Discussion of Marvin Goodfriend's

"I Pull No Punches Essay"

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Three Contributions

- Introduce a taxomony of policy
- Provide a diagnosis of the crisis of 2007–2009
- Articulate principles of Fed-Treasury interactions

My Discussion

- Think taxonomy useful
- Find diagnosis may well be right
- Set out alternative principles
- Provide data for improving academic research

Diagnosis

- Marvin suggests Fed/Treasury converted a somewhat worse than garden variety recession into a full-blown Great Recession
- Speculative, of course
- Just as speculative as "We will not have an economy on Monday if Congress does not pass this bill."
- Need cross-country evidence

Theory Behind Principles

- Interest on reserves good idea
  - Gets us closer to Friedman Rule
- Credit allocation policy dangerous
- Fed getting into fiscal policy undermines independence

Theory Behind Principles

- Interest on reserves good idea
  - Gets us closer to Friedman Rule
- Credit allocation policy dangerous
- Fed getting into fiscal policy undermines independence
  - Is Fed's independence gone for good?

Principles

- We solemnly promise not to get into credit allocation

Principles

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  - Except when the Great Depression monster lurks under our beds

Principles

- We solemnly promise not to get into credit allocation
  - Except when the Great Depression monster lurks under our beds
- Message from Fed to Treasury: Take these assets away
- We will all cooperate
- We will not inflate too much
- Everyone gets interest on reserves
- We will all cooperate

The Logic Behind My Principles

- No commitment technology: Bailouts will happen
- Government bailouts create externalities
- Private agents will not internalize these externalities
- Ex-ante regulation should focus on reducing costs of bailout externalities

Translating Logic into Principles for Policy

- Ask when governments will bail out
- Ask how anticipated bailouts will affect private discussions
- Tailor policies to alter private decisions
- Lots of short-term debt makes bailouts necessary
- Costly bankruptcy makes bailouts necessary

Principles for Policy

- Impose limits on short-term debt
- Force long-term/uninsured debt to be convertible to equity
- Make money market mutual funds truly into mutual funds

What Academics Need to Think About

- How important is access to financial markets for firms' investment decisions?

- What business are banks in, anyway?

Importance of Financial Market Access

Key Ingredients in Many Financial Friction Models

- Typical firm needs external funds to finance investment
- Agency costs induce wedge between internal and external funds
- Binding collateral constraints
- Fluctuations in wedge/constraint affect investment in a big way

Does Typical Firm Use External Funds to Finance Investment?

- Use data from Flow of Funds for all nonfinancial corporations
- Available Funds (AF) = Revenues – Wages – Materials
  – Interest payments – Taxes
- In Flow of Funds, AF = Internal funds + Dividends
  Alternatively, AF = Retained earnings + Dividends
  + Depreciation
- In Flow of Funds use Gross Investment for Capital expenditure

Does Typical Firm Use External Funds to Finance Investment?

