How Much is Enough?

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Two Questions

1. What are the social costs of insufficient or excessive bank capitalization?

2. Is the question for this panel – how much is enough? – well specified?

Raising Minimum Capital Requirements

Will protect creditors and taxpayers; make bank default less likely.

Will absolutely raise banks’ financing costs.

1) Remove subsidy of their debt costs, arising from withdrawal of government protection.
2) Corporate tax effect

High Capital and Financial Innovation

Financial markets are extremely competitive.

If regulated firms have higher costs, unregulated alternative arrangements will evolve.

- Swedish transactions tax in the 1980s
- “Shadow” banking

Out of sight ➔ Unimportant?

Cost of too much capital

- Banks will be less profitable (appropriate…)
- Some nonbanks will produce financial services at higher social cost.
- Risks will migrate somewhere, but *we don’t know enough about the effects of that migration.*

These distortions derive from equity per se.

Other instruments can protect taxpayers with less distortive effects: contingent capital, prompt resolution procedures (bail-in debt).

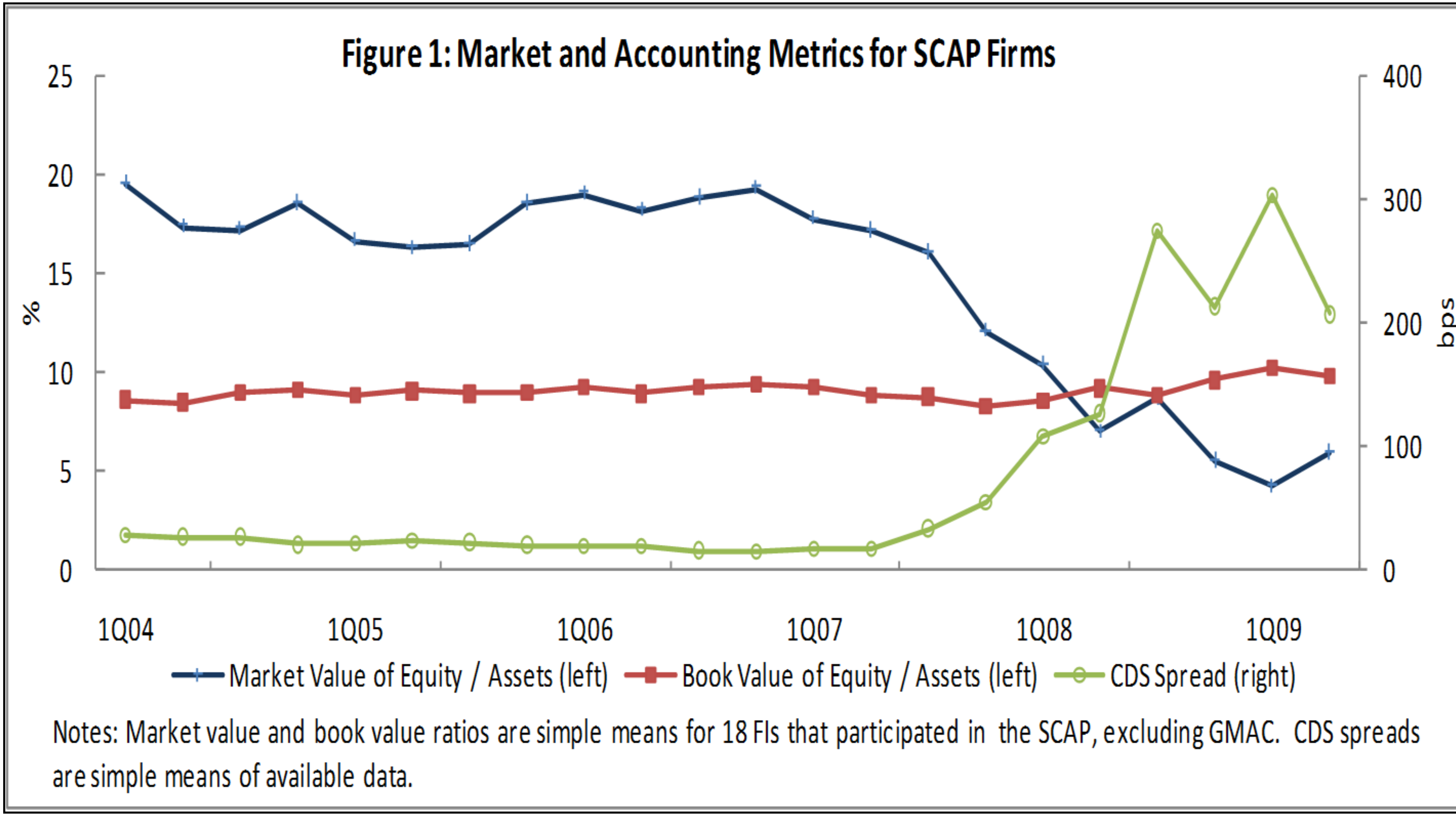
Are we asking the right question?

