Testing times

Quintin Rayer explains how trustees can use investment stress-testing to identify the weak points in a portfolio

Professional accountants are frequently offered roles as trustees because of their expertise in managing accounts and their understanding of markets, as well as their trustworthiness and professionalism. But all this doesn't necessarily make them experts in stress-testing their portfolios against risk.

In fact, this is a complex task. Conventional risk measures that you might be familiar with in your day job may not capture all portfolio risks, particularly under difficult market conditions.

Stress testing is associated with activities such as looking at the potential portfolio downside risk, or methods that help estimate the expected response under difficult conditions. But there is no guarantee that it will identify the actual impacts of future events on a portfolio – it is simply another tool in the risk management armoury.

Stress tests are designed to determine an investment portfolio's potential response to adverse developments so that any weak points can be identified early on and preventative action taken. Stress tests typically focus on credit, market and liquidity risks.

The outcomes of the tests are quantified in monetary terms, but don't provide statistical estimates of probabilities; they indicate potential future outcomes under extreme conditions. Scenarios that anticipate positive outcomes are not stress tests.

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But stress testing only identifies potential problems – it does not resolve them. It will reassure trustees if no issues are detected, but it doesn't offer solutions when risks are identified. Nor does it indicate if the selected stressed scenarios are sufficient to cover all key areas of portfolio weakness.

Historical vs artificial

There is a wide range of approaches to stress testing. Terminology can be loose, however, making classification harder. Although historical events often provide ideas, trustees are free to imagine any damaging situation and attempt to identify the impact on the portfolio.

A key distinction is between historical scenarios (re-enactments of particular market events, with defined start and end dates) and artificial scenarios (invented to capture a particular concern).

For example, in the runup to the Brexit vote, a trustee might have looked at the impact of sterling devaluation using previous devaluations as a model; this would be a historical scenario. However, if a whole range of factors unique to Brexit had been identified, then it would be an artificial scenario.

Historical stress testing's strength is that assets actually behaved in the way captured by the scenario, which adds credibility. But if markets have changed since the historical scenario's date (perhaps because of regulation changes), this may no longer be possible. Also, historical events can be messy – numerous knock-on effects can make it hard to isolate individual aspects.

As for artificial stress tests, it can be difficult to create a realistic scenario. How can you possibly determine all responses, direct and indirect, to portfolio assets? However, artificial tests can attempt to include the impact of changes or anticipated changes (perhaps due to regulatory developments, new currencies and so on) on markets as well as isolate specific portfolio concerns.

Other types of stress test can explore if a portfolio is diversified enough, examine events that might affect liquidity, use 'shocked' risk factors, and try to identify the worst outcome in a defined scenario.

The how-to

Stress testing tends to be an ad hoc, practical activity rather than a purely theoretical exercise. Essentially, any potential set of market events that might keep you awake at night could be the basis for a stress-test scenario. You might need guidance on how to turn initial concerns into a useful stress test.

The selection of scenarios depends on your assumptions, which should be unlikely but plausible. Because stress scenarios are a matter of judgment, it's important to involve other stakeholders (including portfolio investment managers). The portfolio manager's input will be invaluable in helping to identify issues of concern, including discussion around how severe the stress scenarios need to be. Portfolio managers should see stress testing as a reassurance of the quality of their investment decisions.

Stress testing should do the following:

* identify risk – look at historical events or anticipated concerns
* define stress scenarios – involve stakeholders, trustees, advisers and portfolio managers and integrate within investment decision-making
* execute stress-test scenarios – understand the impact on portfolio values
* analyse results – offer commentary in periodic reporting.

Defining stress-test scenarios shouldn't be seen as a one-off activity. Existing scenarios should be constantly reviewed, re-evaluated and adjusted to maintain their usefulness. You should draw up a policy for periodic review to assist in establishing good discipline and to learn from experience.

Once the stress tests have been completed, trustees can consider the outcomes in the light of stated portfolio objectives. When the stress test reveals that the scenario has little impact, trustees have reassurance that the event is perhaps a lesser concern than feared. On the other hand, if the stress test suggests that the portfolio may be adversely impacted by the scenario to an unacceptable level, discussions can follow as to how to restructure and reposition the portfolio to make it more resilient against the possible events considered.

By including an ongoing programme of stress testing, with the scenarios, methods and outcomes documented, it will be clear that trustees are actively working to protect the portfolio assets against more extreme market events. Such a programme helps demonstrate that trustees are working hard to meet their fiduciary responsibilities. ■

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