Risk Modelling Without the Risk.

How banks can benefit from shifting to a Modelling as a Service approach to regulatory risk management

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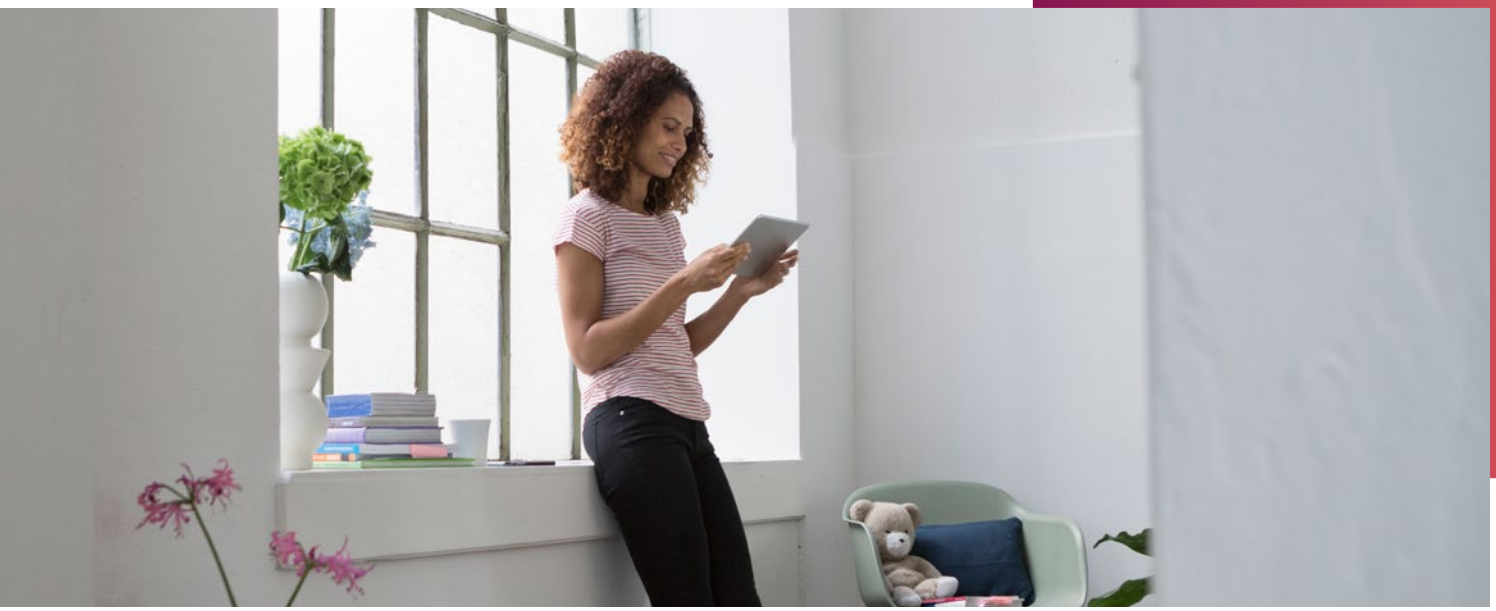


Risk modelling in context.

Over the past few years, UK banks have experienced a series of seismic shifts in the landscape of the financial sector.

For risk teams, the impact of major geopolitical and societal events, regulatory changes and market disruption has shaken long-held assumptions about the way our financial system operates.

This is particularly true—and particularly problematic—for anyone involved in the risk modelling process. Most of the models we use today to analyse and report risk measures to regulators are built on our understanding of the historical behaviour of retail and commercial customers under different economic scenarios. However, recent events have shown that these behaviours can change much more quickly and dramatically than our current models can predict.

The impact of a sharp economic shock driven by a global pandemic, for example, is a scenario that most risk models were not built to predict—and it's not just the immediate response to such a crisis that causes concern for risk modellers. The real worry is that customer behaviour will continue to change.