Basel specifies book capital ratios, which are easily distorted – perhaps opportunistically.

Bear Stearns
Washington Mutual
Lehman Brothers
Wachovia
Merrill Lynch

"failed" in 2008

Tier 1 capital ratio was 12.3% - 16.1%



Source: Kevin Stiroh, FRB-NY

Market Valuations: Important

- "Outside investors can't understand true value" – opacity
- But our large financial institutions are maturity-mismatched – a.k.a. liquidity creators.
- Runs close large banks, not regulators.
- When a run starts, supervisors have no good choices: provide support or let it fail.

- Resolution authority seems to acknowledge that there will continue to be such situations.

- Better to maintain adequate market value of bank capital.

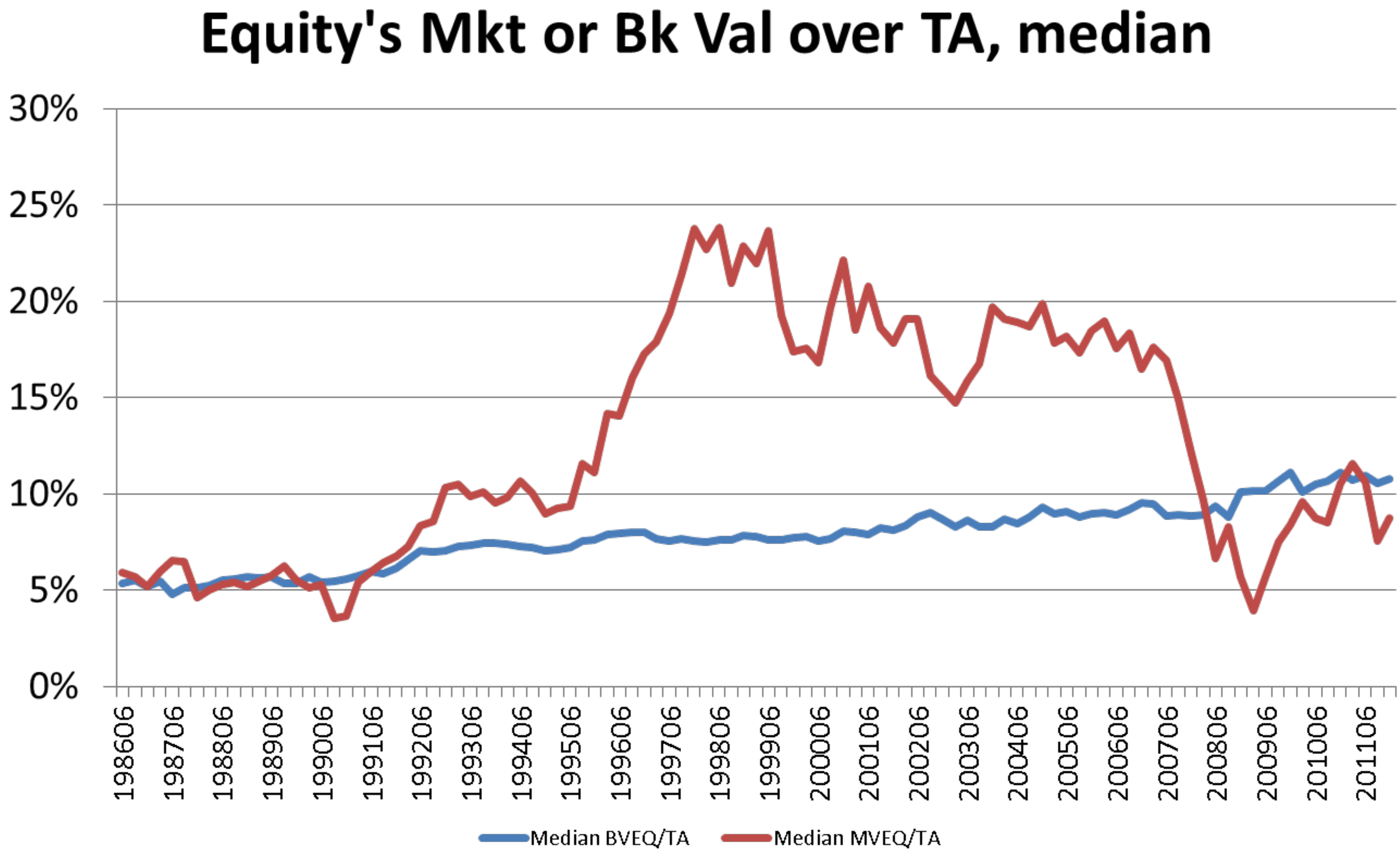
Tracking Failure Probabilities Using Market-valued Data

