

Time to Feed the Beast

Financial companies are overhauling their data infrastructures just as new systemic risk regulatory requirements are kicking in.

BY KATHERINE HEIRES

Among the Dodd-Frank Wall Street Reform and Consumer Protection Act's many, still emerging and evolving contributions to financial services regulation are two acronyms of great risk management portent: FSOC and OFR. The Financial Stability Oversight Council is the panel of top regulators headed by the Secretary of the Treasury that is charged with identifying and responding to systemic risks, in part through information sharing and collection. For the latter responsibility, FSOC has said it will rely heavily on Treasury's new Office of Financial Research "to collect information from certain individual financial companies to assess risks to the financial system, including the extent to which a financial activity or financial market in which the financial company participates, or the financial company itself, poses a threat to the financial stability of the United States."

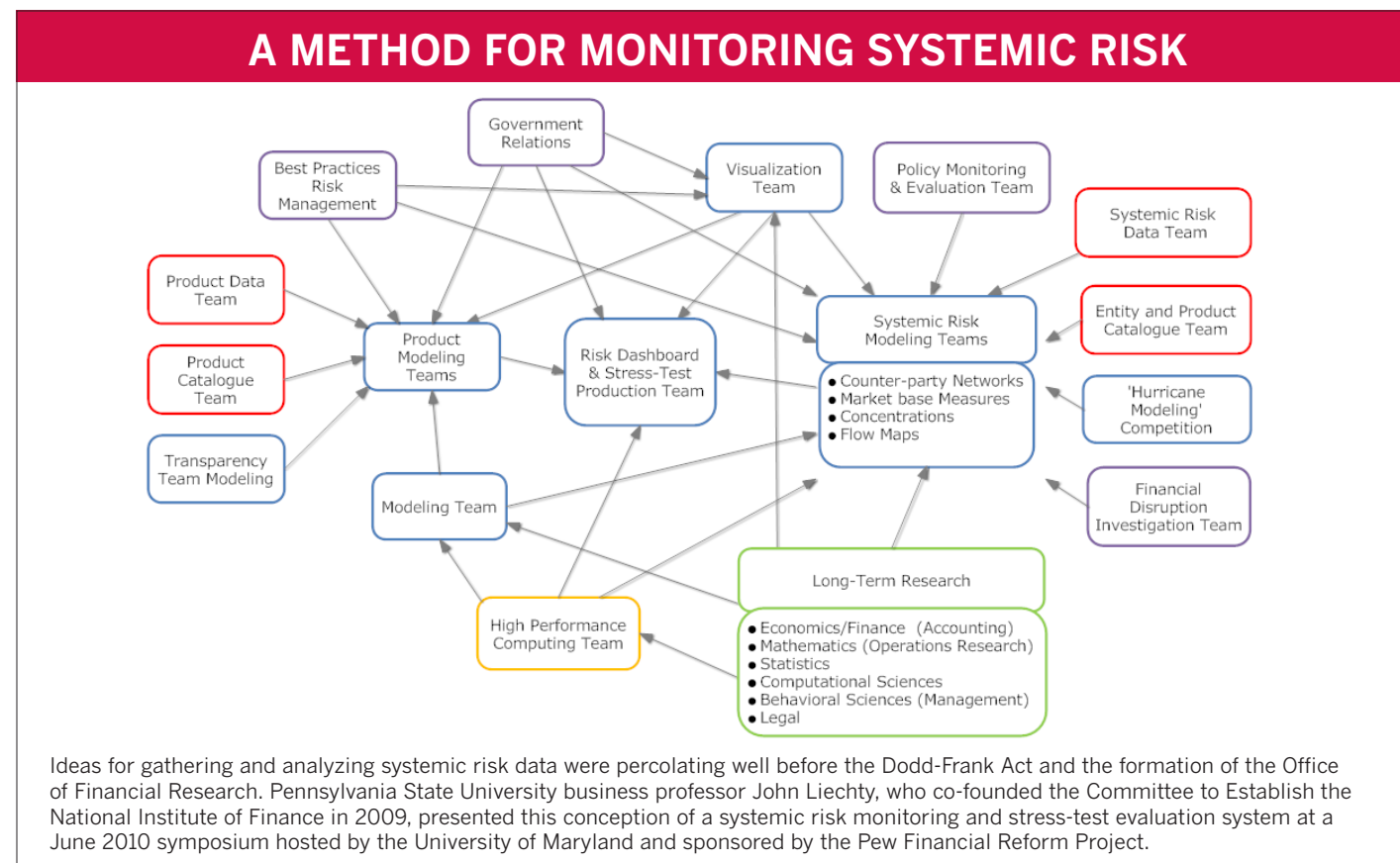
Like many aspects of Dodd-Frank implementation, the OFR is in place but still under construction, with key deadlines looming in July, a year after the act was signed into law. The OFR is working to come up with a data standard in consultation with the financial industry, which in turn will need

some time to bring its operations into full compliance.

