The views expressed today are those of the speakers, and do not necessarily represent the views of the Federal Reserve Bank of New York or members of the Board of Governors.
Challenges & Purposes for Regulatory Reporting

Kenneth Lamar

Data Collections Support the Mission of the Federal Reserve System

- Data Collected to Support the Core Mission of the Federal Reserve System Including:
  - Bank Supervision
  - Monetary Policy
  - Compliance
  - International Activities
  - Financial Stability
  - Economic Measurement
Collected Data Characteristics

- Collected Data
  - Highly Defined
  - Recurring

Purposes of Reports

- Many Reports Contribute to Monitoring of the Financial System and, Indirectly, the Economy. Examples:
  - Wide Range of Monetary and Credit Reports
  - Flows of Funds Domestically; International Flows of Funds
  - Detecting Structural Change, Innovation in the Financial System
Purposes of Reports

- Condition of Individual Institutions
  - Regulatory Capital
  - Exposure to Assets Classes and Sectors
  - Liquidity
  - Sources of Income

- Systemic and Market Measures

- Many Regulatory and Financial Reports Assist in Monitoring Key Points of Risk for the Financial System -- Examples:
  - Real Estate Financing
  - Foreign Exchange Activity
  - Derivatives
  - Country Exposure
Data Types and Uses

- Data are Often Combined from Different Sources to Compile Analytical Output
  - Examples:
    - Bank Supervision Combines Reported Financial and Organization Structure Data with Examination Data
    - Cross Border Securities Data Uses Collected Data with Vendor Data for Consistent Valuation

Banking Structure Reports

- FR Y 6/FR Y 7 and the Associated FR Y 10 Supports these Objectives by Providing the Supporting Information for the Financial Data and Associated Analysis such as:
  - Location of Assets and Liabilities
  - Types of Offices
    - Subsidiaries, Branches
  - Ultimate Parent Company
  - Activity (Business Lines)
  - Functional Regulator
- These Data Determine Who Should File What Reports (Stand Alone Reports)
- Helps Determine the Complexity of the Organization
Collected Data Result Sharing

- Data Aggregation Often Shared
  - UBPR
  - BIS Databank
  - BIS Derivative Statistics (Including Market Concentration)
  - Primary Dealer Market Share
  - F/X Turnover Statistics

Collected Data -- Design Issue

- Comparability/Consistently Critical
  - Requires Clear Data Concepts and Data Definitions
  - Allows for Aggregations
  - Often Follows Statistical Conventions
    - For Example, BIS Consolidated Banking Statistics
- Data Definition Process Add to Implementation Time
  - Data Users
  - Data Providers
- Focus on Standardization of Definition
To Meet Data Users Needs Regulatory Reports Require:

- Different Consolidation Rules
  - Domestic
  - Consolidated
  - Stand Alone

- Clear Data Presentation
  - Well Defined

Materiality Issues

Regulatory Reporting -- Design Issues

- Different Reports Have Different Consolidation Rules
- This is Based on How the Data is Used
- For Example:
  - Monetary Policy Reports Focus Only On U.S. Offices
  - Reports That Cover Banking or Broad Market Risk are Consolidated Globally
  - Risk Reports Covering Material Entities
Regulatory Reporting -- Data Presentation

- Report Items All Have Specific Definitions
  - U.S. GAAP Based
  - But Specific Presentation Required
    - Insures Comparability and Understanding by Data Users
  - Requires Understanding By Corporate and Business Lines
    - Education and Communication Key Aspect For All Report Preparers

- Data Splits are Burdensome
- These are Critical to Data Users
  - Examples:
    - Loan Classifications
    - Deposit Ownership
    - Instrument Type
- Often Have Other Implications (Capital or Other Regulatory Impact)
  - Key Reason For Corporate Reporting Staff to Be Involved in New Product Development and Accounting Policy
Regulatory Reporting -- Materiality Issues

- All Data Series Are Analyzed on an Aggregated Basis
- Changes in Data Are Often Driven By a Few Large Reporters
- The Review of Regulatory Reports Process Should Focus On the Entire Report and Not Just “Material Items”

