Liquidity: Lessons from the Current Turbulence

John Eatwell

Centre for Financial Analysis and Policy

Judge Business School, Cambridge

Centre for Financial Analysis & Policy

CAMBRIDGE Judge Business School

Cambridge Finance

Objectives

1. To clarify the nature of liquidity.
2. To examine the relationship between financial innovation and the expansion of liquidity.
3. To explain the nature of the current loss of liquidity.
4. To consider the implications for the international economy

Bubbles

- An asset or set of assets that becomes the focus of speculation
- A continuous expansion of purchasing power – driven by financial innovation

Financial Innovation

- Technical developments: in data analysis capability, in statistical theory and in the theory of finance have transformed risk management, pricing, the range of financial products, and the structure of financial institutions.

- Financial regulation and crisis management have not kept pace with these changes, indeed in many ways they have made things worse.

Financial Stability Forum

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"A striking aspect of the turmoil has been the extent of risk management weaknesses and failings at regulated and sophisticated firms"

Risk

- Credit risk
- Systemic risk – an externality
- Liquidity risk

Liquidity as adjective

- Liquid markets
- Liquidity premia

What makes markets liquid?

- The liquidity of a market depends on there being agents with heterogeneous goals.
  - Homogeneity enhanced by:
    - common domains, conglomeration
    - common goals, professionalisation, crt etc.
    - common methods, common models
    - common information, transparency
    - common regulation
- Strategic behaviour and homogeneity

Liquidity as noun

- Excess liquidity.
- Markets awash with liquidity.

- Liquidity is “the ability of agents to command purchasing power by acquiring liquid liabilities, an ability dependent on the willingness of others to provide purchasing power against the issuance of liabilities”.

The expansion of liquidity

- First stage: supply of money by the banks.
- Second stage: development of bond markets (liquidity preference).
- Third stage: securitisation, special vehicles and repos.

Repos

“…if the institutional framework is stable, a tight monetary policy will be effective and the interest rate will rise to whatever extent is necessary in order to restrict the demand for financing to the essentially inelastic supply. However, the rise in interest rates feeds back upon the institutional framework. With rising interest rates the incentives to find new ways to finance operations and new substitutes for cash assets increase”.

