

Market Discipline and Macroprudential Regulation: Challenges and Opportunities

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*The views expressed here are those of the authors and
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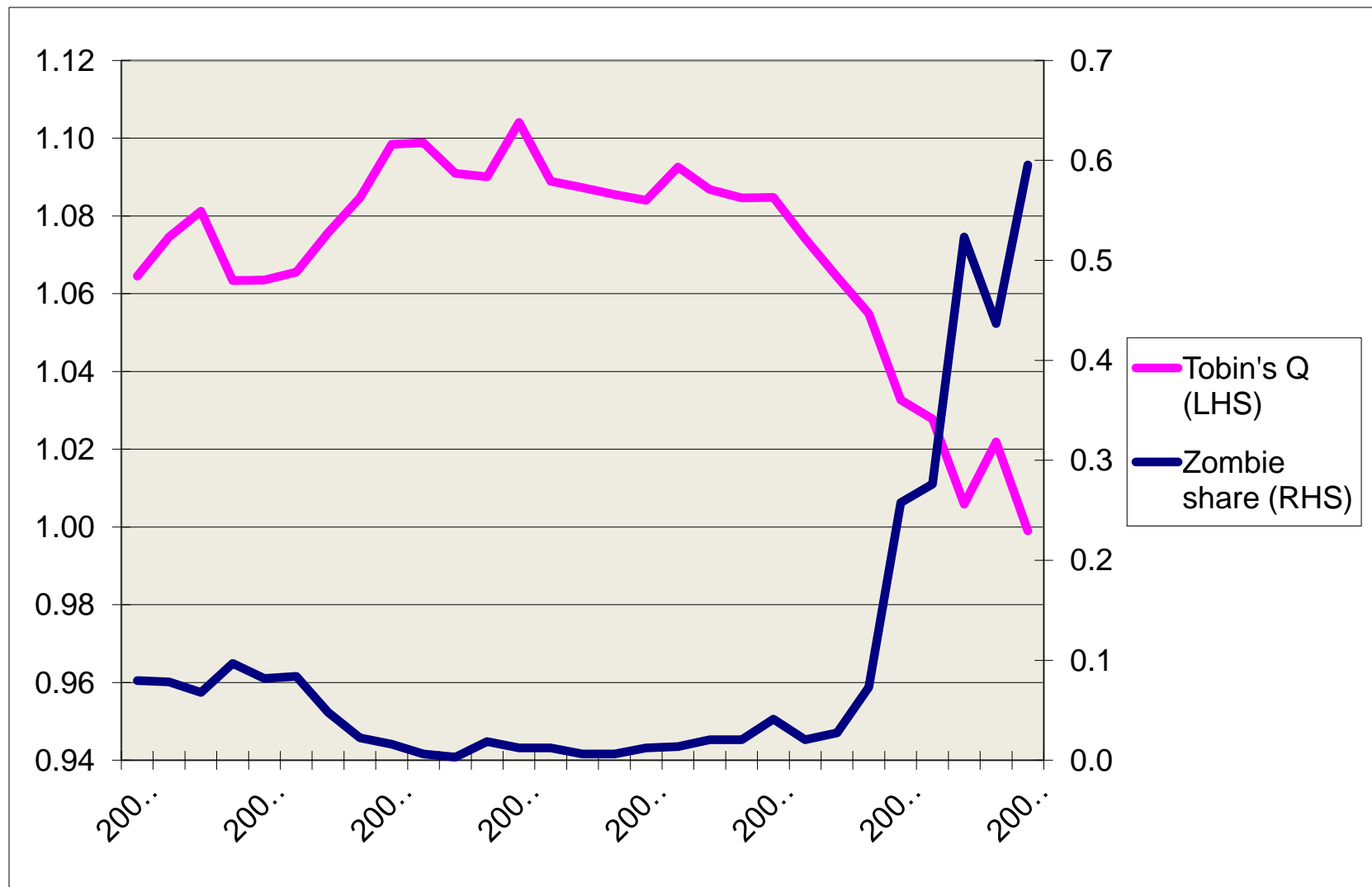
Market Discipline: Mixed Evidence