- MV of common shares
- Equity return volatility

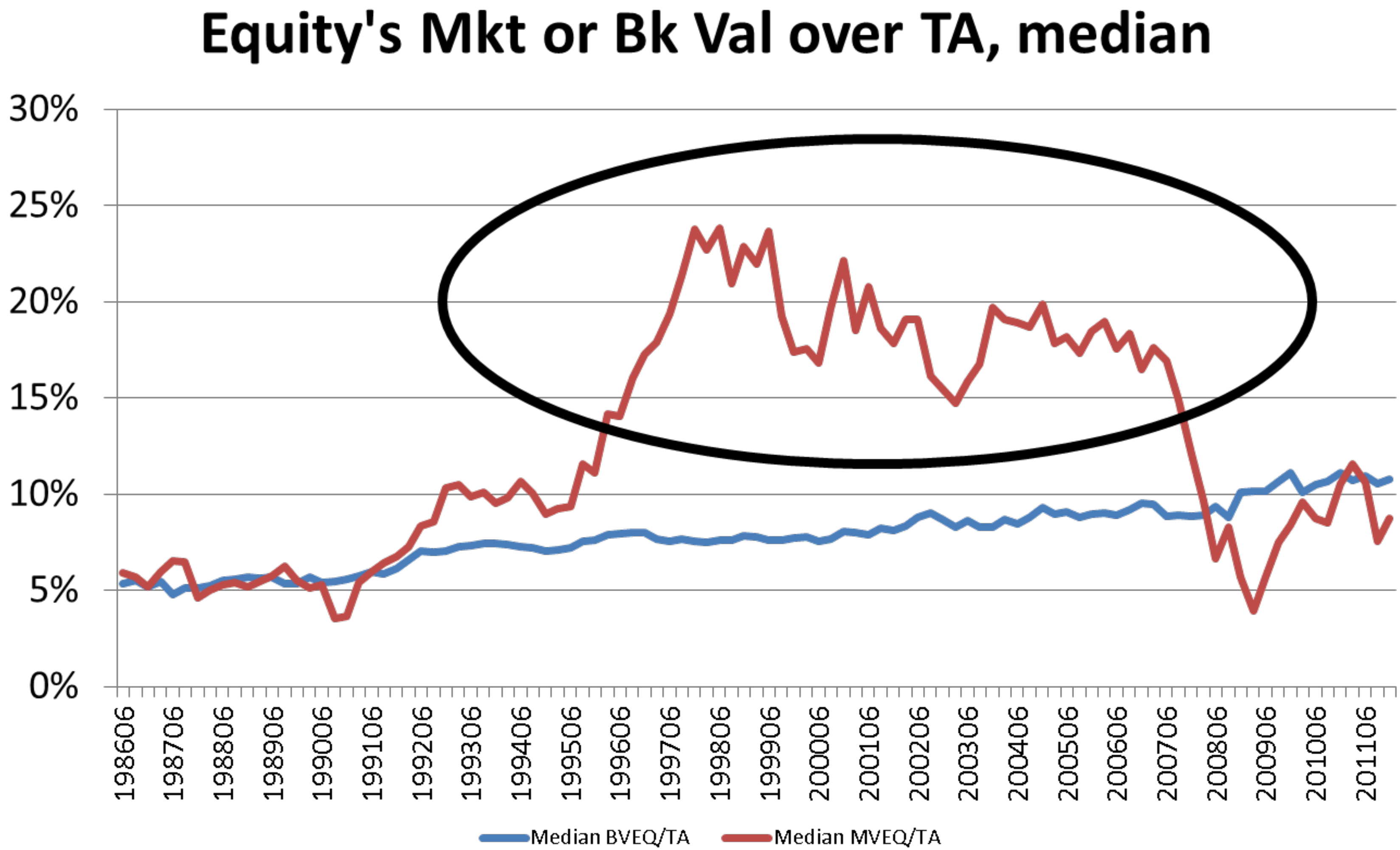
… Merton-esque transformations …

- Market value of bank's assets
