



## 2 KNOWING YOUR ASSUMPTIONS FROM YOUR ELBOW

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## OVERVIEW

This chapter stands as a cautionary note – not just for some of the modelling that we have presented in this edition of *Benefits Barometer*, but for the type of financial outputs on which any number of critical trustee and member decisions are based. In a way, this chapter represents a slight aside, where we can take a bit of time to reflect on how hugely dependent these outputs are on the quality and integrity of the assumptions that underpin the modelling. The inclusion of this chapter, as such, is essential if we are going to draw realistic conclusions about the limits of all modelling exercises.

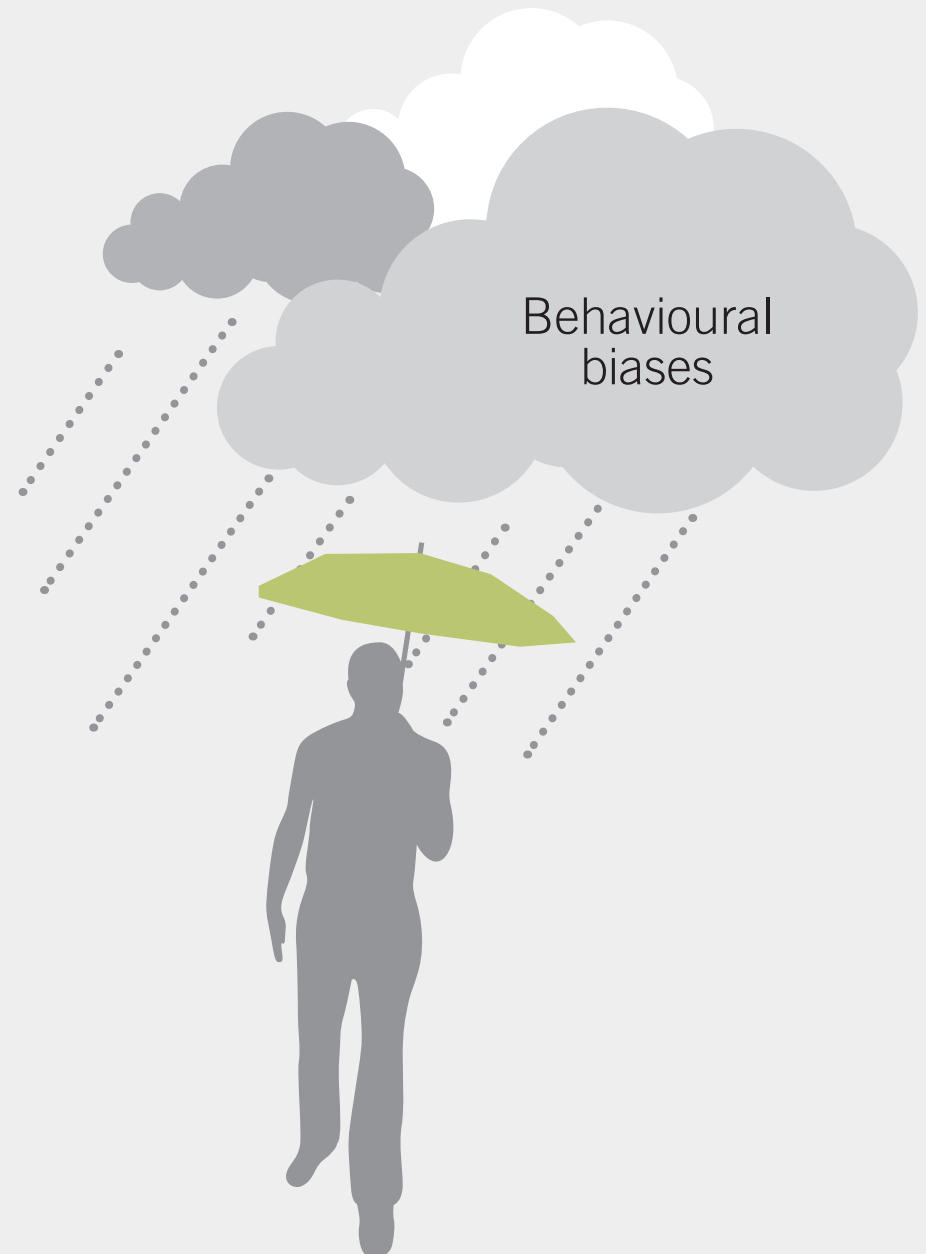
# THE MERITS OF AN INDUSTRY-WIDE PROJECTION ASSUMPTION SET

Consider this for example: There's evidence that commercial weather forecasts have been deliberately and materially changed to appeal to human biases. The theory of 'wet bias' suggests that weather forecasters deliberately exaggerate the likelihood of rain.

The New York Times<sup>1</sup> explains: *"People don't mind when a forecaster predicts rain and it turns out to be a nice day. But if it rains when it isn't supposed to, they curse the weatherman for ruining their picnic."*

Unfortunately our behavioural biases often do more than trick us. They create perverse incentives for experts we trust to advise us – incentives to tell us what we want to hear. The same is true of financial advice.

As consumers, we are often presented with financial modelling and projections. If you are a member of a retirement fund, you likely receive a statement illustrating the retirement income you might receive some day. Adverts for savings products might show how much your money could grow to or how much tax you'll save when using a tax-free savings account. Your financial adviser is likely to show you projections for different investment strategies you may be considering. Without exception, the conclusions these exercises present are a product of the assumptions employed in the modelling process.



<sup>1</sup> The New York Times magazine, 2012



### Drawbacks

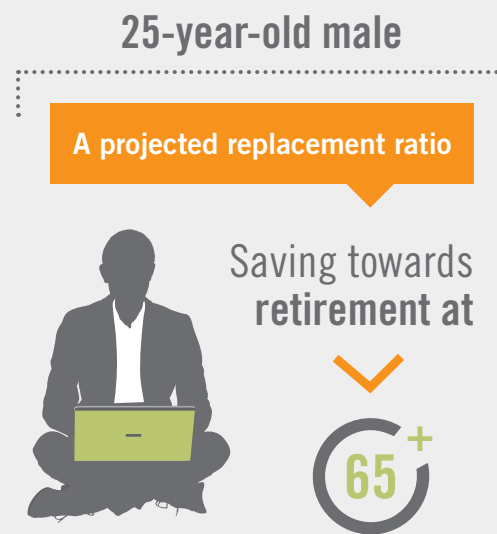
Now let's consider some of the challenges associated with an industry-wide assumption set:

