

Lecture 3

Prices and Quantities in the Monetary Policy Transmission Mechanism

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“Global Financial Crisis of 2007 – 2009:
Theoretical and Empirical Perspectives”

Summer Economics at SNU 2009 and Korea Economic Association

“Expectations Channel” of Monetary Policy

- Long rates are prices that matter
 - Overnight rate are important only as a way to influence expectations
- Expectations theory of the yield curve holds
 - Long rates determined by the expectations of future short rates
 - Communication shapes expectations

Alan Blinder (1998)

“[C]entral banks generally control only the overnight interest rate, an interest rate that is relevant to virtually no economically interesting transactions. Monetary policy has important macroeconomic effects only to the extent that it moves financial market prices that really matter - like long-term interest rates, stock market values and exchange rates.”

Background

- Monetary policy works through financial markets
- Seen through lens of IS curve
 - Central bank controls directly only overnight rate
 - But can influence long rates through expectations of future path for short rates
 - Affects consumption, investment...

Tinbergen-style Separation

- Price/output stabilisation
 - Monetary policy
- Financial stability
 - Prudential/supervisory policies

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Unwinding Financial Excess

- Output costs of financial crises
- Fiscal costs of financial sector restructuring
- Asymmetry of mechanisms
 - “on the way up”
 - “on the way down”

Two Recent Papers

- Ioannidou, Ongena and Peydro (2009) “Monetary Policy, Risk-Taking and Pricing: Evidence from a Quasi-Natural Experiment” paper presented at NBER Summer Institute
 - in a dollarized system (Bolivia) that banks take more credit risk and reduce the loan spreads when rates are low
- Jimenez, Ongena, Peydró and Saurina (2008) find that lower short-term rates prior to loan origination imply loans with higher hazard rate, whereas higher rates during the life of the loan increase hazard rate
 - Working paper, Bank of Spain and ECB

Main Findings

- Decrease in Fed Funds rate
 - Increases hazard rate of default for *new loans*
 - Decreases hazard rate of default for *existing loans*
- Increases in lending
 - to *lower-rated borrowers*
 - at *lower spreads*

Main Findings (continued)

- Effect most pronounced for banks with
 - Lower capital
 - More liquid assets
 - Lower funds from foreign lenders

“Risk-Taking Channel” of Monetary Policy

- Term coined by Borio and Zhou (2008)
 - *Supply* of credit
 - Financial market conditions
 - Works through intermediary balance sheets
 - “Liquidity”

Kashyap and Stein (1990), Borio and Lowe (2002), Adrian and Shin (2008)...

Possible Clue

Decrease in Fed Funds rate

- Increases hazard rate of default for *new loans*
- Decreases hazard rate of default for *existing loans*

Possible Clue

Decrease in Fed Funds rate

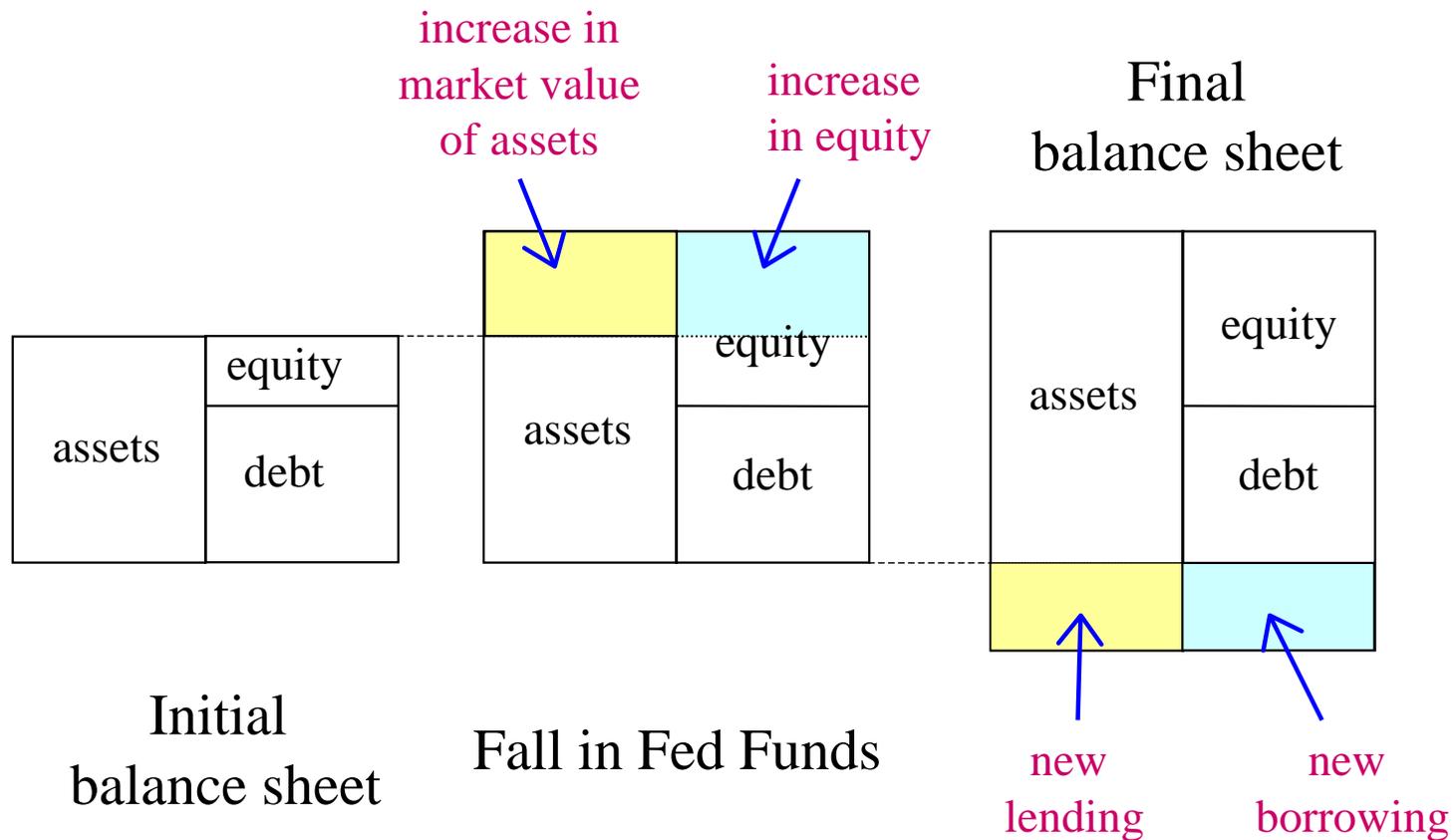
- Increases hazard rate of default for *new loans*
- Decreases hazard rate of default for *existing loans* [increases market value of assets]

Possible Clue

Decrease in Fed Funds rate

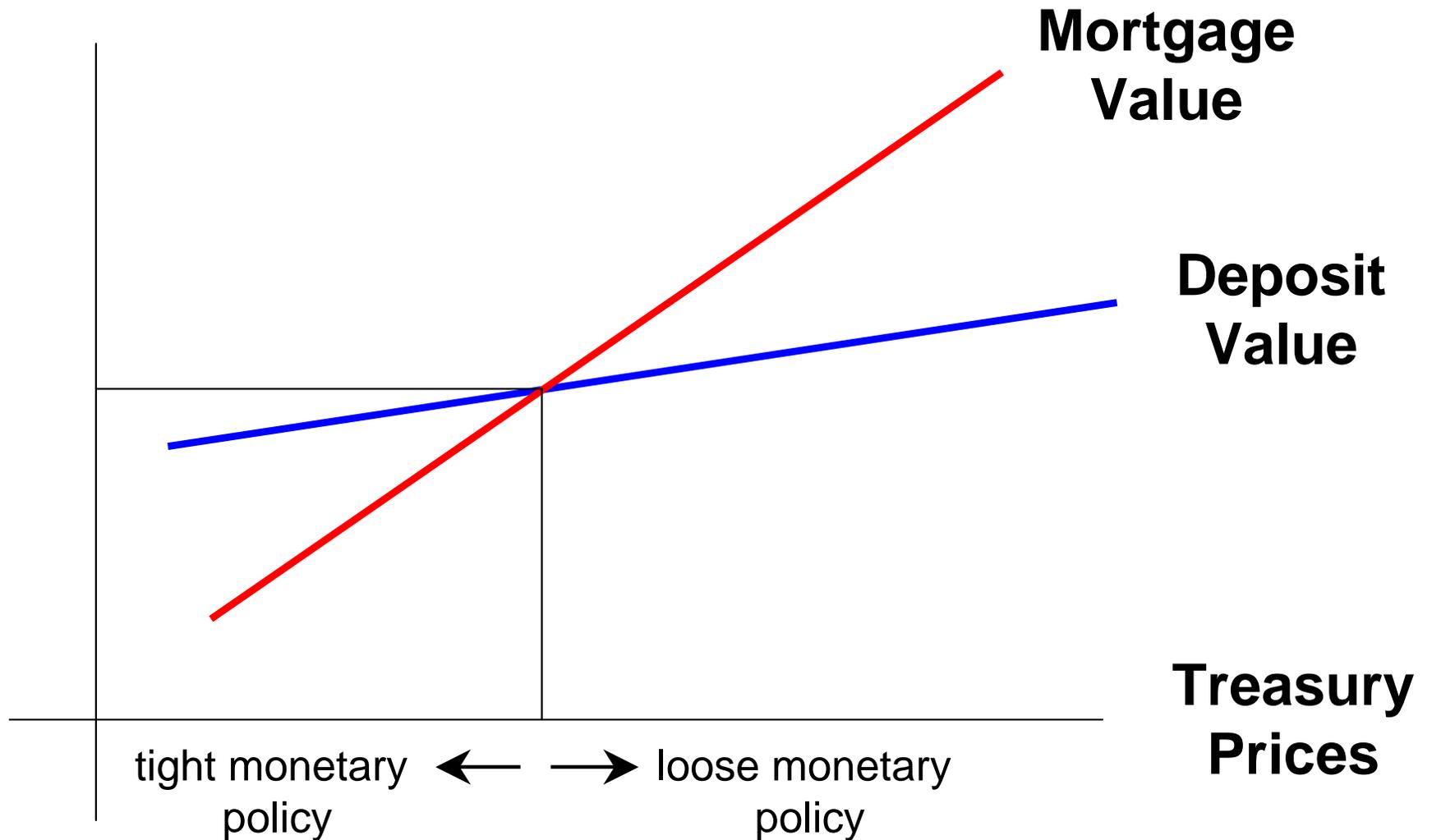
- Increases hazard rate of default for *new loans* [greater balance sheet capacity, take on marginal loans]
- Decreases hazard rate of default for *existing loans* [increases market value of assets]

