

Viewpoint

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RISK SOLUTIONS | WHITE PAPER

Stress Testing in the Pandemic Age

By Daniel Finn, Head of Risk Solutions, North America

The spread of COVID-19 into a global pandemic has resulted in one of the most significant economic events of our lifetimes. It has been more than 100 years since the world has seen an epidemic of this scale, and even longer since such an epidemic has caused this degree of economic distress; even the Spanish Flu outbreak of 1918–1919 did not have a comparable impact, as its economic effects were muted by those of World War I. News reports frighten us daily with words like “unprecedented” and “unimaginable.” Is it impossible to plan for the future at such a moment in history?

Conning believes that the “unprecedented” may have some precedent after all. If we focus on current primary economic indicators, we see the following broad conditions.

- » Huge drop in Treasury yields
- » Significant widening in corporate spreads
- » Dramatic drops in equity prices
- » Expected massive drop in GDP

If these conditions sound familiar, it is because we saw them not long ago: all of these events were also hallmarks of the 2008 Financial Crisis. A comparison by the numbers illustrates the similarities:

	COVID-19 ¹	2008 FINANCIAL CRISIS ²
Change in 10-year US Treasury yield	-0.74%	-1.38%
Change in 10-year A yield spread	1.60%	1.58%
Change in S&P 500 price	-25.45%	-52.56%
Change in real GDP	TBD	-4%

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There are other potential correspondences with the past. What if the massive worldwide stimulus packages currently being put into place are not able to bring the economy back? In that case, equity returns and real GDP would likely continue to fall, but the massive Treasury borrowing used to fund this spending could easily lead to a spike in both Treasury yields and inflation. In that case, it would make our near future look a lot like the Stagflation of 1973–74:

'73-'74 Stagflation ³	
Change in 10-year US Treasury yield	1.39%
Change in S&P 500 price	-46.18%
Change in real GDP	-3%
Change in CPI	6%

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While these are not necessarily the only outcomes, or even the most likely, we can use these historical events to understand the potential risks of the current crisis. The table below shows four hypothetical portfolios and compares how they would perform under today's economic conditions versus those of historical events, were those events to play out again in 2020 as they did in their own time. Clearly, the projected returns for 2020 are disappointing for all but the conservative portfolio, but they are not unprecedented. In fact, the returns under economic conditions matching those of the 2008 Financial Crisis and the mid-1970s' Stagflation would be worse across all four portfolios.

EVENT ⁴	DIVERSIFIED	AGGRESSIVE	CONCENTRATED	CONSERVATIVE
2020 Projected from 4Q 2019	2.9%	3.6%	2.7%	1.9%
2020 Actual YTD	-5.3%	-9.8%	-5.5%	3.0%
2008 Financial Crisis	-6.8%	-12.6%	-6.9%	2.5%
1973–74 Stagflation	-11.5%	-15.8%	-9.8%	-6.8%

Prepared by Conning, Inc. Sources: ©2020 Bloomberg, L.P. and GEMS® Economic Scenario Generator scenario. Sample provided for illustrative purposes only.

It is comforting to know that the rough waters we are navigating now may not be as uncharted as some would suggest, but the similarities between today's economic climate and the events of the past are of more than mere academic interest; this information can also be applied to practical purposes. Historical data is a real-world case study in how the markets have behaved under similar conditions, and the use of historical scenarios for stress testing can give us a window into how a portfolio might perform during a time of crisis and recovery. Such information is critical to a robust and effective risk management program, and Conning has a long history of helping its clients incorporate this type of historical data into their risk analysis, giving them a glimpse into how a crisis may impact their solvency and financial stability. The Conning GEMS® Stress Test Scenarios package simulates ten significant economic events from the past 100 years, including Black Monday, The European Debt Crisis, and The Great Depression.



Daniel Finn, FCAS, ASA, is a Managing Director at Conning, where he is the Head of North America for the Risk Solutions unit. In that role, he leads a team that is responsible for providing asset-liability and integrated risk management advisory services to life, health and property/casualty insurance company clients and pension clients. Mr. Finn also oversees the support and development of Conning's proprietary financial software models. Prior to joining Conning in 2001, Mr. Finn was a Vice President within Swiss Re Investors' asset-liability management unit. He has been involved in the asset-liability management field since 1997. Mr. Finn is a graduate of the University of Rochester with an MA in Mathematics and earned an MBA from Loyola College.

About Conning's Risk Management Software

Conning's risk management software platform includes GEMS® Economic Scenario Generator, FIRM® Portfolio Analyzer, and ADVISE® Enterprise Risk Modeler. They offer greater accuracy in financial risk modeling and provide deeper insights for decision making, regulatory and rating agency compliance, and capital allocation. Overlaying this, Conning's Investment Optimizer module works seamlessly within GEMS®, FIRM® and ADVISE® software to perform effective strategic asset allocation analyses and identify optimal investment strategies.

¹ December 31, 2019 through March 18, 2020

² September 30, 2007 through February 28, 2009

³ November 30, 1973 through September 30, 1974

⁴ "2020 Projected from 4Q 2019" reflects the average of 1,000 simulations of 2020 returns based on Conning's new GEMS Expert View Calibration. "2020 Actual YTD" reflects actual returns through March 18. Other rows are estimated based on a recurrence of the event from 12/31/2019 starting conditions and lasting the length of the historical event; for example, the 1973-74 Stagflation event reflects returns through 9/30/2021 (21 months).

About Conning

Conning (www.conning.com) is a leading global investment management firm with a long history of serving the insurance industry. Conning supports institutional investors, including pension plans, with investment solutions and asset management offerings, risk modeling software, and industry research. Founded in 1912, Conning has investment centers in Asia, Europe and North America. Conning's software and advisory services support insurance and pension risk modeling needs, providing insights for decision making, regulatory and rating agency compliance, strategic asset allocation and capital management. Conning's risk management software platform includes GEMS® Economic Scenario Generator, FIRM® Portfolio Analyzer and ADVISE® Enterprise Risk Modeler.

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