- Market discipline = Market's ability and will to recognize, monitor, and control default risk
- Market prices (yields) on (uninsured) debt liabilities of banks respond to changes in measures of individual bank risk
 - Mixed evidence
 - No link (Avery et al. 1988, Gorton and Santomero 1990, Krishnan et al. 2005)
 - Positive link between bank risk yields on subordinated debt (Flannery and Sorescu 1996, Morgan and Stiroh 2001)
- Market prices predict future changes in individual bank performance
 - Forecasting models of bank failures that combine market and supervisory information outperform models that use only one (Berger et al. 2000, De Young et al., 2001, Evanoff and Wall, 2000)
 - Market discipline can help microprudential regulation by producing alternative set of information about bank performance

Market discipline: Challenges

- Shareholder discipline not effective in controlling bank risk
 - Managers may take less risk than shareholders because human capital tied up in firm; or more due to pay for performance incentives and empire building aspirations
 - Aligning manager with shareholder interests not a solution because both take excessive risk
- Need debtholder discipline but is not effective
 - Ex ante deposit insurance and ex post protection of other bank liabilities
 - Too big to fail considerations (O'Hara and Shaw, 1990)
 - Bank risk is hard to assess by outsiders due to opaqueness and complexity of financial transactions
 - Laeven and Huizinga (2010): The market was able to distinguish between good and bad banks only during the onset of the crisis, and accounting information of banks during the crisis had deteriorated to the point of becoming misleading guides for investors.

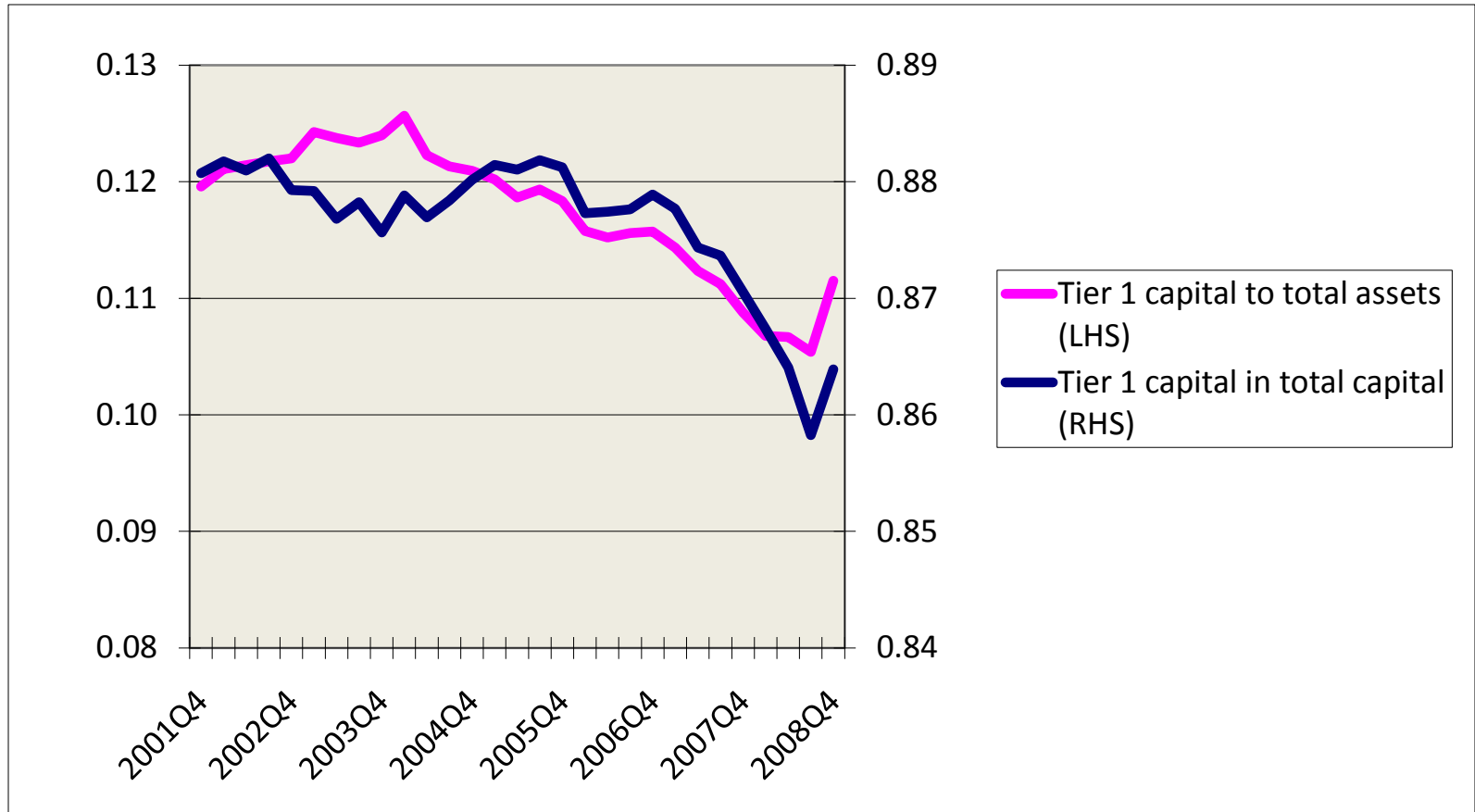
Increased discrepancy between market and book values of U.S. banks



