



**OFFICE OF
FINANCIAL RESEARCH**
U.S. DEPARTMENT OF THE TREASURY



MEETING OF THE FINANCIAL RESEARCH ADVISORY COMMITTEE

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Senior Manager

RESEARCH AND ANALYSIS CENTER

Promote financial stability by serving the needs of the Financial Stability Oversight Council (the Council), performing essential research, and developing new tools for measuring and monitoring risk in the financial system.

- ***Current Analysis:*** Perform analysis in collaboration with Council members to monitor and evaluate potential threats to financial stability, and make such information available to the public as appropriate.
- ***Policy Studies:*** Evaluate the impact of policy and policy choices on financial stability.
- ***Fundamental Research:*** Conduct research that improves financial stability monitoring, informs policy, promotes risk management, and identifies and addresses data gaps.

These missions are closely interconnected and the OFR Research and Analysis Center takes an interdisciplinary team approach to most projects.

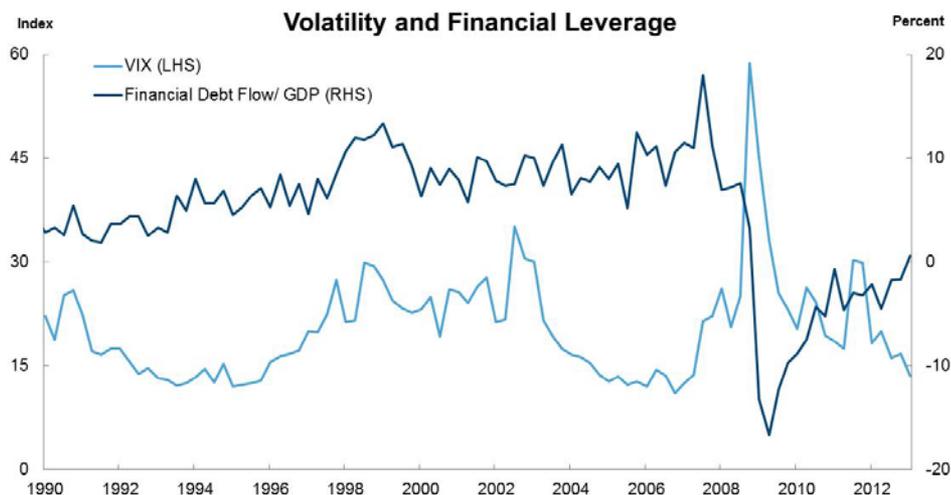
OFR continues to build its current analysis and policy studies capacity while expanding support and collaboration with Council member agencies.

- Monitoring and reporting on threats to financial stability.
- Analysis for nonbank designations.
- Analysis of potential threats from asset management activities.
- Assistance with the Council's Annual Report.
- Reporting on money markets, credit default swap markets, shadow banking.
- Initial analysis of Form PF data.

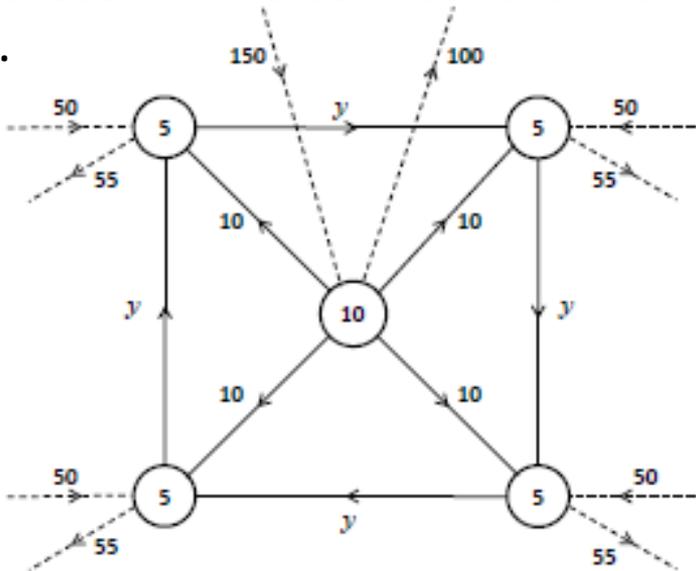
OFR performs fundamental research to improve our collective understanding of the causes and consequences of financial instability.