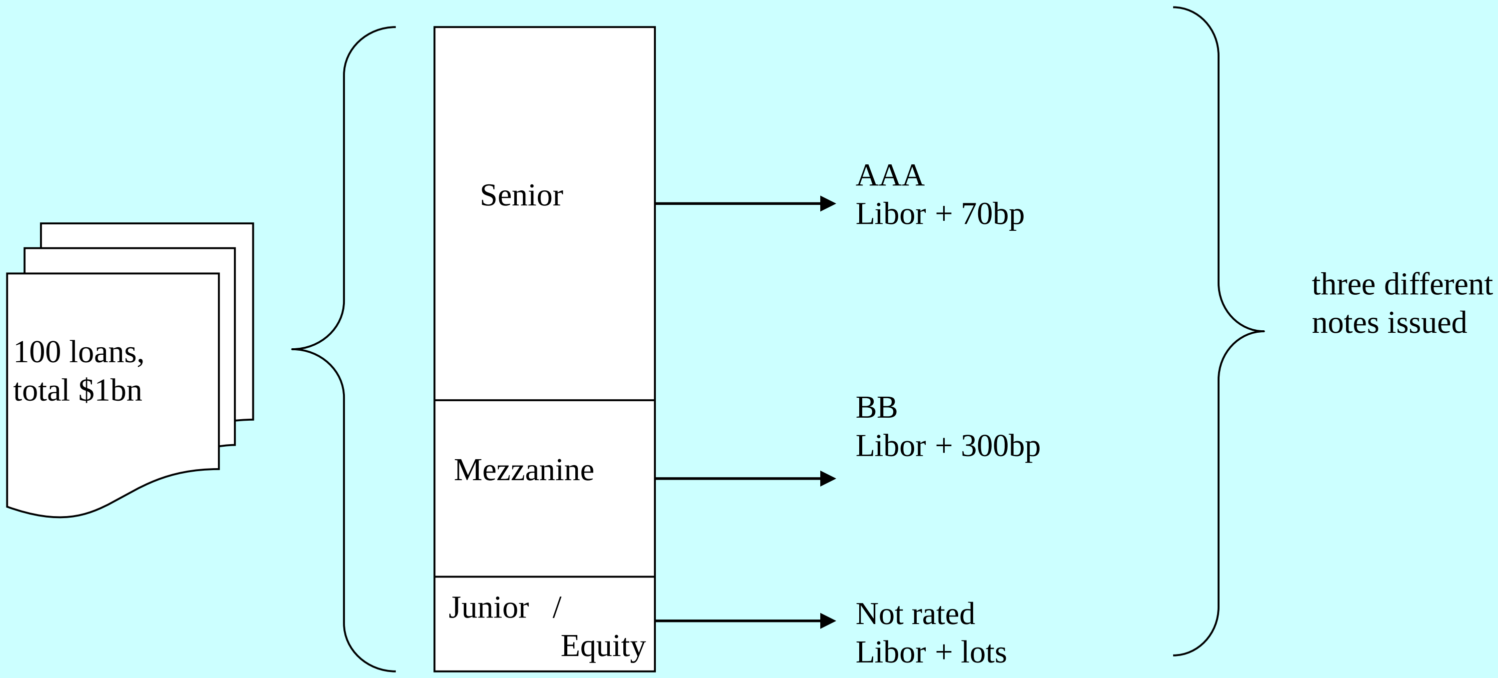
Repos

Suppose initial repo contracts are for two weeks. Then after receiving liquid funds the issuer can buy a further asset, using that asset as collateral in a second repo to raise the funds to conclude (or roll over) the first contract. The original asset may then be used to raise funds to settle (or roll over) the second contract, and so on. The average length of a repo contract is now one week and the velocity of circulation has doubled.

Originate, rate and relocate

- Banks originate
- Ratings agencies rate
  - Rate credit risks, not liquidity risk
  - Rating single bonds v. rating CDOs
- Markets relocate
  - SPVs and SIVs

CDOs



100 loans,
total $1bn
Senior
Mezzanine
Junior /
Equity
AAA
Libor + 70bp
BB
Libor + 300bp
Not rated
Libor + lots
three different
notes issued

Disintermediation – the supply side

- First growth of corporate bond market
- Then having established a huge investor base of non-bank credit investors, assets traditionally funded on bank balance sheets, corporate loans, mortgages, credit card debt, were moved into separate companies and financed by the same non-bank liquidity providers
- Packaging into CDOs
- Banks highly motivated by low returns on core lending – banks could enjoy all the benefits of their franchise without balance sheet costs

The demand side

- ABS and CDO markets have created a huge non-bank fixed income investor base with expectations of a growing supply and (very) attractive returns
- more attractive than bank debt.

Regulatory incentives

- In the run up to the credit crunch banks appeared to have an increasingly healthy ratio of regulatory capital to risk.
- Regulators applauded the growth of securitisation as spreading risk

- In sum: banks were incentivised by regulators to earn fees for originating risk and for relocating the debt elsewhere.

