

Building Blocks for BCBS 239 Risk Data Aggregation (RDA) Compliance

Abstract

The Basel Committee on Banking Supervision (BCBS) 239¹ Principles for Effective Risk Data Aggregation and Risk Reporting (PERDARR) is integral to compliance with Basel III regulations, especially the provisions related to risk management and timely supervisory intervention, legal entity identifier and additional capital conservation for global systemically important financial institutions (G-SIFIs) intended to protect and promote stability of the global financial system. These principles are an enterprise information management imperative and should be considered as best practices.

PERDARR is a transformational initiative in enterprise information management and implementation of PERDARR would require a cross functional collaborative effort at multiple levels of the organizations.

This paper discusses the various aspects of PERDARR, introduces a framework for PERDARR adoption and provides an implementation approach.

The solution framework encompasses Governance Framework, Records Management, Architecture Review, Metadata Information Management Systems, Master Data Standardization & Centralization, Assurance Mechanisms and Reporting for Executives to enable holistic management of enterprise information system as visualized by PERDARR.

Business need for risk data aggregation

Banks face critical challenges in improving Data Management. Data governance challenges emanate mainly from multiple jurisdictions, multiple systems and multiple group entities. Also, challenges exist in arriving at banking group level exposures and assessing group wide risks in the absence of consolidated data.

While data consolidation or aggregation is imperative for reliable and comprehensive understanding and resolution of risks, it is also necessary because of the interdependence and interoperability of risk, finance and customer analytics models as outlined in Figure 1. Sophisticated modeling techniques for detecting abnormalities, risk based performance measures, risk based pricing and risk based capital

¹ Bank of International Settlement, BCBS 239: Principles for effective risk data aggregation and risk reporting, January 2013

analysis require transaction data, risk data, customer data and financial data thereby underscoring the need for effective risk data aggregation as well as a unified reporting system.

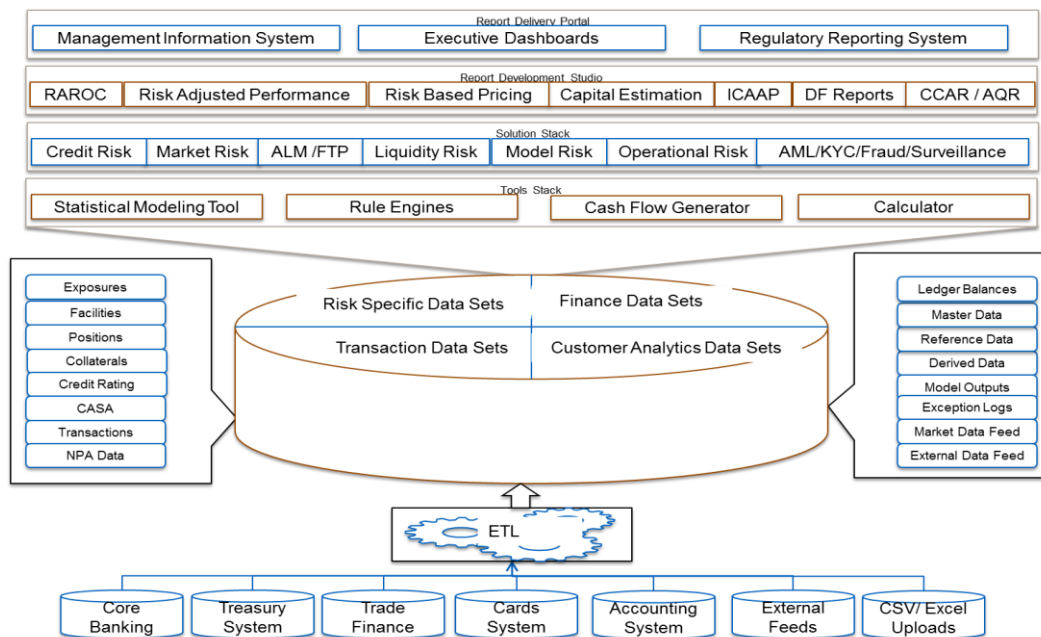


Figure 1: Interdependence of Risk, Finance & Behavioural Analytics (Source: Internal Research)

However, consolidating data from sundry source systems across banking groups for risk analytics and reporting remains a challenge. Moreover, time required for consolidating data is a roadblock in crafting a number of possible time sensitive responses. As banks move to real time consolidation of data, the problem is further compounded by lack of uniformity in data definition leading to differing data interpretation requirements for group entities. Data obtained from various sources are at times irreconcilable, leading to the issue of lack of data integrity.

Additionally, regulators faced challenges in resolving and limiting the damage caused by the financial crisis for want of a consolidated view of data at banking group level. Hence, regulators framed the BCBS 239 PERDARR regulation that requires banking groups to consolidate data and periodically report to regulators.

Data consolidation is an ongoing requirement demanding significant time and effort and hence a perennial drain on resources. Also, a failure to reconcile master data in real time in dependent systems often makes data consolidation difficult which is further compounded by problems in data interpretation due to fragmentation of data definitions.

