Will XBRL Save the U.S. Financial System?

Closing the information gap between regulators and financial institutions will require data standards and risk reporting…enter XBRL

Financial regulatory reform was recently signed into law by President Obama, as the United States continues to emerge from one of the most devastating financial crisis in its history. While reform was needed, there is much debate over how to implement a stronger regulatory framework that will underpin the financial eco-system. The recent crisis exposed the information asymmetry between regulators and financial institutions and revealed the dangers of systemic risk. Systemic risk is the possibility of collapse to the entire financial system, not just the failure of an individual entity.

For regulators to be able to assess systemic risk there is a need for more stringent data standards, increased risk reporting from financial institutions, and standardized methods for data transfer. Enter Extensible Business Reporting Language (XBRL). Defining a systemic risk taxonomy and giving regulators the ability to extend their analysis of a financial institution's balance sheet will provide a window for identifying large exposures across firms and markets, leverage, and counterparty risks. Stronger information standards, data aggregation, and a robust information system framework will help regulators move to into a state of situational governance (Exhibit 1) where they can manage too-important-to-fail scenarios more effectively and act decisively during periods of financial distress.

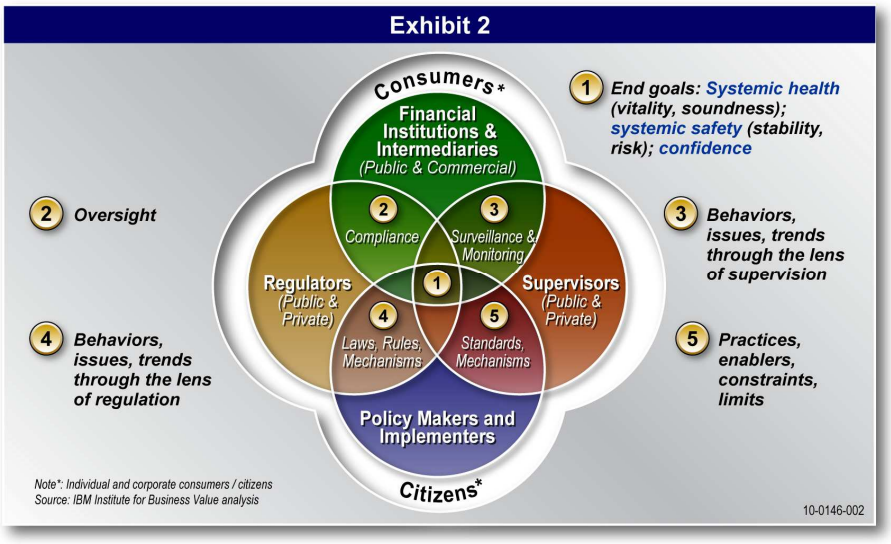
This article examines the problem of systemic risk and how data standards, XBRL, and smarter systems can close existing information gaps between regulators and financial institutions.

Regulation and Systemic Risk

Regulation and supervision faltered during the recent financial crisis. Financial institutions undertook excessive risk and leverage during the economic boom, and regulators did not understand the complexities of the financial system and the underlying systemic nature of risk between institutions (i.e. AIG, Lehman Bros.). Moreover, financial engineering outweighed enterprise risk management practices and corporate governance within the boardroom. In a global economy, the interconnected nature of institutions and markets multiplied the effects of the downturn.