- Available Funds – Dividends + Net new debt issue

  + Net new equity issue

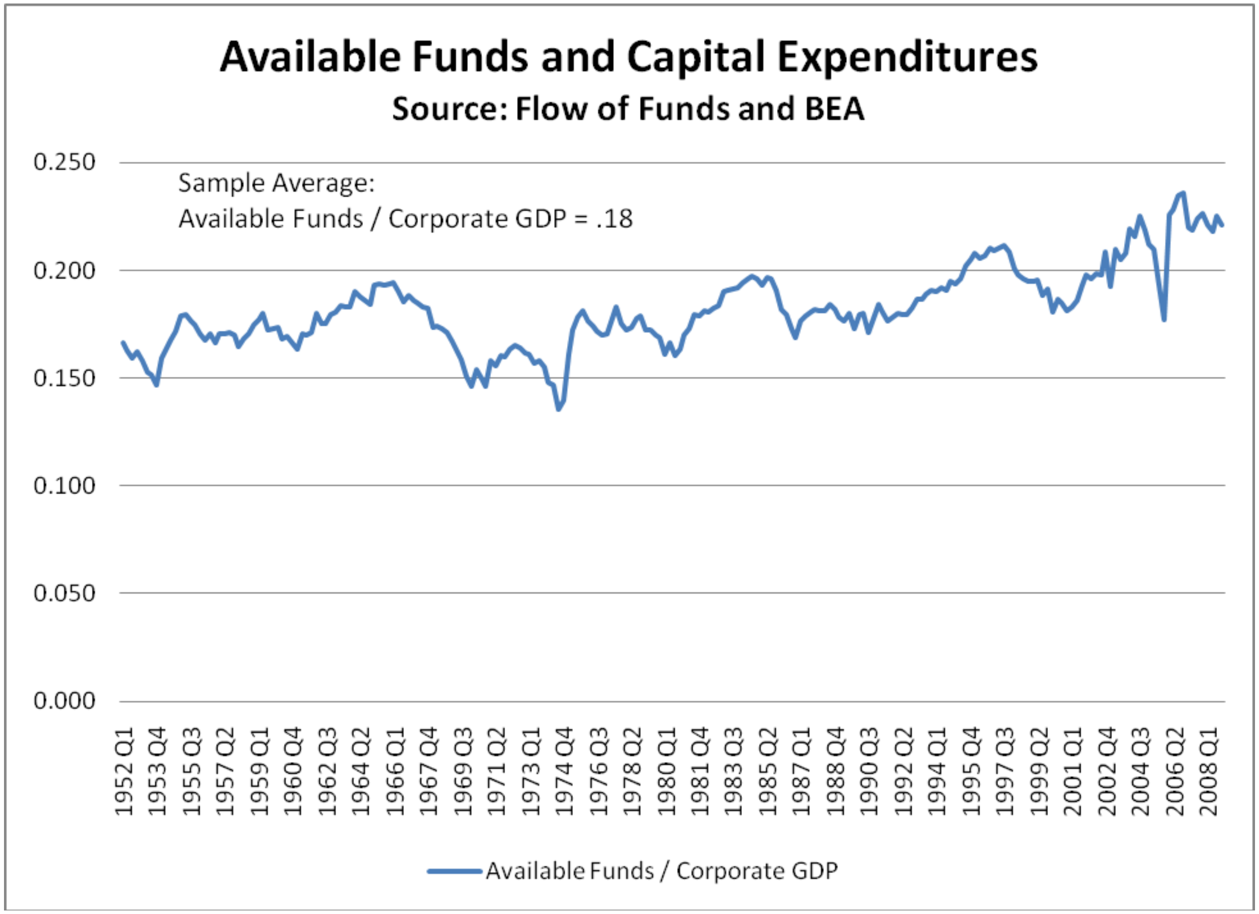
  = Capital expenditure

- Suppose Net new debt issue = 0

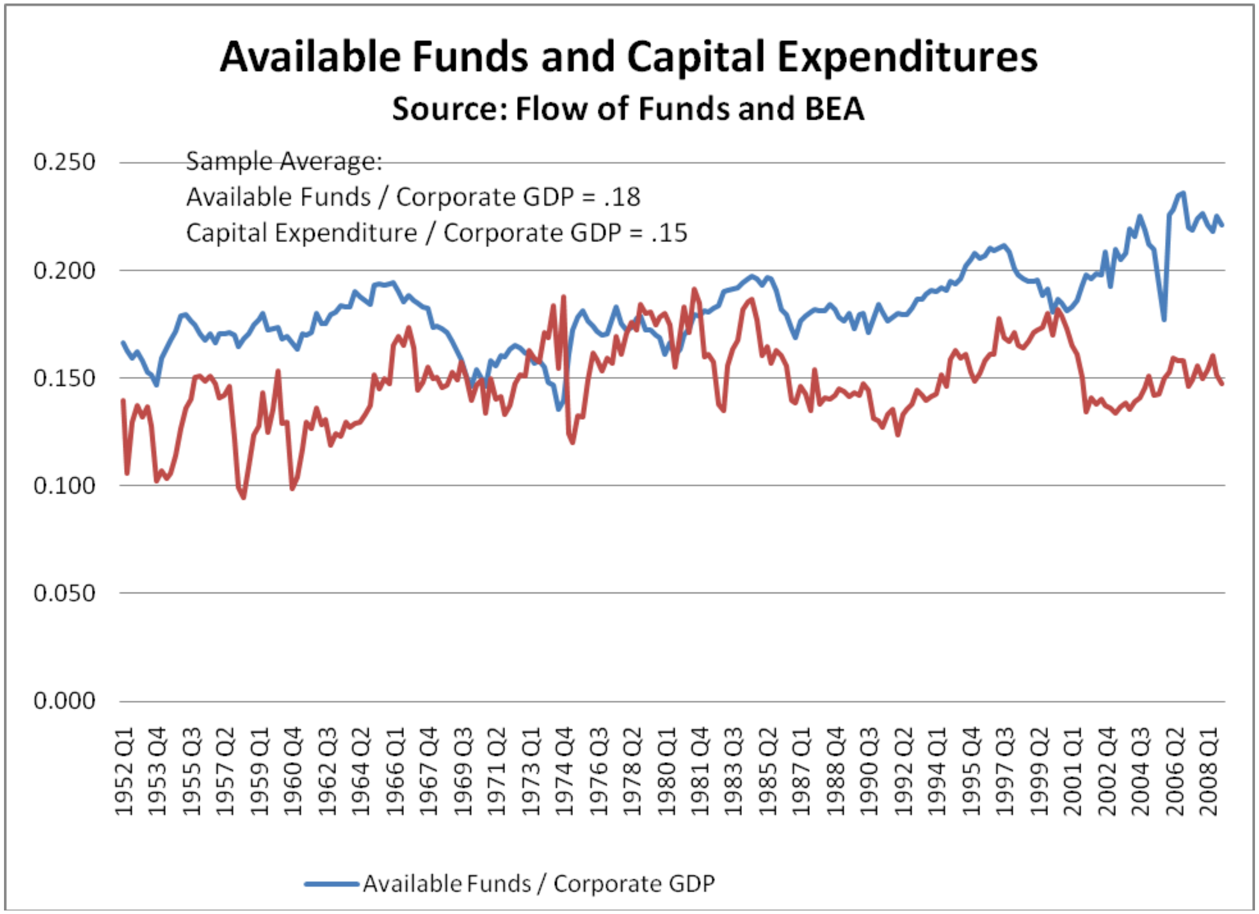
  Net new equity issue = 0

- That is, firms lose access to financial markets

- Can they finance all investment internally?