Current State – Challenges and Demands

Kenneth Lamar
Regulatory Reporting Environment

- Has been:
  - Static
  - Incremental changes occurring over long periods of time
- Now
  - Increasing data demands
  - Implementation time quicker
- Demands results in staffing and IT resource challenge

Key Question

- Strategic issues to consider:
  - What reference data will be needed?
  - How will risk and accounting systems be used as a source for data collections?
  - How will the global LEI affect financial and regulatory reporting?
  - How can data definitions be standardized more effectively?
The outcome of these issues make the long-standing principles more applicable to maintain data quality:

- Ensure high quality reference data
- Place responsibility for data quality enterprise-wide
- Emphasis on quality assurance as part of the data preparation process
- Ensure enterprise-wide data infrastructures converge with business line infrastructures (when appropriate)

Four Key Principles

Good Reference Data

- Foundation of data reporting
- Source of the most frequent and material errors
Good Reference Data

- Mitigants
  - Business lines need to understand the reference data definitions
  - One source for reference data should exist
  - A central reference data base should be seen as strategic investment and leverage across the firm
  - Reference data should be continually validated

Data Quality Across Business Lines

- Accountability is critical to insuring high quality data
- The firm’s Accountability Policy should be:
  - Measurable and actionable
  - Enforceable at the business line level
- Dictated by the firm’s culture and overall risk management framework
- Quality of training of the business line a key success criteria
  - Outlines reporting requirements, processes, and procedures
  - Tracking and re-certification key practice
Quality Assurance Process

- Robust quality assurance process most accompany an effective data collection process
- Effective QA process starts with efficient compilation process
- Analytical tools a must
- Effective staff resources:
  - Numbers and skill level
  - Knowledge of product business lines
  - Professional skepticism
  - Documentation from the analysis important output for the firm
- Independent party review is an effective quality process
  - Internal audit, Quality Assurance unit or combination of both

Quality Assurance Process

- Point of Origin
  - Reporting Errors Often Start at the Inception of Transactions
- Transaction Testing Effective In Uncovering Gaps:
  - Data Quality
  - Internal Controls
Quality Assurance Process

- Report Reconciliation Key Control
  - FR Y 9C to Public Financial Statements
  - FR Y 9C to FR Y 14
- Documenting Differences and Analyzing Differences Over Time

Data Infrastructure

- Close alignment between business lines and enterprise wide data infrastructure:
  - Improves data quality
  - Increases data availability
  - Increases data standardization across the enterprise
Closing Thoughts

- There are a lot of data initiatives occurring
- Collecting and validating is difficult and reaches all parts of the institution
- Data collection and quality improvements require both a tactical and strategic outlook over a multi-year time line.

High Quality Reference Data

Patricia Selvaggi
Good Reference Data

- Foundation of data reporting
  - Legal Entities
  - Product
  - Customer

- Source of the most frequent and material errors

Good Reference Data

- Mitigants

  - A single source for reference data should exist
  - A central reference data base should be seen as strategic investment and leverage across the firm
Best Practices

- General Ledger (G/L)
  - Account titles and definitions
  - Governance: New or closed G/L account approval process
  - Validation & Review
  - Not just a Finance Issue

General Ledger

Best Practices

G/L accounts should contain clear titles, comprehensive account definitions and describe the nature of the account.

New G/L accounts should be in compliance with regulatory reporting instructions

- Correctly mapped on regulatory reports
- The account opening process should be well documented
General Ledger

- G/L account titles and definitions
  - Unclear or misleading
  - Missing
- New G/L account review process

Example: G/L CHART OF ACCOUNTS

Cash and Due from Banks
Reserves with Federal Reserve Bank
Due from commercial banks in the U.S.
Due from banks in foreign countries
Deferred debits-DDA related
Securities
U.S. Treasury securities-HTM
U.S. Government sponsored agencies-AFS
MBS-Pass through securities: guaranteed by GNMA-trading
Deposits
Demand deposits-commercial banks in the U.S.
Demand deposits-IPC
NOW
Stockholders’ Equity
Common stock
Additional paid-in-capital (Surplus)
Retained earnings (Undivided profits)
**Example**

