

Brunnermeier et al. (2009)



THE FUNDAMENTAL PRINCIPLES OF FINANCIAL REGULATION

What we have learnt?

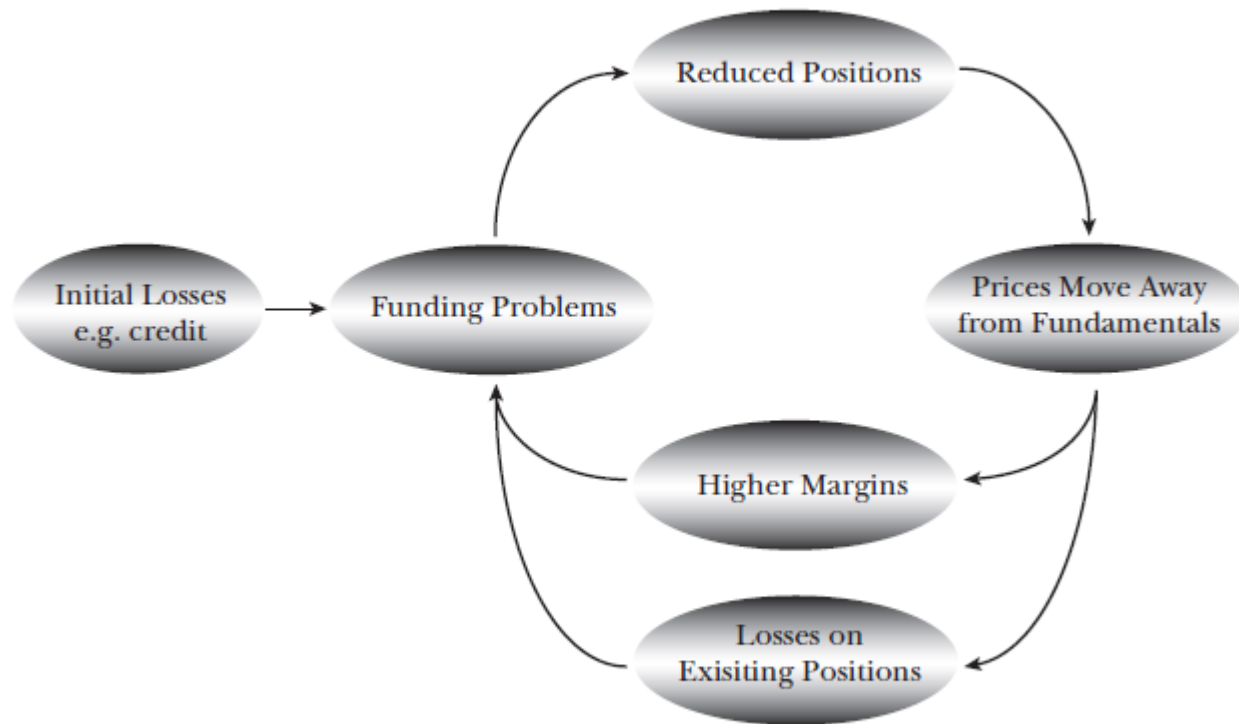
- The current philosophy of banking regulation – that you can make the system safe by making individual institutions safe – is unsatisfactory
- An unexpected loss of an institution may post systemic implication to other prudent institutions

What we have learnt?

- Funding liquidity and market liquidity are two key factors
- Northern Rock, Lehman Brothers and Bear Sterns
 - Inability to roll over their liabilities (funding liquidity)
 - Selling mortgage products at fire-sale prices (market liquidity)

Figure 4

The Two Liquidity Spirals: Loss Spiral and Margin Spiral



Source: Brunnermeier and Pedersen (forthcoming).

Note: Funding problems force leveraged investors to unwind their positions causing 1) more losses and 2) higher margins and haircuts, which in turn exacerbate the funding problems and so on.