- The interconnected nature of financial institutions and markets.
- The roles that market participants play in creating and amplifying financial distortions.
- The effects of regulatory and risk management policies.

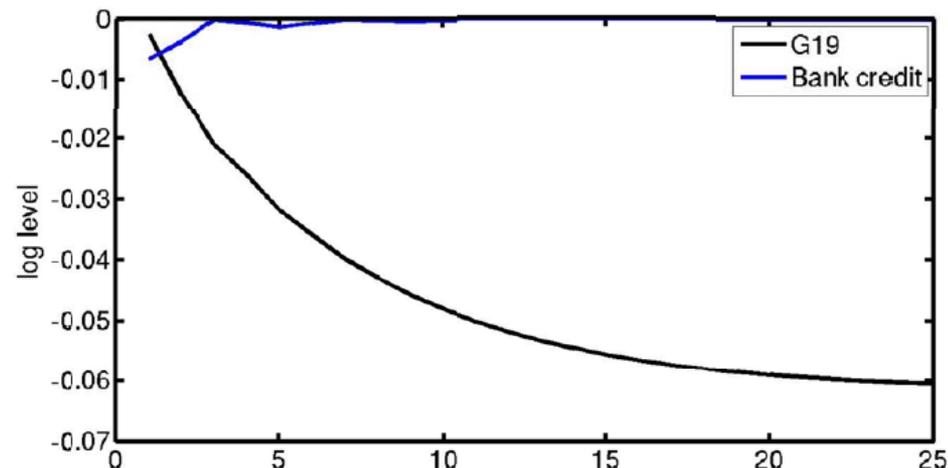
- Dick Berner noted in a recent speech that low volatility can be an indicator of future systemic risk due to excessive risk taking.
- Signs of increasing vulnerabilities include the movement of new players into traditionally riskier markets, increasing leverage and liquidity risk, and selling volatility to enhance returns.
- The chart below shows that, in the five years preceding the 2007 crisis, volatility reached an all-time low and increases in financial leverage (financial debt flow/GDP) reached a record high.



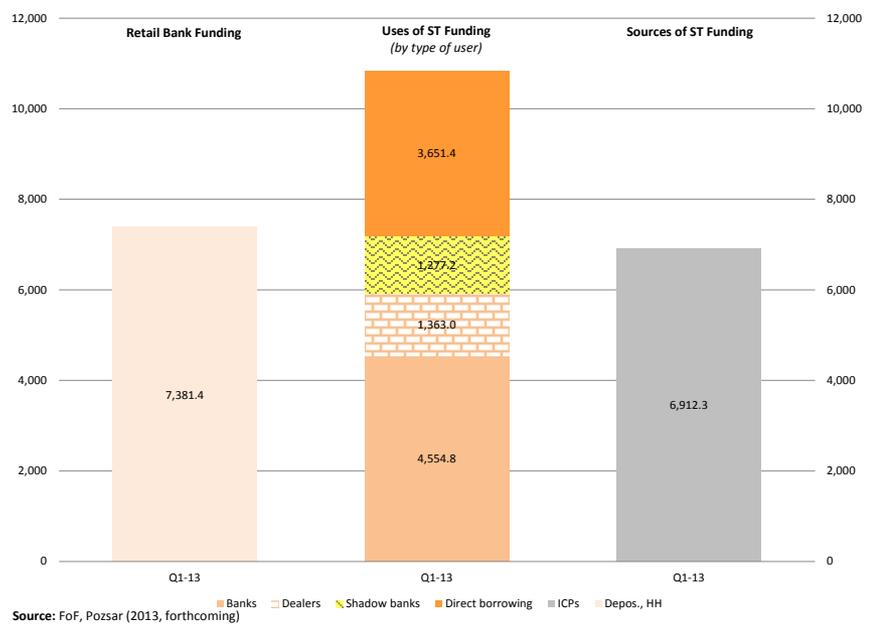
- OFR Working Paper No. 9 estimates the extent to which interconnections among financial institutions create potential channels of contagion and amplification of shocks to the financial system.
- The model builds on prior models by considering the impacts of bankruptcy costs, fire sales, and mark-to-market revaluation of assets. Without those effects, expected losses are small. The figure below illustrates that a key factor in contagion is the exposure of financial institutions to each other as compared with their exposures to outside sectors.
- Ongoing work focuses on interconnections within the U.S. and European banking systems.