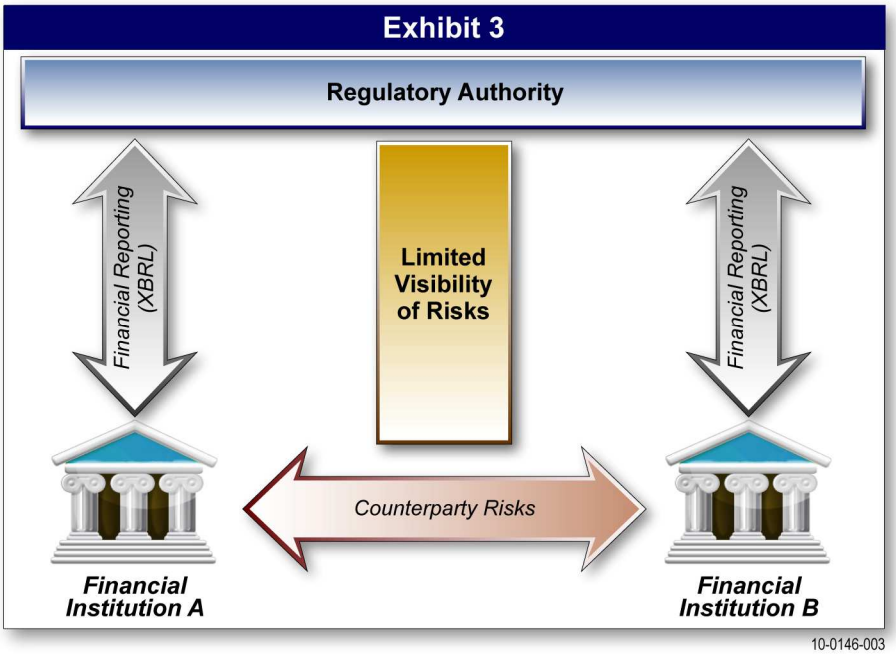
Systemic risk is commonly viewed as the possibility of collapse to the broader financial system or market, not just the failure of an individual entity. It is characterized by negative spillover or contagion effects which propagate throughout the system. During the financial crisis, the regulatory framework was not equipped to properly manage systemic risk properly. The information gap between regulators and financial institutions paralyzed the federal government's reaction during the crisis, and the regulators' lack of understanding of risk and the inability to measure it in a timely manner contributed to the inability to react efficiently and effectively. This was especially evident during the Lehman Bros. collapse and the AIG rescue.

So where are we now? Regulators should be developing the ability to identify the domino before it falls and propagates a negative chain reaction throughout the system. Unfortunately, the lack of systemic intelligence continues to be challenge. The regulatory framework still needs to be rebuilt to properly oversee the complexity of the financial system to nurture end goals of systemic health, safety, and confidence (Exhibit 2). Financial institutions need more standardized and granular reporting of enterprise risk to corporate boards. Regulators need a more holistic view of the financial system which requires more data collection and the capability to aggregate and assess linkages of risk.



Currently, regulators collect very little information on systemic interactions between financial institutions. Quarterly reporting to the Securities Exchange Commission, call data, and the *Reports of Condition and Income* provide insight into the individual condition of a financial institution, but lacks critical information on institution interactions. The risk between institutions is known as counterparty risk. Counterparty risk takes place when one institution has a financial contract (i.e. loans, credit) with a trading partner, through collateral or unrealized gains (Exhibit 3).

The risk of default between trading partners creates counterparty risk and can be one of the severest forms of systemic exposure. Regulators have very limited visibility of counterparty risk with existing data reporting requirements. The lack of transparency over counterparty risk remains one of the most common information gaps that limit government insight into potential systemic events and cascades to the broader economy.

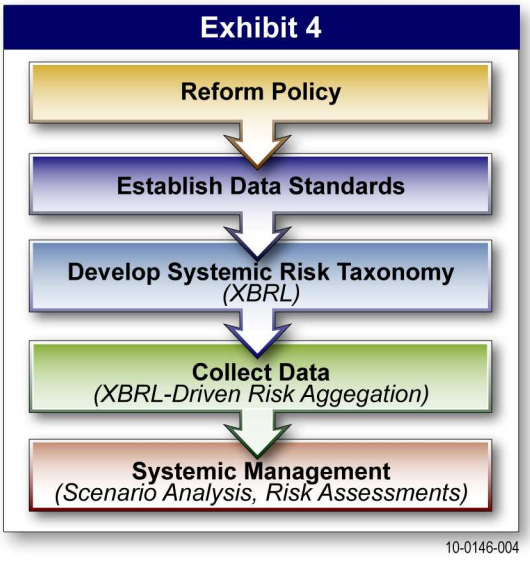


So how can regulators close the information gap and make informed decisions in the face of financial crisis? XBRL is the answer.

