LEVERAGING MAS INSIGHTS FOR EFFECTIVE DATA MANAGEMENT & GOVERNANCE



The financial services sector is increasingly dependent on robust data governance to drive operational efficiency, regulatory compliance, and effective risk management. This article synthesizes insights from a recent Monetary Authority of Singapore (MAS) paper that set out observations from thematic inspections at domestic systemically important banks (D-SIBs), and presents best practices and strategic recommendations for strengthening data governance frameworks.

In the financial services industry, data underpins a wide range of critical functions such as risk reporting, fraud surveillance, anti-money laundering, liquidity management, underwriting, and investment management. Effective data governance is also crucial for mitigating risks related to data privacy, confidentiality breaches, and data misuse.

The rapid expansion of data availability and advancements in analytics demands that financial institutions put in place robust data governance frameworks to ensure data accuracy, consistency, and completeness — enabling both sound decision-making and regulatory compliance.

The Basel Committee on Banking Supervision's principles for effective risk data aggregation and risk reporting (BCBS 239), first set out in 2013, have become a key driver for financial institutions to clean up their data and establish effective data management practices. With a focus on key risk reports and improving transparency in data and risk management processes, BCBS 239 sets out the key building blocks of data management and data governance.

A MAS information paper published in May 2024, based on BCBS 239, sets out supervisory expectations around data management capabilities as well as a series of observations based on the regulator's thematic inspections of data practices at domestic systemically important banks (D-SIBs).*

In this whitepaper, we aim to provide financial institutions with actionable insights derived from MAS's thematic inspections. Below, we set out observations and our recommendations around the five key findings, comprising Board and Senior Management (BSM) oversight, data management organization, data quality management, identification and escalation of data issues, and suggested next steps for expanding the application of BCBS 239 principles.

^{*}Monetary Authority of Singapore

FIVE KEY FINDINGS

1. Board and Senior Management Oversight

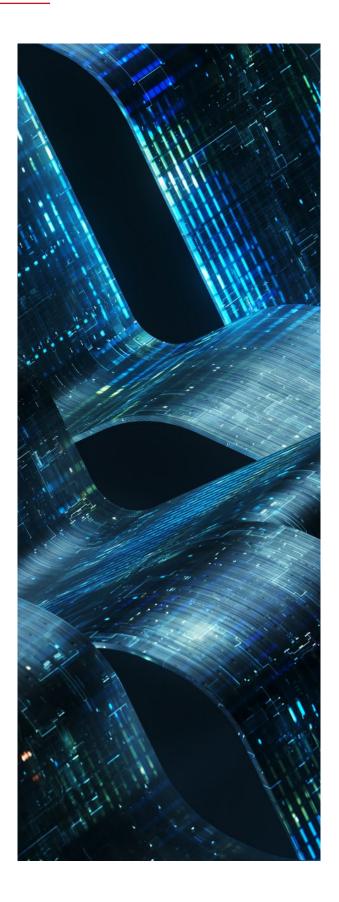
Effective risk management requires a robust data governance framework, over which the board and senior management must exercise critical oversight. Frequent updates and reporting to the board is essential to ensure transparency and accountability in risk data management practices.

Observations

MAS's inspections revealed a considerable variability in the frequency and comprehensiveness of the updates provided to the board regarding data management and data quality. While some banks integrate data risk within their risk appetite statements, which helps to drive data risk reporting and remediation efforts, gaps persist in management reporting. These include insufficient analysis of data quality trends and a lack of granular breakdowns, e.g. by business unit.

Strategic recommendations

- Have a clearly defined data governance framework that outlines
 clear roles and responsibilities, governance meetings, escalations
 hierarchies and processes for maintaining mature data
 governance. Ensure the framework objectives align with those of
 the organization to ensure sponsorship and buy-in at senior levels
- Align data governance metrics with the bank's risk appetite statement and ensure their inclusion in management reports
- Establish a protocol for regular, detailed updates to the board on data management issues and initiatives, including a focus on data quality trends and metrics.



2. Data Management Organization

Banks must establish a central Data Management Office (DMO) or equivalent function with a clear mandate to oversee data governance frameworks, policies, and data management processes across the organization. Clarity of roles and responsibilities within the data management operating model is essential for effective implementation and monitoring of data quality.

Observations

While all the large banks reviewed in the thematic inspections have a central DMO or equivalent function, the MAS paper highlighted gaps in the enforcement of data management standards including a lack of formalized roles and responsibilities and inadequate follow-up of long-outstanding exceptions and checks regarding data quality. In some banks, these gaps are already being addressed through strengthening the DMO mandate as well as improving central policy and control processes.

Strategic recommendations

- DMOs should define data strategies that encompass value-added business outcomes, in addition to regulatory objectives. In doing so, firms should adopt the concept of a data value chain, which describes the end-to-end journey of data. Data capabilities should be enhanced across the value chain to maximize value and minimize cost, as well as to meet regulatory expectations. This more holistic approach can help DMOs to increase the value of data initiatives while also meeting regulatory expectations
- Clearly define and document roles and responsibilities within the DMO and pair this with a comprehensive training curriculum covering data literacy and role-specific training
- Refresh and enhance the enforcement of data policies, standards and guidance, prioritizing capabilities that support the firm's overall data strategy and regulatory imperatives.

DATA VALUE CHAIN

The end-to-end journey of data, from acquisition to analysis, usage, and value generation.