The dialogue has been building in intensity since well before Dodd-Frank was enacted last year. In 2009, for example, the Committee to Establish the National Institute of Finance (CE-NIF), a coalition of academics, executives, former regulators, technologists and consultants, began pressing an argument for the kind of research mission that the OFR was eventually mandated to pursue.

At the same time, financial institutions have been waking up to the need to overhaul and upgrade their increasingly complex mazes of databases, data management systems and infrastructures. Besides bringing greater clarity and transparency to their internal processes, these systems will ultimately have to feed the systemic regulators' prodigious information appetite.

Now a host of experts and analysts, including many who joined in the CE-NIF or supported its principles, are advising risk professionals to be actively involved in the data management discussions at their firms, because the formation of data governance committees, establishment of standards and practices and selection of information technology all have a direct bearing on the risk function and the demands it is facing for accurate and timely assessments in support of business strategies.



"This is an opportunity for risk managers to step up and become leaders in the drive for good data management practices," asserts Clifford Rossi, a veteran risk manager who is now executive in residence at the Center for Financial Policy at the University of Maryland's Smith School of Business. Data is "the lifeblood of everything that goes on in financial firms," says Rossi, and without risk managers' input, they and their firms could get caught in a "dragnet of data requirements" imposed by regulators.

"The greater degree to which risk managers get involved in these standardization activities, the better for them – it's an unparalleled opportunity to help build the data infrastructure that they rely on every day," adds Michael Atkin, managing director of the Enterprise Data Management (EDM) Council, an organization based in the Washington, D.C., area that has sought to represent financial industry interests in discussions about data standards, definitions and best practices.

"Shame on us," says Atkin, "if we blow this opportunity to create the underlying infrastructure that feeds every risk

process within every financial institution."

A Grip on Governance

According to Stamford, Connecticut-based research firm Gartner's 2010 Financial Services Data Management Survey, just 28% of banks and investment services firms have a single data governance unit that spans the enterprise. Another 37% have multiple data governance units based on data type; 21% have multiple governance units based on geography; and 14% have no data governance unit at all.

On a more hopeful note, in the Gartner survey of some 250 financial services companies in Europe and the U.S. in the fourth quarter last year, 45% said they would have "a single data governance unit across the entire organization" within 18 months.

Mary Knox, Gartner's banking and investment services research director, is concerned that risk managers will either stay on the sidelines or be stymied by the lack of central governance over data management, which is a legacy of firms'

PROS AND CONS OF THE OFR

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The Office of Financial Research, which will support systemic risk monitoring as spelled out in the Dodd-Frank Wall Street Reform and Consumer Protection Act, has both supporters and detractors. Those favoring it say that OFR's data standardization initiative will produce long-term cost savings, while financial firms' improved databases will enable better tracking of trades and other deal-making. The proponents see internal risk management, modeling and analysis being enhanced; rogue traders and Ponzi schemers more easily detected; and transactions including complex derivatives reported electronically and comprehensively.

Critics, however, warn of problems in the OFR's implementation.

They say, for example, that massive aggregation of financial institutions' data will be costly, requiring major technology investments by the companies facing these additional compliance burdens as well by regulators in need of both analytical capabilities and staff to make sense of all the data. Some do not see a logical connection between the collection of data and detection of risks. Others wonder how this U.S.-centered effort will be effectively coordinated around the globe.

One senior risk manager favors an alternative to data standards and aggregation as a first step toward systemic risk monitoring. Hans Helbekkmo, senior vice president, enterprise-wide risk at Union Bank of California, recommends a quarterly stress testing approach proposed last year by Stanford University finance professor Darrell Duffie. The program has been dubbed "10-by-10-by-10," because it is based on subjecting an initial set of 10 systemically important banks to the same number of stress tests involving their exposures to 10 top trading partners. More information about the Duffie proposal can be found at: (<http://www.darrellduffie.com/uploads/policy/Duffie10By10By102010.pdf>)

historically siloed organizational structures.

