

COVID-19 Low Interest Rate Environment Cash Flow Testing Survey Summary of Results December 18, 2020





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December 2020

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Section 1: Introduction

The Society of Actuaries (SOA) has partnered with LIMRA to conduct a series of ‘sprint’ surveys on the COVID-19 pandemic and its potential impacts on the insurance industry. Given the importance of changing economic conditions to insurance companies, one of these “sprint” surveys focused on best practices around the potential impact of current market conditions on cash flow testing.

A first round of the surveys was conducted in April of 2020. This report provides results for the second round of surveys and focuses on cash flow testing in order to gauge whether thinking is changing.

The survey was directed at actuaries and/or risk management staff involved in their organization’s cash flow testing efforts. Responses to the survey were collected between November 15, 2020 and December 2, 2020. Forty-three companies responded to the survey. Highlights of the survey responses are found in Section 2 and a summary of results for each question in the survey is found in Section 3.

Section 2: Survey Highlights

This survey covers three topics related to the impact of the COVID-19 pandemic on cash flow testing (CFT): general approach and strategy; deterministic scenarios; and stochastic scenarios.

General Approach & Strategy: Fixed rate annuities, single premium immediate annuities, whole life, term and fixed universal life are the most common products offered by the respondents. About one-third have completed a run of their CFT for 2020 and another 53% plan to do so prior to year-end reporting. When asked about what types of scenarios are run for CFT, over 80% run stochastic scenarios for variable annuities, while only 50% run them for general account products. About two-thirds of companies run other deterministic and shock/sensitivity scenarios for general account products and variable annuities.

Deterministic Scenarios: Two-thirds of respondents are required to pass 5 or more of the NY7 scenarios. Almost half stated this requirement has decreased given the current rate environment. Two-thirds of the respondents believe the current environmental implied scenario is worse than moderately adverse.

Stochastic Scenarios: About 80% of respondents who run stochastic scenarios use the American Academy of Actuaries' economic scenario generator. Four of the 24 respondents stated they allow for negative rates. The most common range for the assumed long-run single A credit spread was "1% to <1.5%" and "0% to 0.5%" was the most common assumption for the initial shock to equity returns. Almost all respondents have reviewed their mortality assumptions and about half have updated them. About 40% of the companies who have reviewed their policyholder behavior assumptions have updated them. Over half of the companies who have reviewed their mean reversion target and credit spread assumptions have updated them. Almost 90% of the respondents are planning to use provisions for adverse deviation similar to prior years, coupled with short-term assumptions that reflect current events.



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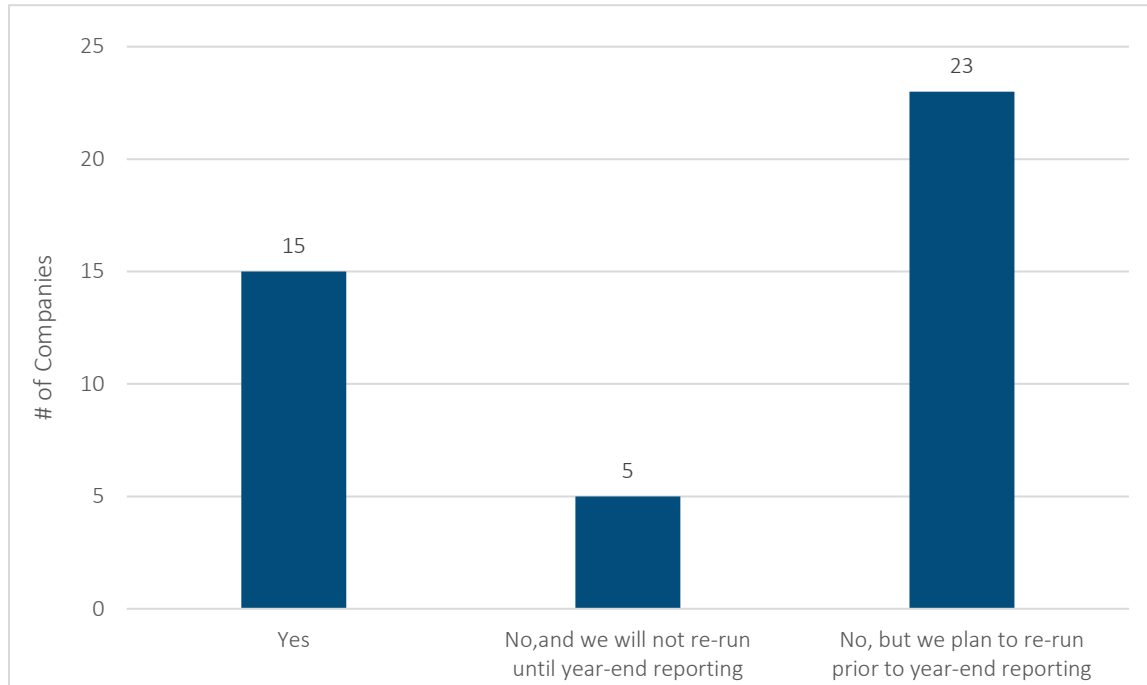
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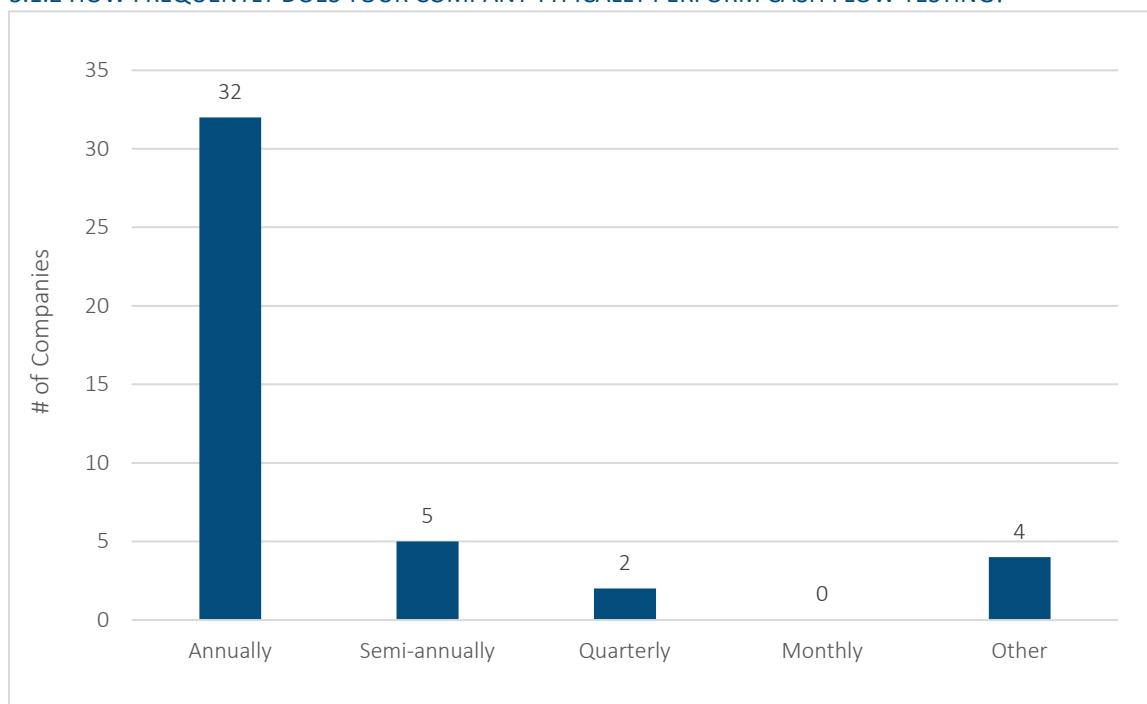
Section 3: Cash Flow Testing Survey Questions and Response Detail

