Macroeconomic management and financial regulation in core countries and the periphery

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Basel III as Anchor for Financial Regulation Is it Adequate, Feasible and Appropriate? Developed and Developing Countries Perspectives

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The context of the Basel Accords

- International standard (soft law) initially born to deal with internationally active banks
- Consolidation and home-host problem (Basel Concordat, ….)
- Regulatory level playing field based on common prudential principles and rules
- Minimum standard, which may be strengthened and/or complemented with other regulatory requirements at national level
- Later extended to all types of banks, although with different degree of regulatory complexity

Changes introduced by Basel III

Basel III strengthens the 3 Capital Pillars of Basel II and introduces a new Pillar for Liquidity

	Capital					Liquidity
	Pillar 1			Pillar 2	Pillar 3	
	Capital	**Risk coverage**	**Containing leverage**	**Risk management and supervision**	**Market discipline**	**Global liquidity standard and supervisory monitoring**
All banks	Quality and level of capital Capital loss absorption at the point of non-viability Capital conservation buffer Countercyclical buffer	Securitisation Trading book Counterparty credit risk Bank exposures to CCPs	Leverage ratio	Supplemental Pillar 2 requirements in particular for off-balance sheet exposures, risk concentrations, compensation practices, stress testing	Revised Pillar 3 disclosure requirements for securitisation, off-balance sheet vehicles, components of regulatory capital, etc.	Liquidity coverage ratio Net stable funding ratio Principles for Sound Liquidity Risk Management and Supervision Supervisory monitoring
SIFIs	Methodology to identify SIFIs Additional requirement of common equity in the range of 1% - 2.5%					

Basel III – Minimum capital requirements

- Given the basic equation

$$\frac{\text{Capital}}{\text{Risk-weighted assets}} \geq c_{min}\,\%$$

- The modifications concern:
  - Definition of capital
  - The minimum level of capital ratio
  - Risk-weights

Basel III – Minimum capital requirements

New definition of capital (quality)

Total capital = Tier 1 + Tier 2

Tier 1 Capital = Common equity Tier 1 + Additional Tier 1

- No list of instruments but criteria for inclusion. Roughly:
  - Common equity Tier 1: common shares, retained earnings, disclosed reserves
  - Additional Tier 1: includes unsecured perpetual hybrid instruments, junior to subordinated debt
  - Tier 2: unsecured subordinated debt, minimum maturity of 5 years

- Non-common equity capital instruments must include contractual terms to absorb losses in case of bank crisis

Basel III – Minimum capital requirements

New quantitative requirements (within parentheses Basel II requirements)

	Common Equity Tier 1 (after deductions*)	Tier 1 Capital	Tier 2 Capital	Total Capital
Minimum	4.5 (2.0)	6.0 (4.0)	2.0 (4.0)	8.0 (8.0)
Conservation buffer	2.5			
Minimum plus conservation buffer	7.0	8.5	2.0	10.5
Countercyclical buffer range	0 – 2.5			

* Deductions mainly refer to immaterial components.

Introduction of a minimum leverage ratio: Tier 1 capital as 3% of assets including off-balance sheet exposures. Backstop to risk-based requirements to avoid outliers

Basel III - Capital Buffers

Conservation buffer

- 2.5% composed of common equity
- To smooth banks' idiosyncratic pro-cyclicality: banks are not obliged to raise new capital but they re-build the buffer by limiting distribution of earnings

Countercyclical buffer

- 0% – 2.5% of fully loss absorbing capital instruments
- To smooth system-wide pro-cyclicality
- It will be deployed by national jurisdictions when excess aggregate credit growth is judged to be associated with a build-up of system-wide risk to ensure the banking system has a buffer of capital to protect it against future potential losses
- Banks will be subject to restrictions on the distribution of profits if they do not meet the requirement

Basel III – Risk coverage

BIII keeps BII's standardised and advanced methods for measuring risks

Enhanced coverage for:

- Securitisation
  - Higher risk weights, already decided in Basel II.5
- Trading book
  - Higher risk weights, already decided in Basel II.5
- Counterparty credit risk
  - More stringent requirements for measuring exposures
  - Capital incentives for banks to use central counterparties for derivatives
  - Higher risk weights for exposures to other financial intermediaries