Data Standards and XBRL

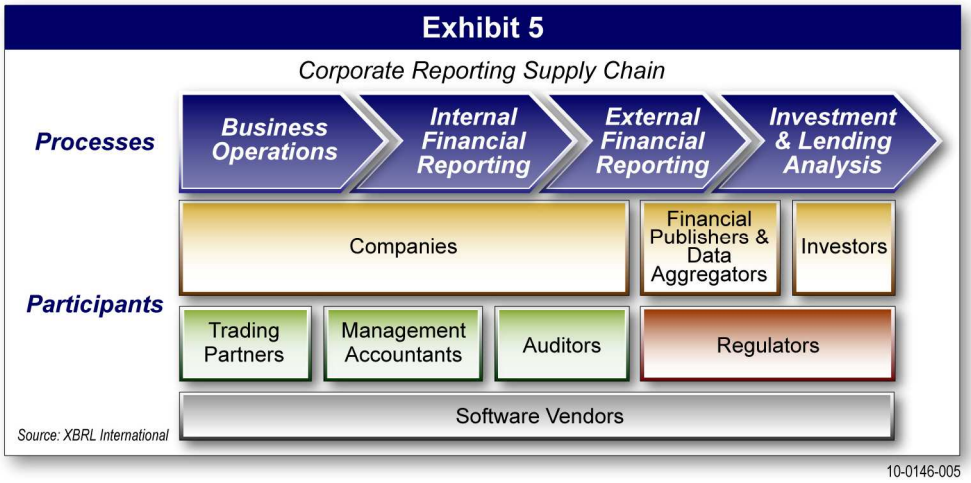
To achieve systemic health, five steps must be taken to provide regulators with the data needed for informed decision making (Exhibit 4).

First, legislative reform must improve the information infrastructure for financial institutions and regulators. Second, data standards on risk must be defined by regulatory authorities. Systemic risk cannot be managed unless data standards are defined for measurement. Data standards will help regulators assess the health of systemically important institutions and allow them to conduct financial institution-wide comparison and analysis. Standards will also facilitate the aggregation and linkage of data across the system and the ability for regulators to

