

# **Money as Infrastructure**

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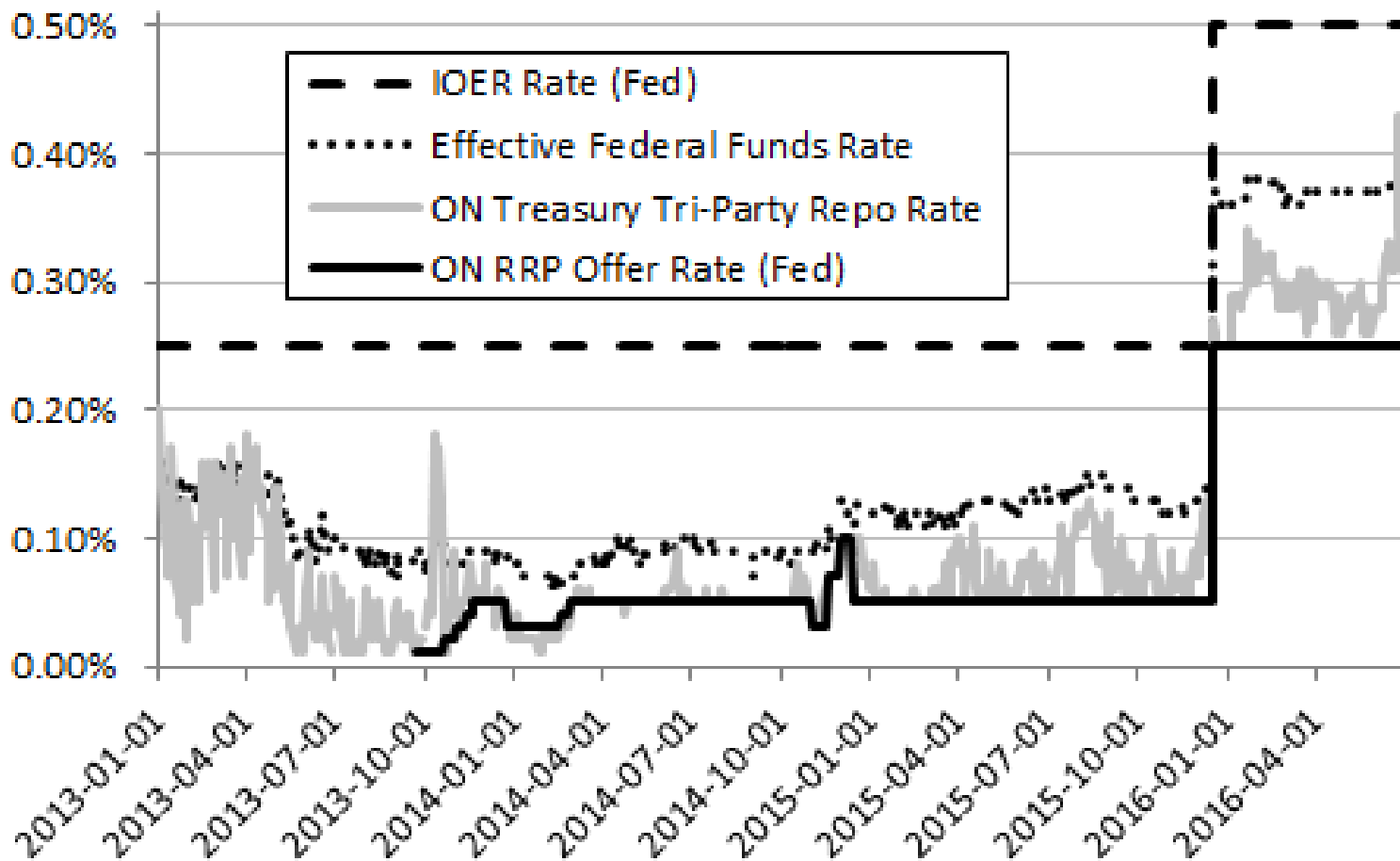


**MORGAN RICKS**

# **The Money Problem**

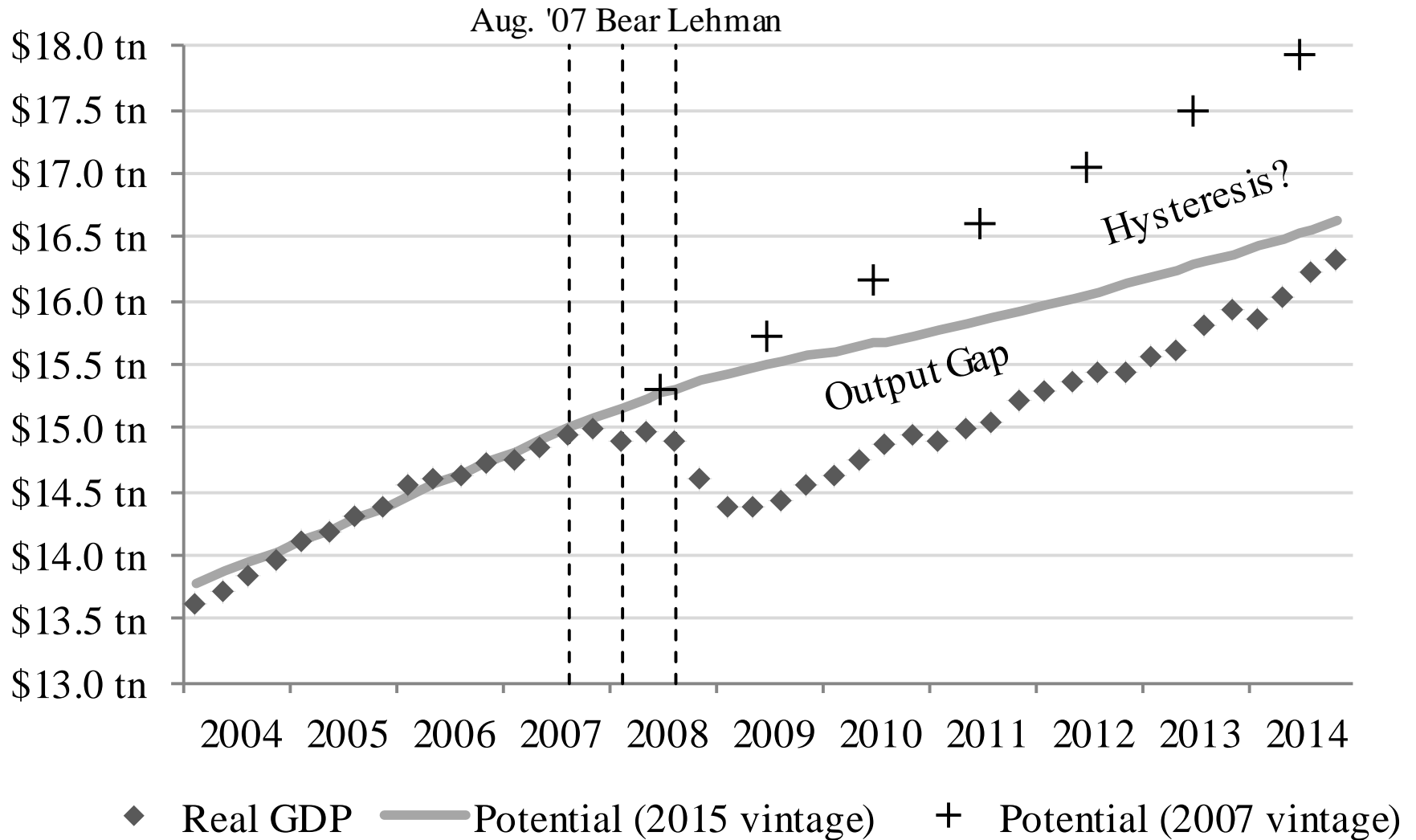
**RETHINKING FINANCIAL REGULATION**

# Selected Money Market Rates and Administered Rates

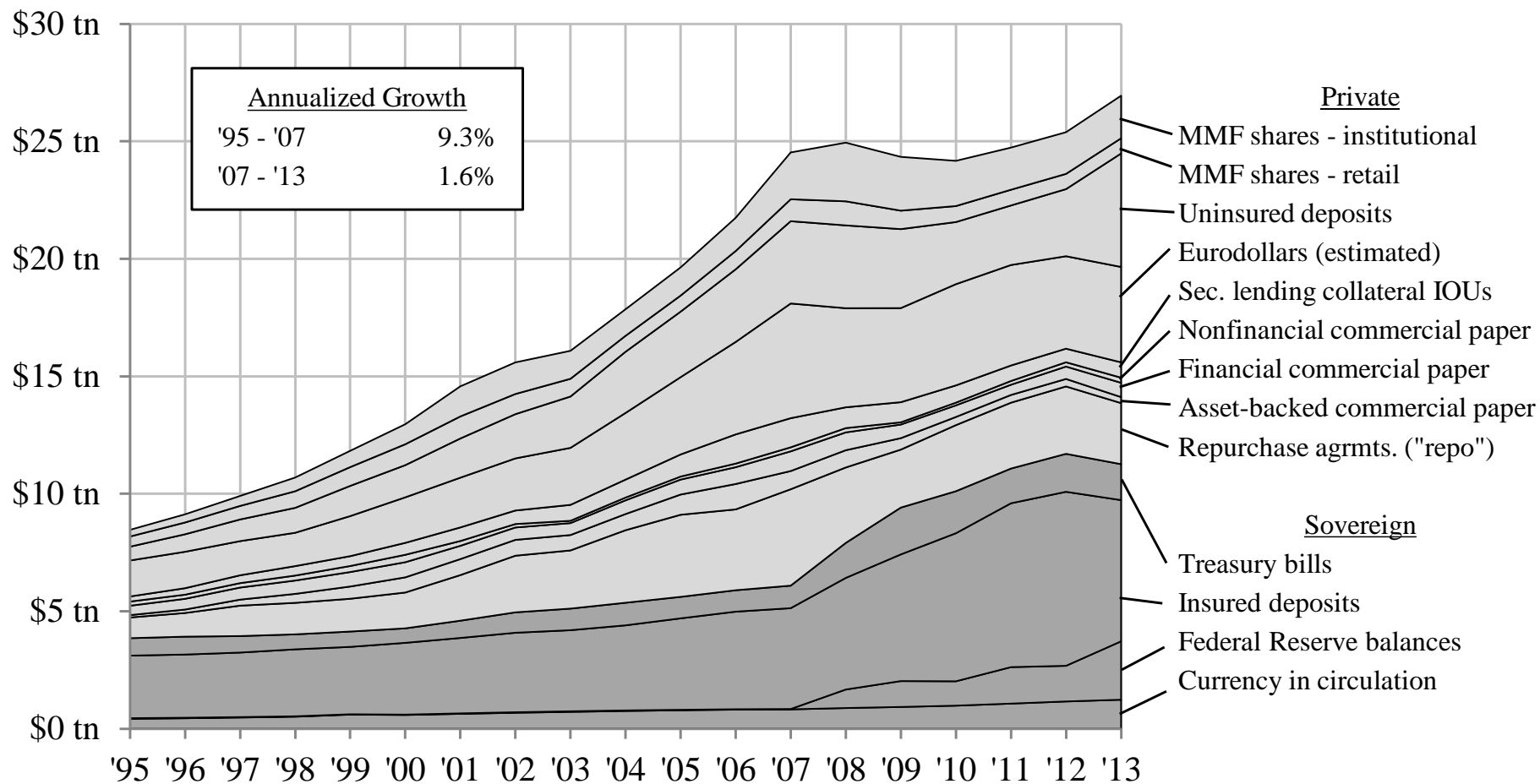


Source: St. Louis Fed (FRED); FRBNY; BNY Mellon.

