

**Institute of Advanced Legal Studies**  
School of Advanced Study  
University of London

Marco Verri

The Impact of Basel II on EU banks, procyclical effects  
and proposals

LLM 2011-2012  
**International Corporate Governance, Financial Regulation and  
Economic Law (ICGFREL)**

**THE IMPACT OF BASEL II ON EU BANKS,  
PROCYCLICAL EFFECTS AND PROPOSALS**

---

**LIST OF ABBREVIATIONS**

---

AMA	Advanced Measurement Approaches
ASRF	Asymptotic Single Risk Factor
BCBS	Basel Committee on Banking Supervision
CEBS	Committee of European Banking Supervisors
CEIOPS	Committee of European Insurance and Occupational Pensions Supervisors
CESR	Committee of European Securities Regulators
CFSP	Common and Foreign Security Policy
CRA	Credit Rating Agencies
CRD	Capital Requirement Directive
DTA	Deferred Tax Asset
EAD	Exposure At Default
EBC	European Banking Committee
EC	European Commission
ECAI	External Credit Assessment Institution
ECB	European Central Bank
ECOFIN	Economic and Financial Affairs Council
EFCC	European Financial Conglomerate Committee
EIOPC	European Insurance and Occupational Pensions Committee
EP	European Parliament
ESC	European Securities Committee
EU	European Union
DG MARKT	Directorate General Internal Market and Services
IRB	Internal Ratings-Based
LDC	Liberalizing Developing Countries
LGD	Loss given default
M	Maturity
PD	Probability of Default
RWA	Risk Weighted Asset
TFICF	Task Force on Impact of the new Capital Framework

## INDEX

<b>INTRODUCTION.....</b>	<b>4</b>
--------------------------	----------

### CAP. I

#### BASEL DEVELOPEMENT

<b>1. CHRONOLOGY OF BASEL REGULATORY CAPITAL REQUIREMENTS.....</b>	<b>6</b>
<b>2. HISTORICAL BACKGROUND.....</b>	<b>6</b>
<b>3. THE PURPOSE OF BASEL I .....</b>	<b>8</b>
<b>4. CREDIT RISK.....</b>	<b>9</b>
<b>5. BASEL ACCORD AND DEVELOPING COUNTRIES.....</b>	<b>10</b>
<b>6. SHORTCOMINGS OF BASEL I.....</b>	<b>11</b>
<b>7. BANKIG RISK.....</b>	<b>13</b>
<b>8. FROM BASEL I TO BASEL II.....</b>	<b>13</b>
<b>9. BASEL II MEASURES.....</b>	<b>14</b>
<b>9.1 FIRST PILLAR OF BASEL II.....</b>	<b>14</b>
<b>9.2 SECOND PILLAR OF BASEL II.....</b>	<b>16</b>
<b>9.3 THIRD PILLAR OF BASEL II.....</b>	<b>16</b>
<b>10. BASEL II WEAKNESSES.....</b>	<b>17</b>
<b>10.1 FALSE SENSE OF SECURITY.....</b>	<b>17</b>
<b>10.2 RELIANCE ON RATING AGENCIES.....</b>	<b>18</b>

### CAP. II

#### EUROPEAN LEGAL FRAMEWORK AND BASEL IMPLEMENTATION

<b>11. EUROPEAN LEGAL FRAMEWORK.....</b>	<b>20</b>
<b>12. IMPLEMENTATION OF BASEL II IN THE EU.....</b>	<b>24</b>
<b>13. WORLDWIDE IMPLEMENTATION OF BASEL II.....</b>	<b>25</b>
<b>14. STRUCTURE AND PURPOSE OF THE CRD.....</b>	<b>26</b>
<b>15. CRD KEY PROVISIONS.....</b>	<b>26</b>
<b>16. CRD IMPROVEMENTS .....</b>	<b>27</b>

### CAP. III

#### BASEL III/CRD PRO-CYCLICALITY AND IMPACT ON EU BANKS

<b>17. INTRODUCTION.....</b>	<b>30</b>
<b>18.SOURCES OF PRO-CYCLICALITY AND THEIR IMPLICATIONS FOR ANALYSIS.</b>	<b>31</b>
<b>19. CYCLICALITY OF MINIMUM REGULATORY CAPITAL.....</b>	<b>32</b>
<b>20. IMPACT OF CAPITAL REQUIREMENTS ON BANK LENDING.....</b>	<b>34</b>
<b>21. IMPACT OF CREDIT AVAILABILITY ON ECONOMIC CYCLE.....</b>	<b>36</b>
<b>22. MEASURES TO ADDRESS PRO-CYCLICALITY.....</b>	<b>38</b>

### CAP. IV

#### PROPOSALS

<b>23. INTRODUCTION.....</b>	<b>39</b>
<b>24. PROPOSALS.....</b>	<b>39</b>
<b>24.1 BASEL III/CRD.....</b>	<b>39</b>
<b>24.1.1 TO RAISE THE QUALITY, CONSISTENCY AND TRANSPARENCY OF THE                 CAPITAL BASE.....</b>	<b>41</b>
<b>24.1.2 ENHANCING RISK COVERAGE.....</b>	<b>42</b>
<b>24.1.3 LEVERAGE RATIO.....</b>	<b>42</b>
<b>24.1.4 PRO-CYCLICALITY.....</b>	<b>43</b>
<b>24.2 RISK SENSITIVITY SHOULD NOT MEAN TIME SENSITIVITY.....</b>	<b>43</b>
<b>24.3 LIQUIDITY MATTERS.....</b>	<b>44</b>
<b>24.4 SECURITIZATION, RATING AGENCIES AND THE SHADOW BANKING                 SYSTEM.....</b>	<b>45</b>
<b>24.5 COUNTERACT INTERBANK REGULATORY ARBITRAGE.....</b>	<b>48</b>
<b>24.6 MEANINGFUL DISCLOSURE.....</b>	<b>48</b>
<b>24.7 HEAD I WIN, TAILS YOU LOSE.....</b>	<b>49</b>
<b>BIBLIOGRAPHY.....</b>	<b>51</b>

## **INTRODUCTION**

New challenging days are coming, the financial crisis legacy is still with us and the threat of a global sovereign debt meltdown is looming over the horizon.

Rarely in the last one hundred years has the future looked so uncertain, newspapers' headlines have been turning from euphoric to depressing and back in the space of a week depending on the news arriving from financial markets.

What does it mean for regulation and more in general for policy makers? Who is to blame for the mess we ended up in? Is there still anyone out there who is fully confident that deregulation of markets will lead us to more efficiency and, as a result of that, to a better world?

It is probably fair at this stage to answer that human behaviour more than anything else has to be taken into account when answering these fundamental and hard questions. The principle based approach to regulation whereby one relies on financial institutions to set sensible limits to risk-taking provided that a bunch of numerical thresholds, the capital ratios, are not exceeded has left the door wide open for regulatory arbitrage and accumulation of bad assets on the banks' balance sheets.

The challenges regulators around the world are now facing are harder than ever, and that is to try and improve the resilience of our global financial system by means of stricter rules on capital without impacting economic recovery.

This survey tries to give an overview on the origination, development and causes of achievements and failures (apparently more of the second) of global financial regulation taking the European banking system as a case study. In particular we analyze the European legal structure where the regulatory framework is created, the kind of rules that have been agreed upon, the impact of those rules on European banks and the new proposals that are being discussed to overcome the shortcomings of the current regulation.

## CAP. I

### BASEL DEVELOPEMENT

#### 1. CHRONOLOGY OF BASEL II REGULATORY CAPITAL REQUIREMENTS:

July 1988 .....	Pubblication of Basel Capital Accord ('Basel I')
End of 1992 .....	Basel I goes into effect
January 1996.....	Basel Market risk paper
June 1999 .....	First consultative paper on a new capital adequacy framework
January 2001.....	Second consultative paper on Basel II
April 2003 .....	Third consultative paper
Mid 2004 .....	Publication of new Basel capital standards
September 2005 .....	Adoption of Basel II Directive by European Parliament
January 2007.....	Basel II goes into effect (begin the transition phase)
January 2008.....	Basel II goes into effect (mandatory appliacation and advanced approach
July 2009 .....	A package of measures to enhance the three pillars of the Basel II framework and to strengthen the 1996 rules governing trading book capital was issued by the newly expanded Basel Committee. These measures include the enhancements to the Basel II framework, the revisions to the Basel II market-risk framework and the guidelines for computing capital for incremental risk in the trading book.