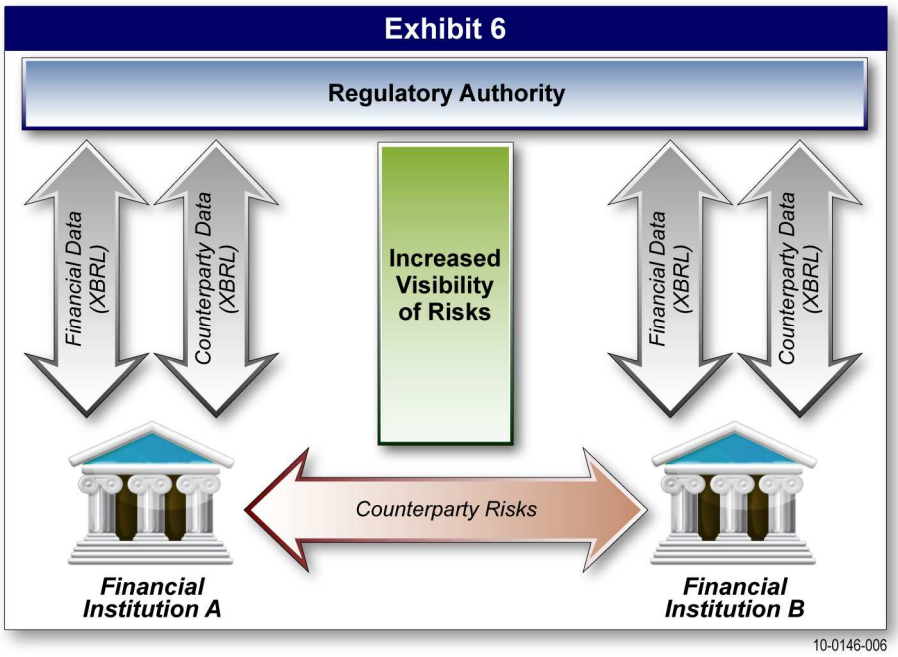


create a systemic view for examining the data as opposed to a singular view.

XBRL is a proven format for financial reporting and will help drive the risk management agenda in a new regulatory environment. Regulators are already key participants in the business-reporting supply chain (Exhibit 5). XBRL serves as a developed platform to collect the additional information which needed to effectively manage systemic risk. Once standards are defined, the next step is to develop a systemic risk taxonomy.



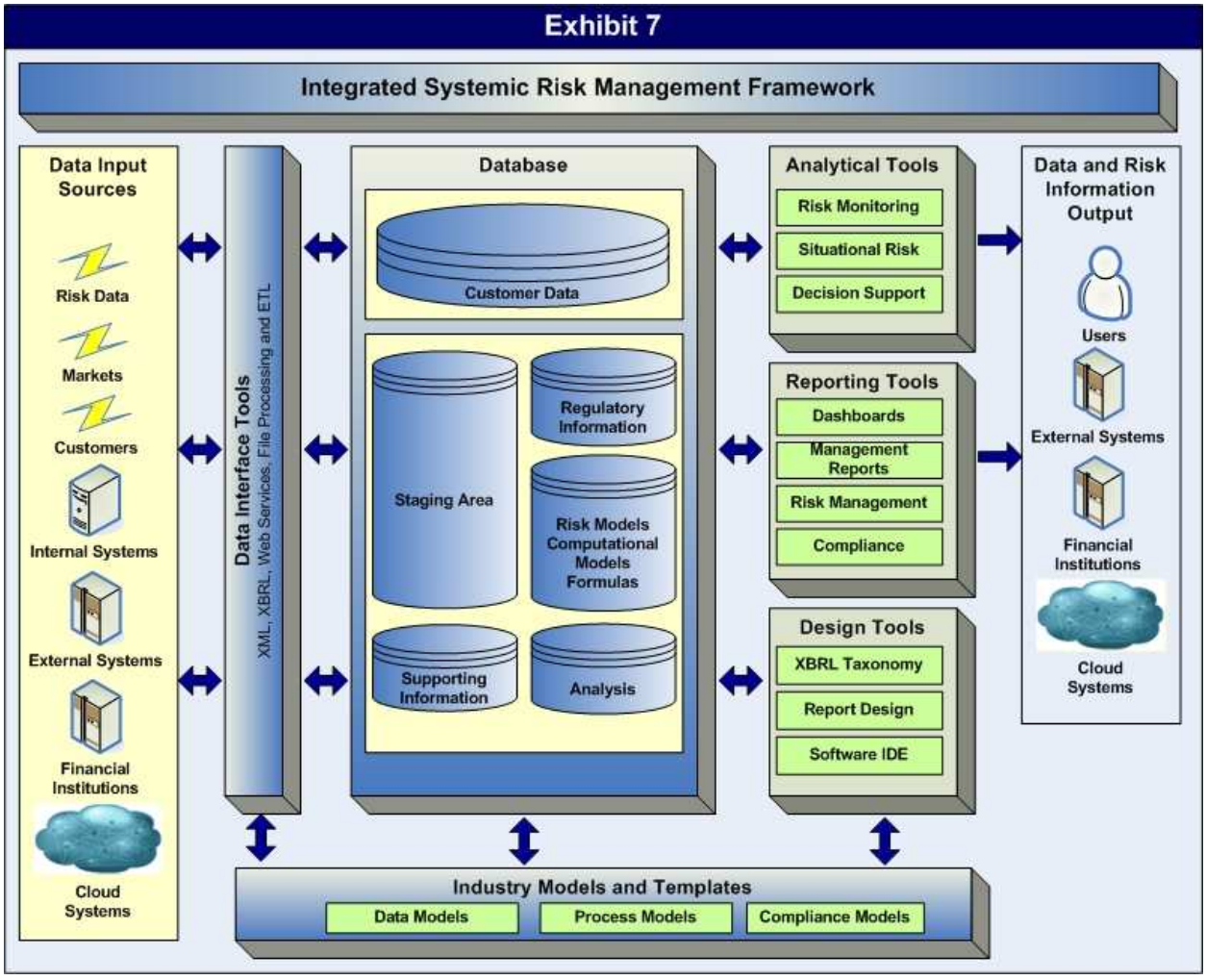
Existing taxonomies already provide regulators with an interactive window into financial institution ledgers, income statements, cash flows, balance sheets, and disclosures. So what type of additional information needs to be collected to properly monitor and reduce systemic risk? Information on derivative positions (swaps, options, and forward contracts), asset positions, leverage, liquidity, and concentration is necessary for regulators to make more informed decisions. Once regulators can collect risk data using XBRL, they will have the capability to map the buildup of risk in the financial system through simulations and what-if scenarios (i.e. too big to fail). One of the benefits to collecting more risk data on systemic interactions is that regulators will have a window into counterparty risks (Exhibit 6), and will be able to identify unhealthy institutions and potential spillover effects.