Lending Capacity Increases

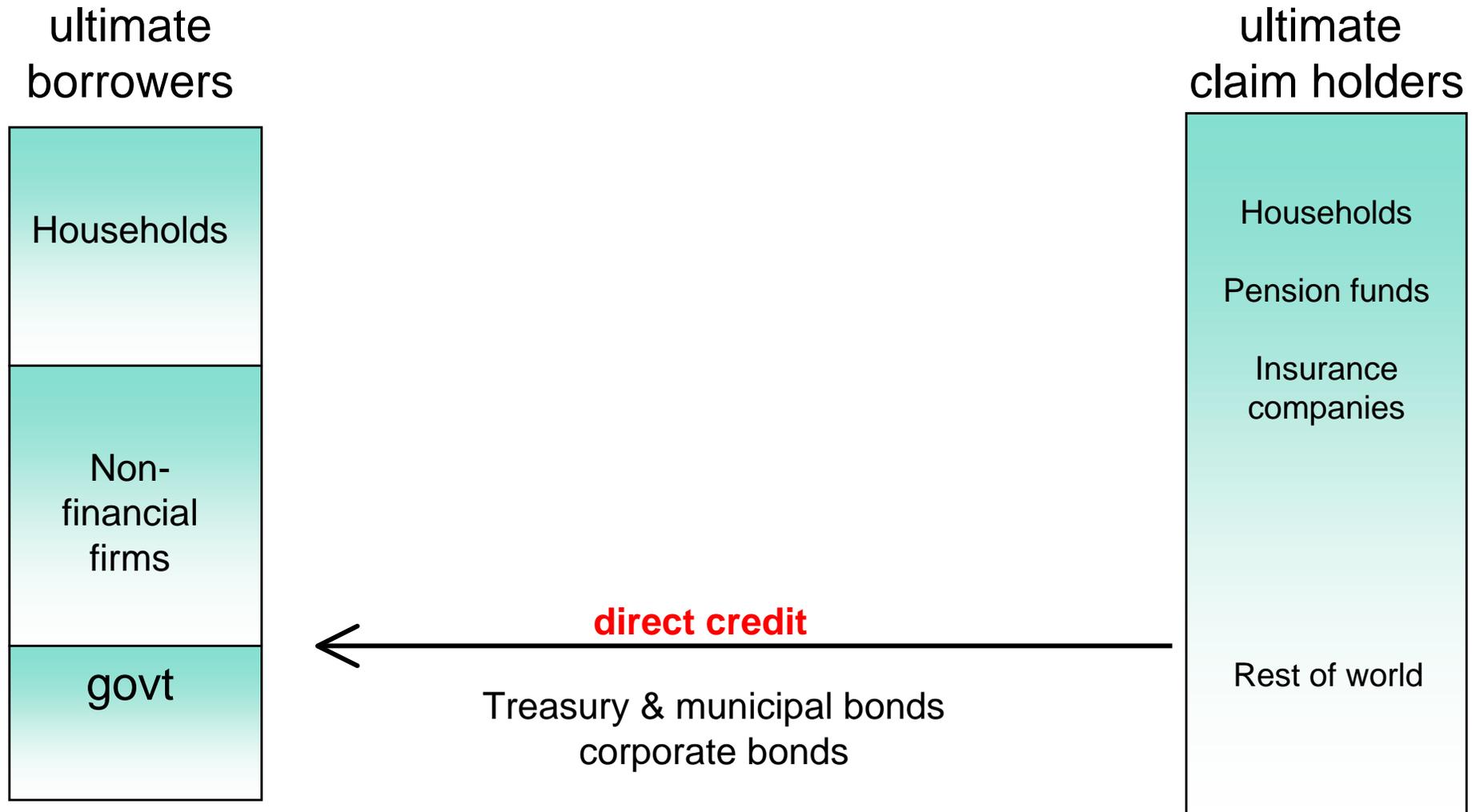


Duration of Assets and Liabilities

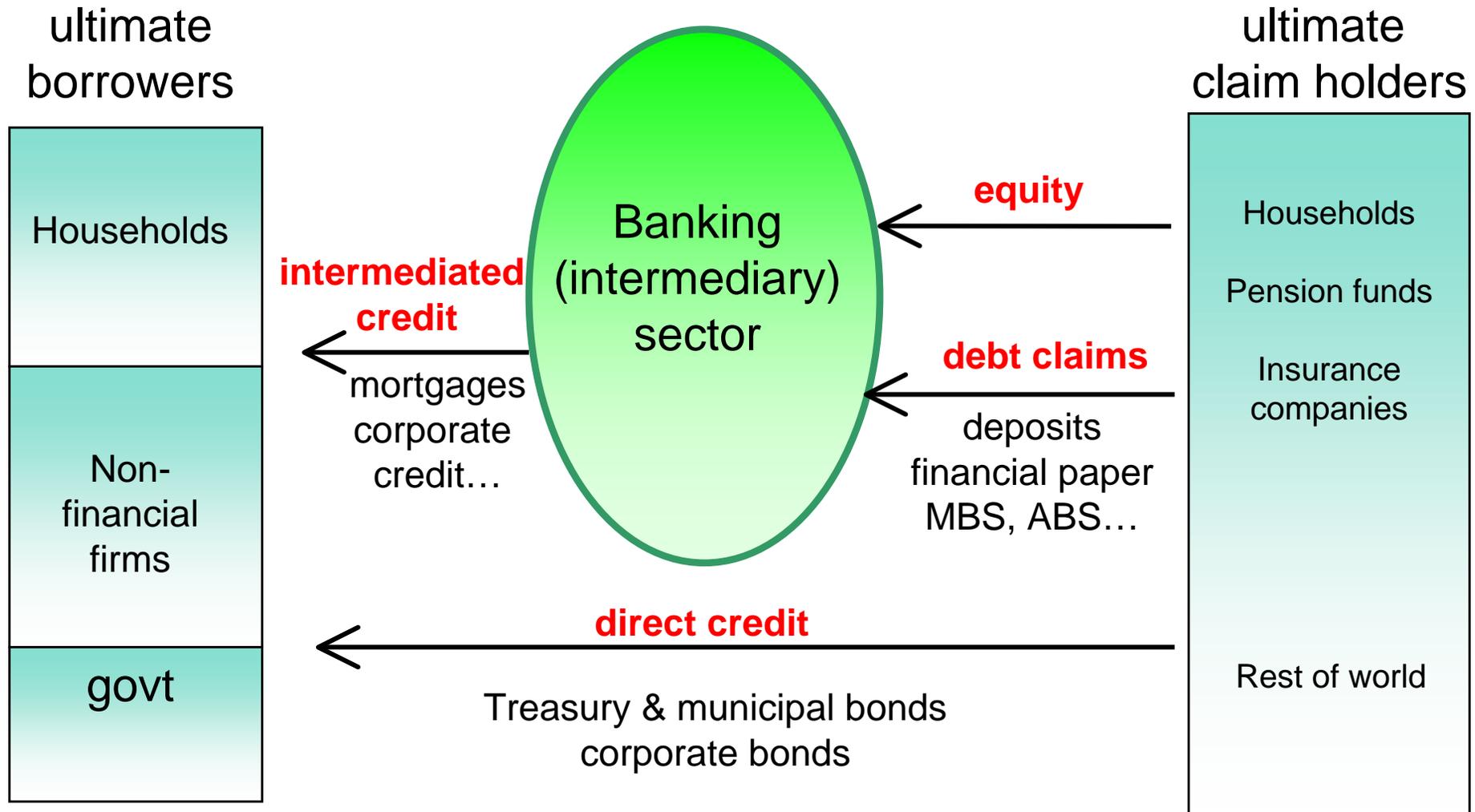
Value



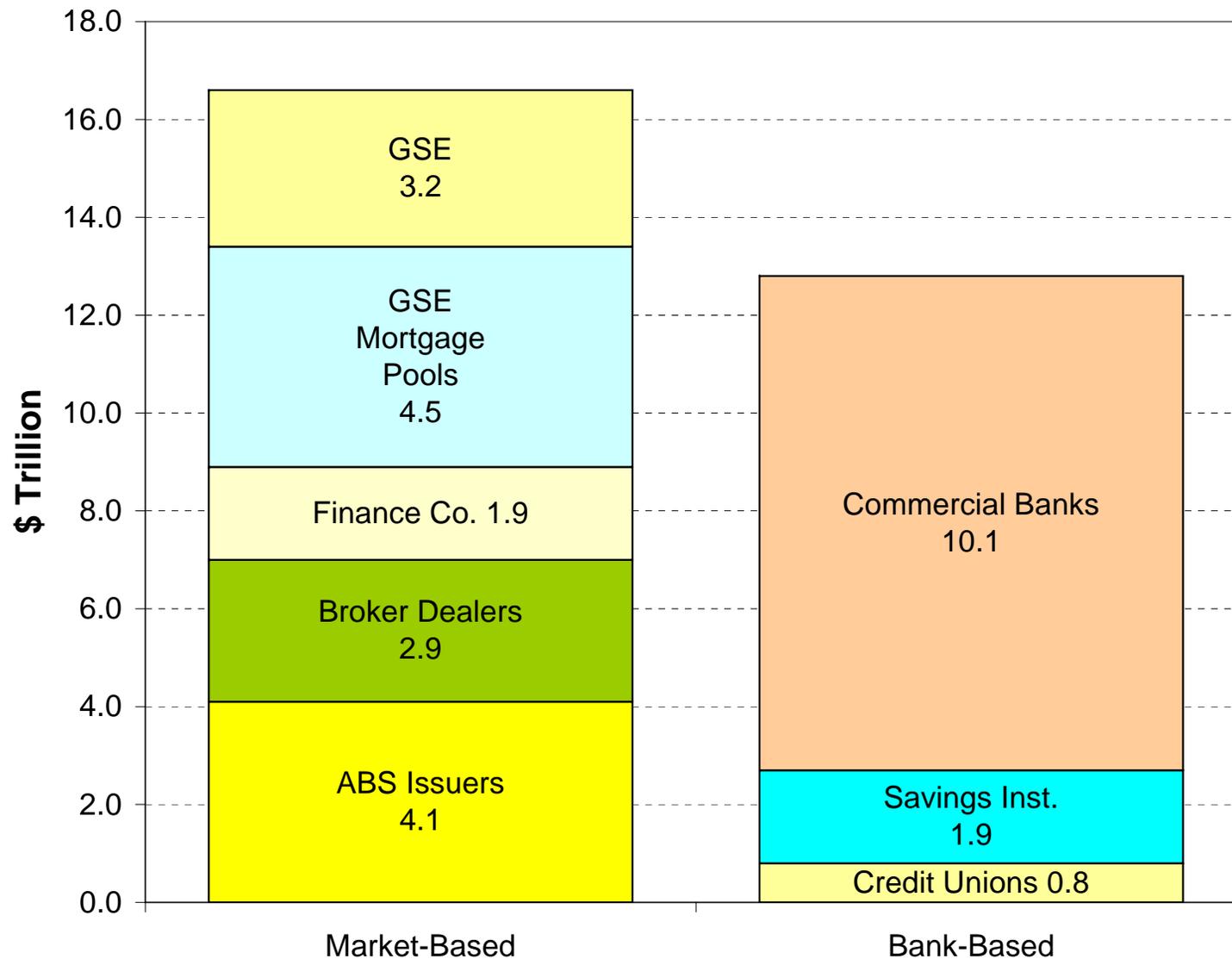
Stylized Financial System



Stylized Financial System



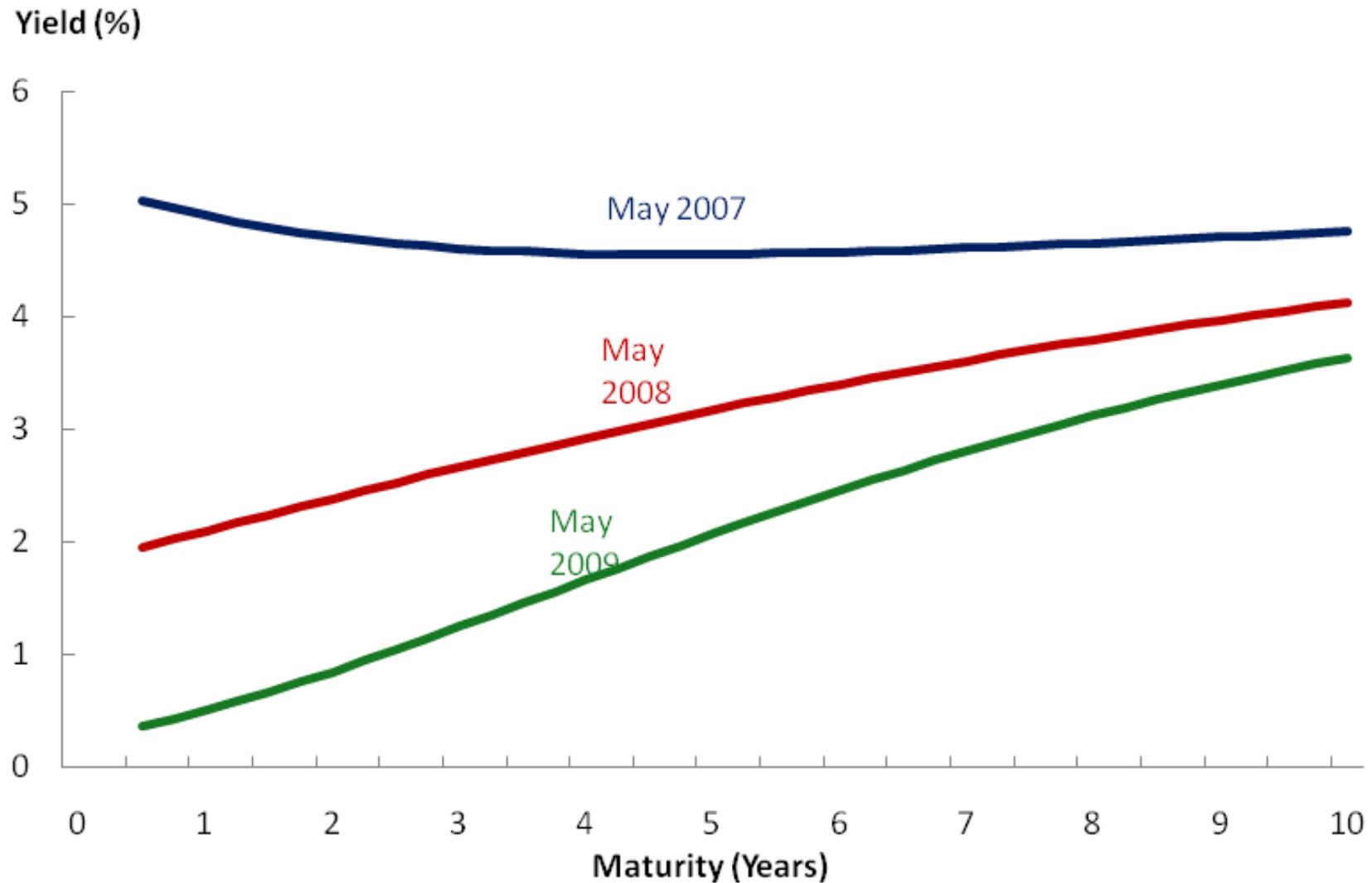
US Financial Intermediaries Total Assets (2007Q2)



Credit Demand

- Demand for credit
 - Investment by households (esp. housing) and non-financial corporates
 - Durable goods consumption (consumer loans)
 - Demand for financing by central and local governments.
- Demand for credit depends on
 - Interest rates and spreads
 - Household and Firm Net worth
 - Fiscal policy

