Comparative Study of the Use of Extensible Business Reporting Language (XBRL) in Projects for the Supervision of Banking Institutions

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ABSTRACT

The objective of this research is to make a comparative analysis of the use of Extensible Business Reporting Language (XBRL) in the projects undertaken for the mandatory filing of banks' financial information in the United States and the European Union. The agencies overseeing these filing requirements are the Federal Financial Institutions Examination Council (FFIEC) and the Committee of European Banking Supervisors (CEBS) in the United States and the European Union, respectively.

This comparative analysis is made for the following five dimensions: 1) project definition and scope; 2) planned project activities and responsibilities of stakeholders; 3) project management methodology and process; 4) progress monitoring, deadlines, and milestones; and 5) outcomes in terms of project goals and objectives.

Keywords: Extensible Business Reporting Language (XBRL), Bank Filing Requirements, Federal Financial Institutions Examination Council, Committee of European Banking Supervisors, Project Management.

INTRODUCTION

The objective of this research is to compare two projects mandating the use of Extensible Business Reporting Language (XBRL) for the filing of banks' financial information to banking supervising agencies in the United States and the European Union, respectively.

In the United States, the Federal Financial Institutions Examination Council (FFIEC) oversees institutions with deposit insurance from the Federal Deposit Insurance Corporation (FDIC). It mandates that insured institutions submit Reports of Condition and Income, stored in a central data depository since March 31, 2001 [9].

In 2006, the European Union decided to adopt an XBRL project with similar goals to that of the FFIEC, expected to be finished by 2009. One of the XBRL taxonomies related to this project is the Financial Reporting (FINREP), which falls under the jurisdiction of the Committee of European Banking Supervisors (CEBS), the FFIEC's counterpart [3].

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The contribution of this research is the evaluation of relative success, by comparing outcomes and goals of projects developed to improve accounting information systems of banking institutions. The aim of these improvements is to increase transparency in financial reporting by providing users with more timely and accurate information so that they can form judgments or make decisions to enable them to make the most productive use of their financial resources.

OBJECTIVES OF XBRL PROJECTS

XBRL allows the storage and transfer of financial data and reports through the Internet. The basic components of an XBRL based reporting system are the taxonomy, the instance document, and the style sheet (see Figure 1). The taxonomy is a list of definitions of elements and their numerical and hierarchical relationships. Tags for numerical values of a financial report's individual line items match them to taxonomy elements. These tags describe an item's content in a manner similar to that of a barcode number representing an individual product item to be sold. Taxonomies exist for different industries and countries [2].

These different taxonomies store relationships between tagged information in separate files. An example of a relationship is hierarchies like definitions of financial statement elements and the items they contain (parent-child relationships). Another example is descriptions of how to calculate additional values, based on stored data, such as subtotals and totals [13].

Finally, the instance document is converted into the final report. This conversion occurs by means of the style sheet or template that prescribes the format for the display of stored data in software such as Excel [2].

Previous research finds several benefits of the use of the XBRL language for communicating and analyzing the operational results and financial condition of different companies.

Expected benefits of XBRL include overcoming shortcomings of traditional business reporting models. These shortcomings include the relevance of financial accounting information communicated to financial report's users. Relevant information should address different user needs and have the potential for making a difference in the users' judgments and decisions [1].

An additional benefit is greater comparability due to increased standardization of documents and classification of individual line items in financial statements in such a way that it is independent of accounting principles underlying such items [14].

XBRL also has been found to improve the efficiency of reporting processes. This occurs as a consequence of cost reductions through increased accuracy and timeliness of financial reporting, which contributes to greater information availability or transparency [12]. Predefined taxonomies, act as "checklists" that help prevent errors and omissions, thus, reducing the time needed to prepare financial reports [14].

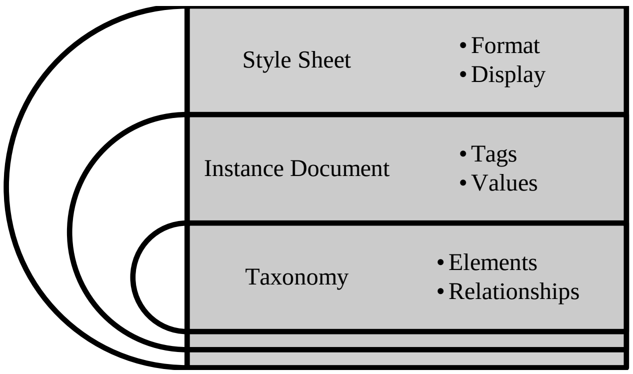

Figure 1. The basic components of an XBRL based reporting system.

FEDERAL FINANCIAL INSTITUTIONS EXAMINATION COUNCIL'S XBRL PROJECT

This section describes the use of XBRL for the Federal Financial Institution Examination Council's Call Report Modernization Project.

Project Definition and Scope

The Federal Financial Institutions Examination Council assessed the need for improved call report information. To satisfy this need, it designed the Call Report Modernization Project with the goal to improve the quarterly bank Call Report process. Specific objectives were to:

1) automate data entry tasks to achieve cost reductions,
2) identify errors and filing problems in a timely manner,
3) improve data validation, analysis, reliability, and comparability [11].