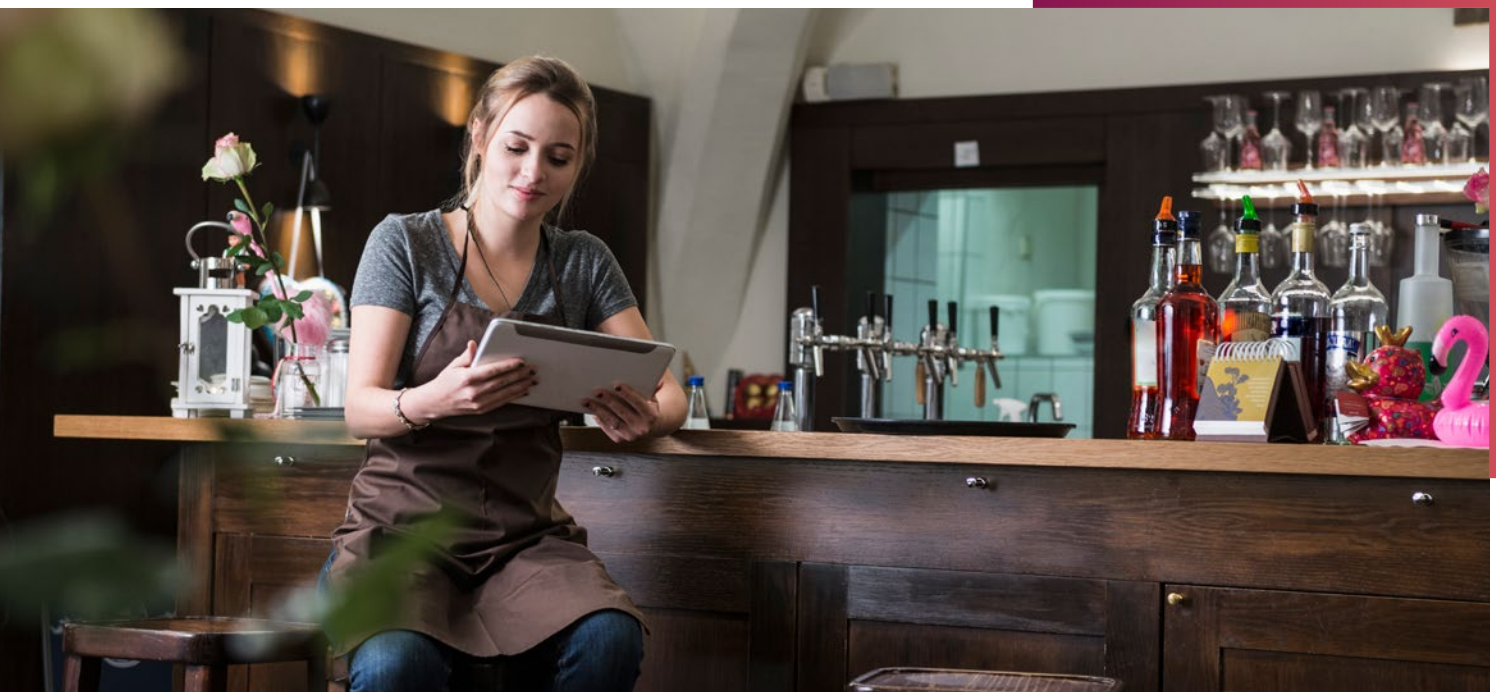
Moreover, the rate of change in the financial sector is increasing faster than ever before, and new threats are looming on the horizon. Regulators are becoming increasingly demanding, expecting banks to absorb changing requirements on ever-shorter cycles. Disrupted patterns of global trade could change the whole structure of the UK's economy. And challengers from outside the industry, such as global technology giants, are increasingly eager to break into the financial services market—posing an ever-present threat to any bank that fails to evolve.

Changing the game.

To give themselves space to survive and grow, banks must find smarter ways to understand the parameters within which they can safely operate, even as the goalposts continue to shift.

This will require more flexible, holistic ways to model risk, as well as a delivery capability that can get risk models to market in a faster, more agile manner. Today, the typical development and deployment cycle for a new risk model takes many months—a potentially fatal weakness in a fast-moving environment where model accuracy starts to degrade almost immediately.

However, the key question for banks to address is not necessarily just how to build models better or faster, but whether they need to be in the business of building models at all. If you asked a customer what a bank is for, they'd tell you that it's to protect their money, to provide credit when they need it, or to help them grow their investments. A bank's core business is to help its customers manage their finances—not to design, build, deploy, execute, and manage sophisticated risk models.



The art of the possible.

A new generation of bold, forward-thinking risk leaders are already coming to this conclusion.

Chief Risk Officers who have risen through the ranks as analysts and model-builders appreciate the huge cost and complexity of maintaining a world-class risk modelling capability in-house. They know that there's no compelling reason for banks to hold onto a process that is fraught with technical and operational challenges, where a lack of scalability can lead to serious regulatory issues, and where excellence doesn't result from keeping a vice-like grip on the reins.

More importantly, these leaders understand the art of the possible. Over the last decade, the industry has overcome significant technical and regulatory obstacles that previously made it impractical to outsource even parts of the risk modelling process.

From a model development and validation perspective, the use of augmented third-party capability has now become the norm rather than the exception.

From a deployment and execution perspective, cloud technologies are mature, and banks have the regulator's blessing to use them—in fact, regulators themselves are adopting these solutions.

Equally, firms such as SAS have established themselves as leaders in developing and delivering world-class core competence in risk data, modelling and advanced analytics.

As a result, now is the time for financial services firms to challenge themselves in terms of how to manage their risk modelling lifecycle and who should do the heavy lifting.

Pain-points of in-house risk modelling.

Most banks' in-house risk modelling processes suffer from three main pain points.

1 The pace of change is fast, and growing faster. Risk modelling teams are already hard-pressed to hit all the deadlines for implementing complex regulatory requirements, and when other internal or external crises hit, it can be impossible to keep all the balls in the air at once.