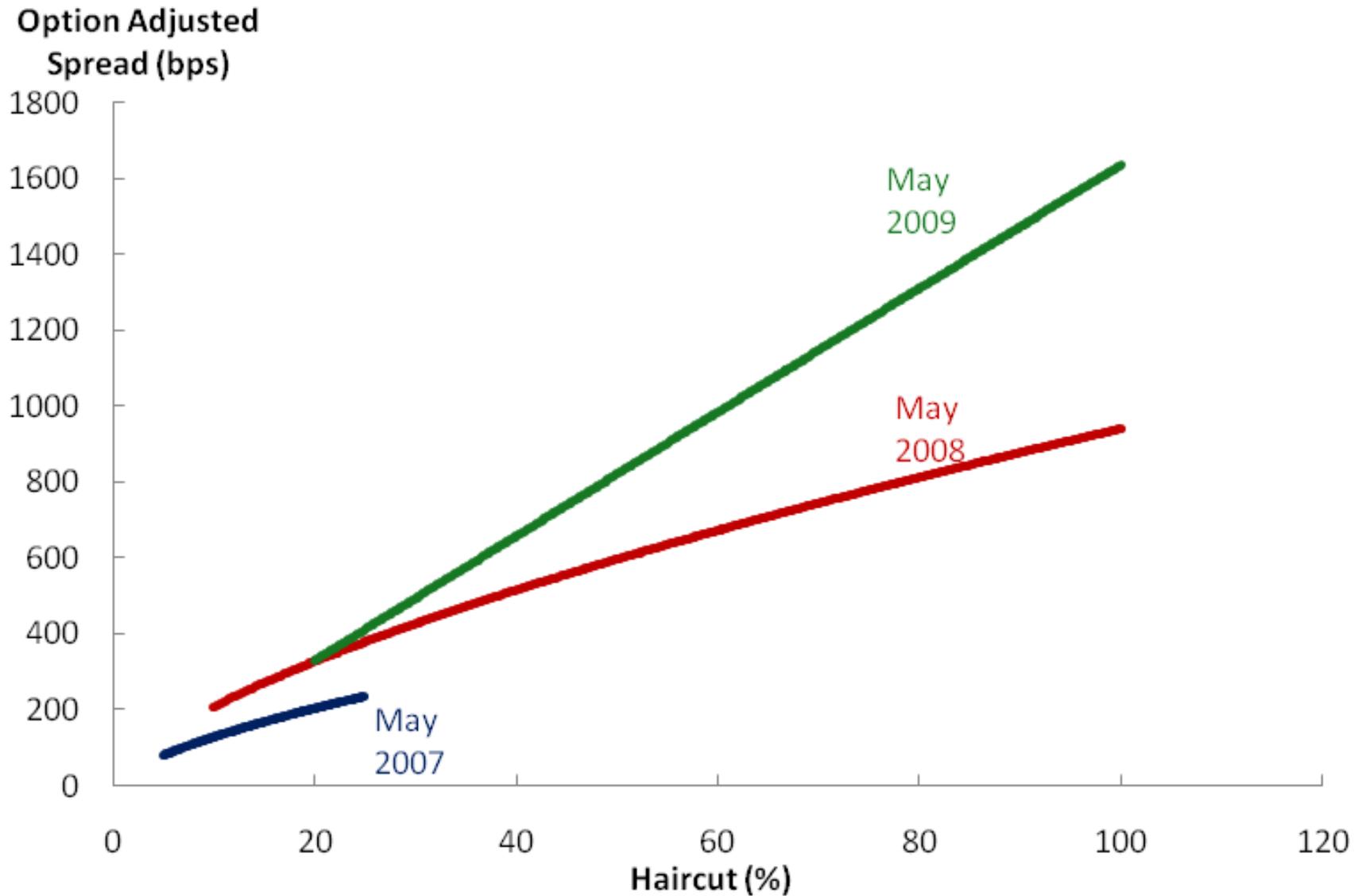
Yield Curve (Credit Demand)



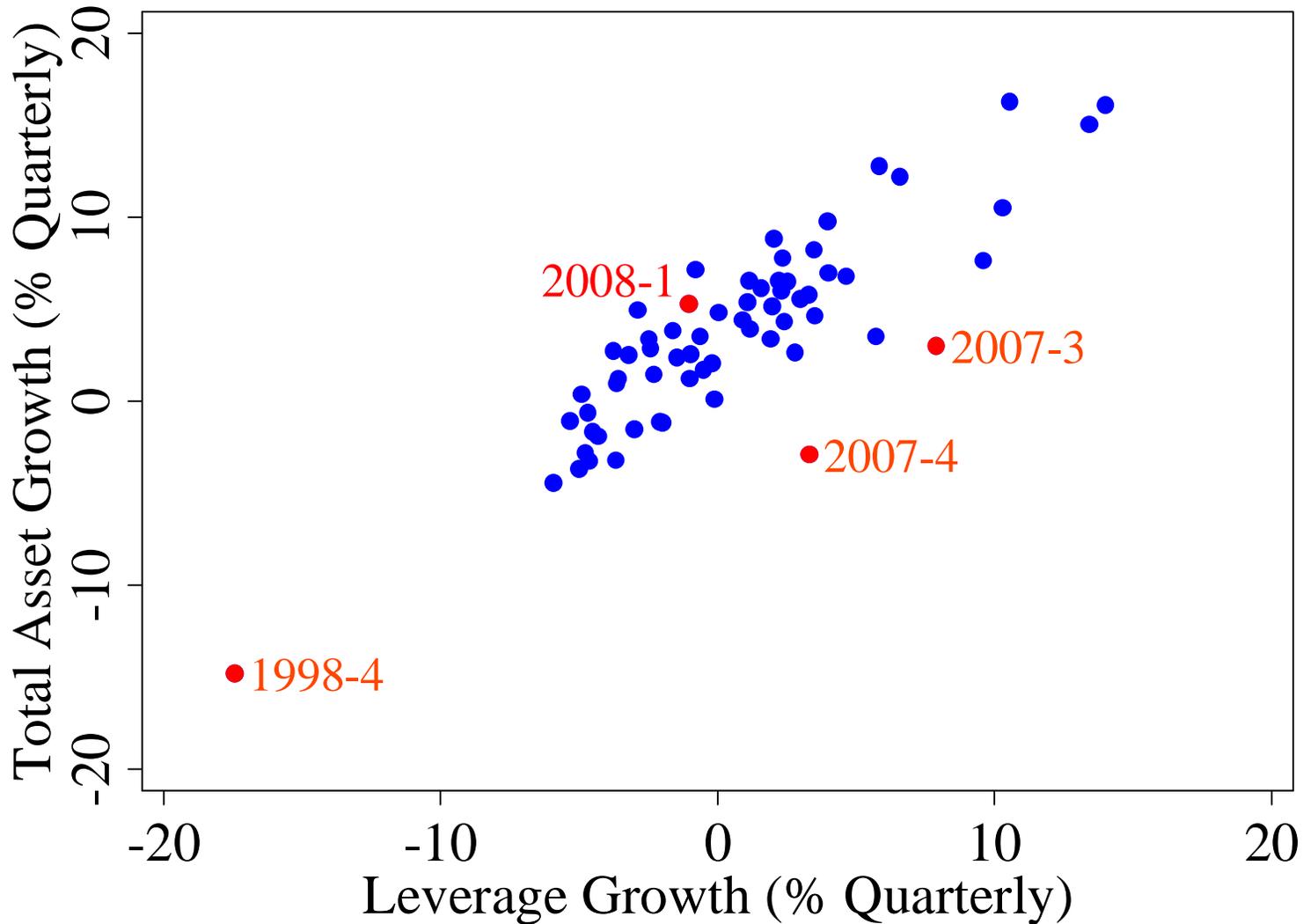
Credit Supply

- Delegation to financial intermediaries
- Credit supply determined by forces shaping financial intermediary balance sheets.
- Monetary policy works through intermediation
 - Profitability of intermediation through yield curve
 - Lender of last resort operations determine the availability of funding for intermediaries.