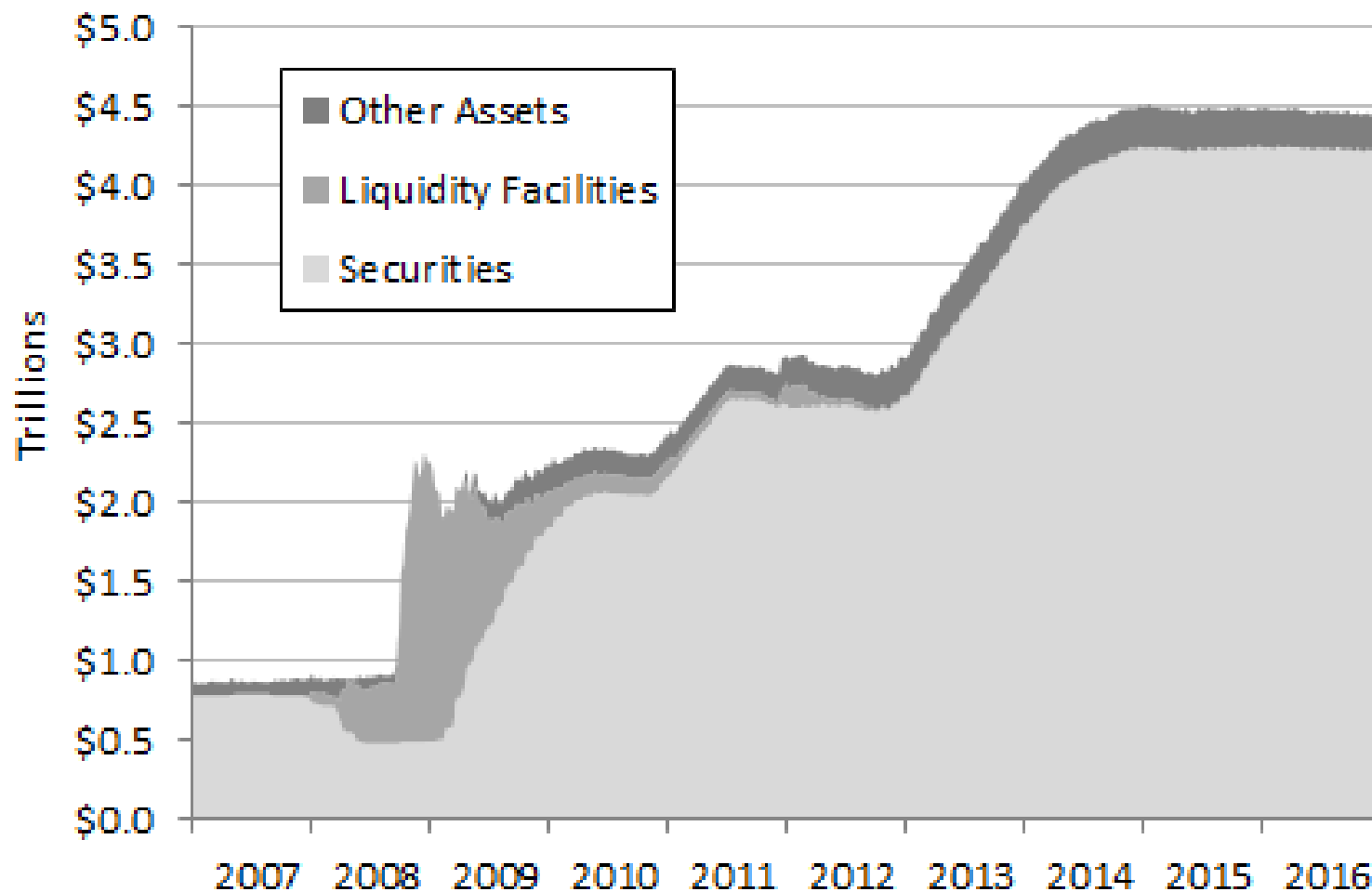
# The Great Recession



# Gross Money-Claims Outstanding

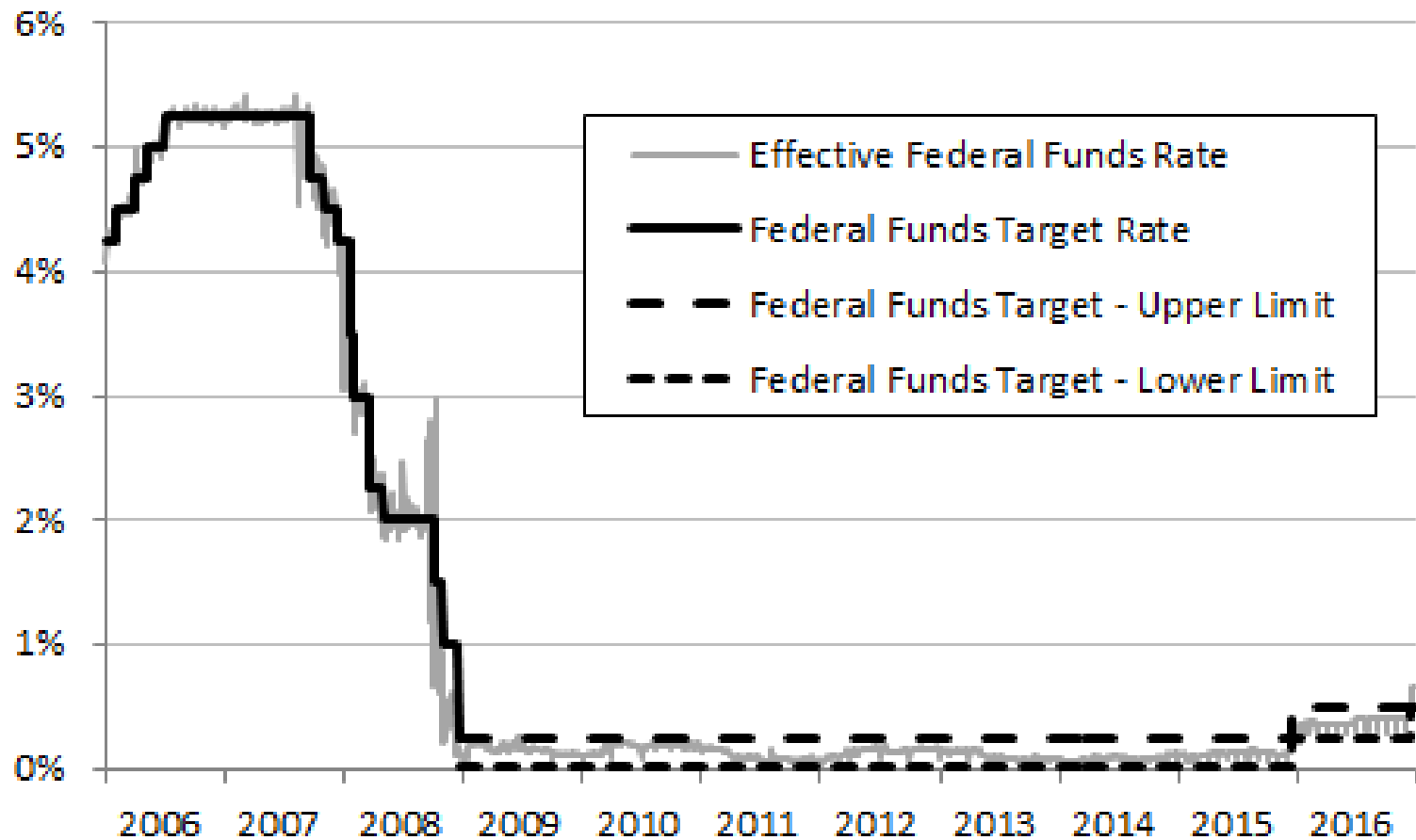


# Federal Reserve Assets



Source: St. Louis Fed (FRED).

# Federal Funds Rate



Source: St. Louis Fed (FRED).

