Challenges to Supervision and Regulation of Shadow Banking

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Transferring risk, capital, and liquidity among ultimate economic agents
Payments and Settlements

Credit Provision with Maturity Transformation

- Underwriting
- Market making
- Other trading
Payments and Settlements

Underwriting

Market making

Hedging

Other trading

Credit Provision with Maturity Transformation

Legal boundary of the U.S. banking system
Bear Stearns’ Liquidity Pool Over its Last Days ($ billions)

Data Source: Cox (2008)
September 2008 Run on Money Market Funds

Institutional investment in prime money market mutual funds

Source: Duffie (2012)
Tri-Party Repo

BUYER

(Cash investor e.g. MMF)

Cash

Securities

TRI-PARTY REPO FACILITY

Cash

Securities

SELLER

(Dealer)
Tri-party Repo Infrastructure

big complex bank

TPR facility

S1

S2

B1

B2

B3

S3
Liquidity to Financial Market Infrastructure
Lehman’s tri-party repo book

Source: Copeland, Martin, Walker (2011) FRBNY
Broad Programmatic Emergency Lending
Prime-Brokerage

HEDGE FUND A

HEDGE FUND B

DEALER BANK
(PRIME BROKER)

CASH AND SECURITIES

INVESTOR

SECURITIES

CASH
Morgan Stanley collateral received that can be pledged

($) billions

Data Source: Singh (2009)
Morgan Stanley’s Liquidity Loss

Sept. 12-22, 2008

$176.8 billion

$85.3 billion

$91.5 billion

Prime brokerage liquidity loss
- New York $44.8 billion
- London $17.6 billion

Conduit finance roll off ($8.8 billion)
Derivatives collateral loss ($7.3 billion)
Debt maturing/buyback ($5.4 billion)
Repo haircut widening ($4.0 billion)
Other ($3.4 billion)

Duffie (2011)

Data source: Morgan Stanley-FRBNY FCIC disclosure
Prime-Brokerage Custodian

HEDGE FUND

DEALER BANK (PRIME BROKER)

Cash and Securities
Central Clearing of Derivatives

- A → B: 100
- B → C: 90
- A → C: 80

- A → C: 20
- B → C: 10
- C → B: 10
10-by-10-by-10 Network Risk Monitoring
### A Bank’s 10-by-10-by-10 Submission

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