Banking Risk and Finance Management on Quality Data

Presentation by **Petr Novák, Jan Muchna**

Confidential information for the sole benefit and use of PwC's client.

pwc

Context

European banks are obliged to report about their financial and risk situation to many **European and local regulators**. In the last decades, the regulators were requesting **new and new reports** and modified and enlarged the existing ones. Banks usually responded by creating new teams or at least new positions who specifically prepare the needed data and deliver those reports.

At the same time, banks have to monitor their **internal business and financial performance and follow the risks**. So, other reports and data were prepared for this use.

As a result, on one hand, banks are **challenged by the regulators** on the quality of the reports and, not only individually, but also on the mutual consistency of reports. And in addition, evidence on the correctness of data preparation for the reporting has to be provided.

On the other hand, banks are **challenged by their shareholders** on the efficiency of supporting functions, where also Finance and Risk departments belong.

PwC is aware of those challenges and offers a way how to resolve them and satisfy regulators and shareholders at the same time.

Petr Novák
Director

Jan Muchna
Manager

Reports in scope

Risk and finance reports which are addressed by the solution are in the first line those coming from EU. Then the national level is added. Finally, internal reporting completes the delivery.
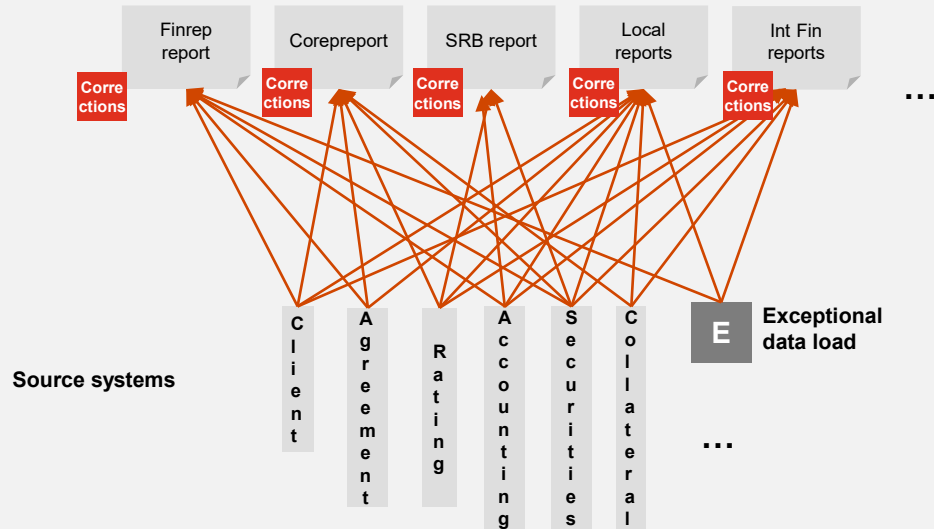
Finance

FINREP	Consolidated Financial Reporting framework for supervisory purposes
IFRS	International Financial Reporting Standards
BSI	Balance sheet items
MIR	Monetary Financial Institution Interest Rate Statistics
EMIR	Reporting of all derivatives to Trade Repositories
SHS	Statistics on holdings of securities
Internal financial performance reporting	Internal financial performance of the bank in product, client and sales force dimensions

Risk

COREP	Common reporting framework to report solvency ratio to supervisory authorities under the Capital Requirements Directive
Anacredit	Information on individual bank loans
SRB	Single resolution board reportng
IRB	Reporting the validation results of internal models
AQR	Asset quality review
EBA benchmarking	Benchmarking of credit risk, market risk and IFRS9 models
EBA stress testing	Assess the resilience of financial institutions to adverse market developments
BCBS239	Principles for effective risk data aggregation and risk reporting
Internal risk reporting	Internal reporting of risks to the bank management

Usual Reporting Architecture

Source systems

Finrep report · Corepreport · SRB report · Local reports · Int Fin reports · Corrections · Client · Agreement · Rating · Accounting · Securities · Collateral · **E** Exceptional data load

Banks load the source data needed for **each report from source systems**. Similar data must be identified in the source multiple times, extracted and loaded to the report. If any problem arises in the source, all the reports are affected.

Or in the better situation, banks have **enterprise data warehouse** storing the source data in a common database. Then the data is already loaded here, but the identification of the data for reporting in the database must be realized, too.

Source data has **unstable quality** and therefore the reporting quality is directly hit or reporting Teams have to implement their quality controls.

