

# Is There Still a Too-Big-To-Fail Subsidy?

Darrell Duffie  
Stanford University

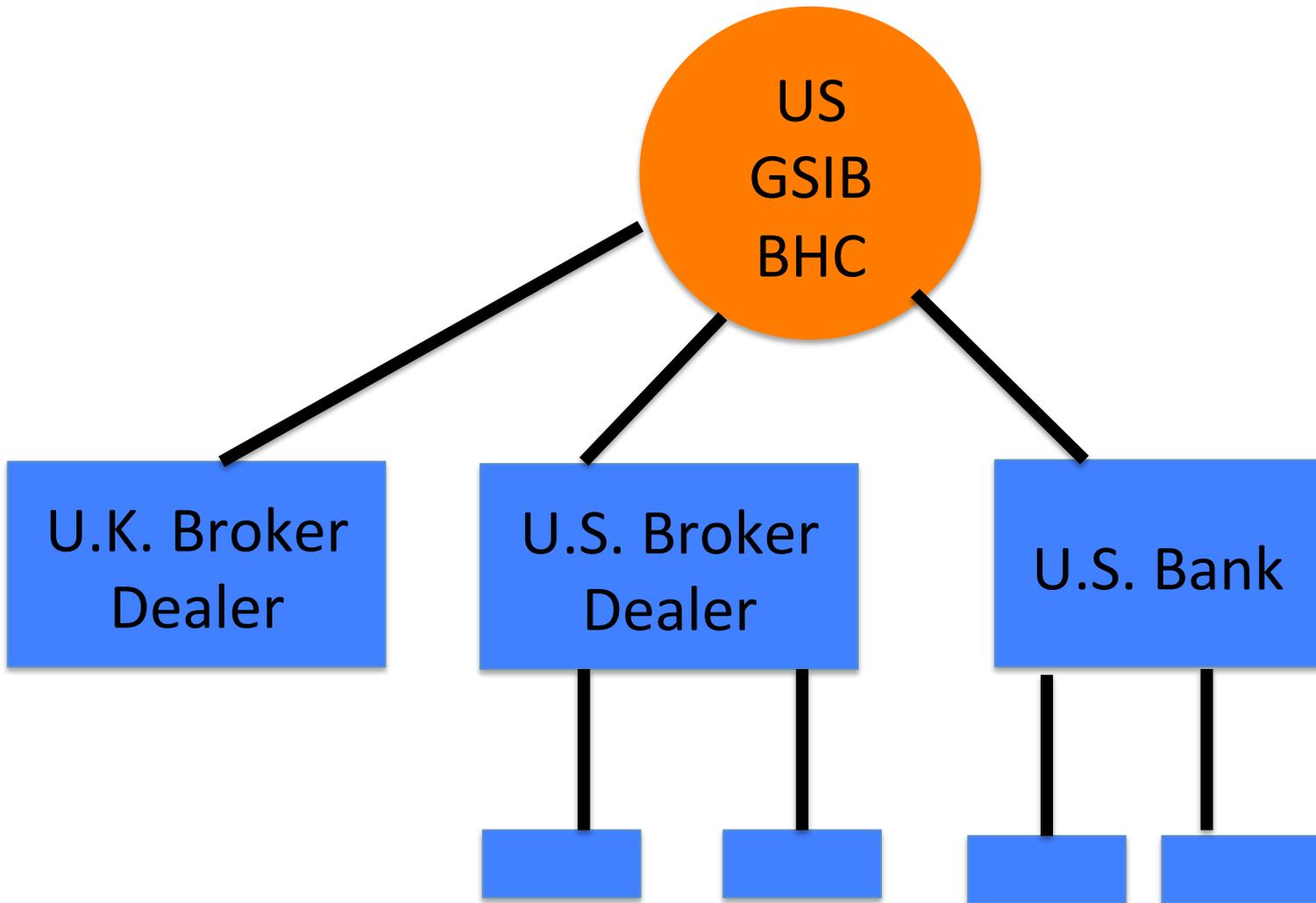
Minneapolis Fed Conference

November, 2013

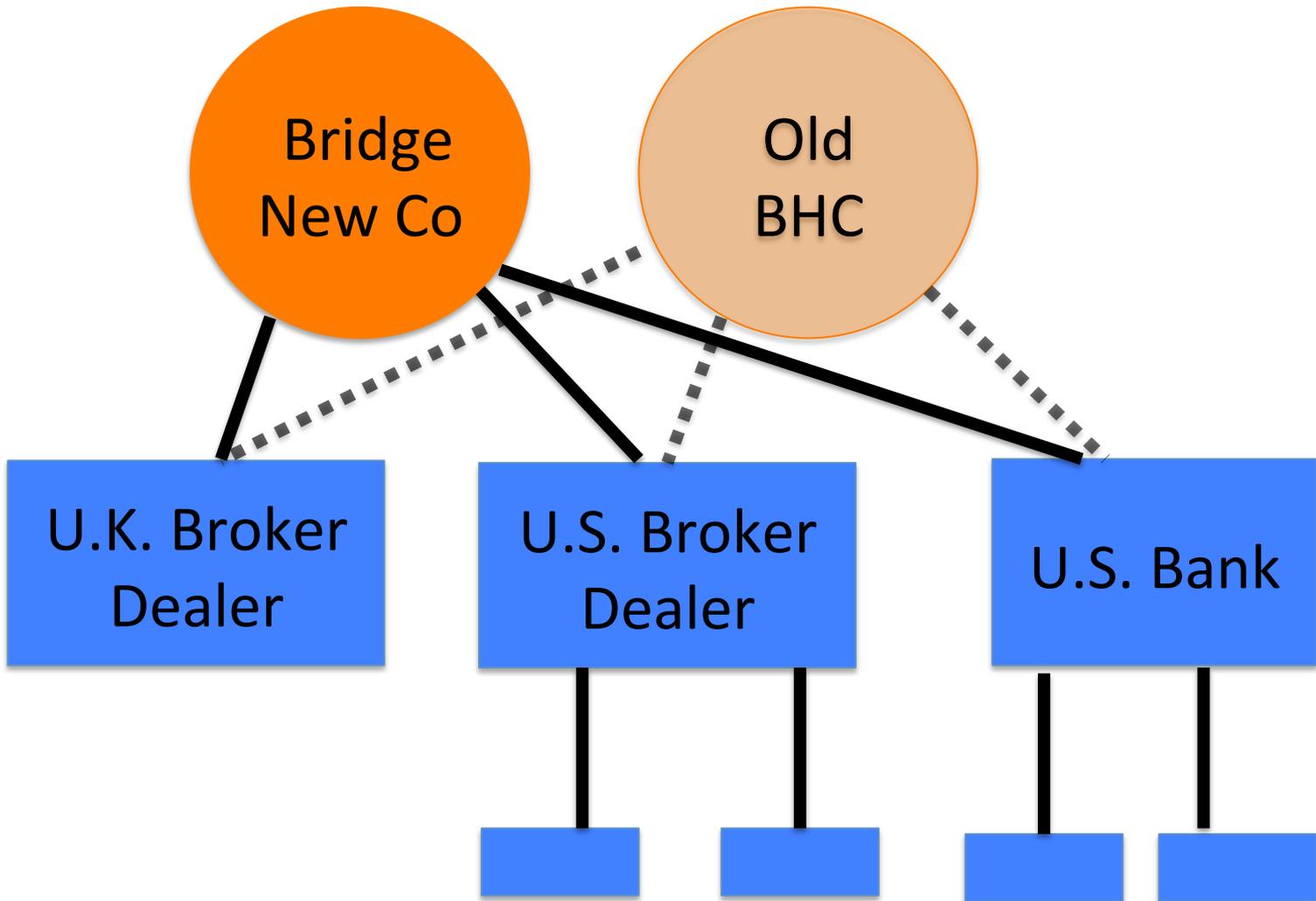
# Identify TBTF support from spreads?

- Spread =  $p L q$ .
- Is the annual probability  $p$  of default lowered by TBTF expectations?
- The loss given default  $L$  for SIFI bonds could be raised by Single-Point-of-Entry resolution.
- The risk-premium multiple  $q$  is heightened by TBTF status.
- It may be difficult to identify SIFI support from bond spreads or CDS rates.

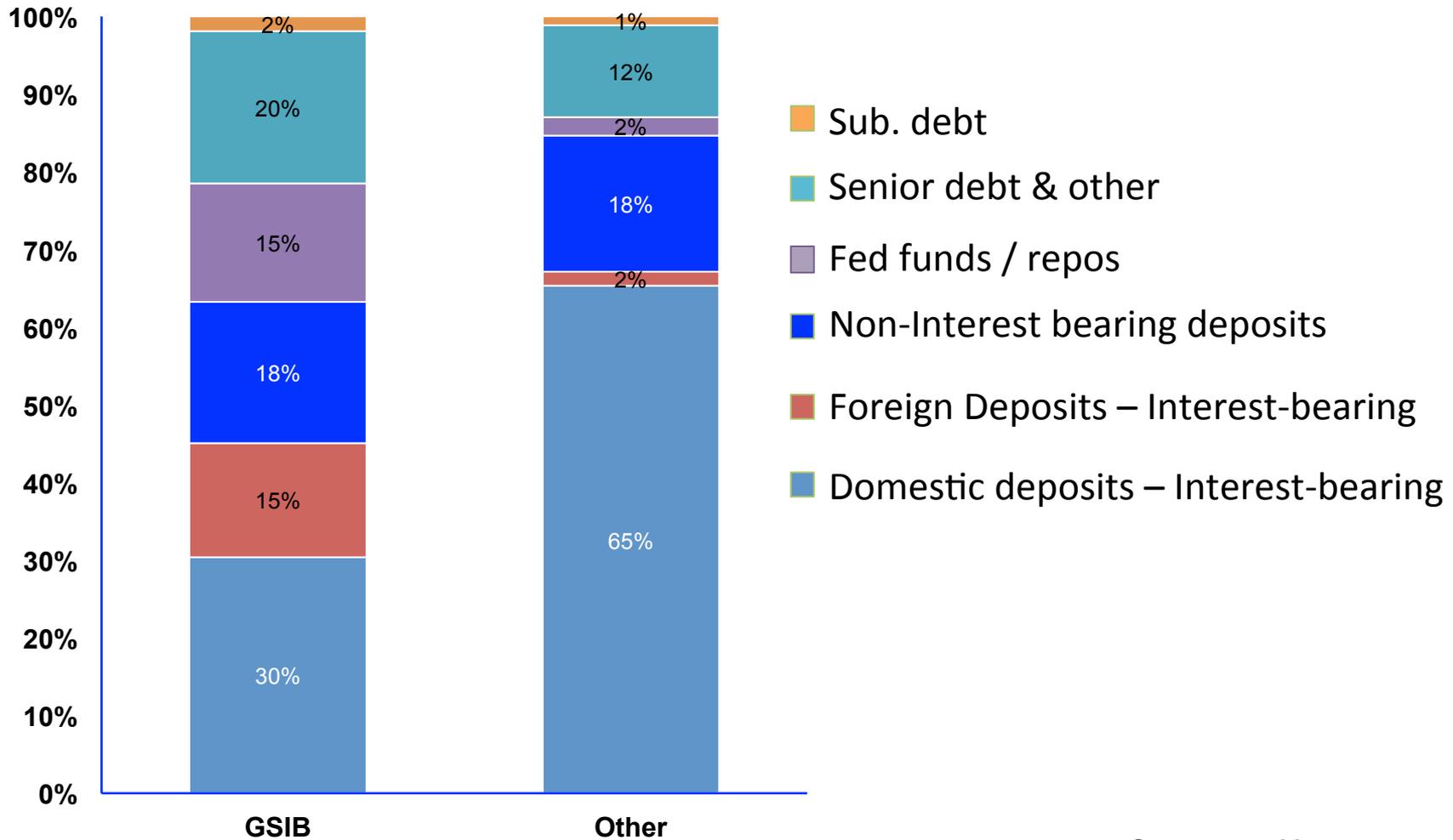
# Basic Structure of a US GSIB Bank Holding Company



