Semantics: The Next Big Issue In Big Data For Compliance

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Financial institutions are using semantic models to share information more easily. Some use semantics to evade the issue at hand (i.e., Bill Clinton's parsed definition of "is"). But in David Saul's world of financial-institution compliance and regulation, it's something that can help get right to the heart of the matter.

Saul, the chief scientist at State Street Corp. in Boston, views the technology of semantics as structuring data in ways users can easily share it.

"By bringing all of this data together with the semantic models, we're going to be able to ask the questions you need to ask to prepare regulatory reporting," as well as internal risk calculations, Saul promised at a recent forum held at the New York offices of SWIFT, the Society for Worldwide Interbank Financial Telecommunication.

Saul's championing of semantics technology was part of a wider-ranging panel discussion on the role of technology in helping banks meet the current and forthcoming compliance demands of global regulators. "That's really what we're doing: trying to pull risk information from a variety of different systems and platforms, written at different times by different people," Saul says.

To bridge the underlying data, the Financial Industry Business Ontology (FIBO), a group that Saul participates in, is creating the common terms and data definitions that will put banks and regulators on the same semantic page.

With an estimated cost of $150 million to $350 million for large international institutions, banks will have an expensive new burden in having to report "much more detail, much more frequently" under the Dodd-Frank Act and Basel III, according to Javier Perez-Tasso, SWIFT's marketing chief and the host of the March panel in New York.

Semantics technology is already a proven tool of the Web that requires common data formats for sites to link to one another, says Saul. At large global banks, common data infrastructure is still in most cases a work in progress, if it's underway at all. Legacy departmental divisions have allowed different (and incompatible) data sets and systems to evolve internally, leaving banks with the heavy chore of accumulating and repurposing data for both compliance reporting and internal risk analysis.

The inability to automate or reuse data across silos is at the heart of banks' big-data dilemma—or as Saul likes to call it, a "smart data" predicament.

"I don't like the term 'big data' because it doesn't associate any value with the data itself. It's only talking about the volume," says Saul. What's needed, he adds, is a robust data governance structure that puts underlying meaning to the information.

"You can have the technology and have the standards, but within your organization, if you don't know who owns the data, who's responsible for the data, then you don't have good control."
With semantics technology marrying data across divides, exposure to certain kinds of derivatives, for example, could be tied to particular assets classes automatically, generating information that's used not only for reporting purposes but also perhaps for making strategic business decisions. "We can take what's a cost just for regulatory and start generating some revenue," Saul says.

Lee Fulmer, a London-based managing director of cash management for JPMorgan Chase and a fellow panelist with Saul at the SWIFT forum in March, says the creation of such standards is paramount for fueling adoption, because even if global banks can work out internal data issues, they still have differing regulatory regimes across borders that will require that the data be adapted.

Fulmer says this would be "the big paradigm shift that we need, that would allow us to leverage technology to improve how we do our regulatory agenda in our banking system.

"If we can come up with a set of standards where we do the same sanction reporting, same format, same data transcription, same data transmission services, to the Canadians, to the Americans, to the British, to the Japanese, it would reduce a huge amount of costs in all of our banks."

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