Data corrections are executed for each report.

All reporting teams must be familiar with **data of source systems**, monitor **changes in source systems** and adapt reporting solution after any change.
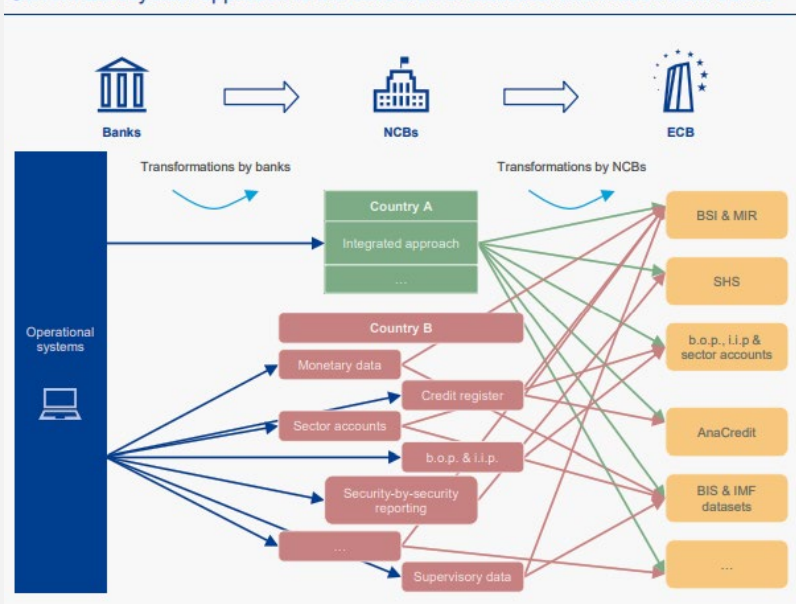
ECB integrated reporting framework

ECB has the intention to help the bank with the problem by introducing integrated reporting framework, but covering only some the bank reporting obligations. The framework is expected to go live in 2027.
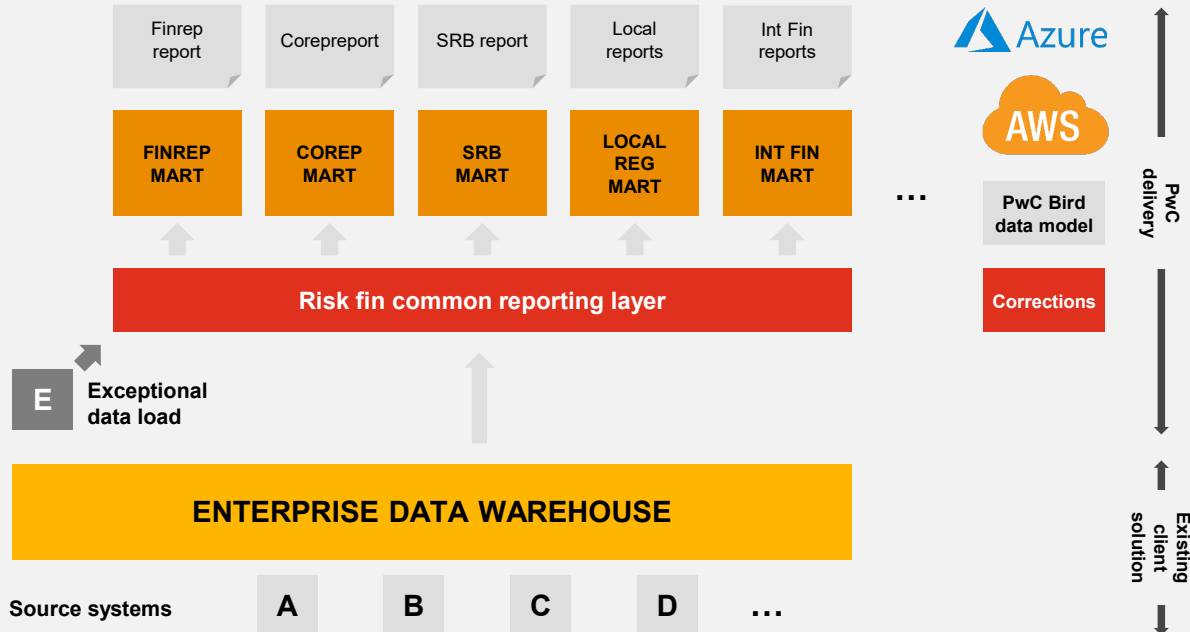
Eurosystem Integrated Reporting Framework

"European Union (EU) banks face a whole range of data reporting obligations, including for statistical, resolution and prudential information. At the EU level, these reporting obligations are specified in different legal frameworks, including ECB statistical regulations on balance sheet items (BSI) and interest rates of monetary financial institutions (MIR), the sectoral module of Securities Holdings Statistics (SHS-S), granular credit and credit risk data (AnaCredit), and the European Banking Authority's (EBA's) implementing technical standards on supervisory data and on the reporting of resolution information to the Single Resolution Board (SRB). Existing ECB statistical regulations specify the information that must be reported but not how the actual reporting process is to be carried out."