Consider the following scenarios:

- Scenario 1: A bank needs to assess the exposure to a corporate group, but is unable to do so due to the lack of a unique identifier. As a result, the bank assumes that the exposure is well within the stipulated limit whereas it is actually well above the single party exposure limit.
- Scenario 2: A bank acquires a solution for trade finance and implements it without using enterprise data warehouse (EDW) as data interchange layer on input side. It ends up creating a new customer master for this new application. As a result, the bank will be unable to determine its exposure to a specific customer as two IDs may exist for the same customer.
- Scenario 3: Bank Management is unable to deduce the assets overdue age from the report presented on NPAs at the group level. This has happened as different aging bucket has been followed in different jurisdiction due to prevalent guidelines. Since, practice has been to collate report data and not raw data, this issue has arisen. Reporting data mart was only having the asset classification and not the date on which it became overdue.

Building Blocks for PERDARR Compliance

Framework depicted in figure 2 identifies the key building blocks required for PERDARR compliance.

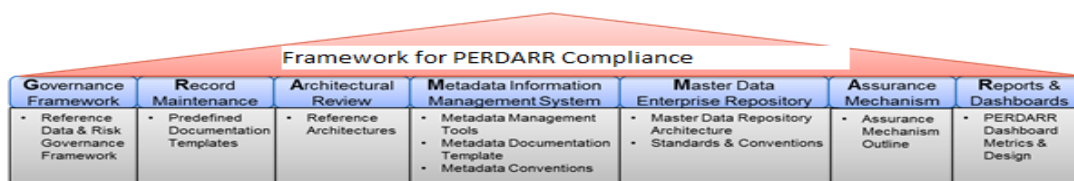


Figure 2: Framework for PERDARR compliance (Source: Internal research)

Components of Framework	Function
Governance Framework	<ul style="list-style-type: none"> • Defines measures covering business, information technology, risk, audit and finance and compliance groups to ensure control over the entire data lifecycle. • Ensures effective change control, Business Continuity Planning & Disaster Recovery (BCP/DR) and management of outsourced processes that are key considerations for any such governance plan.

Record Maintenance	<ul style="list-style-type: none"> • Helps comply with the PERDARR provision that lays stress on developing comprehensive documentation, specifically for standard operating procedures (SOPs) to ensure accurate data aggregation and effective report management. • Maintains records related to service level agreements (SLAs) pertaining to outsourced data processes, risk policies and data policies. • Ensures availability of ready reckoner SOP, data policy, risk policy and SLA would be a useful implement to ensure PERDARR compliance.
Architectural Review	<ul style="list-style-type: none"> • Defines enterprise architecture plans required to harmonize IT solution portfolio across the enterprise so as to be in synch with the requirements of PERDARR. • Comprises reference architecture on risk management, data flow, data systems, IT platform and report systems that can be leveraged for planning an appropriate enterprise architectural plan for ongoing compliance with PERDARR.
Metadata Information Management System	<ul style="list-style-type: none"> • Helps standardize data taxonomies, develop uniform naming conventions and evolve unique identifiers at enterprise level. • Helps to maintain a record of data attributes, data lineages and data latency through aggregation process to help in predicting data accuracy and aggregation timelines. • Supports data reconciliation, change impact traceability and helps adapt the data system to changing requirements
Master Data Enterprise Repository:	<ul style="list-style-type: none"> • Ensures enterprise level master data standardization and centralization need to be implemented at enterprise level. • Ensures uniform understanding and interpretation of such data across the enterprise and also helps determine aggregated exposures and other risk metrics by various dimensions leading to better dimensional analysis.
Assurance Mechanism	<ul style="list-style-type: none"> • Provides mechanism for third party review, board level monitoring as well as supervisory oversight. • Comprises techniques such as mock data aggregation drills, automated reconciliation and inbuilt closed loop feedback mechanism.
Reports and Dashboard	<ul style="list-style-type: none"> • Provides an executive PERDARR dashboard to help the bank's board/senior management to make informed decisions. For example, appropriately aggregated metrics describing data latency and data quality presented in the form of buckets and heat maps.

Approach to PERDARR Program Implementation

PERDARR programs are expected to be large, complex, cross functional and transformational initiatives likely to run for years. The following approach is proposed for effective implementation:

PERDARR Program Organization: PERDARR has wide ramifications for organizations and may also turn out to be a transformational program with cross functional implications entailing process reengineering, IT and data system upgrades and replacements. Based on these requirements, Figure 3 highlights an appropriate program management organization for PERDARR compliance.

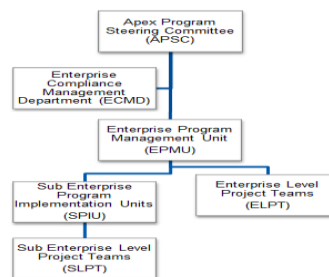


Figure 3: PERDARR Program Organization (Source: Internal Research)

It is recommended to have an interdepartmental Apex Program Steering Committee (APSC) supported by Enterprise Compliance Management Department (ECMD).