Basel III - Pillar 2

- Revised *Core Principles for Effective Banking Supervision*

- More stringent principles on:
  - bank's governance
  - risk management, with particular attention to off-balance sheet exposures, risk concentration and stress testing
  - sound compensation practices
  - accounting standards
  - supervisory colleges

- Pillar 2 adds large discretion to the one already included in Pillar 1

Basel III - Pillar 3

- Enhanced disclosures, particularly for:
  - securitisation
  - off-balance sheet vehicles
  - the components of regulatory capital

Basel III - Liquidity

- **Liquidity coverage ratio**:

$$\frac{\text{Stock of high quality liquid assets}}{\text{Net cash outflows over a 30−day time period}} \geq 100\%$$

- A bank must maintain an adequate level of unencumbered, high quality assets that can be converted into cash to meet its liquidity needs for a 30-day time horizon under an acute liquidity stress scenario specified by supervisors.

Basel III - Liquidity

- **Net stable funding ratio**:

$$\frac{\text{Available stable funding}}{\text{Required stable funding}} > 100\%$$

- *Available Stable funding* is defined as the sum of funding sources weighted according to their stability

- *Required stable funding* is the sum of uses of funds inversely weighted by their liquidity

- Going concern over a one-year time horizon under conditions of extended stress

- It aims to limit asset-liability liquidity mismatches

Basel III - Liquidity

Comments:

- Large supervisory discretion for crucial parameters
- The new liquidity requirements add new complexity and fixed costs for both supervisors and bank treasurers. *Inter alia*, complexity from the interaction between capital and liquidity requirements. Influence on the shape of the yield curve
- They does not address liquidity black holes typical of systemic crises
- As for capital, what appears to be a rule is in fact dominated by principles and discretion

Phase-in Arrangements (shading indicates transition periods)

	2013	2014	2015	2016	2017	2018	2019
Leverage Ratio	Parallel run 1 Jan 2013 – 1 Jan 2017					Migration to Pillar 1	
Minimum Common Equity Capital Ratio	3.5%	4.0%	4.5%	4.5%	4.5%	4.5%	4.5%
Capital Conservation Buffer				0.625%	1.25%	1.875%	2.5%
Minimum common equity plus capital conservation buffer	3.5%	4.0%	4.5%	5.125%	5.75%	6.375%	7.0%
Minimum Tier 1 Capital	4.5%	5.5%	6.0%	6.0%	6.0%	6.0%	6.0%
Minimum Total Capital	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
Minimum Total Capital plus conservation buffer	8.0%	8.0%	8.0%	8.625%	9.25%	9.875%	10.5%
Liquidity coverage ratio			60%	70%	80%	90%	100%
Net stable funding ratio						Introduce minimum standard	

Is Basel III Adequate, Feasible and Appropriate?

- I was also asked to consider the different perspectives for developed and developing countries
- The answer also depends on the more general context of financial regulation

We can try to answer looking at current discussions, classifying them under two headings:

- Accepting the global regulatory level playing field
- Opposing both the regulatory level playing field and unfettered global banking

Accepting the regulatory playing field

- *Are capital requirements strict enough?*
  - Higher than Basel III: Admati et al 2010; BCBS 2010; BoE 2010; Swedish Central Bank 2011
  - Calomiris: hidden risks [but Pillar 2?], market-oriented approach with true equity/risk-weighted assets at 10%
  - No analytical metrics to decide on the level of minimum capitalisation and of the additional buffers

- *Does Basel III weight too much on banks for complexity and compliance costs?*
  - Regulatory rulebook and supervisory handbook sum up to thousands of pages
  - Complexity = regulatory uncertainty, compliance costs and regulatory elusion
  - Disproportionate costs for smaller banks if they adopt advanced methodologies or higher capitalisation if they adopt standardised ones

Accepting the regulatory playing field

- *Are all countries able equip supervisors with the significantly large resources required by the complexity of Basel III?*