# Single Point of Entry Failure Resolution



# Funding Mix for Large versus Small BHCs

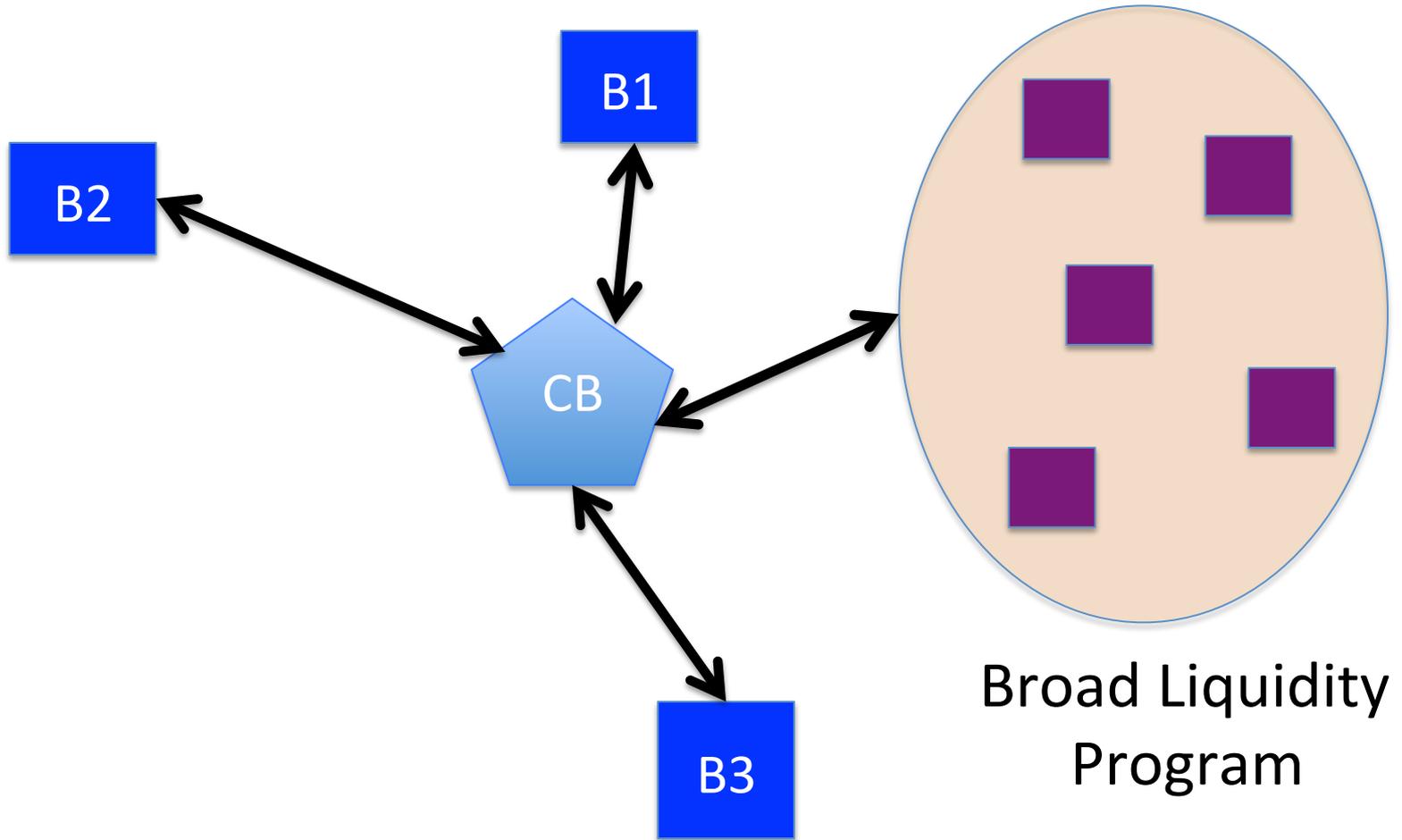


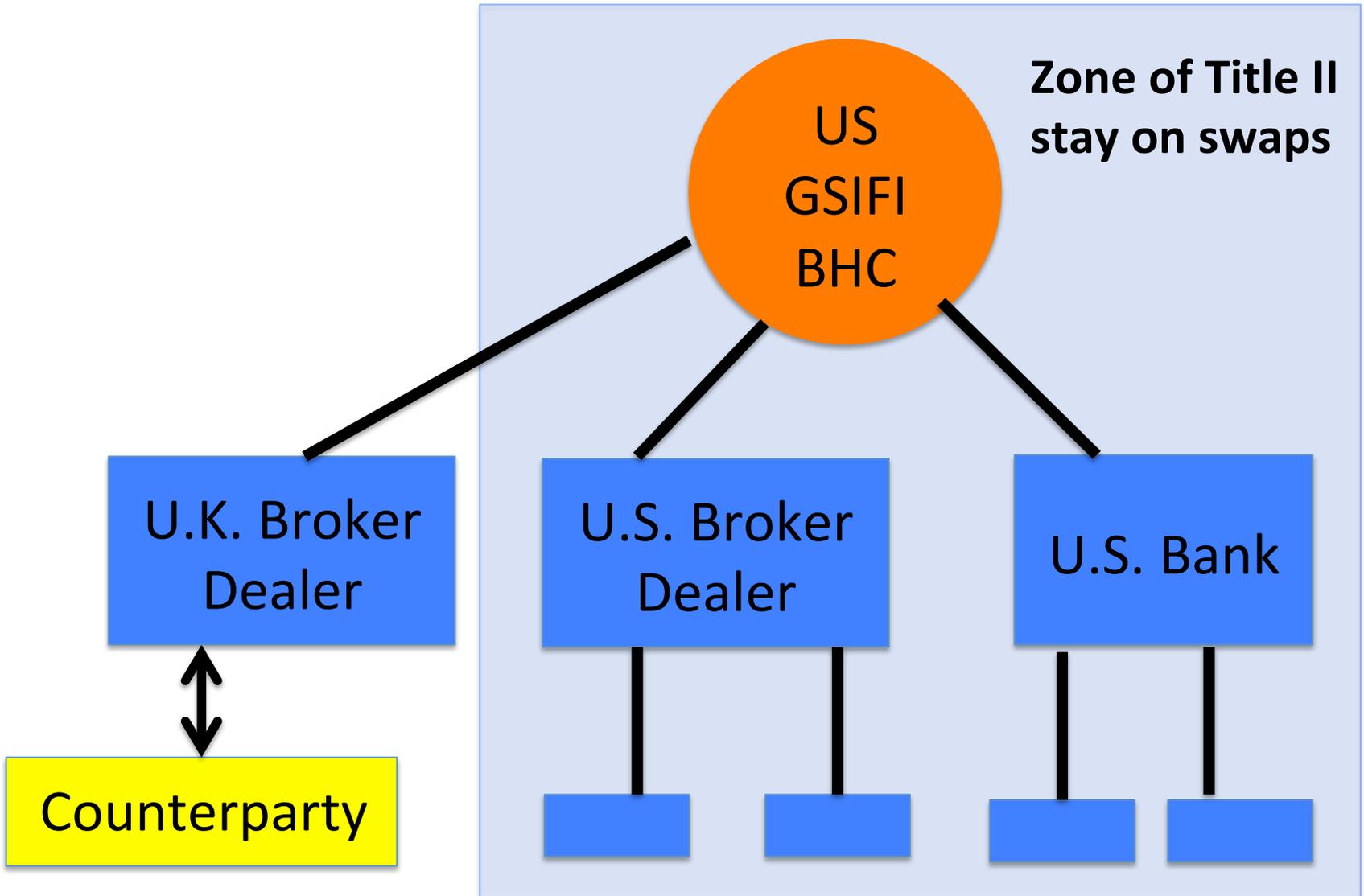
Source: Kroszner (2013)

# Do Investors Anticipate Support?

- Some degree of TBTF support remains a logical presumption by investors.
- The Fed has a mandate to reduce systemic failures caused by a loss of liquidity.
- Financial market infrastructure is not ready for the removal of all TBTF support.
- Single-point-of-entry failure resolution is not yet ready for safe deployment.

