BCBS 239: Meeting Regulatory Obligations While Optimizing Cost Reductions

The central message of BCBS 239 is simple: Risk information must be made available in a way that is suited to the intended recipient. Therefore, the information must be correct, complete, consistent and timely so that banks can quickly make informed management decisions. And responsibility for compliance lies firmly in the hands of general and senior management.

Are you ready?

Time for a Reality Check

Since the consultations on the BCBS 239 paper in 2012 and the publication of principles in 2013, banks, consultants and software companies have begun making changes to processes, organizational structure, and technology to meet them. Make no mistake: These changes will likely be significant for financial institutions. Even regulatory authorities assume they will require very high levels of investment.

The good news is, these investments will pay for themselves shortly after being made (in the medium term), as they will deliver major advantages for banks like yours, not just the national economy. For example:

- Senior management will have a daily data governance report (a cockpit).
- Banks will have improved data governance.

- Banks will increase confidence in their risk management numbers and in reports and analyses based on them.
- Banks will see a lower total cost of ownership by running their risk function and risk reporting processes according to BCBS 239 requirements.

Data Access and Effective Management: The Foundation of Risk Management

As financial institutions have strived to expand their business and maximize profit, it's a common fact that massive volumes of data get created, but it's not always managed optimally. For many banks, data volumes are overwhelming. To cope, they reduce detail or focus on only the most important or high-priority clients. But this causes them to lose the ability to uncover risk insights hidden deep in detailed data. This data is often stored in different departmental silos, in disconnected data sources, or in Excel spreadsheets scattered across the entire organization.

The result is a messy data situation that makes compliance with regulations such as BCBS 239 unnecessarily difficult. Data is the foundation for everything related to BCBS 239. Put simply, if it's not complete and accurate, then the risk reports provided to decision makers and regulators will be incorrect, defeating the entire objective of BCBS 239.

§sas

THE POWER TO KNOW®

For example, not since the release of the German MaRisk (which defines the minimum requirements for risk management) in 2005 has anyone articulated how properly processed risk data should look. In this case, German regulatory authorities provided a set of regulations[1] that included:

- The "early detection of risks," as well as their complete identification and appropriate representation.
- The "full, unrestricted auditability of processes in internal audits" (see AT4.4 ff.).
- The "full, up-to-date documentation comprehensible to third parties" (see AT6 -1).

The MaRisk also specified the "establishment of appropriate risk management and controlling processes that ensure (a) the identification, (b) the assessment, (c) the control, (d) the monitoring and communication [AT4.1 - 2]" of risks. So in theory, if this requirement had been met by banks, implementing BCBS 239 would have been relatively simple. But in reality, few banks executed properly. In its first paragraph, BCBS 239 clearly states that "the information technology (IT) and data architecture of many banks was not suitable for the comprehensive control of financial risks."

For this reason, the Basel Committee developed 14 principles, of which the first 11 relate directly to banks. (The last three have only an indirect effect on banks, by means of direct requirements for the regulatory authorities.) These principles should initially only apply to the so-called G-SIB (the global, systemically important banks) and D-SIB (the domestic, systemically important banks) specifically, but it's widely believed that they will have indirect effects on all banks.

All requirements must be met — even in times of crisis or corporate restructuring. And no principle may be violated in favor of another. In addition, the principles are to some extent mutually interde-

pendent. For example, principle 7 (accuracy of risk management reports) is interrelated with principle 3 (accuracy and integrity of risk data).

What's Needed: Processes and Priorities

For these reasons, forward-looking finance executives are using innovative software to address data issues and create fundamentally superior risk reporting processes. The ultimate goal is to create an integrated, consistent risk reporting process spanning all banking disciplines that both enables BCBS 239 compliance and furthers the core interest of banks: ensuring sustainable profitability. And as explored in the following sections, today's high-performance technologies can meet this need - and be implemented in a cost-effective way.

