FEDERAL RESERVE BANK *of* NEW YORK

# The Central Bank’s Role as a Provider of Liquidity

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Riksbank “Rethinking the central bank’s mandate”, June 3-4 2016 (Stockholm)

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# Session mandate

- *How should the central bank's liquidity provision be designed for normal times?*
- *Can standing facilities combine the objectives of monetary policy and financial stability?*
- *Do new payment technologies and increasingly internationally integrated financial systems pose a challenge to forms of liquidity provision?*
- *And what is the role of government bonds in modern liquidity provision frameworks?*

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- *And what is the role of government bonds in modern liquidity provision frameworks?*

**My comments discuss CB liquidity provision with multiple objectives, and when institutions are complex and global, with a focus on:**

1) **Liquidity facilities, and**
2) **Supervisory approach to change potential demand for liquidity**

# Different roles for CB Liquidity Provision

1. **Ceiling for the policy rate**. Purely for monetary policy implementation.

2. **Broad-based liquidity provision**

- [OMO] Supports the transmission of monetary policy
- [OMO] Makes sure that the link between the policy rate and broad market conditions and the real economy remains strong
- Relates to both implementation during times of stress and more normal financial stability

3. **Emergency Lending Authority and liquidity to individual institutions**

- More for financial stability than monetary policy implementation

# The Discount Window

# Discount Window Basics

| | |
|---|---|
| **Primary Credit**<br><br>For healthy banks | • Generally, no questions asked<br>• Penalty rate over fed funds target (currently 100 bps)<br>• Provide temporary liquidity |
| **Secondary Credit**<br><br>For troubled banks | • Questions may be asked<br>• Penalty rate over primary credit rate (currently 150 bps)<br>• Provide short-term funding when other sources of funds are not available at a reasonable rate |
| **Seasonal Credit**<br><br>For <u>small</u> banks with seasonal funding needs | • Discount rate (currently 45 bps)<br>• Longer-term funding over periods of seasonal need<br>• Mostly small banks in agricultural regions |
| **Emergency Credit**<br><br>For "unusual and exigent" circumstances | • Under Section 13(3) of the Federal Reserve Act<br>• Allows lending to non-banks via broadly available facility<br>• Prior to 2008, not used since 1930s<br>• New limits under Dodd-Frank Act |

# Discount Window Basics – Acceptable Collateral

All DW loans must be fully collateralized

**Securities (Investment Grade)**

US Treasuries and Agencies

Foreign Sovereign Debt*

Corporate Bonds*

Municipal Securities*

Asset-Backed Securities

Agency Mortgage-Backed Securities

CDOs, CMBS, Private-Label CMOs (AAA)

**Loans**

Commercial Loans

Commercial Real Estate

1-4 Family Mortgage Loans

Consumer Loans

Agency Guaranteed Loans

* Foreign currencies: Japanese Yen, Euro, Australian Dollar, Canadian Dollar, British Pound, Danish Krone, Swedish Krona, Swiss Franc

# What if a CB wants a different tool for each role?

1. **Ceiling for the policy rate**.
   - Purely for monetary policy implementation.
   - Use on-demand repo facility against OMO collateral, either for DIs, if you target the FF rate or the OBFR, or for a broader set of counterparties, like dealers against narrower collateral, if you target the repo rate.
   - Because collateral is high quality and narrow, you might avoid stigma issues.

# What if a CB wants a different tool for each role?

2. **Broad-based liquidity provision**

   - supports monetary policy transmission
   - Use weekly Term Auction Facilities (TAFs) for institutions with DW access. Acceptable collateral is broad so could reduce strain in a variety of markets. Not “on demand” so could reduce moral hazard issues. Auction-format could reduce stigma.
   - Limitation: Only available to depository institutions .



*Thanks to Antoine Martin for thoughtful ideas.*

# What if a CB wants a different tool for each role?

3. **Emergency Lending Authority and liquidity to individual institutions**

   – DW seems like the right tool for lending to individual DI institutions, but the potential for stigma is still a big issue.