The potential upside of risk-manager involvement is strong, says Knox. Working in cooperation with top management as well as IT and operations, risk executives are uniquely positioned to facilitate a firm-wide understanding of the benefits and nuances of improved risk monitoring – how to avoid data deficiencies and strengthen risk management while also contributing to better utilization of data for competitive goals.

Barbara Ridpath, chief executive of the International Centre for Financial Regulation (ICFR) in London, sees more technical experts and academicians than risk managers involved in discussions about standards on a global scale. "Risk managers would have a good sense of the best global indicators" for systemic risk, and so she hopes they will get more vocal.

"The awareness and interest in data management issues on the part of financial firms is at a much higher level than it was before," observes Stephen Engdahl, senior vice president of product strategy at New York-based EDM company GoldenSource Corp. "It's no longer the province of a few data geeks, but of chief risk officers and other members of top management who do not want to be the next large financial firm to fail because they did not have a good sense of their exposures."

GoldenSource, Asset Control and other vendors and advocates of EDM systems often struggled to sell their vision of streamlined, holistic data management – until the crisis hit. Now, says Engdahl, "We don't have to do the basic [EDM] education anymore."

"All of these firms have grown disparate systems – equity trades are in one, fixed income in another, and OTC derivatives are on spreadsheets," notes Dan Simpson, CEO of Cadis, a London-based competitor in the EDM space. "They have all the data, but it's in seven different places in various shapes and formats, and so the challenge is in connecting all the dots and knowing your counterparty exposure and eventually, achieving a holistic view. It becomes even more difficult when firms operate across many different jurisdictions, on a global basis."

Convergence of Interests

What's more, regulators and regulated alike are hampered by "data anarchy," as massive volumes of mission-critical data, no longer subject to centralized controls, are distributed and processed in countless personal computers, laptops, smart phones and hand-held appliances.

The micro and macro dimensions of the data management and standardization challenge have converged. While the financial industry recognized its increasingly urgent need for an upgrade, lawmakers realized the U.S. had no single monitor or regulator of systemic stability and risk and wrote the FSO and OFR into Dodd-Frank – complementing global efforts of the Financial Stability Board, an arm of the G-20 countries and the Bank for International Settlements.

The scope of systemic risk is both qualitative and quantitative, and therefore subject to a consensus process on the definition and interpretation. The CE-NIF, however, notes

there is general agreement on some broad components: The interconnectedness among investors, firms and contracts; forward-looking risk sensitivities, especially related to stressful events; margins, leverage and capital adequacy for individual accounts and institutions; and concentrations of exposures, especially relative to market liquidity.

"Not having a systemic risk indication system is like sitting on a volcano, knowing that at some point, X tons of lava will come out but not having a seismograph to alert you to when the vibrations are starting to build up," says Allan Grody, president of Financial InterGroup, a New York risk and technology advisory firm. In association with GS1, the international overseer of the Universal Product Code, Financial InterGroup submitted one of the more than 30 proposals for a data standard under consideration by the OFR.

"Argument for Data Management in Support of Improved Oversight and Safeguarding of the Modern Financial System," a 2009 paper by the CE-NIF, said, "The ability to look holistically at a firm (or the industry's) performance or assess its risk has become increasingly difficult. Clearly, data management is no longer just a technology problem, but, as the current crisis reveals, it is a major 'business' and organizational problem."

Standardization as a Solution

The committee added that new techniques for holistic, systemic risk analysis would "involve novel collaborations between specialists in finance, statistics, computer science, and network analysis. Without such improvements in our ability to collect and integrate data from many sources, it will be impossible for regulators to understand, measure and predict the onset of systemic crises."

Material pertaining to OFR on CE-NIF's Web site highlights the problem by noting that in September 2008, with the U.S. on the brink of a Depression-like breakdown, Treasury Secretary Henry Paulson "made a number of fateful and costly decisions without any clear understanding of what was happening in the financial markets." The OFR is designed to deliver the kind of data and analysis on market risks, interconnectedness and counterparty exposures that were lacking then.

"Financial institutions currently have a mess of incompatible mapping systems for all their data, and that's what got us into the financial crisis," says Financial InterGroup's Grody.

As CE-NIF likewise put it, "Data management in most financial firms is a mess. Providing standard reference data, including common standardized designations for firms and their

subsidiaries and for financial instruments, will greatly improve the way transactions are handled and recorded."

In other words, by standardizing the way data is structured and collected within the firms themselves, the OFR will not only have access to better inputs for its systemic risk monitoring, but standardization can also help, over time, to ease the data management burden placed on regulated firms.

