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# Bank Capital Adequacy Standards: CRD IV & Europe's transition to Basel III

**Annual Conference of the Greek Society of Banking & Capital Markets Law, "The Reshaping of European Banking Law", Karatzas Hall, Athens, 30 May 2013**

# Financial requirements for banking institutions

- Liquidity requirements
- Initial (start-up) minimum capital
- Continuing solvency requirements
- Limits on large exposures

# Bank capital as the primary regulatory concern

- Role of capital in banking institutions
- “Capital”: one word, many meanings
- “Capital” as funds for investment purposes, as residual value of firm, as paid-up capital of company law, etc.
- “Bank capital” as a regulatory construct
- Shift of regulatory emphasis from liquidity to capital adequacy: reasons and implications
  - Abandonment of direct economic controls on banking (administered interest rates, structural controls, direct credit controls, etc), increased emphasis on competition & implications for bank profitability
  - Reduced significance of liquidity in an environment of active liability (& asset) management
  - Secular decline of bank capital positions
  - Need for internationally consistent regulatory tools

# Emergence of risk-related capital requirements: negotiation of the 1988 Basel Accord

- Old-style straight gearing ratios
  - Defects and perverse incentives of gearing ratios
- Early experiments with risk-related capital adequacy standards
- Reappearance & international triumph of risk-related capital adequacy standards in the early 1980s
- Basel Accord
  - Cross-border competitiveness & the quest for international comparability & consistency of prudential standards: the "level playing field" argument
  - Preparation & significance of the Basle Accord
  - Risk-related capital adequacy standards as the pivotal instrument of prudential control
  - Global dissemination

# Provisions of the 1988 Basle Accord

- Constituent elements of regulatory capital:
  - Core capital: equity capital and disclosed reserves
  - Supplementary capital: undisclosed reserves, revaluation reserves, general provisions, hybrid capital instruments, subordinated debt
  - Deductions from capital: goodwill, investments in unconsolidated subsidiaries
- Risk-weighting of bank assets:
  - Risk-weights as a reflection of: counterparty risk; country risk; & availability of collateral
  - Risk-weights for on-balance-sheet items: sovereign borrowers, banks & the rest!
- Incentives to shift risks outside the balance sheet and the regulatory response
  - Credit-conversion factors for off-balance-sheet exposures & calculation of exposures on derivative instruments
- Minimum capital-to-risk-weighted-assets ratio: 8%

# The Basel Accord in Europe

- European implementation of the Basel Accord:
  - Own Funds and Solvency Ratio Directives, 1989
    (sister directives of the 2nd Banking Directive)
- Regulation of banks' trading risks:
  - Capital Adequacy Directive, 1993 / Market Risk addendum to the Basle Accord, 1996 , introducing:
    - standard "building block" approach, but also
    - recognition of proprietary risk-measurement methodologies as an alternative (VaR models)

# Lobbying for change!

- “Methodological crudeness” of Basle Accord
  - Crude nature of the Accord’s risk-classes made possible a substitution of more for less risky assets
  - Uniform 100% weight for loans to the private sector forced banks to hold excessive capital against such exposures, especially in the prime end of their book
  - Financial innovation allowed banks to arbitrage between the two sides of their business (banking /trading), e.g. through securitisation
  - Resulting distortions in patterns of financial intermediation
- Increasing “dissatisfaction” of sophisticated international banks with the practical operation of the Accord:
  - Perceived inadequacy of 8% ratio for emerging markets’ banks
  - Distortions in competition between banks and the securities industry
  - Non-recognition of evolving risk-management techniques, justifying more lenient treatment

# The revamped covenant: Basel II

- Proposals for a new Basle / EU framework for capital adequacy
  - Original proposals of June 1999
  - Revised / detailed proposals of January 2001
  - Final text: Basel II, July 2006
  - European implementation: Dir 2006/48 (& Dir 2006/49) (the “CRD”)
- Dynamic of public consultation processes
- Objectives of Basel II & calibration of overall capital requirement
- The “three pillars” of Basel II
  - Pillar 1: Minimum capital requirements
    - New standardised approach: more sophisticated risk-weighting & credit rating agencies
    - Internal ratings-based approach
    - Credit mitigation techniques and asset securitisation
    - Capital charges for “operational risk”
  - Pillar 2: Supervisory review of banks’ capital adequacy
  - Pillar 3: Disclosures and market discipline