   – Banks have DW access, but excludes the non-banks in financial system

   – Broader issue of provision of liquidity to global bank operations

   – Ways to distance DW from tools to help troubled banks?

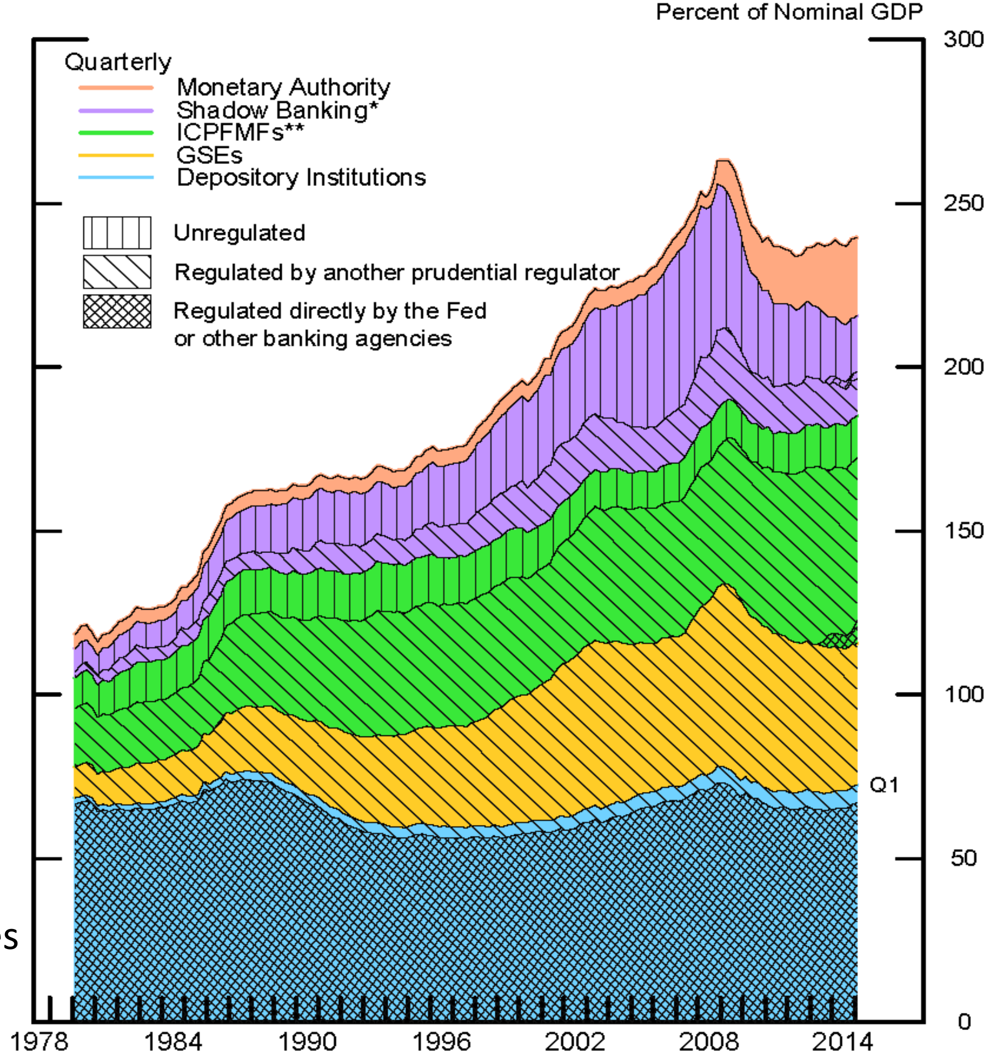
*Thanks to Antoine Martin for thoughtful ideas.*

# Important Changes in Financial Intermediation

# Shadow banking and U.S. supervisory & regulatory perimeter

- The Fed's perimeter …
  - mostly BHCs and some depository institutions (and FMUs)
  - enhanced prudential regulations for designated nonbank (NB) SIFIs
- Multiple agencies cover other entities
  - OCC and FDIC: Depository institutions
  - NCUA: Credit unions (CUs)
  - FHFA: Most of GSE shaded area
  - State Insurance regulators: Insurance companies
  - SEC: MFs, MMFs, broker dealers
  - CFTC: futures, swap dealers, derivative clearing organizations

Credit Market Debt Outstanding




Note: * Shadow banks are ABS Issuers, Financial Companies, Mortgage REITs, MMMFs, Broker-Dealers, and Funding Corporations.
** ICPFMF are Insurace Companies, Pension Funds, Mutual Funds, and ETFs.
Source: Federal Reserve Flow of Funds.