- 1 It's very difficult to set (and maintain) these assumptions and equally difficult to gain general acceptance:** The subjectivity of assumptions and the difficulty of setting these assumptions mean ideally one requires the inputs of a large number of highly skilled individuals with varied technical backgrounds on an ongoing basis. Differences of opinion inevitably exist, making it difficult to agree on a common view. As a result, this is a costly, complex and contentious task. Obtaining the buy-in from financial advisers and consumers is equally challenging.
- 2 Challenges implied by the range of uses:** An industry-wide assumption set necessarily gets applied to a variety of uses, often implying conflicting needs. Some products might require accurate one-year modelling and assumptions while others require 40-plus years. Meeting these varied needs with consistent, compatible approaches is challenging.
- 3 It isn't clear who would be best placed to create and maintain the assumptions:** The costs or resource opportunity cost of properly monitoring and maintaining a good assumption set will be a burden. Would a profession such as the Actuarial Society of South Africa be able to commit adequate resources to a project like this? The entity will also need to be perceived as unconflicted; industry bodies such as the Association for Savings and Investment South Africa (ASISA) might not be perceived this way. Would regulatory bodies such as the Financial Services Board (FSB) have adequate internal skills to earn the trust and acceptance of the industry and clients? The previous regulatory body in the United Kingdom, the Financial Services Authority (FSA), did attempt to maintain an assumption set for retail consumer modelling, though new regulations leave providers with flexibility in setting assumptions (for example in statutory money purchase illustrations).
- 4 There's a lot more to consistent modelling than salary increases, asset class returns and mortality assumptions:** Achieving absolute consistency (and being able to force accountability in comparison) requires consistent modelling techniques, calculations and metrics. Even with consistent modelling, consultants or firms might choose to illustrate the usefulness of different strategies using different measures. For example, one firm might show how their approach offers small probabilities of very poor outcomes. Another might show how their strategy ensures an attractive upside. Which is better? Clients continue to be vulnerable to the quality and integrity of interpretation and advice, even if the modelling is consistent.