#### 2. HISTORICAL BACKGROUND

During the 1990s, more than 50 years after the introduction of the strict regulatory framework known as “Depression-era Banking reform”<sup>1</sup>, governments around the World began to deregulate financial activities, by ceasing to direct credit, privatising state banks, removing interest rate ceilings, and allowing freer entry. Many countries also liberalised the capital account<sup>2</sup>. In most cases, deregulatory

---

<sup>1</sup> The 1933 Glass-Steagall Act, one of the main component of the reform, provided a cap on interest rates for bank deposits (Regulation Q), the separation of investment banking from commercial banking, and the creation of federal deposit insurance (FDIC)

<sup>2</sup> The capital account in a country's balance of payments covers a variety of financial flows—mainly foreign direct investment (FDI), portfolio flows (including investment in equities), and bank borrowing—which have in common the acquisition of assets in one country by residents of another. It is possible, in principle, to control these flows by placing

initiatives were not backed up by strong regulation, severe imbalances were allowed to build up after the regime change, and crises followed some time afterwards. Almost all the countries that liberalised experienced a financial crisis.<sup>3</sup> In 18 of the 26 banking crises studied<sup>4</sup>, the financial sector had been liberalised during the previous five years. Indicators of financial liberalisation were significantly related to the probability of banking crisis.<sup>5</sup>

Furthermore the extent of existing regulation in liberalising countries appeared to matter.

Only five of 34 countries experiencing a crisis had an adequate legal and supervisory framework, and that even in those cases, enforcement and supervision were weak.<sup>6</sup> An index of regulation and supervision strength has been set up, and found that in countries experiencing crises, the index was negatively correlated with the severity of crisis.<sup>7</sup> Of the 25 LDCs in their sample, only three strengthened prudential regulation before liberalising, with another three reforming at the same time.<sup>8</sup>

Since the Mexico crisis of 1994 and the Asian crises of 1997-98, the conventional wisdom has changed. The new consensus holds that, while capital account liberalisation and domestic liberalisation are the best policies in the long run, liberalisation reforms should be accompanied by efforts to improve the incentives of financial agents<sup>9</sup>, particularly by strengthening regulation and supervision (eg the Economic Communiqué from the G-7 Summit at Halifax, June 1995)<sup>10</sup>. It is, for example, a mistake to liberalise if large parts of the system are insolvent or likely to become so. Consequently, the policy recommendation is sequencing: not all capital flows should be liberalised before the legal and regulatory infrastructure is built. Some researchers<sup>11</sup> even claimed that the cause

---

restrictions on those flows going through official channels. Capital account liberalization, in broad terms, refers to easing restrictions on capital flows across a country's borders. This presumably results in a higher degree of financial integration with the global economy through higher volumes of capital inflows and outflows, in Eswar Prasad, Kenneth Rogoff, Shang-Jin Wei, and M. Ayhan Kose (2003), *Effects of financial globalization on developing countries*, IMF Occasional Paper 220, Washington.

<sup>3</sup> Williamson, J and Mahar, M (1998) 'A Survey of Financial Liberalization' Princeton Essays in International Finance No. 211, November

<sup>4</sup> Kaminsky, G L and Reinhart, C M (1998) 'The twin crises: the causes of banking and balance of payments problems' International Finance Discussion Paper No. 544, Federal Reserve Board of Governors

<sup>5</sup> Demirgüç-Kunt, A and Detragiache, (1997) 'The determinants of banking crises: evidence from industrial and development countries', World Bank Working Paper 1828

<sup>6</sup> Lindgren, C J, Garcia, G and Saal, M (1996) *Bank soundness and macroeconomic policy*, Washinton, D.C.: IMF, 65

<sup>7</sup> Ibid. at 7

<sup>8</sup> Demirgüç-Kunt, A and Detragiache, (1998) 'Financial liberalization and financial fragility', IMF Working Paper, 83

<sup>9</sup> Pesenti, P and Tille, C (2000) 'The economics of currency crises and contagion: an introduction', FRBNY Economic Policy Review, 121

<sup>10</sup> S. Fischer, (1995) "What does the Halifax communication imply for the international financial system?", lecture at Korea Institute of Finance, IFM edited version, available at <http://www.iie.com/fischer/pdf/Fischer168.pdf>

<sup>11</sup> M.Obstfeld, (2007) *International Finance and Growth in Developing Countries: What Have We Learned?*, University of California, Berkley press, 48.

of the dangerous imbalances arising in the 1990's were not the absence of regulation but rather a wrong ordering and timing of the agenda of liberalising measures.

But how should regulation be strengthened? Most commentators, painting on a large canvas, have been content to depict bank regulation impressionistically, and to assume that 'strengthening regulation' is a matter of implementing international standards, of which the most important is the 1988 Basel Capital Accord.<sup>12</sup>

### **3.THE PURPOSE OF BASEL I**

In 1988, the Basel I Capital Accord was created. The general purpose was to:

1. Strengthen the stability of international banking system.
2. Set up a fair and a consistent international banking system in order to decrease competitive inequality among international banks.

The way Basel I tackles these two aims is by establishing rules for quantifying the credit risk in the banking book of financial institutions and the market risk in their trading book and by imposing a capital requirement which is directly proportional to the amount of risk measured.

This means that in order to conduct businesses a financial institution must set aside capital buffers to protect creditors. Basel I defines these capital buffers as a mixture of two components (tiers):

*1. Tier 1 (Core Capital):* Tier 1 capital includes stock issues and declared reserves, such as loan loss reserves set aside to cushion future losses.

*2. Tier 2 (Supplementary Capital):* Tier 2 capital includes all other capital such as gains on investment assets in the banking book, undisclosed reserves, revaluation reserves, general provisions, hybrid instruments and subordinated term debt. Supplementary capital can be considered tier 2 capital up to an amount equal to that of the core capital.

*3. Tier 3 Capital (Introduced by the 1996 amendment)* includes short-term unsecured debts. The

---

<sup>12</sup>J. Hawkins and P.Turner (2000) 'International financial reform: regulatory and other issues', paper presented at a conference in Washington, D.C., 3-4 February; M. Brownbridge and C.Kirkpatrick (2000) 'Financial supervision in developing countries: a survey article' *Journal of Development Studies*, October; 13

exact composition of Tier 3 capital is at the discretion of central banks.

In the next paragraph we summarise the methodology for calculating the amount of credit risk in the banking book and market risk in the trading book as envisioned in the Basel Accord.

#### 4. CREDIT RISK

Credit risk is measured by means of a set of risk weights. Each item in the banking book contributes to the overall credit risk of the bank with a standalone risk that depends on the item book value, on a risk weight that depends on the nature of the asset (see below) and on another risk weight linked to the quality of the counterparty (see below). The term Risk Weighted Assets (RWA) refers to the sum of the standalone risks of all the items in the banking book. It follows from the latter definition that there is no degree of reduction in credit risk arising from so-called portfolio diversification effects.

##### **-Nature of assets**

The Basel agreement identifies three categories of assets:

1. On-balance sheet assets
2. Trading off-balance sheet assets which are mainly derivatives.
3. Non-trading off-balance sheet assets such as general guarantees, forward repurchase of assets or transaction-related debt assets .

##### **-Quality of counterparty**

The weights to be used for on balance sheet assets depend on the type of counterparty as summarised in the following table:

Risk Weight	Asset Class
0%	Cash and gold held in the bank. Obligation on OECD governments and U.S. treasuries.

	Claims on OECD banks.
20%	Securities issued by U.S. government agencies.
	Claims on municipalities.
50%	Residential mortgages
100%	All other claims such as corporate bonds, less-developed countries' debt, claims on non-OECD banks, equities, real estate, plant and equipment.

**Market risk** includes general market risk and specific risk. The general market risk refers to changes in the market values due to the movements in the overall level of market prices. An example of the latter is represented by the spectacular worldwide crash of the equities markets in the aftermath of the collapse of Lehman Brothers in October 2008)<sup>13</sup>. Specific risk refers to changes in the value of an individual asset due to factors related to the issuer of the security. There are four classes of economic variables that generate market risk: interest rates, foreign exchanges, equities and commodities. The market risk can be calculated in two different manners: either with the standardized Basel model or with internal value at risk (VaR) models. These internal models can only be used by the largest banks that satisfy qualitative and quantitative standards imposed by the Basel agreement.