# How might important changes in financial intermediation influence liquidity provision by CBs?

- Changes in FI include a dramatic evolution in business models
  - Shadow banking
  - Global span
  - Complex products
- Significant transformation in organizational footprint of BHCs
  - From stand alone entities to subsidiaries of increasingly complex financial conglomerates
  - Many affiliates are in foreign markets, including bank subsidiaries
- Emergence of CCPS and other FM infrastructures as key players

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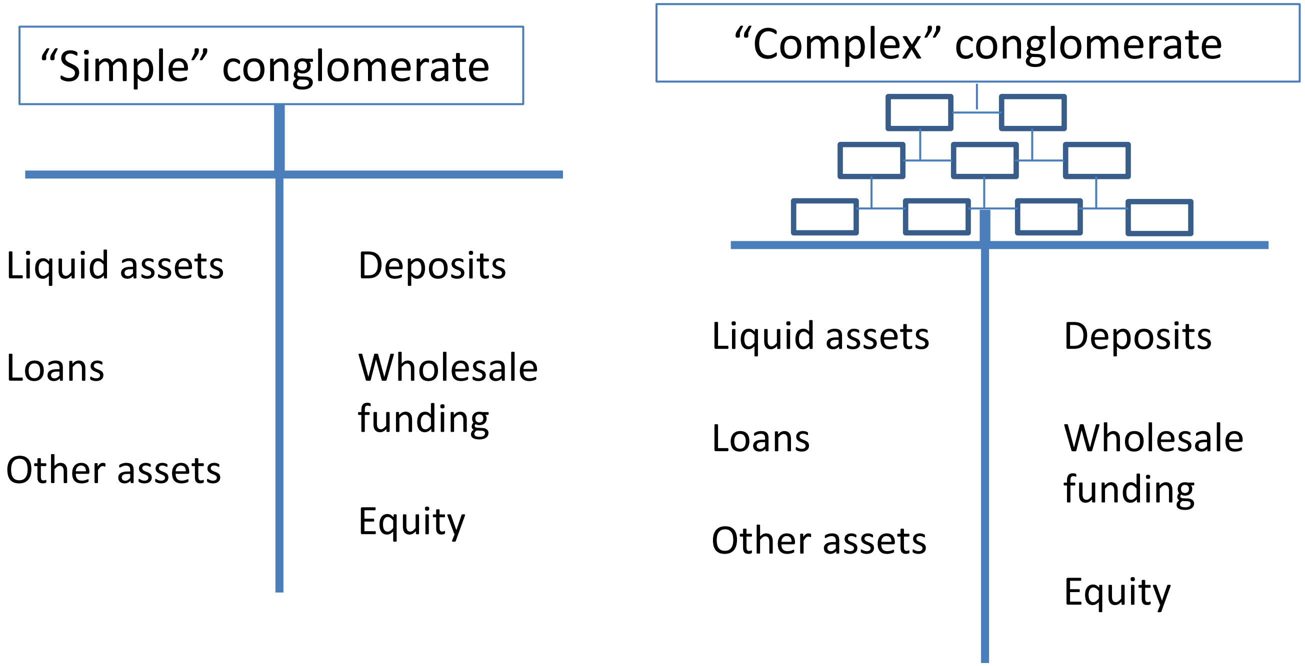
- **These changes are relevant for central banks as providers of liquidity. Work underway on global liquidity and FMU, broker dealers, global….**
- **The changes also are relevant for supervision –**