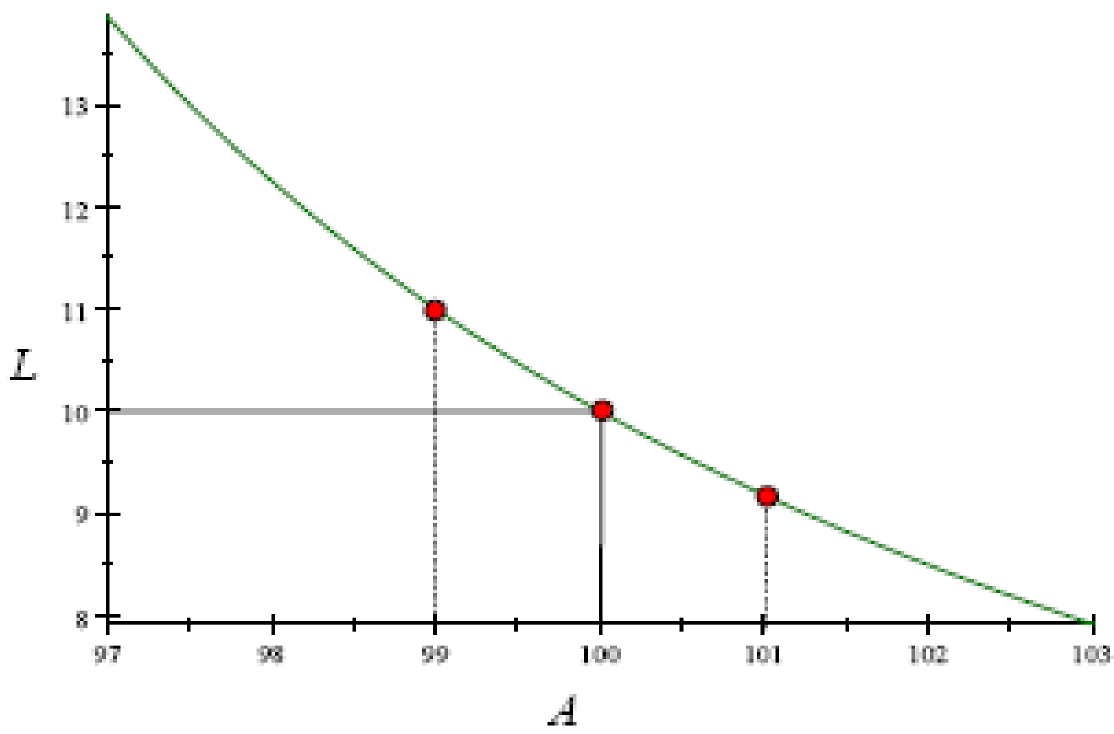
Transparency

- To give investors confidence banks needed packages to be rated by an independent and reputable third party – a credit rating agency.
- In the spirit of transparency (and following US disclosure rules), credit ratings agencies gave banks the application software which enabled them to design packages to ratings – thus creating a tendency toward homogenisation of the packages “built to rating”.