# TBTF Liquidity Support

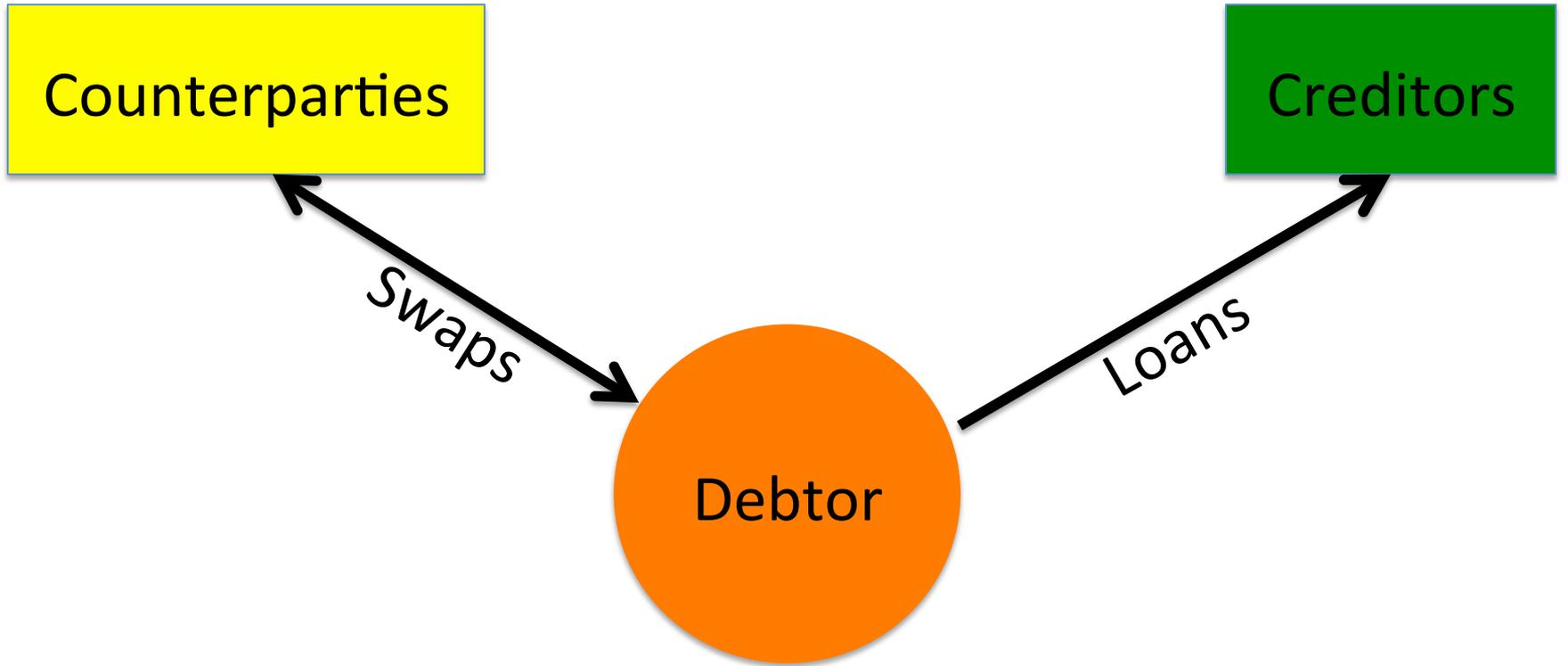




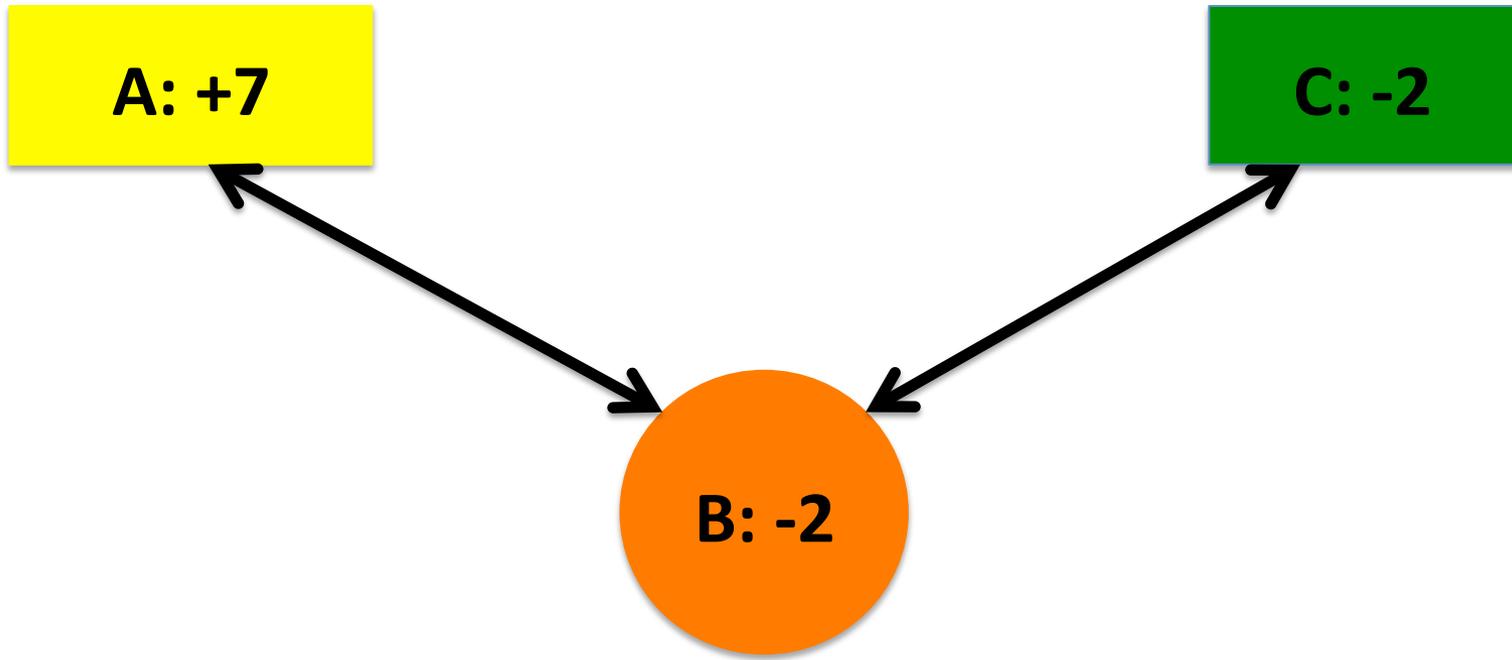
# Closing The Second Point of Entry

“We believe it is essential for ... ISDA documentation to provide for a short-term suspension of early termination rights on the basis of the commencement of an insolvency or resolution proceeding .... Such a provision would allow ... the exercise of all applicable types of resolution powers.”

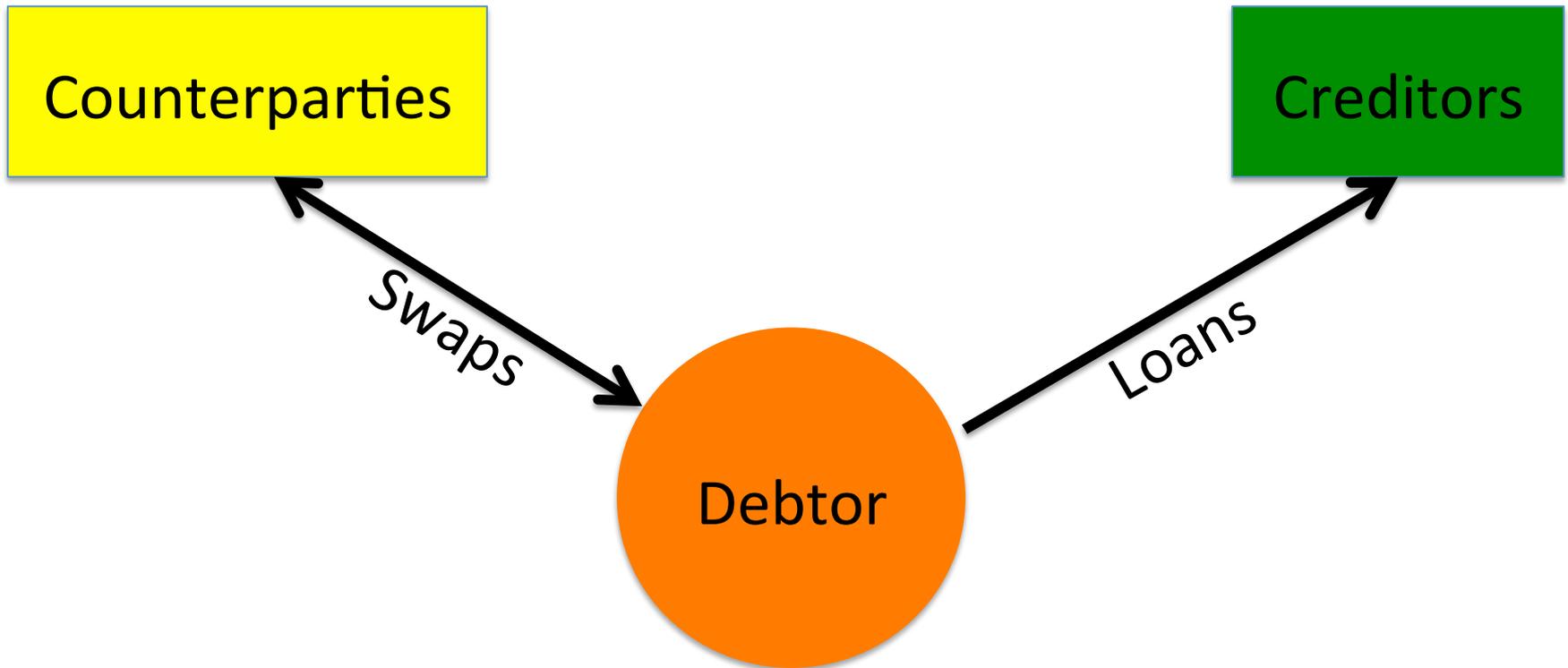
*Letter from FSB, FDIC, BaFin, and Swiss FMSA  
to ISDA Chairman.      November, 2013.*



**Would a stay that increases total value be adopted?**

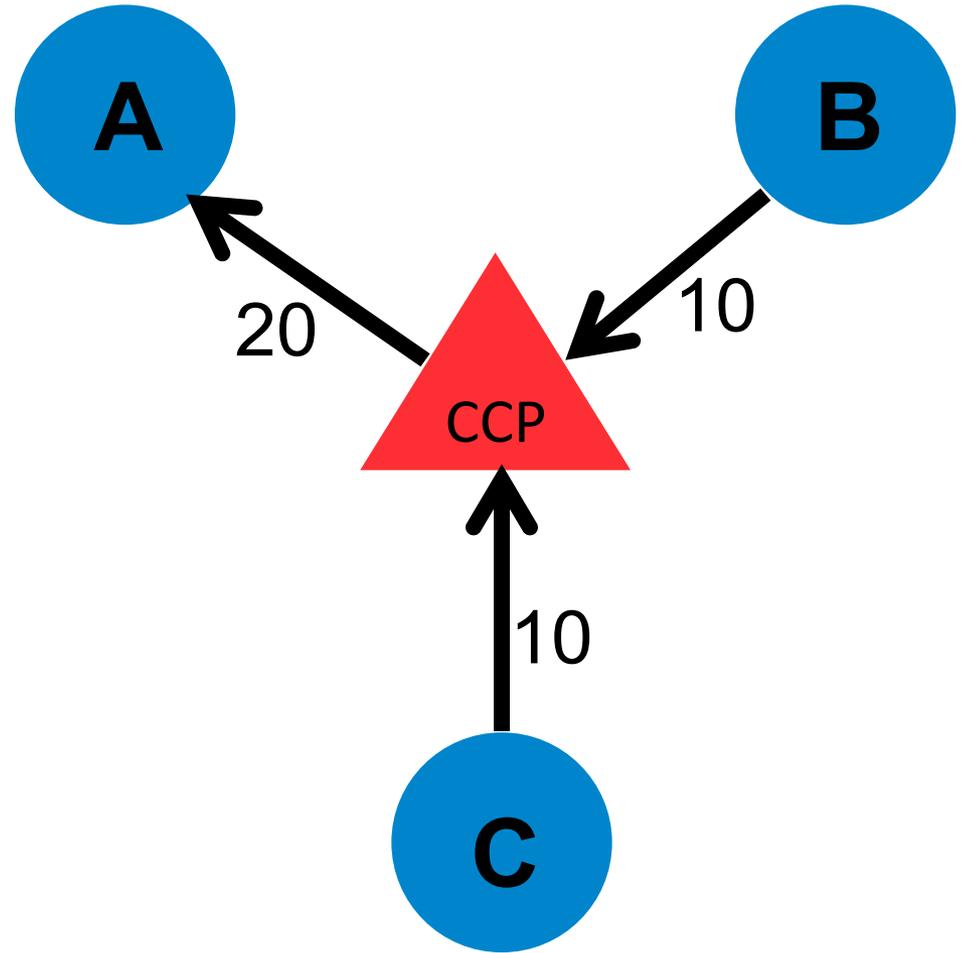
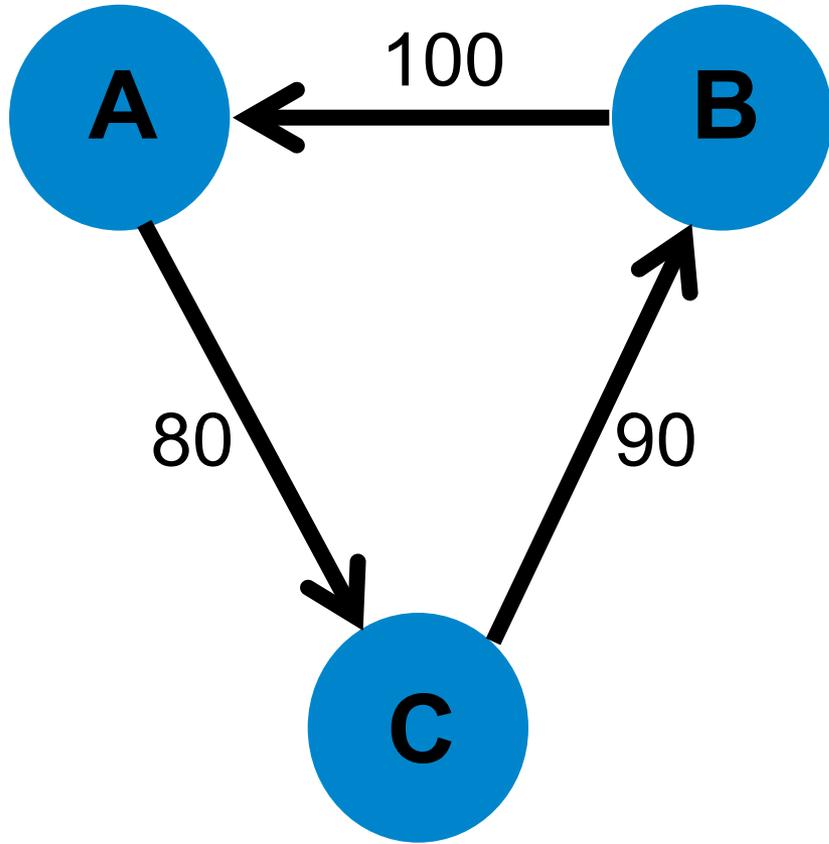


The total present value of all contracts to all parties, including the equity owners of B, is internalized by B.

