

## DROWNING IN

## DATA



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Small data, big analytics—long-term vision in a short-term world.

Everyone is talking about big data. From Silicon Valley to the Sahara, decision-makers are grappling with a deluge of data and the realisation that this contains insight that extends far beyond traditional analysis. Very few CEOs and senior executives, however, want more information. Most are already drowning in data from internal and external sources, and the last thing that they need is more complexity. What they do need is clarity in a rapidly changing world.

Over the past decade, there has been a dawning realisation that the right type of advanced statistical analysis, focused on the right pools of data, could transform businesses. Most 'big data' analysis, however, relates to operational matters. Identifying the best layout in your online store, or the benefits of stacking beer next to nappies in supermarkets, is helpful, of course. These insights will increase sales, but they are not much more than another race to the bottom.

The biggest opportunity for businesses and governments is that advanced statistical techniques can dramatically transform the effectiveness of decision-making in relation to the largest strategic and

investment decisions. In short, these techniques cut through all the noise and provide much greater clarity. In contrast, old decision-making tools simply do not address the uncertainty that is inherent in business life. Critically, they hide value and they hide risk.

If you seize this opportunity for 'big analysis', you will win the race to the top and will establish meaningful strategic advantage. In particular, you will be able to make decisions that embrace all the uncertainties that are inherent in business and government, and will avoid the dangers of over-simplification in the face of complexity. This is the next generation of financial evaluation and business decision-making tools, and it is starting to replace the 1950s liquid-paper technology of traditional discounted cashflow models that have been at the heart of Western decision-making for the past 25 years.

Advanced statistical analysis may still feel like a mystical art to many, just one step away from Hogwarts' lessons in Potions, Transfiguration, and the Care of Mythical Creatures. Much like the wave of innovation driven by information technology in the 1980s, there are relatively few people on boards or in senior management who truly understand the language of

advanced statistics. With this in mind, here are five key points to remember as you seek to separate the insight offered by twenty-first century strategic analytics from the armies of would-be data scientists offering statistical analysis paralysis.

#### Outperform by embracing the new technology

Start by getting your head around what big analytics can do with data. In the 1980s IT revolution, senior managers who combined business experience with an understanding of the powers and limitations of the new technology gained massive advantage. The same is true for data and analytics—as with any great revolution, the opportunities for dramatic outperformance of your peers will be substantial.

#### Learn to love uncertainty

Since the birth of the modern paradigm of economic rationalism, businesses have sought to simplify business decisions by identifying the most likely scenarios and associated base-case forecasts. In practice, individual base cases are incredibly unlikely to eventuate. The new models for decision-making embrace all the rich complexity and uncertainty of the real world so that you don't need

to base decisions on monochromatic and misleading single-point estimates (see side bar). By embracing complexity in this way, you will find new sources of value and build a better understanding of risks and how they can be mitigated. In contrast, overconfidence in the 'average' frequently creates massive, unmeasured, and unnecessary risk.

#### Believe in the impossible

The statistical techniques on which all this depends are nothing new—indeed, they have been under development in universities for at least a hundred years. Even the most cutting-edge thinking typically depends on research that dates back to the 1990s. As a result, seemingly amazing feats are possible. Many were amazed when Nate Silver projected the outcome of the last US presidential election to within one vote in the Electoral College. And in 2013, Pottinger Analytics predicted the outcome of the Australian election to within a single seat four months ahead of ballot day.

Our predictions were very different from those of the pollsters and commentators at the time, and were made despite massively less polling data being available than in the US. None of this is black magic—insights are created by making much more sophisticated use of information that is already available. As a result, these techniques can make the future enormously more predictable than most people would imagine possible.

#### Small data is great for big decisions

These techniques add the most value when they are applied to the largest business decisions, even where the available data sets are small. Indeed, if you understand the power of the techniques involved, you will be horrified at the way that conventional business decision-making ignores the insights that are available. To do this, the right methodologies must be applied to the right sets of data, and you must understand the confidence limits properly.

“People think the deliverable will be a hideous combination of Greek letters and equations. An experienced analyst can take tons of data from different sources, merge it, clean it up, do some math, and distil powerful, forward-looking meaning”.

- Andrew Hah, Chief Data Scientist, Pottinger Analytics

Often, the analysis may suggest a range of possible outcomes that is alarmingly wide compared to the advice often found in board papers. This will, however, reflect the reality of the situation—risk and uncertainty which traditional decision-making techniques would simply ignore. And remember, identifying such risks is the most critical step in being able to manage or mitigate them effectively. In contrast, decisions that consider only a base case and a few scenarios are the equivalent of driving blindfold.

#### Big analysis starts at the top

Expect your business to understand the power of big analysis from the top down. Don't just ask, “What are we doing about big data?” and then move on to the next agenda item. Ensure that everyone from the board and CEO down builds a clear understanding of where and how big analysis techniques can be applied to address uncertainty and to create value or reduce risk in relation to the largest decisions. This also means coming to grips with how the over-simplification of historical decision-making tools such as discounted cashflow models may hide where value lies and also obscure inherent risk.

Armed with this perspective, you will be much, much better placed to drive more sophisticated decision-making throughout your whole organisation. Ultimately, there are often large P&L and value asymmetries between the upside and downside scenarios, so it's seldom optimal to plan around the mean forecast, and it's really important to have a robust measure of uncertainty.

The benefits will emerge quickly, as these new techniques provide a natural and intuitive way to embrace complexity. They are inherently forward-looking, and will give you a much better chance of making decisions that will stand the test of time—and building businesses that will be more resilient in the face of change. ●

## BURN THE BASE CASE

Traditional cashflow models are built using a base case and a few upside or downside scenarios—often simply plus or minus 10 per cent on a few key variables. This is a recipe for disaster, particularly if the business is going to be highly leveraged.

As one example, many wind farms have been financed using near-maximum debt based on forecasts which assumed average wind outcomes. No-one should be surprised, therefore, that many such businesses failed following actual wind levels in the bottom quartile of expectations. These wind outcomes were entirely predictable, in a statistical sense. The insolvencies were thus entirely avoidable, if only more sophisticated analysis had been undertaken in the first place and capital structures had been designed for the inherent uncertainty involved.

#### About Flashpoint

Very few businesses can rely on incremental growth to ensure long-term success. The safety of the status quo has been consigned to history by technological innovation and the accelerating pace of change. In Flashpoint, we explore potential disruptions and inflexion points in major industries, and provide tools to help leaders guide and support their teams through this environment.

#### About Nigel Lake

Nigel is Joint CEO of global advisory firm Pottinger and an entrepreneur with a passion for diversity, innovation, environment, and action. He is author of *The Long Term Starts Tomorrow*. Follow him on Twitter at @Nigel\_Lake.