Leverage = Total Assets/Equity

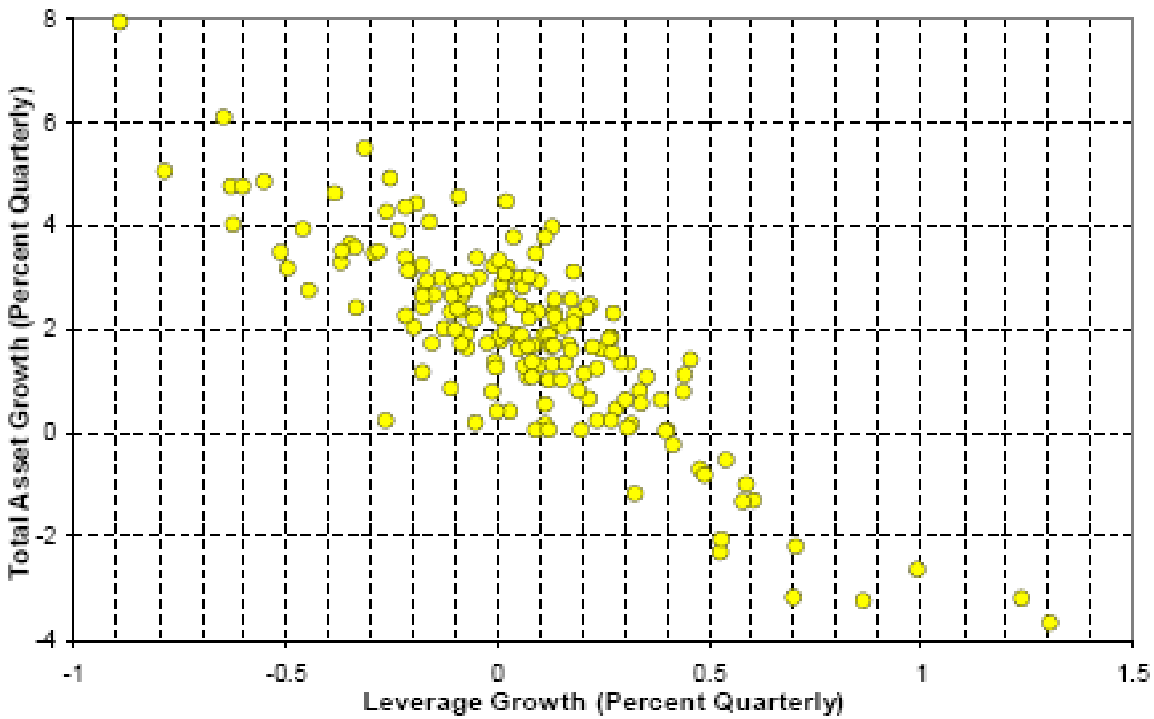
Graph 1

Leverage for passive investor



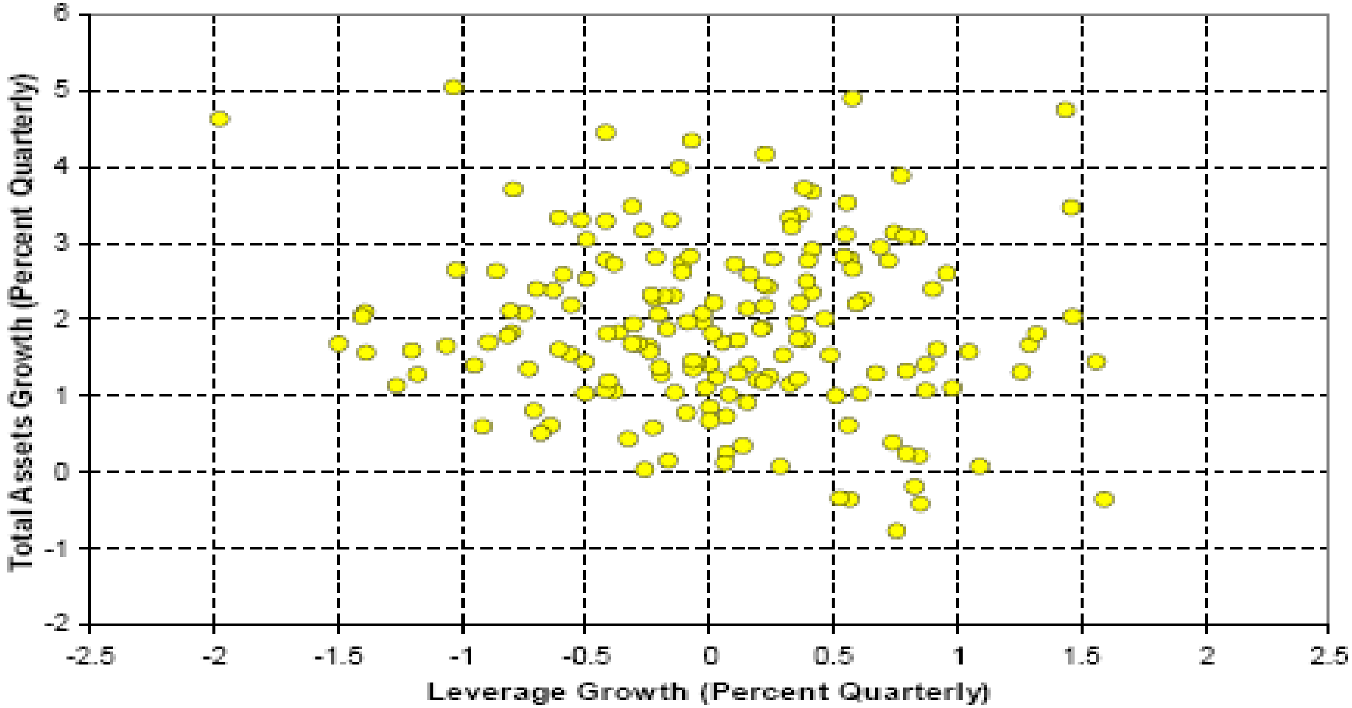
Graph 2

Households: total assets and leverage