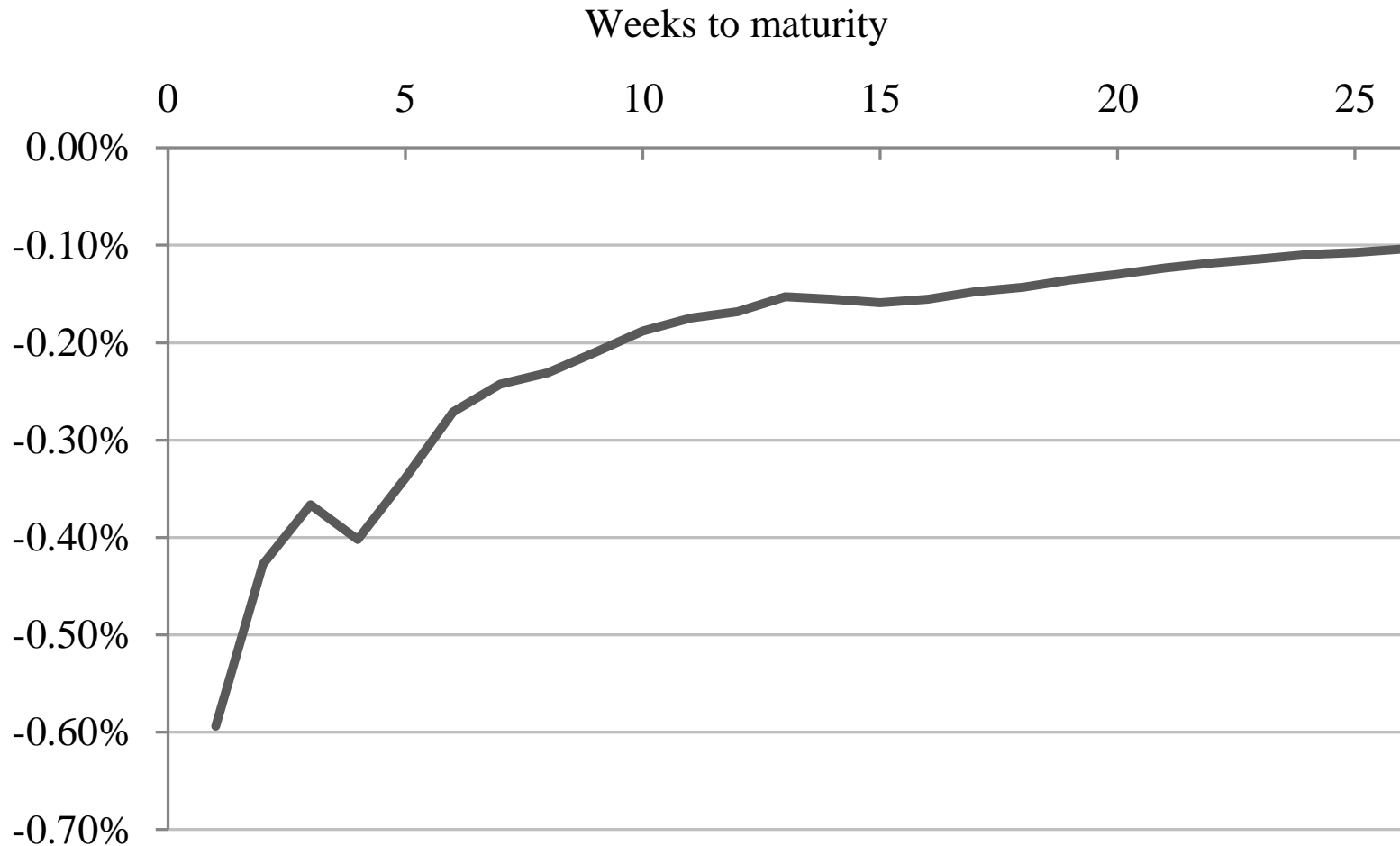
# Appendix



# “Moneyiness” of Money-Claims

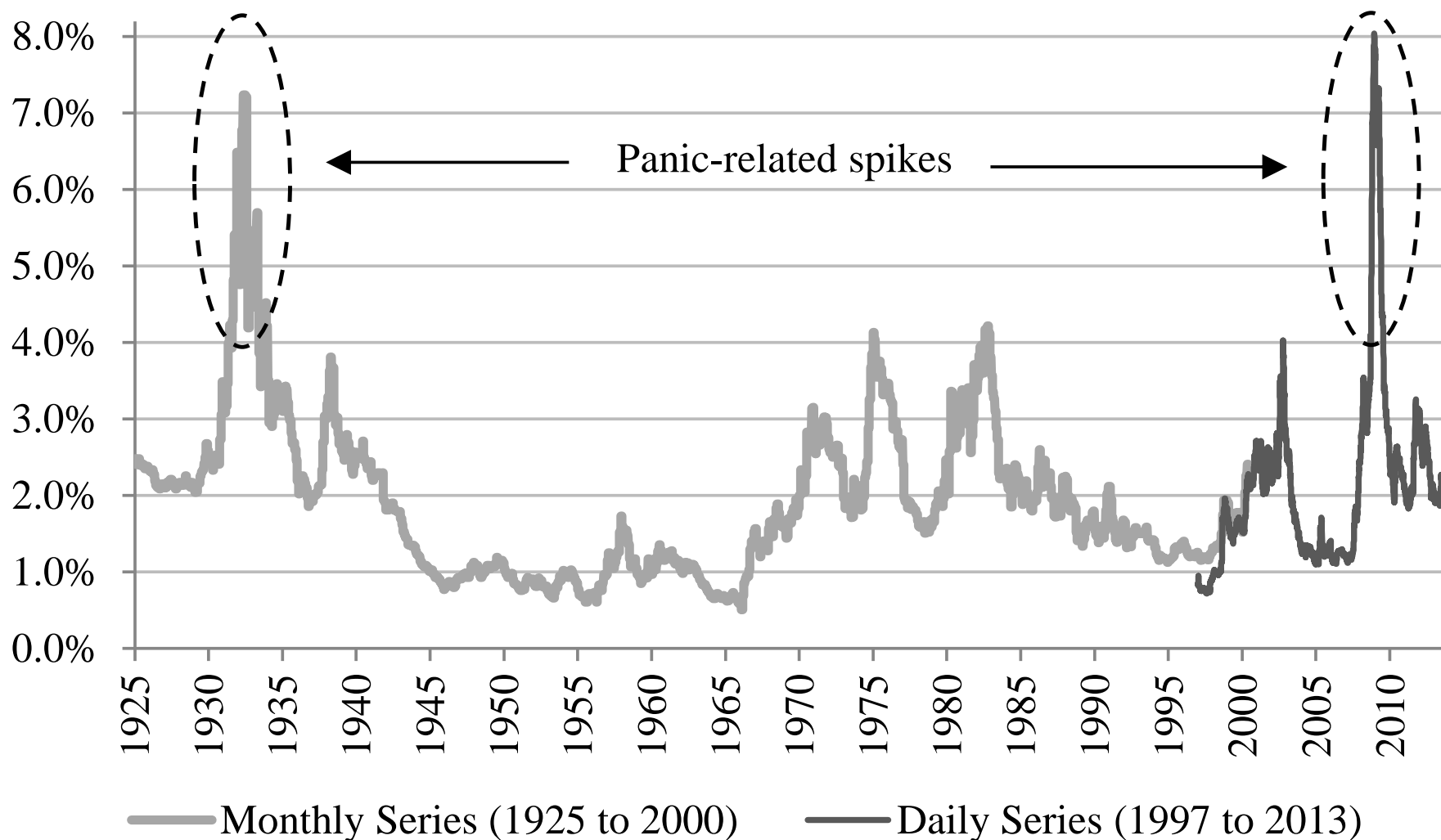
- **Simons (1934):** “short-term debts ... are ... closely akin to money”
- **Keynes (1936):** suggests 3 mo. maturity cutoff between money and bonds
- **Hicks (1946):** “Bills of short maturity” are “very close substitutes” for money, have “moneyiness”
- **Friedman & Schwartz (1970):** “moneyiness”
- **Lucas & Stokey (2011):** Short-term repo is “close to cash”
- **Gorton (2012):** short-term debt “forms of money,” “private money”
- **Stein (2012):** short-term debt is “private money,” offers “monetary services”
- **Cochrane (2014):** “short-term debt is money”

# The Money Premium on Short-Term Treasuries



Source: Robin Greenwood, Sam Hanson, and Jeremy Stein, Harvard University

# BBB-rated Corporate Bond Spreads



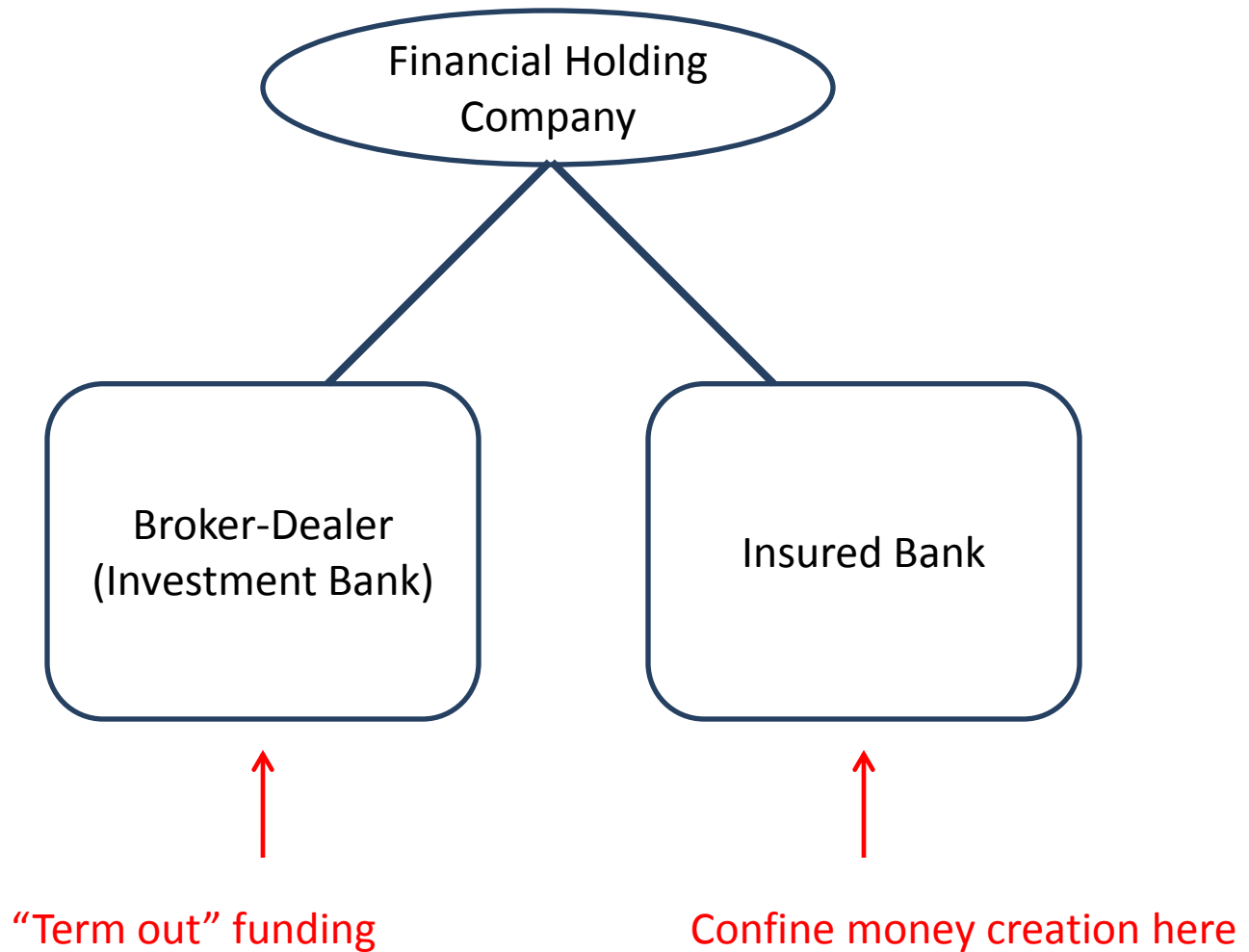
# What to Do About This?

- We already have an approach: U.S. insured banking system
- Explicit government backing of monetary liabilities
- Risk-based fees
- Portfolio constraints and capital requirements

## Confining Money Creation (Entry Restriction)

- Banking law (at least in U.S. and England) has always sought to confine money creation to chartered banks
- See 12 U.S.C. § 378(a)(2)
- I suggest we update this prohibition along functional lines
- Failure to do this is the “original sin” of banking law