Haircut Curve (Credit Supply)



Procyclical Leverage of Five US Investment Banks

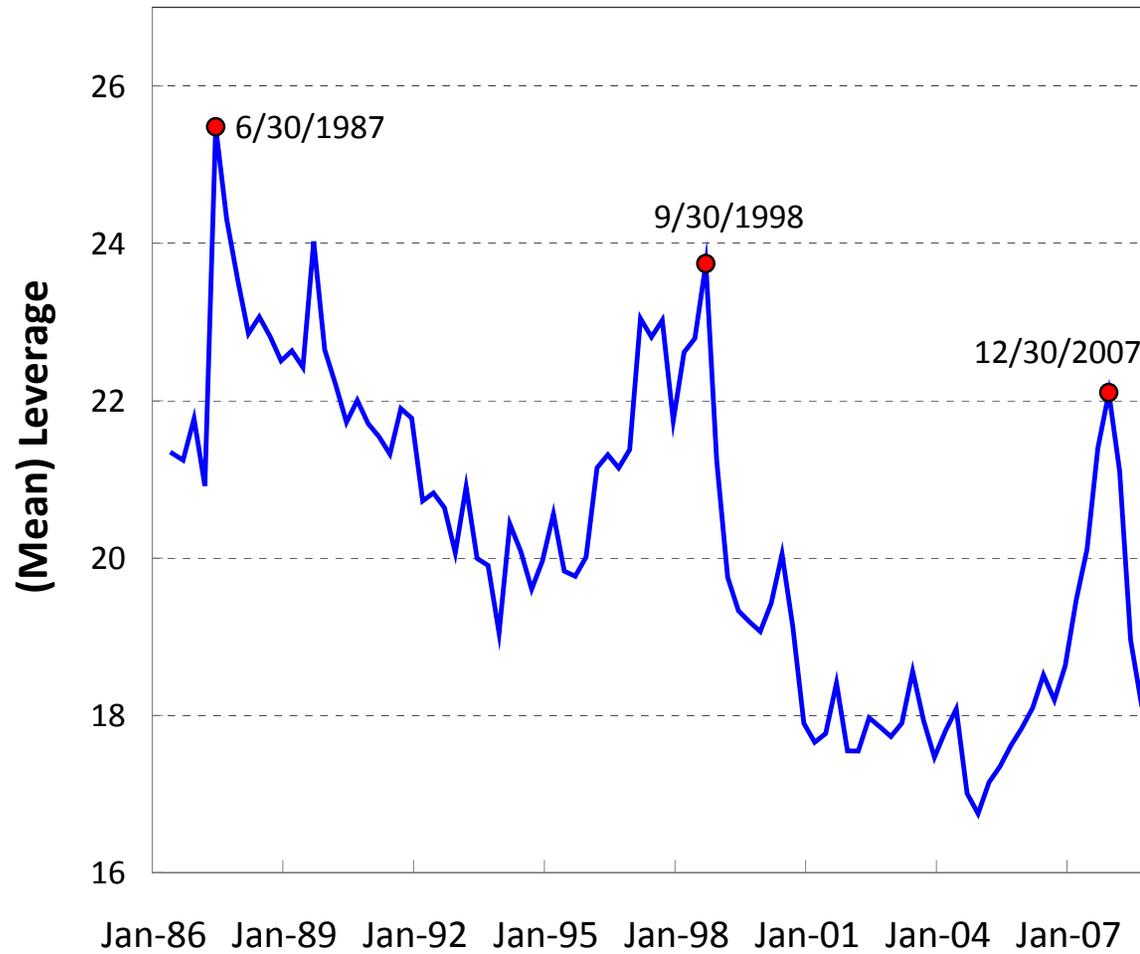


Repo Haircuts

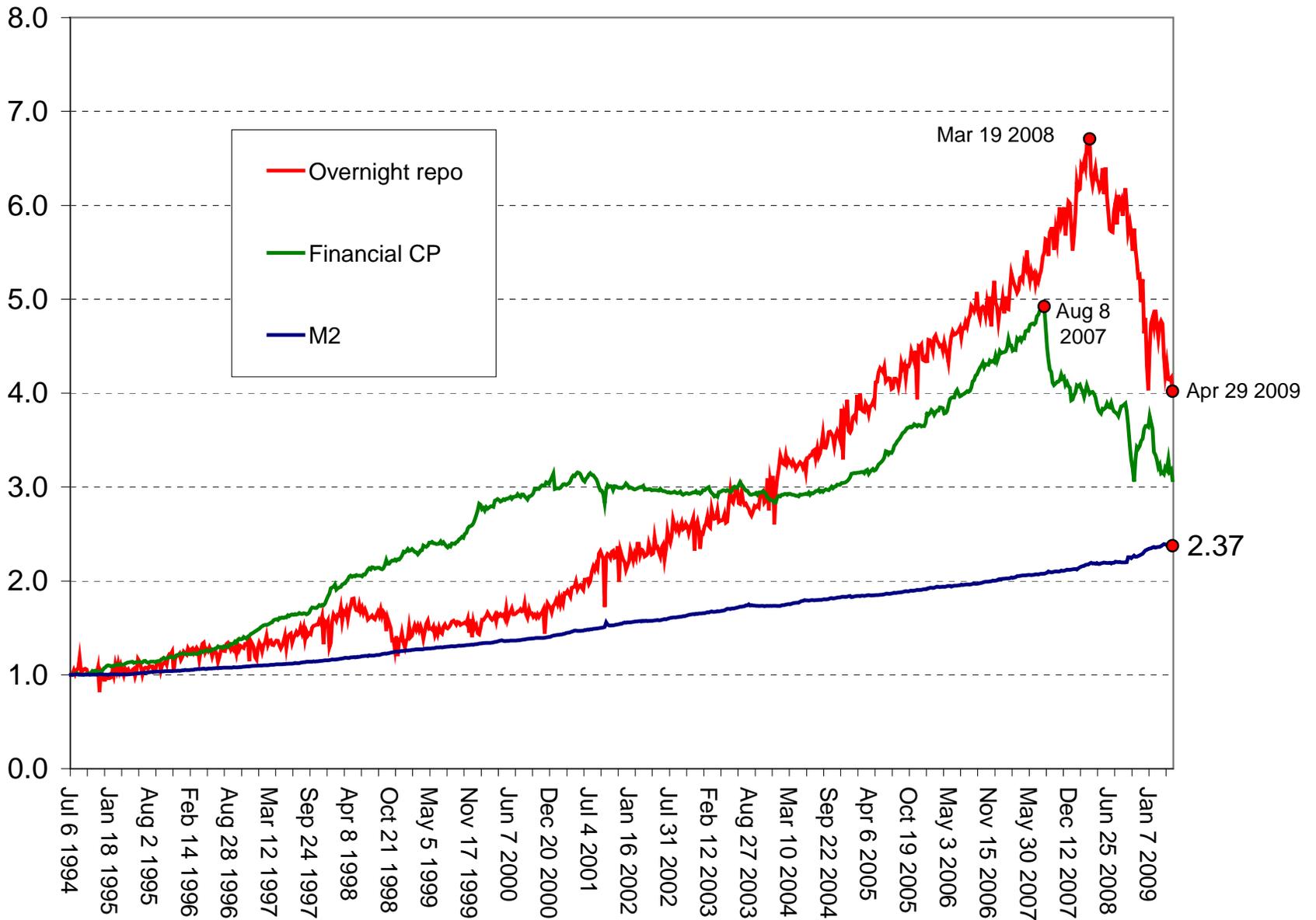
Securities	April-07	August-08
U.S. treasuries	0.25	3
Investment-grade bonds	0–3	8–12
High-yield bonds	10–15	25–40
Equities	15	20
Senior leveraged loans	10–12	15–20
Mezzanine leveraged loans	18–25	35+
Prime MBS	2–4	10–20
ABS	3–5	50–60