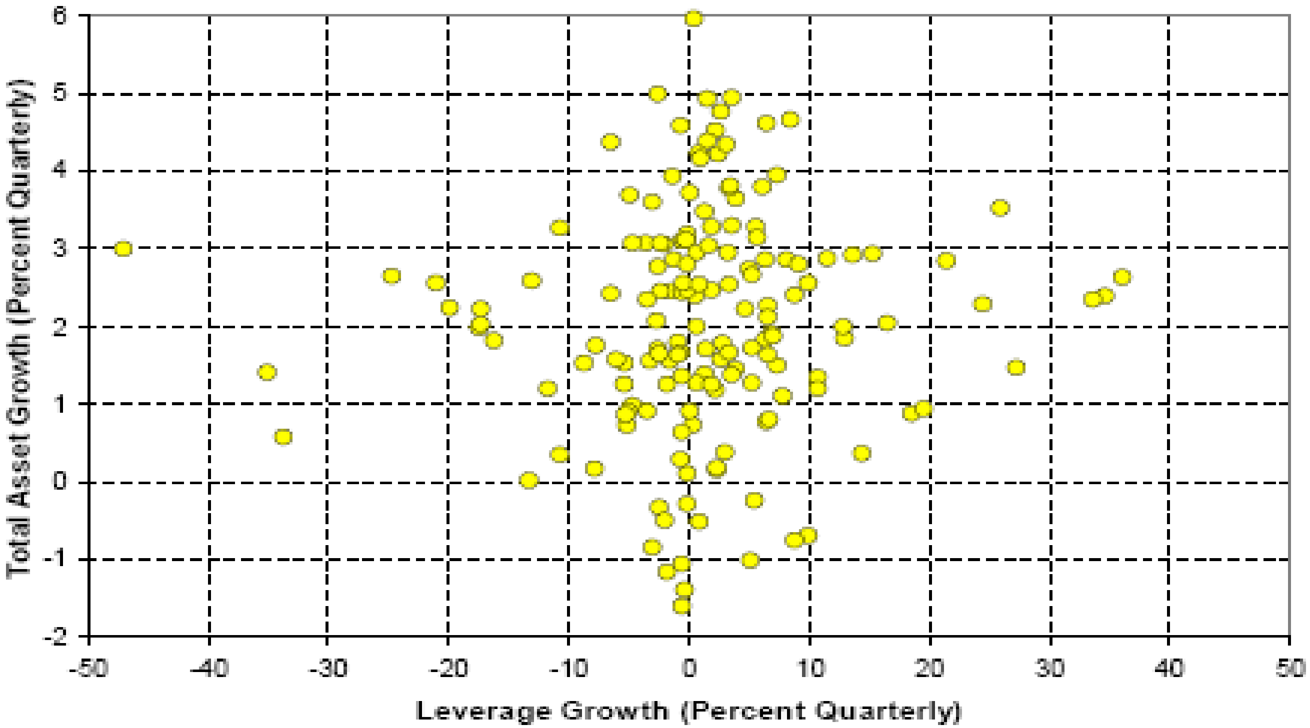
Graph 3

Non-financial, non-farm corporates



Source: Board of Governors, Federal Reserve, flow of funds, 1963 Q1–2006 Q4.