3.1 GENERAL APPROACH AND STRATEGY

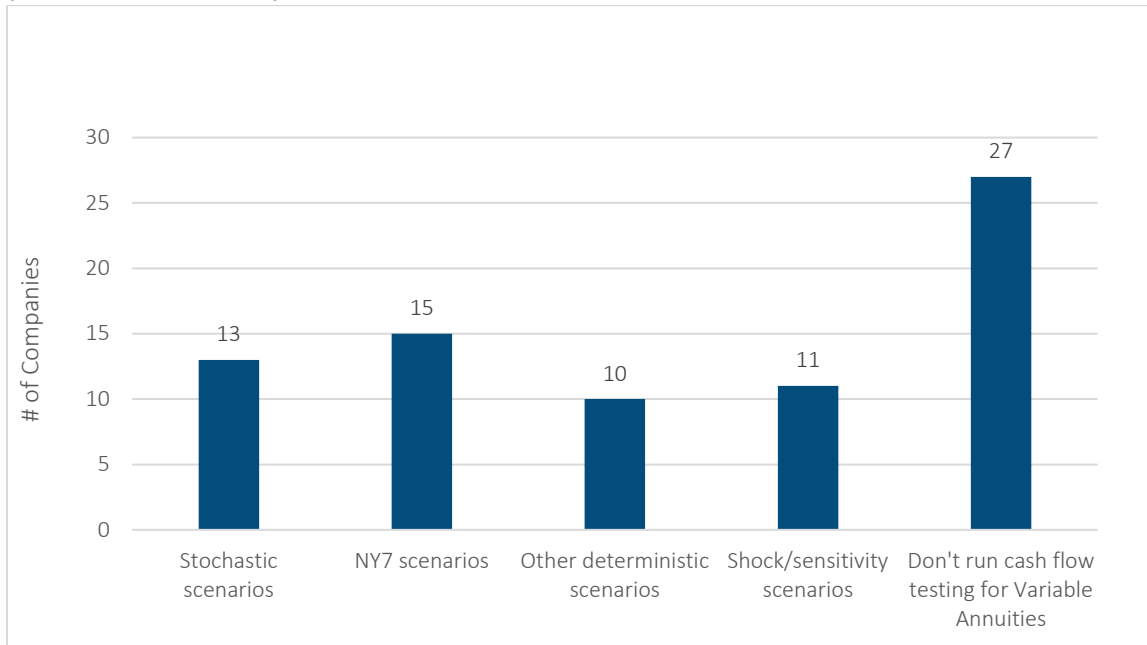
3.1.1 HAS YOUR COMPANY COMPLETED A RUN OF ITS CASH FLOW TESTING FOR 2020?



