SOLUTION BRIEF

Data: The New Focus for Financial Institutions in 2017 and beyond

BCBS 239 principles put data preparation in the forefront

The financial crisis of 2008 put a powerful spotlight on the weaknesses of data collection and information management in the financial industry, especially for large, complex banks.

There were many reasons for the financial crisis: the sub-prime mortgage boom and subsequent bust, loosening of capital requirements in the early 2000's, extended periods of low interest rates, and the highly complex and unregulated derivatives market. When all those factors were combined, the result was explosive–the near financial collapse of the global economy. In retrospect, the information that pointed to the crisis was there but was not recognized until after the fact. Bank executives and regulators were unable to recognize the underlying risk factors that were present throughout the build-up to the crisis until it was too late. The financial crisis taught regulators and governmental agencies that the only way to avert crisis in the future is to fully and continually measure the underlying risk inherent in the global market. Today, banks are required to monitor their risk and maintain sufficient capital reserves to ensure solvency through times of stress in the market.

How is this achieved? Regulators demand greater transparency into the quality of regulatory reporting and risk calculations that measure the health of banking firms. In 2013, the Basel Committee of Banking Supervision (BCBS) published Regulation 239, a standard that describes robust data aggregation principles for Globally Systemically Important Banks (G-SIBs) and Domestically Systemically Important Banks (D-SIBs). BCBS 239 requires banks to simplify, modernize and fully document their data systems; in effect, to guarantee the accuracy and timeliness of data aggregation at both normal times and times of stress in the economy; while improving risk management practices across the financial sector.

Historically, bank executives rarely thought of data collection and information management as a top priority, especially when compared to sales growth, revenue enhancement, cost containment and product development. Data management was seen as a routine part of the technology organization's operations, rarely getting much attention or interest from the top of the house. Regulatory reporting was largely satisfied by data from the General Ledger, with little need for additional data sources or calculations. Those days are gone.

Today, regulators want more and more data at lower grain and with more accuracy. Federal and international regulators are increasing the frequency of changes to reporting requirements, while banks struggle to keep pace. BCBS 239 is the vanguard of things to come–data is now under a microscope. Banks will spend vast sums of money and deck large numbers of resources against projects to retool data systems and reporting capabilities–but will they be successful? That depends on how banks approach the challenges of BCBS 239–as a waste of time and money or alternatively as a critically important and worthwhile priority.

> “Given the complexity of ongoing, large-scale data infrastructure projects and noted issues in complying with some of the more fundamental principles, it appears that banks still have considerable work ahead of them.”
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> *Progress in adopting the principles for effective risk data aggregation and risk reporting*
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> Bank for International Settlements
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> www.bis.org
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> January 2015

What is BCBS 239 and what does it mean for banks?

BCBS 239 outlines eleven principles that banks must implement to improve risk data aggregation. These principles highlight a new way of managing data from the ground up. These principles outline a comprehensive framework that, if fully adopted, represent a revolutionary set of practices in data management for many, if not all, banks.

Overarching Governance and Infrastructure	Risk Data Aggregation Capabilities	Risk Reporting Practices
• Governance • Data Architecture and IT Architecture	• Accuracy and Integrity • Completeness • Timeliness • Adaptability	• Accuracy • Comprehensiveness • Clarity and Usefulness • Frequency • Distribution

Banks are struggling to comply with BCBS 239 regulatory standards which demand huge changes to the entire lifecycle of data used by banks.

Modern banks employ large numbers of systems, ranging from older mainframe systems to traditional data warehouses to disparate excel spreadsheets to modern Hadoop “data lakes” and everything in between. These systems support multiple business lines, and often do not integrate until very late in the data lifecycle. Data preparation is often performed via manual processes that are poorly documented and often misunderstood not just by management but also by siloed, cross-functional teams. In many cases, these systems use different customer and product identifiers, different aggregation hierarchies and different data formats which then produce disparate results that are not easy to aggregate.

How does Trifacta change the game?

The deadline for compliance with BCBS 239 has come and gone, however banks continue to struggle to upgrade their data systems to the high standards set by the regulation. As all too many risk managers and technology teams know, lofty goals and high dollar projects can take years to complete. In the meantime, regulatory reporting requirements continue to evolve at an increasing pace. To address these challenges, existing solutions must be modernized and associated processes need to be optimized to produce greater efficiency while also reducing cost. So how can a data wrangling solution like Trifacta help?

There are four key capabilities underlying the eleven risk aggregation data principles that can be solved by the Trifacta solution:

1. DataQuality Management
2. Data Blending Diversity
3. Data Response Timeliness
4. Data Lineage

“At Nordea Bank, we are constantly striving to improve the timeliness, accuracy and level of trust in our data to internal and external stakeholders. Trifacta has allowed us to fundamentally reduce time to market and cost of managing data while demonstrably increasing the quality of our data products”

Alasdair Anderson
Executive Vice President of Data Engineering

Nordea Bank

Data Quality Management

No matter how sophisticated a bank's risk and compliance applications may be, data quality issues will undermine even the most robust system. Data quality is a bedrock requirement of risk management, and will nullify even the most highly-tuned risk model. Trifacta allows users to easily perform data discovery (understanding data types, trends and anomalies), data structuring (data formatting) and data cleansing (uncovering missing data pieces and errors).