Data for U.S. Nonfinancial Corporations



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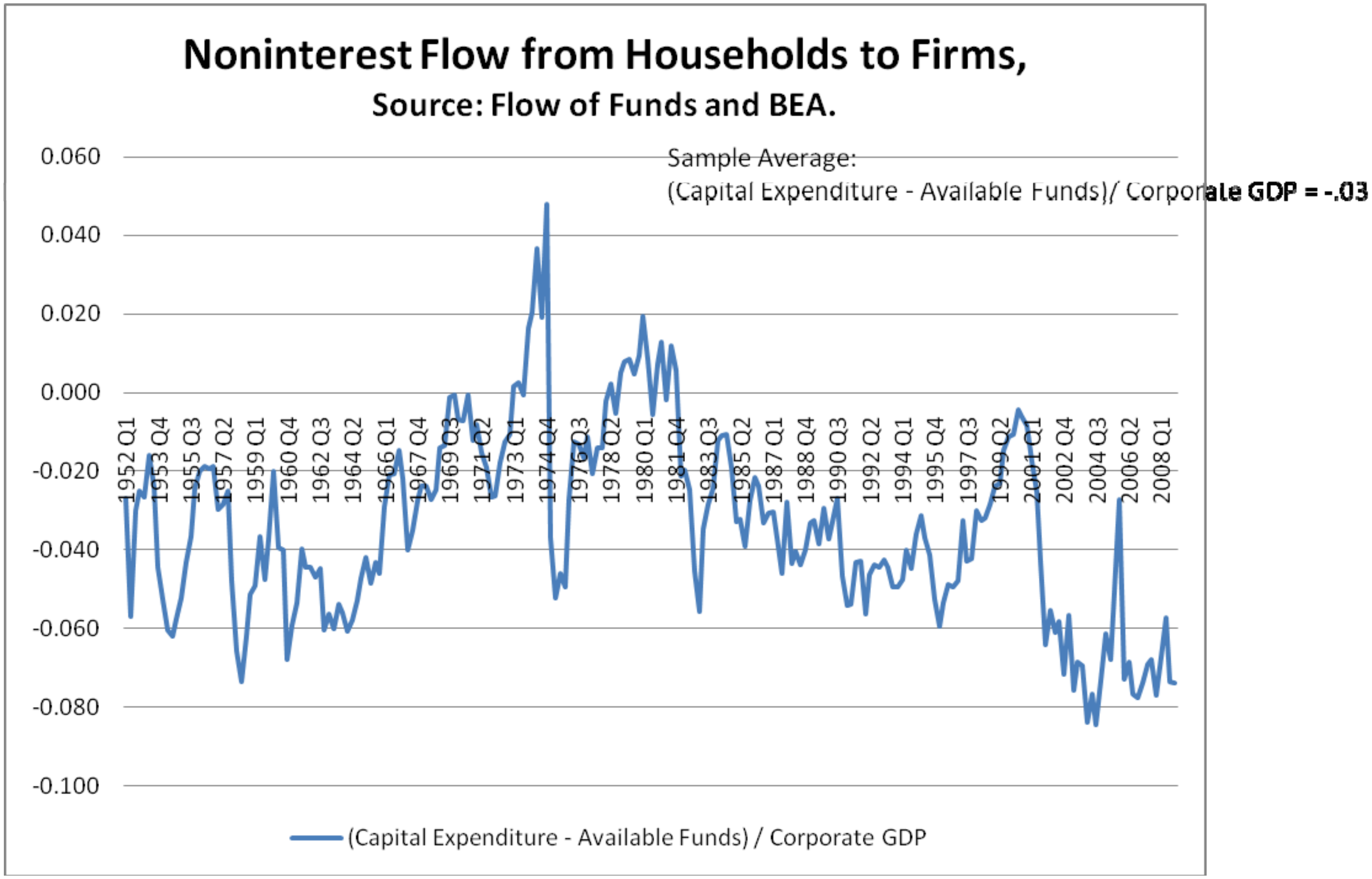
Noninterest Flow from Households to Firms,
Source: Flow of Funds and BEA.
Sample Average:
(Capital Expenditure - Available Funds)/ Corporate GDP = -.03
0.060
0.040
0.020
0.000
-0.020
-0.040
-0.060
-0.080
-0.100
1952 Q1
1953 Q4
1955 Q3
1957 Q2
1959 Q1
1960 Q4
1962 Q3
1964 Q2
1966 Q1
1967 Q4
1969 Q3
1971 Q2
1973 Q1
1974 Q4
1976 Q3
1978 Q2
1980 Q1
1981 Q4
1983 Q3
1985 Q2
1987 Q1
1988 Q4
1990 Q3
1992 Q2
1994 Q1
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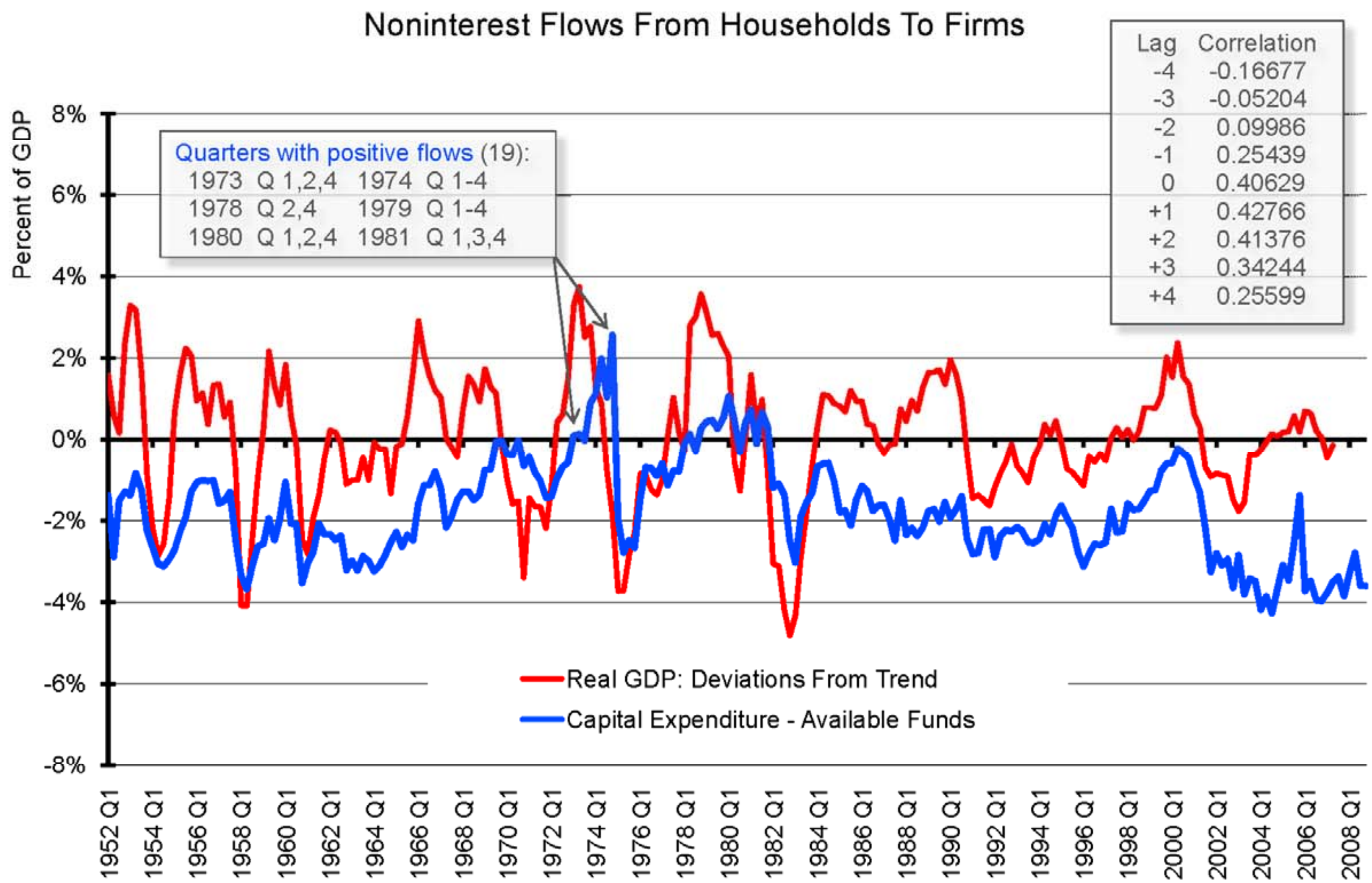
1997 Q3
1999 Q2
2001 Q1
2002 Q4
2004 Q3
2006 Q2
2008 Q1
(Capital Expenditure - Available Funds) / Corporate GDP



Source: Federal Reserve Board, http://www.federalreserve.gov/releases/z1/

Does Typical Firm Use External Funds to Finance Investment?

- No, for aggregate of U.S. corporations

- Financial markets may play a big role in reallocating funds from cash-rich, project-poor firms to cash-poor, project-rich firms

- Use disaggregated data to analyze reallocation

Does Typical Firm Use External Funds to Finance Investment?