An interdepartmental Enterprise Program Management Unit (EPMU) should be set up to oversee Enterprise Level Project Teams (EPLT) and coordinate with Sub Enterprise Level Program Implementation Unit (SPIU) after comprehensive process and activity mapping undertaken by EPMU. SPIU can set up Sub Enterprise Level Project Teams (SLPT) to execute PERDARR program implementation.

PERDARR Work Stream Planning Approach:

This involves gap assessment at micro level in relation to PERDARR requirements. Gap assessment needs to be undertaken to identify gaps in: i) Risk management processes ii) Reports iii) Report systems iv) Report processes v) Data systems vi) Data processes vii) Metadata viii) IT systems ix) Business processes pertaining to risk data x) Governance framework. Given the comprehensive requirements, SPIUs should use predefined templates as approved by program management units for conducting gap assessment to maintain uniformity and facilitate subsequent analysis of findings. Identified gaps should be documented to enable the enterprise program management unit to identify the work streams and draw up an appropriate roadmap for PERDARR compliance. Thereafter, such

work streams must be assigned to project units at enterprise level and sub enterprise levels for execution.

PERDARR Program Work Stream Allocation:

Figure 4 depicts a typical distribution of PERDARR program work streams between various units and teams. As described, the enterprise compliance management department will undertake mapping of

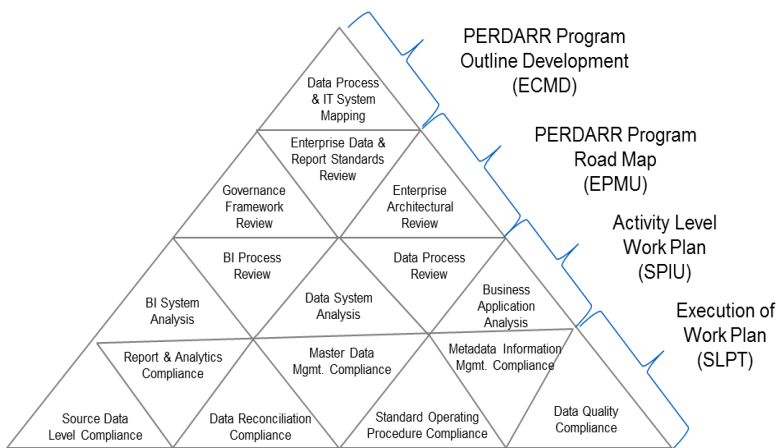


Figure 4: PERDARR Work Stream Allocation (Source: Internal Research)

concerned processes, systems and stakeholders for PERDARR program implementation to facilitate constitution of program implementation units and teams. EPMU should lay down standards to ensure enterprise-wide uniformity. EPMU should also undertake governance framework review and enterprise architecture review for Data and IT systems. SPIU should conduct gap

assessment and execute remedial measures for processes and systems in conformity with the outline prepared by EPMU. Several sub level project teams need to be constituted under EPMU and SPIU to undertake report and data level gap analysis and remediation.

Conclusion

Banking groups need to minimize their data related woes on an ongoing basis. Risk Data Aggregation offers a strategic opportunity for banks to address perennial data management challenges. The proposed framework and the implementation approach proposed in this paper would help identify the essential building blocks and expeditiously roll out a PERDARR program.

About the authors

Dwarika Nath Mishra, an MBA and B Tech, has wide ranging experience spanning 16 years across Manufacturing, Software, Investment Banking, Finance & Insurance sectors in leadership positions. Has been a risk management consultant and risk solution architect of 10 year standing, during which he has opportunity to architect multiple Risk Management platforms, namely D'Risk and MORSE among a number of other specific purpose solutions while working with different organizations. He has also managed complex Basel II implementation program involving multiple banks, some having presence in multiple jurisdictions. He is currently working as a Risk Management Consultant with TCS BFS Risk Practice.

Vijayaraghavan Venkatraman (Vijay) is a Global Lead for Tata Consultancy Services Ltd (TCS Ltd) Banking Risk Management Practice. He has approx 16 years of experience in the IT industry with focus on banking, risk management and regulatory compliance. Vijay has worked in several global risk and compliance engagements for various banking clients. In his current role, his key responsibilities include offering development, thought leadership initiatives, pre-sales support, Go to Market strategy, enhance domain competency and consulting. Vijay holds a master's degree in business administration and a bachelor's degree in electrical and electronics engineering. He is a GARP certified Financial Risk Manager (FRM), holds CFA charter from ICFAI and a Project Management Professional (PMP). Vijay has co-authored White papers on Basel & Enterprise Risk Management architecture.

A.N. Jayaraman (ANJ) is the Head of the Center of Excellence for the BFS risk and compliance practice in Tata Consultancy Services (TCS). He has over 17 years of experience in the banking industry and over nine years of experience in the IT industry focusing on banking, risk management, assurance and compliance. His current responsibilities include management of the CoE which involves the activities of solution/offering development, pre-sales, and consulting in the risk management space. He is a certified associate of the Indian Institute of Bankers and a graduate in commerce.