Regulation of Liquidity and Maturity Mismatches

Ch. 5

It is inefficient to consider the quality of assets

- Previously:
 - If the quality of assets is high, a liquidity crisis might not have emerged
- However:
 - The financial system's reliance on short-term funding of long-term assets with potentially low market liquidity has been the main source of instability in this crisis

Two ideas to solve the problems

- Mark-to-funding accounting rule
 - Previously: Mark-to-market
 - Alternative: Hold-to-maturity
 - This approach: The combination between the two
- Explicit capital charge for liquidity risk
 - Financial institutions who hold assets with low market liquidity and long-maturity and fund them with short-maturity liabilities should incur a higher capital charge

Mark-to-Funding

- Objectives
 - To reduce the procyclicality that mark-to-market induces in asset booms and bust, due to the loss spiral
 - It seems that applying mark-to-market accounting to assets backed by long-term funding is not in the prudential interests of the firm

Mark-to-Funding

- The new approach is believed to
 - Better reflects the prudential interests of financial firms
 - Will limit forced sales of assets
 - More honest than a suspension of mark-to-market, or shifting to hold-to-maturity value
- The Principle
 - Assets should be valued and managed, not according to the intention of the holder, but to the funding capacity of the holder

Mark-to-Funding

- Example

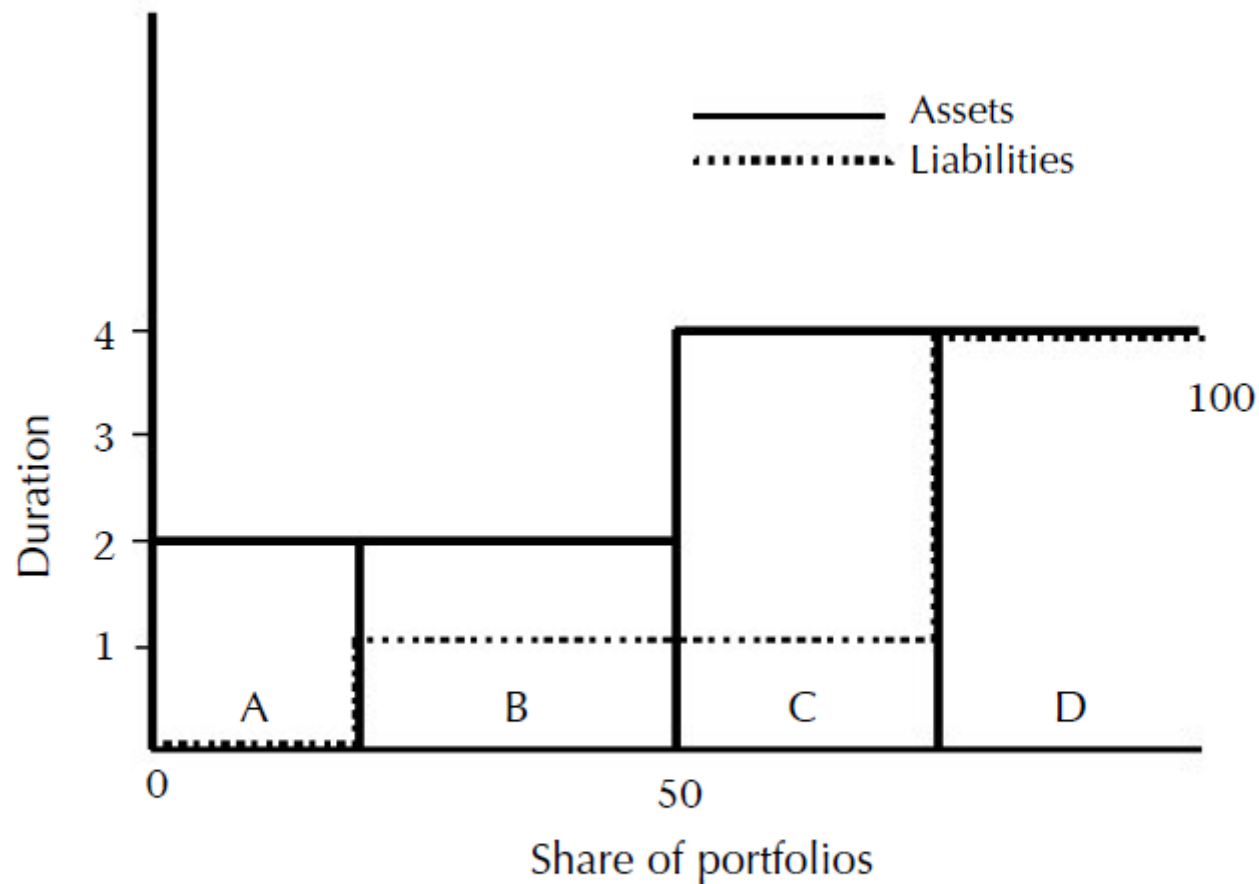
- If a bank has funded its 20-year assets with 1-month borrowings, they should value the asset according to mark-to-market accounting
- However, if the asset is funded with the issuance of a 10-year bond, the asset can be valued by a third party valuer on the basis of the present value
- This valuation exercise would be best carried out on the basis of pools of assets and pools of funding