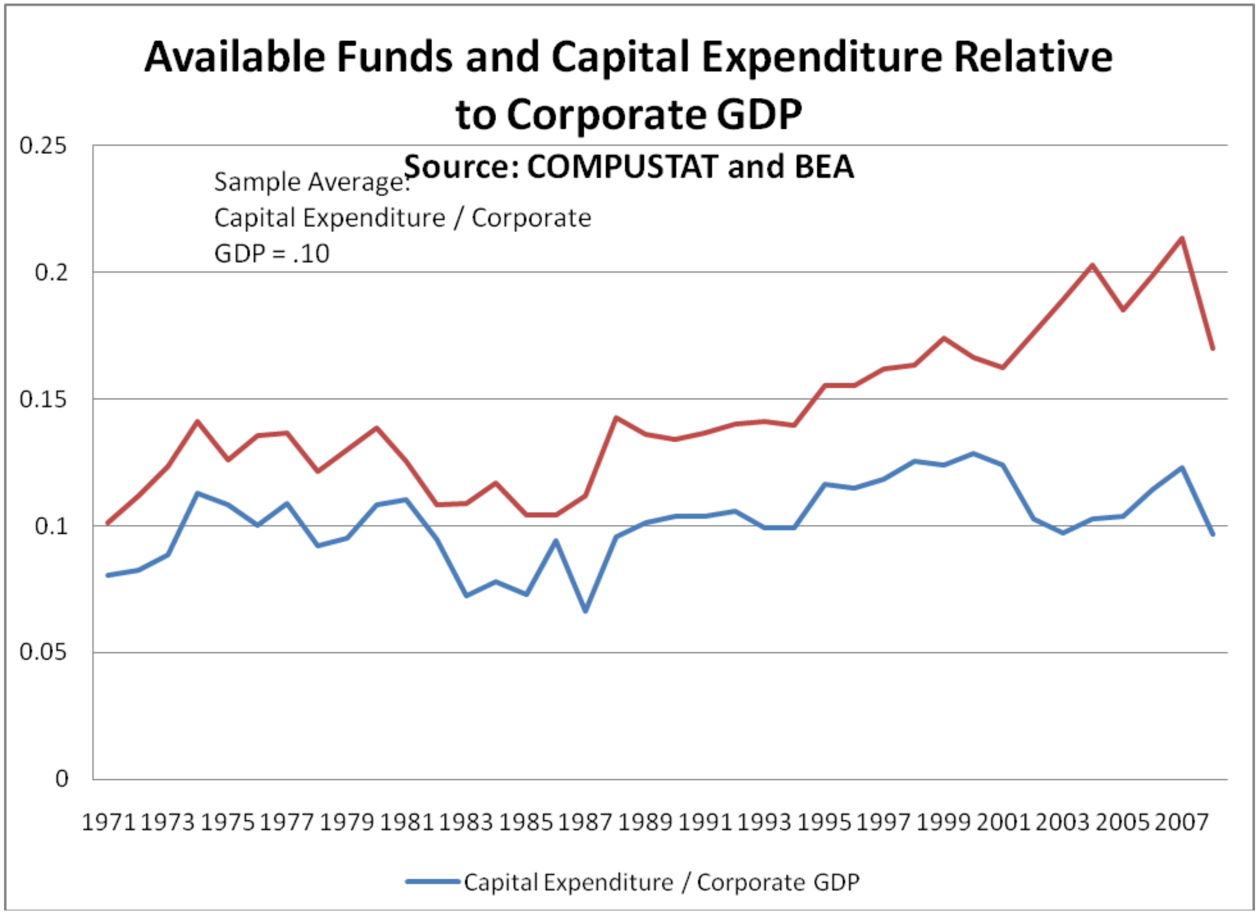
- Use data from Compustat
- Compute available funds for each firm, each time period
- AF_{it} = Available funds for firm i in period t
- I_{it} = Gross investment by firm i in period t
- How much would I_{it} fall if no firm can invest more than AF_{it}

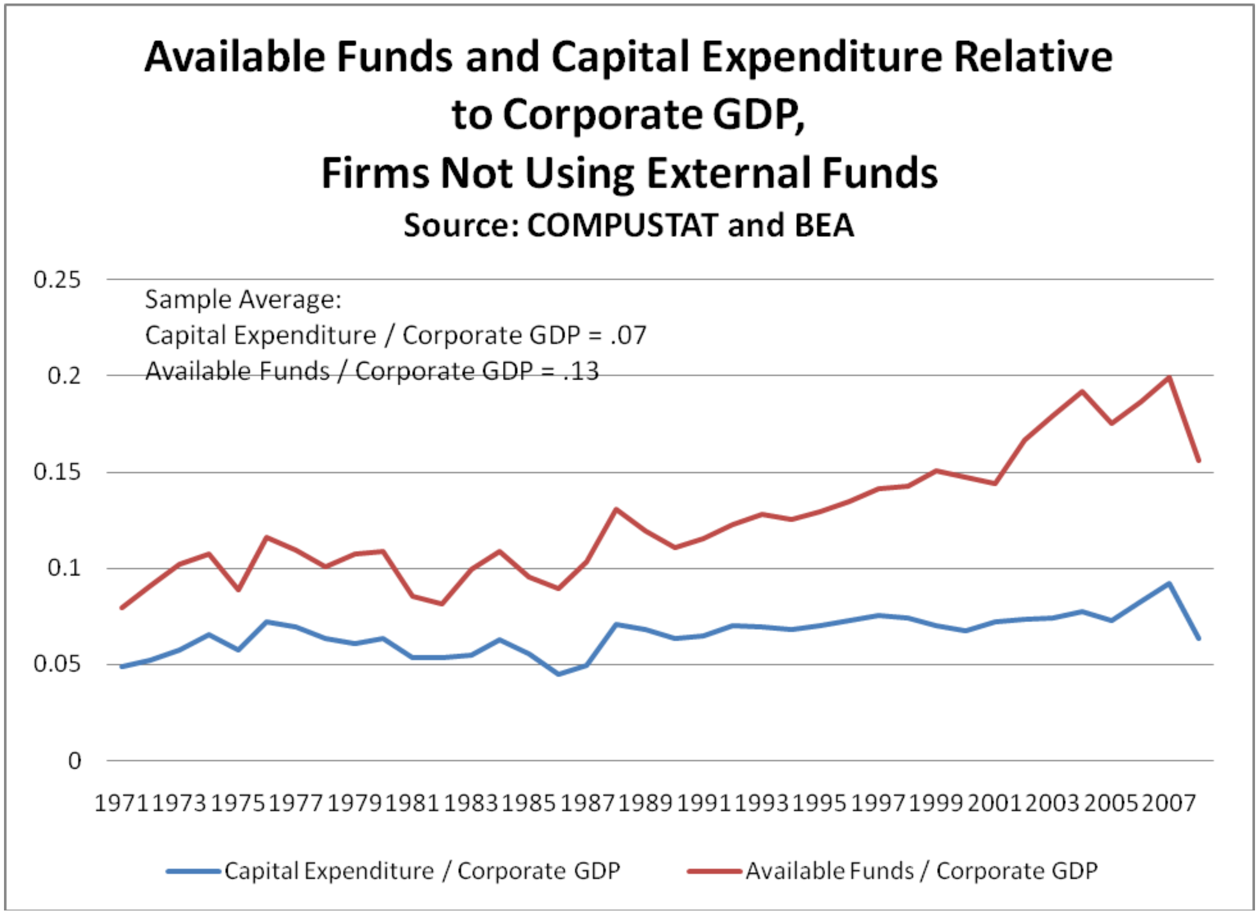
Does Typical Firm Use External Funds to Finance Investment?