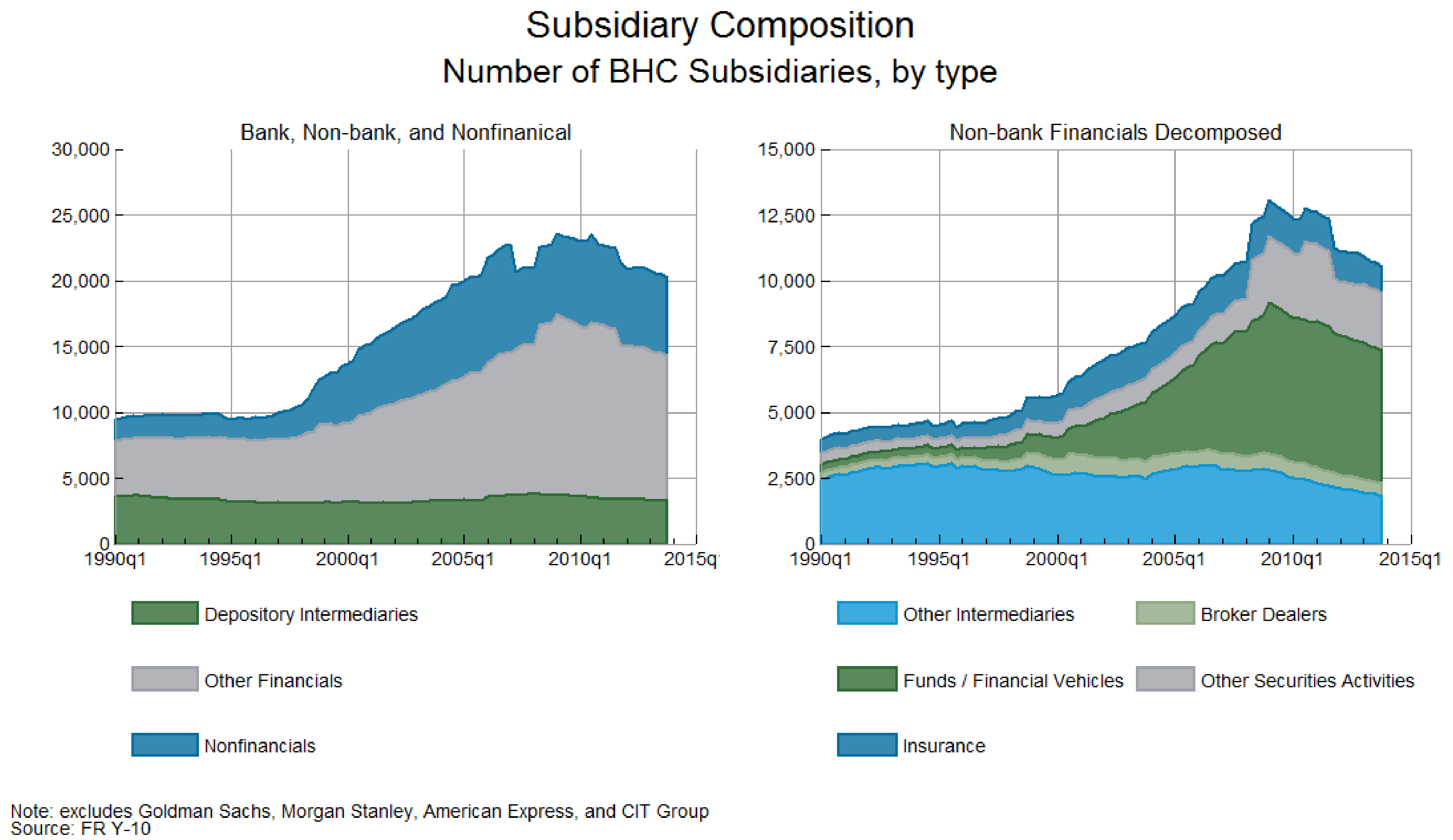
  **Supervise institutions so that they better manage their own liquidity.**

# Complexity of the parent conglomerates matter for the business conduct of its bank affiliates, including liquidity




- Cetorelli and Goldberg (2016) <u>Differential liquidity management</u>
  - Bank in simple conglomerate is run according to canonical business model of banking. All that matters is own balance sheet.
  - Bank in complex conglomerate. Own balance sheet management, structure, composition, dependent *also* on family-wide business model, strategies, needs, as reflected in its organizational complexity.