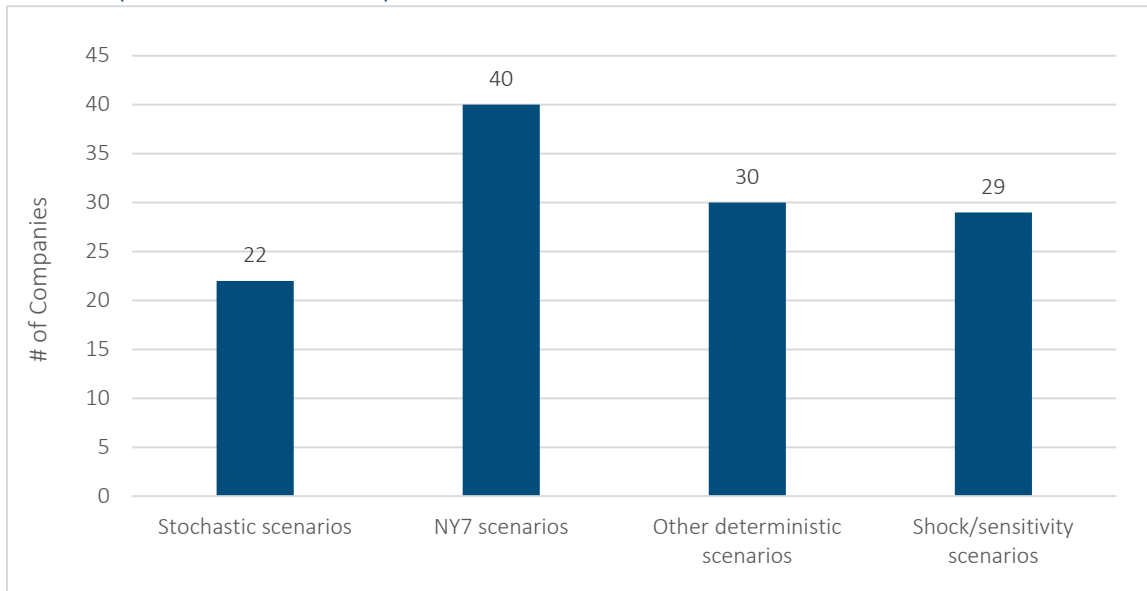
3.1.2 HOW FREQUENTLY DOES YOUR COMPANY TYPICALLY PERFORM CASH FLOW TESTING?



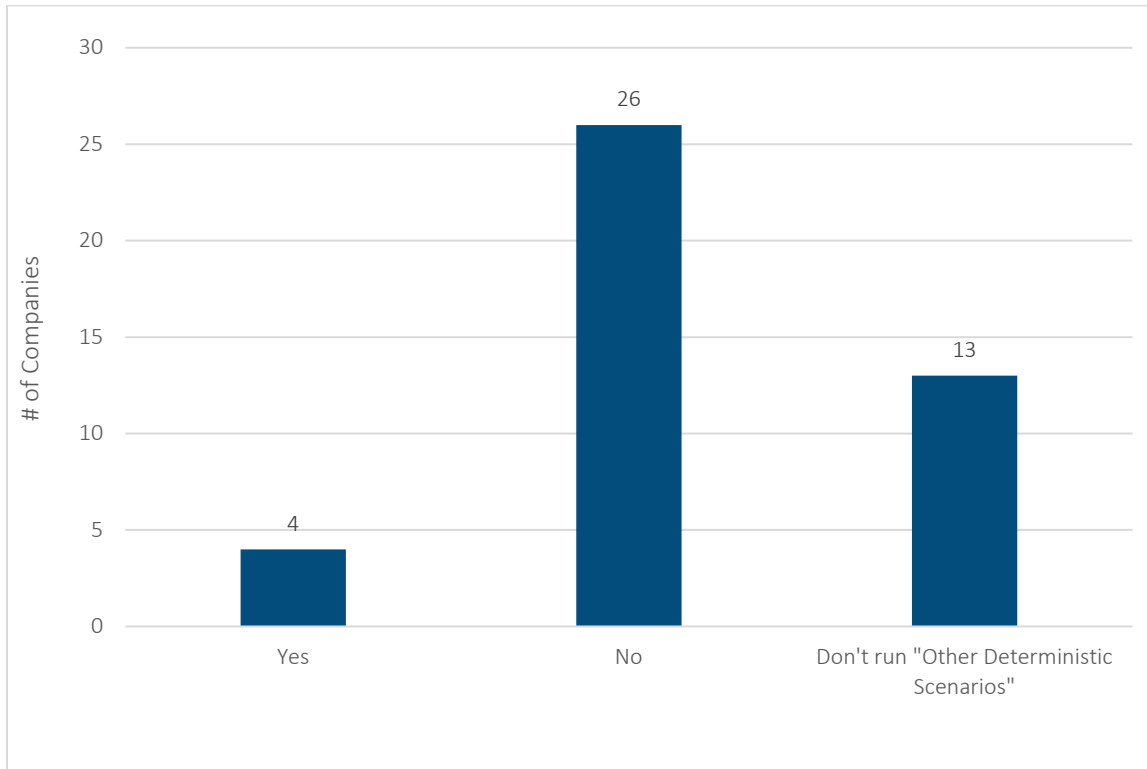
3.1.3 WHAT TYPES OF SCENARIOS DOES YOUR COMPANY RUN FOR VARIABLE ANNUITY CASH FLOW TESTING? (SELECT ALL THAT APPLY)



3.1.4 WHAT TYPES OF SCENARIOS DOES YOUR COMPANY RUN FOR GENERAL ACCOUNT PRODUCT CASH FLOW TESTING? (SELECT ALL THAT APPLY)