Figure 1

Current Eurosystem approach to the collection of statistical information from banks

PwC solution architecture

Finrep report	Corepreport	SRB report	Local reports	Int Fin reports
FINREP MART	**COREP MART**	**SRB MART**	**LOCAL REG MART**	**INT FIN MART**

...

Risk fin common reporting layer

E Exceptional data load

ENTERPRISE DATA WAREHOUSE

Source systems **A** **B** **C** **D** **...**

Azure

AWS

PwC Bird data model

Corrections

PwC delivery

Existing client solution

Solution description

If banks have **enterprise data warehouse** storing the granular data in a common banking model, it is the right source for Risk/Fin common reporting layer.

If it is not the case, PwC can help to create the data warehouse for the data needed for Risk/Fin reporting.

Exceptionally, some data sources can be loaded directly into Risk/Fin common reporting layer.

The core of the solution is **Risk/Fin common reporting layer**. It is based on **BIRD** data model enriched by PwC to cover the data needed for all the reporting. **Data quality controls** are implemented. The reporting layer is equipped with **Corrections** application enabling to propose and to approve corrections in the data and to track them for an audit purpose. The corrections on the common data are realized just once and therefore the same way for all the reports.

Individual **Risk and Fin data marts** for different reporting purposes are then derived from the common quality data.

The solution can be hosted on **MS Azure or Amazon AWS cloud** or implemented specifically in a local bank infrastructure.

PwC approach summary

Bank problem

Many bank teams are involved and significant effort spent to:

- Run database infrastructure
- Prepare source data for each report
- Clean it
- Make manual corrections
- Report it

Despite it, quality issues and mutual inconsistencies arise in the reports.

Our capabilites

PwC has at your disposal a team experienced in:

- EU regulatory reporting
- Local regulatory reporting
- Internal risk reporting
- Business data understanding
- Risk management and modelling
- Data architecture and delivery

Our approach

Building a unique solution to cover the risk and finance reporting

- EU compliant cloud platform infrastructure - MS Azure or Amazon AWS
- Unified data set for financial and risk internal and regulatory reporting - PwC data model extension of BIRD
- Automated data quality controls and their reporting
- Process and tools to make and document manual corrections
- Common cloud reporting platform

This solution saves the effort spent on regulatory and internal reporting and improve the reporting quality and consistency.

Data model
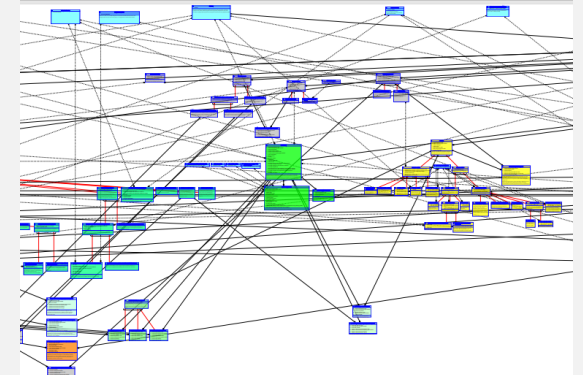
PwC data model extension of BIRD

Logical data model with the needed attributes of the main entities:

- Rating,
- Party,
- Instrument,
- Agreement,
- Credit Facility,
- Collateral,
- Security and Derivative,
- Securitisation,
- Non-financial asset and liability

Interested?
Contact us.

Petr Novák

**Data Delivery,
Risk Management and Modeling**

PwC Czech Republic

T: +420 602 282 972
M: petr.novak@pwc.com

Jan Muchna

**Financial Risk Modelling,
Risk Management and Modeling**

PwC Czech Republic

T: +420 777 563 619
M: jan.muchna@pwc.com

Thank you

PwC Czech Republic
Risk Management & Modelling

www.pwc.cz/rmm