

## **SIBOS 2009: Before Dealing With Systemic Risk, How About Getting Data on It?**

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“Does anybody have the data in place to really deal with systemic risk?” asks John Liechty, associate professor of marketing and statistics at Penn State University’s Graduate School of Business.

So far the tools to collect nor to analyze that breadth and depth of data don’t exist. But the Obama Administration’s proposal to create a systemic risk manager will require the collection, normalization and analysis of data from sources as diverse as corporate and municipal issuers to the world’s largest financial institutions. The crème de la crème of Wall Street: Goldman Sachs, Morgan Stanley, JP Morgan Chase, Citigroup and Bank of New York Mellon would just be just a handful of the firms contributing information on the securities they hold and the transactions they do.

Without a vast array of data on just what securities are being traded and when regulators have little or no hope of understanding where the systemic risks lie. Without standardized reporting and a dedicated team of researchers to crunch the data it will be impossible to make sense of the flood of information.

As one of the founders of the Committee to Establish the National Institute of Finance, Liechty wants the U.S. government to create such a national data repository and give a systemic risk manager the right tools to ... manage systemic risk.

Yet another goal of the repository would be to help firms cut down the time it takes for them to cleanse their legal entity and reference data and dramatically reduce the amount of effort needed to clear trades, thereby saving them multimillions of dollars per year .Morgan Stanley has estimated it could save on the order of \$200 million a year in operating costs, according to Liechty. The total savings to the financial industry could be as high as \$1 billion annually.

Supporting the NIF are more than 60 academics, financial analysts, former regulators and representatives from financial services firms, as well as the Enterprise Data Management Council, a New York-based non-profit industry group specializing in helping financial firms promote the importance of enterprise-wide data management and raise the profile of data management at the senior levels.

With an institute such as the NIF in place, regulators last fall could have modeled the repercussions of Lehman Brothers’ collapse, using portfolio data from financial institutions. Or so goes the Committee’s argument. While such an initiative will initially be U.S. focused that doesn’t mean foreign regulators aren’t interested, as evidenced by the important of risk management as a topic of debate at Swift’s annual Sibos conference in Hong Kong this week. Liechty says that NIF is also in talks with the European Central Bank and other regulators to share data worldwide.

*Securities Industry News* spoke last week with Liechty about the origins of the Committee and how the national repository would operate.

**How did you come up with the idea to establish the Committee?** During a workshop sponsored by the Office of the Comptroller of the Currency and the National Institute of Statistical Sciences in February 2009 attended by academics and regulators and focused on statistics and financial risk, a group of us raised the question about whether any regulator had the ability to deal with systemic risk. When the answer came back as no, a small group of academics and regulators got together and wrote a white paper on the subject, calling for the creation of the National Institute of Finance.

**What response have you received from lawmakers and the Fed?** The response from the Federal Reserve Bank of New York, the Federal Reserve Board, and the FDIC has been positive. Much of the initial uncertainty was focused on whether such a repository is technically feasible to build. The feasibility questions have been largely answered by IBM Research and market participants, who are working with the Committee. For example, IBM Research is currently designing a prototype for how the repository would operate as a proof of concept. Ultimately this proof of concept will help lay the ground work for the final repository, which would be owned and managed by the NIF. IBM is not anticipating that they will get a contract, they are simply helping demonstrate that the repository is feasible.

**How is the committee defining systemic risk and what sorts of systemic risk can you identify from data from US organizations and companies?** One practical, working definition for systemic risk is any event which reduces access to credit, such as occurred when the commercial paper market became frozen after Lehman Brothers' bankruptcy. There are at least two important types of systemic risks that a systemic regulator needs to monitor - one is the domino risk, which means understanding the importance of a bank to a network of counterparties and the impact that the failure of one bank can have on the rest of the network.

For example, if AIG were allowed to have gone bankrupt it would have had \$3 trillion in outstanding swap contracts that would no longer be able to be considered as assets by other bank counterparties. The other type of risk to be monitored is called fire-sale risk. If everyone is engaging in the same type of trading and a shock to the system occurs, counterparties must unwind their positions, but no one is willing to take the other side of the trade. Such occurred in the case of Long Term Capital Management which was involved in [[pairs of what?]] pairs trading. One of the reasons that contributed to their demise is that Solomon Brothers stopped doing arbitrage trading, and as it unwound its pairs trading positions, this forced prices to move against Long Term Capital Management.