Source: IMF GFSR

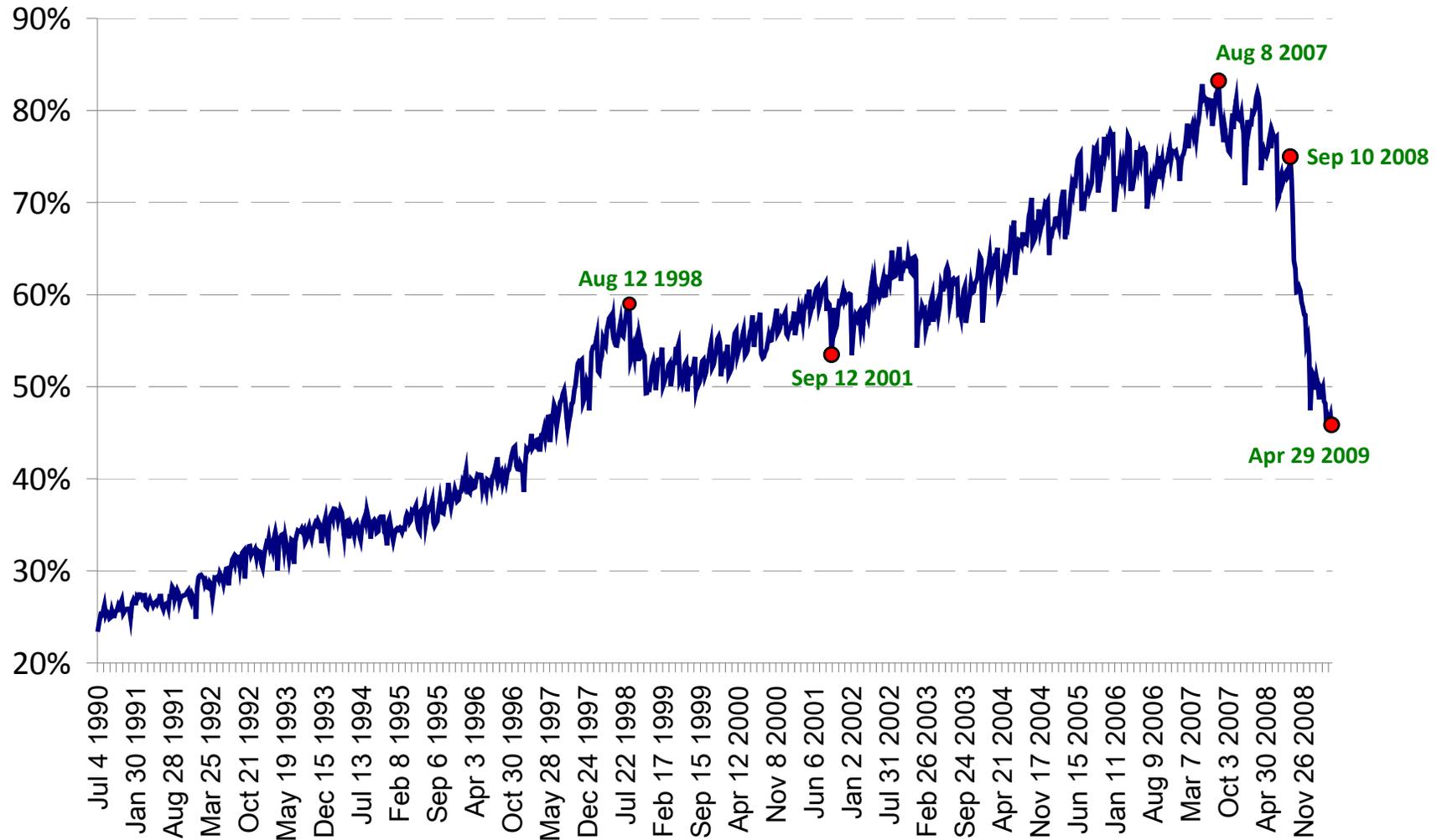
Primary Dealer Mean Leverage



Overnight repos, Financial CP and M2 (weekly, July 6 1994 as base date)

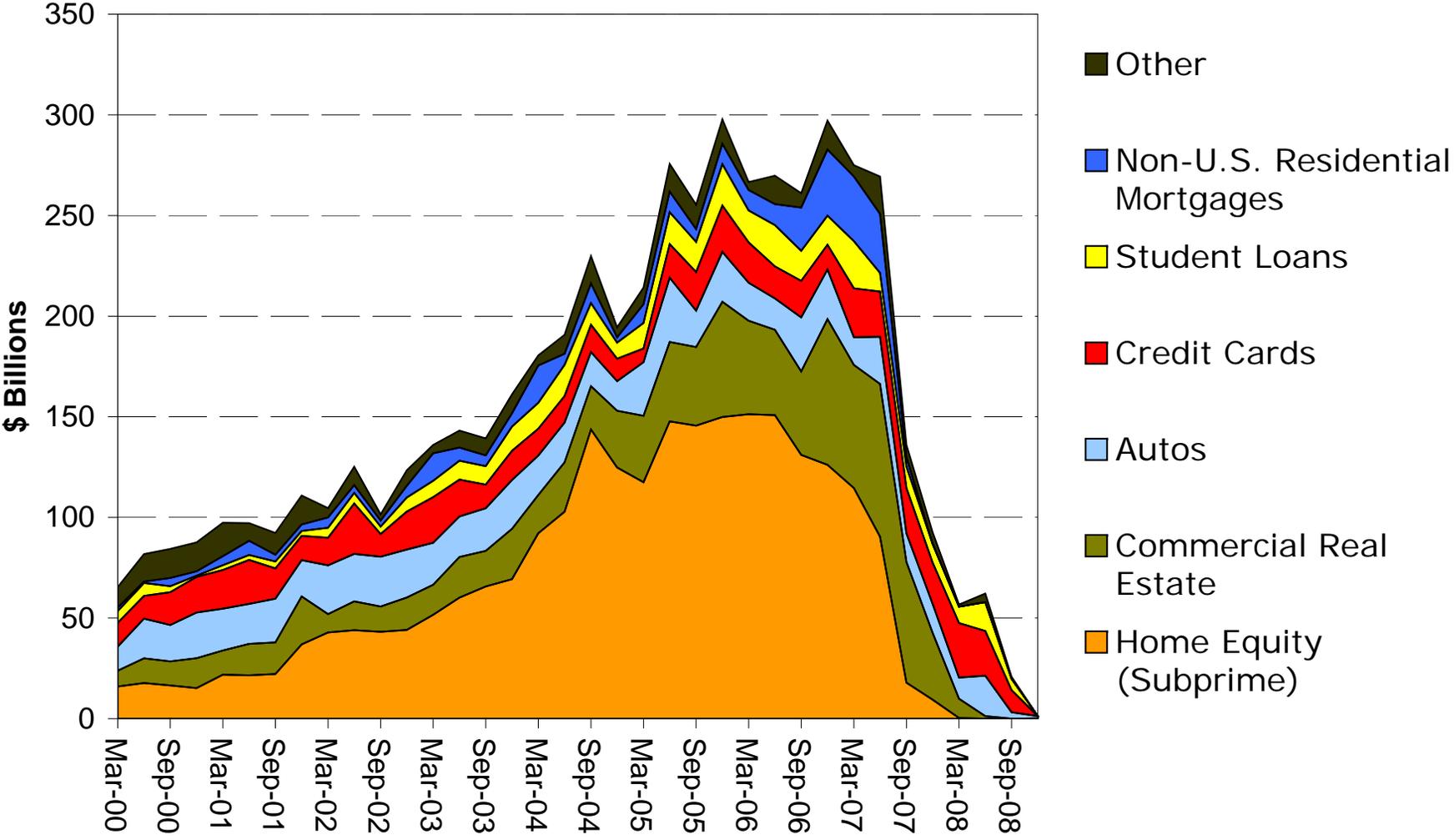


Repos and Financial CP as Fraction of M2 (weekly)



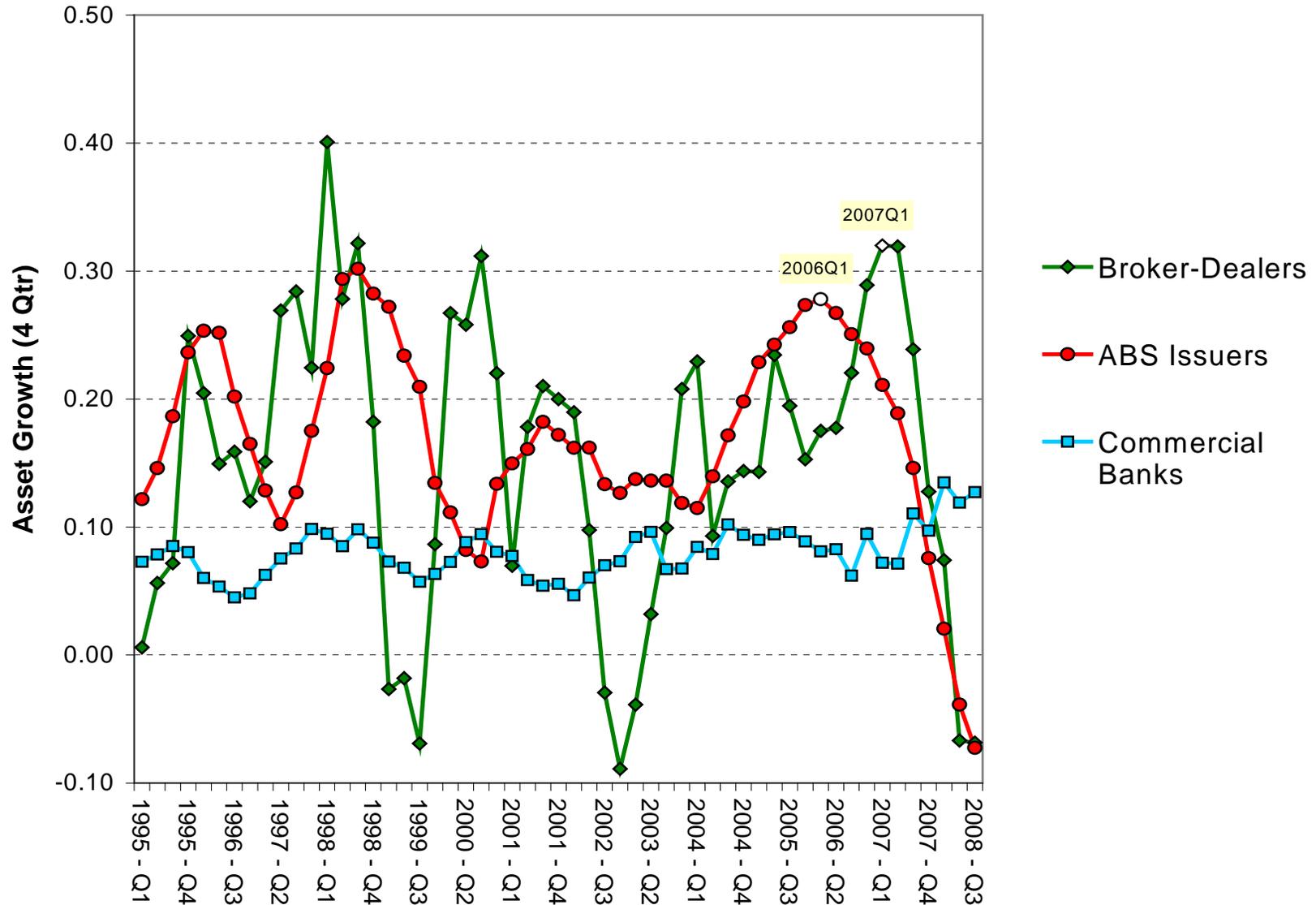
Source: Adrian and Shin (2009)