## 5. BASEL ACCORD IMPLEMENTATION AROUND THE WORLD

The Basel Committee does not have the right to impose its own Accord to governments, and has never, at least explicitly, sought to do so. Nevertheless, more than 100 countries have implemented the Basel Accord in some form. There are several possible explanations: it is cheaper to pick one off the shelf than to start from scratch; financial markets reward governments and banks in countries where a Basel regime is implemented; the international official community (including the Basel Committee and the international financial institutions) encourages them to do so; and financial institutions from countries not complying with Basel standards find it difficult to enter important financial centres such as London and New York. Regulators in both developed and developing

<sup>13</sup> e.g. the recent spike in value of Bank of America shares due to the announcement by Warren Buffet on 26<sup>th</sup> of August 2011 to inject 5 billions of capital in the form of preferred shares and warrants, available at <http://dealbook.nytimes.com/2011/08/25/buffett-to-invest-5-billion-in-bank-of-america/>

countries may feel that they have little choice. Therefore, the Accord has acquired the status, if not the form, of customary international law, and those designing it bear the responsibilities of international law-makers.

From a developing country perspective, the OECD/non-OECD distinction in risk-weights adopted in Basel I is objectively crude, unfair and provides a distorting incentive for developing countries to seek OECD membership. Most importantly, the lower (20%) risk-weights attached to short-term loans for emerging markets created a bias in their favour whilst credit to non-OECD banks with over one year maturity was discouraged by a far higher (100%) risk weight. This contributed towards the 1997/8 Asian crisis wherein the devastating impact of rapidly reversible short-term lending was demonstrated.<sup>14</sup>

## 6. SHORTCOMINGS OF BASEL I

Basel I Capital Accord has been criticized on several grounds. The main criticisms include the following:

- **Limited differentiation of credit risk.** □ There are four broad risk weightings (0%, 20%, 50% and 100%), based on an 8% minimum capital ratio. The methodology of Basel I is too simple to address the activities of the most complex banking organizations. The calculation of risk-weighted assets is crude. For example, in the assessment of risk countries that are members of the Organisation for Economic Co-operation and Development (OECD) are considered to be much less risky debtors than non-OECD countries, which is true on average but not in all cases.

- **Static measure of default risk** □ The capital ratio (8%) is too simplistic and it is not an outcome of too much scientific analysis but rather of a political discourse. Also, the risk weights are set by intuition in the best case; or even according to the pressure of politically powerful groups in the worst case<sup>15</sup>.

- **No recognition of term-structure of credit risk** □ The capital charges are set at the same level regardless of the maturity of a credit exposure.

---

<sup>14</sup> R.Bonte (1999), “*Supervisory lessons to be drawn from the asian crisis*”, Basel Committee on banking Supervision, working papers No. 2 – June 1999, available at [http://www.bis.org/publ/bcbs\\_wp2.pdf](http://www.bis.org/publ/bcbs_wp2.pdf)

<sup>15</sup> G.J.Benston in H. M. Schooner, and M. W. Taylor, 2009. *Global Bank Regulation: Principles and Policies*. Elsevier, 2009.

- **Risk mitigation.** some collateral is recognized in Basel I, other collateral of equivalent quality is not. Even though loans assigned the same risk weight (for example, 100 per cent) can vary greatly in credit quality. The limited differentiation among degrees of risk means that calculated capital ratios are often uninformative and may provide misleading information about a bank's capital adequacy relative to its risks. The limited differentiation among degrees of risk creates incentives for banks to "manipulate" the system through regulatory capital arbitrage by selling, securitizing, or otherwise avoiding exposures. So banks indulged in "regulatory arbitrage": they disposed of risks for which Basel I required more capital than the market did, such as credit card loans or residential mortgages; and they retained assets for which the market demanded more capital than the regulators did.

- **Simplified calculation of potential future counterparty risk.** □The current capital requirements ignore the different level of risks associated with different currencies and macroeconomic risk. In other words, it assumes a common market to all actors, which is not true in reality.

- **Lack of recognition of portfolio diversification effects.** In reality, the sum of individual risk exposures is not the same as the risk reduction through portfolio diversification. Therefore, summing all risks might provide incorrect judgment of risk. A remedy would be to create an internal credit risk model - for example, one similar to the model as developed by the bank to calculate market risk. This remark is also valid for all other weaknesses.

These listed criticisms have led to the creation of a new Basel Capital Accord, known as Basel II, which added operational risk and also defined new calculations of credit risk. Operational risk is the risk of loss arising from human error or management failure. Basel II Capital Accord was implemented in 2007.

In conclusion the Basel I Capital Accord aimed to assess capital in relation to credit risk, or the risk that a loss will occur if a party does not fulfill its obligations. It launched the trend toward increasing risk modeling research; however, its over-simplified calculations, and classifications have simultaneously called for its disappearance, paving the way for the Basel II Capital Accord and further agreements as the symbol of the continuous refinement of risk and capital. Nevertheless, Basel I, as the first international instrument assessing the importance of risk in relation to capital, will remain a milestone in the finance and banking history.

## 7. BANKING RISK

Like any industry, banking involves specific business risks, but at the same time banks have a special position in the economy. Since banks act as lenders and borrowers (from their depositors) at the same time and function as intermediaries which provide businesses with funds, they play a crucial role in the overall economy with regard to the availability of these funds and the costs of financing. □□Of course, granting any type of loan involves the risk that the borrower will fail to meet payment obligations and that the lender will lose part or all of the loan amount: this is referred to as credit risk. However, as banks do not (or not only) operate using their own financial funds (i.e. their own equity, for example in the form of nominal capital) but also funds they manage for depositors as well as other funds, lending involves additional responsibilities. Naturally, banks are also aware of these responsibilities and thus make separate provisions for risk; at the same time, however, they also face national and international competition – and risk provisioning costs money. Therefore, the only alternative is to ensure sufficient capital ratios in the global banking system and to create as level a playing field as possible by defining internationally coordinated regulatory capital requirements.

## 8. FROM BASEL I TO BASEL II

With the Basel Capital Accord of 1988, the Basel Committee on Banking Supervision pursued precisely these intentions as well as the ultimate objective of increasing the stability of financial markets. The original accord was based on "actual" banking risk (i.e. credit risk), for which banks were required to hold a minimum capital standard of 8% of the volume of outstanding loans (in the form of risk-weighted assets). In 1996, the accord saw comprehensive extensions to include regulations which accounted for market risk.□□However, in light of ongoing developments and events in the banking industry, the Basel Committee began revising the original accord in 1999 with the following objectives:□

- to bring regulatory capital requirements closer to the actual risk profile of banks
- to cover all essential banking risks with theoretically grounded, flexible and operable requirements which create incentives for advanced implementation and to allow banks to use in-house methods.

Given these demands and the large number of new developments in banking, the new regulatory

capital requirements had to be more comprehensive and complex than the previous capital adequacy framework.<sup>16</sup> However, if possible, the simplest approaches under the new requirements should not significantly exceed the current capital accord in terms of complexity, and above all they should be neutral in terms of capital requirements, at least on average.

## 9. BASEL II MEASURES

The revision process of the Basel Accord started in 1999 and lasted five years. Finally, in 2004 it resulted in the new Basel II (BCBS, 2004b), which was to be implemented by 2007. In contrast to Basel I which is about 25 pages long, the new document accounts for full 239 pages and thus its detailed description is out of scope of this thesis.

Basel II is based on three pillars:

### 9.1 FIRST PILLAR OF BASEL II

The first pillar, which contains the capital requirements, is the most similar one to Basel I.

The Tier 1 and Tier 2 capital definitions remain the same, as well as the minimum ratios of 4% and 8%. What changes significantly is the definition of risk weighted assets, i.e. the denominator of the ratio, which now involves credit risk, market risk and newly also operational risk measures.

$$\text{CADt} = \frac{\text{Tier1 capital} + \text{Tier2 capital}}{\text{credit risk} + \text{market risk} + \text{operetional risk}} \geq 8\%$$

As has been mentioned, the market risk measures have been amended to Basel I in 1996 and do not change in Basel II. The credit risk measures, on the other hand, were modified significantly to allow for better risk sensitivity and the operational risk measure is a completely new concept.

---

<sup>16</sup> C. Sholz and J. Zentes (2006), “*Strategic Management: New Rules for Old Europe*”, Gabler, Betriebswirt.-Vlg, 143.