- Asset return volatility

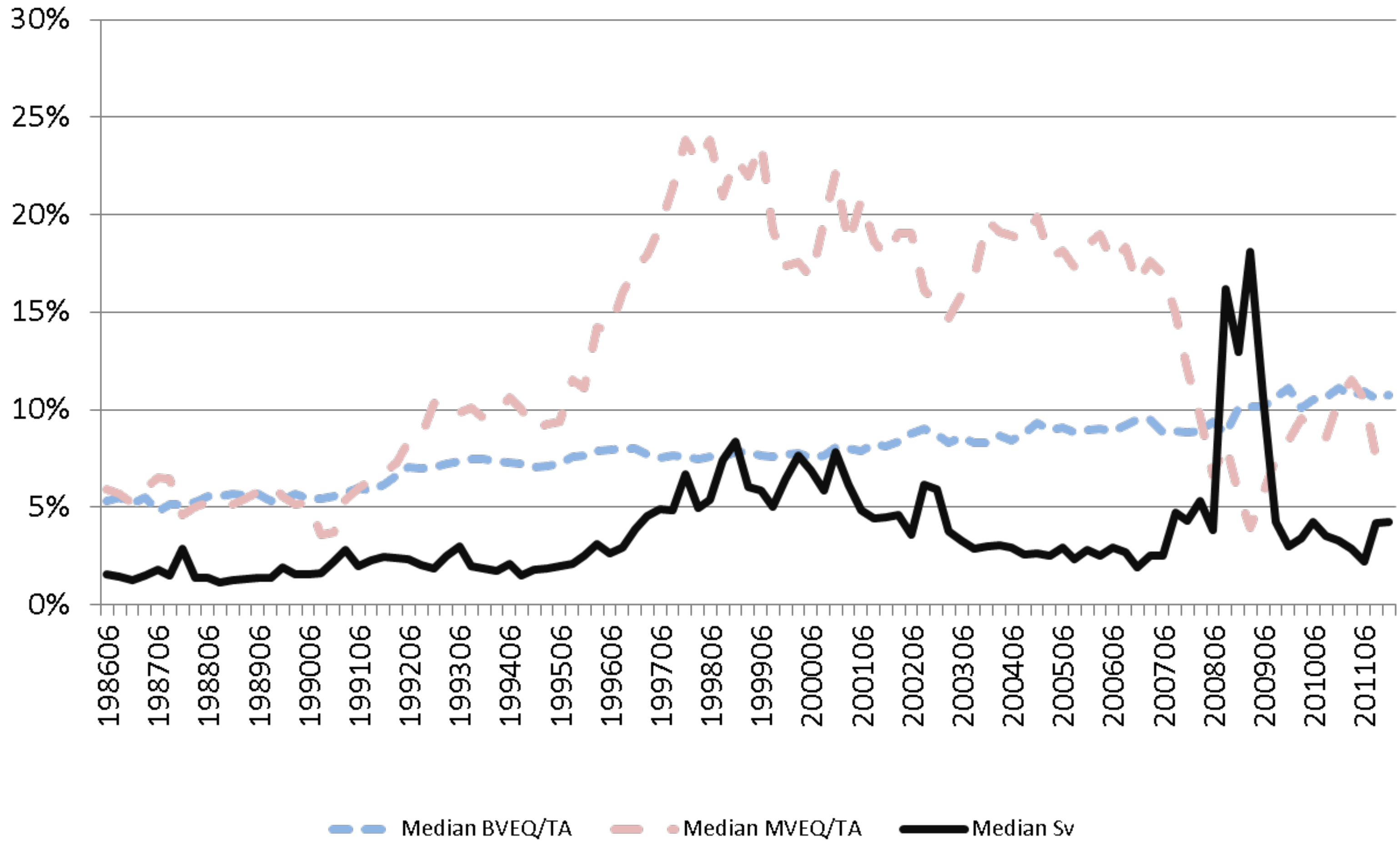
$$\left[\frac{MV_{EQ}}{MV_{TA}} \Big/ \sigma \right] \sim N(0,1)$$