The mechanics of how the OFR will operate remain unclear, but its purposes are spelled out, starting with standardizing reporting requirements; aggregating data and conducting financial analysis; developing a reference database; maximizing data efficiency and security; and reporting regularly to Congress. OFR has set July 15 as a target for issuing an industry-wide data standard. The intent is to record all applicable transactions electronically, and the OFR's requests for information will be made in concert with the Securities and Exchange Commission and Commodity Futures Trading Commission.

Critics point out that the OFR has formidable regulatory authority including subpoena power, yet there was a leadership void as President Obama was slow to designate a head of the agency. Former Citigroup chief economist Lewis Alexander led early efforts to build out the OFR as a counselor to Treasury Secretary Timothy Geithner until February of this year. Since then a team that included Adam Lavier, Treasury's acting director for research and quantitative studies in domestic finance, and, as of late April, Richard Berner, former chief U.S. economist at Morgan Stanley, were filling the void while the appointment of a director to a six-year term was pending.

Others question how effective a single U.S. agency can be in bringing about data and risk management improvements on a global basis. Says Ridpath of the ICFR, "I find it fascinating that Dodd-Frank says they are going to create a universal identifier, but they are only one national regulator. Who gives them the right to create an international standard for the global financial industry?"

No Shortage of Ideas

For its part, OFR explains on its Treasury Department Web page that it aims to coordinate with regulators both domestically and abroad and has stated its support for an internationally recognized standard – though that has yet to be selected.

As of January, 30 organizations had submitted proposals to the OFR for a data standard or legal entity identification system. The filers included the Bank of England; Bloomberg Data Solutions; D&B, the U.S. operating subsidiary of Dun &

Bradstreet Corp.; the EDM Council working with the Securities Industry and Financial Markets Association and six other trade associations; Financial InterGroup with GSI; and SAS Institute of Cary, North Carolina.

While there is still a fair amount of uncertainty, Chris Thompson, head of Accenture's North America financial services risk and regulatory management practice, says firms are currently assessing what the new data standards will mean for them, trying to understand what sorts of information might be collected and the supporting data architecture and infrastructure that will be required.

"For now, there is a big focus on reference data, though the act allows them to collect actions and transaction data to model for systemic risk," says Thompson. "In some instances, what we are seeing is a partnership between operations, finance and risk departments to make sure that all data that is needed by regulators will be available." He adds that risk managers will wind up playing a significant role in dealings with regulators because any given firm's risk profile will be closely reviewed and referenced. "The CRO and his team need to be right in the middle of understanding the information flow," he says.

Thompson suggests that a financial company's big challenge is not so much the standardization of data as it is managing how information changes over time and how it is handled by legacy systems. "If you have 4,000 legacy systems," says the Accenture consultant, "you will need a variety of interfaces to make sure your reference data changes correctly every time a company goes bankrupt or merges or launches a new legal entity" — an accurate and consistent record of corporate actions. "In the end, it's a very complicated effort."

Gartner's Knox contends that regardless of OFR's schedule, reference data management needs to be addressed sooner rather than later. "These are not issues firms can solve in a 12-month time frame, so now is the time to start to prioritize and identify the most critical data for your firm, the same data that is critical for improving your corporate performance," she says.

Not surprisingly, a host of data management vendors are eager to help financial industry clients. According to Gartner, among those at the ready with reference data solutions are Asset Control, Cadis, Credit Dimensions, Eagle Investment Systems, First Derivatives, GoldenSource, Informatica, Kingland Systems, Netik, NRS, PaceMetrics, Paladyne, PolarLake, SmartCo and Xenomorph. In addition, some firms use more generalized data and analytics platforms from the likes of IBM Corp., Oracle Corp. and Teradata Corp., as well as the data management capabilities of analytics vendors such as SAS Institute.

The suppliers vary in terms of experience and breadth of offerings, Knox points out. GoldenSource, for one, markets EDM Suite, a platform capable of consolidating securities masters and counterparty masters across an organization. Dublin, Ireland's PolarLake is touting "a truly disruptive technology based on a unique combination of XML streaming, storage and semantic Web," which it says translates into faster data aggregation, loading, data queries and on-boarding of data feeds.

Choices of Models

"There is a growing marketplace of firms that provide reference data management platforms, with firms such as Asset Control and GoldenSource providing a specified data model with their solution," says Knox. "Other vendors such as Cadis will accept whatever data model or models you want to use for reference data management, and newer entrants such as PolarLake, SmartCo and Kingland offer more modularity in their approach to data management."

