How scenario analysis and balance sheet simulation can help in a volatile market

Sander Dekker, Insurance Strategy Consultant - Scenario & Asset Valuation, Ortec Finance, discusses how insurers can respond to market volatility with scenario analysis and balance sheet simulation.

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Sander Dekker, Insurance Strategy Consultant - Scenario & Asset Valuation, Ortec Finance.

Andrew Putwain: Can you explain the short- and long-term implications of market volatility in the insurance industry? How can it impact investment strategies?

Sander Dekker: Whether based in the US, APAC, or Europe, our global insurance clients consistently highlight volatility as their primary concern. While everyone is finding ways to navigate it, assessing its impact requires us to examine the distinct waves of volatility we have seen.

It began with geopolitical tensions last year, particularly in Europe and the Middle East.

The more recent source of volatility was policy-induced, with the implementation of tariffs, shortly followed by a 90-day pause, triggering a shock-and-relieve wave. Around that time, we also saw the independent position of the US Federal Reserve Chair openly being questioned, shocking markets further.

This leads to examining how these events influence investment strategies, with both short-, and long-term effects. Some impacts are direct, while others are more indirect.

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not have recovered all their losses."

You could argue that, despite earlier signals, - market participants, including insurers, did not anticipate the Trump administration would implement the tariffs on such a large scale. In that sense, you could say it was a miscalculation by the markets. On the other hand, this was also a classic example of a 'tail-risk'-event, low in probability but significant in impact.

While we had to wait for the result of the impacts, we saw that Japanese life insurers immediately responded by actively selling bonds. You could also conclude that, while equity markets did rebound, the recovery was modest, so those investors with higher exposure in equities will likely not have recovered all their losses.

We also observe a split between public assets versus private assets. Public assets tend to respond swiftly, while private assets have shown minimal movement. It's likely there's a lag for the effects to materialise if they do at all. In the short term, insurers appear well-equipped to manage this stress. This event was a real-time stress test for the system, and insurers are naturally prepared to withstand such challenges.

In the long term, we consider this from two lenses: microeconomic and macroeconomic.

One key impact comes from the trade war's impact on global confidence, consumer spending, investments and corporate decision-making, stemming from the macroeconomic channel.

There are also microeconomic effects on institutions. For US non-life insurers, such as car and homeowners' insurance providers, rising claim costs will have a direct impact.

However, the significant impact is on the life insurance sector, where the macroeconomic implications are much more fundamental.

The question then becomes, is this truly a trade war as it has the ingredients to become something more substantial. The start of more regionalism in certain areas of the world, for example, in APAC certainly indicates this.

Within the first week after the tariffs, we saw South Korea, China, and Japan agree to their own trade deal. China and Vietnam quickly followed suit, showing solidarity and cooperation within the production economy.

On the European side, there have also been some strategic shifts. We saw investments in Europe pick up, with increased capital flows into the corporate sector and government bonds. European investors are also showing a stronger focus on domestic opportunities closer to home.

These are direct impacts, but further developments could come, leading to more fundamental shifts in production, financial flows and trades. While it is still too early to say definitively, we can see multiple potential outcomes emerging.

So, what can insurers do? The best way of managing risk in terms of uncertainty is the combination of scenario analysis and balance sheet forecasting as it enables every investor to integrate uncertainty into their investment decisions.

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there's additional attention on dealing with these dynamics."

The key is that with scenarios, you grasp the unique behaviours of asset classes under a variety of circumstances, including trade wars or deglobalisation patterns. Then you assess the impact; the key is to translate what's happening in the outside world against the impact on your own balance sheet.

In our role, we support clients in addressing these challenges early on. We find that the impact can be significant, depending on the level in which they have prepared. This requires having a holistic and realistic view of both asset allocation and liabilities and the interactions between the two. The dynamic between assets and liabilities and how they interact with each other, can strengthen or be detrimental to an insurer's position, depending on how well they are managed.

Regulators put a lot of emphasis on scrutinising this area, and modelling policyholder behaviour is an example of this. With APAC introducing the new Insurance Capital Standard (ICS), there's additional attention on dealing with these dynamics. The idea is based on the volatility in the outside world, impacting policyholders' decisions, and potentially resulting in extreme or unexpected outcomes for the insurer.

Andrew: What role do scenario analysis and balance sheet forecasting play in helping insurers make informed investment decisions in volatile markets?

Sander: What is essential is that insurers adopting this approach combine scenario analysis and stochastic balance sheet modelling to generate forward-looking forecasts. While they recognise the value of these tools, and understand the techniques involved, many still struggle to implement a model that works for them.

Due to the complexities involved, the analysis can become three or four-dimensional at some points, making it difficult to oversee the full impact of certain decisions. Yet, uncovering these complexities is what the technology is designed to reveal.

By following this approach, you could find potential weak or even blind spots that had gone unnoticed and wouldn't be realised using conventional methods.

It enables you to stay on top of risk and proactively manage it, and challenge existing assumptions, especially when risk analysis or monitoring exercises reveal previous assumptions no longer hold. That could serve as a trigger to reinvestigate whether you're still in control of your risk exposure.

Andrew: How can Book-Yield-Optimisation (BYO) enhance portfolio optimisation for insurers, and how does it integrate different areas into investment decisions?

Sander: Insurers have to stay solvent but must also follow strict regulations.

This can be incredibly challenging in some jurisdictions – for example within APAC, or in the US under Risk Based Capital where insurers are required to value part of their balance sheets according to book values.

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volatility and prevailing market conditions come into play again."

To remain compliant and explicitly factor this into investment decision-making, it must be integrated into the optimisation process. Typically, the impacts of volatility take time to filter into a portfolio, especially for 'buy-and-hold'-strategies. However, when insurers have to re-adjust their portfolio or reinvest income, both volatility and prevailing market conditions come into play again.

The challenge is to switch the mindset between the more economic approach of being fully focused on market values and market dynamics, and the approach required by the regulator, which is based on book values. It is these types of analyses that book- yield-optimisation (BYO) is intended to support.

Andrew: How can insurers strengthen their risk management frameworks to better navigate ongoing market volatility, particularly with regard to liquidity and solvency?

Sander: Having a robust risk management framework is essential for managing liquidity and capital. By utilising technologies, such as balance sheet simulations and scenario analysis, insurers are well-equipped to meet these challenges.

Within insurer's risk frameworks, we typically see risk budgets allocated for market risk, along with risk thresholds to guard against capital shortfalls, often specified for short and mid-term.

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critical moments on a scenario-by-scenario basis."

By using an integrated framework with tooling that can project probabilistic outcomes of your investment decisions, on both liquidity and solvency, you are capable of matching investment strategies that, on the one hand, work and are effective in terms of meeting your roles, but that also sit within your risk tolerance.

When investing in illiquid assets, insurers need to be capable of enduring extreme amounts of volatility in the liquid portfolio. Using an integrated framework allows insurers to identify critical moments on a scenario-by-scenario basis, ensuring they aren't forced to sell illiquid assets at the worst possible time.

This interview is the latest in our ongoing partnership with Ortec Finance.

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- AI, reinforcement learning, and modern technological solutions for investment strategies

- Stochastic modelling and AI – what are the new developments?