**G/L DESCRIPTION OF ACCOUNT**

**Section**  
Assets

**Account name/#:** Deferred Debits-DDA related; 006-xxx

**Applicable to:** Demand deposits in domestic offices

**Description**

Deferred debits represent cash items in Bank’s possession drawn on Bank’s demand deposit accounts which cannot be charged to the proper account on the day received. The item may have been received late or with insufficient/inaccurate information to determine the proper account. Although the work cannot be processed to the proper G/L account on the day received, it will be recorded on the books of the Bank by the use of a holding account. The following day, the item will be debited to the customer’s demand deposit account.

**General Ledger**

**Example**

**G/L DESCRIPTION OF ACCOUNT**

**Section**  
Assets

**Account name/#:** Deferred Debits-DDA related; 006-xxx

**Applicable to:** Demand deposits in domestic offices

**Accounting Entries**

Debit: Deferred debits-DDA related 006-xxx  
Credit: Various accounts

All deferred entries should be reversed on the following business day. Bank policy dictates items in deferred accounts may not be rolled over a fourth day. Any deferred item that cannot be processed to the proper account at the end of the third business day must be charged off as follows:

Debit: Difference and Fine-Debit, Account 466-xxx (Expense)  
Credit: Deferred Debits-DDA related 006-xxx
Internal Control Guidelines

Diane Iacopelli

- Definition
  - Methods and procedures to provide reasonable assurance for the accuracy of regulatory reports

- 2002 Sarbanes-Oxley Act, Section 404
  - Internal controls over financial reporting

- 2013 COSO Framework
  - Expanded to reflect changes and greater complexities of business.
### Internal Control Guidelines

<table>
<thead>
<tr>
<th>Control Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preventive</strong></td>
<td>Policies and procedures to prevent errors. Normally applied to individual transactions (customer information files, FX, interest rate swaps, etc.)</td>
</tr>
<tr>
<td><strong>Detective</strong></td>
<td>Policies and procedures designed to detect and correct errors that might preclude the achievement of the relevant process. Generally applied more broadly (review and analysis of regulatory reports).</td>
</tr>
</tbody>
</table>

### Internal Control Guidelines

- Control Principles
  - Review and Approval
  - Interpretation of Instructions
  - Regulatory Reporting Committee
  - Documentation and Reconciliation
  - Training Program
  - Accounting
  - Record Retention
Internal Control Guidelines

- Review and Approval
  - Management review and approval of regulatory reports

  *As a result of an inadequate review and approval process, errors may be overlooked.*

  **Best Practice**
  A review process of reports should be performed by senior level management to detect potential problems with data.

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Internal Control Guidelines

- Interpretation of regulatory reporting instructions
  - Understanding of instructions
    - Relationship between regulatory reports and public financial statements

  *Limited understanding of regulatory reporting instructions and lack of reconciliation between reports/schedules result in inaccurate regulatory reports.*
**Internal Control Guidelines**

- Interpretation of regulatory reporting instructions

  **Best Practices**
  - Review the report specifications for all regulatory reports and compare to regulatory reporting instructions to ensure specifications are in compliance with the instructions.
  - Obtain clarification of instructions in writing.
  - Attend FRB seminars.

**Internal Control Guidelines**

- **Regulatory Reporting Committee**
  - Cross functional committee that includes regulatory reporting staff, controllers, internal audit, risk, compliance, finance, and operations (data providers)
  - Quarterly meeting to review regulatory reports, discuss issues identified during reconciliation and review of reports, and address changes needed to workflow.

  **Best Practices**
  - A Regulatory Reporting Committee improves communication and management awareness of regulatory reporting issues.
Documentation and Reconciliation

Procedure Manual

A lack of written or inaccurate procedures could result in inconsistent practices among employees and inaccurate and unreliable reports.

Best Practices

The procedure manual should include:

1. Procedures for all regulatory reports;
2. Adequate descriptions for all adjustments; and
3. Process to review new/complex banking products from regulatory reporting perspective.