As to the credit risk regulation, instead of five broad categories of assets which were assigned fixed risk weights under Basel I, the new accord allows for two basic options .

1. **standardized approach** assigns the risk weights according to the external ratings provided by rating agencies

2. **internal rating based (IRB)** approach allows for usage of internal credit assessment models, subject to strict supervision of methodological and disclosure standards. This approach further allows for two options according to the extent of the banks' participation on determining the value of risk-weighted assets:

a. the **foundation** IRB approach, where the banks determine the probabilities of default and the other inputs are provided by the regulator,

b. the **advanced** IRB approach, where the risk calculation is solely the banks' responsibility and the regulator only validates the calculation process.

Regarding the measures for operational risk, the banks can again choose among more options, varying from the most standardized Basic Indicator Approach where the capital requirement is calculated as a 15% fixed percentage of gross income, to Advanced Measurement Approach, where the capital charge is calculated by the bank itself. However, as with the credit risk measures, the methods used for calculation need to meet certain standards and are reviewed by the regulator .

**Calculation method:** The calculation of capital requirements for a loan's default risk under Basel II requires four input parameters to the supervisory risk weight functions :

1. **Probability of default (PD):** Estimate of the likelihood of the borrower defaulting on his obligations within one year.

2. **Loss given default (LGD):** Loss on the exposure following the borrower's default, commonly expressed as a percentage of the debt's original nominal value.

3. **Exposure at default (EAD):** Nominal value of the borrower's outstanding debt.

4. **Effective maturity of the loan (M).**

As we said, "foundation" and an "advanced" version of the IRB approach is available, the difference in the two approaches being in the input variables for which the bank can use its own estimates. Both approaches rely on banks' PD estimates, but banks' internal estimates of LGD, EAD and M can only

be applied in the advanced IRB approach <sup>17</sup>.

## **9.2 SECOND PILLAR OF BASEL II**

The extended involvement of banks' internal processes demanded the regulators to change the approach to banks supervision. Instead of simply prescribing the rules and checking the capital levels, it is necessary to examine how well the banks assess risks. The second pillar defines the process of dialogue between the banks and the regulators and comprises of four main principles:

1. Banks should have a process for assessing their capital adequacy in relation to their risk profile.
2. Supervisors should review and evaluate banks' internal capital adequacy assessments and strategies, as well as their ability to monitor and ensure their compliance.
3. Supervisors should be able to intervene if they are not satisfied with the result of this process, they should expect banks to operate above the minimum regulatory capital ratios and they should have the ability to require banks to hold capital in excess of the minimum.
4. Supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum levels.

## **9.3 THIRD PILLAR OF BASEL II**

Providing enough information is necessary to ensure that the market participants can better understand the risk profiles of individual banks and adequacy of their capital positions.

Therefore, the third pillar aims to strengthen the market discipline through enhanced disclosure by banks which is required in several areas, mostly comprising the banks' methods for risk assessment and capital adequacy calculation .

Although the core set of requirements in the second and third pillars apply to all banks, it is clear that

---

<sup>17</sup> F. Dierick, F. Pires, M. Scheicher and K. G. Spitzer (2005), *The new Basel capital framework and its implementation in the european union*, European Central Bank occasional paper series, No. 42/December 2005, <http://www.ecb.int/pub/pdf/scpops/ecbocp42.pdf>

the rules ought to be more demanding for the banks using the internal approaches for risk assessment.

## 10. BASEL II WEAKNESSES

### 10.1 FALSE SENSE OF SECURITY

Belief in the design and effectiveness of Basel II as a near-complete system of bank regulation (that is, in lieu of traditional safety-and-soundness oversight by supervisors) may have lulled authorities and market actors—including banks themselves—into a false sense of security<sup>18</sup>. There may have been a common fallacy in play—the observation of general compliance with any regulatory regime suggests that the regime is effective in achieving its intended regulatory goal. Implementation might easily suggest that best practices are being followed.

Basel II acceded to the credence that banks inevitably know their risk exposures and know how to manage risks better than their regulators.<sup>19</sup> This presumed institutional advantage was derived in part from the proprietary data that banks had collected on asset performance,<sup>20</sup> and in part from the belief that banks could better afford the high brain-powered technicians needed for more sophisticated risk management. Moreover, banks were granted broad discretion to set their own risk preferences, with the understanding that riskier institutions would pay higher costs for the privilege through higher mandated capital. Thus, Basel II encouraged a wider range of banking activities and styles, since it was largely non-judgmental with respect to the absolute levels of risk banks assumed. Banks, in turn, engaged experts to develop risk management protocols that would attain the desired level of financial robustness. The national regulator verified the presence of such internally developed risk management systems, but did not verify their effectiveness, which was regarded as technically beyond the pale.<sup>21</sup> As such, Basel II played to the possibly excessive self confidence of the banks.

The imprimatur of compliance also assuaged any of the banks' or their regulators' incipient concerns about counterparty and broader systemic risk during the credit bubble leading to the Crisis. This was

---

<sup>18</sup> Paul Atkinson, *The Basel Capital Adequacy Framework Should Be Reconsidered* 12 (Group d'Economie Mondiale de Sciences Po, Policy Brief, 2008) available at [http://gem.sciences-po.fr/content/publications/pdf/Atkinson\\_BaselIII17112008.pdf](http://gem.sciences-po.fr/content/publications/pdf/Atkinson_BaselIII17112008.pdf).

<sup>19</sup> Harald Benink & George Kaufmann, *Turmoil Reveals the Inadequacy of Basel II*, FIN. TIMES, Comment 9 (Feb. 27, 2008), available at <http://www.ft.com/cms/0e8404a2-e54e-11dc-9334-0000779fd2ac.html>;

<sup>20</sup> H. M. Schooner & M. W. Taylor, (2010) *Bank regulation: principles and policies*, Elsevier 2010, 131

<sup>21</sup> Harald Benink & George Kaufmann, *Turmoil Reveals the Inadequacy of Basel II*, NAKED CAPITALISM BLOG (Feb. 28, 2008, 2:37 AM), <http://www.nakedcapitalism.com/2008/02/turmoil-reveals-inadequacy-of-basel-ii.html>

particularly apt for transnational systemic risk. Most major banking areas had implemented, or were in process of implementing, Basel II's requirements. As such, Basel II represented a significant harmonization in the field of bank regulation. Banks and other financial actors took comfort from the generalized presence of Basel II-compliant national regulation in assessing systemic risk.

The complacency engendered by Basel II resulted from two levels of trust. The first was the trust that other actors were following Basel II rules—and hence were minimally robust. The second, and more dangerous, source of complacency was the trust that Basel II had been designed well enough that when financial institutions complied, a systemic meltdown was so remote as to be virtually impossible. In hindsight, such a naïve view seems hard to imagine, yet banks and their regulators widely shared this view prior to the Crisis.

## 10.2 RELIANCE ON RATING AGENCIES

In the time leading up to the Crisis, credit rating agencies<sup>22</sup> failed to appreciate the risk of certain innovative financial assets. AAA credit ratings (the highest rating of credit worthiness) were passed out like candy. Nor did ratings reflect the heightening of correlated defaults during periods of financial stress. Further, ratings seemed to have been decoupled from any objective content, no longer expressing the probability of default and expected recovery rates upon. These informational elements (probability of default and loss given default) had quite different meanings when applied to certain complex financial products.

Basel II contributed significantly to banks' reliance upon credit rating agencies.<sup>23</sup> Basel II explicitly incorporated credit ratings in assigning capital adequacy requirements to the holding of particular assets. An obligation rated AAA required substantially less capital to hold than a B-rated obligation.

The accuracy of many pre-Crisis credit ratings of complex financial products seems doubtful. The Crisis was replete with examples of securitization vehicles' highly rated obligations becoming virtually worthless overnight. It is all too clear in hindsight that there were far too many AAA-rated

---

<sup>22</sup> The major credit rating agencies are Standard and Poors, Moodys, and Fitchs

<sup>23</sup> S.Claessens and G.Embrechts (2002), *Sovereign ratings, and transfer risk: external versus internal ratings*, available at <http://www.bis.org/bcbs/events/b2eacla.pdf>.

assets around.<sup>24</sup>

Credit enhancement was used frequently by banks and other originators of asset backed securitizations to “bulk up” ratings to investment grade, permitting risk-averse institutions to hold these assets, including other banks.