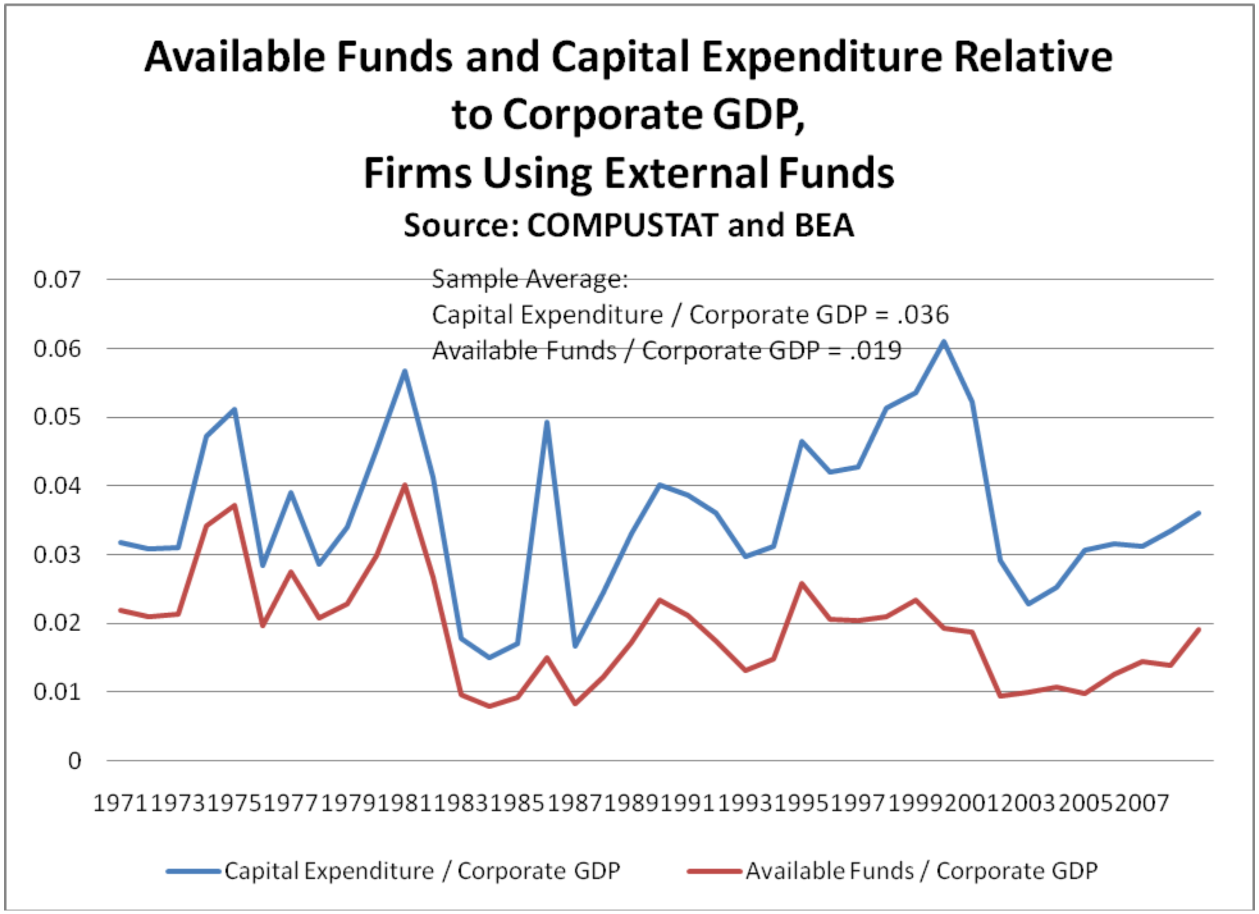
- Use of external funds to finance investment

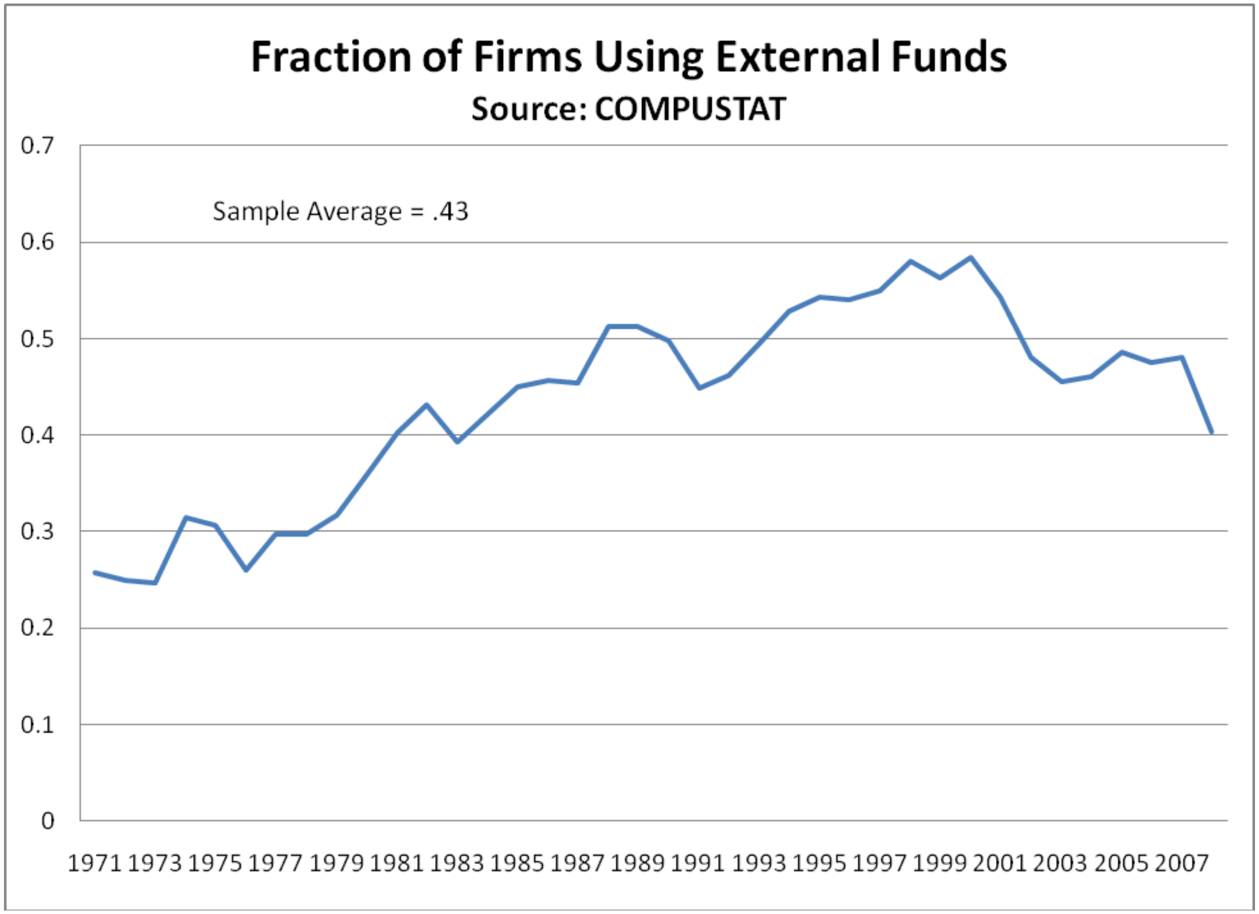
$$\frac{1}{T}\sum_{t=1}^{T}\frac{\sum_{i}\left((I_{it}-AF_{it})\mid I_{it}>AF_{it}\right)}{\sum_{i}I_{it}}$$