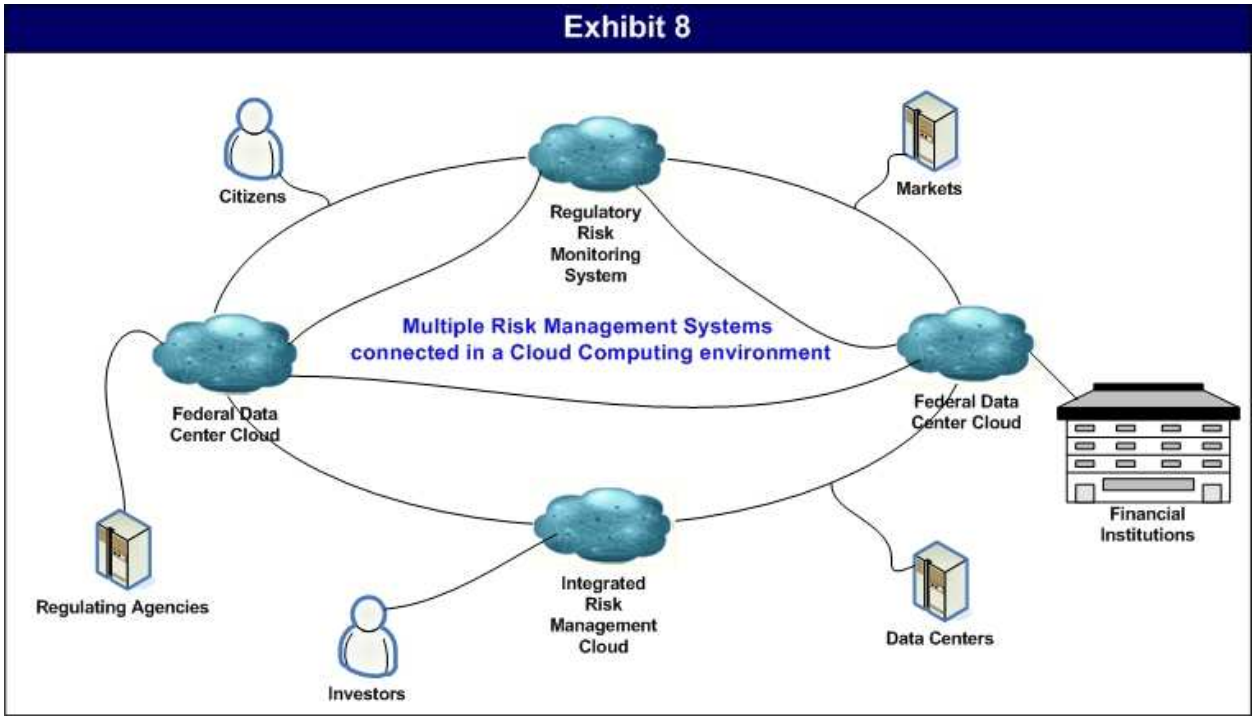
Significant advantages to XBRL-driven transparency are that it provides a seamless exchange of information and provides an automated format which can be used to deliver near real-time insight into large exposures across the system. During periods of crisis, regulators must react in a quick manner, so the accessibility, uniformity, and method of information exchange are integral to the effectiveness of oversight.

