can assist with initial ratings or help optimize your current ratings

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B&B Quarterly Newsletter

Trending Topics in the Retirement Plan Space

- How Well Funded Is Your Pension Plan?
- Participants Past Normal Retirement Age
- Lump Sum Windows
- Retirement Readiness
- Required Minimum Distributions
- The Great Resignation
- Annual Funding Notices
- Hibernating Pension Plans
- Rising Interest Rates – Impacts on Defined Benefit Pension Plans
- Contribution Receivables
- Total Rewards
- PBGC Variable Rate Premium – Interest Rate Options
- Change In Vesting Schedule
- Secure Act 2.0

Trending Topics in the Insurance Industry

- Annuity Suitability
- Investment Monitoring Programs
- Principle-Based Reserving (PBR) on Non-Variable Annuities
- Increase in Privately Rated Securities Among U.S. Insurers
- ESG (Environmental, Social, and Governance)
- High Yield Asset Adequacy Guidelines
- Enterprise Risk Management
- US Treasury Interest Rate – Impacts to the Life Insurance Industry
- Refinements to NAIC RBC Formula on the Horizon
- Ancillary Health Products
- Assessing Less Volatile Investment Strategies in a Volatile Environment
- Negative IMR Guidance for Year-end 2022

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About Bruce & Bruce

- Full-service actuarial firm specializing in fraternals and small-to-medium sized life insurance companies
- Serving clients since 1929
- Our value-added consulting services include:
  - **Life Insurance Actuarial** – Appointed Actuary, CFT, Experience Studies
  - **Marketing** – Membership Growth Initiatives, Product Development, Pricing
  - **Life/Annuity Compliance** – Policy Form Development and Review; State Ins. Dept. Filings
  - **Retirement Solutions** – Enrolled Actuary; Plan Administration, Compliance and Financial Reporting
  - **Rating Agency & Strategic Advisory** – ERM, Capital Efficiency, M&A, Financial Reporting, Ratings
- Visit Bruce & Bruce to learn more

We will apply our expertise and experience to develop solutions to improve your organization!

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