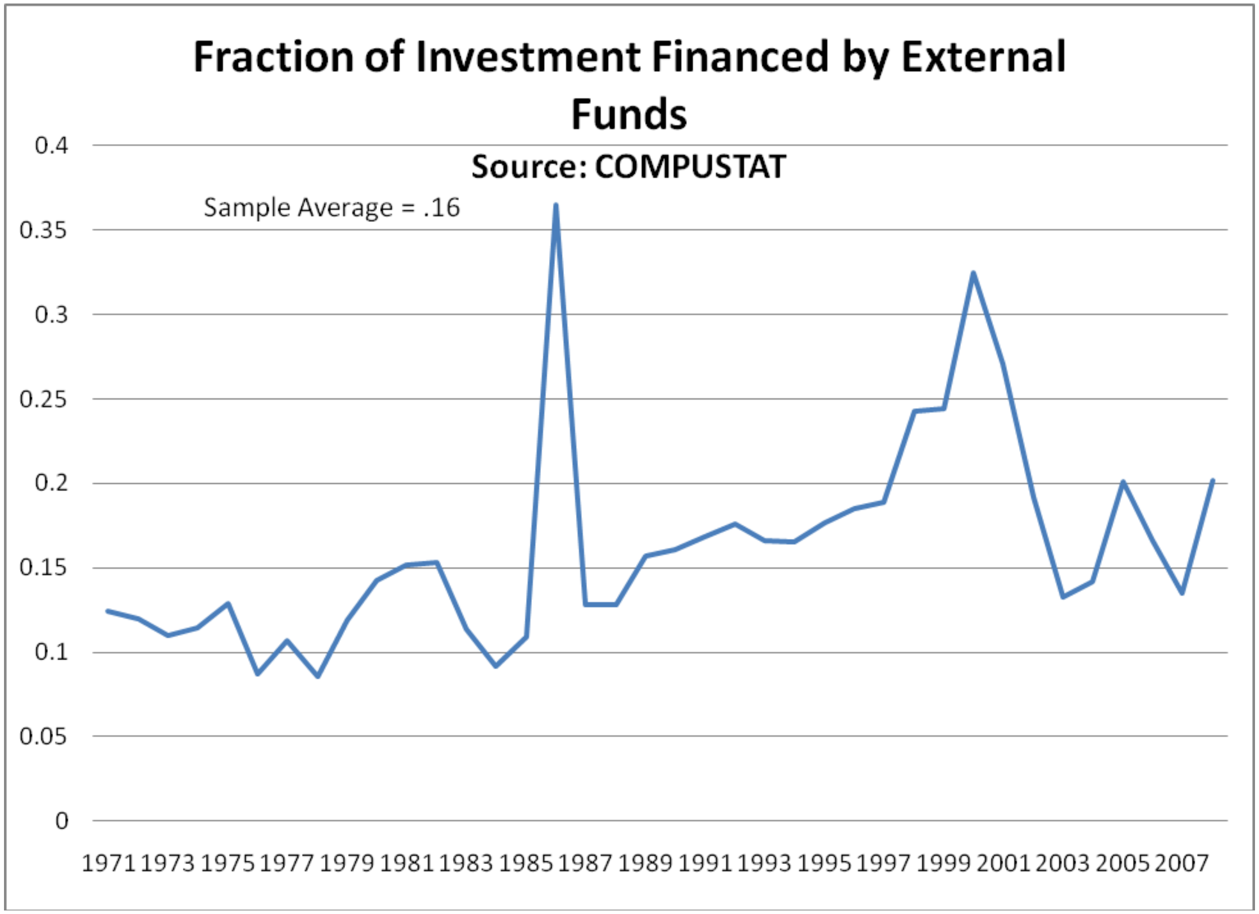
- In data, financial market constraints = 16% of investment financed by external funds
- Interpretation: If firms had <u>no</u> access to financial markets, investment would have fallen by 16%
- This is exceptionally extreme exercise


Available Funds and Capital Expenditure Relative to Corporate GDP
Source: COMPUSTAT and BEA
Sample Average: Capital Expenditure / Corporate GDP = .10
0.25
0.2
0.15
0.1
0.05
0
1971 1973 1975 1977 1979 1981 1983 1985 1987 1989 1991 1993 1995 1997 1999 2001 2003 2005 2007
Capital Expenditure / Corporate GDP


Available Funds and Capital Expenditure Relative to Corporate GDP,
Firms Not Using External Funds
Source: COMPUSTAT and BEA
Sample Average:
Capital Expenditure / Corporate GDP = .07
Available Funds / Corporate GDP = .13
0.25
0.2
0.15
0.1
0.05
0
1971 1973 1975 1977 1979 1981 1983 1985 1987 1989 1991 1993 1995 1997 1999 2001 2003 2005 2007
Capital Expenditure / Corporate GDP
Available Funds / Corporate GDP


Available Funds and Capital Expenditure Relative to Corporate GDP,
Firms Using External Funds
Source: COMPUSTAT and BEA
Sample Average:
Capital Expenditure / Corporate GDP = .036
Available Funds / Corporate GDP = .019
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
1971 1973 1975 1977 1979 1981 1983 1985 1987 1989 1991 1993 1995 1997 1999 2001 2003 2005 2007
Capital Expenditure / Corporate GDP
Available Funds / Corporate GDP


Fraction of Firms Using External Funds
Source: COMPUSTAT
Sample Average = .43
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1971 1973 1975 1977 1979 1981 1983 1985 1987 1989 1991 1993 1995 1997 1999 2001 2003 2005 2007



Fraction of Investment Financed by External Funds
Source: COMPUSTAT
Sample Average = .16
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
1971 1973 1975 1977 1979 1981 1983 1985 1987 1989 1991 1993 1995 1997 1999 2001 2003 2005 2007