Mark-to-Funding

- If a bank is funded over the short-term, this method will be exactly the same as mark-to-market
- If, however, a bank held a pool of long-term assets using a pool of long-term funding, then it would not be forced to sell the assets
- The only problem left is the practical issue

Mark-to-Funding

Figure 5.1

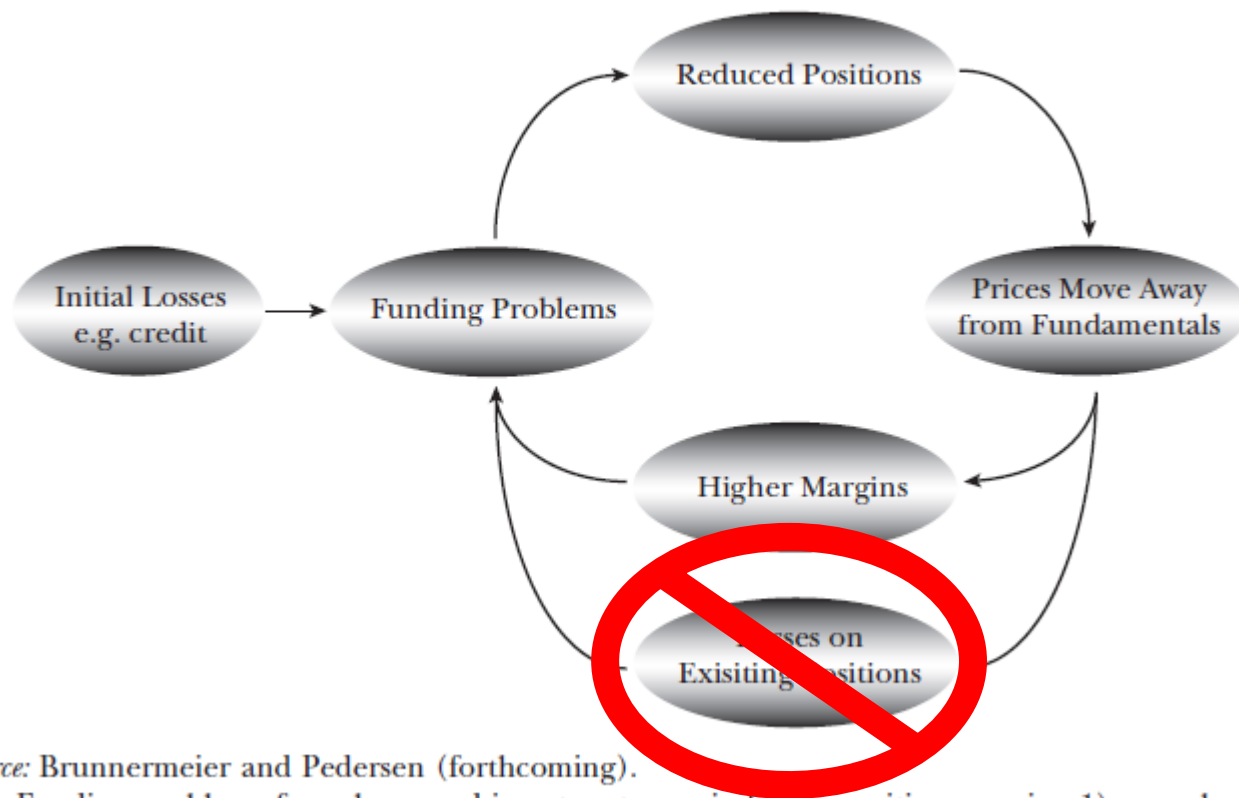


Valuation Section A
 Valuation Section b
 Valuation Section c
 Valuation Section D

