After the Reform of Banking Regulation: Has the Financial System Become Safe?

Why Not?

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Safer is not safe

- Since 2008, the financial system has become safer, but safer is not the same as safe
- If all the new regulations had been in place in 2000, would the crisis have been avoided?
- No!
- A truck explodes in a tunnel at 150 km/h
- We lower the speed limit to 140 km/h
- ... And we impose a limit on gas consumption of SUVs
- Has the tunnel become safe?
Reforms since the Crisis

- „Basel III“ = „Basel 2.01“
  - No reform of the model based approach to risk weighting
  - Changes in quality of „capital“ – ABE?
  - A tripling of something close to zero ...
  - Leverage ratio 3 % of total assets...
  - Macroprudential regulation ... A new form of fine tuning? For what purpose? How?
- Liquidity Coverage Ratio ... diluted ABC principle (Anything but cash!)
- Net Stable Funding Ratio, yet to be introduced
Reforms since the Crisis 2

- New Organizations: EBA, EIOPA, ESMA, ESRB, SSM...
  - As if the crisis had been caused by lack of European integration
- New rules for hedge funds,
  - As if the crisis had been caused by hedge funds
- Prohibition of short sales
  - As if short sales had caused the disaster at Lehman Brothers or Hypo Real Estate
Reforms since the Crisis 3

- Proposals for a Financial Transactions Tax
  - As if the crisis had been caused by stock market speculation

- Improvements in recovery and resolution: UK, D, US, EU ... Not practical and ineffective: cross-border issues, liquidity provision, insufficient backstops

- Structural measures: size limits, separation, ring-fencing: Volcker, Vickers, Liikanen, EU...Nostalgia and illusions – little analysis
  - Glass-Steagall had contributed to the crises of the eighties; traditional banking is risky – credit risk, maturity transformation
  - LTCM, Bear Stearns, Lehman Brothers had no deposits, still systemic
Why?

- **The Iraq-Effect**: After September 11, Cheney and Rumsfeld „knew“ that Iraq was the culprit
  - Integration agenda of the European Commission
  - Mr. Steinbrück and the Locusts
  - The left and the transactions tax

- **Industry resistance**: Crisis? What crisis?
  - Equity, ROE and Bonuses

- **Political interest**:
  - National champions, industrial policy
  - Banks are where the money is
  - Creditor protection
Problems?

- Lack of conceptual basis for talking about crisis and reform
  - No analysis of the crisis and its causes?
- Failure of Media and Parliaments
  - Bonuses and casino capitalism are more entertaining
  - ... And it is always good to complain about banks not lending enough and not cheaply enough
- Ignoring problems makes discourse easier
  - Liquidity provision ... Hundreds of billions
  - Fiscal backstop .... Fiscal union?
  - Let the ECB do the job...
Issues

- Dealing with banks in difficulties
  - Kicking the can down the road?
  - Recovery and resolution
  - Minimizing systemic fallout
  - Allowing exit – eliminating artificial exit barriers

- Preventing banks from getting into difficulties that compromise the financial system
  - Funding: Equity
  - Asset Management: Liquidity
  - Structure
  - Shadow banking
Recovery and Resolution: TBTF is still with us

- Legal Reforms, UK, US, D, EU (BRRD+SRM)
- Issues:
  - Cross-Border Resolution
  - Funding/Liquidity
  - Fiscal Backstops
- TLAC as a panacea?
  - Distributive issues in resolution ... Only partly addressed
  - ... presupposes that one is willing to initiate a resolution procedure
  - Who holds TLAC/bail-innable debt?
- Why not equity? „Equity before,… TLAC in resolution“ fallacious comparison
Prevention: Structure

- Nostalgia and illusions – little analysis
- What should be the issues?
  - Governance of investment of surplus funds – inside (UBS) – arm’s length (Lehman) – hybrid (Landesbanken)?
  - Contagion – through contracts or internally?
  - Resolution – too complex to resolve? Cross-border issues – do we really need globally active banks with systemic operations in different countries?
  - Market Structure? How much competition? How to reduce excess capacity? How to deal with ruinous competition with natural-monopoly technologies?
Prevention: Liquidity

- Basel III: Liquidity coverage ratio
- What is liquid?
  - Government debt? (Greek?)
  - Covered Bonds?
  - Mortgage-backed securities?
- Politics:
  - Liquidity requirements reduce asset returns
  - Temptation to make exceptions
  - „anything but cash“
Liquidity: What should be the issues?