  - This has been a major preoccupation for the BCBS. Monitoring by IMF has shown it to be a real problem, also for many developed countries. Now the BCBS is studying ways to simplify the framework ….
  - Especially for large banks, complexity for both bank operations and regulation require large stable supervisory teams at each bank. Add to it the participation to supervisory colleges
  - Supervisory costs (at least partially) paid by banks. Do they dent into profits or into the cost of finance?
  - Political issue: a way to make supervisors toothless is by underfunding them
  - Remuneration and revolving doors

Accepting the regulatory playing field

- *How much do Basel principles and rules produce an international level playing field?*
  - Experience shows that the sum of national specific implementation, supervisory discretion and bank options produces widely different results for the definition of capital and assets (derivatives in particular) and for risk weights

RW, %	2008	2009
Europe	31.9	34.6
USA	67.1	67.7
Japan	47.4	45.3

  - Risk weights come from questionable statistical methods and calibrations

Accepting the regulatory playing field

- *Do the large discretional powers given to supervisors ensure time consistency?*
  - The light touch supervision that was criticised as one of the culprits for the recent crisis may appear again in the future

- *Should supervisors mix so deeply with risk measurements and risk management?*
  - Banks necessarily have to adopt the best existing quantitative and qualitative methods, knowing their deficiencies and that they walk on shifting sands. Why should supervisors give their seal of approval (Pillar 2) to such methods?
  - Calomiris on hidden risks: hidden also from supervisors? Yes
  - An increasing number of people, also among regulators, would prefer instead of Basel a minimum un-weighted leverage ratio
  - This option would reduce, but not eliminate, the problem. Definitions of capital and assets. The latter, particularly, when fair value accounting is adopted

Accepting the regulatory playing field

- *Are many banks too big and complex to be effectively supervised under Basel III?*
  - The same supervisors know that this is impossible. This explains their present focus on crisis resolution. But increasing doubts on resolvability of SIBs

- *Does Basel III produce unwanted structural results?*
  - A regulation based on incentives with a myriad of *ad hoc* parameters necessarily produces structural results. E.g. shadow banking and the shift from the banking to the trading book

Accepting the regulatory playing field

- *Should we accompany Basel III with structural measures?*

  Some current proposals are seen as a way to make bank resolution easier:
  - Volcker rule
  - Fed proposal on subsidiarisation of US establishment of foreign banks
  - Ring fencing
  - Electrified ring fencing

  - In different degrees they help to lessen the size-complexity-interconnectedness problems
  - Stringent bank regulatory requirements plus strict limits to banking activity may increase the regulatory asymmetry between banks and non-bank institutions
  - Some of these proposals lead to the subsidiarisation of commercial global banking

Opposing the global regulatory level playing field

- *Do we believe that global banking, from which the Basel project started, must be maintained, at least in the present form?*
  - Several researches show that international financial flows in the form of debt (including bank loans) are the main culprits for volatility and bubbles
  - Establishments of foreign banks, especially if branches, mainly follow the needs of the parent bank, especially in periods of stress
  - Limiting foreign establishment in the form of subsidiaries, subject to local regulation, could help local supervisors to manage foreign exposures and adapt to idiosyncratic conditions
  - Subsidiarisation does not necessarily solve the problems coming from systemic banks: discussions on limiting bank size

Opposing the global regulatory level playing field

- *Is the level playing field appropriate given the structural heterogeneous economic and financial realities of different countries?*

  - The level playing field is not just Basel. WTO rules on financial services tend to oppose national ring fencing
  - Regional agreements on financial services may subject the interoperability to weaker countries accepting the rules of the stronger ones
  - The Basel approach implies that the flexibility coming from the risk-sensitive methodology is sufficient to adapt to all type of banks and all local conditions. This means quantitative, not qualitative adjustments.
  - Countries at different stages of development, with different development models, with different real and financial matrixes may require qualitatively different regulatory standards, with also different levels of complexity and compliance costs

  - In reality, the global level playing field does not concern just the uniform application of the same rules. Its primary goal may be seen as preventing countries to adopt structural measures significantly limiting the operations of global banks

