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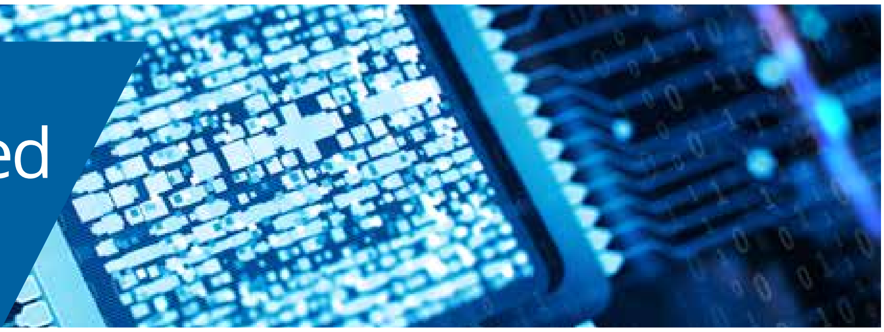
Technology Revisited

Another Look at its Role in Investing for Insurers



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Technology seems to excite and dismay in equal measure. For every tech evangelist espousing the world-changing benefits of artificial intelligence (AI), there's a modern-day Luddite warning of threats to livelihoods and even to humanity itself.

Regardless of which side of the aisle you occupy, it's unlikely you would think that new technologies would have no significant impact on your industry, or in the way you run your business.

So image our surprise when senior insurance investment professionals in the US, Canada and Bermuda told us just that last year. These executives were taking part in the Aberdeen Standard Investments North American Insurance Survey which was published last October.

No big deal?

A staggering 83 per cent said technology would have no impact, or just a 'minor' impact, on investment strategy and management approach. Only 3 per cent thought technology would have a 'major' effect in this respect.

We've been doing similar surveys around the world since 2015. This apparently relaxed attitude towards the role of technology contrasts with views expressed by insurance investment professionals who are based in Europe and Asia.

For example, life insurers elsewhere, especially in Europe, have been relying more and more on technology to better match their assets and liabilities. This helps them pursue more capital efficient investment strategies.

Technology has also helped investment managers squeeze out more risk-adjusted returns. This is amid a shift towards market-based valuation approaches to assets and liabilities, the adoption of more risk-sensitive solvency regimes and a decade of low interest rates.

Informed insights

So what explains this lacklustre response from North America? It could do with survey methodology. The way questions are phrased often leave room for ambiguity and interpretation. It may be that respondents felt it would take more time for technology, especially untested technology, to effect big changes.

A lot of the comments we received in the survey were along the lines of: 'Fintech sits in the strategic development division outside of investments. That team drives that discussion and they bring us in when appropriate.'

While AI algorithms are being used to pilot different investment strategies, they are still immature. Right now technology tends to facilitate the investment process, such as assist decision-making, rather than act as a major agent of change.

It may also be that North American insurance executives are more interested in harnessing the power of technology in areas other than investing. For example, the industry is studying how 'big data' – analysing vast amounts to information to find patterns and trends – can help client acquisition, claims payments, risk underwriting and premium calculations.

It may even be that North American insurers aren't under the same pressures to innovate as their counterparts elsewhere. In Europe, for example, insurers develop technology solutions to get ahead in a competitive marketplace and because attractive assets are so scarce.

'The contrast in the Northern American market is that competitiveness is more limited,' observes Gareth Mee, an actuarial partner at Ernst & Young. 'Most (North American) insurers have well-trodden paths for accessing the assets they need to support their business plans'.

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Reassessing technology

Our own experiences, from analysing earlier surveys and talking to our clients around the world, teach us not to downplay the role played by technology.

To be fair, some 53 per cent of North American respondents 'strongly' agreed with a separate assertion that the insurance industry is on the verge of a 'seismic, tech-driven shift within the next ten years'.

However, dismissing technology as 'something-to-be-revisited-later' seems short-sighted. Here are three ways in which technology is already helping insurers and their investment managers:

Data management

You've probably heard that data is 'the new oil'. That's because information has become a valuable commodity that has multiple applications across many industries.

Like their counterparts in other industries, insurers and their investment managers need ways to gather and make sense of highly granular, or detailed, data sets.