Bank valuation and accounting during the 2007-09 financial crisis

- Large differences between market and book values of U.S. bank assets
 - By end-2008, 60% of U.S. bank holding companies had M/B value of assets < 1, compared to only 8% at end-2001
- Distressed asset markets → incentives to use discretion over financial reporting to preserve book value
 - Favorable assessments of asset impairment
 - Advantageous valuation techniques and asset classifications
- Cum regulatory forbearance → banks understate balance sheet stress and overstate regulatory capital
- US not alone; M/B value of assets of many large European banks also fell below 1 during course of 2008

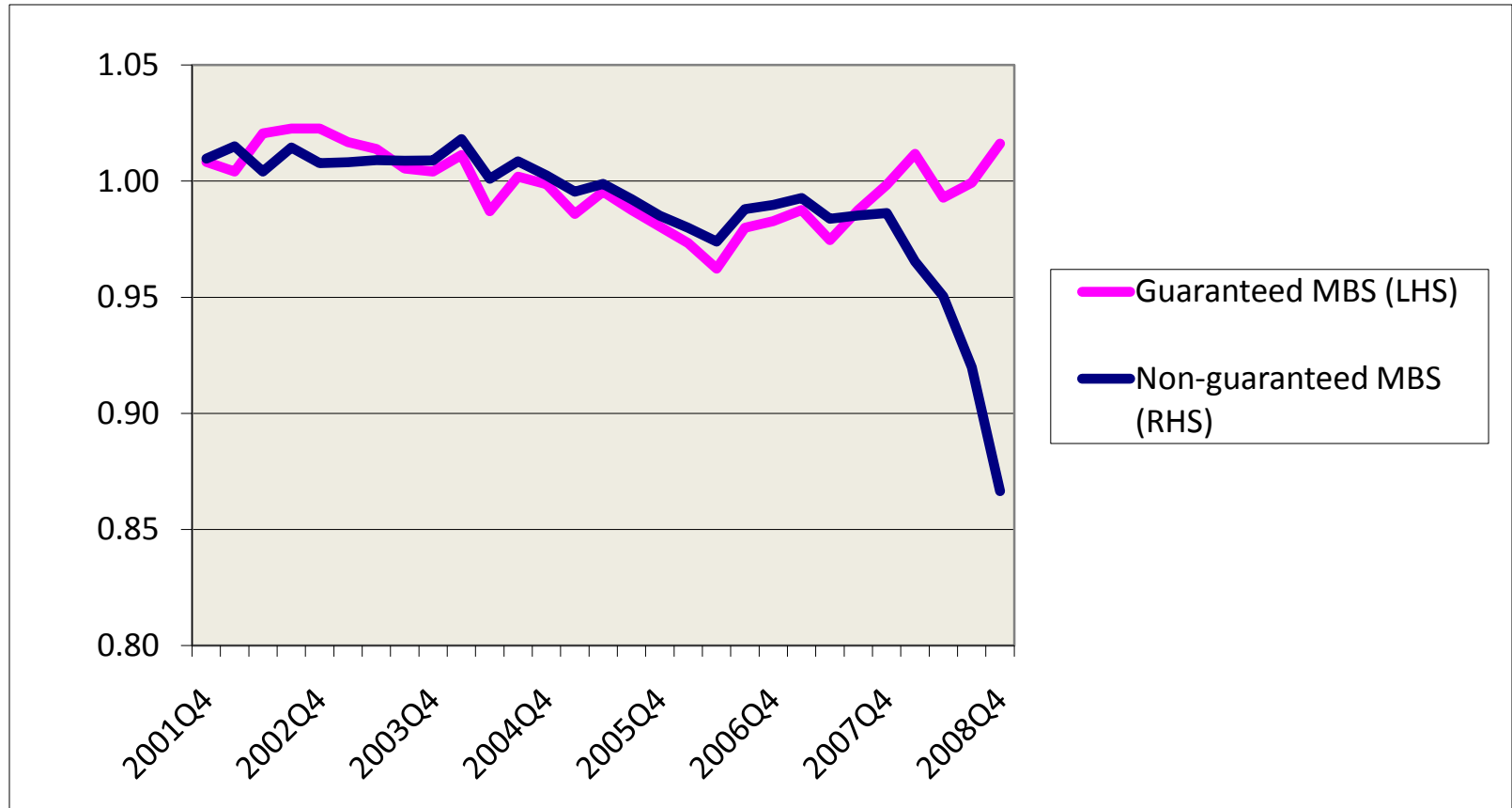
Capitalization and composition of bank regulatory capital