- OFR Working Paper No. 8 analyzes historical actions by the Fed and others that would be considered “macroprudential” under today’s framework.
- Many of these tools appear to have succeeded in short-term goals—for example, limiting specific types of credit or affecting the terms of lending. It is less obvious that they improved long-term financial stability.
- The chart below shows the cumulative response, over 25 months, to a tightening of consumer credit controls during 1945-1952. Total consumer credit (G19) is 6 percent lower on average; total bank credit is unchanged.
- This is a fertile area for further research.



- An upcoming OFR working paper describes the sources and uses of short-term funding in the U.S. money market.
- The paper finds a \$4 trillion data gap between sources and uses, as shown in the figure below. This is the amount of institutional cash for which the investors are not identified by the Fed’s Flow of Funds report. On the “uses” side, the main categories are banks, sovereigns, dealers, and the shadow banking system.



- Co-hosted May 29-30, 2013 conference with the Cleveland Fed, “Financial Stability Analysis: Using the Tools, Finding the Data.”
- Established a joint OFR-NSF grants program.
- Co-hosting September 29, 2013 conference with the New York Fed.
- Annual Report for release November 2013.
- Annual joint OFR-FSOC conference in December 2013.

1. Financial stability monitoring and metrics

- Working Paper No. 1 (1/2012): A Survey of Systemic Risk Analytics.
- Forthcoming: Shadow banking sources and uses; liquidity indicators; analysis of data collected by the OFR on money funds, credit derivatives, short-term funding, and hedge funds.

2. Financial stability policy

- Working Paper No. 4 (1/2013): CoCos, Bail-In, and Tail Risk.
- Working Paper No. 8 (5/2013): The History of Cyclical Macroprudential Policy in the United States.
- Forthcoming: Policy agenda for OFR Annual Report.

3. Risk management and stress testing

- Working Paper No. 2 (3/2012): Forging Best Practices in Risk Management.
- Working Paper No. 3 (12/2013): Using Agent-Based Models for Analyzing Threats to Financial Stability.
- Working Paper No. 5 (2/2013): Systematic Scenario Selection.
- Working Paper No. 6 (3/2013): Hedge Fund Contagion and Risk-Adjusted Returns.
- Working Paper No. 7 (4/2103): Stress Scenario Selection by Empirical Likelihood.
- Working Paper No. 9 (6/2013): How Likely is Contagion in Financial Networks.
- Working Paper No. 10 (7/2013): Stress Tests to Promote Financial Stability.
- Forthcoming: Analysis of stress tests across financial institutions; results of ABM simulations.

4. Support the Data Center

- Working Paper No. 11 (forthcoming): Privacy and Confidentiality in Risk Regulation.
- Forthcoming: Working paper on mortgage identifiers.

Linda Powell
Chief Business Officer

DATA CENTER

The mission of the Data Center's Data and Analytics Division is to provide data, standards, and analysis to advance the investigation of threats to financial stability.

- Collect data
- Analyze data
- Provide subject-matter expertise to the Council and the Research and Analysis Center
- Create reference databases (entity and instrument)
- Develop strategies and implement data standards

Support for the FSOC

- Data for the Council's Annual Report and ongoing analysis
- Data and analysis for the Council's nonbank designation process
- Analytical support on data content, quality, and structure
- Service Desk support to facilitate requests for data and analysis
- Lead the Council's Data Committee - current initiatives include:
 - Enhance data sharing and analysis
 - Develop a common framework for information security practices, processes, and compliance requirements to ease sharing of data across agencies
 - Maintain an inventory of member agencies' data assets
 - Co-chair the Data Gaps Working Group
 - Develop a framework for mapping and analyzing entity hierarchies

Collect Data

- Collect, validate, and maintain data from government agencies, vendors, and financial market utilities to support the Council and the OFR in carrying out their missions.