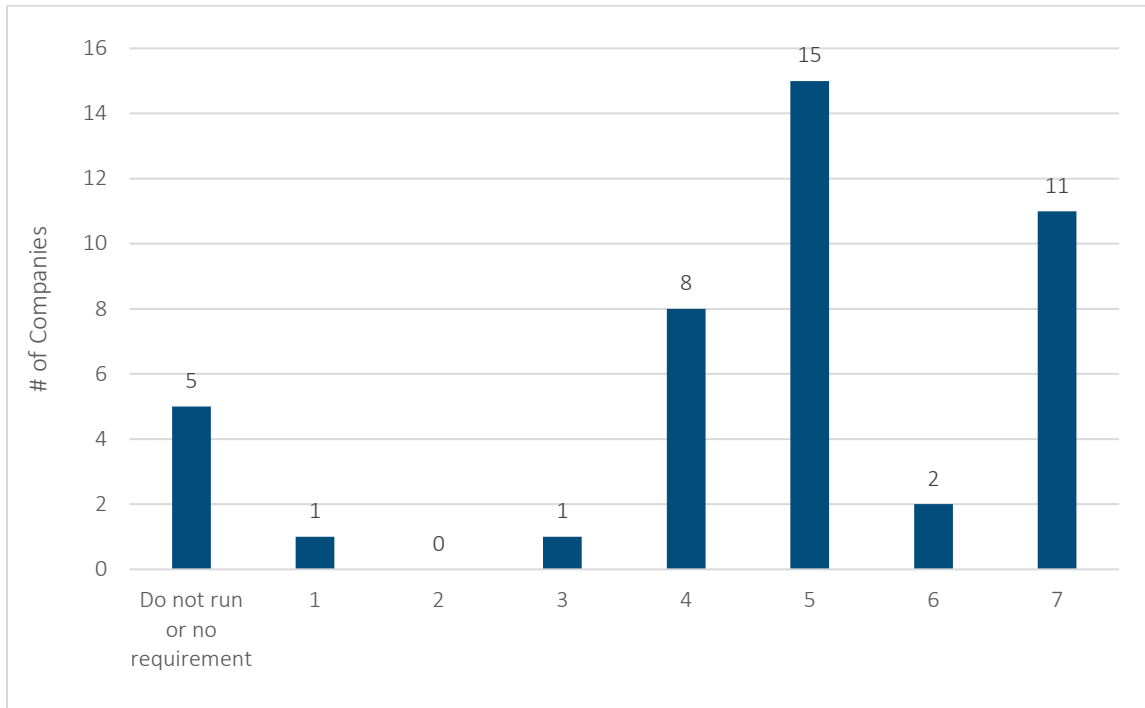


3.1.5 YOU INDICATED THAT YOUR COMPANY IS RUNNING OTHER DETERMINISTIC SCENARIOS. DO ANY OF THESE SCENARIOS CONSIDER NEGATIVE RATES?