Because each firm is different and has unique legacy issues, "there is really no one, right model or technology approach for data management," states James Wolstenholme, director, capital markets of Hewlett-Packard Enterprise. "A platform that provides a centralized system or one that offers a more modular or flexible approach to data management can work, and we have seen both." HP recently acquired a data management platform, now called HP Intelligence Center, which will aggregate data on market, credit and operational risks across multiple divisions of a firm, leading to an enterprise-wide view of risk.

Atkin of the EDM Council notes that even without a standard in place, many firms have already been addressing legal entity identification and other data standard issues. That makes sense because a large financial institution may work regularly with 500,000 to 800,000 business entities, and identifying and verifying all those database entries is no small task. "Some firms are playing catch-up, but others have a control environment for improved data management," says Atkin.

Indeed, large firms with dispersed operations such as Credit Suisse, GE Asset Management and Morgan Stanley have publicly revealed they have adopted internal data standards and will map those to the OFR specifications later. "At some large institutions, we've been seeing CROs help to ensure that both the right budgets and infrastructure are put in place" to help advance data management and compliance, says Barry Zane, founder and chief technology officer of California-based high-performance analytics company ParAccel.

Leadership Matters

How are firms preparing for the data standard and the regulatory oversight that will come with it?

Sponsorship from top-level management is a key element, according to Dan Simpson of Cadis. A data tsar or chief data officer may be put in charge, but the objective is to get business and technology people, including the CRO and COO, working together. "In the past, data management was strictly an IT function, but in the current environment, the collaborative approach is what works," says Simpson.

Rick Enfield, product business owner at Asset Control in New York, says it's an advantage to let the business side take the lead, so as not to lose focus on strategic concerns and competitive advantage. "If the effort is driven from the IT perspective, you can lose perspective, while having a business-led effort yanks you back into business focus," he says.

Jon Asprey, director of strategic consulting at Trillium Software, a Billerica, Massachusetts-based provider of data quality and validation software, says, "Who actually oversees a data management project changes from firm to firm, but to be successful, you do need some kind of executive-level sponsorship, data governance board or steering group." He says he often sees at big commercial banks "centers of excellence" to manage large data projects, overseen by a head of data quality from the business side of the organization. Also represented are risk teams and central operations divisions.

"Risk managers are the natural and right people to push for better data quality and management," says Asprey, adding that firms will have to demonstrate to regulators that they have a robust data management framework and generate accurate risk reports.

Fritz McCormick, a senior analyst at Boston-based research firm Aite Group, advises getting risk managers actively involved in the data management process and participating in governance bodies. There they can help lead the move toward data convergence, going beyond reference data to encompass such things as real-time market snapshots, valuations and additional analytics. "Professionals scoping out a data management project should expand the requirements process and look to vendors, many of which have begun expanding their offerings beyond traditional security master data types," McCormick says.

For all the uncertainty and complexity surrounding data standardization and compliance, improved systemic risk management could yield substantial benefits at the micro level as firms move to streamline, update and upgrade their data man-

DATA QUESTIONS FOR RISK MANAGERS

At the Financial Information Management Association Reference Data Conference in March in New York, Duane Good, head of risk systems and projects at HSBC, presented the following checklist of questions to help chief risk officers and risk managers advance their firm-wide data management efforts:

Culture: Do risk managers have a seat at the executive management table? Are risk data questions being addressed by top business managers?

Strategy: Does the firm have a unified plan for data management planning? Do you have a strategic road map that permits proper changes to be made over time?

Governance: Who is accountable for data management efforts? Who will address the critical question, How good does it have to be? Do you have consensus for proceeding with a risk data re-think or update? Is everyone at the table participating — all the various areas of risk, plus finance, treasury, IT and the lines of business? Do you have a data governance charter in place to address questions about responsibility?

Operations: Are you continuing to automate and eliminate manual operations to reduce risk, delays and costs in data operations? Are you addressing the challenge of integrating data after mergers and acquisitions?

Platform: Are you addressing the challenges inherent in the legacy of M&A activity and a P&L investment focus? What capabilities will be needed next, and will my platform be able to support them?

Quality: Is your data "fit for purpose," and can you demonstrate that?

Source: HSBC

agement systems and thereby improve their business processes. And risk managers are in a position to ensure they get the timely and validated information that is essential to their task.

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