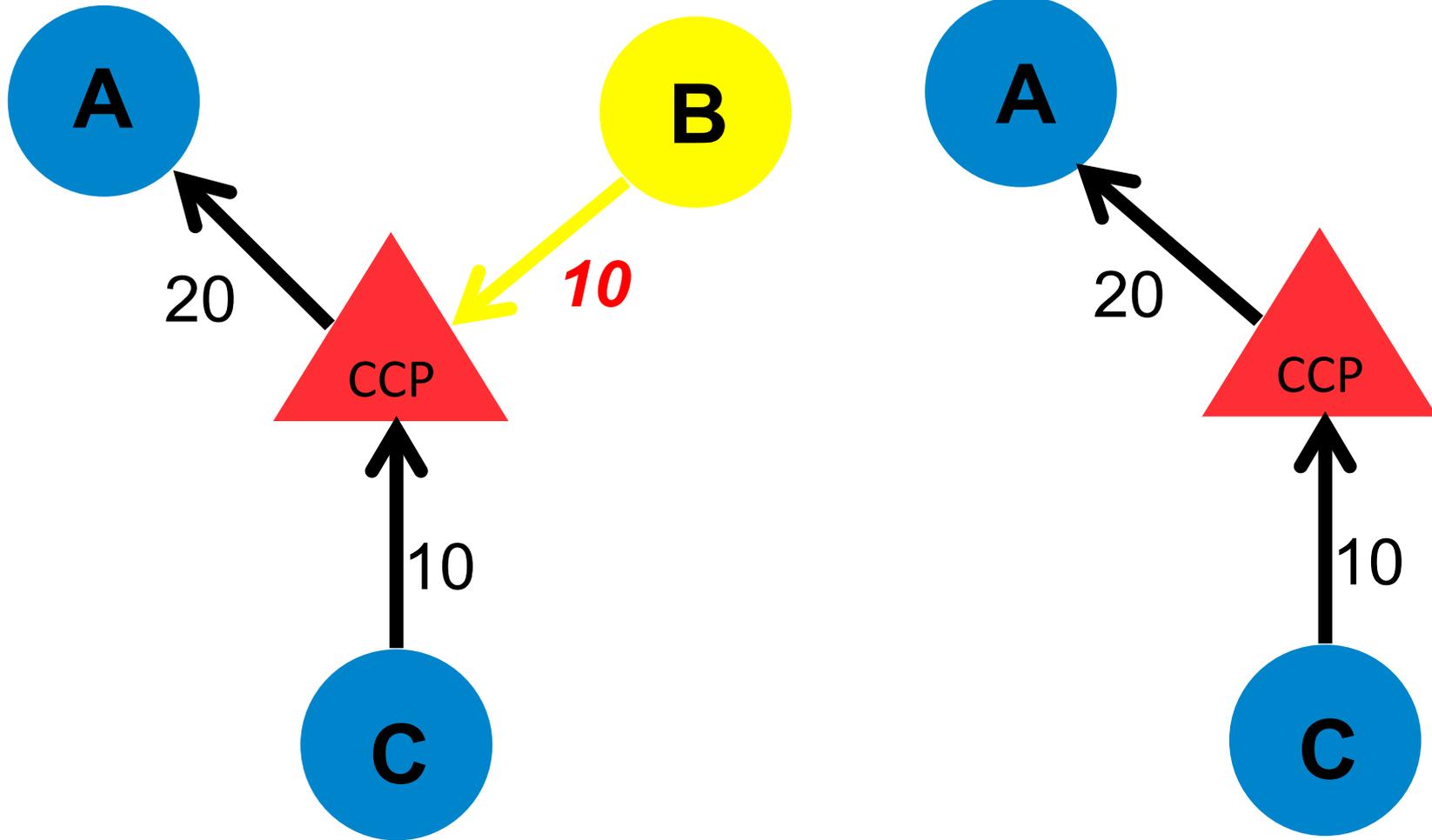


Other market participants subject to spillover costs such as fire-sale risk

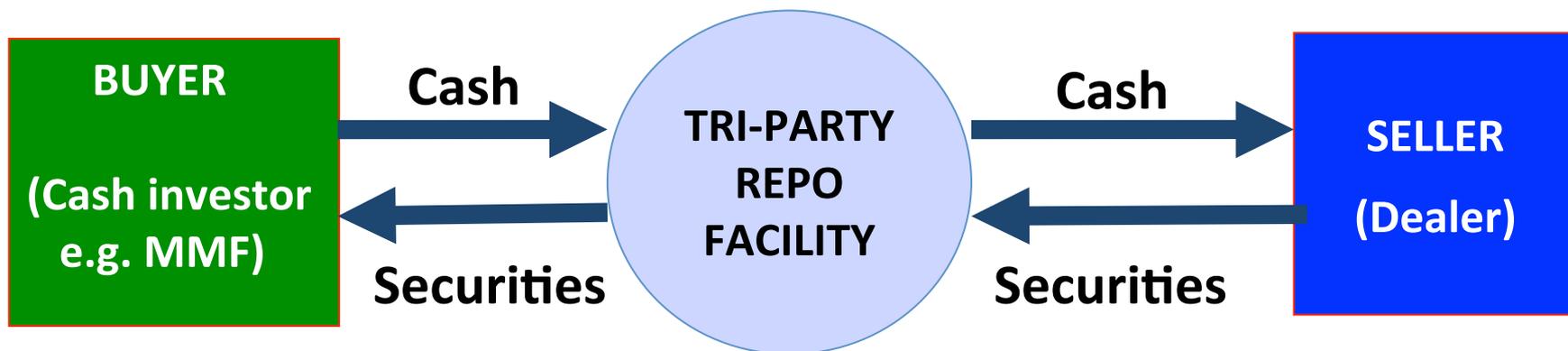
# Loss mutualization via CCP

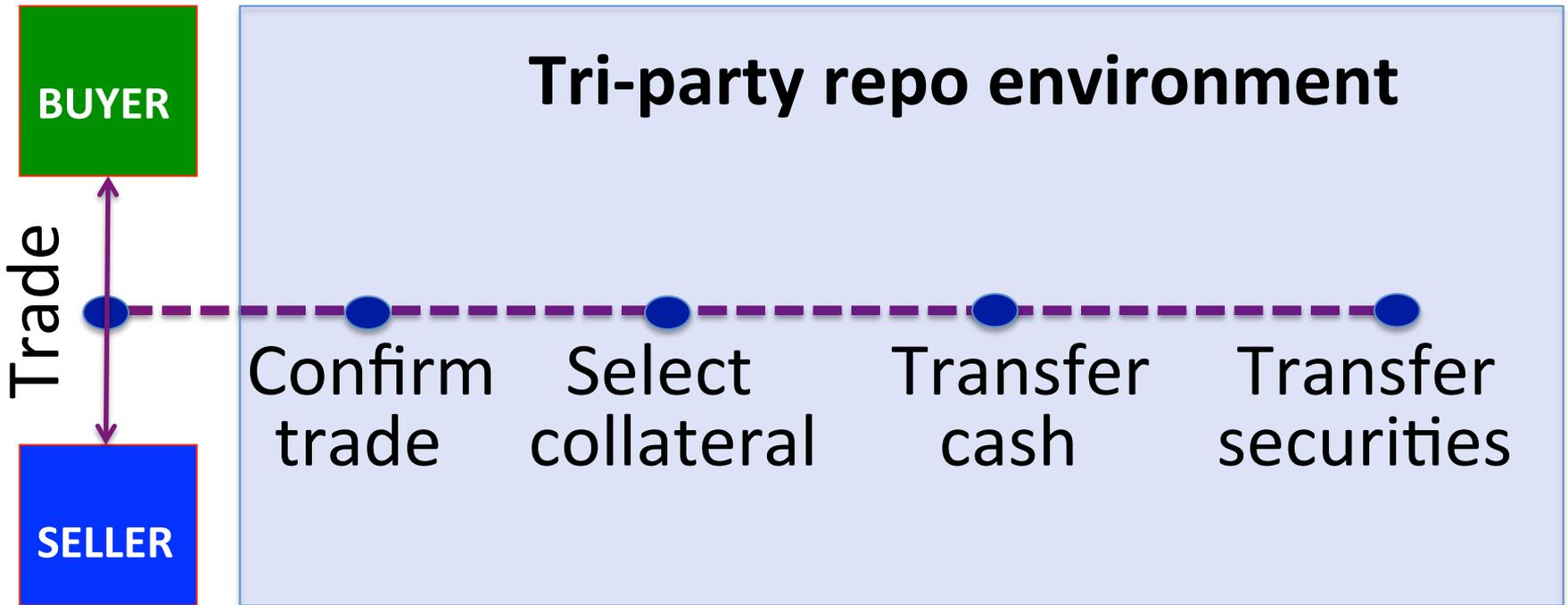


# When B Fails, the CCP is imbalanced

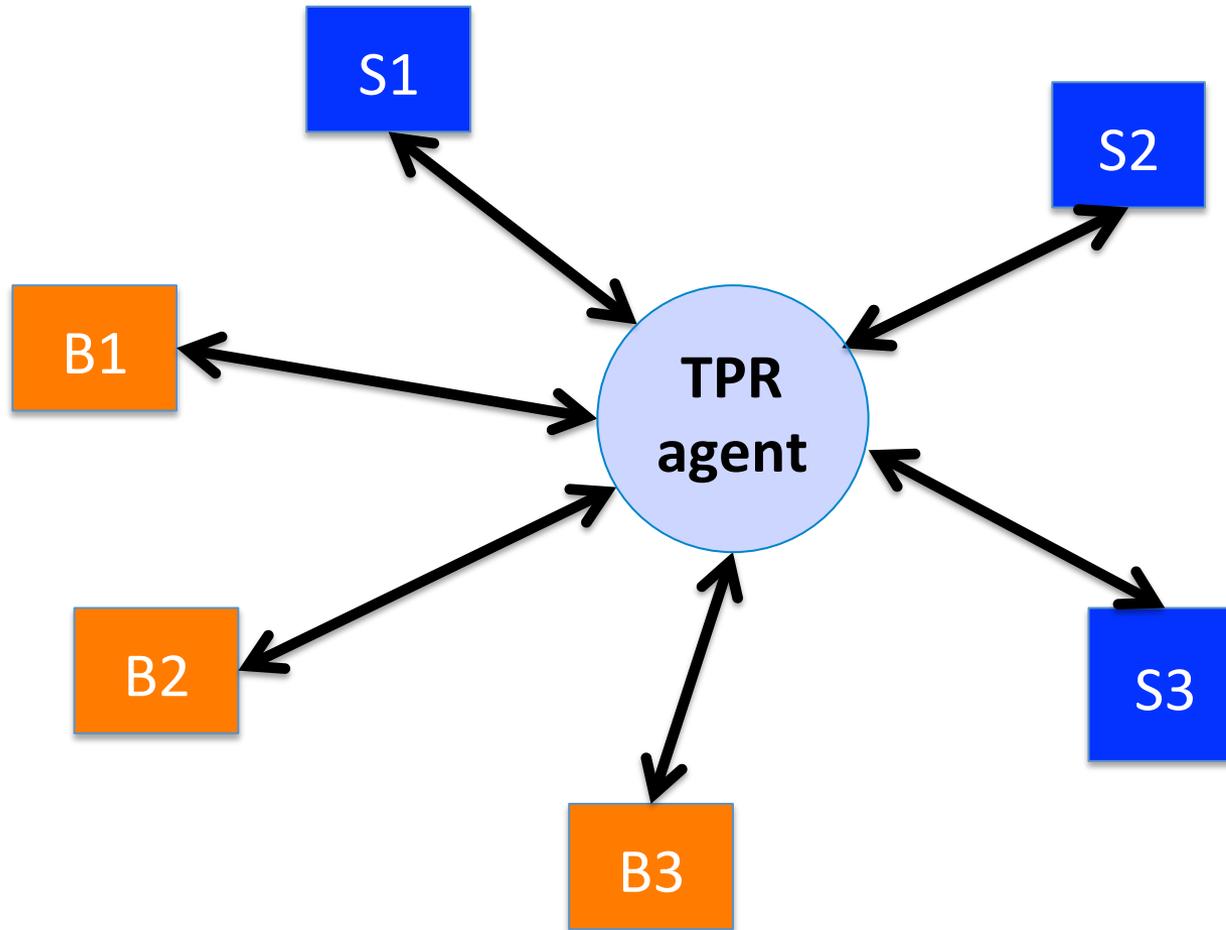


# Tri-Party Repo

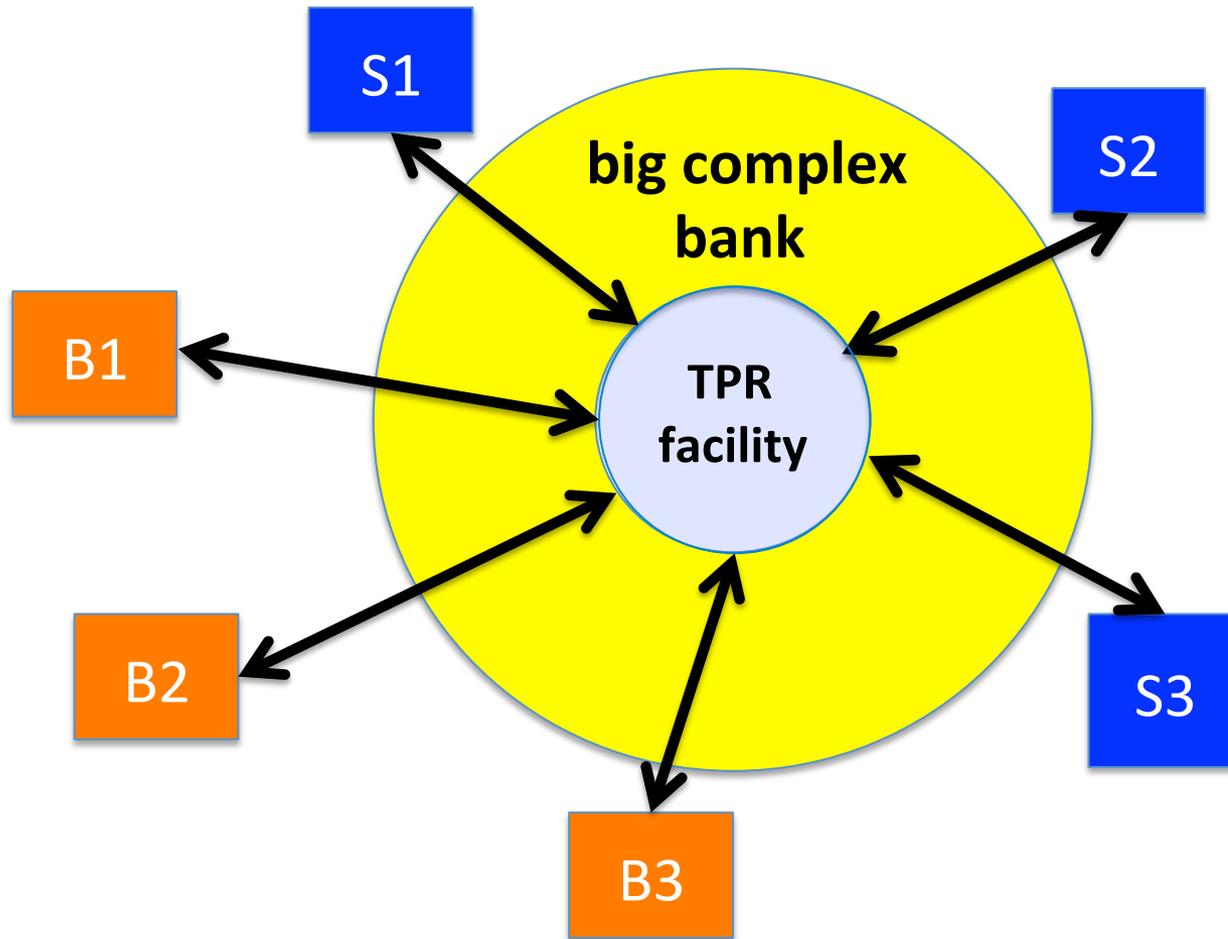




# Tri-party Repo Clearing

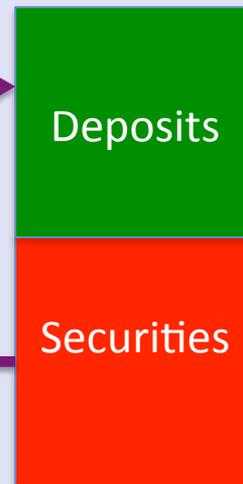
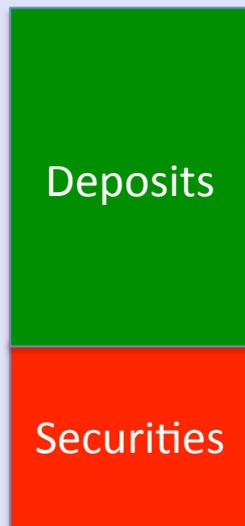


# A systemic flaw



Cash Investor Accounts

Dealer Accounts



**Purchase**

## CPSS-IOSCO FMI Principle 9

***“An FMI should conduct its money settlements in central-bank money where practical and available.***

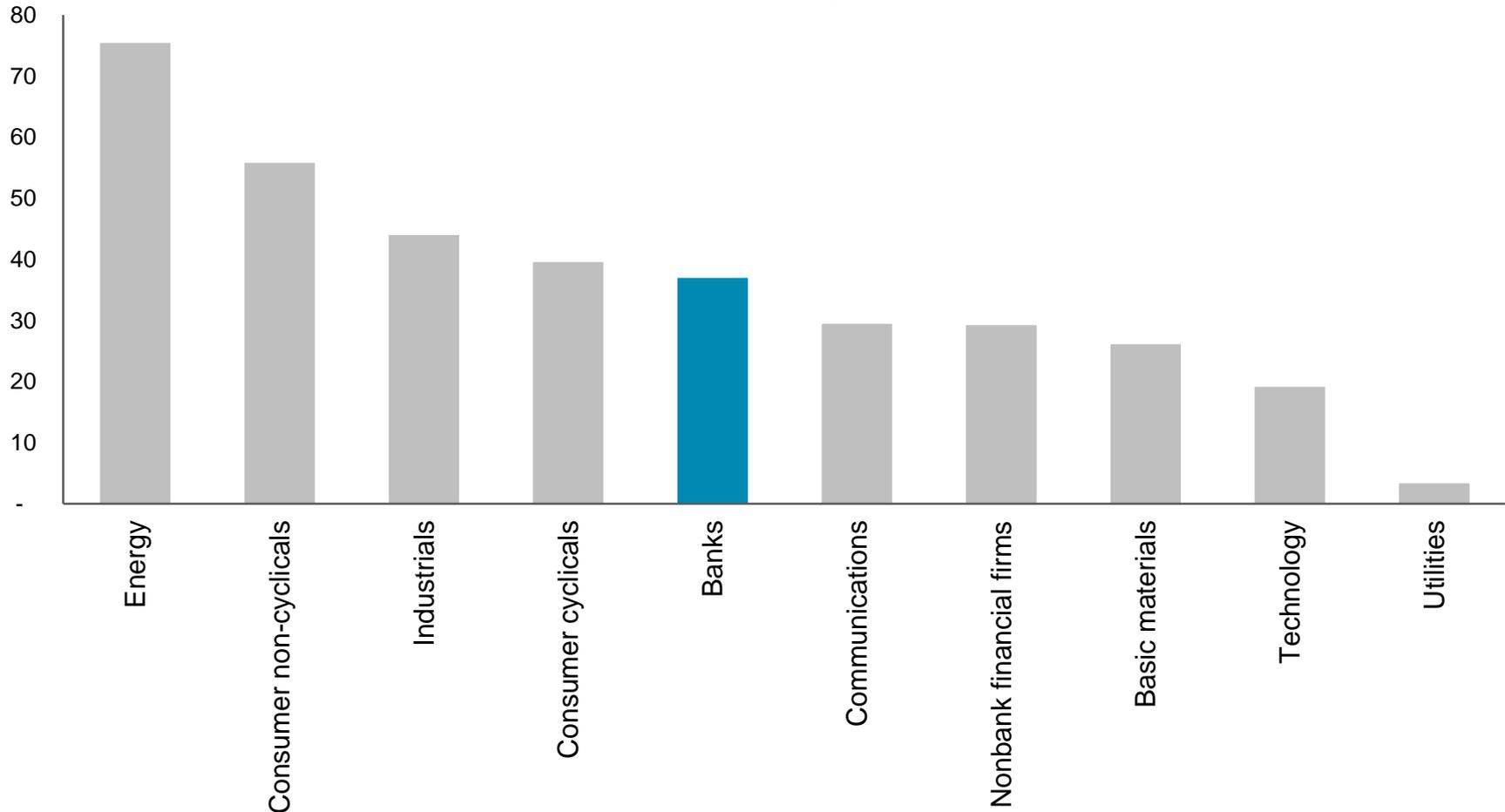
