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PERSPECTIVES

NAVIGATING RISK TRANSFORMATION: ROAD TO CLOUD

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> SAS

Over the past two decades, cloud computing has evolved significantly. However, a remarkable step change has occurred in the last four to five years. Regulated financial institutions (FIs) have increasingly embraced cloud technology for their risk operational functions, and regulators have recognised the advantages of this transition.

This transformation has been made possible by significant advancements in cloud computing services within the last three years, which have enhanced the capability to effectively manage associated risks, such as cyber crime, data breaches and other vulnerabilities.

This shift is especially crucial in the wake of the recent Silicon Valley Bank (SVB) collapse, where the combination of interconnected risks including interest rate risk, liquidity risk and concentration risk played a significant role. Although regulators see the benefits of financial services companies moving to the cloud, regulatory guidance remains prescriptive. It is the responsibility of the FIs to understand the risks involved and manage them appropriately.

But why should organisations consider moving their operations to the cloud? Is it simply a matter of keeping up with industry trends? While staying competitive is important, the decision to migrate to the cloud should be driven by genuine business

value, extending beyond apparent technical advantages.

It is essential for organisations to evaluate whether cloud adoption aligns with their specific needs and goals before embarking on the journey to cloud. The recent SVB collapse serves as a stark reminder of the potential consequences of not effectively managing risk in an integrated fashion and to use this learning to address and strengthen identified weaknesses when considering a move to cloud.

In today's fast-paced financial landscape, FIs face a wall of challenges that hinder their risk management capabilities. Their ageing technology infrastructure holds them back from exploring, analysing and managing vast and intricate data sets – transactions involving consumer risk cards, revolving credit and mortgage accounts, all of which significantly impact a bank's overall health. The need to link these data points sensibly with other crucial functions across the institution adds layers of complexity and demands an abundance of manual effort.

Unnecessary data duplication and movement have become a daily grind, resulting in inefficiencies and confounding complexity. Silos separating key functions within risk management suppress collaboration, impairing overall efficiency. Moreover,

conventional risk models fall short of harnessing the capabilities of advanced machine learning (ML)

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and artificial intelligence, ultimately undermining the effectiveness of risk predictions.

These limitations have far-reaching consequences for the business outcomes of FIs. Inaccurate risk predictions can lead to either underestimating or overestimating credit losses, jeopardising financial stability especially during times of uncertainty and volatility. Diminished data analysis capabilities limit opportunities for new loans, diminishing revenue growth. Inaccurate data and inefficient risk models increase operational and regulatory risks, possibly culminating in capital add-ons due to inaccurate regulatory submissions.

Transitioning to the cloud and adopting a modern risk platform could be the right strategy. This transformation will unlock a world of possibilities if

done properly, helping overcome current challenges. Cloud infrastructure opens doors to a wealth of data, including high-volume behavioural transactional data, substantially enhancing data exploration and analysis. Banks can seamlessly integrate advanced risk scores with behavioural and application data, thereby elevating the quality of risk decisioning outcomes.

Furthermore, cloud technology empowers FIs to leverage advanced ML models, leading to significant improvements in the accuracy of risk models. Automation of model monitoring and an enhanced model quality significantly reduce the time required for developing and implementing risk models and strategies, thereby strengthening model risk management.

The value of transitioning to the cloud is not speculation. It is an imperative that can and must be quantified. The best way to get started on quantifying business value is to quantify opportunity costs by assessing limitations of current capabilities of technology, system and processes to identify bottlenecks that inhibit risk functions impacting the balance sheet and regulatory compliance.

Outlined below are a couple of recent business cases to help support organisations.

A medium-sized bank with total assets of \$180bn had suffered a loss of 3 percent of a total of 8 percent of flood-affected customers in a postal area who did not have sufficient insurance, leading to

delinquency and a loss to the bank of \$27m. This was largely due to technology constraints. Discovery workloads are often deprioritised to allocate resources to long-running production workloads, limiting on-demand analytics to gain new insights from the development of external events such as flooding and forest fires. The lack of timely insights may have potentially affected the loan to value ratio due to the devaluation of affected properties, leading to delinquency and loss of revenue.

In another case, a small-sized building society or credit union with total assets of \$65bn suffered shortcomings in data quality issues caused by the merger of three organisations, leading to inaccurate submission of capital adequacy reports to the regulator, attracting \$50m in additional capital reserves that caused a cost of capital increase of \$4.5m per annum. Because of the lack of accurate and complete data from upstream systems, this led to multiple versions and copies of the same data available across different platforms, causing data quality issues and accuracy in capital adequacy calculations. This implied a lack of governance to comply with regulation and attracted capital additions. In addition, it also impacted the balance sheet with cost of capital increases that could have been avoided.

Risk has been managed in silos, with distinct teams operating on disparate technology infrastructure and separate data. This results in

a disparity in the maturity of risk management capabilities between different risk teams. To embark on a transformative journey, a comprehensive strategy for a modern risk architecture that harnesses the full potential of the cloud should be envisioned.

This platform should enable holistic risk management by orchestrating the interconnectedness of both financial risks, such as credit, market and liquidity risks, and non-financial risks, such as fraud, operational and climate risks. This entails creating a single technical platform, one that integrates purpose-built solutions tailored to individual business use-cases in a modular fashion.

An object-based approach on a repeatable workflow framework, in which the underlying common components such as data, models, market scenario and business assumptions are shared and reused, and where user experiences are uniquely tailored to individuals, is crucial in such architecture. The integrated risk platform should foster cross-functional collaboration among risk, finance, treasury and technology teams.