Fill Data Gaps

- Collaborate with other organizations in government, industry, and the non-profit field to identify data gaps and overlaps, and fill key data gaps for financial stability analysis.
 - Analyze an interagency inventory of data assets to identify sector coverage, gaps, and overlaps.
 - Lead opportunities to reduce burden and collaborate with other agencies.
 - Co-chair the Council Data Committee's Working Group on Data Gap Analysis.
 - Develop tools to help link data assets.

Analytical Data Expertise

- To support the Council and the OFR, provide subject-matter expertise and analysis on the content, quality, and usage of data.
- Develop an electronic library that provides the OFR and the Council with enterprise-wide knowledge management.
- Provide enterprise-wide analytical support to build the OFR technical infrastructure.

Reference Databases

- Prepare and publish reference databases on financial companies and financial instruments.

Data Standards

- Develop strategies and implement policies for data standards to increase efficiency and transparency in financial markets.
 - Provide leadership in establishing the global Legal Entity Identifier (LEI) system.
 - Co-chair the Council Data Committee's Working Group on Entity Hierarchies.
 - Participate in the Mortgage Industry Standards Maintenance Organization community to use the LEI for regulatory reporting and transaction data flows.
 - Participate in an interagency working group to identify the characteristics of a universal mortgage identifier that would improve regulators' understanding of the mortgage marketplace and help in connecting data across the mortgage lifecycle.
 - Explore and evaluate "semantic technologies" that facilitate the understanding, integration, and sharing of data.
 - Work with agencies to identify other needs for data standards.
 - Collaborate with standard-setting experts and the financial industry (e.g., X9, EDM Council, ISO, etc.).

John R. Talbot

Chief Technology Officer

DATA CENTER

Support the OFR and the Council by delivering effective and secure information technology solutions and programs.

Current focus is on 3 areas

Analytic Environment

Deliver secure, high-capacity, scalable, feature-rich analytic capability.

- Continue supporting short-term environment while developing and delivering longer-term environment.
- Deliberative and thoughtful approach.
- Reusability of short-term components.

Data Management

Support data onboarding, and continue evolving and expanding data management, in accordance with business needs, best practices, and industry standards.

- ETL (extract, transform, load) automation.
- Governance, internal process development, internal standards.

Application Development

Develop tools and applications that help with data management and with using a complex analytic environment. Fill gaps in off-the-shelf products.

- Internal data portal.
- Support development of data library and catalogue.
- Workflow automation.

Short-Term IT Capabilities

- Deployed short-term analytic capability with interim, secure file-transfer facility.
- All short-term functionality will be included and expanded in the longer-term analytic environment.
- Designed and planned for reusability in the long-term environment.

Under Treasury Umbrella

- Completed the architecture and design of the OFR systems residing within the greater Treasury IT environment.

Long-Term IT Capabilities

- Completed planning, architecture, and design of the long-term analytic environment. Currently in procurement mode.
- Deployment will begin during the fourth quarter of FY 2013.
- Launched, and will continue to develop, an Information Security program.
- Launched, and will continue to develop, a Data Management program.

Features of the Analytic Environment

- Timely and secure methods to receive and transmit data.
- Onboard data efficiently, responsively, and with greater automation.
- Strong capabilities for data life-cycle management and security.
- Highly flexible, scalable, and customizable components.
- Rapid provision of services.
- Ability to tailor security controls to the level of data sensitivity.
- Variety of computational platforms to match analytic needs and preferences.
- Iterative computational or data-intensive analyses.
- Extensive suite of tools for data exploration and visualization at all stages of the data lifecycle.
- Nearly identical capabilities for remote workers.
- Compliance with Treasury policies and strategies.