2 Human resources are highly constrained. The lifecycle of a risk model is complex and requires a broad range of skillsets to manage effectively. You need experts to review regulatory requirements; prepare, explore, and transform data; build and validate models; and then deploy, execute, and monitor them. Those skills are in short supply, and experienced practitioners are expensive to recruit and retain. When a new modelling requirement arises and you need to grow the team, it can take months to ramp up.

3 Most banks' existing technical infrastructure for modelling is siloed and fragmented. Getting a new model into production involves time-consuming manual processes and hand-offs between different teams. In many cases, models are developed using one tool, validated in another, and then entirely rewritten for production deployment on a different platform. The gaps between these systems open up significant potential for human error and are a fertile breeding ground for bugs—so even when models do eventually make it into production, they may not run reliably or provide fully trustworthy results.

The combination of these three factors often puts banks on the back foot in their conversations with regulators, and in extreme cases can even pose a threat to the bank's ability to operate. By contrast, leveraging a specialist provider and adopting a Modelling as a Service strategy can relieve the risk team of all the heavy lifting and free them up to focus on higher-level concerns, not day-to-day firefighting.

An idea whose time has come.

Outsourcing parts of the risk modelling lifecycle is not an entirely new idea: banks have been doing it for over a decade.

However, until now, no outsourcing provider has been able to offer a credible option for managing the entire end-to-end risk modelling lifecycle as a service. But what are the advantages of an end-to-end approach? The risk modelling cycle is often described as a pipeline of discrete stages, from reviewing requirements through data preparation, exploration and transformation to model building, validation, deployment, and execution.

With an end-to-end Modelling as a Service approach, you have fewer vendors to manage and a simpler operating model. With no gaps in the process, no hand-offs and no politics between suppliers, you can shorten time to execution and reduce errors and re-work. Meanwhile, your supplier can take advantage of economies of scale to continuously enhance their internal workflows, which ultimately results in faster delivery and lower costs for the bank.

The economies of scale also help to solve resourcing challenges: since your provider is a specialist in their field, it's much easier for them to hire, train and retain experts in every aspect of model delivery, and they will have the resources on-hand to ramp up or down their service provision to meet your needs. If a new regulatory requirement arises, they will have the resources to scale up straight away, enabling you to hit the ground running and deliver ahead of the regulator's deadlines. And with data science expertise at a premium due to skills shortages in the market, the savings on recruitment and salary costs can be considerable.

Finally, a Modelling as a Service partner can offer a significant technical advantage: they can provide a much more coherent technology stack that has been built from the ground up to support end-to-end model delivery and management. Instead of a patchwork of different tools accumulated by different teams for different purposes, they can provide a fully integrated platform with automated workflows that save time and eliminate the risk of error. For example, with SAS Modelling as a Service, once we've built a model, we can instantly promote it to a live production environment – a one-click deployment, versus a three-month implementation.

Why SAS?

Many companies are already helping banks outsource different aspects of the risk modelling cycle.

For example, there are several excellent boutique consultancies that already work with banks to support model building and validation. Banks also work with systems integrators who can help to develop tools and integrate data, and with hosting companies that can provide flexible, scalable infrastructure.

However, none of these companies have the breadth of expertise and technology to provide a truly comprehensive Modelling as a Service. This requires a combination of analytics and data science skills, modelling and data management software, and cloud infrastructure management experience that only a handful of companies in the world possess.

SAS is a global leader in all these areas and can provide banks with the unique advantages of an end-to-end approach to regulatory risk modelling. In fact, our Modelling as a Service offering can extend far beyond creating, deploying and managing your models—our intelligent decisioning capabilities allow you to re-use the outputs of your regulatory modelling processes to add value in other areas. For example, we can integrate with back-office risk support services, feeding the results of our models into impairment calculations and stress tests to support smarter day-to-day decision-making.

The maturity of SAS technologies across every technical area of the model lifecycle means that we are the most credible provider of a true end-to-end Modelling as a Service strategy currently available on the market.

The next step

The introduction of Modelling as a Service marks a point of departure for the banking sector.

In an increasingly fast-moving and competitive market, banking leaders need to make tough decisions on where to focus their attention and investment.

As they seek to make banking simpler, fairer and more rewarding for everyone, they will need to concentrate on core activities that deliver customer value, while reducing the cost and complexity of important support services such as regulatory risk modelling.

Modelling as a Service unlocks a huge opportunity to do just that. Unlike many digital transformation initiatives, which depend on a lot of blue-sky thinking and may be difficult to achieve in practice, Modelling as a Service is the art of the possible. While comprehensive end-to-end outsourcing is the goal, Modelling as a Service allows you to start small, learn fast, and accelerate quickly.

To start your journey with Modelling as a Service, get in touch with our Risk guy Miles Elliott at Miles.Elliott@sas.com to learn more today.

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