Enabling Harmonization and Integration of Risk and Financial Data

Risk and finance data integration, or harmonization, has been a goal for banks for many years. But until now, having a comprehensive, consistent Internal Capital Adequacy Assessment Process (ICAAP) has only been a pipe dream. While harmonization isn't required by regulatory authorities, some financial institutions are exploring it as a way to increase transparency and incorporate risk information into capital planning and management processes. Harmonization also lays the foundation for common data management and standardized data methodologies, which regulatory authorities are increasingly demanding.

Harmonization is certainly desirable, but in reality, bringing the risk and financial data sets together is notoriously difficult. Banks are run in silos; each silo tends to handle data differently. Organizational, process-related, technological and even regulatory barriers add to the complexity. Only new banks starting with a "clean sheet of paper" have the opportunity to set up their IT and data management processes so that close integration of risk and financial data is easy. Older banks have to take it slow, integrating their existing IT solutions and data sources one step at a time, as well as the various valuation and calculation methodologies they use across the organization.

As you select tools to facilitate this integration, keep in mind that the ultimate objective is to facilitate the process of creating knowledge in risk and finance in a way that is transparent, flexible and timely. Events and crises usually demand rapid responses, which means the underlying IT infrastructure and enabling software must be able to give people fast access to trustworthy information,

The 14 principles of BCBS 239 are grouped into four sections:

- Overarching governance and infrastructure (principles 1-2).
- Risk data aggregation capabilities (principles 3-6).
- Risk reporting practices (principles 7-11).
- Supervisory review, tools and cooperation (principles 12-14).

---

[1]   To view the most up-to-date MaRisk report, visit: bundesbank.de/Redaktion/EN/

analysis and insight. This is true even as your data set grows exponentially; the underlying IT must be scaled and designed in such a way that you can always quickly analyze all of your data on demand.

Creating a Unified Data Pool for Consistent Risk Analysis

For nearly all aspects of banking, data management is an ongoing issue. Most financial institutions have implemented an enterprise-wide data warehousing project, but few have yielded expected value. This is no surprise, in part because people often assume - incorrectly - that it's possible to manage data as a uniform, consistent risk view. The fact is, the world is much too complex and volatile for this requirement to be met.

Clearly, current risk data management processes are suboptimal and resources - both human and machine - are not being used optimally to create the reliable and timely data required to support the risk aggregation process. To address this issue, you should initially focus on consolidating risk management to reduce complexity. In addition, be realistic about what can be represented in your risk data model.

And finally, deploy multiple, standardized ways for technical departments to rapidly integrate additional data as it becomes available. As a starting point, data governance should establish a standard, self-descriptive data model for all organizational data spanning all data silos. This model can act as a reference point, or language, for translating data from a spreadsheet (a nonstandard data form locked into the Excel data standard) and a predictive analytics tool, for example.

Establishing Automated, Flexible Risk Reporting

Given that the primary message of BCBS 239 is about making timely, complete and accurate risk information available to people in a way that best suits their needs, effective reporting capabilities are essential. For example, regulatory authorities have specified that within 10 working days of the end of the month, financial institutions must issue a groupwide risk report to their boards. Currently, almost all banks remain a long way from achieving this. Risk reports take far longer than 10 working days to complete - and their processes are set up for quarterly reports at best.

To meet this requirement, banks will need vastly more efficient processes and the right underlying technology. Traditional, static reports won't meet BCBS 239 requirements, as they are not flexible enough. Though OLAP cubes are flexible, they don't allow nonadditive performance figures to be aggregated – a critical step for risk management. OLAP cubes also force you to predefine and build all fixed hierarchy paths that you may need now and in the future,

which limits flexibility. Imagine not being able to eliminate or separate a country like Greece from a European portfolio simply because this option was never built into in the standard cube created for reporting.

What's needed in analytical and visualization tools for BCBS 239 compliance? At the highest level:

- Non-IT staff and nonstatisticians should be able to flexibly model data and understand the interrelationships between data. Making risk comprehensible to a broader user base means that risk insights are more likely to be used in everyday workflows and decisions.
- Users should have access to a high-performance reporting solution so they can quickly explore the interrelationships between millions or billions of individual data records in seconds (for example, for cash flow and time series analysis).
- There should be flexibility for integrating additional data as it becomes available so that previously unknown relationships may be detected. While spreadsheets are often used for this purpose, it comes at a heavy cost: nearly total loss of traceability; dependence on a slow, error-prone, manual process; and no auditability at all.
- Risk managers should be able to explore, assess and comment on risks qualitatively and quantitatively.