Imagine a technology manager in a large bank, faced with potentially petabytes of data–unsure of how to proceed–trying to flush out data quality issues in an ocean of data. Where does she start?

Trifacta Wrangling Solutions provide a way to scour through that data–looking for potential sources of data imperfection. Instead of writing endless lines of code–massive SQL queries that run for days–the technology manager and the risk manager can pore through vast swathes of data quickly using Trifacta. Together, they can seek out data quality issues and put together a game plan to remedy systematic data problems. Trifacta puts that power at the tips of their fingers saving days of work.

> Research has shown that 85 percent* of analysts' time is spent hunting for and gathering information, with only 15 percent of their time left to perform the kinds of analytical functions they were hired to do.

https://www.clearpeak.com/data-driven-culture-let-analysts-analyze/

ClearPeak Consulting

April 28, 2016

Data Blending Diversity

Risk data aggregation needs extend over many diverse categories such as on-and-off balance sheet, income statement, transactional and master and reference data. Trifacta's data enriching features (combining multiple data sources and types) replaces manual integration processes with machine learning assisted algorithms for easy connection across multiple sources ranging from traditional data warehouses to Hadoop clusters to Excel files. This solves one of the biggest BCBS 239 challenges: data completeness across multiple business lines and their siloed systems, all of which contain data in disparate formats.

In typical banks, analysts and risk managers spend a disproportionate amount of time sourcing and joining data.

BCBS 239 principles require that data is made available in a timely and accurate fashion, which can be impossible in traditional IT shops. If analysts and technologists are spending their time stitching together these data sources, how can their data aggregation be timely and accurate? Answer–it can't be.

With Trifacta's data enriching features, blending data sources is simplified and streamlined –freeing up analysts to spend their time focused on the critical task of assessing risk.

Reporting Response Timeliness

As every risk analyst knows, time is of the essence when it comes to data aggregation to support risk reporting.

Trifacta helps analysts quickly respond to reporting fire drills by:

- Building repeatable workflows of what is typically a manual process of data preparation
- Allowing for collaboration across teams to share context and knowledge
- Quickly publishing to common data visualization tools such as Tableau and Qlik.

BCBS 239 emphasizes timeliness as a core principle–in both normal circumstances, as well as times of stress. The market can be volatile and data systems must be prepared to keep up with the dynamic and emerging trends. If reporting lags during times of stress, risks can multiply before steps can be taken to address them.

Put yourself in the shoes of a CFO of a multi-national bank and imagine a catastrophic event leading to instability in parts of their market. The last thing any CFO wants to hear is that they must wait days or weeks to understand the impact to the bottom line.

Trifacta ensures that impact analysis and risk models can be generated in short order with great confidence in the fidelity of the data.

Trifacta users report productivity gains of 70% to 90% in blending data together, enabling teams to focus on the core of their activity supplying compliance reporting and analytics.

In addition, with the constant changes of regulations and the adhoc demands for specific analysis, Trifacta offers a solution to respond quickly to any demand and implement changes in hours or days instead of months.

Data Lineage

BCBS 239 principles speak forcefully of the need to trace data from system of record (SOR) to ultimate use. Every cell in a regulatory report spreadsheet should be traceable back to the loans, deposits and other financial instruments that comprise that ultimate aggregation.

Today, most banks find this kind of data audit nearly impossible. Without massive spending on upgrading existing data systems, banks will continue to struggle to comply with data lineage regulatory requirements.

Trifacta's interactive data lineage visualizations provide a remedy to this intractable problem. Trifacta Wrangler Enterprise provides the ability to trace data across the lifecycle from data sourcing, through blending, aggregation and finally reporting. The feature allows users to see downstream dependencies as well as filter on specific types of dependencies.

Data Agility

The rule that "change is the only constant" applies to the practice of risk management. These days, at any moment regulations can be re-interpreted or updated with new requirements or the data itself will evolve and change. The ability to be quick and agile is critical to meeting the evolving landscape of risk aggregation reporting. A solution like Trifacta can bridge the gap between banks' legacy systems and the need for data blending agility in the face of constant change.

Conclusion

At Trifacta we know the BCBS 239 road ahead seems long and daunting. However, we also know that those banks that are successful in meeting the rigorous requirements of risk aggregation reporting will see a positive impact and, indeed, a long-term competitive advantage.

Successful banks will not only experience less regulatory fines, but by being able to quickly and accurately aggregate their complex exposures, they will be better able to make risk decisions. And by using a data wrangling solution like Trifacta they will empower their Risk Managers and Analysts to spend less time manually massaging their data and more time delivering analysis and insights.

Do you want to spend less time preparing your data and more time analyzing it?

Go to trifacta.com to learn more.