The phases of a banking institution's reporting process are: business operations; internal financial reporting; external financial reporting; investment, lending, regulation; and economic policymaking [11].

The major deliverable for the modernization project is the Centralized Data Repository (CDR) for filers and users to retrieve data for analysis and decision making. The purpose of the CDR is to allow for improved bank supervision and judgment and decision making by analysts of banking information.

The project requirements included ability for banks to provide explanations for results not meeting report expectations. Additional requirements were increased data accuracy and timeliness in report analysis and publishing and flexibility in making necessary changes to reports [11].

The project scope is limited to call reports filed by financial institutions. These reports are requested for assessing financial health and analyzing risk. Previously, information was stored in several formats including PDF, Word, and Excel documents. The Central Data Repository was created to store call report data in a single format (XBRL) to facilitate bank financial analysis and performance assessment [11].

Planned Project Activities and Responsibilities of Stakeholders

To be able to accomplish the project objectives, it is essential to plan specific project activities and decide which stakeholders are responsible for them.

Stakeholders include banks, software vendors, regulators, analysts, and the public. Banks are required to validate and submit their financial data through the Internet to the Central Data Repository (CDR). The responsibility for data validation is shared with software vendors who provide support to banks for this purpose. The regulators are in charge of the security and accuracy of data received in the CDR and of the disclosure of financial institutions' financial information to analysts and the public [8].

Project Management Methodology and Process

The reporting process has two main sub processes: the internal financial reporting and review process and the call report collection process.

The methodology for banks to complete their internal financial reporting did not have to be changed to submit their data to the Central Data Repository (CDR). However, call report requirements for the CDR, including forms and instructions, are prepared using XBRL. The purpose of XBRL is to facilitate the electronic transmission of data submitted by banks [10].

Figure 2 shows the main steps of the reporting process.

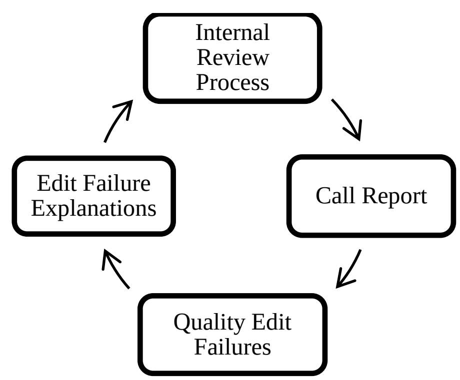

Figure 2. CDR Reporting Process.

Before submitting the data to the CDR, banks must complete an internal review process to ensure the quality of the data. This must have occurred by the call report due date [10].

The Central Data Repository Call Report collection process begins by banks using specialized software to input and transmit their financial data. Next, banks receive an email notification that is their receipt for having complied with the mandatory reporting [10].

The CDR information system checks bank data for quality edit failures. According to the FFIEC, the average for these quality edit failures is 3 to 4, which is considered to be low enough to be acceptable [10].

Banks are responsible for submitting any necessary edit failure explanations, which are reviewed by call report analysts. The FFIEC Reports Task Force's Data Quality Working Group revises or adds data as required by edit failures. The final data becomes part of the individual bank statistics [10].

Progress Monitoring, Deadlines, and Milestones

Banks must make the filings on a quarterly basis. The original project start date was October 2004. It faced several delays due to postponements to quarters ending March 31 and June 30, 2005 [16], and did not begin until October 1, 2005 [15].

These implementation postponements were to allow more time for banking industry feedback, testing, and enrollment [16].

Outcomes in Terms of Project Goals and Objectives

As of 2006, the major results for the Call Report Modernization Project were as follows.

Ninety five percent of original bank filings met FFIEC data requirements, and one hundred percent of data were accurate and reliable [11].

FFIEC began receiving data earlier, less than one day after the end of calendar quarter. Analysts from banking supervision agencies were able to take ten to thirty three percent more bank cases; decreasing costs [11].

Data could be published almost immediately to enable the public to receive it sooner. XBRL taxonomies allowed changes to be made in minutes or hours [11].

These results show the Modernization Project allowed FFIEC to achieve the objective of cost reductions through automation and increase in bank cases per analyst. The objective of timely error and problem identification was also met through enhanced comparison of filings to data requirements. Lastly, there were validation, analysis, reliability, and comparability improvements due to XBRL taxonomies allowing changes to be made and published within a short time period. To summarize, report quality and public availability of bank information was accomplished.

COMMITTEE OF EUROPEAN BANKING SUPERVISORS' XBRL PROJECT

Project Definition and Scope

On December 2005, the Committee of European Banking Supervisors (CEBS) established the guidelines on financial reporting (FINREP). The goals of these guidelines were to:

1) increase the comparability of financial reports submitted to European Union banking supervisors,
2) increase the cost-effectiveness of such supervision,
3) facilitate reporting for cross-border credit institutions,
4) remove a potential threat against European Union's financial market integration [4].