Internal Control Guidelines

- Documentation and Reconciliation
  - Regulatory Reporting Policy Manual
    - Provides guidelines and overall framework to ensure uniformity and standardization

Inadequate policies could result in inconsistent practices leading to inaccurate regulatory reports.
Documentation and Reconciliation

- Reconciliation
  - Process to compare financial data to regulatory reporting to identify inconsistencies in reporting.

*Lack of reconciliation procedures can result in data quality issues that go undetected and resulting in regulatory reporting errors.*

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Internal Control Guidelines

- Training program
  - Regulatory reporting staff
  - Staff across functional areas responsible for providing regulatory reporting information
Inadequate controls result in misstated regulatory reports and inaccurate and unreliable financial records.

**Best Practices**
Employees are properly trained on performing accounting functions.
Automated accounting systems have adequate input and processing controls.

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**Internal Control Guidelines**

- Accounting
  - Accurate posting
  - Adequate account review and reconciliation

  *Inadequate controls result in misstated regulatory reports and inaccurate and unreliable financial records.*

**Internal Control Guidelines**

- Record Retention
  - Comply with internal policies and procedures

  *Inadequate policies could result in inconsistent practices leading to inaccurate regulatory reports.*
Data Integrity Issues

- Data integrity issues
  - Inter-company (related party transactions)
  - Systems integration/interface issues
  - Reconciliations
  - Incorrect use of G/L accounts by business lines or cost centers

**Best Practice**
Management should ensure the integrity of information by enforcing accountability.

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Internal Audit

Diane Iacopelli
Internal Audit

- Working with auditors is critical
  - Obtain valuable feedback
  - Improve controls

Internal Audit

Improving Communication with Auditors

- Communicate and coordinate with the Auditors
  - Appoint an Audit Coordinator:
    - Meet with the Audit Team
    - Compile the information requested
    - Discuss priorities with staff
**Internal Audit**

**Internal Audit Adds Value to Regulatory Reporting**

- Ensure senior management is aware of reporting risks not covered by the audit plan
- Add value to regulatory reporting
  - Evaluate accuracy of reports by reducing the risk of misreporting (transaction testing)
  - Effectiveness of the controls over the reporting process

**Internal Audit**

**Internal Audit Adds Value to Regulatory Reporting**

- Continued education and training
- Maintain a dialogue with supervisors
- Follow-up on prior findings and recommendations
Internal Audit

- “Management self-assessments” or “control self-assessments”
  - Internal Audit involvement
  - Frequency of regulatory reporting audits

Accountability

Henry Castillo
Objectives

- Accountability
- Data Ownership
- Corrective Action

Accountability

- Collaborate to achieve high quality reporting
- Create a culture of accountability
- Establish Accountability Policy, including enforcement and monitoring
### Accountability

- Firm-wide awareness and involvement in the reporting process
- Regulatory Reporting
- Accounting Policy
- Operations
- Information Technology
- Business lines

### Data Ownership

- Individuals responsible for regulatory reporting data may not be well versed in regulatory reporting requirements

**Best Practice**
Regulatory reporting management should distribute roles and responsibilities to data owners.
Data Ownership

- Individuals responsible for regulatory reporting data
  - Accountable for data integrity provided
  - Responsible for analyses

Corrective Action

- Incorrect reporting by businesses and data owners

Best Practices
Create an escalation process to identify and resolve issues in a timely manner.

Document all incorrect and inconsistent reporting.

Create an accountability model to enforce compliance with requirements.
Corrective Action

- Establish a system to ensure accountability
  - Timeframe
  - Initiatives to resolve the problem
  - Short and long-term action plan(s)
  - Individual(s) responsible
  - Consequences

- Meet with senior management regularly

Quality Assurance

Henry Castillo
Quality Assurance

- The objectives of Quality Assurance (QA) processes include the validation and enhancement of regulatory reporting data integrity.
- QA effectiveness is directly linked with:
  - Technical and business skill sets of QA staff
  - Top-down corporate and business executive management understanding of, and commitment to, QA over the long term