# Effect on Financial Conglomerates



## Some Observations about this System

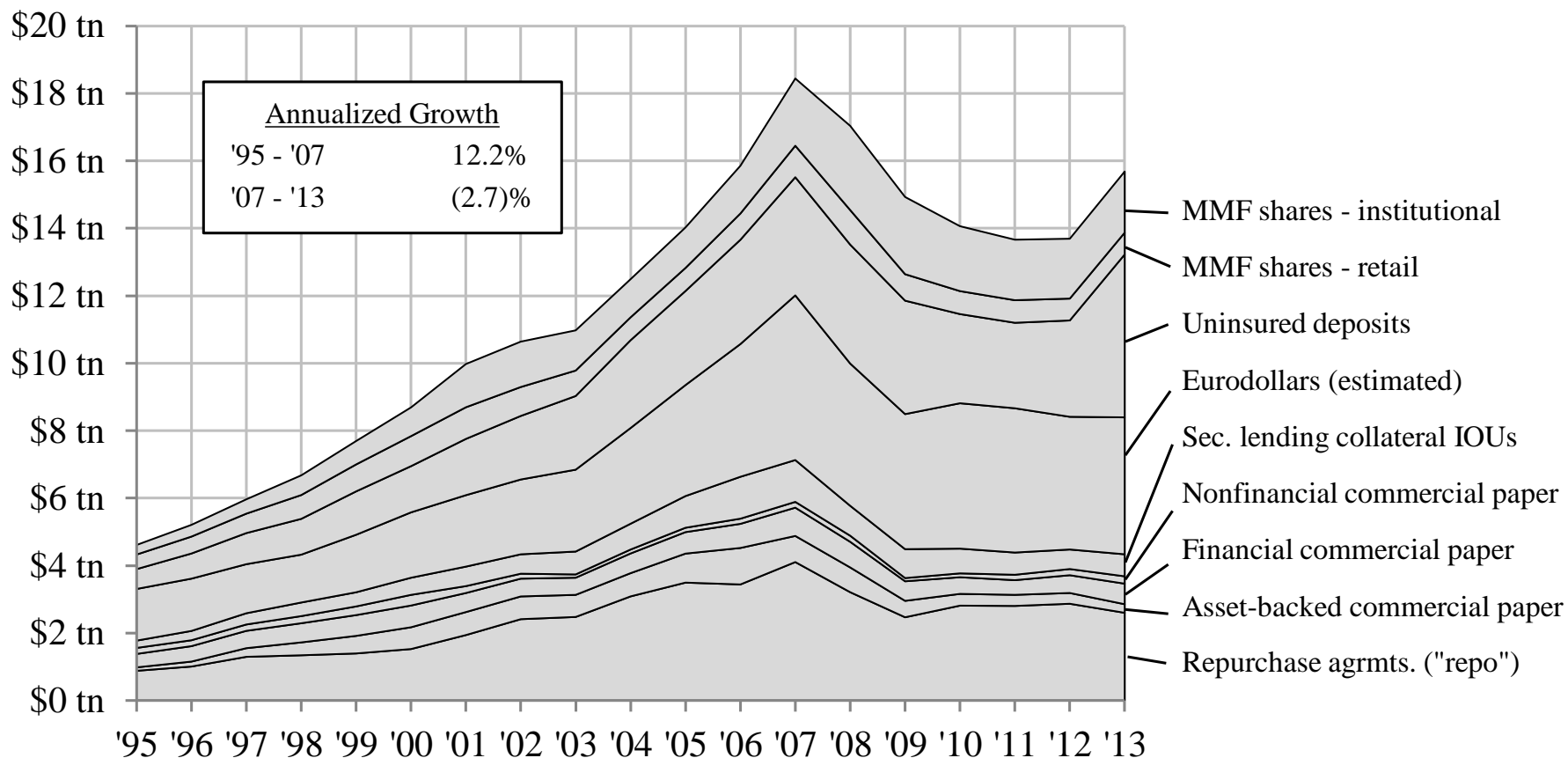
- All money is sovereign (system is panic-proof)
- It's a public-private partnership
- It has worked pretty well in the past (Quiet Period 1933-2007)
- It's fairly conservative – and it could set the stage for “scaling back”

# Objections

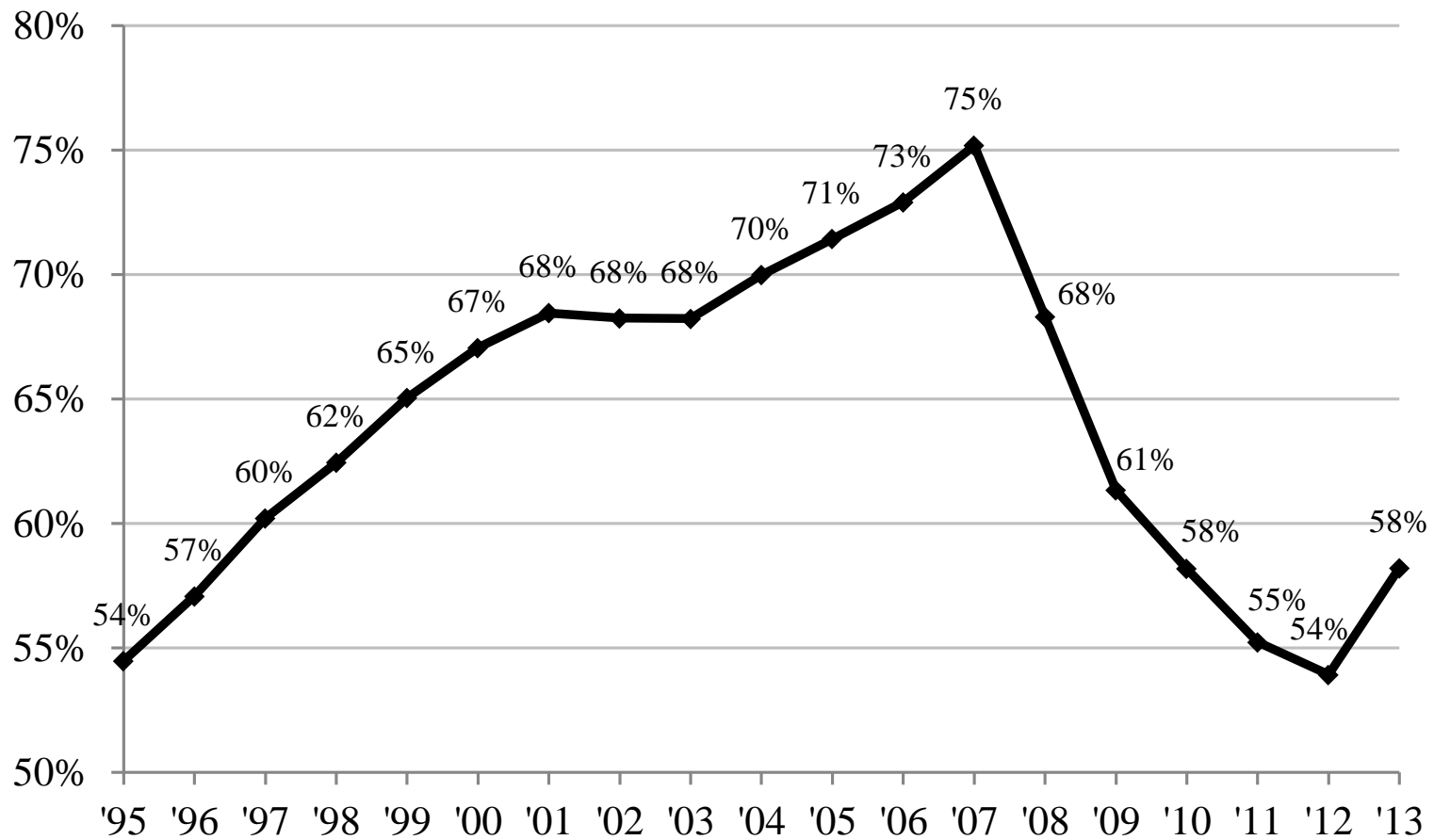
- Regulatory arbitrage
- Moral hazard
- Costliness (e.g., bid-ask spreads, economic growth)
- Are panics really the main problem?
- Other alternatives (e.g., margin requirements, LOLR)



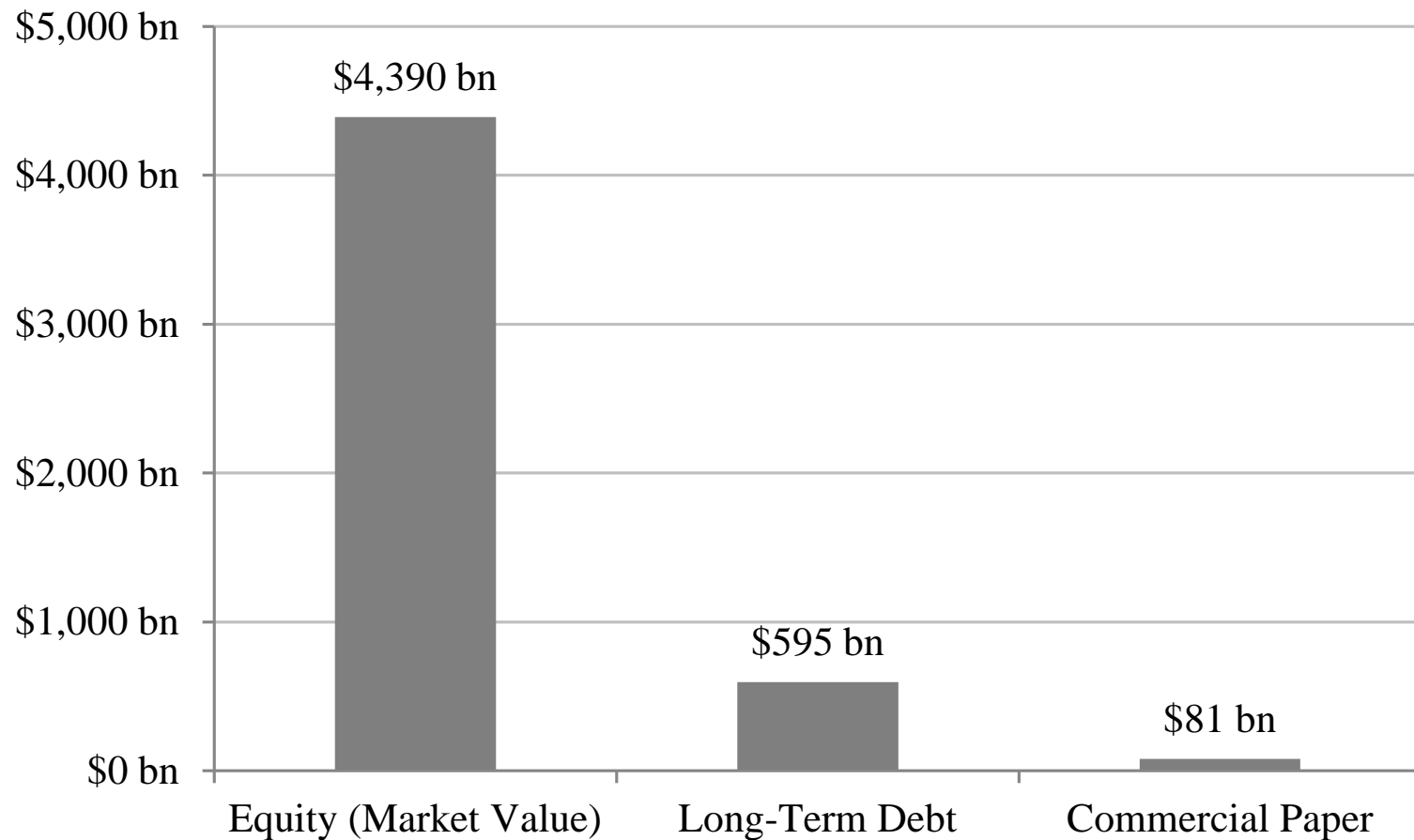
# Gross Private “Money-Claims” Outstanding