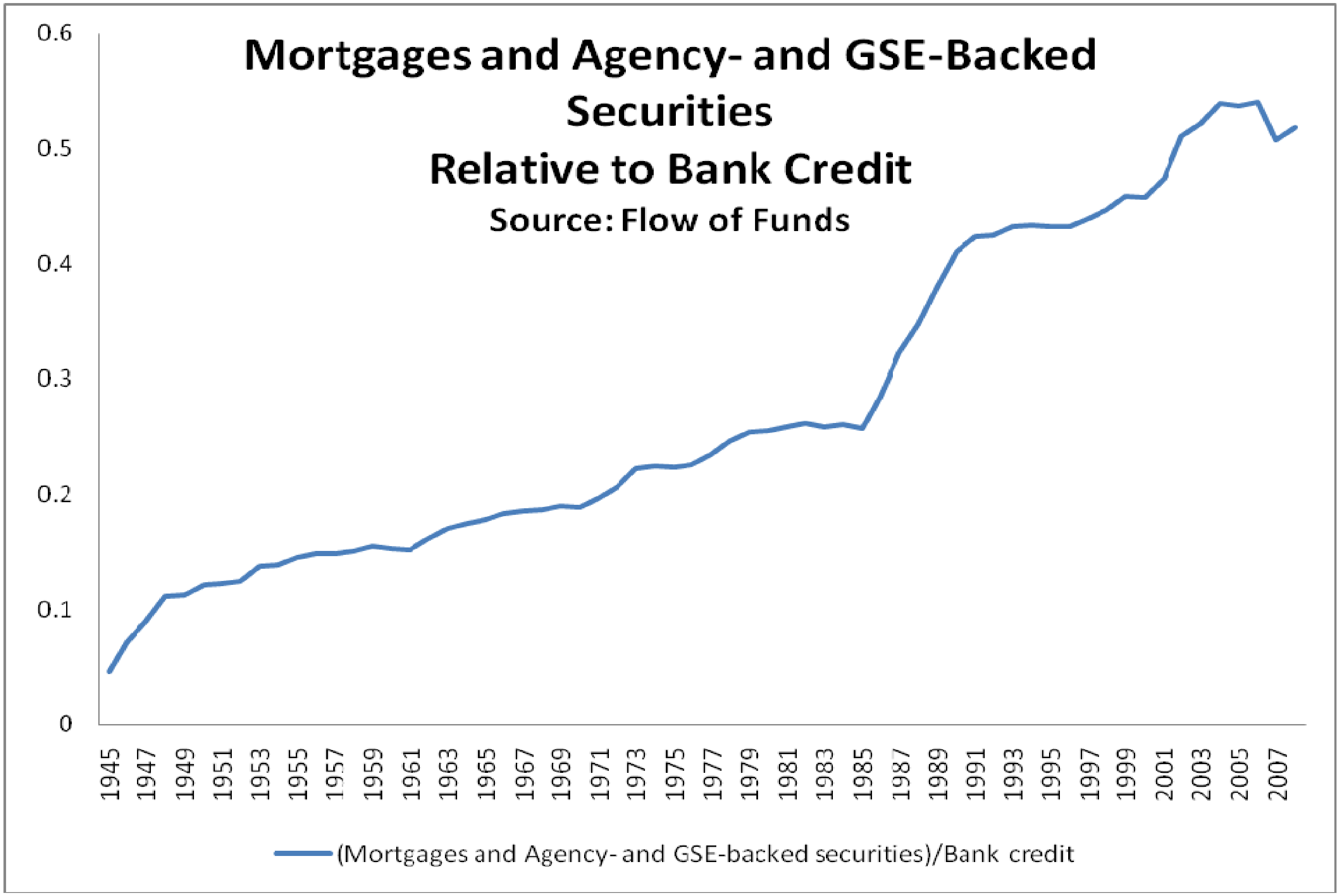
Are Banks Special?

Are Banks Special?

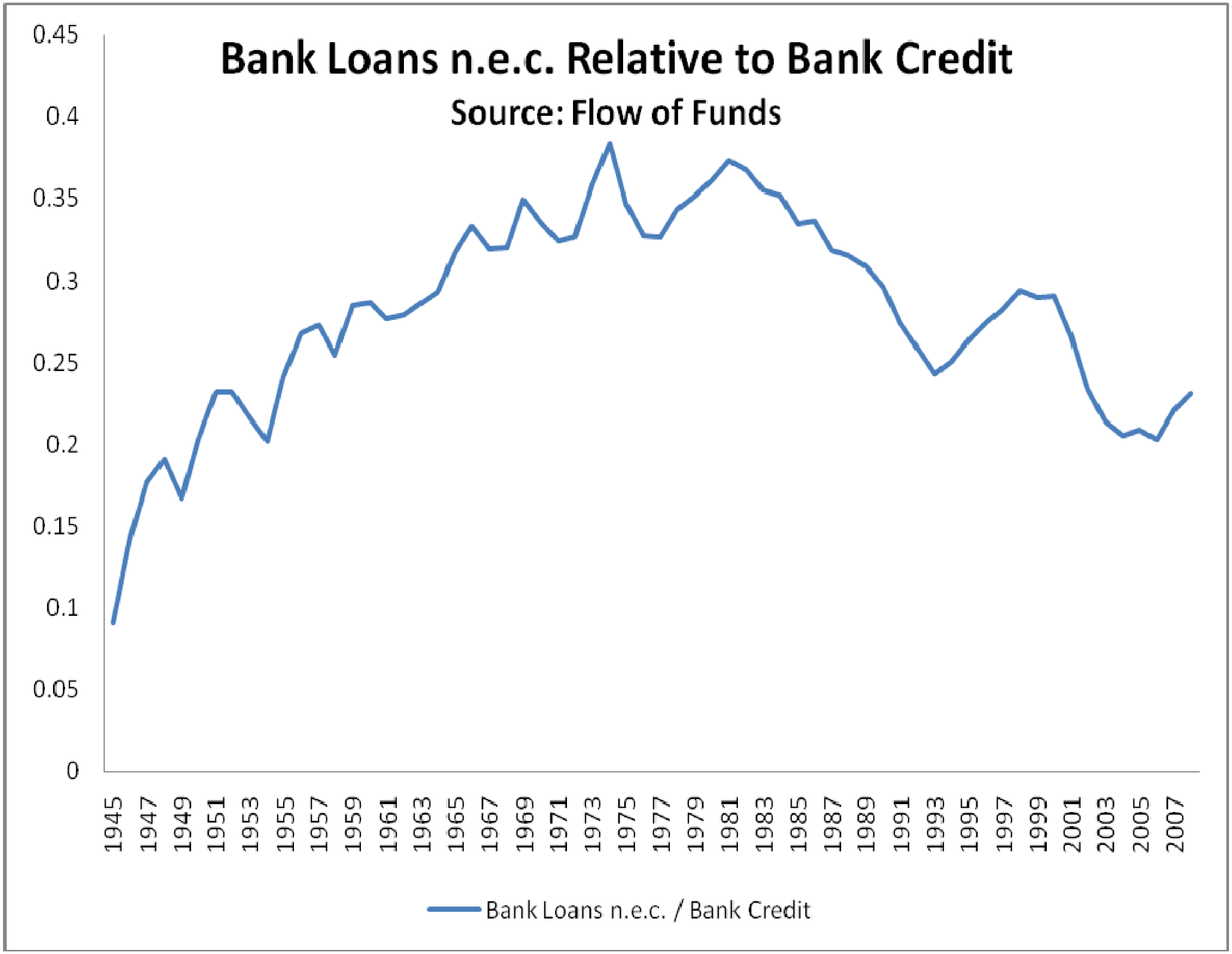
- Banks have lots of short-term debt
- More so than pension funds, mutual funds, insurance companies
- Diamond-Dybvig: Technology differences for short- and long-run projects, liquidity shocks
- Popular story: Incentive problems in managing financial assets, can change risk easily. Need short-term debt to discipline managers

Are Banks Special?