The inherent conflict-of-interest facing rating agencies contributed to the problem—credit rating agencies were hired by the very promoters who desired to sell the rated assets. But much of the power of credit ratings depended largely on their validation by external authority, such as their use by national banking regulators in administering Basel II’s requirements. No longer was a credit rating a mere opinion—under Basel II it justified a classification that might merit the holding of less regulatory capital. Basel II’s reliance on credit ratings created a strange conflict of interests between sellers and buyers of financial assets. Originators sought high ratings in order to enhance marketability and to increase asset sale prices. Asset purchasers benefit from higher ratings under Basel II because higher rated assets are assigned to baskets that require less capital to hold.<sup>25</sup>

## CAP.II

### EUROPEAN LEGAL FRAMEWORK AND BASEL IMPLEMENTATION

---

<sup>24</sup> Ann Lester,(2009) *Post-modern asset management: the credit crisis and beyond*, 14 , available at [http://www.jpmorgan.com/cm/Satellite?blobcol=urldata&blobheader=application%2Fpdf&blobkey=id&blobtable=MungoBlobs&blobwhere=1158551497355&ssbinary=true&blobheadname1=Content-disposition&blobheadvalue1=attachment;filename=Post-Modern\\_Asset\\_Management\\_Target\\_Date\\_Investing.pdf](http://www.jpmorgan.com/cm/Satellite?blobcol=urldata&blobheader=application%2Fpdf&blobkey=id&blobtable=MungoBlobs&blobwhere=1158551497355&ssbinary=true&blobheadname1=Content-disposition&blobheadvalue1=attachment;filename=Post-Modern_Asset_Management_Target_Date_Investing.pdf).

<sup>25</sup>J. Atik, (2010) *Basel II: A Post-Crisis Post-Mortem*, 19 *Transnational Law and Contemporary Problems*, Vol.19, 731.

## 11. EUROPEAN LEGAL FRAMEWORK

At the EU level the regulation and supervision of financial markets and financial services providers remains fragmented. European member states still have diverse regulatory and supervisory cultures, for example, with regards to the role of the state. They have retained a variety of regulations and supervisory systems with competences remaining at national level with parliaments, central banks or other supervisory institutions.

The fragmentation of financial regulation and supervision contrasts starkly with the expansion of the EU-wide financial markets and financial services network. Several banks now have a presence in multiple EU countries, conducting trans-border capital transfers, and trans-border selling of highly complex and risky financial products. The EU has facilitated liberalisation of financial services providers and of financial markets. Based on the Nice Treaty and the Lisbon strategy the principles behind this liberalisation have been stronger competition in EU markets, with the purpose of reducing financing costs and improving allocation of resources, thus boosting the global competitiveness of the EU's financial industry. An effort to compete with the US financial industry, which has been dominant in some big earning sub-sectors such as investment banking, has had an important influence on EU policies.

Before diving into the details of the European regulatory framework a synthetic and brief overview on the European institutions involved in the banking regulatory system.

The **European Commission** (EC) is the legal initiative taker (not always decision-maker) to liberalise financial services and to make them more competitive. The EC Directorate General Internal Market and Services, is in the driving seat to improve regulation and supervision of financial services at the EU level. A complex decision-making process - the Lamfalussy process<sup>26</sup> - has been put in

---

<sup>26</sup> Lamfalussy approach was set out by the Committee of Wise Men on the Regulation of European Securities Markets, chaired by Baron Alexandre Lamfalussy, in its "Final Report" dated 15 February 2001. In details:

### **The Lamfalussy approach:**

#### **Level 1**

Proposal for Community legislation advanced by the European Commission and adopted under the co-decision procedure by the Council and the European Parliament. The legislation takes the form of directives or regulations. It should be limited to framework principles and define the powers for the Commission to implement the necessary technical rules.

#### **Level 2**

The European Commission enacts legislation containing the technical details for the framework principles approved at Level 1. This requires the intervention of a regulatory committee under the "comitology procedure". These regulatory committees are chaired by the Commission and composed of high-level representatives from Member States. The ECB has observer status in the banking, securities and financial conglomerates

place at EU level to improve cooperation, convergence, harmonization or standardization of financial regulation and supervision. It has dealt with some important issues such as bank capital requirements, and transparency in the issuing and selling of shares and other equities<sup>27</sup>.

This complex framework of sometimes overlapping committees allows member states to influence the development and adoption of EU directives on financial services and financial markets. The EC has the right to propose directives, and the Council (ECOFIN) and the European Parliament (through the Economic and Monetary Affairs Committee) have co-decision rights to adopt them. Once a directive is adopted, the EC and the member states play an important role in implementation.

In the course of this complex decision-making process, the financial industry has a strong influence through its well-equipped informal lobby instruments as well as through the extensive official consultation set up by DG Market, the Lamfalussy Committees and the European Parliament. Other stakeholders, such as consumers, have much less influence. These together with academics and

---

committees.

The “Level 2” regulatory committees

Banking	European Banking Committee (EBC)
Securities and investment funds	European Securities Committee (ESC)
Insurance and pension funds	European Insurance and Occupational Pensions Committee (EIOPC)
Financial conglomerates	European Financial Conglomerates Committee (EFCC)

### Level 3

Level 3 committees are entrusted with the task of facilitating the day-to-day implementation of Community law with the goal of converging both supervisory practices and the application of Community legislation, and enhancing supervisory cooperation. Guidelines, interpretative recommendations, common standards or best practices may be issued, but these are not legally binding and implementation remains voluntary. Level 3 committees also assist the Commission in drafting the more technical provisions of the legislation enacted at Level 2. The supervisory committees are composed of high-level representatives from the competent national supervisory authorities.

#### The “Level 3” supervisory committees

Banking	Committee of European Banking Supervisors (CEBS)
Securities and investment funds	Committee of European Securities Regulators (CESR)
Insurance and pension funds	Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS)
Financial conglomerates	At present, there is no Level 3 committee

### Level 4

The European Commission is responsible for ensuring that Member States’ national law complies with Community law and, if needed, to take enforcement action. Legal action against Member States can be taken before the European Court of Justice. Strengthening enforcement is underpinned by enhanced cooperation between Member States, the regulatory bodies and the private sector.

In F. Dierick, F. Pires, M. Scheicher and K. G. Spitzer (2005), *The new Basel capital framework and its implementation in the european union*, European Central Bank occasional paper series, No. 42/December 2005, <http://www.ecb.int/pub/pdf/scpops/ecboep42.pdf>

<sup>27</sup> *ibid.*17

experts in financial markets, some of whom have grouped together, have maybe too often had their voices ignored by the political decision-makers.<sup>28</sup>

**European Parliament (EP)**, which represents the EU's citizens and is directly elected by them. The Parliament has three main roles:

1. Passing European laws - jointly with the Council in many policy areas. The fact that the EP is directly elected by the citizens of the EU helps guarantee the democratic legitimacy of European law.
2. Parliament exercises democratic supervision over the other EU institutions, and in particular the Commission. It has the power to approve or reject the nomination of commissioners, and it has the right to require the Commission as a whole to step down.
3. The power of the purse. Parliament shares with the Council authority over the EU budget and can therefore influence EU spending. It adopts or rejects the budget in its entirety.

**Council of the European Union**, which represents the individual member states; The Council is the EU's main decision-making body. Like the European Parliament, the Council was set up by the founding Treaties in the 1950s. It represents the member states, and its meetings are attended by one minister from each of the EU's national governments. Which ministers attend which meeting depends on what subjects are on the agenda. The EU's relations with the rest of the world are dealt with by the 'General Affairs and External Relations Council' which is also in charge for general policy issues, so its meetings are attended by whichever minister or state secretary each government chooses. The Council has six key responsibilities:

1. To pass EU laws - jointly with the European Parliament in many policy areas.
2. To coordinate the broad economic and social policies of the member states.
3. To conclude international agreements between the EU and other countries or international organisations.
4. To approve the EU's budget, jointly with the European Parliament.
5. To define and implement the EU's Common Foreign and Security Policy (CFSP) based on guidelines set by the European Council.
6. To coordinate cooperation between the national courts and police forces in criminal matters.

Most of these responsibilities relate to the Community domain - i.e. areas of action where the member states have decided to pool their sovereignty and delegate decision-making powers to the EU institutions. This domain is the 'first pillar' of the European Union.