**What are the most important pieces of data you think need to be collected? And where would the data come from?** We want to have all the transaction and position data from major financial institutions for exchange-traded and over the counter (OTC) instruments. The OTC contracts would include contracts cleared through centralized clearinghouses as well as bespoke contracts and underlying collateral for structured finance products. We would also need to provide reference data on legal entities and all the securities and provide reporting standards. We

have yet to fully refine the list of financial institutions that would be required to participate, but we will need data from market participants to monitor systemic risk.

**Who would set the policies for how the national repository would work?** The systemic risk regulator would have the legal authority to set standards for the collection of the data and reporting to itself. The data would be collected from the back offices of major financial institutions as well as corporate and municipal issuers. It would be updated on a daily basis. Transaction and position data will be reported on a daily basis to the Federal Finance Data Center, which would be part of the NIF. The Analytic Data Center, another critical part of the NIF, would analyze the data on a daily basis and provide system-wide risk assessments to the systemic risk regulator.

**What formulas or benchmarks will be created to guide ongoing calibration of the state of systemic risk?** In order to monitor systemic risk, we will need to understand the flow of risk throughout the financial system. The NIF will be able to build graphical descriptions that highlight the counterparty network, the flow of transactions and providers of liquidity. With this view, the NIF will be able to run scenario analysis anticipating the impact of shocks to the system from changes in underlying market factors, failures of institutions or even segments of the market. Initial scenario analysis will provide an understanding of solvency changes in the system. Given sustained research efforts, these analyses can begin to include appropriate feedback loops, which will allow regulators to begin to understand how the system will respond when it is under stress. The results of these scenario analysis, or stress test, will help regulators understand potential risks to liquidity, solvency and ultimately access to credit.

**Is there any value in a 9/11-like system of named (or colored) states of systemic risk so a presidential administration, the Fed and the public can easily see systemic risk bubble up before a crash happens?** There is great value in having some type of risk dashboard and some type of high-level summary of risk that can be shared with the systemic risk regulator and, as requested, with the administration. In addition, the NIF would provide an annual assessment of risks to the financial system to Congress. The NIF would also be required to make reference data available to the public. That data would include legal entity data and descriptions of securities. The NIF would not make transaction and position level data available to be public but it could be asked to make prices for a variety of transactions available in a manner similar to the TRACE prices for bonds.

**Who would own the repository?** It would be owned and operated by the National Institute of Finance which would be part of the regulatory community and would be overseen by a council of regulators. We anticipate that this council would be chaired by the Secretary of the Treasury and include the heads of the SEC, FDIC, CFTC, OCC, OTS, the proposed Consumer Protection Agency and the director of the NIF.

**Who would initially fund the repository and who would fund its ongoing operations?** It would be funded by some sort of assessment fee charged to the entities required to report data to the NIF. We are currently working on an analysis of the best type of fee structure. Nonetheless, we have been told by Morgan Stanley that such an initiative could save the firm \$200 million annually from a reduction in operating costs based on improved reporting and clearing

operations. We have not done a comprehensive cost-benefit analysis to the industry but anticipate it will save in excess of \$1 billion a year in operating costs. The cost of running the NIF will be less than the savings incurred by the industry.

**Doesn't there need to be a global database of systemic risk data since economies are now basically hyperlinked?** It is important to have a broad picture as possible, but to achieve a global consensus would be time-consuming and would stop us from getting legislation passed in the U.S. We feel that U.S. entities should participate even for their non-U.S. transactions while non-U.S. entities would also have to contribute their U.S.-based transactions.

**How will the NIF work with the European Central Bank which has also indicated plans to create a data repository?** We are in discussions with the European Central Bank and anticipate that the reference data and reporting standards the NIF provides will be the same reference data and reporting standards the ECB provides. Therefore, they will ultimately be global standards. The NIF would collect transaction and position data for U.S. firms and their affiliates and transactions data for non-U.S. firms and their affiliates for trades done in the U.S. We expect the ECB would collect similar data for EU firms and transactions and the U.K. and Asian regulators would collect similar data for their firms. Ultimately, there would be an agreement between global regulators on how to share all of the transaction and position data. Clearly it will take time to reach these type of agreements, but one area where we should all agree on easily is providing a single set of reference data and reporting standards. Our objectives are one and the same. This is a global problem and needs to be addressed on a global scale.

**What are the next steps you will be taking to implement the U.S. data repository?** The key is to pass legislation and a senator who sits on the Senate Banking Committee has indicated an interest in the NIF and in drafting legislation related to creating the NIF. We hope that draft legislation for creating the NIF can become part of the regulatory reform bill and it can be on the president's desk early next year. It would then take another two to three years for the repository to be populated.