Tier 1 capital to total assets = ratio of tier 1 capital to total risk-weighted assets

Tier 1 capital in total capital = ratio of tier 1 capital to total regulatory capital

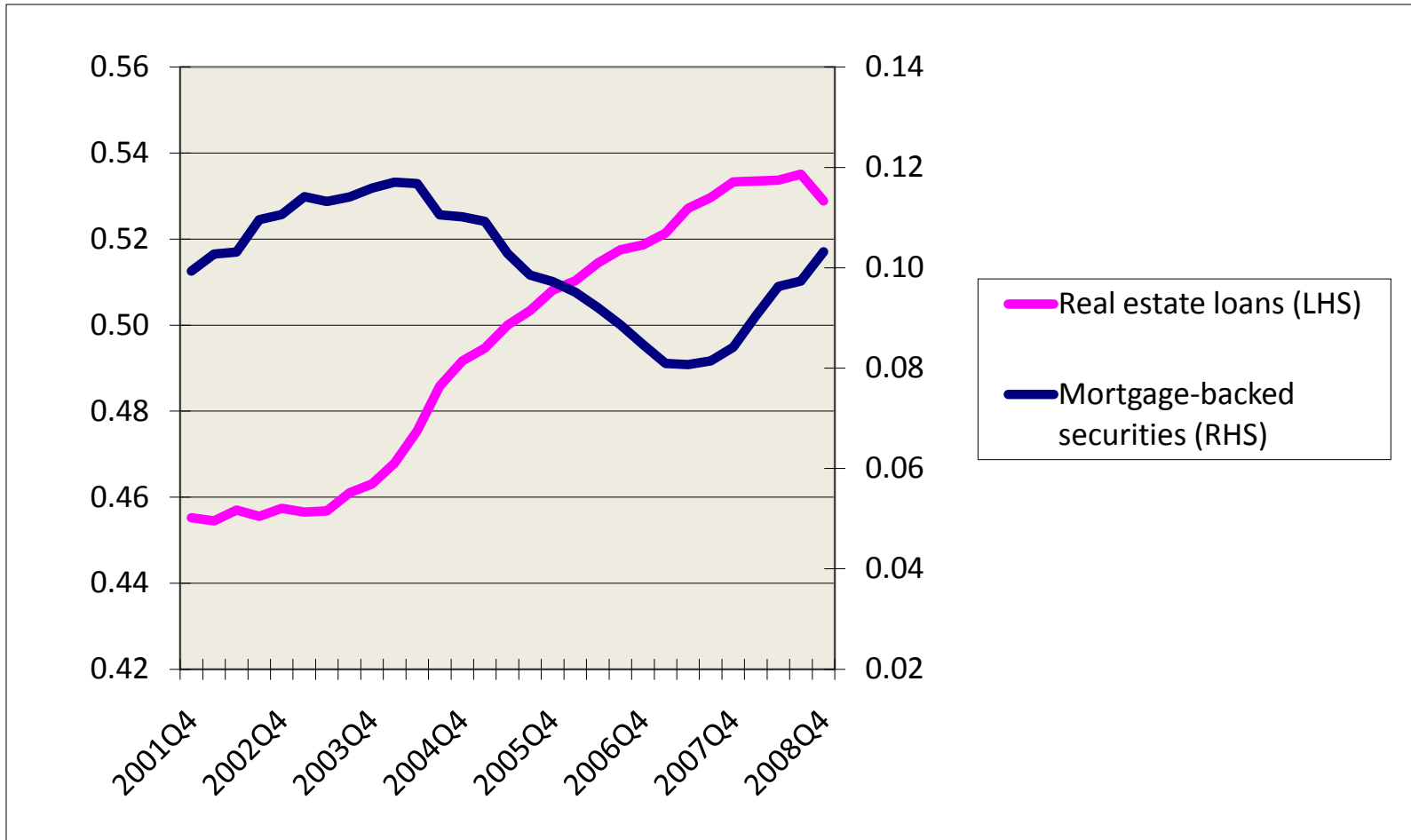
Fair value of mortgage-backed securities relative to amortized cost