# HOW ASSUMPTIONS AFFECT REPLACEMENT RATIOS

Replacement ratio projections provide pension fund members with insights into what percentage of their final annual income is likely to be replaced after retirement, given their pension fund savings. These projections are derived from current contribution rates, current fund credits, assumed retirement age and, importantly, **assumptions about future salary increases, assumptions about asset class returns, and assumptions about inflation**. These last three assumptions require a considerable measure of insight and experience to derive.

Perhaps the one input that employers or trustees of pension funds could assess for themselves is the assumptions around salary increases. Note that not all companies ascribe to the same increase policies. But if the salary increase assumption applied for your company isn't a material reflection of how salary increases are experienced in your company, this can have a material impact on the outcomes for members. The following example on the right illustrates this point. We have used a standard set of assumptions to calculate a projected replacement ratio for a 25-year-old male saving towards retirement at 65. In our base case, we have applied the standard houseview salary increase scale for Alexander Forbes. We have now varied this assumption by  $\pm 1\%$ . Note the significant difference in replacement ratio outcomes.



Salary scale	Base	+1%	-1%
Replacement ratio	61%	50%	77%

By that same token, making assumptions about future investment returns is fraught with problems. Is the past likely to persist into the future? Usually any number of caveats apply to any projections. But we need to consider two types of return assumptions. The first is the projected long-term return on the range of asset classes reflected in

the strategy. Here industry convention has provided us with a number of valuation tools that allow us to examine very long-term histories of those asset classes (plus 50 years). There are many different valuation models that can be employed, and most analysts use combinations of models. As such, one can well imagine how much variation might be found throughout the industry. But what trustees should be looking for is a level of robustness in the final model so that the valuations seem sensible under a range of economic circumstances.

But the second type of return assumptions that sometimes sneaks its way into performance projections relates to the persistence of the active management performance contributions. Take the last five years of sterling active outperformance and project that forward 35 years – in spite of the fact that there's no way the same asset management team that produced that performance would still be on the job. Sadly, this is a favourite marketing trick, although most professional codes of conduct forbid this practice. In no way should these be allowed to be part of long-term projections.

## CONCLUDING THOUGHTS

There are a number of obvious benefits to an industry-wide, standardised assumption set. Consumers of financial advice could make more meaningful comparisons between providers, with a reduced technical evaluation burden. Unfortunately there are also a number of challenges to creating, agreeing on and maintaining such a tool and limitations to its use. Modelling should be recognised as a tool for better understanding financial problems. Modelling is not a definitive guide to the future, nor is it the only input that should be considered when planning or making comparisons. The limitations of an industry-wide assumption set would arguably be acceptable, if understood and recognised by clients and advisers. Unfortunately that still leaves the challenge of who is best suited to creating and maintaining such an assumption set and whether it would gain widespread acceptance and trust.

If we can't arrive at a point of standardised assumptions, then our next best option is that consumers of financial advice, especially institutional investors such as pension funds and financial advisers, should make an effort to interrogate the reasonability of the assumptions used by the service provider. Ultimately these assumptions drive the advice they will provide. It's far more important not to fall victim to unfounded, optimistic promises though. Avoid choosing an adviser or product purely on a more positive modelled outcome unless the advisor can explain (in terms you can understand) why the strategy is superior to a competitor's advice or product. When in doubt, get a second opinion. In general though, reputable financial institutions will avoid this sales technique to protect their reputation.