## Private Money-Claims as % of Total



# Selected Sources of Financing for Top 25 US Nonfinancial Public Companies

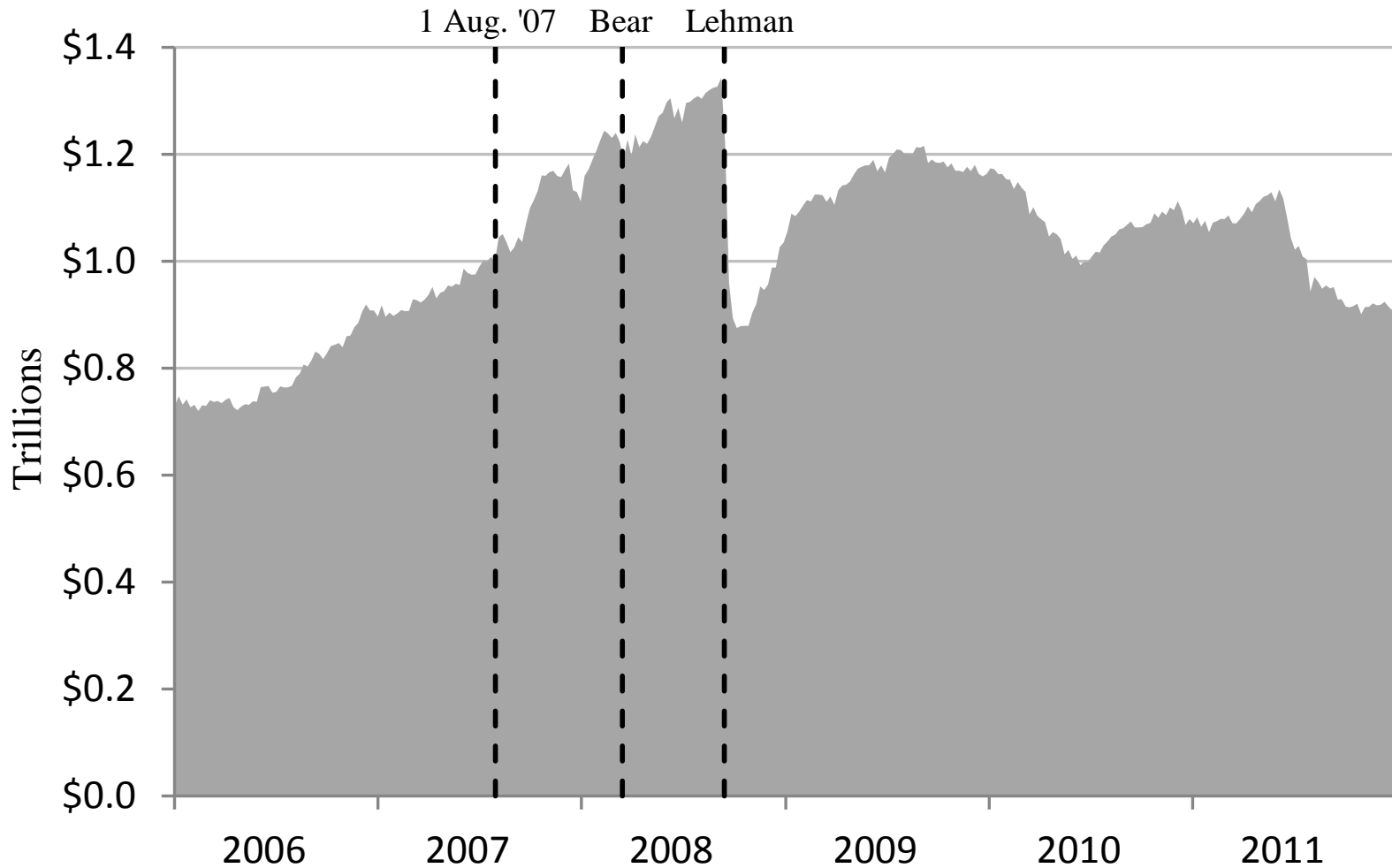


# Top 50 Non-Gov't Borrowers from Prime MMFs (May '12)

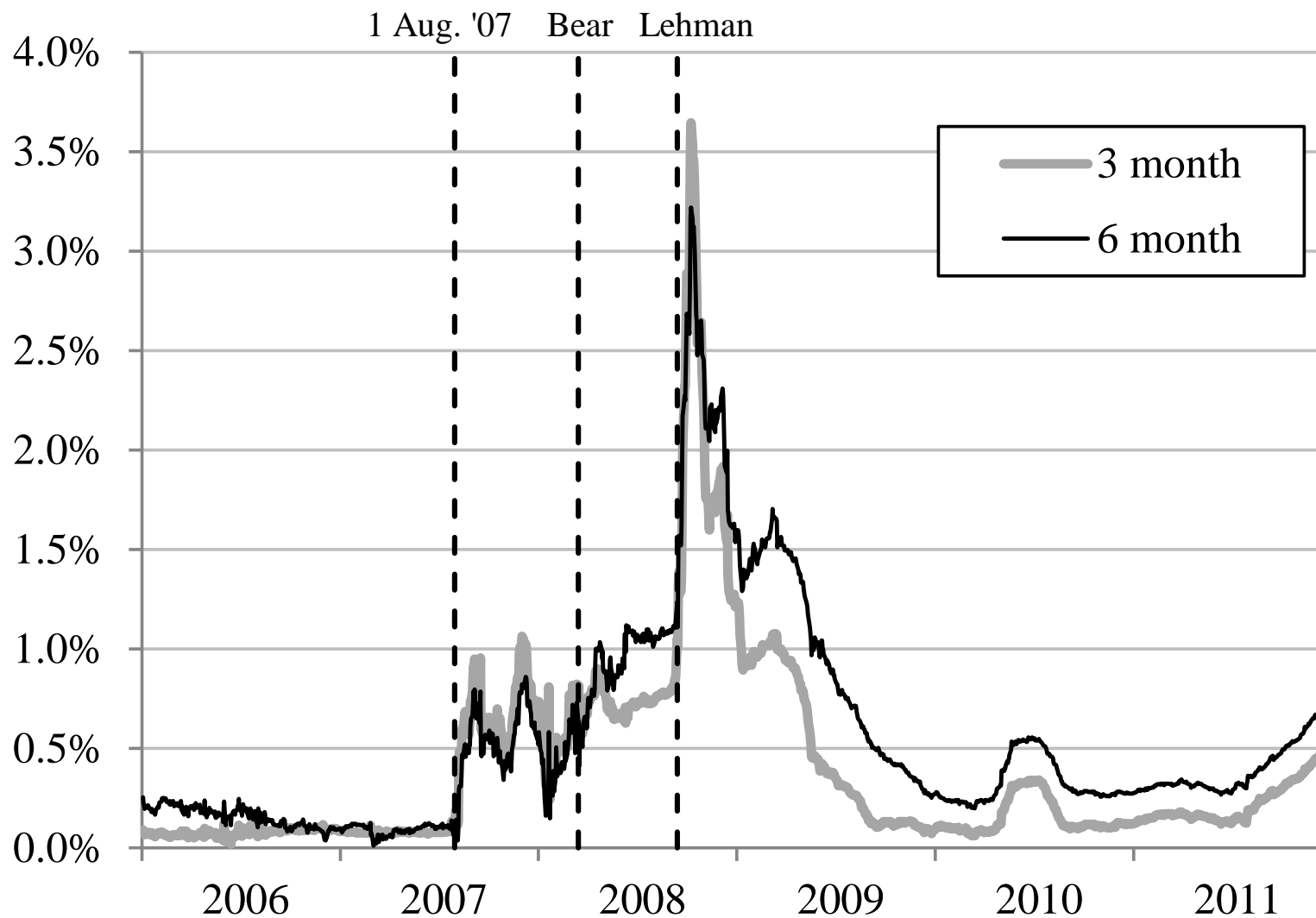
Rank	Issuer	May 2012 (USD billions)	Percent of MMF Assets	Rank	Issuer	May 2012 (USD billions)	Percent of MMF Assets
1	Barclays Bank	56.8	3.99%	26	HSBC	17.4	1.22%
2	Deutsche Bank AG	52.1	3.66%	27	DnB NOR Bank ASA	15.8	1.11%
3	Bank of Tokyo-Mitsubishi UFJ Ltd	45.4	3.19%	28	BNP Paribas	15.2	1.07%
4	Bank of Nova Scotia	42.9	3.01%	29	Skandinaviska Enskilda Banken AB	14.5	1.02%
5	Sumitomo Mitsui Banking Co	42.6	2.99%	30	Canadian Imperial Bank of Commerce	14.1	0.99%
6	National Australia Bank Ltd	41.4	2.91%	31	Australia & New Zealand Banking Group Ltd	13.7	0.96%
→ 7	JP Morgan	40.4	2.84%	32	Credit Agricole	13.4	0.94%
8	Credit Suisse	40.2	2.82%	33	Straight-A Funding LLC	11.6	0.81%
9	RBC	37.8	2.66%	34	FMS Wertmanagement	11.4	0.80%
10	Rabobank	37.6	2.65%	35	ABN Amro Bank	10.4	0.73%
11	Bank of America	37.1	2.60%	36	Norinchukin Bank	10.3	0.72%
12	Westpac Banking Co	28.9	2.03%	37	Lloyds TSB Bank PLC	9.6	0.68%
13	Citi	28.5	2.00%	38	Toyota Motor Credit	9.2	0.64%
14	ING Bank	25.8	1.81%	39	State Street	9.1	0.64%
15	Mizuho Corporate Bank Ltd	25.7	1.81%	40	Wells Fargo	8.9	0.62%
16	RBS	23.5	1.65%	41	Natixis	7.7	0.54%
17	General Electric Capital Corp.	22.9	1.61%	42	NRW Bank	6.6	0.46%
18	Bank of Montreal	22.6	1.59%	43	Morgan Stanley	6.3	0.44%
19	Svenska Handelsbanken	22.4	1.57%	44	Nestle	6.2	0.43%
20	Commonwealth Bank of Australia	21.6	1.52%	45	MetLife Insurance Company	5.5	0.39%
21	Toronto-Dominion Bank	20.9	1.47%	46	US Bank	5.2	0.36%
22	UBS AG	20.1	1.41%	47	Swedbank AB	4.9	0.34%
23	Societe Generale	19.6	1.38%	48	Coca-Cola Co	4.5	0.31%
24	Nordea Bank	19.4	1.36%	49	Branch Banking & Trust Co	4.3	0.30%
25	Goldman Sachs	17.5	1.23%	50	Oversea-Chinese Banking Co	4.1	0.29%

Source: Sam Hanson, David Scharfstein, and Adi Sunderam, "An Evaluation of Money Market Fund Reform Proposals" (May 2014)