Being able to do this with asset data, for example, allows them to understand and manage the risks associated with those assets. This knowledge helps build efficient asset portfolios that tightly match cash flows with prescribed fixed liabilities and control capital requirements (see below).

What's more, insurers need faster access to data. Typically they need this within five working days from the end of each month to meet regulatory reporting requirements and to manage their balance sheets. Indeed, some insurers are now close to achieving 'real time' balance sheet risk and capital management.

This requires the underlying operational infrastructure, capabilities and processes in place to deliver information on time and in a robust and reliable manner. Building this capability is both challenging and expensive. However the pressure for faster and ever more granular data will only increase.

Optimal cash flow matching

There's great demand for asset portfolios that cash flow match a prescribed fixed liability profile, within prescribed cash flow matching constraints. This means finding investments that pay a fixed amount at set times to cover predictable liabilities, such as regular annuity pay outs.

The drivers of this demand come from two sources.

The first is investment returns. Insurers need to boost returns in a low interest rate environment. Buying undervalued assets can help achieve this. One way is to invest in assets that are hard to buy and sell at short notice, which offer a so-called 'illiquidity premium'. This is because investors need to be compensated by cheaper prices for less flexibility.

Regulatory regimes, such as the European Union's Solvency II and the proposed Insurance Capital Standard (ICS) from the International Association of Insurance Supervisors, allow insurers to take credit for the illiquidity premium if they cash flow match their assets and liabilities. This means beneficial treatment when valuing liabilities that leads to less capital being tied up.

The second driver is risk and capital management. Insurers that cash flow match their assets and liabilities, and who hold assets for the long term, are subject to less market risk. They can therefore set aside less capital to cover potential investment losses. Again, this benefit of cash flow matching is recognised by both Solvency II and ICS.

Technology can help cash flow match in the optimal, or most efficient, manner. Software and algorithmic tools screen the potential universe of assets; eliminate those that are unsuitable; cash flow match assets and liabilities; perform complex insurance calculations; and identify asset portfolios that minimise the amount of capital set aside to meet regulatory requirements.

Systematic derivatives strategies

Low interest rates have forced insurers to try and take more risks to meet investment targets. That's why more insurers are considering investing in equities. But high equity volatility means they need to set aside 40 per cent of the market value of an equity investment to meet capital requirements set by Solvency II and ICS.

Insurers can use derivatives to dampen volatility. So-called 'collar strategies' involve buying put options – the right to sell shares at a specified price within a fixed timeframe – to limit potential losses. They also involve selling call options – buyers get the right to buy shares at a specified price within a specific timeframe – to help pay for the cost of the puts and to cap gains.

However, regulators and insurers may not always agree on the long-term effectiveness of a derivatives strategy in reducing volatility. This is particularly the case when the strategy relies on judgement and discretion, which can be unreliable during times of market stress.

One way of tackling this problem is to remove all discretion from the implementation of the collar strategy by employing a prescribed set of systematic rules. This is where technology comes in because it requires extensive data and testing to design those rules. Daily systematic trading rules also require advanced technology to implement.

The benefits are considerable. The 40 per cent capital requirement for equity investments can be reduced to 20 per cent when using a systematic derivatives strategy to reduce volatility. This doesn't reduce expected returns. In fact, it greatly enhances risk-adjusted returns.

Looking ahead

Despite the results from the survey we're expecting industry attitudes towards technology to converge. Insurance investment professionals in the US will move in line with their counterparts in Europe and Asia.

We think this for two reasons. The first is regulatory. Europe's Solvency II, regarded as a gold standard within the industry, is driving regulatory change around the world and heavily influencing the proposed ICS. Canada and Bermuda are already moving towards European norms. So far, the US has been slower to evolve.

But it's only a matter of time because there is a global view that European-style rules are better equipped to regulate today's insurance markets. If that's the case, then constructing efficient asset portfolios for insurers will take on a new urgency in the US. This, in turn, would require embracing technology.

Market conditions provide the second reason. Insurers everywhere are turning to illiquid alternative assets – corporate loans, real estate loans and private equity – to boost returns on investments in an environment of low interest rates. This will drive demand for cash flow matched and capital efficient portfolios as European-style regulations become standard. Once again, technology will play a vital role.

Excite or dismay? That is the subject for another article. However, dismissing the importance of technology in insurers' investment processes cannot be an option.

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