- Why is Wholesale so important?
- Money Market Funds as a result of regulatory arbitrage, initially Regulation Q, later evasion of deposit insurance
- Repo as a result of Bankruptcy arbitrage
- Why not cash?
- „But we need liquid assets!“ „Cash does not earn returns!“ And the costs to society?
Prevention: Shadow banking

- Money market funds, special purpose vehicles or hedge funds
- Special Purpose vehicles a source of systemic risk, tolerated by supervisors
- Money market funds a source of systemic risk, tolerated by supervisors
- Hedge Funds not much of a problem, well capitalized (30% equity and more).
Prevention: Equity

- Equity requirements improve liability and incentives without interfering with the bank’s actual business
- Equity reduces systemic risk, in particular risk from firesale contagion – multipliers for deleveraging are smaller
- Basel III has not made much of a difference
Lack of Equity

- Basel II had reduced regulatory capital quite dramatically
- „10 % core equity“ meant 2 to 3 % of total assets
- Deleveraging multipliers enormous
- Solvency problems arise easily
- ... And give rise to runs... As in the case of Lehman Brothers
Fallacies, Irrelevant facts and Myths: The Bankers' New Clothes

- Squam Lake Report: Do not ask for more equity because debt is needed to discipline bankers
- Gorton et al.: Banks must fund with liquid debt

Admati et al. 2010:
- Fallacies: Outright nonsense
- Irrelevant facts: Confusion between private and social costs of bank equity
- Myths: Theoretical models that have never been compared to real world experience
THE BANKERS’ NEW CLOTHES

What’s Wrong with Banking and What to Do About It

ANAT ADMATI & MARTIN HELLWIG
Equity requirements are key.

Banks should be forced to fund with much more with equity than they currently do, i.e., borrow relatively less and use relatively more of their own funds.

Equity requirements should NOT be calibrated (downwards) to account for purported differences in asset risks.

Proposal: 20 – 30 % of total assets (no netting)
Assessment of the Crisis

- The crisis has not one cause, but several
- Bad Loans: Real estate, sovereign
- Excessive leverage and maturity transformation
- Excessive Interconnectedness
- Flawed financial system architecture generating a downward spiral based on the interplay of asset price declines, fair-value accounting, inadequacy of bank capital, deleveraging, asset price declines....
Our recommendation

- Equity = 20 – 30 % of total assets would reduce deleveraging multipliers
- Risk weighting only to be used to raise the requirement
- ... As well as solvency suspicions
- ... And thereby reduce liquidity risks.
- At this equity level, implicit subsidization of banks through (unspoken, but effective) government guarantees would play a smaller role
- Moreover, liability of decision makers for the consequences of their actions would be better
What do we mean by „20 – 30%“

- Move to a system of graduated interventions:
  - No payouts below 30 %
  - Recapitalization below 20 %
- Accounting issues: Derivatives, Asset valuations, etc.
- Role of market values: legally problematic, but very relevant information
- .... Except: market values may be inflated by the default option
“A dollar in capital is a dollar not working in the economy"

Confusion: Equity – Cash Reserve

What is “equity“?

Kate makes a downpayment of $ 30.000 on a $ 300.000 house – equity .... Not cash!

Leverage effects: If the value of the house goes up by 10 %, Kate earns a return of 100 % of her equity

... and if it goes down by 10%?

How big is the leverage effect at 3 % equity?
„Equity requirements lower bank lending and growth“
And the fourth quarter of 2008???
If equity today is fixed and given, a higher equity requirement today lowers bank lending today
(„Banks are where the money is“!)
... but reduces the banks’ exposure to losses next year and raises bank lending next after losses next year
Requirement smoothes the time path
„If equity requirements are doubled, bank lending is cut in half“

Bank lending or investments in toxic securities?

Assumption: Equity is fixed and given.

If the bank is profitable, it can retain earnings or issue new shares.

... but it does not want to do that because shareholders would suffer

... as some of the benefit goes to creditors and taxpayers
„Where would all this equity come from?“

If banks issue equity and use the proceeds to buy shares and other securities, the sellers of those securities get cash.