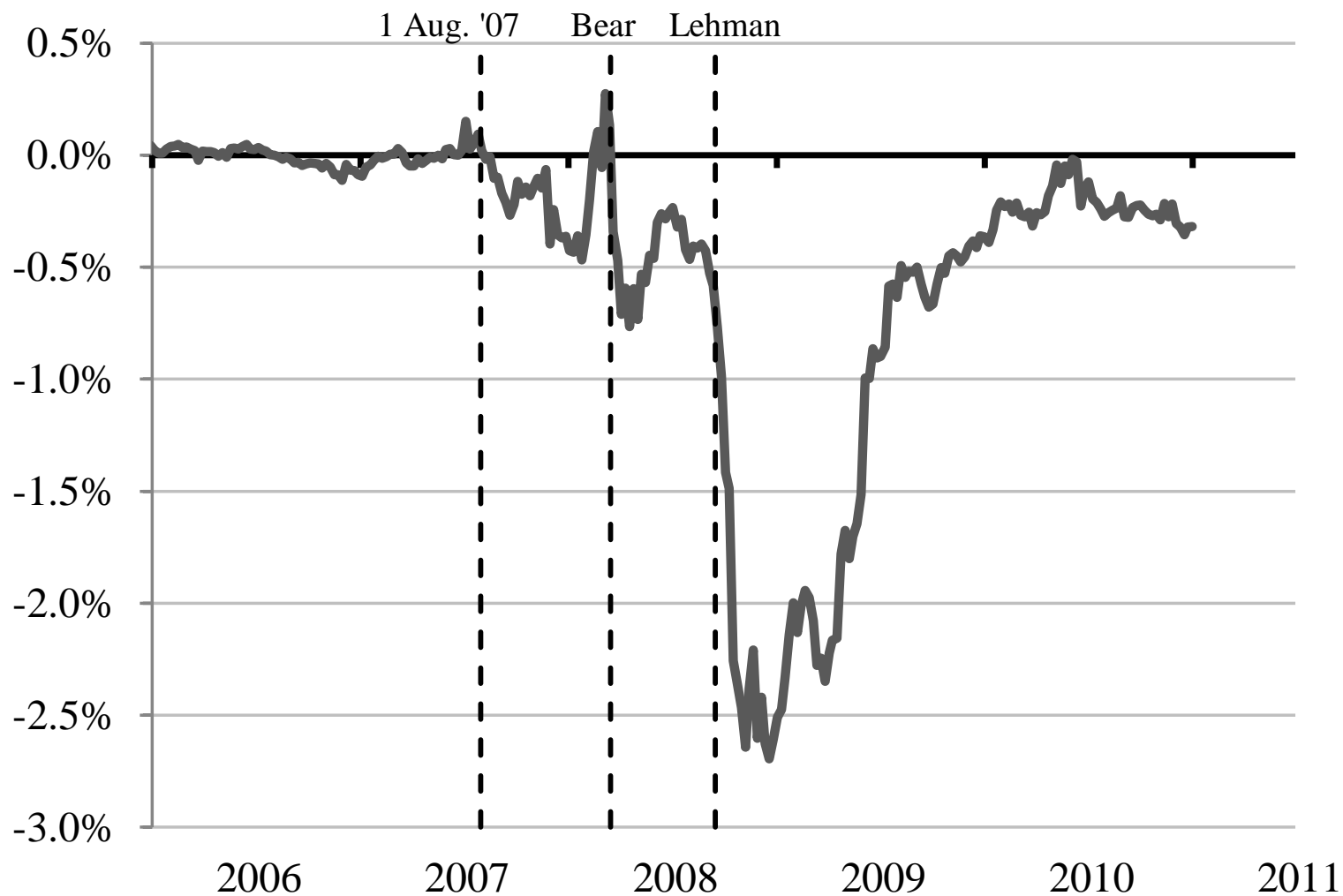
# The Run: Prime Institutional MMF Shares Outstanding