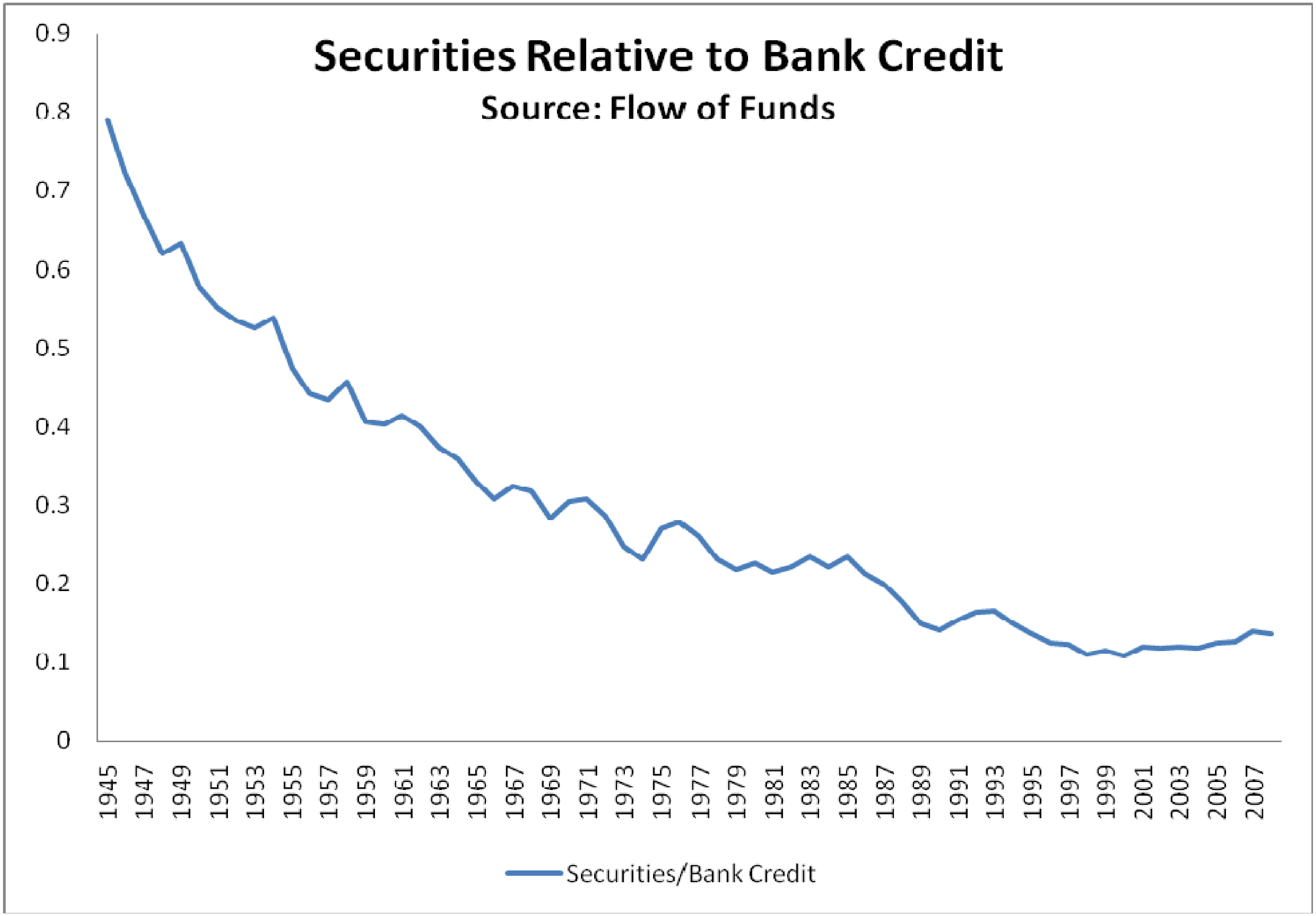
- Yes, in terms of liabilities
- Not so much in terms of assets



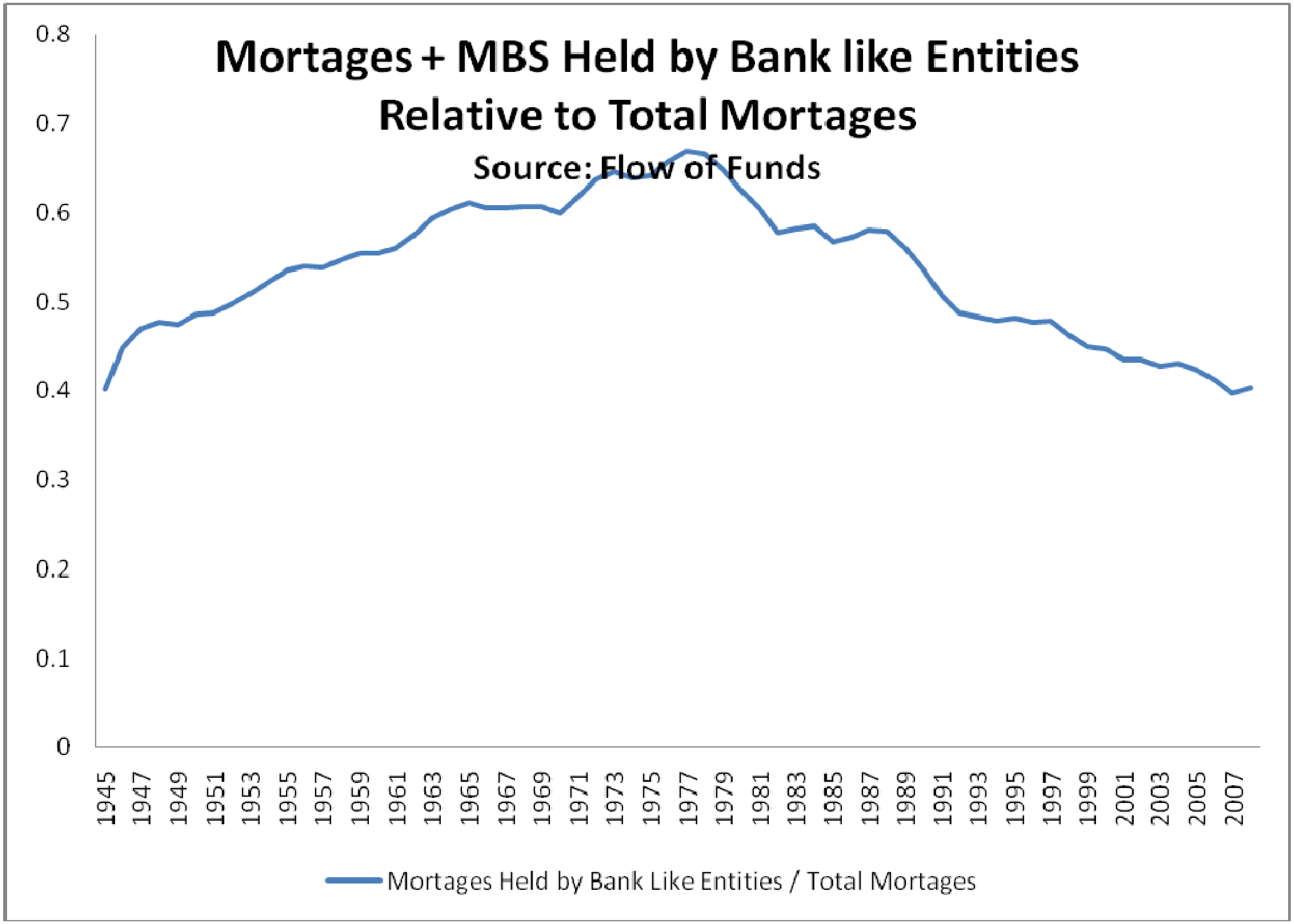
Banks hold lots of mortgages



Loans smaller fraction of bank assets



Large decline in publicly traded securities



Banks not only holders of mortgages