No more than a realignment of securities ownership patterns

... As with the appearance of a stock fund
Problem of transition

- And if banks are unprofitable?
- Europe has too much banking capacity
- Evidence: In some markets (wholesale, covered bonds) you cannot make money unless you gamble (Dexia, Hypo Real Estate, Landesbanken, Investment Banks)
- Europe has too many zombies; losses from real estate, government, shipping loans still hidden
- Zombies use ECB money to fund governments and to speculate in markets, little lending
- A cleanup is needed
Higher equity requirements will raise the funding costs of banks because the required return on equity is higher than the required return on debt. The difference in required returns reflects a difference in risks. With more equity, the return per $ in equity is less risky and the required rate of return is lower. Under some conditions, funding costs are independent of the funding mix. Except that higher equity might reduce subsidies from taxpayers.
"Higher equity requirements harm shareholders by lowering ROE"

ROE - Return on Equity is a random variable

If the realization of ROE is low, the sentence is false.

Average ROE is likely to go down but so is risk!

ROE does not measure performance unless you correct for leverage and risk

Incentive systems that are based on ROE induce gambling and fraud (mark-to-model, LIBOR)
Shareholders` Interests

- Higher equity requirements harm shareholders by reducing taxpayer subsidies.
- Debt Overhang Effect: Shareholders also dislike „dilution“ from new shares if the new money benefits creditors by making the debt safer.
- A higher equity requirement in the form of a ratio provides them with incentives to sell safe assets in order to reduce junior debt, which makes incumbent senior debt holders pay part of the cost (Europe 2011/12).
- Distinction social versus private costs.
„We cannot have stricter regulation than others – or our banks will suffer in global competition“

It would have been good for German or Swiss society if German banks or UBS had been less „competitive“

Competitiveness on the basis of government subsidies and guarantees is economically harmful

The global economy is unlike the olympics

No national interest in the „competitiveness of our banks“ – only in the proper use of resources

Are all those physicists in banks well used?
If competitive success of banks is due to their imposing costs on the economy, should we admit that just because banks elsewhere are allowed to do the same?

If a chemical company pollutes a river, .... Should we admit that just because its competitors in Delaware are allowed to pollute?
Why regulation?

- Banking regulation is necessary to reduce the fallout from risks in banking on the rest of the economy
  - ... risk for payments infrastructures, market making infrastructures
  - ... costs for taxpayers
  - ... costs for the economy
- Equity requirements improve liability
- ... and reduce bank vulnerability
- .... and systemic feedback effects
Appendix: The crisis
Insufficiency of Bank Equity I

- Practically no “Free” equity
- Write-Downs induce an immediate need for corrective action
- Corrective Actions:
  - Recapitalization
  - Deleveraging
- Deleveraging enhances sales pressures in markets, lowers market prices even further
- Induces further write-downs at other banks, etc.
Insufficiency of Bank Equity II

- With equity amounting to 1 - 3 % of unweighted assets, two problems arise:
  - Multipliers for Deleveraging are exorbitant
  - There quickly are problems with solvency
  - Doubts about solvency endanger funding
  - „Runs“ Problem
  - Examples:
    - Bear Stearns, Lehman Brothers
    - Europe in 2011
Prehistory

- 1988 Basel I: 8% equity requirement for (ordinary) credit risks
- 1993: First Proposal for equity requirements for market risks (Standard approach)
- 1993-1995: Regulatory Capture by Sophistication: “We understand much more than you do about risk management and risk control”
- 1995: Revised Proposal for equity requirements for market risks (Standard Approach + model based approach)
- 1996: Amendment of Basel I for Market risks
- 1996 – 2005: Discussion about Basel II
Critique of the Model Based Approach 1

- Model Based „Economizing on equity capital“ has been a reason why solvency became an issue so quickly
- 10 % “Core Capital” or 1 – 3 % of the balance sheet – which number is more meaningful?
- ... in the crisis, we have seen the realization of risks that had not been accounted for in the models!
Critique of the Model Based Approach 2

- ... Correlations of MBS due to a common dependence on the same underlying factors (Interest Rates, Real Estate Prices)
- ... Correlations between counterparty credit risks and underlying risks in hedge contracts
- ... system risk exposure due to excessive maturity transformation and leveraging at investment banks, conduits, etc.
Critique of the Model Based Approach 3

- These deficits are fundamental:
- Time series are nonstationary, some of them much too short to provide a reliable basis for statistical analysis (contrast the papers of the Basel Committee on Backtesting!)
- Credit risks are endogenous
- ... and change over time ... unobservably
- Correlations of underlying and counterparty credit risk can hardly be measured
- Incentives for better models are missing
A Cynical Interjection

- Risk-based capital regulation treats sovereign debt as riskless
- Funding risks of loans in the bank book are overlooked
- Correlations between credit risks in the bank book are overlooked
Conceptual Deficits Facilitate Capture

- "... surely you agree that a system of capital regulation with risk calibration is better than one without“
- Conceptual deficits induce helplessness in the face of such statements
- If only I knew what capital regulation is supposed to be doing!!!
Conceptual Deficits of Bank Capital Regulation

Four Deficits:

- The objectives of capital regulation are not specified
- ... nor is there an account of how the regulation will serve those objectives
- Neglect of the dynamics of regulation
- Neglect of systemic interdependence
Conceptual Deficits of Bank Capital Regulation: Objectives

What is the purpose of capital regulation?