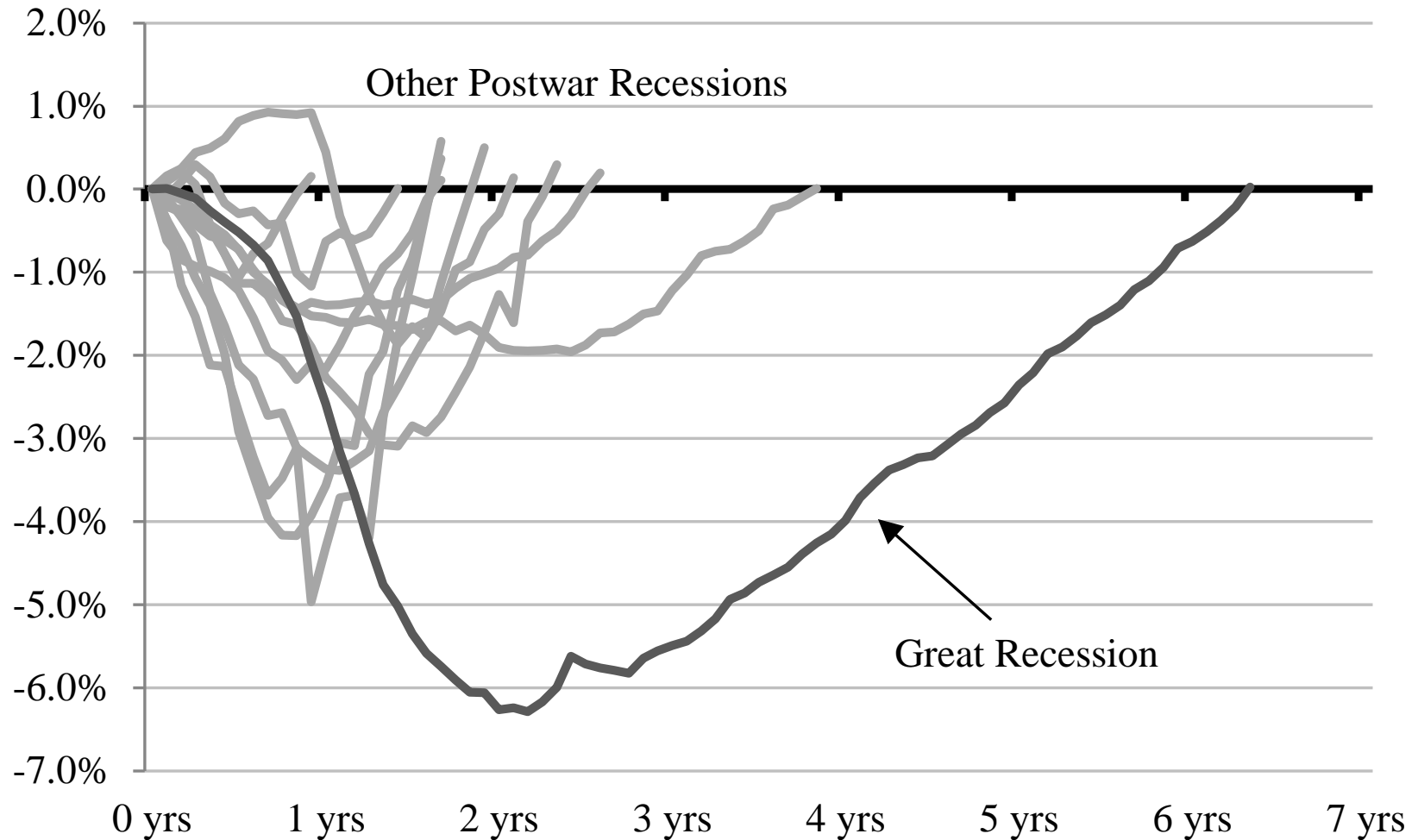
# Short-Term Funding Spreads



# CDS-Bond Basis (High Grade Corporate)

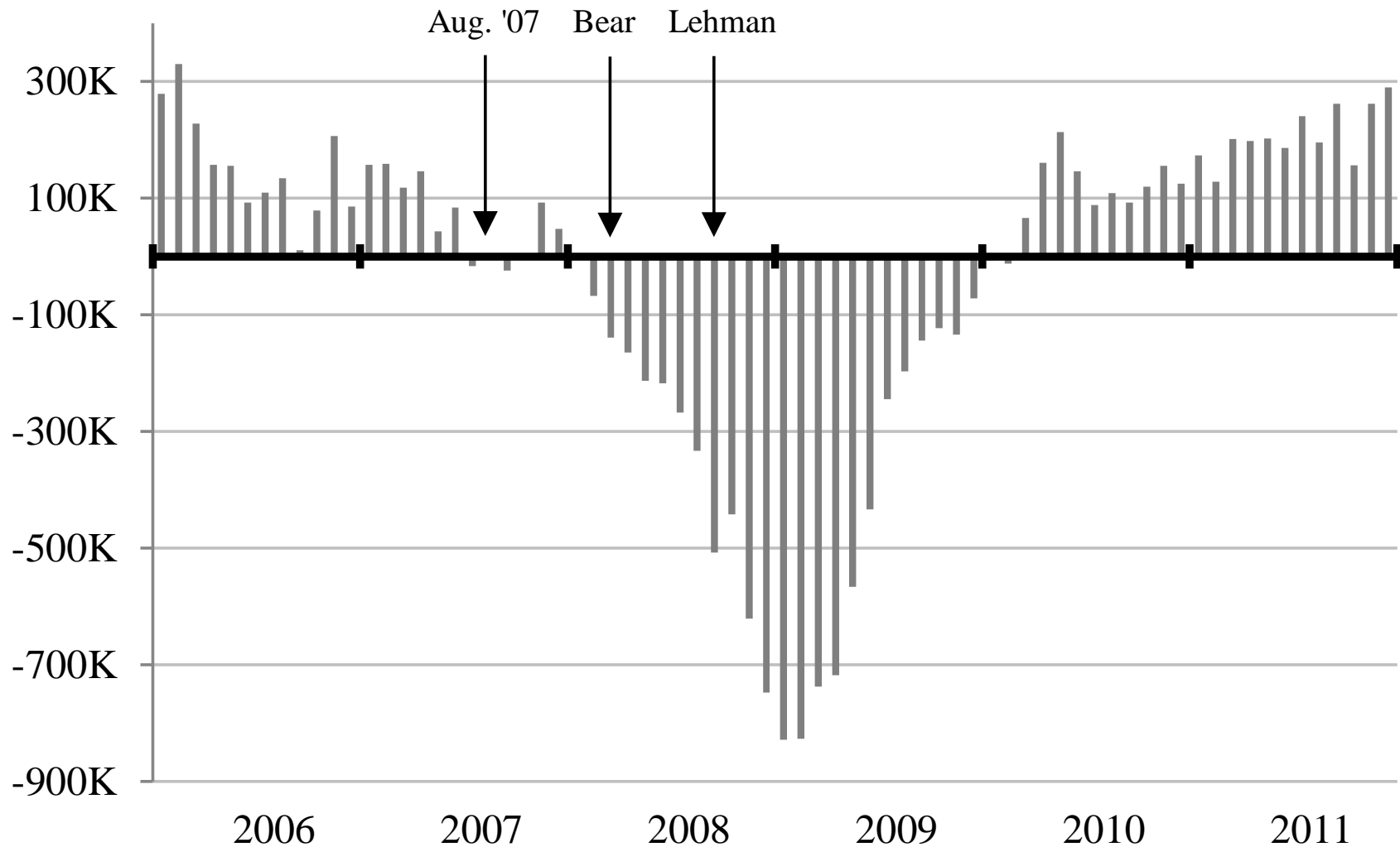


# Change in U.S. Employment in Postwar Recessions

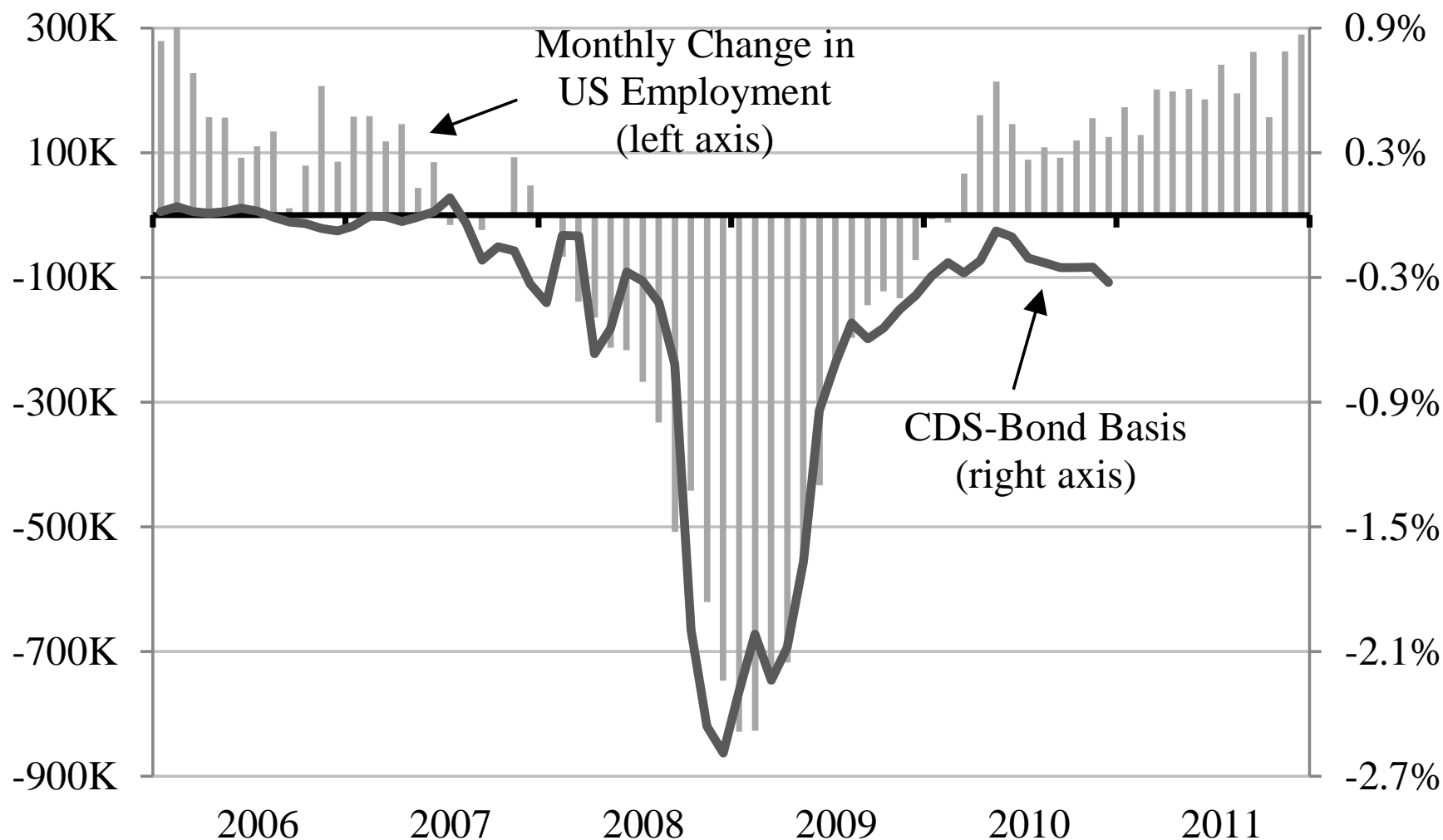




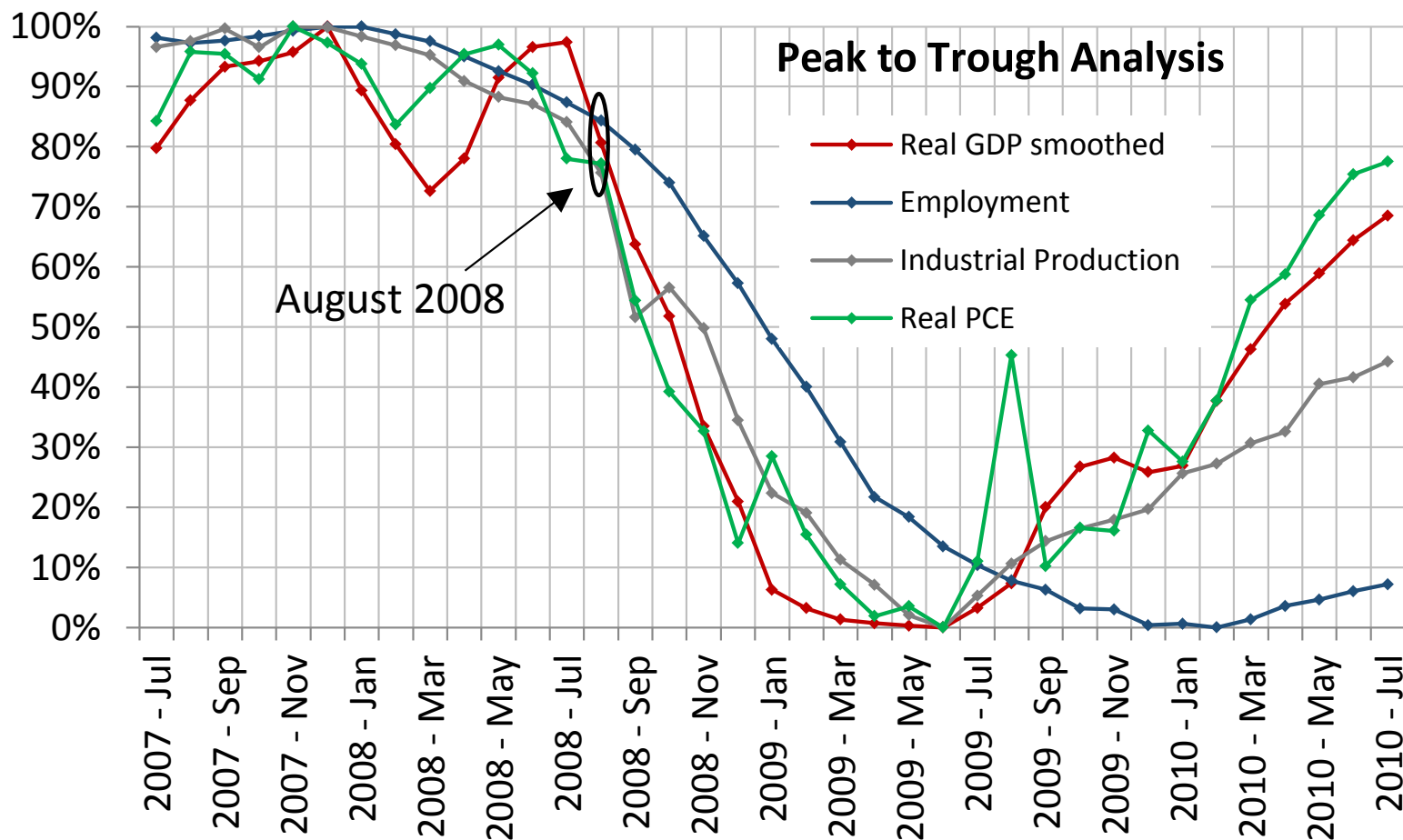
# Monthly Change in U.S. Employment



# CDS-Bond Basis and Job Losses

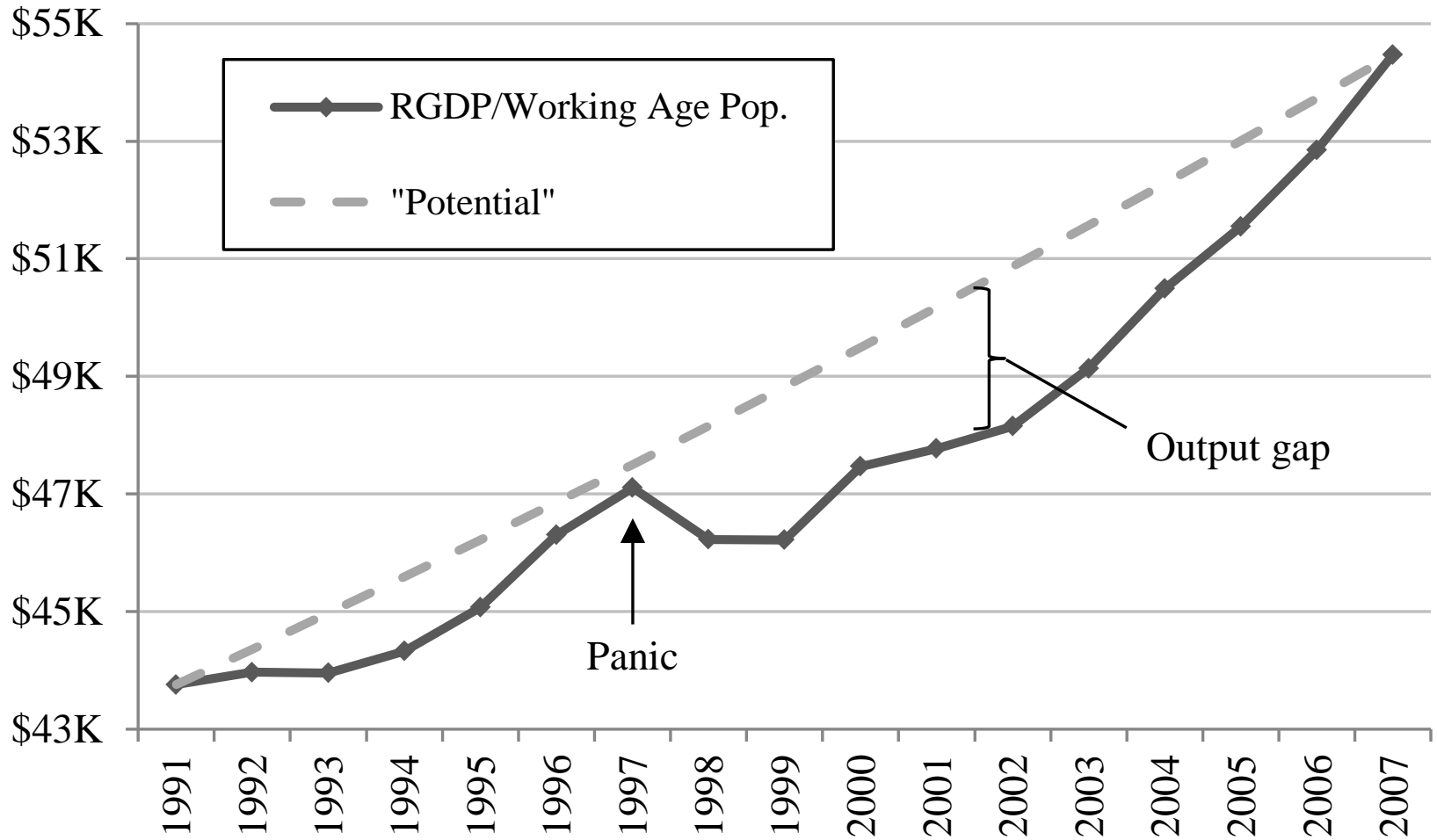


# Peak to Trough Analysis – Macro Indicators

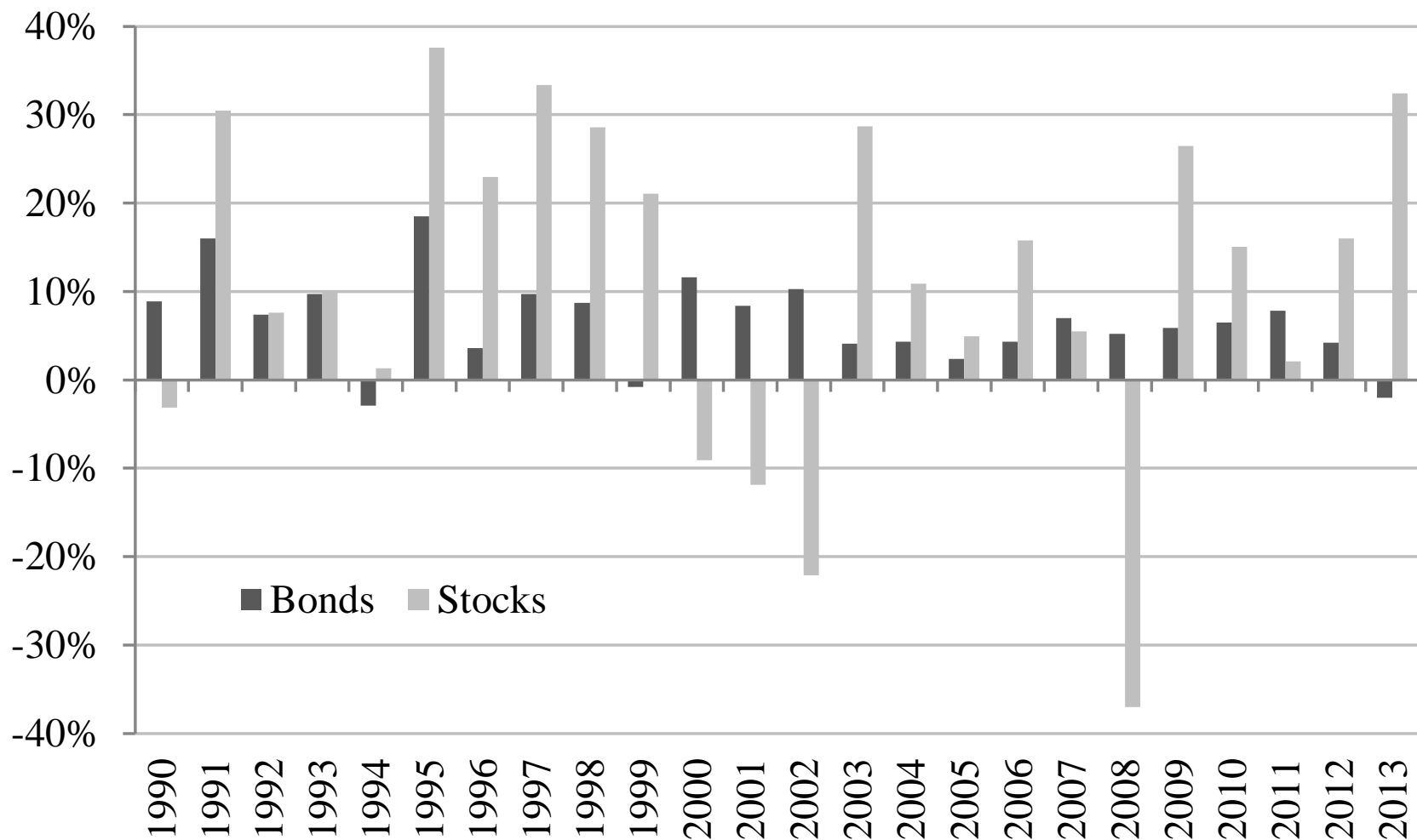


Note: "Real GDP Smoothed" is three-month centered moving average of monthly GDP series from Macroeconomic Advisers

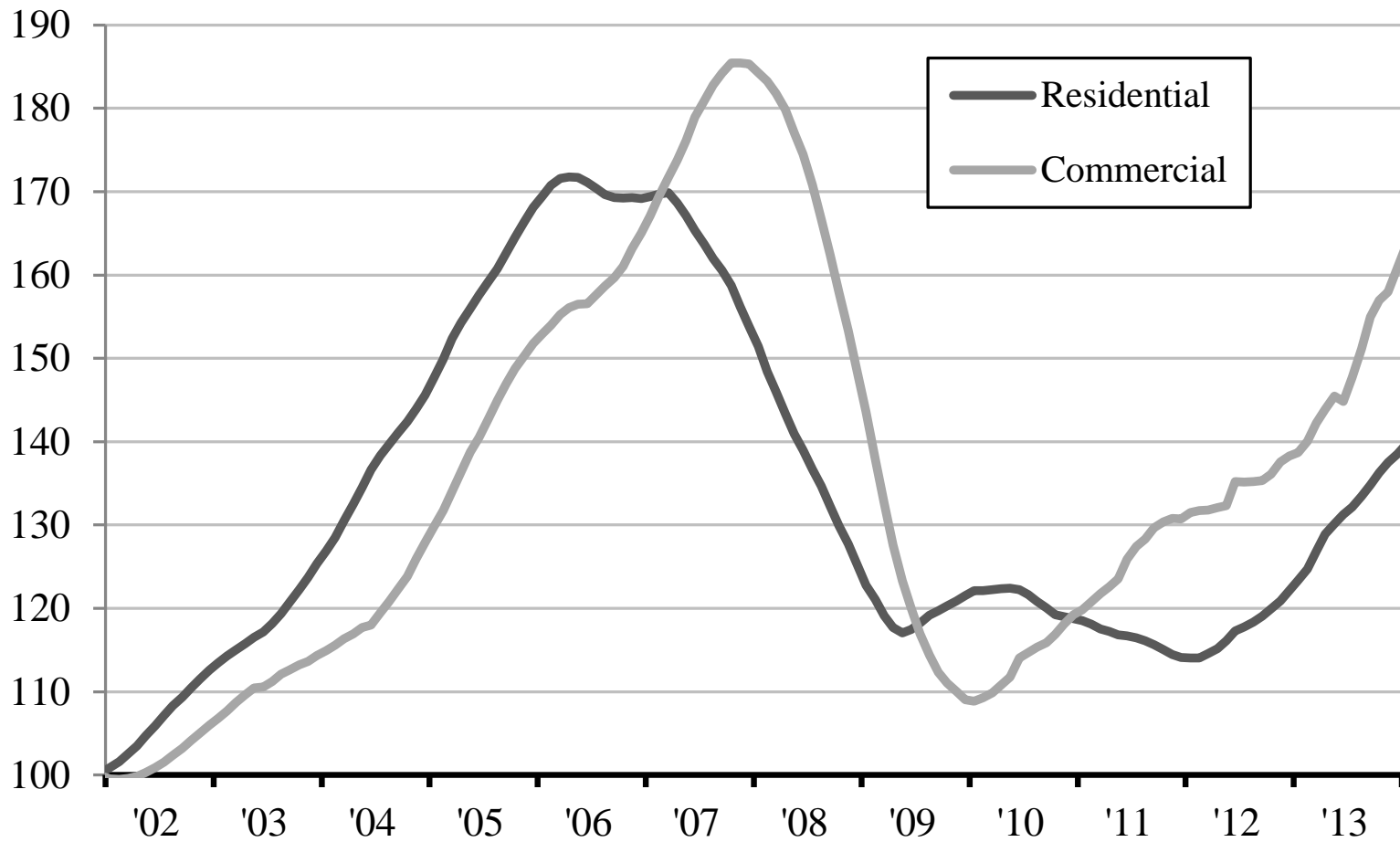
# Japan's Inferred Output Gap



# Bond vs. Stock Returns



# US Real Estate Prices



# Pershing Square Presentation, May 2007 (page 1 of 2)

## Leveraged Lending Mirrors Sub-Prime

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Sub-Prime	LBOs
▶ Higher LTVs	▶ Higher Debt / EBITDA
▶ I/O, Negative amortizing loans	▶ Covenant lite & PIK toggle notes
▶ Cash-out Re-fi	▶ Dividend Re-Cap
▶ “Liar” loans, limited documentation	▶ Credit for “pro forma” cost savings
▶ 0% down	▶ Lenders providing equity bridges
▶ Home Appreciation	▶ Purchase multiple expansion

## **Commercial Real Estate Mirrors Sub-Prime / LBO**

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- ▶ **Loan-to-Values of > 100%**
- ▶ **Negative debt service coverage**
- ▶ **Non-recourse financing on projected NOI in years 5 & 6**
- ▶ **Dividend Yield on U.S. Real Estate Index declining from high of ~8.0% in September 2002 to 2.8% today**
- ▶ **Credit market supported by CMBS and CDO bid**



## England: 1708

AND it is hereby further enacted by the Authority aforesaid That during the Continuance of the said Corporation of the Governor and Company of the Bank of England it shall not be lawful for any Body Politick or Corporate whatsoever erected or to be erected (other than the said Governor and Company of the Bank of England) or for any other Persons whatsoever united or to be united in Covenants or Partnership exceeding the Number of Six Persons in that Part of Great Britain called England to borrow owe or take up any Sum or Sums of Money on their Bills or Notes payable at Demand or at any less Time than Six Months from the borrowing thereof

## New York State: 1804\*

*I. Be it enacted by the people of the state of New-York, represented in senate and assembly, That it shall not be lawful for any person, association of persons, or body corporate, from and after the first day of August next, to keep any office of deposit for the purpose of discounting promissory notes, or for carrying on any kind of banking business or operations, which incorporated banks are authorised by law to carry on, or issue any bills or promissory notes, as private bankers, unless thereunto specially authorised by law:*

\*as amended 1818