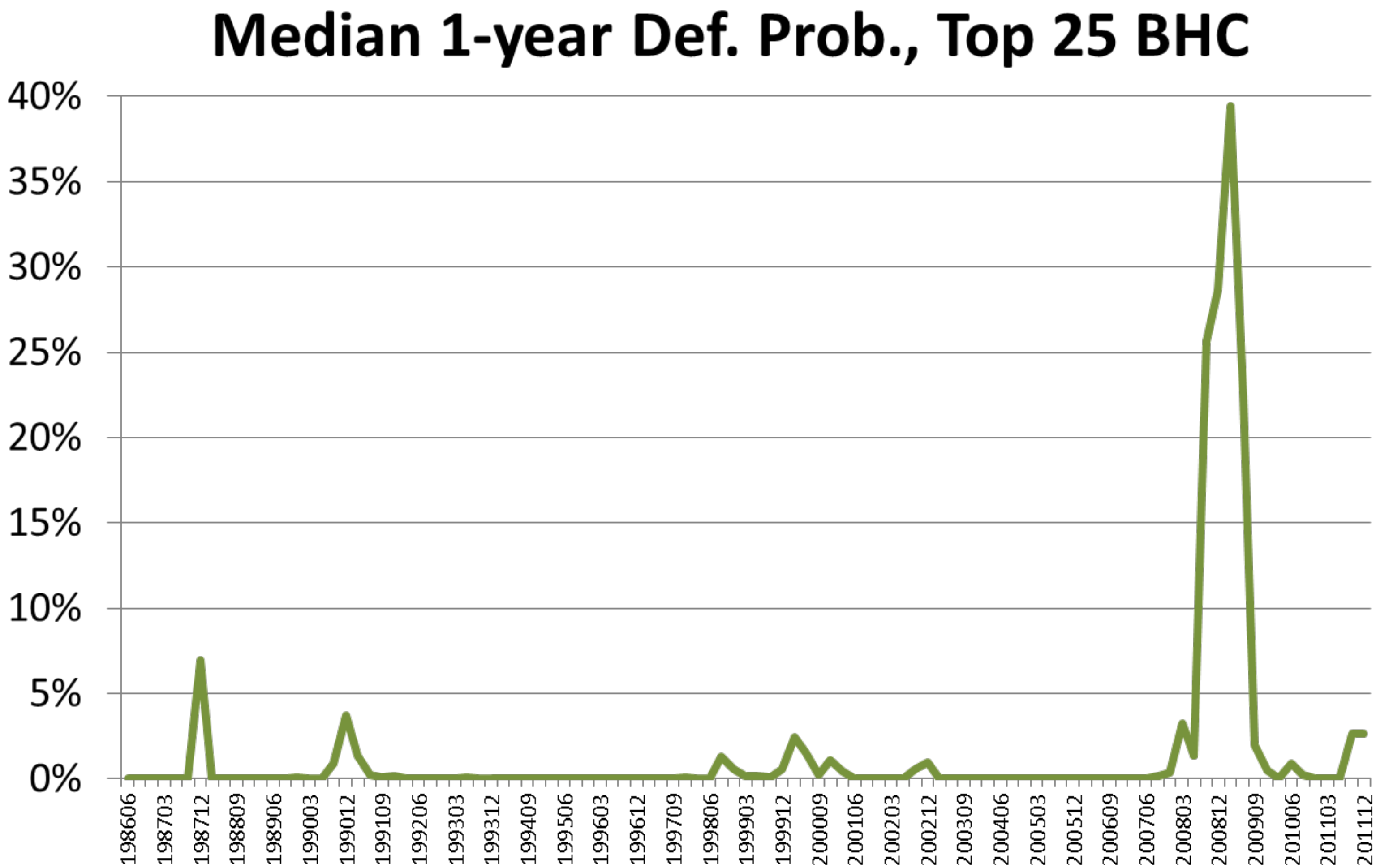


Largest 25 BHC each Quarter

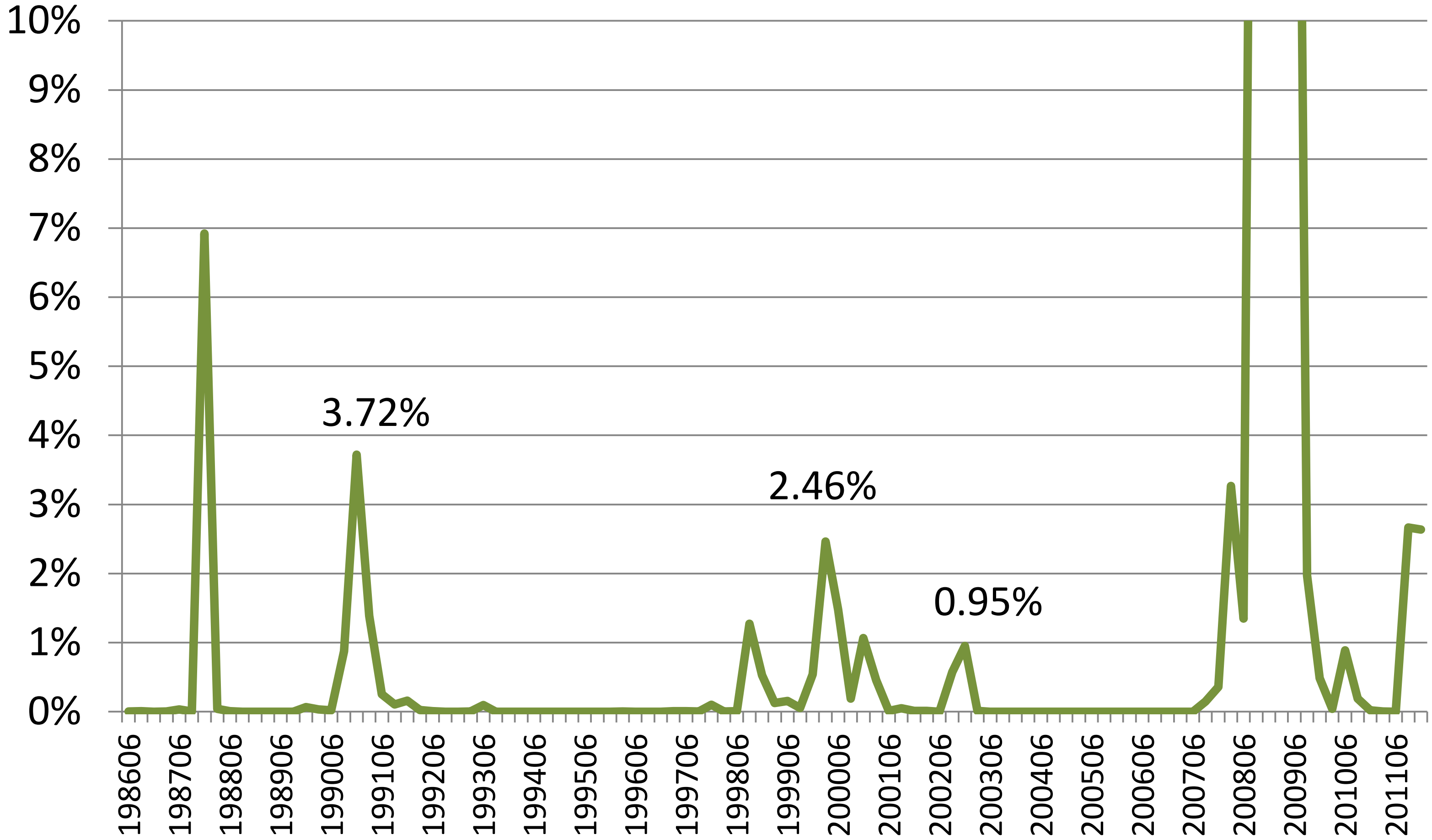

Equity's Mkt or Bk Val over TA, median
30%
25%
20%
15%
10%
5%
0%
198606
198706
198806
198906
199006
199106
199206
199306
199406
199506
199606
199706
199806
199906
200006
200106
200206
200306
200406
200506
200606
200706
200806
200906
201006
201106
Median BVEQ/TA
Median MVEQ/TA

Median Capital Ratios and Asset Vol.