***If central bank money is not used, an FMI should minimize and strictly control the credit and liquidity risk arising from the use of commercial bank money.”***

“One way an FMI could minimize these risks is to limit its activities and operations to clearing and settlement and closely related processes.” (CHIPS)

# Appendix Slides

# Cross-industry comparison of funding costs for the largest versus smaller firms

Average differential in weighted average cost of debt for top 10 firms vs. others<sup>1,2</sup>  
2007Q1-2013Q2 (bp)



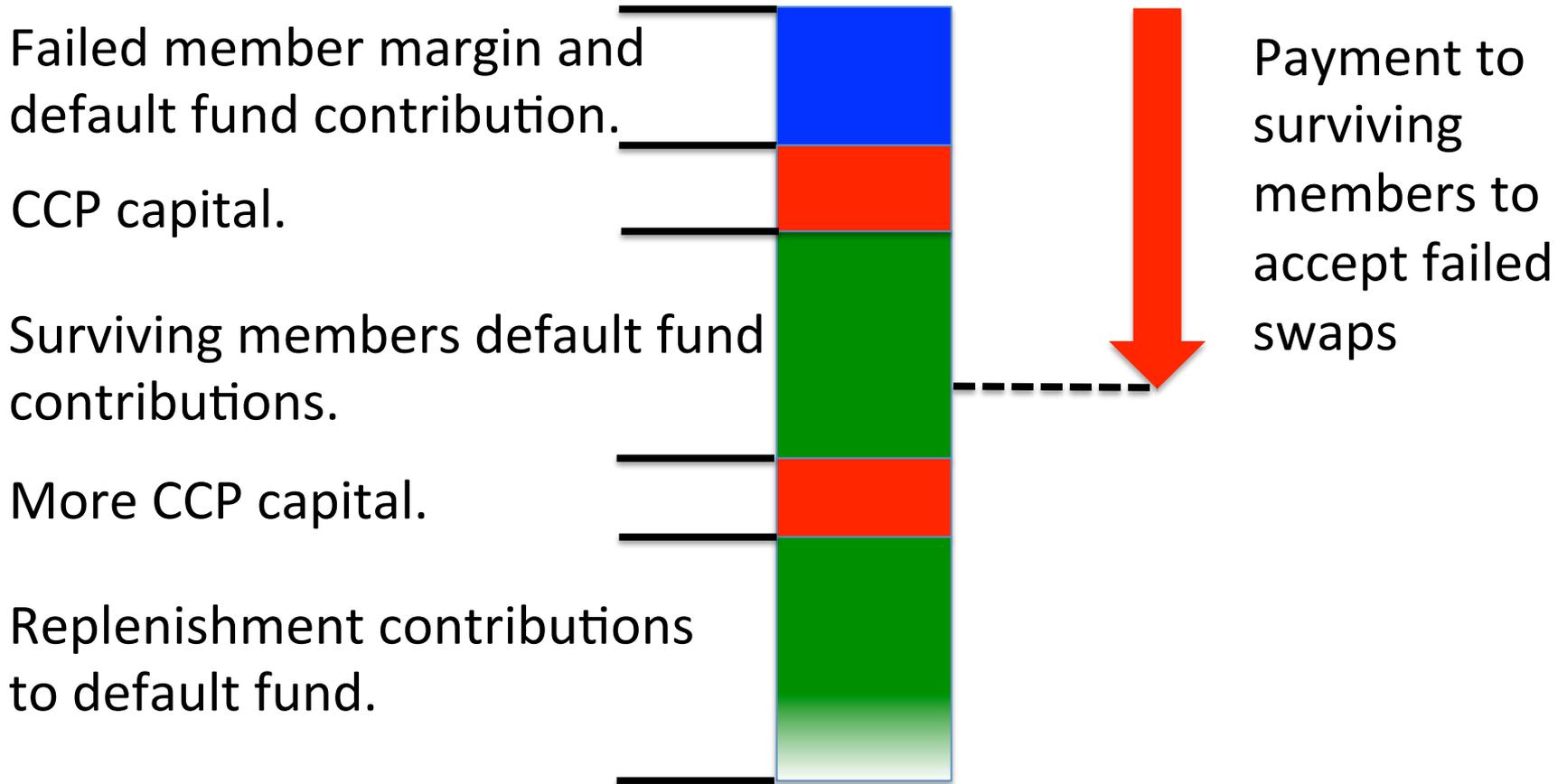
1. Top 10 institutions identified based on asset size (as of year end 2012), sample of firms based on companies in the Russell 3000 index; all firms are above the 20th percentile in debt / equity ratio (as of year end 2012).