## United States: 1865\*

**SEC. 19. That every person, firm, association other than national bank associations, and every corporation, State bank, or State banking association, shall pay a tax of ten per centum on the amount of their own notes used for circulation and paid out by them.**

# Today

(a) After the expiration of one year after June 16, 1933, it shall be unlawful—

(2) For any person, firm, corporation, association, business trust, or other similar organization to engage, to any extent whatever with others than his or its officers, agents or employees, in the business of receiving deposits subject to check or to repayment upon presentation of a pass book, certificate of deposit, or other evidence of debt, or upon request of the depositor, unless such person, firm, corporation, association, business trust, or other similar organization (A) shall be incorporated under, and authorized to engage in such business by, the laws of the United States or of any State, Territory, or District, and subjected, by the laws of the United States, or of the State, Territory, or District wherein located, to examination and regulation, or (B)

# “Deposit”

The term “deposit” means—

(1) the unpaid balance of money or its equivalent received or held by a bank or savings association in the usual course of business and for which it has given or is obligated to give credit, either conditionally or unconditionally, to a commercial, checking, savings, time, or thrift account, or which is evidenced by its certificate of deposit, thrift certificate, investment certificate, certificate of indebtedness, or other similar name, or a check or draft drawn against a deposit account and certified by the bank or savings association, or a letter of credit or a traveler’s check on which the bank or savings association is primarily liable: *Provided*, That, without limiting the generality of the term “money or its equivalent”, any such account or instrument must be regarded as evidencing the receipt of the equivalent of money when credited or issued in exchange for checks or drafts or for a promissory note upon which the person obtaining any such credit or instrument is primarily or secondarily liable, or for a charge against a deposit account, or in settlement of checks, drafts, or other instruments forwarded to such bank or savings association for collection.

## Department of Justice: 1979

It is patent from the quoted statutory language that a depositor is only a creditor of his depository (a debtor in the case of an authorized overdraft, which indebtedness he must liquidate by a "deposit"). It is equally patent that one who invests in a money market fund is an owner pro tanto of the fund

Inasmuch as investors in a money market fund are, in our view, owners of the fund and not mere depositors, we perceive no violation of section 21(a), Glass-Steagall Act, supra, in