- Equity as a buffer against losses
- Equity as an incentive mechanism to reduce gambling for resurrection
- Equity requirements as a basis for supervisory intervention in advance of an insolvency

- All three aims are usually mentioned, but conflicts and tradeoffs are not discussed
Conceptual Deficits of Bank Capital Regulation: Objectives

- **BCBS 180:**
  - **Regulatory Minimum:** The amount of capital a bank needs to be regarded as viable by creditors and counterparties.
  - **Buffer:** The amount needed to withstand shocks so that they do not go below the regulatory minimum.

- No notion of externalities
- No notion of endogeneity of creditor attitudes
Conceptual Deficits: Dynamics

- All theoretical arguments come from a two period model with financing and investment decisions in period 1 and returns coming due in period 2.
- In such a model, equity capital is a buffer and reduces incentives to gamble.
- What are the effects of capital regulation in a multi-period world?
In a multi-period world, capital requirements are not just imposed *ex ante*, but also *ex interim*, after the bank has acquired a history and when it is sitting on previously acquired assets.

How is the regulation applied *ex interim*? E.g. what are the dynamics of reaction to intervening losses?

Practice: Requirements must be satisfied at each instant!
Conceptual Deficits: Dynamics

- Paradox of Regulation: Regulatory capital does not serve as a buffer because it is needed to satisfy the regulator.
- Without “free” capital, one must react to losses by recapitalizing or deleveraging.
- In malfunctioning markets, sales of assets below discounted present values of returns harms solvency!
- Why is there no discussion about the dynamics of adjustment after losses?
Conceptual Deficits: Dynamics

- Paradox of Regulation: In an intertemporal setting, the anticipation of future capital requirements can enhance risk taking incentives
  - Heads, I win and have additional equity and can grant 12.5 times (50 times?) that many more loans
  - Tails, the taxpayer/depositor loses!
Conceptual Deficits: Systemic Interdependence

- Banking Regulation and Supervision neglect systemic interdependence.
- Focus on the individual institution (the target of the underlying legal norms)
- However: In the past twenty years there have been many instances where all banks satisfied regulatory requirements and suddenly there was a banking crisis!
The notion that you can control solvency risks by looking at each individual institution in isolation neglects the problems that arise from correlations of underlying and counterparty risks, from system risk exposure to the behaviour of others, finally also the problems that stem from the insufficient empirical basis for measuring correlations.
Conceptual Deficits: Systemic Interdependence

- When considering corrective actions, system interdependence is also neglected.
- If all banks have problems at the same time, e.g. because of common exposure to an interest rate shock, corrective actions occur simultaneously and must affect market prices.
- Deleveraging depresses market prices and has negative effects on the solvency of other institutions!
Systemic Risk and Macro Risk

- **Systemic Risk:**
  - Risk to the system due to common exposure?
  - Risk to the economy from the system?
  - Risk to the system from systemic interdependence?

- **Systemic Interdependence:**
  - Information contagion
  - Dominos through contracts and loss of contracting opportunities
  - Dominos through fire sale effects on asset prices
  - Loss of market making functions
Systemic Risk and Macro Risk

- Protection against macro risks by hedging
- ... Can just be a way of moving these risks elsewhere
- .... to possibly get them back through correlated counterparty risks!

- Enhancing exposure of others?
- Hiding risks in correlations?
Conceptual Deficits: Systemic Interdependence

- Macroprudential elements to capital regulation are welcome but should not be based on illusions about our ability to measure.
- As yet there is no theoretical or empirical analysis of what the effects of the regulation are or will be.
- Such an analysis requires concepts of general-equilibrium theory (not just risk management methods!) in order to encompass changes in markets.
“... surely you agree that a system of capital regulation with risk calibration is better than one without”

Lecture BoE 2000: “Of course the proposed system for Basel II is much better than Basel I .... just as the Soviet Union’s five-year plans under Breshnev were much better than under Stalin!”

They talk about higher equity requirements for riskier positions and mean lower equity requirements for positions that they claim are not risky.