2. Weighted average cost of debt differential = average cost for all others in the sector - average cost for top 10 firms; simple average of debt cost of capital across institutions in each time period

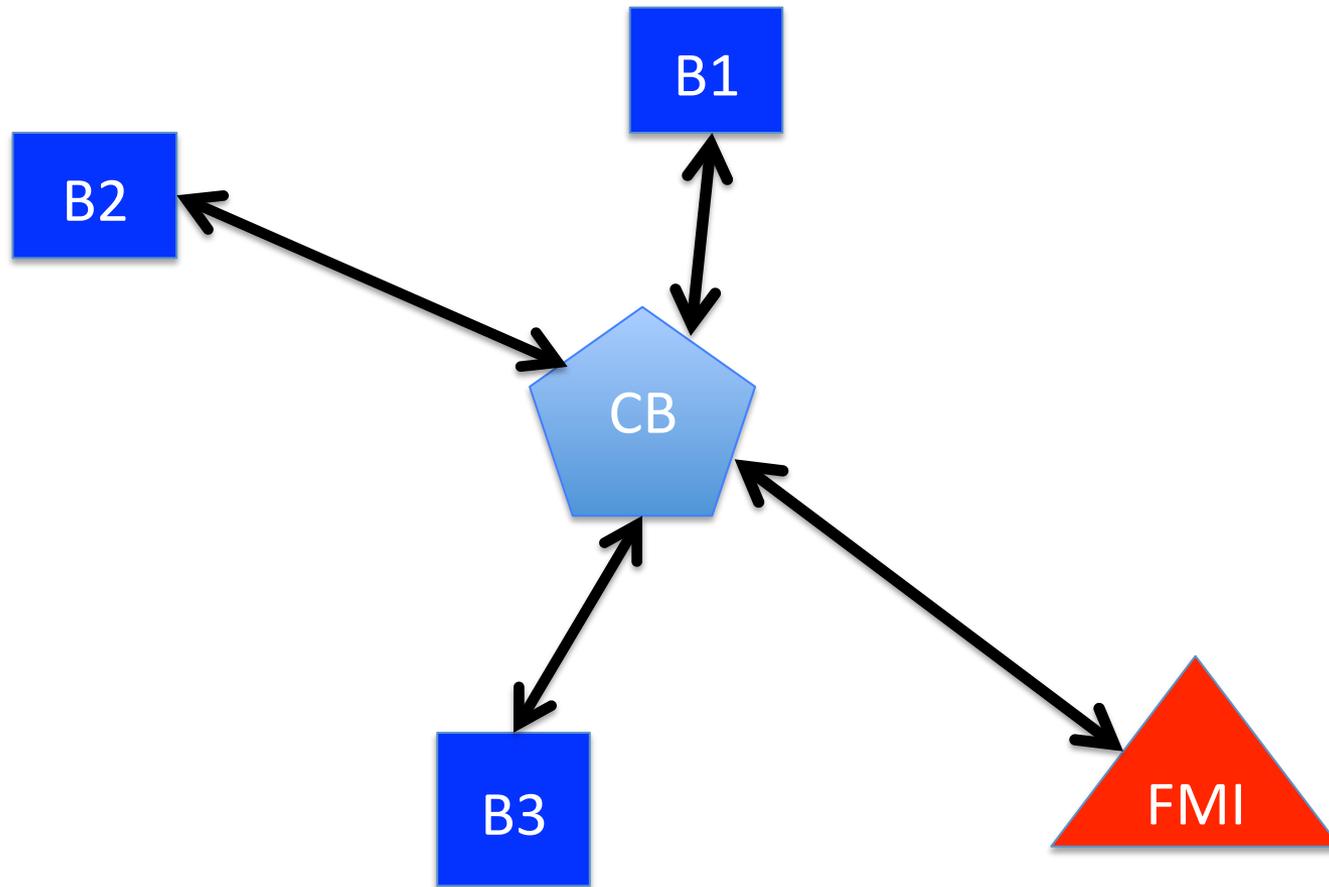
Bloomberg data.

Based on analysis and calculations from Kroszner (2013), "A Review of Bank Funding Cost Differentials."