# Complexity Build Up. Evidence from U.S. Bank Holding Companies

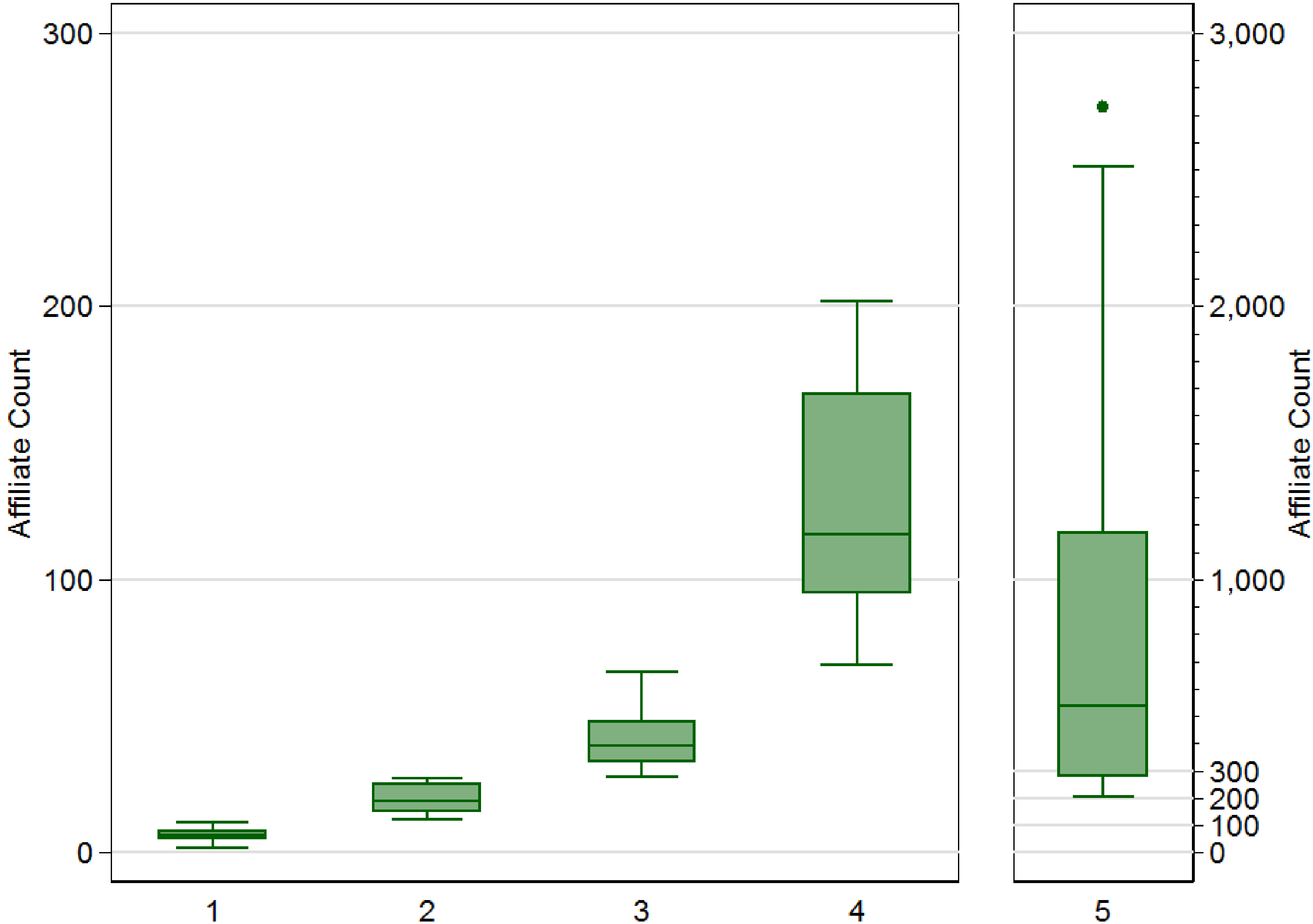



"Counts"-based. Herring and Carmassi 2010; Cetorelli and Goldberg 2014.