The **European Central Bank (ECB)** has no legal mandate to regulate or supervise banks and other

---

<sup>28</sup> M.V. Stichele, (2008), , *Financial regulation in the european union; mapping EU decision structure on financial regulation*, report commissioned by Bretton woods project, available at: [http://www.eurodad.org/uploadedFiles/Whats\\_New/Reports/EUMapping\\_Financial\\_Regulation\\_FINAL.pdf](http://www.eurodad.org/uploadedFiles/Whats_New/Reports/EUMapping_Financial_Regulation_FINAL.pdf)

financial actors, or financial markets. Part of the ECB's mandate is to preserve financial stability and it has been active during the financial crisis since August 2007 based on its competence to provide liquidity to the EU financial markets. The ECB is involved in many EU structures and institutions in an advisory function and is legally mandated to provide information in support of action on financial stability.

The slow, faulty and diverse implementation and application of EU legislation by EU member states has many causes. The costs of regulation and supervision have always been considered too high and a risk to the competitiveness of EU member states' domestic finance industry. Some EU member states are home to many cross-border financial services providers. Others, which only host them, fear losing control over their financial industry and markets and their ability to defend their interests against large European financial conglomerates.<sup>29</sup> National supervisors cannot deal sufficiently with crossborder banks and conglomerates and no EU wide supervisory structure has been put in place, with a reliance only on voluntary cooperation agreements.

During the financial turmoil and government interventions of September and early October 2008, the weakness of this voluntary coordination structure became clear. Many governments first took national measures before gradually coordinating response from the ECOFIN meeting of 7 October 2008 onwards. Important agreed principles were not respected, such as: managing a cross border financial crisis in a way that takes account of the interest of other countries, sharing potential fiscal burdens, and coordinating public communications to the maximum extent possible. In addition, structures for a financial crisis resolution (e.g. clear legislation dealing with the liquidation of crossborder European banks and their securitization instruments) were not in place.

In summary the existing structures did not function to prevent the crash. On the contrary, as the main tendency of the EU's financial policy was to increase liberalisation, it contributed to the depth and impact of the crisis.

The financial crisis is having severe impacts in Europe and also beyond. Developing countries are suffering from a shortage of credit and reduced exports. The European banks that are operating in developing countries also pose a stability risk. In bilateral and multilateral free trade negotiations the EU has been pushing developing countries to open up their financial sector to the European financial

---

<sup>29</sup> *ibid* at 28

industry without guaranteeing effective regulation and supervision.

The financial and economic crises are yielding a major public debate about changes in policy and in institutional arrangements. This should lead to a change in attitude and new and better structures being put in place.

## **12.IMPLEMENTATION OF BASEL II IN THE EU**

Concurrent with the work of the Basel Committee, the EU drafted a legal instrument for implementing the Basel II framework agreement. The aim here was to formulate general EU regulations for capital standards in harmony with Basel II, while taking into consideration the specific conditions prevailing in the EU.

The EU directive (Document 12890/05 of 18th October 2005), which is based on the directive proposal (COM(2004)486) issued by the European Commission on 14th July 2004, was approved by the European Parliament on 28th September 2005 and by the Council on 11th October 2005. It is known as “CRD” (“Capital Requirements Directive”)<sup>30</sup> and forms the legally binding framework for national regulatory legislation for all credit institutions and securities issuers in the EU Member States. The Member States are obligated to implement the CRD as part of their national law<sup>31</sup>.

In this way CRD is the common framework for the implementation of Basel II in EU.

This directive is making significant changes to two existing directives that were implementing Basel I:

1. The Banking Consolidation Directive
2. The Capital Consolidation Directive

---

<sup>30</sup> The exact name of the document is: "Directives of the European Parliament and of the Council" Re-casting Directive 2000/12/EC of the European Parliament and of the Council of 20 March 2000 relating to the taking up and pursuit of the business of credit institutions and Council Directive 93/6/EEC of 15 March 1993 on the capital adequacy of investment firms and credit institutions."

<sup>31</sup> R. Trotz (2006), *Implementation of Basel II in the EU (CRD)/Property Valuation*, IVSC Information Paper, October 2006

It is interesting that CRD allows for ‘national discretions’ in a number of areas. This represents the biggest strength and weakness of Basel II.

In order to comply with Basel II in the European Union (EU), it is important to understand the unusual way in which the European Union works.

Basel II is a best practice. It is an Accord, not an Act. A general framework that gives many levels of freedom to national supervisors. The Basel Committee does not possess any formal supranational supervisory authority, and its conclusions do not have legal force.

### **13. WORLDWIDE IMPLEMENTATION OF BASEL II**

The Basel Committee has no legislative authority. Therefore, the framework agreement on “International Convergence of Capital Measurement and Capital Standards” passed by the Basel Committee in June 2004 and popularly known as Basel II is not legally binding. Basel II is only directly relevant for internationally operating banks that have voluntarily agreed to be bound by a so-called ‘Gentlemen’s agreement’.

The national regulatory authorities represented on the Basel Committee recommend the acceptance of Basel II in their countries as a framework for more far-reaching national regulations. Corresponding national implementations are carried out on a voluntary basis and in varying forms. Voluntary worldwide implementation of the regulations that goes beyond the national level is widely desired.

On the level of the European Union (EU), a legally binding implementation has been put through in the form of a directive.

### **14. STRUCTURE AND PURPOSE OF THE CRD**

The CRD comprises two newly drafted directives, Capital Adequacy Directive (CAD) and Banking Consolidation Directive (BCD), each of which is made up of articles with fixed principles and aims and annexes with detailed individual technical provisions.

In order to ensure that the directive is adaptable to market developments, modifications options are provided for in the case of the individual technical provisions.

It implements the revised Basel capital adequacy framework (Basel II) and applies it to all investment firms, building societies and banks. The CRD aims to reduce the probability of consumer loss or market disruption as a result of prudential failure. It will do so by seeking to ensure that the financial resources held by a firm are commensurate with the risks associated with the business profile and the control environment within the firm. The various amendments packages from the Commission attempt to strengthen the prudential framework for individual institutions and provide responses to financial stability concerns that arose during the banking crisis.

## **15. CRD KEY PROVISIONS**

Similarly to Basel II the CRD framework consists of three 'pillars', capital requirements, the role of supervisors and market discipline.

All firms were required to adopt the Basel Framework/CRD from 1 January 2007. At that point firms had to apply Pillar 2 and 3 but had a number of options regarding Pillar 1. Firms were able to choose between the basic indicator or standardised approach for operational risk and either the standardised approach or Foundation Internal Ratings Based approach (FIRB) or Advanced Internal Ratings Based approach (AIRB) for credit risk. Firms were also able to opt to move straight to the revised standardised approach for credit risk under the Basel II/CRD or remain on Basel I until 1 January 2008. Firms that opted to stay on Basel I for credit risk may have had a corresponding reduction in their Pillar 1 charge for operational risk. However, from 1 January 2008, when the Basel I method became invalid, all firms had to apply the standardised or the FIRB or the AIRB approach for credit risk and either one of the simple approaches or the Advanced Measurement Approach for operational risk.

The Directive contains various national discretions including a proportionate regime for 'limited licence' and 'limited activity' firms and their groups. These discretions allow operational risk capital requirements to be replaced by fixed overhead requirements for such firms and for 'limited' groups;

and the exemption from consolidated supervision. In addition, the Directive contains a number of national discretions that permit modification of the requirements for firms that are members of groups. Amendments to options and national discretions in the CRD generally, formed part of consultation by commission in 2009.<sup>32</sup>

## 16. CRD IMPROVEMENTS

The suggested measures, which form an integral part of the Commission's response to the financial crisis, will be the third set of amendments to the Capital Requirements Directive ('CRD IV').

They will supplement the two sets of revisions adopted by the Commission in October 2008 ('CRD II') and July 2009 ('CRD III').

**CRD II**, The (2008 or CRD II) amendments to the CRD included: (i) large exposures; (ii) hybrid capital instruments; (iii) supervisory arrangements ; (iv) liquidity risk management; (v) securitisations; (vi) the waivers for banks organised in networks; and (vii) adjustments to certain technical provisions.

It was adopted by Member States and the European Parliament in September 2009 and will enter into force on 31 December 2010.

**CRD III** Further packages of amendments emerged during 2010. The CRD III amendments to the CRD included: covering amendments addressing capital requirements for the trading book and re-securitisation, disclosure of securitisation exposures, and remuneration policies, is currently being negotiated in the European Parliament and the Council.