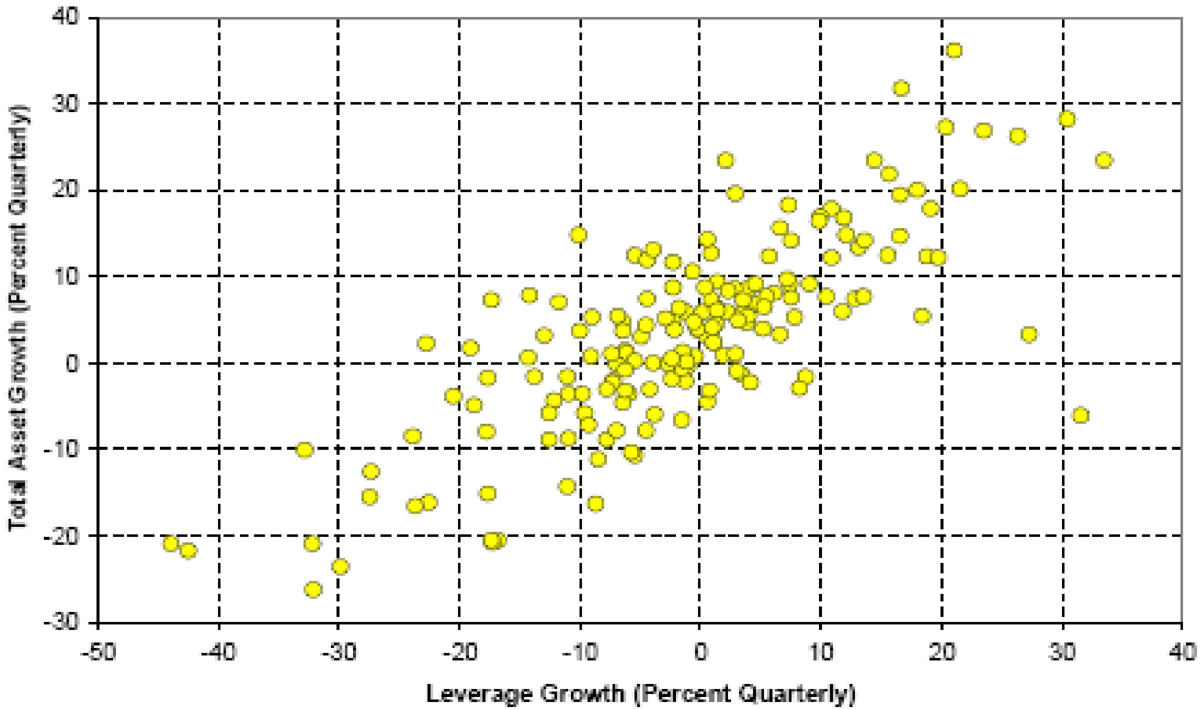
Graph 4
Commercial banks



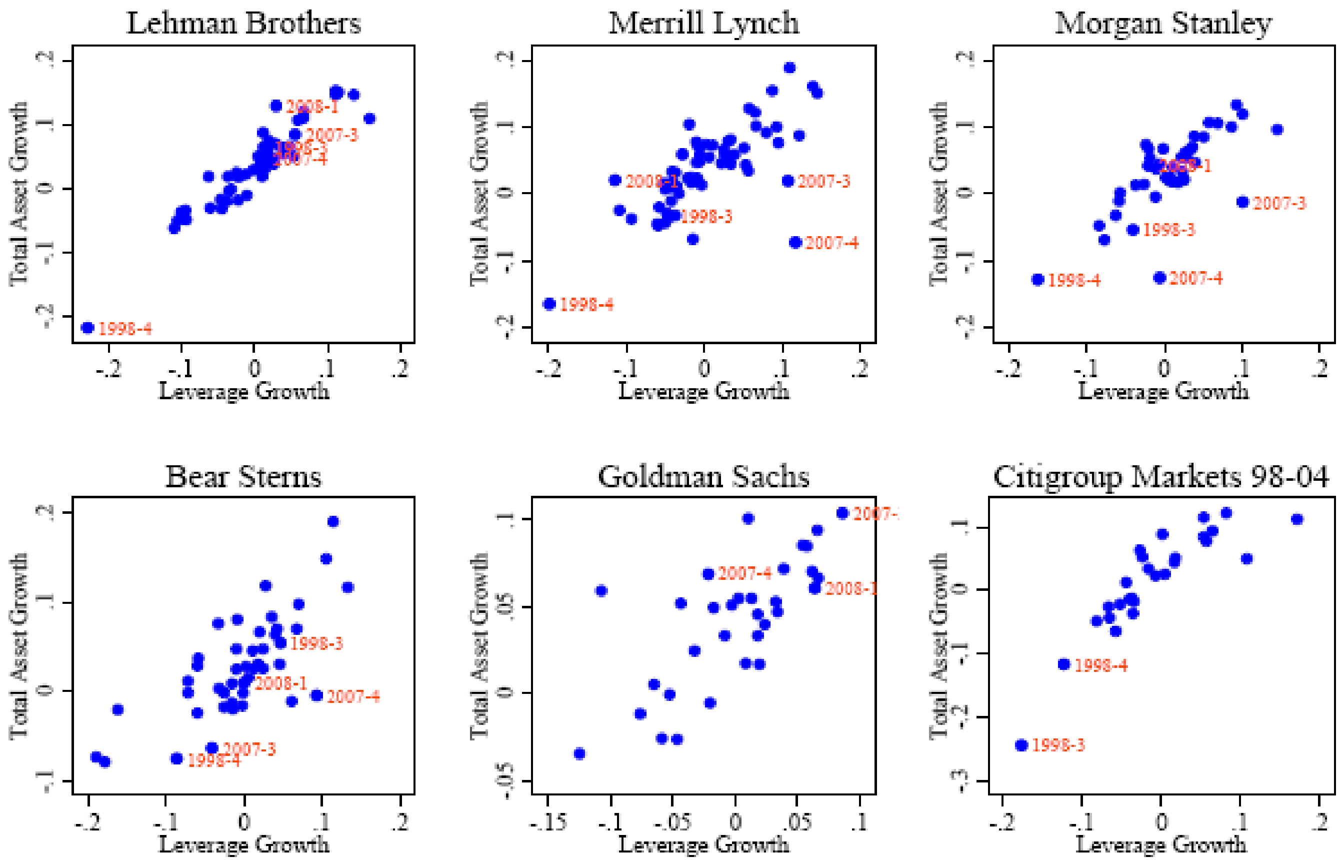
Source: Board of Governors, Federal Reserve, flow of funds, 1963 Q1–2006 Q4.