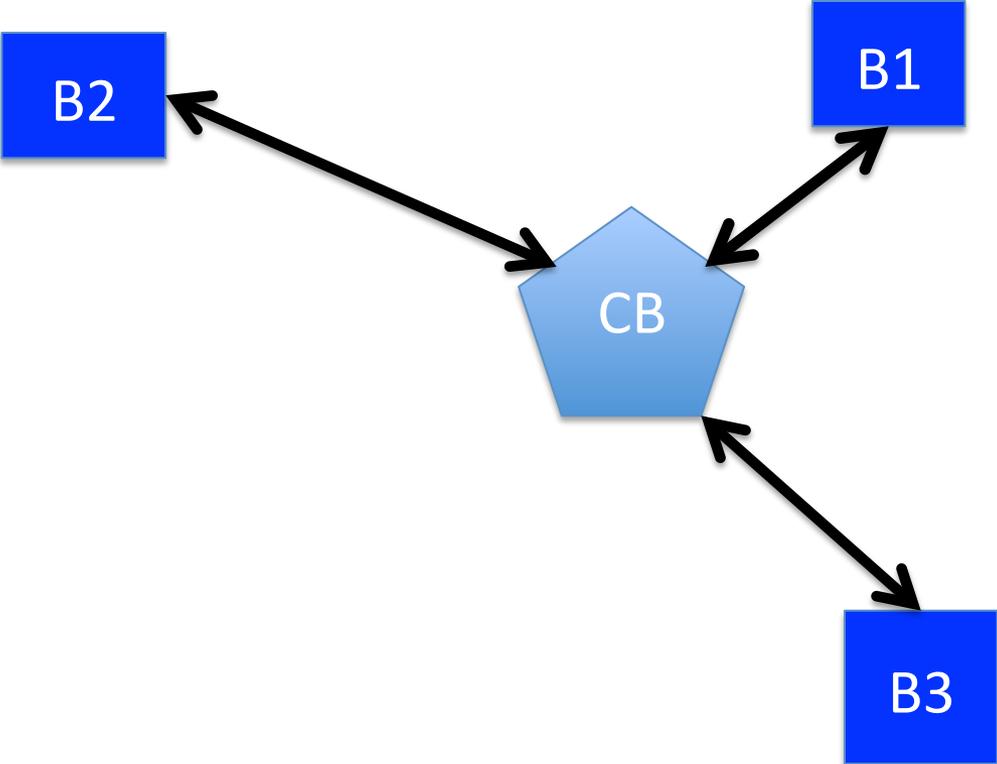
# CCP Default Management Waterfall



# Liquidity to Financial Market Infrastructure

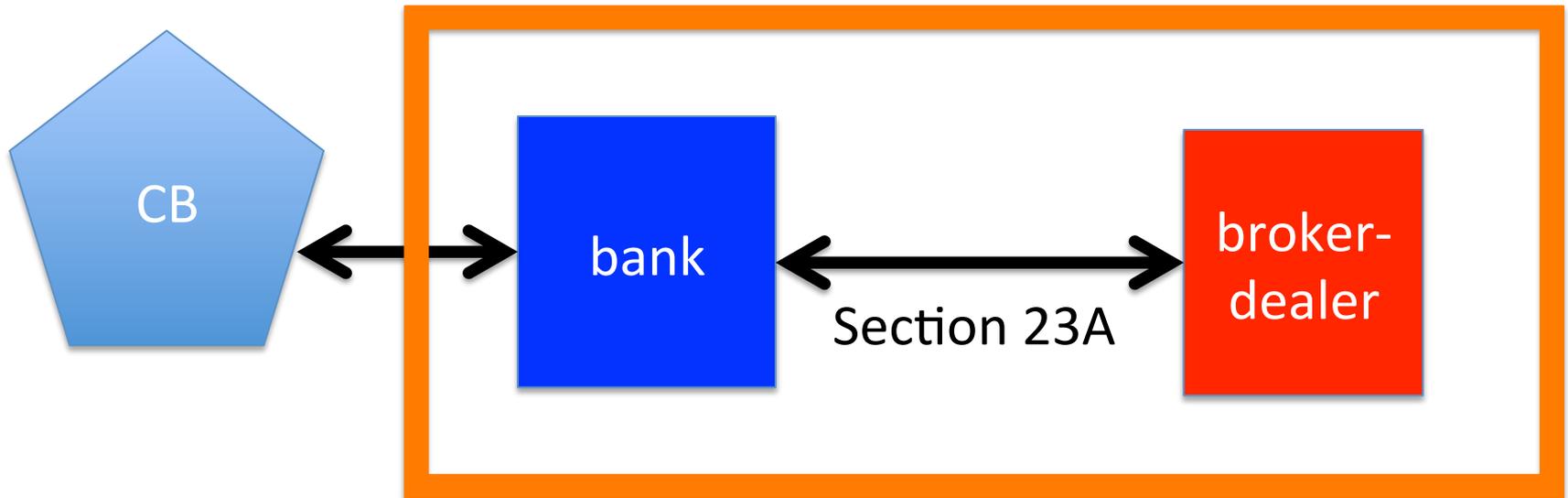


# Central Bank Emergency Liquidity

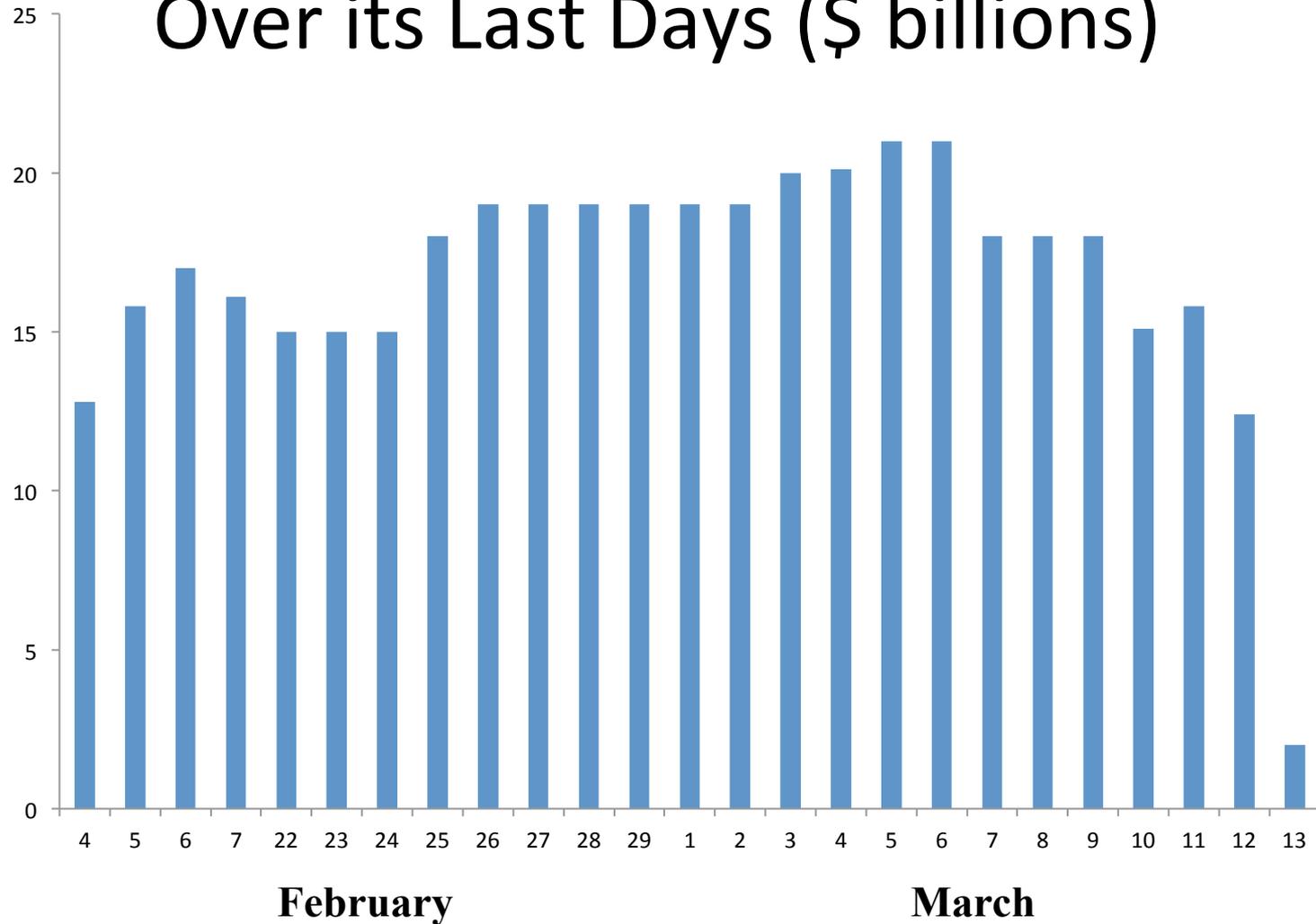


# Limited liquidity to an affiliated dealer

bank holding company

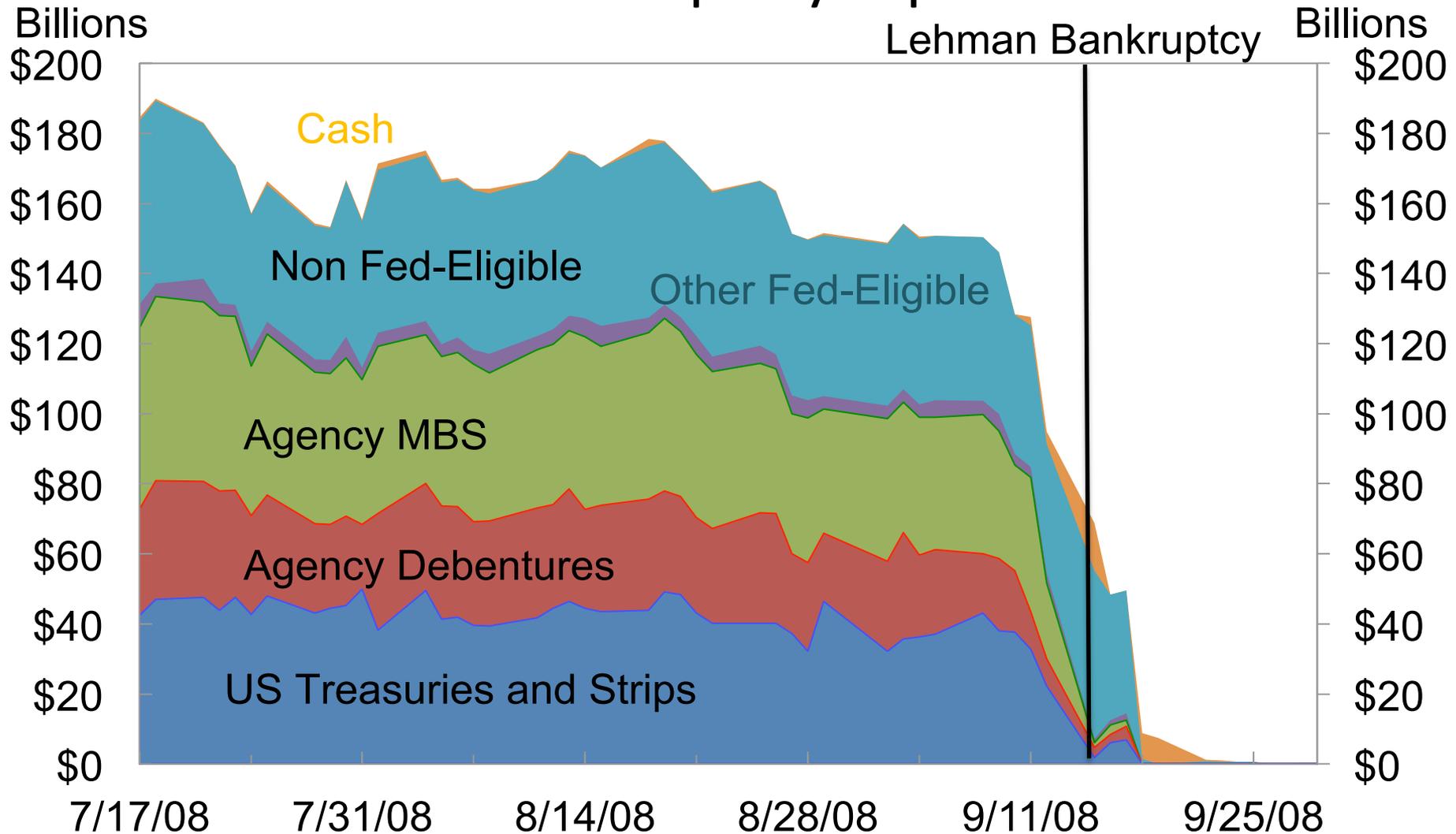


# Bear Stearns' Liquidity Pool Over its Last Days (\$ billions)



Data Source: Cox (2008)

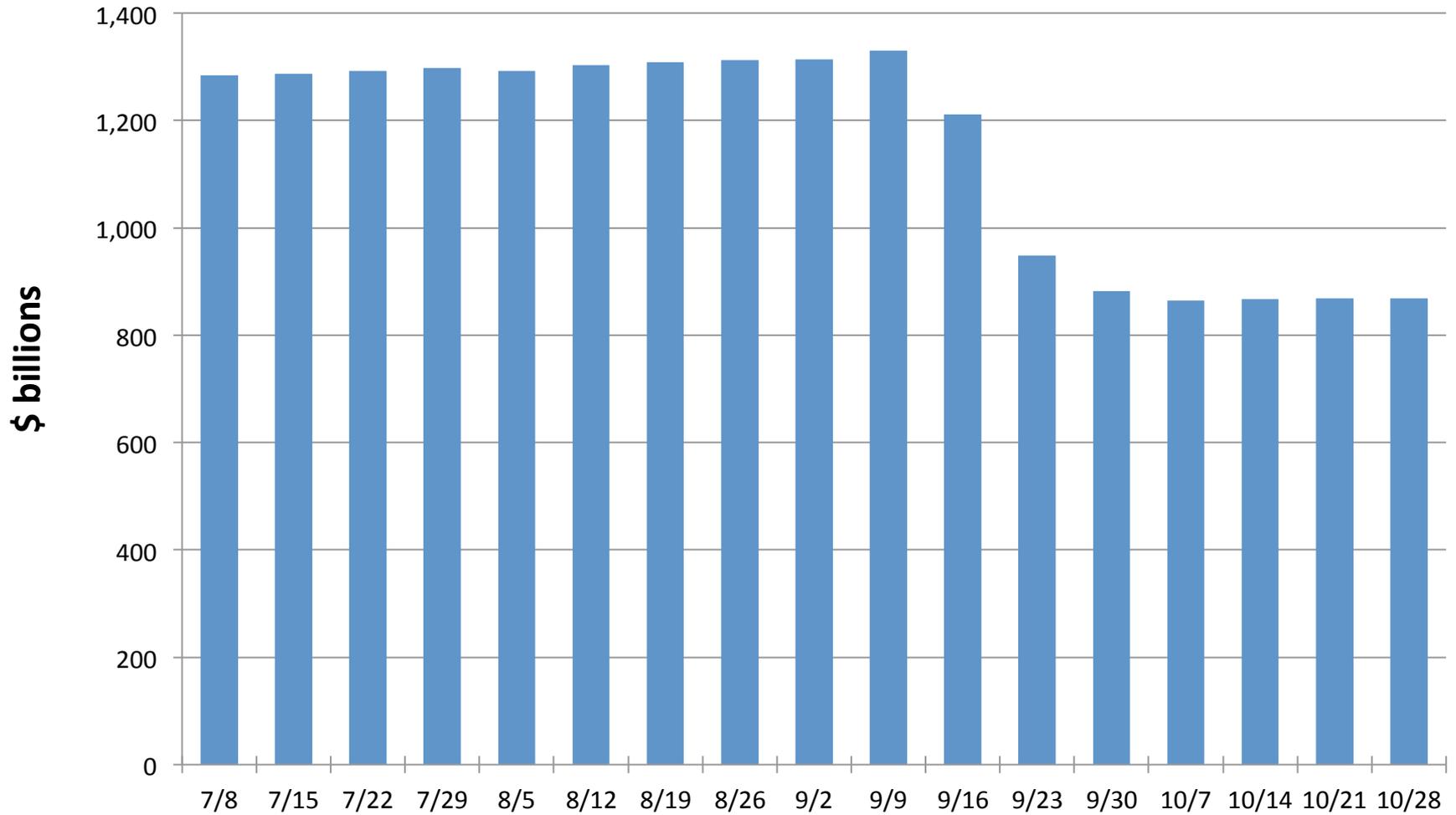
# Lehman's tri-party repo book



Source: Copeland, Martin, Walker (2011) FRBNY

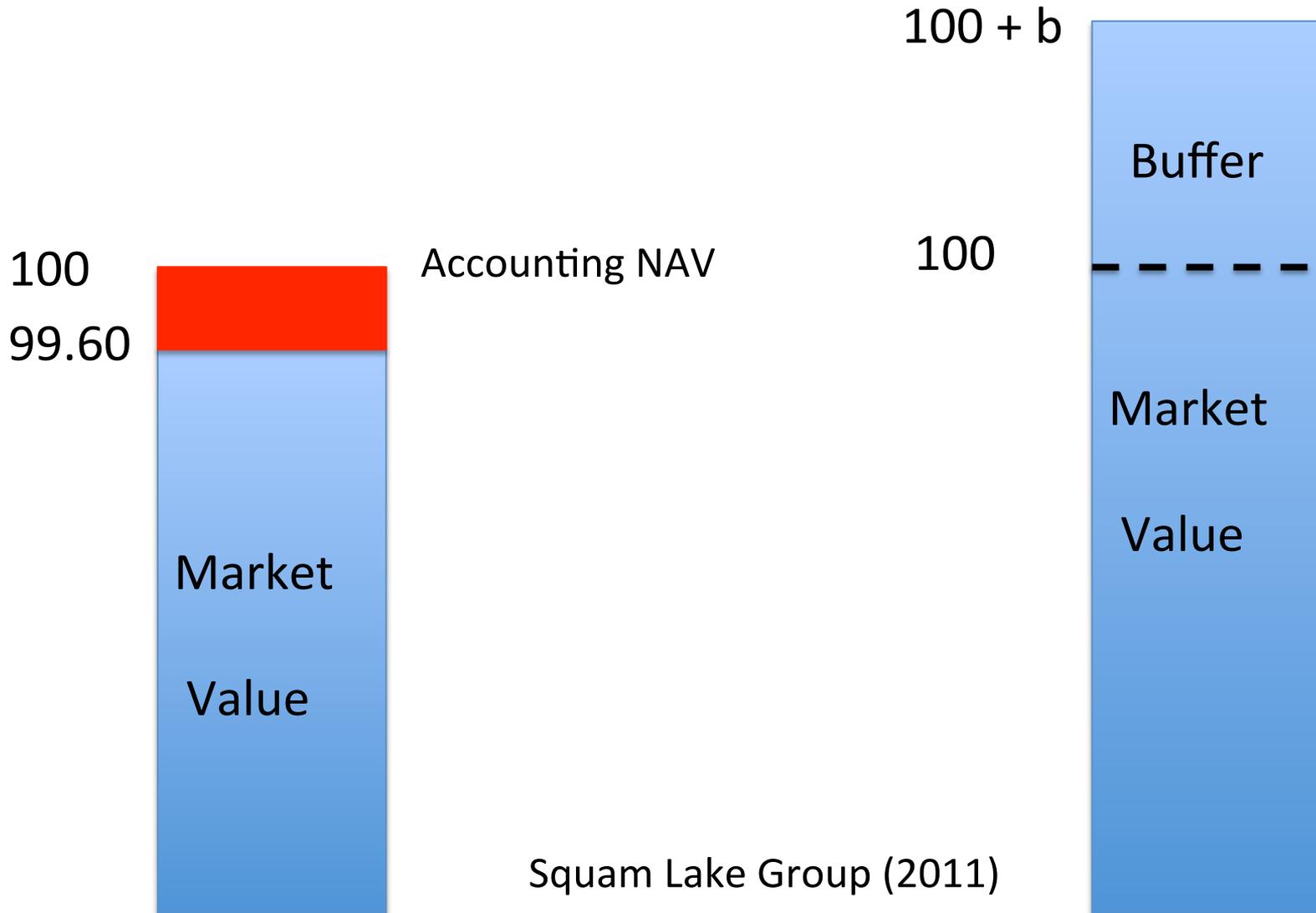
# September 2008 Run on Money Market Funds

