

just like in the movies...

Life is never quite as simple as in the movies, unless you are talking about investment tools... Graham Bentley explains.



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I love cinema. Now, while my wife appreciates the intellectual challenge proffered by anything featuring Julia Roberts, I belong to the action/special effects school of film appreciation.

I don't want to think too hard at the cinema; I want to suspend reality somewhat. In the world of action movies, life is so much more straightforward. When you have a big story to tell and 120 minutes to tell it, it helps if you can make the world a simpler place.

Take computers. In movie-world you never have to use the spacebar when typing a long sentence. Every monitor has two-inch high letters. All computers are hacker-friendly; computers used by clandestine groups bent on world domination will let anyone with one fully-functional finger get all the information they want by typing 'ACCESS ALL SECRET FILES'. If this doesn't work, any 'PERMISSION DENIED' statement has an 'OVERRIDE' function. Computers can interface with each other regardless of the galaxy where it originated. Computers catch

viruses like we do – they get a temperature, overheat and blow up. The more high tech the equipment is, the more (unlabelled) buttons it has, but completely untrained users can grasp functionality by intuition alone. If you want to incapacitate a computer and delete all files, simply smash the monitor. The internet connects to everything in the movies. You can edit credit records, search hotel registries, look up police criminal files, search (and edit) drivers license databases, edit social security files and more at the touch of a (unlabelled) button.

In the real world of course, life isn't quite so simple, unless you happen to be talking about the ease of use of asset allocation tools. Ten years ago, who would have thought that the industry would be debating the validity (or otherwise) of this 'stochastic' model versus that 'deterministic' engine?

special effects

You might be surprised to learn that of all the tools currently available to advisers, none of them are stochastic in

the strictest sense. This is because the model has to run millions of calculations required per asset allocation, with potentially thousands of advisers accessing it at the same time.

Computers are currently not fast enough to do real-time full-search stochastic modelling. Generally, a stochastic engine runs overnight once a year and produces a set of 'mega tables' of potential returns and volatilities.

These returns are then run through a deterministic engine to produce the asset allocation tables, which form the database from which asset allocations are reproduced on the web.

The Selestia Investment Solutions deterministic model, as supplied by Watson Wyatt is 'live' in the system, which means you can change the parameters in real time. For example, if you don't want any Japan, or want to limit the exposure to Property, the system will recalculate the asset allocation to account for this, yet maintain the appropriate risk level.

unedited

The next issue relates to the purity of the output. As one adviser was quoted recently:

'We are sceptical of the asset allocation tools - where the platform is operated by an investment or life assurance company, they sometimes appear weighted towards the funds in which they specialise.'

So why aren't the outputs the same if the economic assumptions are the same? It has been admitted by one actuarial provider that they have 'tweaked' portfolios at the behest of product providers.

The Selestia Investment Solutions asset allocations are not 'tweaked' and we set no parameters with Watson Wyatt other than to account for charges and tax.

This can lead to counter-intuitive (but valid) results occasionally. Your client may have preferences that override the results, and to allow for this, the engine can account for those preferences, live in the system. For example, optimal gross portfolios (eg ISA, pension) feature little Property exposure. This is because the expected return on Fixed Interest rises in a gross environment (via the tax credit) to the point where it suggests a higher return than Property with a lower risk. However, if you were to set a constraint of say minimum 10% Property, the system will recalculate the asset allocation required to accept 10% Property, yet remain within the range of the required risk level.



supporting cast

Finally, the entire e-business team, and your regional sales teams, will be on hand to guide you and your colleagues through the theory and practice of the system.

You cannot however access GCHQ files, nor will you discover secret codes embedded in the funds list. There is no facility to gain access to any alien mothership. Unless, of course, you press the 'HELP' button... ■

heads or tails?

Stochastic modelling is often viewed as the 'star' - demanding top billing - but deterministic models are equally vital.

A good example of the difference between a deterministic and a stochastic model relates to coin tossing.

Given 10,000 tosses with a fair coin and thus a 50:50 chance of either heads or tails, the deterministic model uses the data it has (10,000 tosses, 50% chance of heads per toss) to 'determine' the result - 5,000 heads.

A stochastic model will essentially run a simulation, choosing a random number between 0 and 1 to represent heads or tails. A run of 10 simulations gave me six heads and four tails, ie 60% Heads.

100 runs was 56% heads, 1,000 48% heads, 10,000 49.9% heads.

The more runs I perform, the more the result homes in on the deterministic result.

Hence, for a given growth rate the deterministic model is no different from the stochastic model over a high number of simulations. However, if you were looking at a model that had to

consider regular withdrawals, then the results would be wildly different depending on the returns assumed each year.

For example, income drawdown, and the sustainability of withdrawals, is very dependent on the return each year. A bad first year's performance can be difficult to recover from, but if that bad year came in year 10 the impact might be very different. In this scenario, stochastic modelling is vital.



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