Quality Assurance

- Comprehensiveness of QA review procedures – scope/timing/granularity/end-to-end/cross-report impacts
- Reporting forums – reports/committees/metrics
- QA organization reporting lines
- Governance and consequences to identified weaknesses/ability to enforce corrective actions
- Alignment/coordination of scope with Internal Audit, as appropriate
**Quality Assurance Process**

**Best Practices**

- QA staff are independent of corporate regulatory reporting management
- QA staff are technically competent and possess business acumen
- QA review procedures are standardized across processes and customized as necessary
- Appropriate reporting mechanisms are in place to enforce fixes to identified errors and weaknesses
Data Infrastructure

Anthony Guglielmo

Objectives

- Information system controls
- Data collection process
- Systems’ interface and legacy systems
- Data integrity
- Manual adjustments
- Early detection system
- Systems overview
- Transaction Level Data Base (Data Warehouse)
- Systems overview
- Challenges
**Information System Controls**

- **General Control** – Systems (e.g., regulatory reporting, G/L) are appropriately implemented, maintained and operated and only authorized changes are made to the system.

- **Application Control** – Specific application control, ensures that transactions are recorded and are processed completely, accurately and timely.

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**Information System Controls**

- Staff should have an adequate knowledge of regulatory reporting systems or software.

- Backup or succession plan should be in place for key personnel.

- New specifications or new systems should be formally reviewed, tested and comply with new requirements and controls.
Information System Controls

- New software or database package should meet all reporting requirements
- The software package should include adequate security and control features and it should be on the network with restricted access

Data Collection Process

- Establish a standardized data collection process with sufficient quality controls and accountability for data
- A process lacking standardization with high level of manual intervention is susceptible to significant errors.
Data Collection Process

Best Practices
- Automate and stream-line the process
- Set and enforce regulatory reporting standards
- Establish a process to monitor the accuracy of information submitted for regulatory report
- Implement controls over the reporting process

Granularity of information required for regulatory reporting is not always available

Best Practices
- Design a system/process where sufficient level of detail is available
- Design a system with an option to accommodate future changes (Sustainability & Flexibility)
Manual Collection Process

- The information necessary to prepare regulatory reports is collected manually

Best Practice
Establish sufficient internal controls to compensate for the weaknesses inherent in the manual data collection processes

Manual Adjustments

- Adjustments applied to the system generated information must contain sufficient details concerning the nature of the adjustment

Best Practices
- Review adjustments to determine the cost-benefit of automating adjustments
- Develop a centralized facility to streamline, review and control manual aspects of the reporting process with a direct feed to the Reporting Application
**Systems Interface**

- Inadequate systems interface (e.g., G/L, subsystems and regulatory reporting system)
- Multiple systems to capture the same information increases processing time, maintenance and support

**Best Practices**

- Consistent reporting of financial products from a single source or few sources
- Reduce month-end closing period and eliminate or minimize reconciliation among systems

**Data Integrity**

**Best Practices**

- Implement sufficient controls to ensure information captured by subsystems is accurate
- Review subsystems and identify and resolve any programming issues
- Ensure the integrity of the information housed by subsystems prior to pursuing an automated solution
- Develop mechanism to maintain integrity of the system (periodic review, training and support)
Coding of Customer Information Files (CIFs) and general report mappings

Best Practices
- Review the accuracy of data and identify discrepancies in coding on a regular basis.
- Improve methodology for coding of new customers/financial products

Incorrect assignment of risk characteristics
- Market Risk
- Credit
- Domicile

Incorrect assignment of loan classification

Incorrect data elements or reference data in sub-ledger systems
**Early Detection System**

- Analysis can detect potential issues with reporting

**Best Practice**
Implement an early detection system for a business related analysis and detection of potential errors and inconsistencies

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**Systems Overview**

- **DUE FROM**
- **LOANS**
- **DEPOSITS**
- **DERIVATIVE PRODUCTS**

**Global GL**

**Data Warehouse**

**General Ledger Standards (Editing, Routing, Translating, Reconciling)**

**Standard Reporting/Extract Tools**

- **SEC Reporting**
- **Management Reporting**
- **Regulatory Reporting**
- **Tax Reporting**
Transaction Level Data Base