In 2009, G-20 leaders committed in London and Pittsburgh to build high quality capital, strengthen liquidity risk requirements , mitigate pro-cyclicality, discourage excessive leverage as well as to strengthen liquidity risk requirements and forward-looking provisioning for credit losses.

---

<sup>32</sup> Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directives 2006/48/EC and 2006/49/EC as regards capital requirements for the trading book and for re-securitisations, and the supervisory review of remuneration policies, Brussels, COM(2009)final, available at [http://ec.europa.eu/internal\\_market/bank/docs/regcapital/com2009/Leg\\_Proposal\\_Adopted\\_1307.pdf](http://ec.europa.eu/internal_market/bank/docs/regcapital/com2009/Leg_Proposal_Adopted_1307.pdf)

To respond to these commitments, the Commission and Basel Committee on Banking Supervision have been working together on developing the respective amendments to the Basel II framework and the new global liquidity standards, including on assessing their impact.

Consequently, the possible changes to the CRD set out in the Commission's consultation document are closely aligned with the expected amendments to the Basel II framework and the introduction of a global liquidity standard as suggested by the Basel Committee in its December 2009 consultation.

The Commission strongly supports the work of the Basel Committee in these areas. In order to achieve the dual objective of improving the resilience of the global financial system and ensuring a level playing field, it is imperative that the more robust set of prudential capital requirements be applied consistently across the world.

**CRD IV** The EC has launched a public consultation on further possible changes to the CRD aimed at strengthening the resilience of the banking sector and the financial system as a whole.

The proposed changes, known as 'CRD IV', following two earlier Commission proposals amending the CRD, relate to seven specific policy areas<sup>33</sup>, most of which reflect commitments made by G20 leaders at summits, as mentioned, in London and Pittsburgh during 2009. All interested stakeholders are invited to reply to the consultation, indicating what impact the potential changes would have on their activities. The results will feed into a legislative proposal scheduled for the second half of 2011.

A further stimulating question could be whether the Commission is considering the cumulative impact of all these changes and whether it would consider delaying their application if the economic conditions do not improve quickly.

The Commission is well aware that the cumulative effect of the various contemplated measures

---

<sup>33</sup> The seven areas of potential action are as follows: **1. Liquidity standards:** Introducing liquidity standards that include a liquidity coverage ratio requirement underpinned by a longer-term structural liquidity ratio. **2. Definition of capital:** Raising the quality, consistency and transparency of the capital base. **3. Leverage ratio:** Introducing a leverage ratio as a supplementary measure to the Basel II risk-based framework based on appropriate review and calibration. **4. Counterparty credit risk:** Strengthening the capital requirements for counterparty credit risk exposures arising from derivatives, repos and securities financing activities. **5. Countercyclical measures:** A countercyclical capital framework will contribute to a more stable banking system, which will help dampen, instead of amplify, economic and financial shocks. **6. Systemically important financial institutions:** The Commission is consulting on appropriate measures to deal with the risk posed by such institutions. **7. Single rule book in banking:** The Commission is consulting on areas where more stringent requirements might be necessary. In addition, the Commission is consulting on the appropriate prudential treatment of real estate lending. This is part of the Commission's commitment to create a single rule book in Europe.

might be substantial, and that this could have implications for the capacity of banks to provide lending to the real economy.

So although tighter prudential rules are needed, as clearly demonstrated by the crisis, there is a risk that imposing higher capital requirements and new liquidity standards while the system is still weak could slow recovery in the real economy.

The Commission is therefore attaching the utmost importance to assessing both the micro- and macro-economic effects of the suggested measures, and their potential impact on economic and financial recovery.

In this respect, the Commission has invited the Committee of European Banking Supervisors (CEBS) to carry out a European Quantitative Impact Study to aid the assessment of the aggregate effect of the suggested measures. The feedback to the Commission's consultation paper will considerably facilitate this exercise.

Depending on the outcome of this study, it may need to be assessed whether the application of any of the new measures should be postponed until recovery is further advanced and assured.

This would be consistent with Declaration by the G20 Leaders on Strengthening the Financial System made at the meeting in London and in Pittsburgh, as we said, which stated that the new prudential regulatory standards should be phased in " as financial conditions improve and economic recovery is assured, with the aim of implementation by end-2012 ".

Internal Market and Services Commissioner Michel Barnier said:

*"It is essential that we learn all the lessons from the crisis. In that context, I want to ensure an effective follow-up of international decisions. It is vital that we further strengthen the solidity of financial institutions and put in place new rules in order to be better prepared for the crises of tomorrow. But before making a proposal on 'CRD IV', I want to ensure that we have consulted widely and assessed the impact of the potential changes. I encourage all interested parties to reply and make their views known."*<sup>34</sup>

---

<sup>34</sup> available at <http://www.abbl.lu/articles/commission-asks-stakeholders-views-further-possible-changes-capital-requirements-directive-crd-iv>

In order to achieve the dual objective of improving the resilience of the global financial system and ensuring a level playing field, it will be essential that a more robust and consistent set of prudential capital requirements is applied across the world.

Consequently, the possible changes set out in the consultation document are closely aligned with the forthcoming amendments to the Basel II framework and the introduction of a global liquidity standard that are currently being drawn up by the BCBS.

### **CAP.III**

## **PRO-CYCLICALITY IN BASEL II/CRD**

### **17. INTRODUCTION**

The minimum capital requirements for banks under the EU CRD, based on the Basel II framework, are risk sensitive: the higher the risk, the more capital a bank needs to hold to meet that risk and cover potential losses. By consequence, as credit and market risks increase in a downturn, minimum capital requirements for banks will also increase to meet those higher risks. Banks may need to raise additional capital to meet these higher requirements at a time when their capital resources are being eroded by losses and opportunities for raising capital are scarce and costly. This may potentially constrain banks' lending capacity into the economy.

The possibility that the CRD may contribute to the pro-cyclicality observed in the financial system under the predecessor Basel I framework led to the inclusion in the CRD of Article 156 which requires the EC to periodically monitor whether the CRD has 'significant effects on the economic cycle' and, in the light of the examination, submit a biennial report to the EP and to the Council together with any appropriate remedial measures.

### **18. SOURCES OF PRO-CYCLICALITY AND THEIR IMPLICATIONS FOR ANALYSIS**

Bank capital regulation may potentially amplify the cyclicality endemic to bank lending behaviour.

Due to their risk-sensitive nature, capital requirements under the Basel II framework, transposed in the EU by the CRD, are expected to rise more in recessions and grow less during expansions. Since it may be expensive for banks to raise additional capital during economic downturns, this may encourage them to cut back on lending instead. By contrast, as capital requirements become more relaxed during economic upturns, banks may have more room for manoeuvre to extend more and / or riskier credit as compared to historical average over the business cycle.

However, bank lending is pro-cyclical in nature and it cannot be assumed that cyclical capital requirements per se have an amplifying effect. Indeed, the procyclical nature of bank lending has many, often interconnected sources<sup>35</sup> such as limitations in the measurement of risk<sup>36</sup> and information asymmetries<sup>37</sup> between borrowers and lenders. Furthermore, pro-cyclicality in lending may also stem from inappropriate responses<sup>38</sup> of financial system participants to changes in the economic conditions.

## 19. CYCLICALITY OF MINIMUM REGULATORY CAPITAL

With the adoption of the CRD, capital requirements were made more risk-sensitive compared to

---

<sup>35</sup> BIS (2008), "Addressing financial system procyclicality: a possible framework", Note for the FSF Working Group on Market and Institutional Resilience, September 2008, available at [http://www.financialstabilityboard.org/publications/r\\_0904e.pdf?noframes=1](http://www.financialstabilityboard.org/publications/r_0904e.pdf?noframes=1) ,

Masschelein, N. (2007), "Monitoring pro-cyclicality under the capital requirements directive: preliminary concepts for developing a framework", NBB Working Paper Document No. 120

<sup>36</sup> In particular, financial institutions have difficulties in assessing absolute level of risk (while they fare better at assessing relative risk), especially over a prolonged period, and so rarely identify booms with consequences for systemic risk. Measures of risk may be quite low as vulnerabilities and risk build up during the expansion phase but spike once tensions arise, for example, the market risk embedded in banks' trading book can be easily underestimated if measured over short holding periods. Such limitations to perception of risk are in part attributable to the paucity of information regarding the dynamics of systemic risk and are explained by certain theories of behavioural finance such as disaster myopia and cognitive dissonance, see Borio, C., C. Furfine, and P. Lowe (2001), "Procyclicality of the financial system and financial stability: issues and policy options", BIS Paper No 1

<sup>37</sup> When economic conditions are depressed and collateral values decline, information asymmetries with respect to the quality of clients' balance sheets can imply that even borrowers with profitable projects find it difficult to obtain funding. When economic conditions improve and collateral values rise, the opposite situation may occur. This reasoning suggests that pro-cyclical effects may be more pertinent to borrowers which are more prone to asymmetric information, including small and medium-sized enterprises not subject to external ratings and extensive disclosure requirements.