- Vast expansion in BHCs organizational footprint
- Additions in non-bank financials

Source: Cetorelli and Stern (2015)

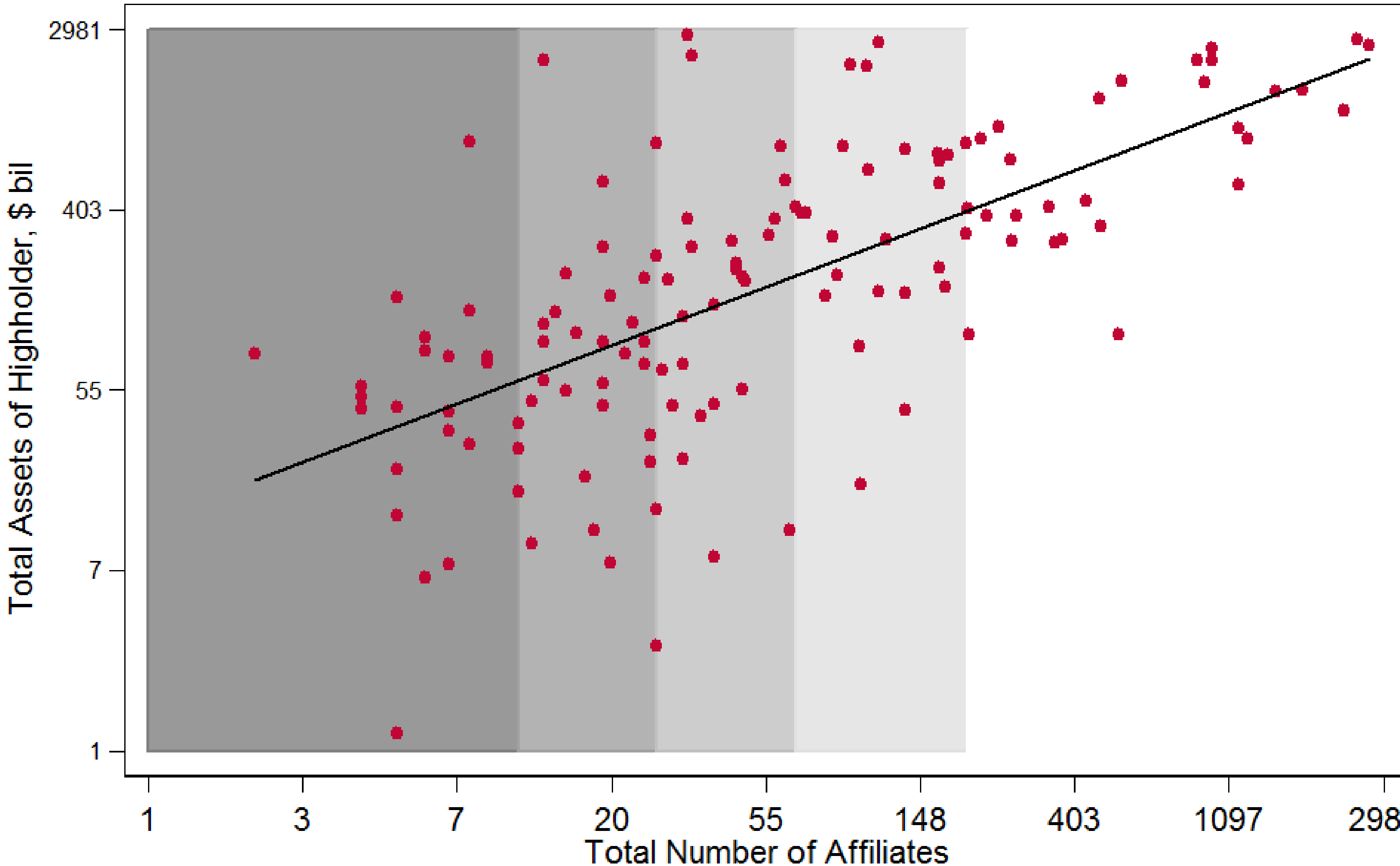
# Foreign Banking Organizations in US and Affiliate Count, by Quintile




Note: Quintiles are indicated along the x-axis. Source: Bankscope.