Information Technology Framework for Systemic Risk

To meet the challenges of systemic risk data consumption, conversion, analysis, reporting, and interfacing, requires a scaleable integrated framework designed to meet XBRL processing. The information system should be able to process real-time data, financial data models, and risk scenarios from multiple internal and external systems in a variety of data formats. The consumed data should be converted into structured and unstructured information. Based on financial information, risk data, and banking data models, the system can generate real time and aggregated reports and provide regulators information in any easy to access format including spreadsheets, dashboards, charts, and other standard formats. A Systemic Risk Management Framework is demonstrated in Exhibit 7.



Cloud computing offers a smarter alternative to current IT delivery models. Applications and services are not tethered to specific hardware components. Instead, processing is handled across a distributed, globally accessible network of resources, which are dispensed on demand as a service. The framework described in (Exhibit 7) can be configured as a cloud computing environment and hosted in a secure data center (Exhibit 8). A cloud system can act as an input or output to other cloud systems providing an interconnected infrastructure offering storage, virtualization, networking and built-in service management systems, all culminating in an intelligent, services-based infrastructure in which the client pays for the services it requires.



Case Study

The following case studies help to illustrate how regulators can use XBRL to identify systemic risk. Case 1 is an illustration of what will happen under the current regulatory framework without the collection of risk data.

Case 1: Financial Institution A has entered into a derivative contract with Financial Institution B which creates a counterparty relationship. The failure of performance by Financial Institution A will cause a material loss to Financial Institution B which impacts the firm's liquidity and solvency. Financial Institution B also has counterparty relationships with Financial Intuition C and D. The loss adversely impacts Financial Institution B's ability to meet external financial obligations to Financial Institution C and D creating a cascading systemic effect.

The regulators job is to identify how an institution's risk could impact the stability of the system as a whole. Regulators collect individual financial reporting data on all four institutions; however, they do not have detailed risk information on the derivatives contract to identify the linkage between A and B. In addition, they do not have the analytical framework to identify the potential propagation of risk from Financial Institution A's action to C and D. As a result, they can not properly manage systemic risk within the regulatory framework.

Next is an illustration of what could happen under a regulatory framework which uses XBRL for risk transparency.

Case 2: The same scenario between financial institutions takes place in Case 1. In Case 2, regulators utilize a systemic risk taxonomy to collect data using XBRL. Regulators now have visibility over the derivative contract, and the parties involved. Furthermore, they can make the linkage between Financial Institution A and B. Employing analytics the regulators can conduct scenario analysis and forecast how default by Financial Institution A could adversely impact B, C, D and the system as a whole. Collecting systemic risk data utilizing XBRL will move financial regulation into a more proactive position over financial markets.

Conclusion

The dynamic nature of financial markets and the information asymmetry between regulators and financial institutions will require improved transparency to foster stability. Extending XBRL, and utilizing smarter systems for systemic risk will create the ability to aggregate and link risk across the system. Risk management will have an active role in the new regulatory environment so the time for employing XBRL as the standard is now.

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