STRESS TEST

Greek drama underscores the need to shock-proof your pension portfolio

By *Yaldaz Sadakova*

Greece is so battered even vulture funds are abandoning it. Canadian DB pension plans likely lack direct exposure to it, since they want to preserve their recent gains.

But the turmoil in the Hellenic republic and the larger eurozone has encouraged some to revisit their stress-testing tools, even if they're not specifically calculating the Greek turmoil's impact on their portfolios.

"The Greek situation just highlights the potential for short-term volatility," says Ross Servick, head of North American consultant and client relations with Schroders. "If you're in capital preservation mode, taking a punt on a political situation isn't the mindset today."

Worried about how greater volatility could affect them, some pension plans are focusing on whether their portfolio stress tests are adequate and whether the assumptions behind those tests are accurate, Servick explains.

The Greek crisis definitely underscores the importance of contingency planning and stress testing, agrees Terri Troy, CEO of the Halifax Regional Municipality (HRM) Pension Plan. But, she adds, macro shocks shouldn't be the main reason for these assessments; rather, it should be learning how much and what kinds of risk pension plans can withstand so they can be prepared for the shocks.

On the Rise

Pension stress testing—which can be conducted in-house with software or outsourced, if the investor lacks the resources—isn't new in Canada.

But it only became a formal requirement five years ago when the Canadian Institute of Actuaries said DB plans should measure the effect of a 1% discount rate decline on their funding status on both a going-concern and a solvency basis for their actuarial valuation reports.

Worldwide, pension stress testing is relatively new but on the rise. A 2011 international MSCI survey of 85 institutional investors (including Canadian DB pension funds) revealed 80% of respondents were stress testing—up from 27% in 2009.

Test Types

Canadian pension plans are only required to perform the simplest type of test, called sensitivity testing. This assessment examines what would happen to the funded status if one or a limited number of risk factors materialize.

For example, the HRM Pension Plan uses factors such as a 5% decline in global equity markets for its sensitivity analysis, says Troy.

The plan also conducts more sophisticated testing, such as scenario analysis, which considers what would happen to the plan's funded status if multiple risk factors amounting to an entire scenario change simultaneously. In the case of the HRM Pension Plan, this includes historical events caused by many factors, such as the 2008 meltdown.

The most complex technique is reverse testing, which involves identifying what losses would make the plan unsustainable and calculating backwards to determine which scenarios would cause the plan to incur those losses.

Reverse testing is most comprehensive because, unlike the other techniques, "you're not limited by your own imagination of what the future might hold," says Ken Choi, director of investment consulting with Towers Watson.

This test can identify risks the plan hasn't considered because it uses a simulator to predict the plan's financial position under different conditions, Choi explains. The simulator does the projections thousands of times, with thousands of scenarios. Because it's so complex, reverse testing is less common, he notes.

Of course, even the most comprehensive test isn't a crystal ball. "But the biggest advantage of having a stress test is to understand where the plan's vulnerabilities lie," says Choi. This information allows the pension plan to change its risk approach and asset mix—and take action *before* disasters such as the Greek crisis strike.

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IT CAN BE TRICKY!

Holding illiquid assets, such as real estate and infrastructure, can complicate stress test calculations. Why? Because these assets are private. This means they're not marked to market every day like publicly traded stocks, so investors use public market proxies that provide only a best estimate of how these assets will perform.

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