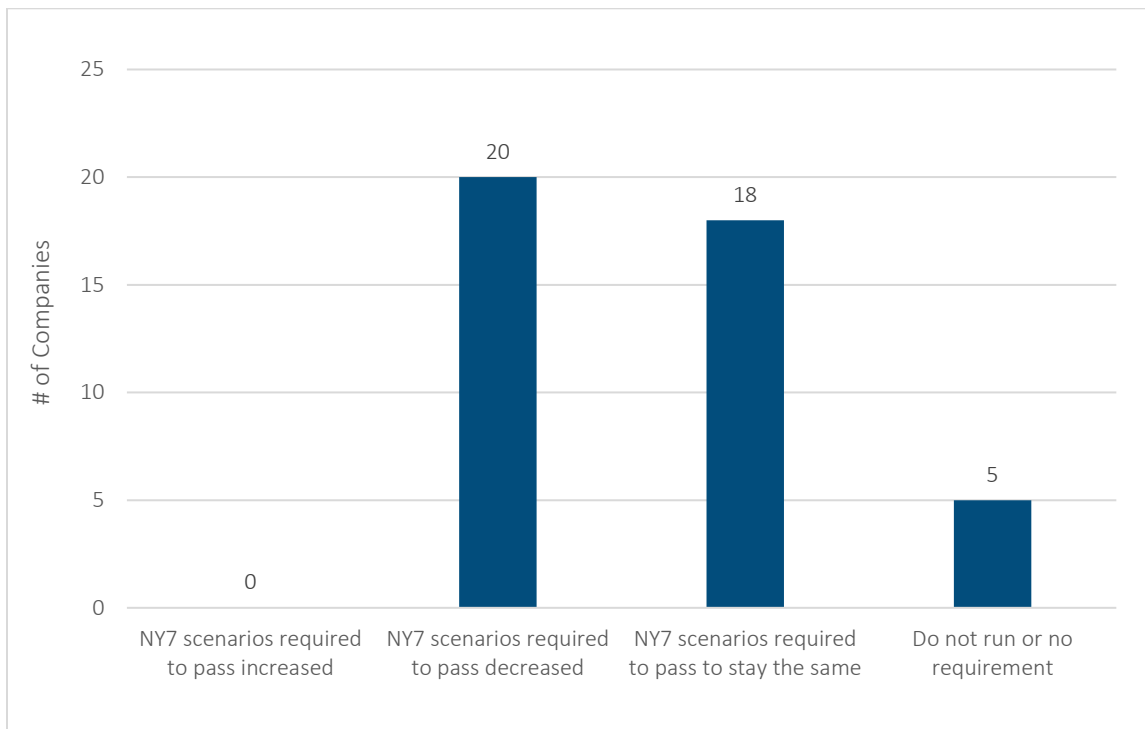


3.2 DETERMINISTIC SCENARIOS

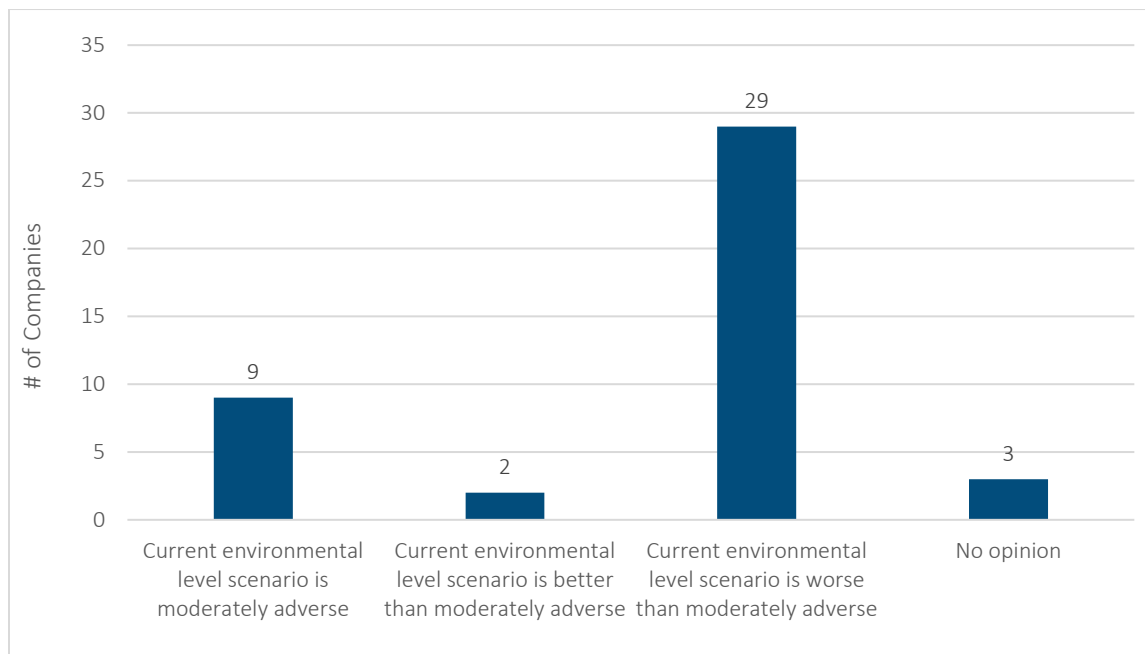
3.2.1 HOW MANY NY7 SCENARIOS ARE YOU TYPICALLY REQUIRED TO PASS?



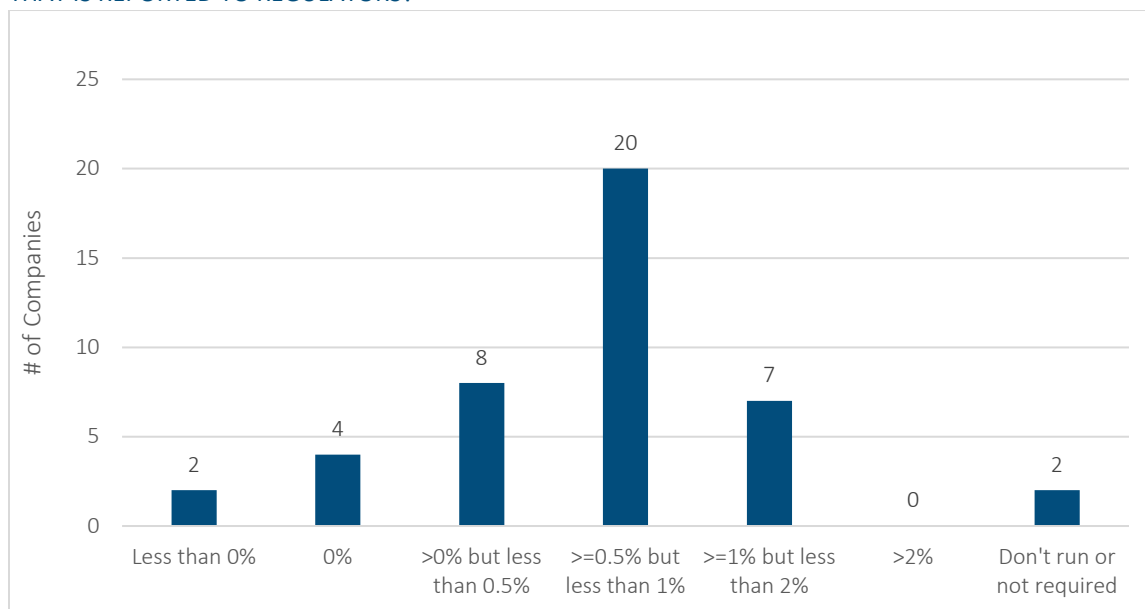
3.2.2 HAS THIS REQUIREMENT CHANGED GIVEN THE CURRENT RATE ENVIRONMENT?



3.2.3 WHAT IS YOUR COMPANY'S VIEW REGARDING THE LEVEL SCENARIO RELATIVE TO THE DEFINITION OF "MODERATELY ADVERSE"?



3.2.4 WHAT IS THE LOWEST 10-YEAR INTEREST RATE YOUR COMPANY IS USING IN A DETERMINISTIC SCENARIO THAT IS REPORTED TO REGULATORS?