In addition, reporting solutions should free risk managers from everyday tasks - particularly in the area of data management - so they have more time for analysis. This will require uniform data procedures for all departments, as well as support for automated standard reporting and flexible ad hoc reporting.

Using Data Governance for Full Data Transparency

Data quality is an ever-present topic for banks. Now, there's broad consensus that in order to be effective, data quality assurance must occur directly at the data collection source: the operational core IT system.

But this approach - while good in theory - can't be implemented in practice. Data is not only entered using operational systems, but it is also constantly modified and adapted. Every change is an opportunity for human error. For example, how often has a mapping in the ETL process not been adapted in the data warehouse? Or, due to an incorrect cell reference in Excel, the data contained errors at the very end?

To establish true data quality, you need data quality dashboards, seals and indicators that reveal the correctness, completeness and consistency of data. These software-powered tools are already a requirement of Basel in BCBS 239 and MaRisk, as they allow banks

to assign a "data quality mark" to reports given to boards. If quality falls below a level set by a board (e.g., 95 percent), the board can demand the creation of a new report.

Ensuring data quality requires close interaction between the business, IT and the risk management department. The best outcomes are possible when technical departments can use profiling to independently and easily gain an overview of the potential data field characteristics, and identify incorrect values and error patterns. In addition, technical departments can use software to create business rules that IT can then apply to data.

Ensuring data quality also assumes that all affected employees define data uniformly throughout the entire bank using consistent metadata. Technical departments have the content-related competence to create business definitions for metadata, and a data glossary so everyone involved in multidisciplinary discussions regarding data, terms and performance figures understand their meanings and interrelationships.

Running Real-Time Simulations in Seconds

Uncertainties are simply a part of the banking industry. To respond to them proactively, banks need to take into account future value fluctuations in transactions, and thus cash flow changes, by running real-time scenarios and stress tests. Scenario analyses and stress tests can help finance executives evaluate transactions and risks given a set of assumptions regarding uncertainty. Forecasted transactions, valuations and cash flows must be simulated according to flexible but traceable rules. For example, to simulate liquidity management scenarios, simulations need to calculate forward liquidity exposures and their direct impact on liquidity reserves (high-quality liquid assets). In general, the more iterations that you can run per transaction, and the more granular the data, the more accurate the forecast becomes.

> Using high-performance technologies, you can run what-if scenarios for transactions not yet completed, such as simulating the effects of new transactions on risk levels.

With high-speed processing of data, analytics and visualizations, you can validate decisions using simulations that illustrate their repercussions on financial portfolios. But to be useful, results must be available very quickly so that they can actually influence the decision-making process. (Depending on the risk type and department, very different requirements exist regarding what time frames must be met.) In addition, you need to make simulation environments available to each individual user. People need their own simulation environment where they can bring together their own data and scenarios in a case-specific way using centrally provided components to get answers to their questions. These environments should also include a standardized view of standard scenarios.

BCBS 239 Compliance: Helping Banks Compete More Effectively

Better, faster risk processes are no longer just about complying with new regulatory requirements; they are essential to competing successfully in today's business environment. Increasingly competitive market situations are forcing finance executives to think about how to industrialize and accelerate their information-gathering processes so they can forecast quickly and accurately - and then plan and act accordingly.

For most organizations, getting to this desired state will be a gradual, evolutionary process. What's essential to success, though, is developing a plan that takes into account the entire value chain for risk reporting. Implementing high-performance analytics for real-time reporting will not add value if the data being analyzed is not current, consistent, complete and high quality. Data integration and management issues must be addressed first so that reports and simulations provide accurate, trustworthy insights for decision making.

To learn more about SAS® risk aggregation capabilities, visit: sas.com/en_us/industry/capital-markets.html

§SAS

THE POWER TO KNOW®