Opposing the global regulatory level playing field

- *Should we invert the logic of current financial regulation, starting from local needs? Should national regulation be directed at the twin objectives of growth and stability, and not only to that of stability?*

  - Suppose a bank in a steady growth. Given its leverage, the rate of growth of its assets is equal to the rate of growth of its capital. If the bank retains part of its profits (RR), asset growth is equal to the retained share of the return on equity (*ROE*). Given the *ROA*, a minimum regulatory leverage ratio L_m determines the maximum rate of growth of assets (AG_M).

$$\boldsymbol{AG_M = RR * ROE = RR * ROA/L_m}$$

  - Even if we allow for the contribution of external capital, it should be safe to assume that in the long term this contribution would be linked to bank profitability, hence to the asset growth based on internal resources.

Opposing the global regulatory level playing field

- In terms of Basel's methodology

$$\mathbf{AG}_{\boldsymbol{M}} = \frac{\mathbf{RR} \cdot \mathbf{ROA}}{\mathbf{MCR} \cdot \boldsymbol{RWA}}$$

- From a growth perspective, it is not different if Lm is a straight leverage or the risk-sensitive Basel minimum capitalisation ratio: the parameters of the equation are in no way coordinated to produce a given growth of bank assets

- Looking at national banking systems, there should be some close relation between the growth of bank assets and the growth of nominal GDP ($\dot{Y}$).

Opposing the global regulatory level playing field

Averages 1992-2007, %; RR=0.5

	ROA	***AG_M* (%) for leverage ratio equal to**				***$\dot{Y}$***
		3% (Basel)	**6% (USA)**	**15% (Admati *et al.*)**	**25% (Admati&Hellwig)**	
Austria	0.43	7.1	3.6	1.5	0.8	3.7
Belgium	0.35	5.9	2.9	1.2	0.7	3.9
Denmark	0.79	13.1	6.6	2.7	1.6	3.8
Finland	0.98	16.2	8.2	3.3	1.9	4.4
France	0.32	5.3	2.7	1.1	0.5	3.3
Germany	0.22	3.6	1.8	0.7	0.4	2.6
Greece	0.89	14.7	7.4	3.0	1.8	4.8
Ireland	0.84	13.8	7.0	2.8	1.7	7.3
Italy	0.47	7.7	3.9	1.6	0.9	2.5
Netherlands	0.50	8.2	4.2	1.7	1.0	4.3
Norway	0.82	13.6	6.8	2.8	1.6	7.3
Portugal	0.66	10.9	5.5	2.2	1.3	3.7
Spain	0.71	11.7	5.9	2.4	1.4	4.2
Sweden	0.80	13.2	6.7	2.7	1.6	3.7
UK (Large)	0.69	11.3	5.8	2.3	1.4	4.5
USA	1.13	18.6	9.4	3.8	2.3	5.1
India*	1.00	16.7	8.3	3.3	2.0	12.0
Indonesia*	3.00	50	25.0	10.0	6.0	10.5
Korea**	0.6	10	5.0	2.0	1.2	4.2

* 2012, data from Central Banks. ** Average 2010-2012, Data from Bankscope and Central Bank

Opposing the global regulatory level playing field

- Fixing the leverage ratio on stability grounds the result may be bank assets outgrowing or constraining GDP growth.
- Given the imperfect correlation of ROA with the rate of growth of nominal GDP, one size does not fit all.
- Under a common capitalisation rule there is no mechanism capable of matching bank profitability with a sustainable local growth of nominal GDP so that it may either permit inflationary pressures and asset bubbles or constrain real growth.

- Minsky suggested taking the growth of nominal GDP as a policy target, $\dot{Y}_T$. The prudential variables of current regulation may be transformed into policy variables to be included in a consistent general policy set together with fiscal and monetary tools

$$\boldsymbol{AG = \frac{RR \cdot ROA}{L} \simeq \dot{Y}_T}$$

- According to Minsky, while *L* should be rather stable, calibrated for the average conditions of banks, acting on *RR* for individual banks permits to obtain results consistent with both the general objectives and idiosyncratic and local conditions.
- The dynamic path of the new equation avoids both bubbles and constraints on real growth.