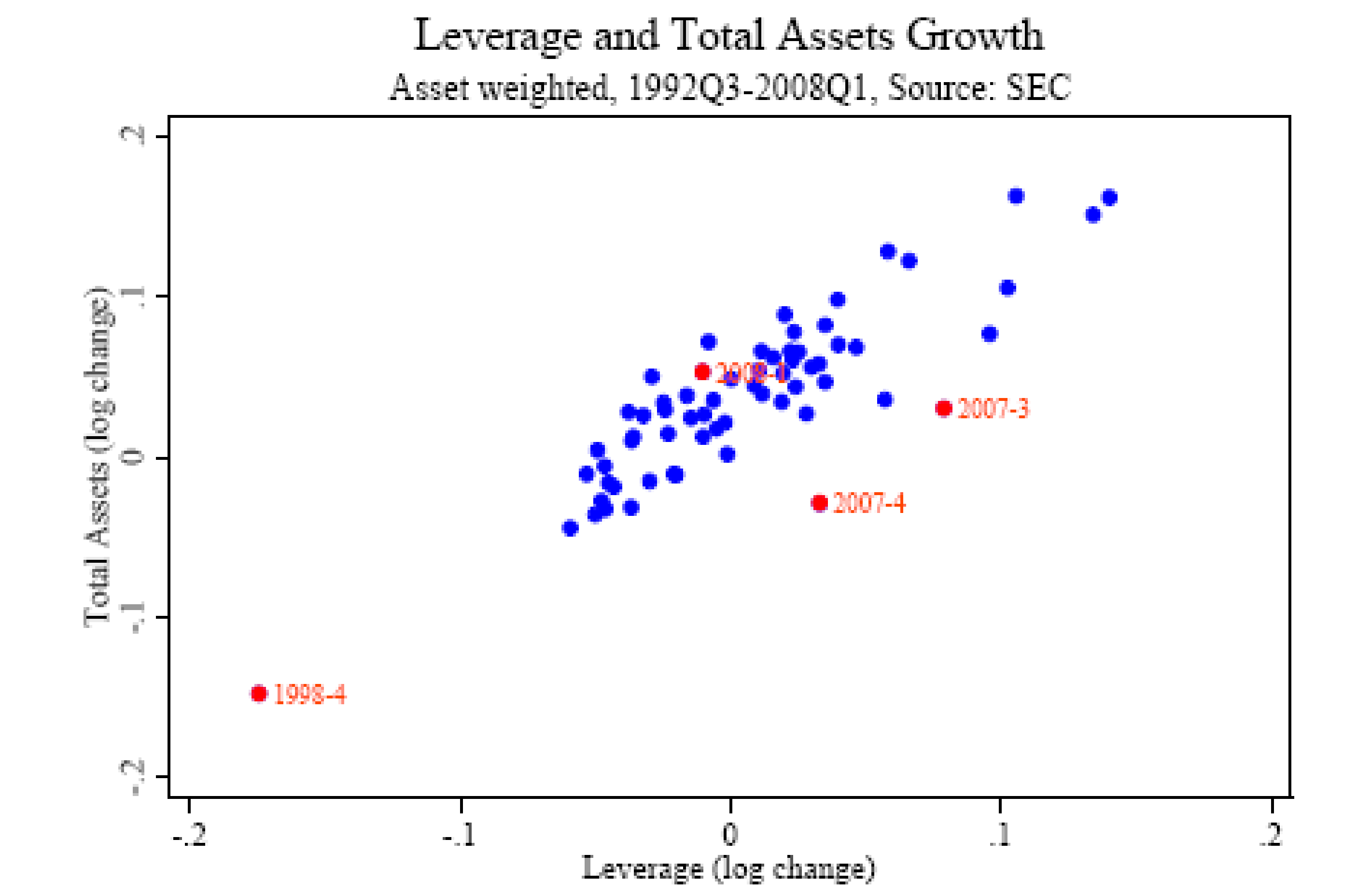
Graph 5

Security dealers and brokers

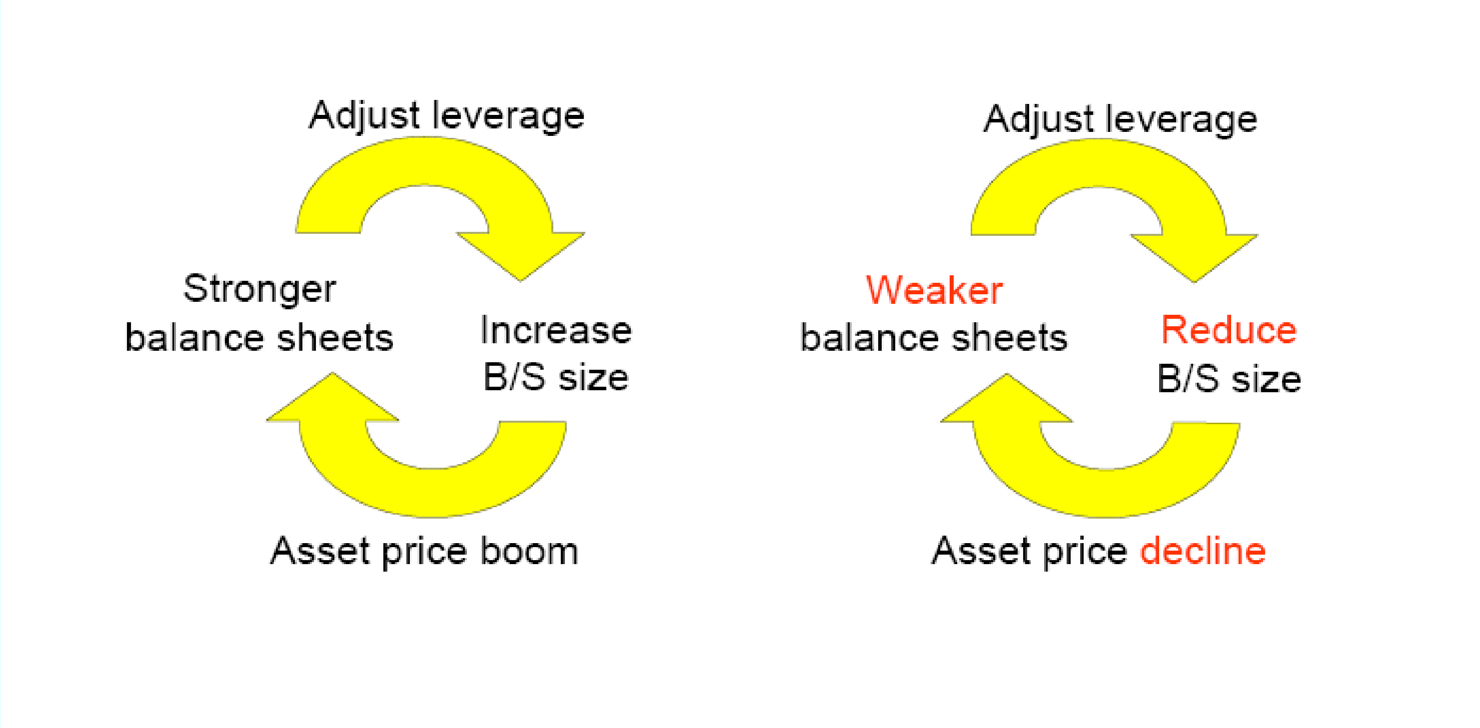


Total Assets and Leverage




Leverage and Total Assets Growth
Asset weighted, 1992Q3-2008Q1, Source: SEC
Total Assets (log change)
Leverage (log change)
.2
.1
0
-.1
-.2
-.2
-.1
0
.1
.2
2008-1
2007-3
2007-4
1998-4

Vicious cycles



Summing up – the orr model was the outcome of the incentives facing financial institutions

- Regulatory requirements incentivised banks to originate and relocate loans
- Investors were incentivised to hold (and trade) illiquid, high return assets that appeared to be of low risk
- Investors that could hold illiquid assets were discouraged from doing so by an emphasis on mark to market accounting and the required responses to changes in asset prices

- The size and concentration of the flow to risk traders proved destabilising – the risk-sensitive models are an important part of the problem

Summing up: Market gridlock

- Crises in the provision of liquidity no longer take the form of bank runs
- Market gridlock

- Northern Rock not a “bank run”

Financial Stability Forum

Working Group on Market and Institutional Resilience

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John Dugan Comptroller of the Currency

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United Kingdom

Callum McCarthy Chairman Financial Services Authority

John Gieve Deputy Governor Bank of England

The Response

- from the FSF and from the G7 Finance ministers:
  - more transparency
  - more disclosure
  - more effective risk management by firms.

- More of the Same: “The New Basel Consensus”

The Response

- Improving risk management by firms, in the light of current events, fails on two counts:
  - first, it fails to address the dilemma that the favoured trinity may actually increase systemic risk by increasing homogeneity;
  - second, it does not confront the externality of systemic risk.

Analysis

- An excessive reliance on markets to deliver systemic stability!
- Far reaching re-appraisal of the analysis underpinning financial policy is required

A systemic approach

- Contra-cyclical “provisioning” – a buffer, not a charge.
- Retention of risk by the Arranger.
- Common stress testing based on the stresses reported to the regulator.
- The negative systemic impact of mark-to-market needs to be mitigated.
- Need to de-incentivise risk traders in favour of risk absorbers

Regulation

- Urgent re-appraisal of the underlying philosophy of risk management – “more transparency, and greater market exposure” may do more harm than good
- Emphasis on systemic risks to be a fundamental component of all supervisory activity

A systemic approach

- Transform the relationship of the central bank to the market from an institutional approach to a functional approach.
- Target leverage – wherever it may be found!

UK proposals

- Recapitalise banks
- Guarantee interbank lending
- Provide liquidity

- The international dimension

International regulation?

- Policy
- Information
- Authorisation
- Surveillance
- Enforcement

World Financial Authority

- Participation
- Policy: the end of Basel 2.
- Systemic regulation on an international scale: who decides?

Global Finance at Risk

THE CASE FOR INTERNATIONAL REGULATION

JOHN EATWELL and LANCE TAYLOR

EUROPEAN PARLIAMENT

STUDY

Policy Department
Economic and Scientific Policy

Financial Supervision and Crisis Management in the EU

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Kern Alexander
John Eatwell
Avinash Persaud
Robert Reoch

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