# Global financial crisis, 2007–

- Financial innovation, macroeconomic imbalances & other reasons of the crisis
  - “Originate-and-distribute” banking & bankers’ incentives
  - Role of credit-rating agencies
  - Excessive reliance on the interbank market for liquidity
  - Macroeconomic (monetary & fiscal) policy stances
- Policy responses
  - Fiscal stimuli
  - Central bank lending of last resort / liquidity-enhancing policies
  - Bank bailouts
  - Regulatory reforms

# Regulatory responses to the crisis

- Sundry regulatory “lessons” of the global crisis
  - Excessive reliance on credit rating agencies, etc
  - Procyclicality of capital regime
  - Absence of liquidity regime
  - Absence of macroprudential perspective
  - Incentive issues in bank management (corporate governance of banking institutions, executivie compensation)
  - Imperfect scope of regulatory net
  - Incoherent crisis management (bank resolution / safety-net) arrangements
- A motley of partial improvements:
  - Basel III
  - Dodd-Frank
  - European legislative initiatives

# Basel III: key components

- Dec 2010: two BCBS papers:
  - "Basel III: A global regulatory framework for more resilient banks and banking systems" (revised June 2011)
  - "Basel III: International framework for liquidity risk measurement, standards and monitoring"
- Key components:
  - Review of Basel II system of minimum capital requirements
  - Two new capital buffers, on top of basic capital adequacy requirement
  - Non-risk-weighted capital requirements: leverage ratio
  - Measures to correct the pro-cyclicality of minimum capital requirements
  - Two new liquidity ratios: moving beyond capital adequacy!
- Gradual implementation of new norms: 1 Jan 2013 through 1 Jan 2019

# Implementation of Basel III in Europe: CRD IV

- CRD II: Dir 2009/111
  - Management of large exposures
  - Quality of bank capital
  - Liquidity risk management
  - Risk management for securitised products
  - “Colleges of supervisors” for multinational banking groups
- CRD III: Dir 2010/76
  - Trading book
  - Re-securitisation
  - Supervisory review of remuneration policies
- “CRD IV”: Two very detailed, comprehensive instruments:
  - Regulation, applicable to credit institutions and investment firms, containing the substantive norms / implementing Basel III
  - Directive, applicable only to credit institutions, reenacting the rules on access to the business of banking and containing the procedural norms on banking supervision and free movement

# Recast capital adequacy requirements

- Recast of definition of own funds:
  - greater emphasis on common equity ("core Tier I" capital);
  - abolition of Tier III capital;
  - limit on inclusion of general provisions in Tier II capital: up to 1.25% of risk-weighted assets ("RWA")
- Enhanced risk coverage: inclusion of credit risks arising in the context of derivatives, repo agreements, etc
- Revised minimum capital ratios:
  - 4.5% core Tier I capital / RWA;
  - 6% Tier I capital / RWA;
  - 8% total own funds (Tier I + Tier II) / RWA

# Add-ons to the capital adequacy regime

- New capital buffers, on top of basic requirements
  - Capital conservation buffer: 2.5% core Tier I capital / RWA, as first line of loss-absorption
  - Countercyclical buffer: 0% to 2.5% core Tier I capital / RWA, to be called at national supervisors’ discretion in times of excessive credit expansion & drawn down in recessions
- Measures towards non-procyclical / countercyclical capital adequacy requirements
  - Correctives to excessive pro-cyclicality of capital requirements
  - Long-term data horizons to estimate probability of asset default
  - Downturn loss-given-default estimates
  - Forward looking provisioning: move towards expected loss approach
  - Stress tests
- Minimum 3% leverage ratio (core Tier I capital / total gross nominal exposure): parallel, non-risk-weighted capital requirements

# New risk-weighted capital adequacy ratios

**Calibration of the Capital Framework**

Capital requirements and buffers (all numbers in percent)

| | Common Equity Tier 1 | Tier 1 Capital | Total Capital |
|---|---|---|---|
| Minimum | 4.5 | 6.0 | 8.0 |
| Conservation buffer | 2.5 | | |
| Minimum plus conservation buffer | 7.0 | 8.5 | 10.5 |
| Countercyclical buffer range* | 0 – 2.5 | | |