The CEBS set forth a list of 3 priorities or requirements that defined the scope of the FINREP project. The first priority was that FINREP be based on a dimension specification developed as an XBRL information technology (IT) solution. The IT solution is the main deliverable of the FINREP Project. Another priority was that this IT solution had be standardized, with the same rules to be shared among and extended by different countries. This standardization process would be enhanced through XBRL. As a third priority, the process would enable compatibility between past, present, and future XBRL taxonomies [17].

Planned Project Activities and Responsibilities of Stakeholders

The most important stakeholders of the FINREP Project are the core project team, national supervisors, and banks.

The activities of the core project team include taxonomy development and building and testing the collaborative XBRL network, with the help of 4 software vendors.

The national supervisors are in charge of receiving the financial reports based on XBRL dimensions. They may also extend XBRL taxonomies to meet individual country specifications.

Banks are meant to be the end users of the XBRL data [18].

Project Management Methodology and Process

As can be observed in Figure 3, the FINREP Project reporting process consists of links between four information system related components: method and frequency, set of tables (core and noncore), national websites, and CEBS website.

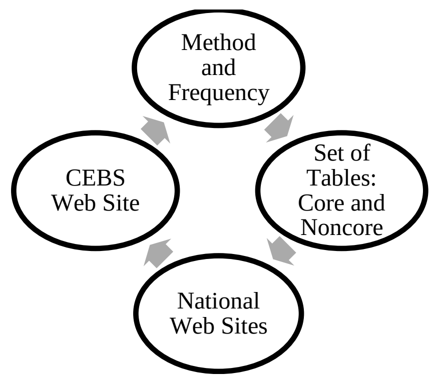

Figure 3. FINREP Information System.

National supervisors make the decision about whether to make FINREP Guidelines mandatory in their European home country. The FINREP project is based on a set of tables to be filled with core and noncore bank information. The core information is the consolidated balance sheet and income statement. Noncore information provides greater details about balance sheet or income statement items.

National supervisors may also establish a particular method and reporting frequencies for compliance with FINREP guidelines. If such requirements were not to exist, banking institutions could choose the methodology to be used.

The FINREP information system links CEBS website to national websites. The CEBS website provides templates with recommended tables for data collection purposes. There are both: summary and detailed tables [5].

Progress Monitoring, Deadlines, and Milestones

The target date for qualitative banking information was set to end of year 2006. The statistical information had been planned to be ready by the middle of year 2008 [5].

The FINREP taxonomies' deadline was September 2006 with the intent to implement the operational phase of the project by 2007 [17].

Outcomes in Terms of Project Goals and Objectives

During the 2007 reporting period, the CEBS assessed its accomplishments in regards to the FINREP Project. Its major conclusion was that the Guidelines were a first step in the goal of increasing comparability of financial reports by improving convergence between information requirements of European Union countries. Convergence had been achieved, to a great extent, for the core framework of the FINREP Project. The noncore information, however, showed that significant differences still existed [7].

After the conclusion of year 2008, CEBS still recommended XBRL and began, in March 2009, a project to revise guidelines in order to achieve a greater progress in convergence of bank financial reporting supervisory standards [6].

COMPARISON

Figure 4 summarizes the main similarities and differences between the CDR and the FINREP Projects, along three dimensions: objectives, method and frequency, and outcomes.

Dimensions	CDR Project	FINREP Project
Objectives	Comparability, Cost-effectiveness, XBRL Information Technology	
Method and Frequency	CDR Instructions Quarterly	National Supervisors Approve Guidelines
Outcomes	Greater Success	Lesser Success

Figure 4. Comparison table for CDR and FINREP Projects.

Both projects, the FFIEC Central Data Repository (CDR) and the CEBS FINREP, shared the objectives of greater comparability and cost-effectiveness and the use of information technology based on XBRL.

However, contrary to the CDR, FINREP is not mandatory in all instances. Its use is only required if and when national supervisors decide on it. The same happens for reporting frequencies. There are no single requirements for FINREP, while CDR data must be submitted on a quarterly basis.

The fact that banks in the United States must comply with CDR instructions, makes it necessary for them to use a common method for external supervisory reporting purposes.

The CDR Project began earlier and was more successful in achieving its objectives than the FINREP Project. However, these results were, very likely, influenced by the mandatory nature of CDR Instructions, contrary to FINREP Guidelines.

CONCLUSIONS

The United States Federal Financial Institutions Examinations Council (FFIEC) and the Committee of European Bank Supervisors (CEBS) have undertaken major Extensible Business Reporting Language (XBRL) projects. Common goals of these projects are to increase comparability of bank financial reporting and to obtain cost reductions.

These projects have important implications as they provide for the wider acceptance of XBRL as a universal business reporting language. However, it remains to be seen if these convergence efforts towards a common reporting method extend across regional borders.

The FFIEC Central Data Repository (CDR) Project appears to have been a lot more successful. But, this conclusion must be viewed with extreme caution.

It is important to note that CDR's use being mandatory makes it easier to ensure individual bank compliance. Also CDR was developed for a single country, while FINREP Guidelines were established for multiple countries. An alternative for future research would be to study convergence outcomes within individual European countries and compare them to those of the Union as a whole.

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