DATA CREATION & SOURCING

DATA COLLECTION & INTEGRATION

DATA PROCESSING & Storage DATA ACCESS, ARCHIVAL & DISPOSAL

DATA ANALYSIS & USAGE

Data lifecycle begins with creation and sourcing of data from internal/external sources Data is collected and consolidated from disparate sources into a single dataset Data is processed and stored in line with security, privacy and recovery standards demonstrating regulatory compliance Data entitlements are managed and enforced, with data archived and disposed of in line with standards Data is analyzed and utilized to address specific business requirements and generate value

3. Data Quality Management and Controls

Implementing a comprehensive data quality management framework is vital to ensure data remains of high quality throughout its lifecycle. This includes establishing robust data quality indicators and scorecards, as well as controls for end-user computing (EUC) tools.

Observations

Although MAS's inspections found that frameworks and processes for data quality are generally in place, gaps remain in the implementation of data quality controls and corrective actions, including in the design of data quality scorecards. Issues identified here include the use of uniform thresholds for all data sets, when it may be better to set some thresholds at different levels in line with the criticality of the data. There were also inconsistent data profiling monitoring practices, which leads to challenges when aggregating data quality results across different business units.

Strategic recommendations

- Define data quality scorecards to include tailored thresholds for different data sets and hold stakeholders accountable for regular reviews and remediation of any failed controls
- Identify the data quality dimensions that are applicable to each organization or business area, and then define a set of controls obligations for each dimension, establishing minimum mandatory standards tailored to the data
- Create inventories and conduct regular assessments around EUC usage and purpose. As part of the inventory, EUCs should have named owners who are accountable for the data processed, produced, and managed
- Apply an EUC-specific control framework with a focus on data quality control checks to ensure the data processed and produced in EUCs is of a consistently high standard.

4. Data Issues Identification and Escalation

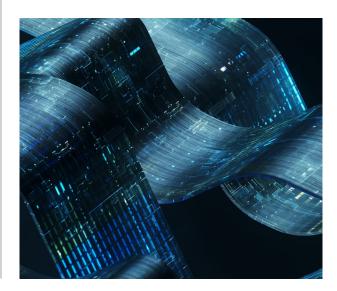
Financial institutions should have systematic processes for identifying, escalating, and remediating data quality issues. The comprehensive documentation of data lineage is critical for tracking the flow of data and investigating the root causes of data issues.

Observations

MAS's inspections highlighted weaknesses in the policies and processes for data issue identification and escalation. Common issues include the absence of severity ratings of data issues, inadequate root cause analysis, and insufficient trend reporting on data issues.

Strategic recommendations

- Embed data lineage maintenance processes so that lineage remains accurate and reflects the current state
- Define clear end-to-end data quality issue management processes that focus on detailed root cause analysis and prioritized remediation (rather than exception management of perceived issues)
- Define a severity rating framework that aligns to your organization's issue management framework, so that issues can be assessed and quantified against key risks
- Implement systematic processes for assigning severity ratings and escalating data issues.



5. Observations Relating to BCBS 239 – Next steps

While supervisors expect the BCBS 239 principles to be applied to bank risk management data, the broader application of BCBS 239 principles can enhance data management across critical bank functions and data domains.

Meanwhile, an independent validation (IV) function is essential for ensuring robust data management standards and practices.

Observations

While banks generally apply BCBS 239 principles to risk management reports, there is potential to expand their application to other critical areas, with some banks applying them to areas such as tax management and financial segment reporting.

Issues identified in connection with applying the BCBS 239 principles include potential conflicts of interest where the IV function reports to an executive also in charge of risk reporting, and reliance on business-as-usual controls without adequate verification.

Strategic recommendations

- Expand the scope of BCBS 239 principles to encompass other critical functions and data domains
- Build data management and governance capabilities with BCBS
 239 principles in mind, however these principles should not
 dictate how capabilities are defined. BCBS 239 principles are
 required to drive basic data governance practices but may not in
 themselves enable organizations to meet enhanced levels of data
 maturity
- IV functions should remain independent and be empowered to critically challenge data management practices and processes.

CONCLUSION

The MAS 2024 thematic inspections shine a light on the current state of data management in the financial services industry. The findings demonstrate that Singapore's larger financial services institutions have successfully defined and implemented data fundamentals from a regulatory lens. Although gaps still exist across data management and governance processes, the banks assessed are taking pro-active remedial action.

Other financial institutions should use the thematic findings from the MAS paper to benchmark their practices and identify their own gaps for remediation.

Moving forwards, financial services firms should take a more holistic approach to enhancing data management practices. In particular, they should work to better align those practices with their business objectives and strategies, and then take action to drive cultural change within their organization.

The goal should be not simply to meet compliance requirements but to enable and promote data-driven decision making at scale.

Capco's Data Strategy & Advisory enables financial institutions to become more data driven through the delivery of scalable and value-focused understanding, management and usage of data. Key offerings include data maturity assessments, data quality assessments and the benchmarking and implementation of intelligent data management. With a wealth of experience across clients and regions, we have developed several accelerators, from easily deployable templates to scalable data operating models.

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Capco, a Wipro company, is a global management and technology consultancy specializing in driving transformation in the energy and financial services industries. Capco operates at the intersection of business and technology by combining innovative thinking with unrivalled industry knowledge to fast-track digital initiatives for banking and payments, capital markets, wealth and asset management, insurance, and the energy sector. Capco's cutting-edge ingenuity is brought to life through its award-winning Be Yourself At Work culture and diverse talent.

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