Market price
 1/2 market price, 1/2 PV
 2/3 market price, 1/3 PV
 PV

Figure 4

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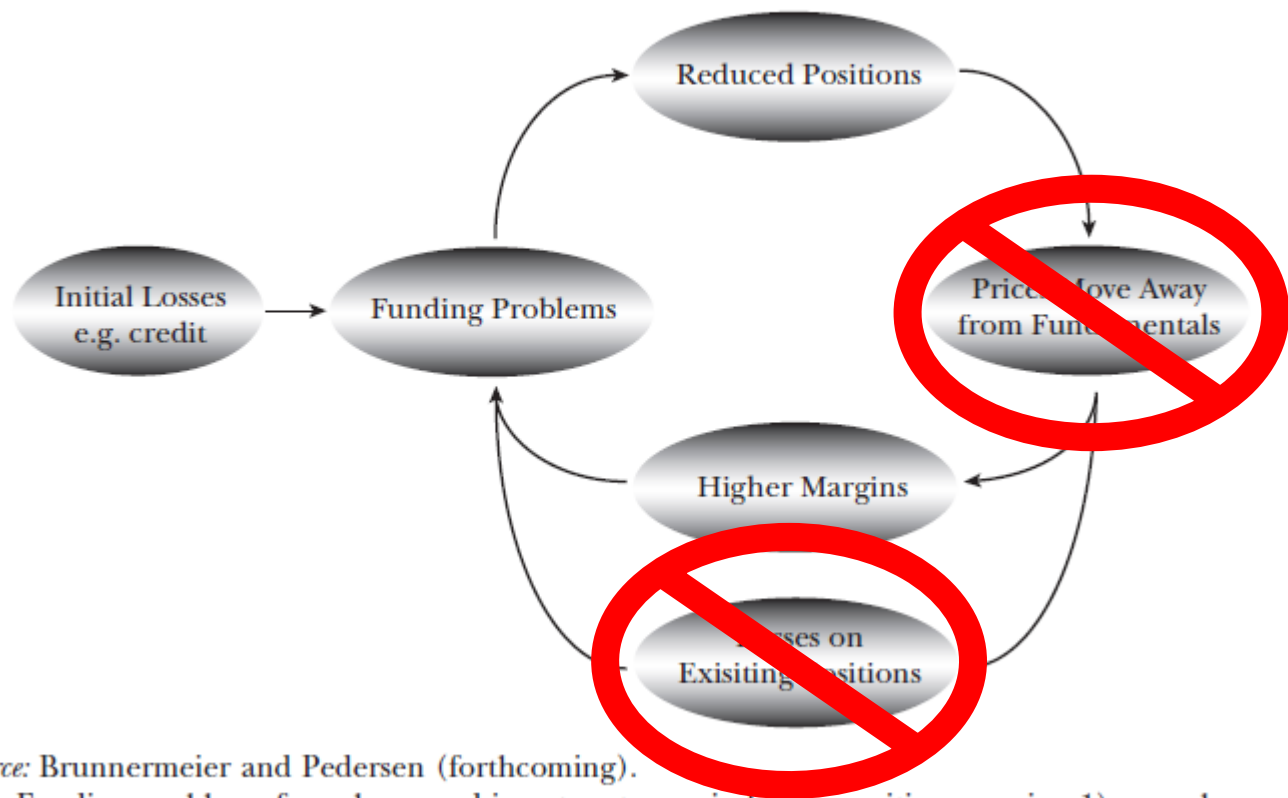
Note: Funding problems force leveraged investors to unwind their positions causing 1) more losses and 2) higher margins and haircuts, which in turn exacerbate the funding problems and so on.

Mark-to-Funding

- The adoption of mark-to-funding may also encourage financial institutions with long-term funding to be buyers of distressed assets, which will also support market liquidity
- Allowing “hold-to-funding account” grants financial institutions some discretion how to value assets
 - Hence, the asset should be valued by a third party

Figure 4

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Capital Charges against Illiquidity

- Regulatory capital should be set aside against the riskiness of the combination of an asset and its funding
- Objective: Encourage banks to find long-term funding, and discourage them from greater leverage
- If two banks hold the same asset, the one funding with term deposits would be set aside a lower amount of capital than the one funding with overnight borrowing

Capital Charges against Illiquidity

- In practical terms, adjustments to capital to reflect the maturity mismatch between assets and liabilities could be done as simple multiples to the current requirement
 - Make it easier to adopt
 - This makes risky assets more charges
- The multiple should be a function of the months of effective mismatch between the asset maturity and the funding maturity

Capital Charges against Illiquidity

- The problem left now is the calculation of effective maturities