New Issuance of Asset Backed Securities in Previous Three Months

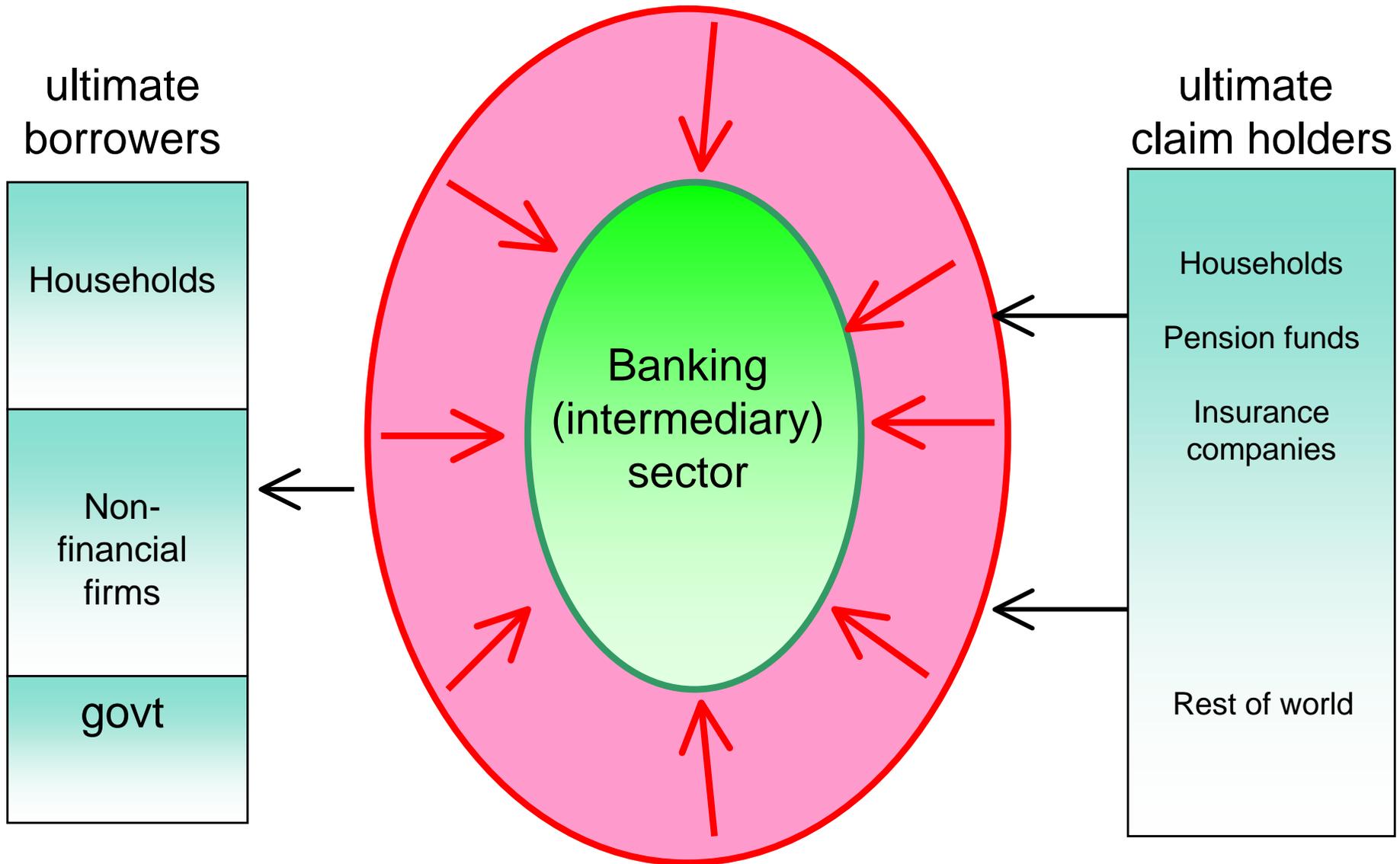


Source: JP Morgan

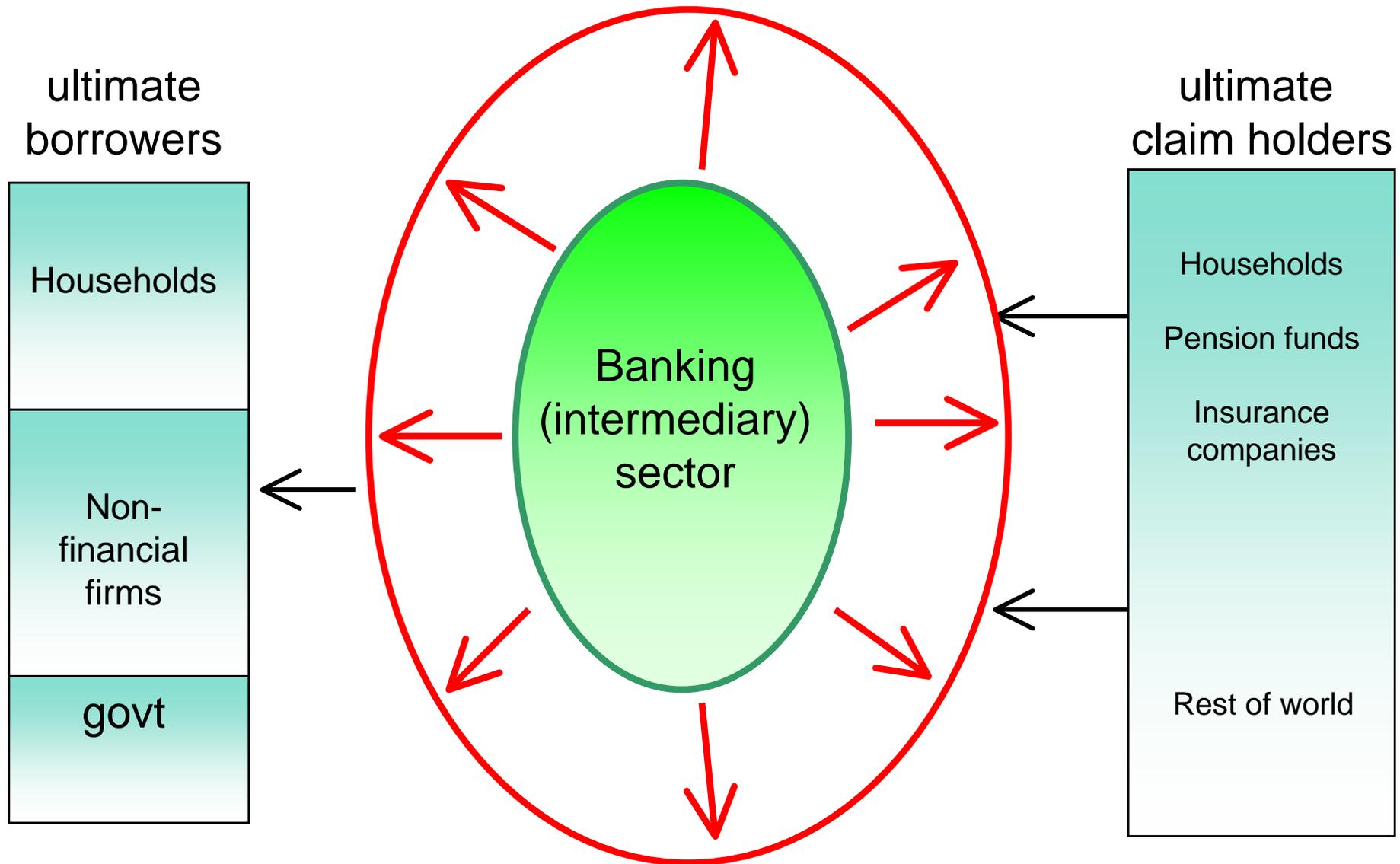
Focusing on bank lending only would be a mistake...