Guaranteed MBS = fair value to the amortized value of guaranteed MBS

Non-guaranteed MBS = fair value to the amortized value of non-guaranteed MBS

Real estate loans and mortgage-backed securities



Real estate loans = ratio of real estate loans to total assets

Mortgage-backed securities = ratio of MBS to total assets; Securities are valued at amortized cost if held-to-maturity and at fair value if available-for-sale

Incentives to smooth earnings

- Managers have incentives to smooth reported accounting incomes, to smooth own compensation, to increase their job security, or to increase firm valuation (Fudenberg and Tirole, 1995)
- Enhanced corporate disclosure and transparency boosts corporate valuation (Karpoff et al. 2008)
- Capital regulation: Minimum regulatory capital requirements give banks an additional incentive to smooth earnings and overstate capital during economic downturns
- Regulatory forbearance: Misreporting would be limited if bank regulations were strictly enforced, but during crises regulators often resort to regulatory forbearance to avoid bank failures, with concomitant risks for tax payers (Kane, 1989; Kroszner and Strahan, 1996; Barth et al., 2006; Skinner, 2008)

Banks overstate regulatory capital

- Huizinga and Laeven (2010) estimate significant market discounts on banks' real estate loans starting in 2008; with banks holding about half their assets in real estate loans, this discount explains a large part of low bank share prices
- No evidence of market discounts prior to 2008
- Banks with large MBS exposure report lower loan loss provisions in 2008, suggesting that weakened banks manipulate their loan loss provisioning to manage regulatory capital during the crisis
- Distressed banks classify MBS such as to take advantage of valuation differences

Consequences of misreporting

- Discretion delivers highly inaccurate financial information, especially at time of financial crisis when assets become distressed, with potential real consequences for allocation of capital in economy (Peek and Rosengren, 2000; Kedia and Philippon, 2009)
- Financial misreporting can impede market discipline by bank debtholders

Improving market discipline and regulatory discipline

- Need to limit extension of government safety net during crises and improve debtholder discipline ex ante (e.g. impose haircuts on debt in the event of failure)
- Reducing deposit insurance coverage is not a political option
- Need accurate financial information; reduce accounting discretion (Huizinga and Laeven, 2010)
- Requires regulatory discipline (prompt corrective action); too big to fail problem; curtail buildup of excess in good times

The need for macroprudential regulation

- Macroprudential regulation=Financial regulation aimed at protecting banking system as a whole
- Justified by partial market failure of market to deal with aggregate risks, and by the public good component of financial stability (Rochet, 2004)
- Regulation has been too much microprudential; belief that financial instability was mostly consequence of externalities from individual bank failures, not systematic buildups of risk
- Macroprudential regulation focuses on systemic risk, which varies naturally over the cycle

Market discipline and macroprudential

- Market discipline is little defense against macroprudential risks that come with economic cycle; not effective in dealing with aggregate risk; market signals erratic during crises
 - Market discipline is weaker during booms; bond investors demand lower risk premiums during booms (Santos, 2009)
- But: politics of booms and supervisory discretion render macroprudential regulation ineffective; need countercyclical rules that are enforced by regulator with help from markets
 - Market can join forces with regulators to generate additional information and discipline banks that have been identified by regulator as contributing to systemic risk (cf. Hart and Zingales (2009) proposal)
 - Challenge is to strike right balance in terms of reliance on market/regulator and degree of information sharing with the market