- Consolidated source for bank’s subsystems
- Allows the firm to move from a manual to an automated process
- Required data are centrally stored
- Drill-down capability
- Granular information can be easily extracted

Controlled and Unconsolidated Entities

- Challenges in reporting controlled and unconsolidated entities meeting filing requirements for nonbank legal entity reporting
- Although entities are controlled based on the Regulation Y definition, the ability to influence timely reporting is a challenge

Best Practice
Develop a single reporting platform, including incorporating firm’s general ledger chart of accounts for non-consolidated controlled nonbank entities
“Since the financial crisis and the passage of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), supervisory policies for the largest firms have become increasingly more data-driven, horizontal, and centrally coordinated.”

– Governor Daniel K. Tarullo(1)

“Considerable work is needed, first, to develop better data on assets under management, liquidity, and leverage, in order to fill the information gaps that have concerned so many academics and policy analysts.” – Governor Daniel K. Tarullo

Common Data Challenges for Reporters

- Aligning Data Across Different Business Lines
- Maintaining Data Quality in an Evolving Regulatory Landscape
- Addressing Different Accounting and Valuation Requirements
Legal Entity Reporting
- Regulatory reporting are based on legal entities
- This may differ from internal business line controls and measurement
- The greater the complexity of an institution, the greater the difficulty in reporting by legal entity
- Availability of reporting details for material legal entities versus smaller entities

Evolving regulatory reporting landscape
- Flexibility to adapt to changes
- Data elements at varying levels of detail across report forms
- Domestic requirements and international requirements
Common Data Challenges for Reporters – Data Elements Across Reports

- Securities
  - FR Y-9C: Broad categories of AFS/HTM securities [Schedule HC-B]
  - FR Y-14-Q: Securities at CUSIP-level [securities 1 template], as well as broad categories of AFS/HTM securities [securities 2 template]
  - FR 2052B: Investment securities categorized by type and risk weight
  - FR 2052A: Securities categorized by HQLA/non-HQLA by risk weight in some instances and by type in more granularity than 2052B
  - TIC: Different securities classes
  - SHC(A): Security by Security detail, with information of CUSIP, type of holder, type of issuer, type of owner, type of securities, maturity, price information, currency denomination, fair value, security description, # of shares held

Common Data Challenges for Reporters

- Data Splits
  - Critical to Data Users and ensuring comparability and measurement
  - Burdensome
Common Data Challenges for Reporters

- Consolidation rules are driven by the use of the data
  - Monetary Policy reports focus on U.S. offices
  - Reports that cover broad market risk or banking are consolidated globally

Best Practices

- Data should be thoroughly reviewed by regulatory management and business lines before submission
- Include ability to conduct analysis in regulatory reporting systems
- Recognize importance of structure reporting as foundation for regulatory reporting – data determines who should file what reports
**Best Practices**

- **Reconciliation**
  - Differences among reports should be analyzed, explained, and clearly documented – differences should be analyzed over time
  - Regulatory Reports
  - External Reports (SEC, GAAP, IFRS)
  - “Like” data collected internally
  - Policies and account and product descriptions should be clear and readily available to preparers

- **Reasonableness**
  - Ensure data reflect current business activity
  - Mergers, Acquisitions or Sales
  - Earnings Announcements / Accounting Changes
  - Document drivers of unusual or significant changes or trends
  - Analyze data at the legal entity and business level
  - Anticipate questions in advance
  - Connecting reporting variances over time with business / strategic activity
Best Practices: Connecting reporting variances over time with business / strategic activity

- Review how data are collected periodically
- Data are only as good as their source
- Leverage business solutions for regulatory reporting
Best Practices

- Ensure regulatory reporting implications are clear to business lines
- Business areas understand regulatory reporting requirements
- Open communication and partnership with business lines, accounting policy, audit, and regulatory reporting area
- Business involvement in regulatory reporting data quality

Best Practices

- Communicate (Ask & Learn)
  - Ensure open communication lines with regulators
  - Stay apprised on accounting and regulatory changes
  - Document complex issues and regulatory reporting of new/complex products
  - Explain notable reporting changes
Questions & Answers