Source: BCBS 189

# Liquidity requirements

- New liquidity ratios: a first in international banking regulation
- Liquidity coverage ratio (LCR): minimum 100% high-quality liquid assets / total net cash outlays of next 30 days
  - Regulators may allow banks to move below minimum LCR in times of stress
- Net stable funding ratio (NSFR) as longer-term structural liquidity ratio: minimum 100% of available stable funding / funding needs, as defined
- Supervisory observation of liquidity risk on the basis of:
  - contractual maturity mismatch;
  - concentration of funding;
  - available unencumbered assets;
  - LCR by significant currency;
  - market-related monitoring tools

# Transition to Basel III

**Phase-in arrangements**

(shading indicates transition periods - all dates are as of 1 January)

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | As of 1 January 2019 |
|---|---|---|---|---|---|---|---|---|---|
| Leverage Ratio | Supervisory monitoring | | Parallel run 1 Jan 2013 – 1 Jan 2017 Disclosure starts 1 Jan 2015 | | | | | 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% | 2.50% |
| Minimum common equity plus capital conservation buffer | | | 3.5% | 4.0% | 4.5% | 5.125% | 5.75% | 6.375% | 7.0% |
| Phase-in of deductions from CET1 (including amounts exceeding the limit for DTAs, MSRs and financials ) | | | | 20% | 40% | 60% | 80% | 100% | 100% |
| 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% |
| Capital instruments that no longer qualify as non-core Tier 1 capital or Tier 2 capital | | | Phased out over 10 year horizon beginning 2013 | | | | | | |
| | | | | | | | | | |
| Liquidity coverage ratio | Observation period begins | | | | Introduce minimum standard | | | | |
| Net stable funding ratio | Observation period begins | | | | | | | Introduce minimum standard | |

**Source: BCBS 189**

# Relaxation of the Liquidity Coverage Ratio?

- 06 Jan 2013: Group of Governors and Heads of Supervision (GHOS, the oversight body of the BCBS) endorses new arrangements for LCR:

  "The GHOS agreed that the LCR should be subject to phase-in arrangements which align with those that apply to the Basel III capital adequacy requirements. Specifically, the LCR will be introduced as planned on 1 January 2015, but the minimum requirement will begin at 60%, rising in equal annual steps of 10 percentage points to reach 100% on 1 January 2019. This graduated approach is designed to ensure that the LCR can be introduced without disruption to the orderly strengthening of banking systems or the ongoing financing of economic activity.

  The GHOS agreed that, during periods of stress it would be entirely appropriate for banks to use their stock of HQLA, thereby falling below the minimum. Moreover, it is the responsibility of bank supervisors to give guidance on usability according to circumstances."

- New LCR arrangements: http://www.bis.org/publ/bcbs238.htm
- Summary description of LCR: http://www.bis.org/press/p130106a.pdf
- Changes to original LCR: http://www.bis.org/press/p130106b.pdf

# Haldane’s critique: is the Basel methodology both excessively detailed and inaccurate?

- Andrew Haldane, exec. dir. for financial stability, BoE: robust call for more parsimonious regulatory approach. See speech of 31 Aug 2012, at www.bankofengland.co.uk/publications/Documents/speeches/2012/speech596.pdf
- Basel Accord (1988):
  - Brief (30 pages long), comprehensible
  - Covered credit risk only, based on five risk categories;
  - Operated as a backstop, not substitute for commercial risk decisions
- Starting with the Market Risk Amendment (1996):
  - Highly detailed/complex regulatory framework
  - Covers credit, market and operational risks on the basis of a large number of estimated parameters and capital charges
  - Incorporates credit ratings
  - Incorporates banks’ own risk models, blurring the distinction between commercial and regulatory judgments

- A flawed framework?
  - Opacity, reliance on great number of estimated parameters
  - Non-comparability across banks, raising issues of competitive equality
  - Supposed "accuracy" of risk estimations flounders due to the lack of sufficiently large and accurate series of historical data
  - Low predictive power: simple leverage ratio found to yield better results
  - Subsidises complexity! Distinct advantage to large/complex financial institutions (although this is now reversed, due to the resolution requirements for SIFIs, to be discussed next)
- Haldane: appeal for resort to simple rules of thumb (heuristics) / supervisory discretion / market discipline
- Leverage should play a greater role:
  - 3% ratio in Basel III: first ever internationally consistent ratio
  - But is it sufficient?

# Thank you for your attention

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