Source: Cetorelli and Goldberg (2016) 2012:Q4 Structure

# Foreign Banking Organizations in US: Size vs. Affiliate Counts




Slope of Fit Line = 0.673***
R Squared = 0.436
Gray shaded areas indicate quintiles of count. Tick marks on the x-axis and y-axis are spaced using log scale. X-axis labels indicate total number of affiliates per highholder. Y-axis labels indicate total assets per highholder. Sources: Bankscope, Capital IQ.



Source: Cetorelli and Goldberg (2016) 2012:Q4 Structure

# When institutions are large and complex, expand the supervisory focus on Liquidity Risk Management

- **Liquidity** is a financial institution's capacity to meet its cash and collateral obligations without incurring unacceptable losses

- **Liquidity risk** is the risk to an institution's financial condition or safety and soundness arising from its inability (whether real or perceived) to meet its contractual obligations.

- The primary role of **liquidity risk management** is to:

  - Prospectively assess the need for funds to meet obligations

  - Ensure the availability of cash or collateral to fulfill those needs at the appropriate time by coordinating the various sources of funds available to the institution under normal and stressed conditions

- Lessons learned by <u>financial institutions and supervisors </u>in Financial Crisis

- Still, not all nonbanks subject to prudential regulation of liquidity

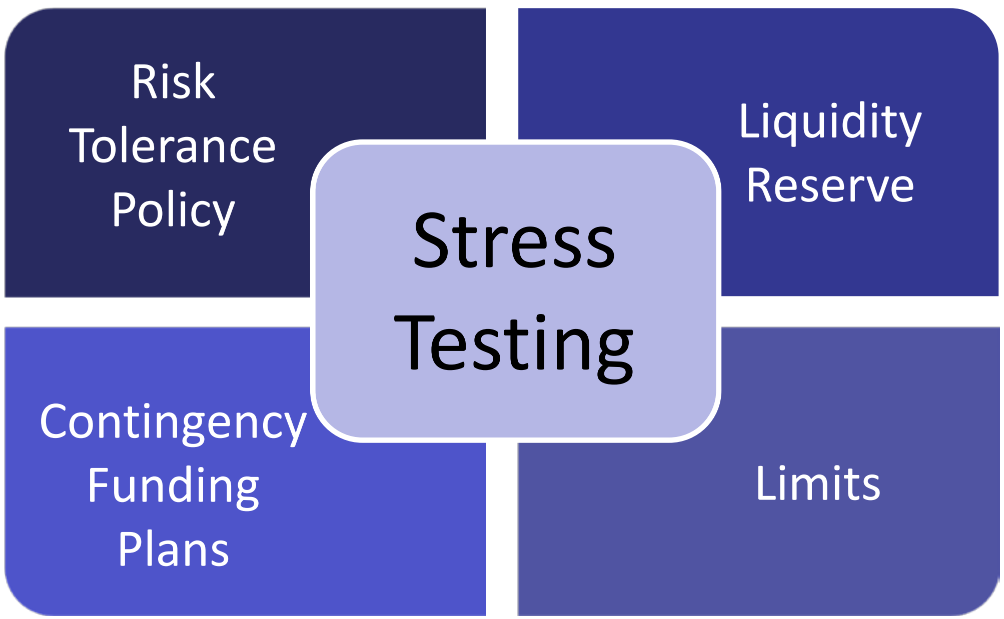
# Supervision of Large Financial Institutions in NY

| | |
|---|---|
| On-Site Continuous Monitoring | • On-site risk specialists responsible for understanding funding and liquidity risk management inherent within key businesses |
| Liquidity Analytics | • Monitor liquidity risk profiles of individual firms<br>• Monitor funding markets and behavior of funding providers |
| Horizontal Reviews | • Cross-firm reviews of liquidity and liquidity risk management practices at Large Financial Institutions in the U.S.<br>• Comprehensive Liquidity Analysis and Review (CLAR) |
| Examinations | • Exams used to obtain an in-depth view on an issue. |