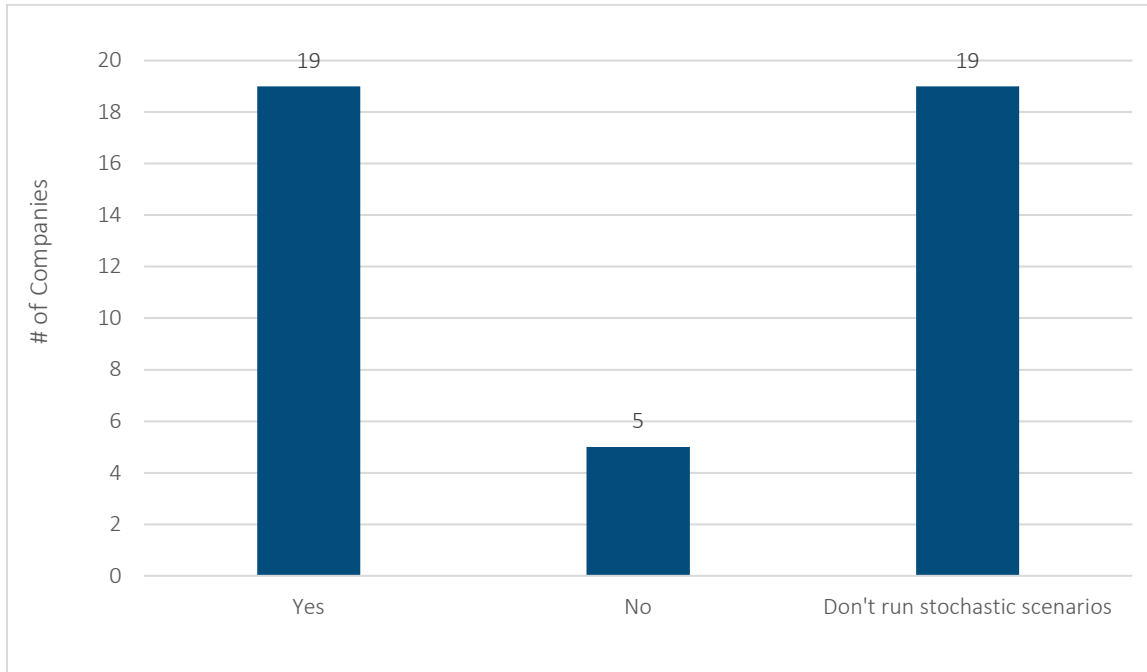


3.2.5 IF YOUR COMPANY DOES NOT RUN DETERMINISTIC SCENARIOS WITH NEGATIVE RATES, WHY NOT?

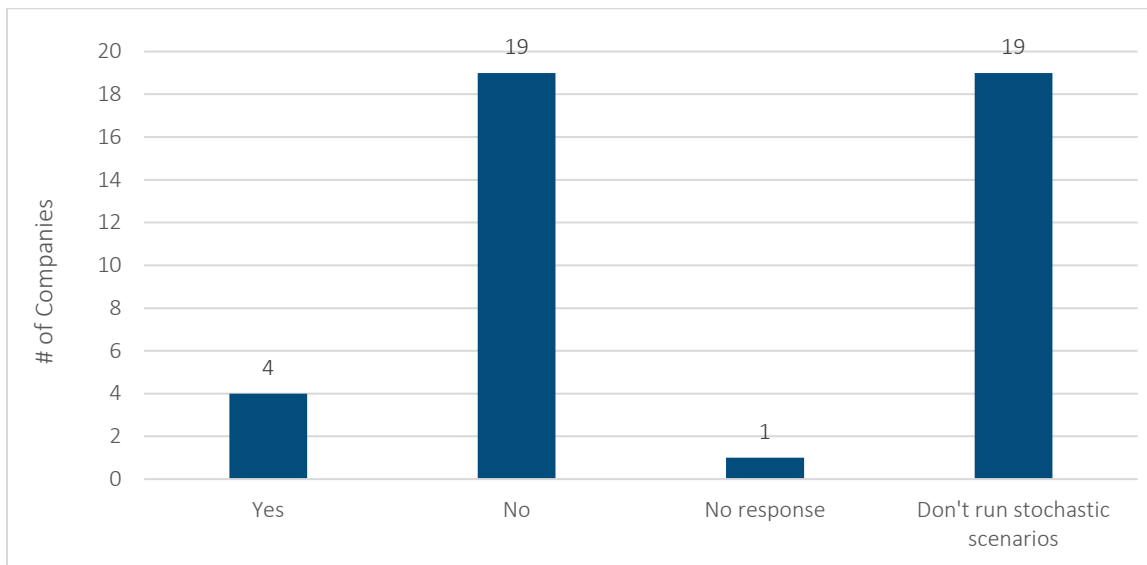
- Considered beyond a moderately adverse scenario
- System/software does not support negative rates

3.3 STOCHASTIC SCENARIOS

3.3.1 FOR STOCHASTIC SCENARIOS, DO YOU USE THE AMERICAN ACADEMY OF ACTUARIES' ECONOMIC SCENARIO GENERATOR?



3.3.2 FOR STOCHASTIC SCENARIOS, DO YOU ALLOW FOR NEGATIVE RATES?



3.3.3 IF YOUR COMPANY DOES NOT ALLOW FOR NEGATIVE RATES IN STOCHASTIC SCENARIOS, WHY NOT?

- System/software does not support negative rates
- Academy generator does not produce negative rates

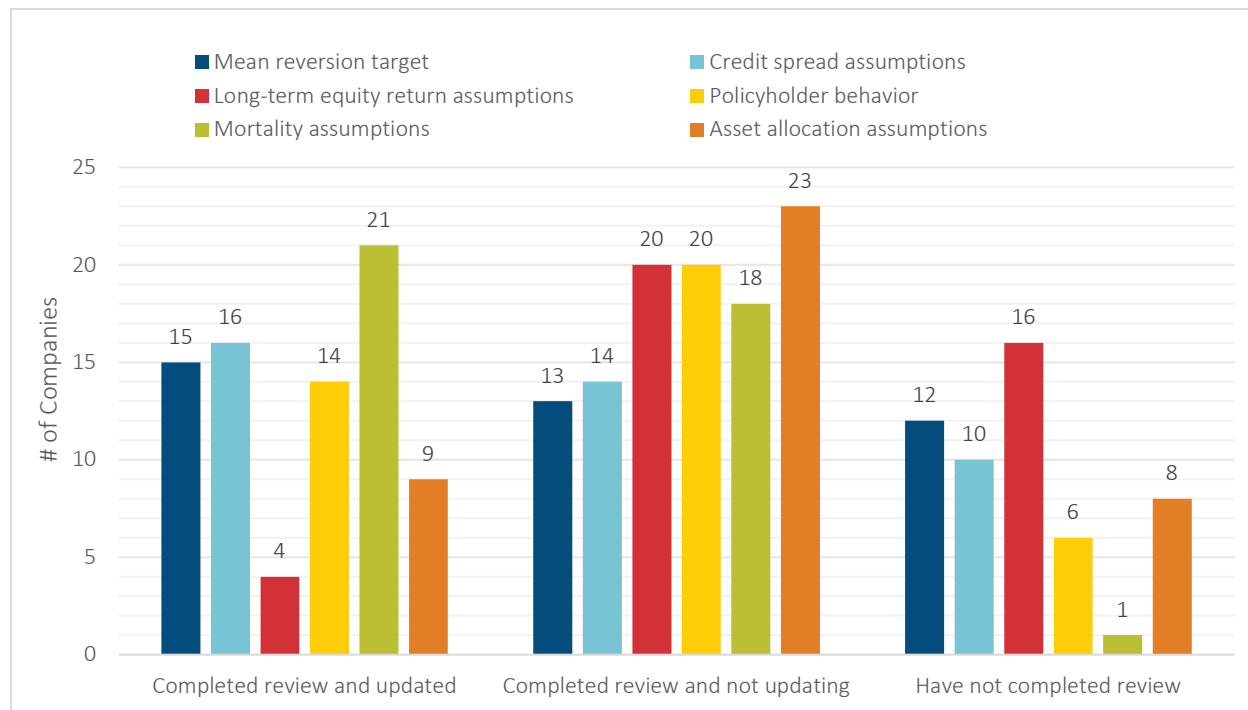
3.3.4 WHAT IS YOUR COMPANY ASSUMING AS OF 9/30/20 FOR THE FOLLOWING?