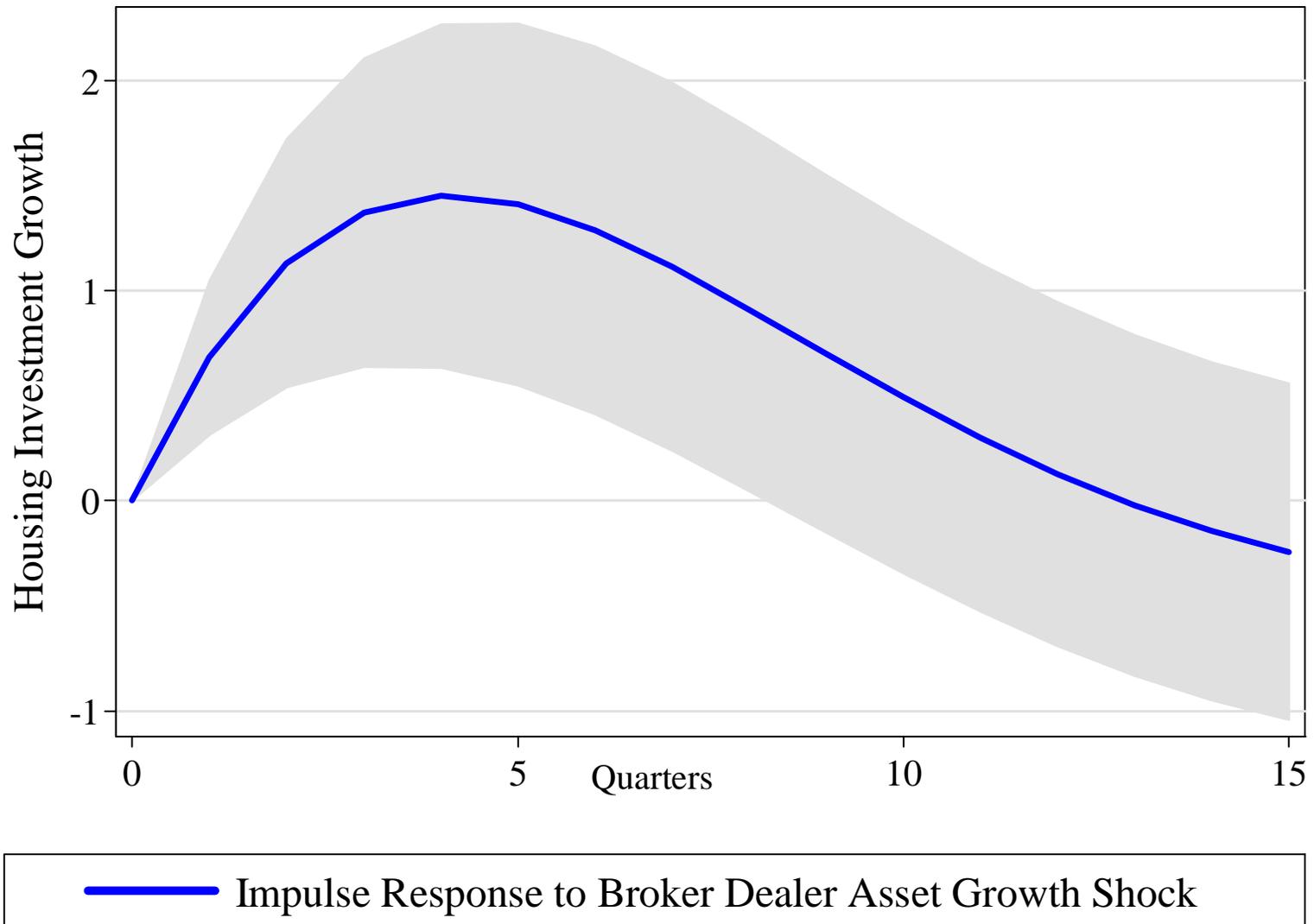
Biggest Damage is Done in Contractions



But Seeds of Crises Are Sown in Expansions



Impulse Response of Broker-Dealer Asset Growth on Housing Investment Growth



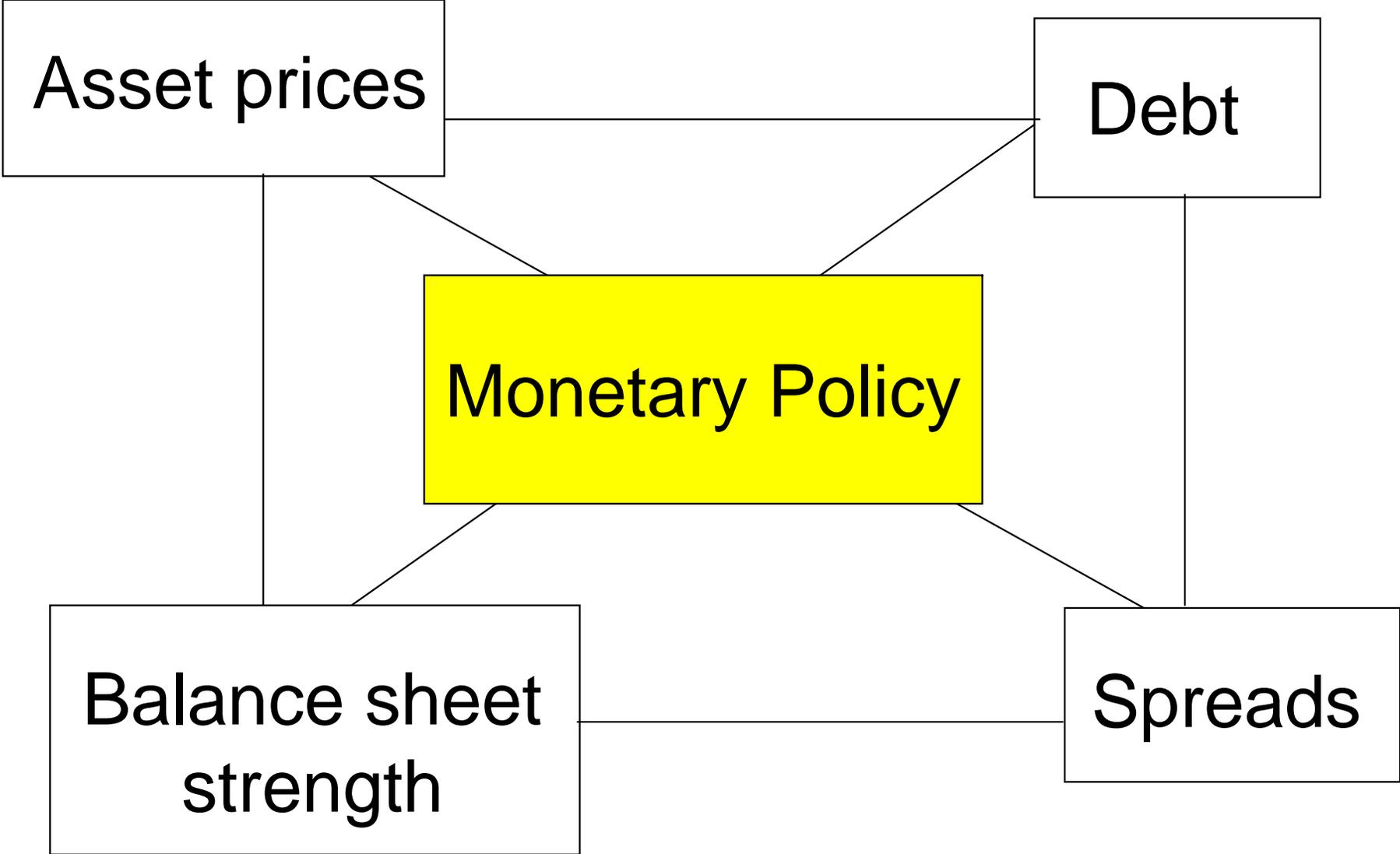
Monetary Policy and Repo Growth

Table 8: Primary Dealer Repo Growth Expands when the Term Spread is Large

	<u>Repo Growth</u>	
	Primary Dealers	
Fed Funds (13 week change)	-0.037	**
Fed Funds (13 week lag)	0.037	***
S&P500 Return (13 week)	0.000	*
S&P500 (13 week lag)	0.000	***
VIX (13 week change)	-0.001	
VIX (13 week lag)	-0.007	***
10-year / 3-month Treasury spread (13 week change)	0.049	**
10-year / 3-month Treasury spread (13 week lag)	0.087	***
Baa / 10-year credit spread (13 week change)	0.150	***
Baa / 10-year credit spread (13 week lag)	0.017	
Repo Growth (13 week lag)	-0.242	***
Constant	-0.163	

Monetary Policy Lessons

- Overnight interest rate matters in its own right, not just through expectations channel
 - Balance sheet growth & liquidity conditions
- Case for rehabilitating some role for balance sheet quantities
 - Not money, but repos, commercial CP, etc.
- Monetary policy and policies for financial stability are two sides of same coin



Asset prices

Debt

Monetary Policy

Balance sheet
strength

Spreads

Changing Nature of Monetary Policy

- Monetary policy works by manipulating asset prices
- Repercussions for wider financial system
- Is the “IS” view of monetary policy sufficient?
 - Financial stability is also about output/price stabilisation
 - Costs of getting it wrong are large