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Model risks for banks: Solution lies in compliance to regulations, while instilling system of oversight & control

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By proactively managing model risks, banks can safeguard its stability, resiliency and trust in the financial system, in the face of uncertainty. The landscape of banking has undergone a tectonic transformation, driven by technological innovation and digitalization. One of the critical challenges financial institutions face in this rapid evolution is effectively managing the risks associated with the use of complex algorithms and predictive models.

As banks rely more on such models for decision-making processes, the possibility of adverse results arising from errors or inadequacies in these models have become a major concern today.

In today's banking sector, the ever-increasing business complexities and regulatory requirements have aggravated the importance of models in the financial sector. A model is a quantitative method, system, or approach that applies statistical, economic, financial, or mathematical theories to process input data into quantitative estimates.

They play a pivotal role in guiding various aspects of banking operations, including asset management, front-office trading desks, wholesale banking, retail banking, and risk management.

However, with the increasing reliance on models comes an inherent risk. This is because a model simplifies a complex problem statement by factoring assumptions to reflect the otherwise complex and dynamic reality. These simplifications using assumptions, though tested and updated regularly, can lead to potential financial

losses or reputational damage on account of bad decisions.

In statistical teams, models can lead to two kinds of errors: Type I error- rejecting something which is true or Type II error- accepting something which is false. Regulators and banks are more interested in the latter. Also, model risks can creep in through a variety of sources, including data quality issues, algorithmic bias, model complexity, and inadequate validation processes.

The pandemic underscored the significance of model risk in the banking sector. Financial institutions, like many other industries, found themselves grappling with the unprecedented challenges posed by the pandemic. Financial institutions found themselves unprepared for the economic lockdown, prompting urgent efforts to mitigate model-related vulnerabilities.

The crisis highlighted the limitations in existing models, which were built on assumptions and data from the pre-pandemic world, leading to inaccurate risk assessments and biased financial decisions. This realization has prompted banks worldwide to re-evaluate their model risk management frameworks to account for the changing environment.

One of the key drivers of model risk in today's banking industry is the growth of advanced analytics and Artificial Intelligence (AI) technology. While these technologies provide useful insights into customer behaviour and operational efficiencies, they also add layers of complexity and uncertainties. They also become opaque and difficult to interpret outputs.

Left unchecked, algorithmic bias, which refers to systematic inaccuracies or unfair outcomes in decision-making processes due to biases in the data used to train models, can lead to discriminatory practices or erroneous decisions.

Regulators and industry bodies have sought to establish guidelines and frameworks to govern model risk management practices in response to these challenges. For example, the Basel Committee on Banking Supervision (BCBS) has issued principles for effective management of model risks, emphasizing the importance of a robust governance structure, independent validation procedures and ongoing monitoring mechanisms.

However, compliance to regulatory requirements is just one aspect of effective model risk management. It is crucial for banks to prioritize transparency and communication regarding their practices for identifying, assessing, and mitigating risks associated with the use of quantitative models. In this fast paced world where data is now the new currency, all stakeholders, including board members, regulators, and investors, should continuously upskill themselves to better understand the processes and procedures involved in developing, validating, and monitoring models.

To begin with, establishing a consistent, firm-wide policy for model risk management is a prerequisite in instilling a strong system of oversight and control. This policy should clearly define a model risk appetite that aligns with the nature and complexity of the models used by the bank, ensuring a proactive approach to managing model risks.

To conclude, model risk poses significant challenges for banks in today's dynamic and

fast-paced world. By proactively managing model risks, banks can safeguard its stability, resiliency and trust in the financial system, in the face of uncertainty.

(The author is Chief Risk Officer, Ujjivan Small Finance Bank; Views are personal)

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