NUMBER OF COMPANIES IN RATE RANGE

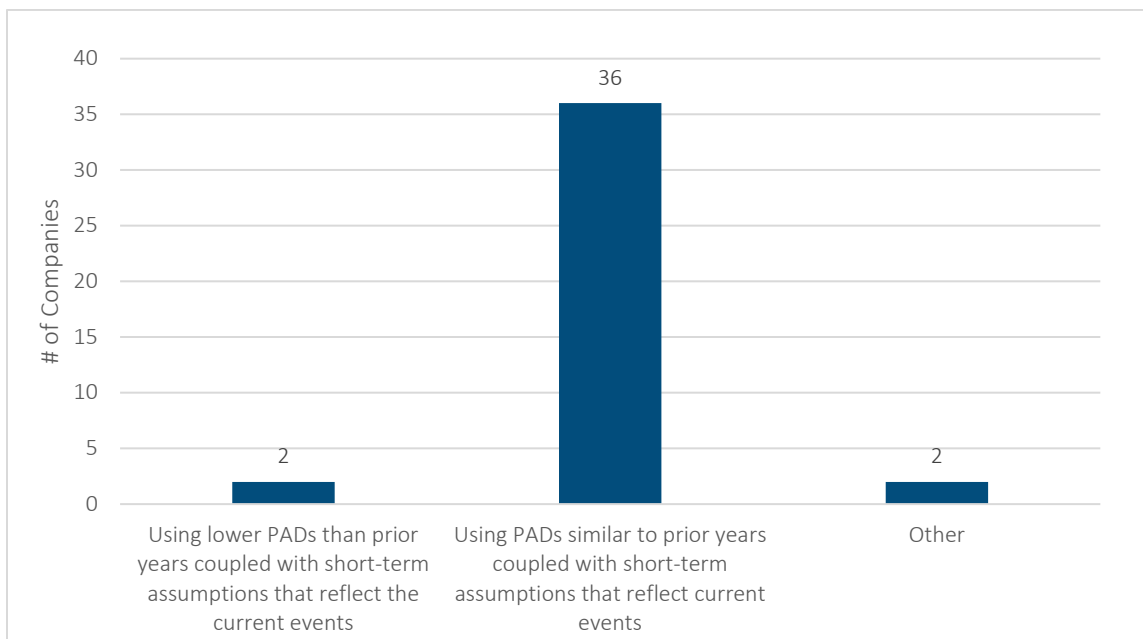
Rate Range	Long-run single A credit spreads	Equity return-initial shock*	Equity return-long term return
<-5%	0	6	0
-5% to <0%	0	0	0
0% to <0.5%	0	15	8
0.5% to <1.0%	2	0	0
1.0% to <1.5%	14	0	0
1.5% to <2%	4	0	0
2% to <3%	1	0	0
3% to <5%	0	0	0
5% to <10%	0	0	13
10%+	0	0	0

*Eight of the 15 companies with no initial shock indicated assuming 0% long-term return.

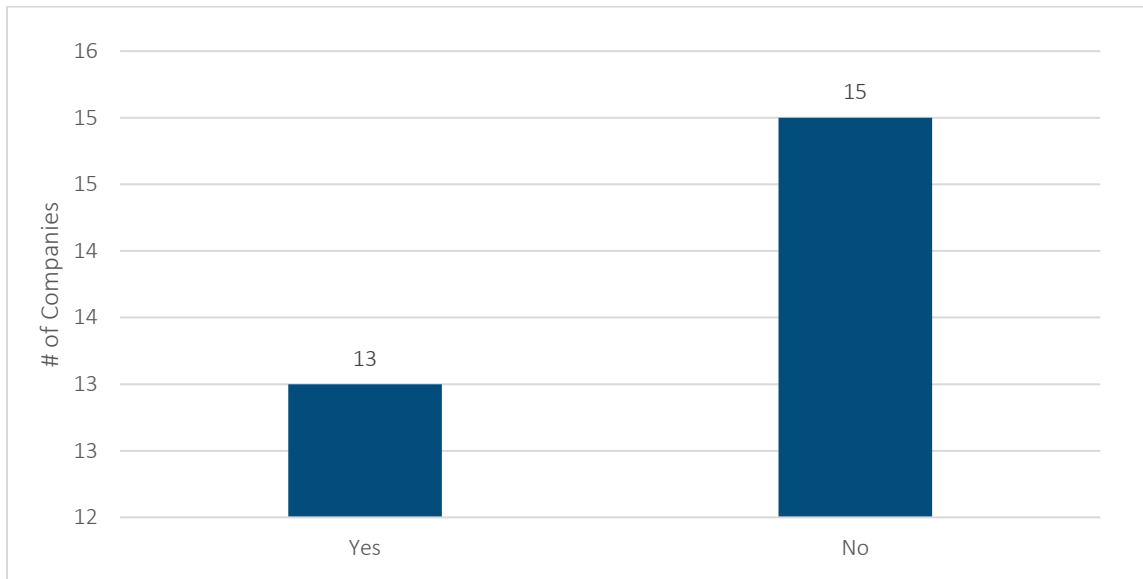
3.3.5 HAS YOUR COMPANY UPDATED ANY OF THE FOLLOWING ASSUMPTIONS IN LIGHT OF COVID-19 AND THE CURRENT MARKET ENVIRONMENT?