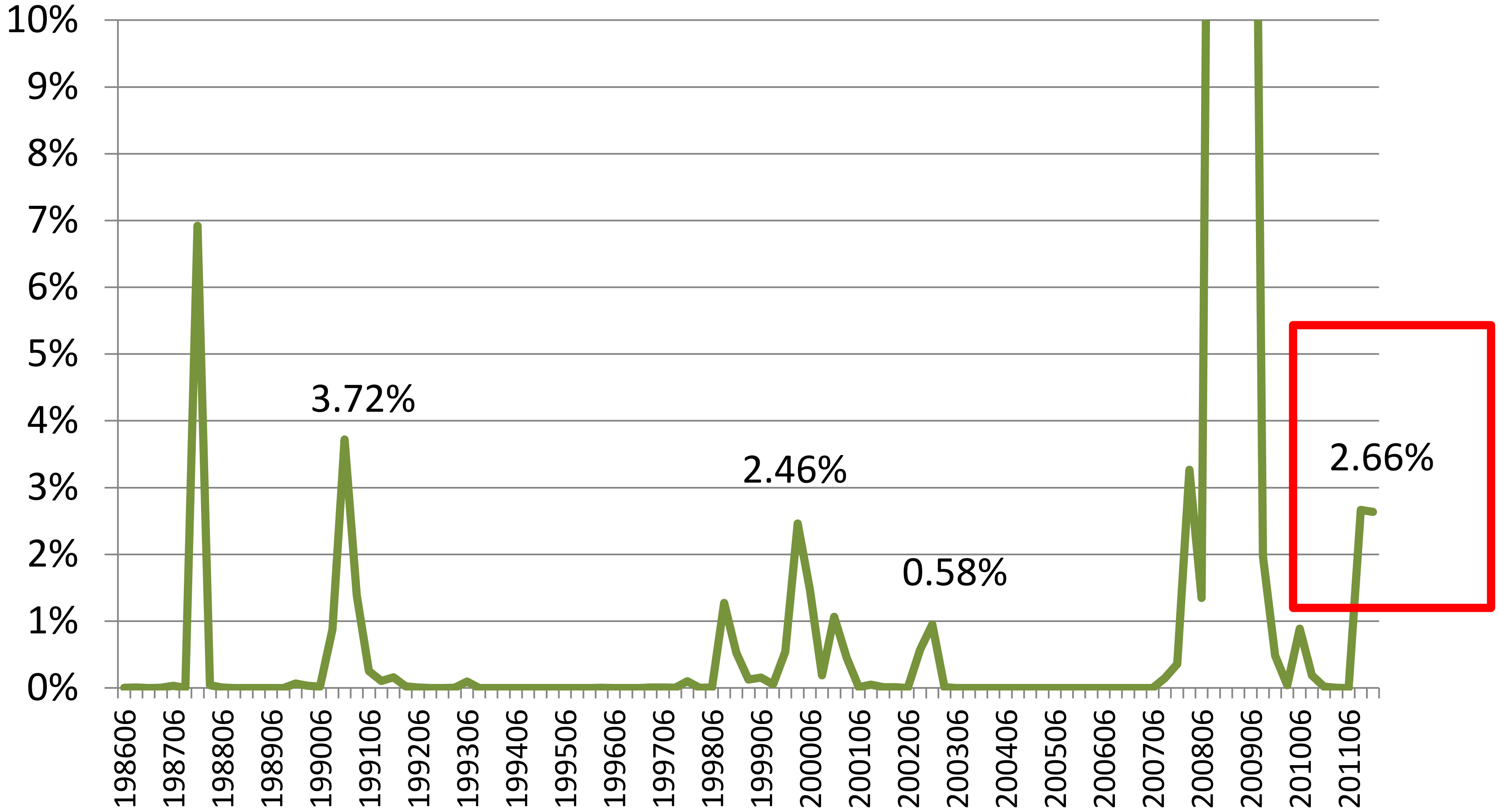



Median 1-year Def. Prob., Top 25 BHC
40%
35%
30%
25%
20%
15%
10%
5%
0%
198606
198703
198712
198809
198906
199003
199012
199109
199206
199303
199312
199409
199506
199603
199612
199709
199806
199903
199912
200009
200106
200203
200212
200309
200406
200503
200512
200609
200706
200803
200812
200909
201006
201103
201112

Median 1-year Def. Prob., Top 25 BHC



Median 1-year Def. Prob., Top 25 BHC



Conclusions

1. Yes, there may be social costs to too much capital.
2. "Downside" capital instruments like contingent capital or bail-in bonds may help.
3. Book-valued capital ratios mean less, the more important they become.
4. Actual BHC default probabilities fluctuate quite a lot, even before 2008. Relatively small capital additions could avoid this, if they were added <u>promptly</u>.
5. Signals presently indicate a need for regulatory action at a few large BHC.