Institutional investment in prime money market mutual funds



Source: Duffie (2012)

# Money Market Fund Capital Buffers

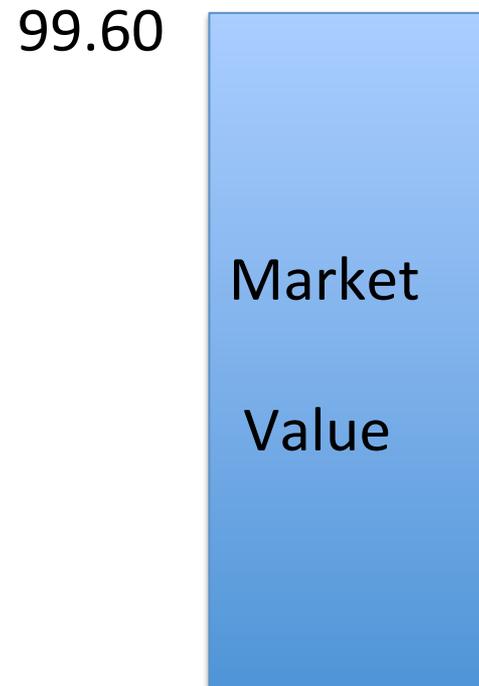


# Money Market Funds

“Stable” NAV



Floating NAV



# Tri-party environment

Cash Investor Accounts

Dealer Accounts



# Current Reform of Tri-Party Repo Infrastructure

Pre reform



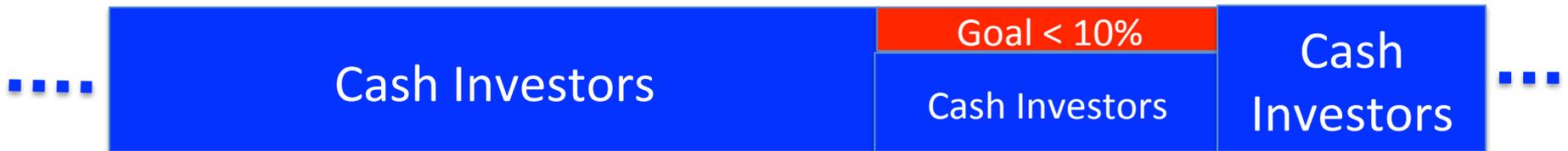
FICC GCF repos  
settle

DTCC equities  
available

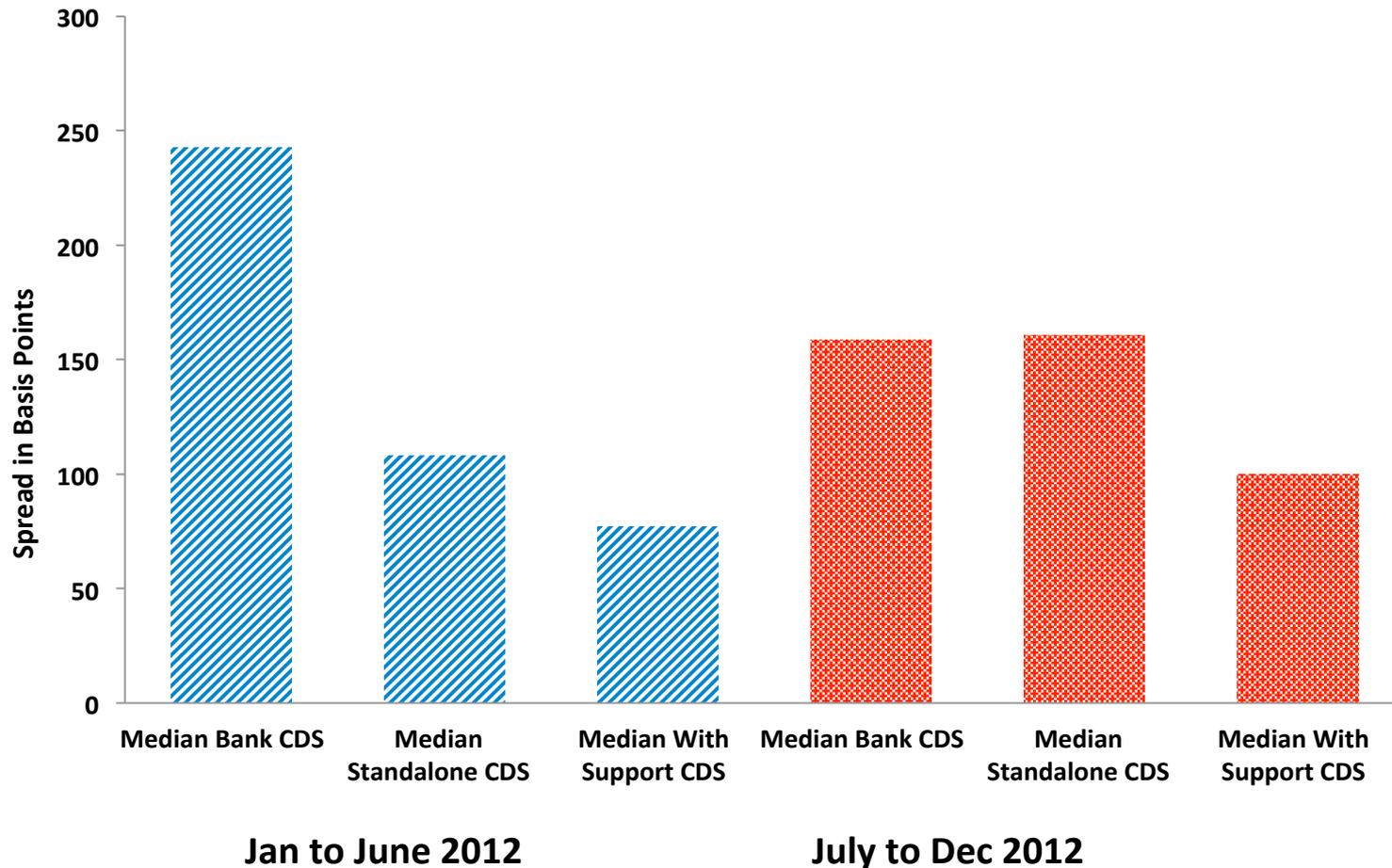
Fedwire Securities  
interbank open

3:30PM

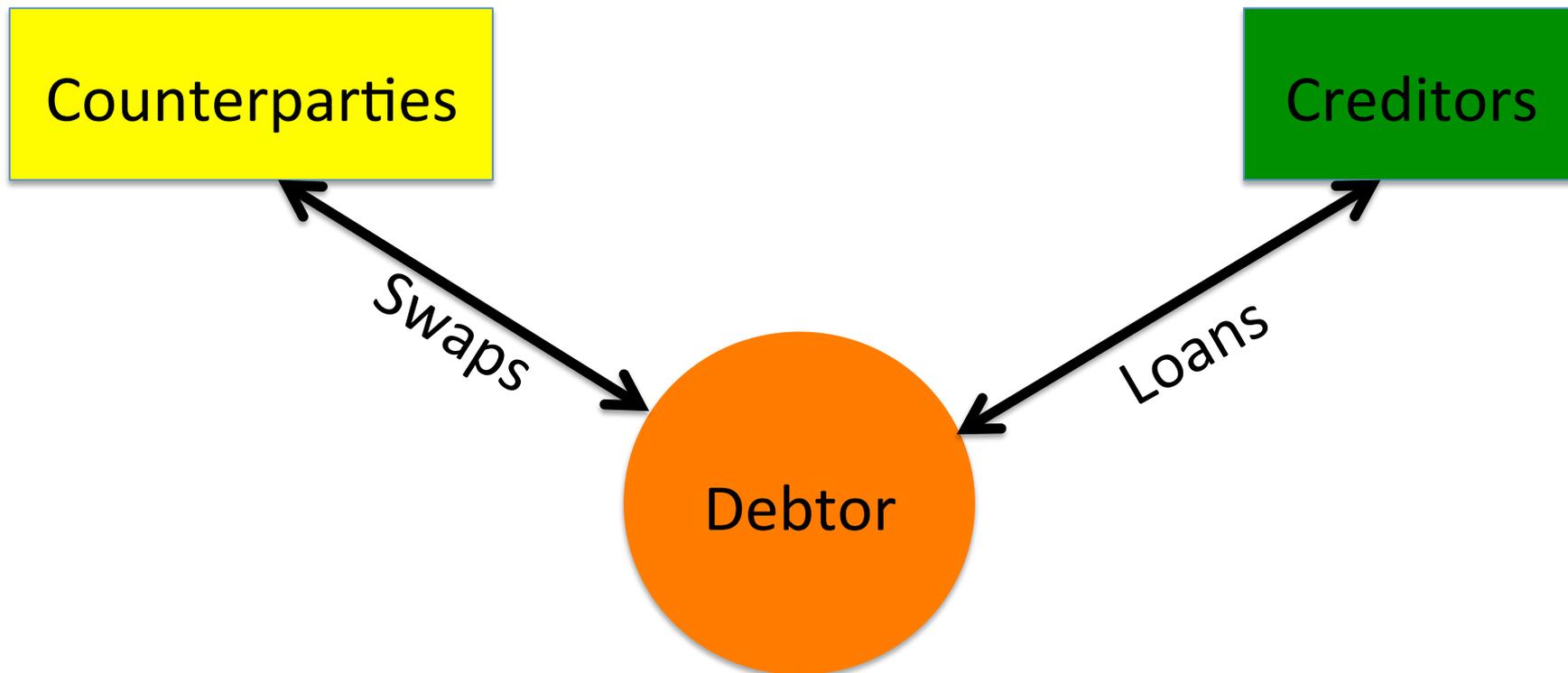
Post reform



# Are “With Support” Credit Ratings for BHCs Reflected in Market Pricing of Credit Default Swap (CDS) Spreads?



Source: Kroszner (2013)



**Result:** With simultaneous bargaining or this effect via covenants, the contracting maximizes total value, including the value of contingent default recoveries by creditors and swap counterparties, net of their incremental distress costs.

# Tri-party Repo Infrastructure

- **Tri-party agent:** issues confirmations and instructions for cash and collateral transfers.
- **Securities custodian or depository:** maintains securities accounts.
- **Bank (or central bank):** maintains cash deposit accounts; may also provide secured liquidity.
- **Settlement systems:** processes requests received for cash or securities transfers.