3.3.6 PLEASE INDICATE WHICH OF THE FOLLOWING STATEMENTS BEST REFLECTS YOUR CURRENT THINKING REGARDING PROVISIONS FOR ADVERSE DEVIATION (PADS) IN ASSUMPTIONS FOR CASH FLOW TESTING?




3.3.7 YOU SAID YOUR COMPANY RUNS SHOCK/SENSITIVITY SCENARIOS FOR CFT. ARE YOU RUNNING ANY NEW SENSITIVITIES THIS YEAR?





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Section 4: Acknowledgments

The SOA, LIMRA, and Oliver Wyman would like to thank the industry Low Interest Rate Task Force (established in January 2020 by LIMRA, Oliver Wyman and the ACLI), as well as the following individuals for their support in the design and development of the survey.

Brian Bayerle, FSA, MAAA, ACLI

David Seidel, FSA, MAAA, Securian

Steve Verhagen, FSA, MAAA, CUNA Mutual

The SOA also thanks the many companies that participated in the survey.

5-Star Life Ins Co	Modern Woodmen of America
Allianz Life	National Life Group
American Equity	National Western Life Insurance Company
Amica	Nationwide
Banner Life Insurance Company	New York Life
Boston Mutual Life Insurance Company	Pacific Life
Catholic Financial Life	Principal Financial Group
Catholic Order of Foresters	Prudential
Columbian Financial Group	RiverSource Life
Columbian Mutual Life (CFG)	Royal Neighbors of America
COUNTRY Financial	SBLI
Erie Family Life Insurance Company	Securian Financial Group
F&G Life Insurance Company	State Farm
Farmers New World Life	Transamerica
Globe Life Inc	USAA Life Insurance Company
Guardian Life Insurance Company	USABLE Life Insurance Company
Hartford Life and Accident	Vantis Life Insurance Company
Homesteaders Life Company	Voya
Independent Order of Foresters	WAEPa
John Hancock	Western & Southern
Kansas City Life	Woodmen of the World
Kuvare	

About The Society of Actuaries

With roots dating back to 1889, the [Society of Actuaries](#) (SOA) is the world's largest actuarial professional organizations with more than 31,000 members. Through research and education, the SOA's mission is to advance actuarial knowledge and to enhance the ability of actuaries to provide expert advice and relevant solutions for financial, business and societal challenges. The SOA's vision is for actuaries to be the leading professionals in the measurement and management of risk.

The SOA supports actuaries and advances knowledge through research and education. As part of its work, the SOA seeks to inform public policy development and public understanding through research. The SOA aspires to be a trusted source of objective, data-driven research and analysis with an actuarial perspective for its members, industry, policymakers and the public. This distinct perspective comes from the SOA as an association of actuaries, who have a rigorous formal education and direct experience as practitioners as they perform applied research. The SOA also welcomes the opportunity to partner with other organizations in our work where appropriate.

The SOA has a history of working with public policymakers and regulators in developing historical experience studies and projection techniques as well as individual reports on health care, retirement and other topics. The SOA's research is intended to aid the work of policymakers and regulators and follow certain core principles:

Objectivity: The SOA's research informs and provides analysis that can be relied upon by other individuals or organizations involved in public policy discussions. The SOA does not take advocacy positions or lobby specific policy proposals.

Quality: The SOA aspires to the highest ethical and quality standards in all of its research and analysis. Our research process is overseen by experienced actuaries and nonactuaries from a range of industry sectors and organizations. A rigorous peer-review process ensures the quality and integrity of our work.

Relevance: The SOA provides timely research on public policy issues. Our research advances actuarial knowledge while providing critical insights on key policy issues, and thereby provides value to stakeholders and decision makers.

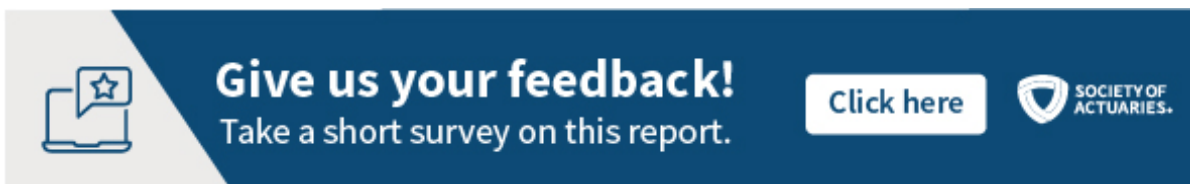
Quantification: The SOA leverages the diverse skill sets of actuaries to provide research and findings that are driven by the best available data and methods. Actuaries use detailed modeling to analyze financial risk and provide distinct insight and quantification. Further, actuarial standards require transparency and the disclosure of the assumptions and analytic approach underlying the work.


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About LIMRA


Established in 1916, LIMRA is a research and professional development not-for-profit trade association for the financial services industry. More than 600 insurance and financial services organizations around the world rely on LIMRA's research and educational solutions to help them make bottom-line decisions with greater confidence. Companies look to LIMRA for its unique ability to help them understand their customers, markets, distribution channels and competitors and leverage that knowledge to develop realistic business solutions.

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