# Liquidity Stress Testing

## Developing Liquidity Stress Test


## Linking Stress Test to Risk Management Practices




- Ensure that exposures are consistent with risk tolerance
- Identify and quantify sources of potential strain and the impacts on cash flows, liquidity, profitability, and solvency
- Ground management discussions to limit exposures, build up the liquidity reserve, and adjust the liquidity profile to fit the risk tolerance
- Shape and be linked to contingency planning

# Session Mandate: How should the central bank's liquidity provision be designed for normal times?

- Different facilities for different liquidity goals, separating monetary policy support from financial stability, can be one approach.
- Government bonds serve as one form of collateral in liquidity provision frameworks, but full collateral burden can be spread across numerous types of acceptable collateral.
- Complexity and globalness of financial conglomerates, and expanded FMI roles, provide broader set of liquidity challenges.
  - Organizational liquidity, not just bank balance sheet, important.
  - Access of parts of the organization to liquidity depends on geography and types of affiliates.
- Stronger focus on institution's liquidity management, and supervisory testing of liquidity frameworks, should reduce the burden on central banks to provide liquidity to individual institutions for idiosyncratic and market function reasons.

Thank you.

# Reference slides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# Lessons from the Global Financial Crisis

- **Lessons Learned by Institutions**
  - Maintain liquidity reserves of unencumbered, highly liquid assets as insurance against stress events
  - Establish active contingency funding plans with limit and trigger structures to monitor the health of institutions
  - Produce regular liquidity stress tests, internal reports and metrics to inform both Treasury and enterprise-wide risk management of existing and emerging risks
  - Model and limit: less liquid asset characteristics, liquidity transfer across entities and currencies
  - Establish strong funds transfer pricing practices, linked to existing and new product governance and develop business level understanding
- **Lessons Learned by Supervisors**
  - Collaborate globally to articulate and enforce consistent supervisory expectations of liquidity and risk management
  - Provide consistent messages to institutions while considering their varying size, complexity, and scope of operations
  - Improve micro- and macro-prudential supervision through quantitative surveillance

# Comprehensive Liquidity Analysis and Review (CLAR)

- Annual horizontal review by the Federal Reserve to provide a consistent, cross-firm evaluation of liquidity and liquidity risk management at the largest, systemically important firms under the Federal Reserve's supervision

- Select Areas of Focus:
    - Evaluation of firms' liquidity risk measurement processes
    - FRS' independent quantitative analysis of firm's liquidity position
    - Evaluation of firms' liquidity risk management and planning
    - Evaluation of firms' preparedness for upcoming regulatory standards and requirements
    - Other cross-firm topics, determined annually

- Supervisory communication to participating firms includes horizontal finding from CLAR process and feedback as a result of Federal Reserve's continuous monitoring activities

# Discount Window Basics – Facilities

- Typical reasons for borrowing
  - To meet liquidity needs due to unexpected outflows of funds from an institution’s Reserve account
  - Operational problems
  - Arbitrage opportunities
  - To satisfy reserve requirements
  - As a test to validate borrowing processes and loan applications
  - Institution cannot access funding markets due to financial condition

# Sound Liquidity Risk Management Practices

- Effective corporate governance consisting of oversight by the board of directors and active involvement by management in an institution’s control of liquidity risk

- Appropriate strategies, policies, procedures, and limits used to manage and mitigate liquidity risk

- Comprehensive liquidity risk measurement and monitoring systems (including assessments of the current and prospective cash flows or sources and uses of funds) that are commensurate with the complexity and business activities of the institution

- Active management of intraday liquidity and collateral

*Sound Liquidity Risk Management Practices are based on The Basel Committee’s Principles for Sound Liquidity Risk Management and Supervision*