This platform should unlock cloud benefits of scalability and agility. Right sizing – that is, the ability to turn on the risk management system instance on-demand and scale the infrastructure to match the required workload – enables FIs to satisfy increasing demands for granular bottom-

up and near-real-time risk analysis while optimising cost. A continuous integration and delivery approach alongside modular design enables agility and efficiency when upgrading systems to adapt swiftly to the ever-changing regulatory and business landscape.

The transition toward cloud-based risk management demands dedication and strategic commitment. Accelerating the delivery of tangible business benefits throughout this journey is key to sustaining executive sponsorship for a successful transition. Before embarking on this journey, it is crucial to conduct a comprehensive survey of legacy systems and their dependencies.

This survey should not only
acknowledge the
complexity

of existing systems but also identify and prioritise risk capabilities for migration.

Embracing agile delivery with a minimum viable product approach allows for faster adoption of capabilities into business as usual activities. This ensures the technology is constantly evolving and adapting to meet changing risk management needs in a dynamic banking landscape. Another advantage is its ability to unlock new use-cases and efficiencies. Identifying these additional values and communicating them effectively is essential for driving funding and buy-in for the next stages in the transition journey.

It is also critical to transform the risk management strategy from the reactive stance of regulatory compliance into a proactive, value-driven paradigm. Increasing emphasis should be placed on delivering last-mile values to the end-users. Many FIs have taken advantage of the vastly improved risk management infrastructure in the last five to seven years, which resulted from substantial investments in compliance with IFRS 9 and Current Expected Credit Loss (CECL) and Basel III reforms, to establish an analytical overlay to derive critical business insights.

This includes the ability to enhance the explainability of risk outcomes via retrospective attribution analysis, to quantitatively assess the viability of different business strategies via forward-looking scenario analysis and forecasting, and the ability to automate the planning, budgeting and stress testing process under both going concern and stress scenarios.

A strong governance framework is essential to steer the transformation journey toward the vision of an integrated risk platform. Many FIs establish a cross-functional design council, a special task force composed of individuals with a unique blend of business acumen and technological expertise. This council expedites the approval of major design decisions, ensuring the platform is aligned with the overarching vision.

It is essential to recognise the critical role that the 'process-technology-people' triad plays in this transformative journey of transitioning risk management to the cloud. A successful migration relies not only on technological proficiency but also on aligning people and processes with the new technology.

Process

Process standardisation and automation can also lead to greater efficiency and consistency. Many critical risk processes are managed offline outside the realm of governance oversight. This also leads into increased manual handling of data, slower decision making and, ultimately, unnecessary human errors and non-compliance with regulatory requirements. Cloud transition is a great opportunity to identify these manual processes and consolidate them into a repeatable workflow framework.

Migration to the cloud necessitates embracing new ways of working with added capabilities. It opens doors to more frequent analyses and iterations, more granular bottom-up analysis, the assimilation of additional data, and quicker business and balance sheet strategy decisions. Cloud technology makes it easier for teams to recalibrate and manage their models, set up new tests and experiment with innovative risk management strategies.

Technology

In the traditional on-premises model, technology upgrades could be a daunting process. With cloud technology, the burden of upgrades can be transferred to technology partners equipped to seamlessly handle software and hardware upgrades. This not only reduces ongoing technology operating costs but also minimises the risk of obsolescence, keeping banks on the cutting edge.

The risk management operating model is fundamentally changing as a high level of flexibility and agility is introduced, allowing rapid scaling and access to cloud-based applications. This requires a responsive operating model adapting seamlessly to these dynamic demands.

People

To truly unlock the potential of cloud-based risk management, fostering a culture shift in people is paramount. This shift involves empowering and enhancing the skills of the first and second lines of defence. Rapid scaling and access to cloud-based applications extends risk management ownership and decision-making processes beyond risk management functions to a democratised framework across the organisation.

A significant aspect of this cultural shift is the transition from pure compliance activities to more business-oriented analytics for deeper insights. Automation of compliance tasks and manual

processes allows risk analysts to focus on what they do best – developing sophisticated models, identifying trends and creating alert mechanisms.

The transformative journey to cloud-based risk management offers FIs a path to overcome challenges and enhance efficiency, and to position themselves for future success. As the financial landscape evolves, the imperative to migrate to the cloud is clear, driven not only by industry trends but by the genuine business value it can unlock.

Quantifiable benefits, exemplified by successful business cases, showcase the potential for improved risk management, reduced impairment charges and increased revenue growth. Beyond the apparent advantages, the cloud's ability to harness vast data sets, integrate advanced risk metrics and leverage ML models makes it a strategic move to address the limitations of ageing technology.

Embarking on this journey requires a comprehensive strategy, aligning risk management with organisational goals, fostering collaboration and orchestrating the interconnectedness of the different risks. The cloud platform should be a dynamic ecosystem, facilitating scalability, agility and in-depth scenario-based analyses.

The shift to cloud-based risk management is not just about compliance, it is about integrating risk into the fabric of business planning. This evolution demands dedication, strategic commitment and

the acceleration of tangible business benefits throughout the transition.

Before embarking, a thorough survey of legacy systems, embracing agile delivery and transforming the risk management strategy from reactive to proactive are critical steps. The 'process-technology-people' triad plays a central role, emphasising standardisation, automation and culture shift.

The cloud migration journey is about unlocking potential, adapting to dynamic demands and democratising risk management across the organisation. By fostering a culture of empowerment, enhancing skills and embracing the flexibility of cloud-based applications, FIs can navigate this transformative journey successfully.

The key lies not just in the technological shift but in the holistic transformation that positions FIs as leaders in an ever-changing financial landscape. By carefully considering these key learnings and actionable takeaways, FIs can navigate the road to cloud for their business-critical risk management capabilities with confidence and realise the full potential of this transformative journey. Do the homework. It is worth the investment. **RC**

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