<sup>38</sup> In some cases, responses are explained by short-term bias of remuneration structures or herding behaviour (tendency of market participants to conform their behaviour with that of their peers). Remuneration policies in financial institutions may have an enhancing pro-cyclical effect where they entail (possibly disproportionate) rewards on the upside and insufficient penalties on the downside, e.g., bonuses based on short-term profits that are paid immediately, with no risk adjustment or deferred payment to take account of future performance of the business unit or institution as a whole Ibid at 36.

Basel I by allowing banks to adopt approaches to determining regulatory capital that are appropriate to their situation and the sophistication of their risk management. The IRB Approach, for instance, enabled banks to determine capital requirements for credit risk by using their own ‘risk inputs’ such as PD, LGD and EAD.<sup>39</sup>

Due to the expected enhancement of risk-sensitivity of regulatory capital requirements under the CRD, it was widely expected that they would become more variable (or cyclical) over time. Given that requirements for credit risk represent more than 80% of overall MRC under Pillar 1, it is generally considered that the main driver of potential cyclicalities of MRC is the integration of the credit risk parameters under the IRB approaches into calculation of risk-weighted assets (RWA), although risk weights under all three approaches – Standardised Approach (SA),<sup>40</sup> Foundation IRB<sup>41</sup> and Advanced IRB – are expected to be responsive to macro-economic conditions. In case of the IRB approaches, as PD of an exposure decreases in an economic upswing and increases during a downturn, capital requirements are expected to fluctuate accordingly .

CRD art.156 requires the EC to periodically monitor whether the CRD has “*significant effects on the economic cycle*” and in the light the examination submit a biennial report to EP and to the Council together with any appropriate remedial measures. A report<sup>42</sup> has been drawn up for that purpose. It was prepared in close cooperation with the ECB and the CEBS which in 2006 set up a joint Task Force on the Impact of new Capital Framework (TFICF)<sup>43</sup>. In addition to stakeholder consultations

---

<sup>39</sup> As regards the relative impact of individual risk parameters of the IRB approach, PD is considered to be the main contributor to the cyclicalities of the framework, while, to a lesser extent, the effects of LGD and EAD may also be relevant. The degree to which capital requirements oscillate may depend, among other factors, on whether a Point-in-Time (PIT) or a Through-the-Cycle (TTC) system is implemented by banks in their internal rating processes. Typically, TTC ratings do not change rapidly in response to fluctuations in the macroeconomic conditions, and thus are less influenced by the economic cycle momentum. Use of TTC rating systems is suggested by the Basel II and the CRD frameworks as a way to smooth the potential volatility of the capital requirements. However, due to banks' preferences to use recent default data and early warning systems as well as difficulties in obtaining a sufficient set of data, they primarily use PIT approaches, especially for exposures to SMEs and retail clients. See, *Report from the Commission to the Council and the European Parliament on effects of Directives 2006/48/EC and 2006/49/EC on the economic cycle*, COM(2010)327, available at [http://ec.europa.eu/internal\\_market/bank/docs/regcapital/monitoring/23062010\\_report\\_en.pdf](http://ec.europa.eu/internal_market/bank/docs/regcapital/monitoring/23062010_report_en.pdf)

<sup>40</sup> Under the SA, requirements are expected to fluctuate less as banks use risk weights based on external ratings (which tend to be determined on the TTC basis) issued by external credit assessment institutions.

<sup>41</sup> The FIRB risk-weighted assets for corporate portfolios are expected to be less responsive to business cycle than those under the AIRB, as under the latter banks use their own estimates of LGD and EAD. Internally estimated LGD and EAD are seen as more responsive to business cycles than the supervisory estimates used under the FIRB.

<sup>42</sup> *Report from the Commission to the Council and the European Parliament on effects of Directives 2006/48/EC and 2006/49/EC on the economic cycle*, COM(2010)327, available at [http://ec.europa.eu/internal\\_market/bank/docs/regcapital/monitoring/23062010\\_report\\_en.pdf](http://ec.europa.eu/internal_market/bank/docs/regcapital/monitoring/23062010_report_en.pdf)

<sup>43</sup> The mandate of the TFICF is to monitor the level and volatility of banks' minimum capital requirements as defined by the CRD and analyze their impact on bank lending and the economic cycle.

that were conducted two on-line questionnaires to facilitate the input from borrowing<sup>44</sup> and lending<sup>45</sup> parties.

According to the analysis of the TFICF, in December 2008, MRC under the CRD was lower on average by 10.6% for Group 1<sup>46</sup> banks and by 6.1% for Group 2 banks relative to Basel I. At the same time, MRC rose by 8.3% for Group 1 banks and by 0.1% for Group 2 banks between June and December of 2008. These changes can be attributed to an increase in RWA of 8.2% for Group 1 banks and a decrease of RWA by 1.5% for Group 2 banks. However, total exposure amounts increased at a faster rate than RWA, i.e. at 10.7% and 2.8%, respectively, indicating that the increase in MRC between June and December of 2008 was not due to an increase in the riskiness of exposures.<sup>47</sup>

In June 2009, MRC for Group 1 and Group 2 banks continued to be lower under the CRD in comparison to Basel I (by 7.7% and 5.5%, respectively). Between December 2008 and June 2009, RWA of Group 1 banks declined by 2.1% despite an increase in total exposures of 0.3%. Group 1 MRC, nevertheless, increased by 3.7%, primarily driven by rising deductions for related entities and securitisations as well as shortfalls of provisions for expected losses. Therefore, further monitoring will have to assess whether components of the MRC other than RWA contribute to its volatility over a longer term.<sup>48</sup>

---

<sup>44</sup> A questionnaire to the EU businesses ran from August 12 until September 28, 2009. Via the European Business Test Panel, the business community was consulted on their perceptions regarding the developments in availability and conditions of bank credit since October 2008. 429 members of the EBTP from 28 EU/EEA countries filled in the questionnaire. As regards the company size of the respondents, 59% of them were small enterprises, 20% medium enterprises and 21% large enterprises.

<sup>45</sup> A questionnaire to the EU banking industry ran from May 21 until August 31, 2009. Nineteen responses were received from IT, SI, BE, AT, DE, UK and NL. Respondents included banks whose majority ownership is private (publicly traded), national cooperative bank networks and publicly owned banks. Some replies were submitted by national associations representing a consolidated position of their members, effectively increasing the number of individual credit institutions covered by the questionnaire.

<sup>46</sup> A bank is considered a Group 1 bank if its Tier 1 capital is above €3 billion and it is well diversified and internationally active.

<sup>47</sup> Indeed, MRC per exposure - a measure of riskiness - was either unchanged (for Group 1 banks) or slightly lower (for Group 2) in December versus June 2008. While Group 1 banks' portfolio-level PDs increased on average, non-defaulted PDs were virtually unchanged indicating that the rise in average PDs was due to a higher number of defaults. To the extent that the rise in PDs reflects an increase in the share of defaulted exposures, the impact of rising average PD on RWA (and on MRC) is less straightforward since the risk weight on a defaulted exposure is zero (with some exceptions under AIRB). The risk is then accounted for by the expected loss, for which risk provisions should be made (in case of their shortfall, a deduction from capital is made). Furthermore, LGDs were lower for a number of exposures in December versus June 2008.

<sup>48</sup> MRC effectively summarises the numerator and the denominator of the regulatory capital ratio. It measures the capital required to cover (i) 8% of RWA; (ii) differences between total eligible provisions and the total expected loss amount; and (iii) other deductions.

There are a number of factors that may have contributed to this somewhat surprising dynamics of RWA vis-à-vis total exposures, including government programs to support banks and shifts in bank portfolio composition towards less risky exposures. Indeed, observed changes in portfolio composition, which indicate a shift from portfolios with high PDs (corporate portfolio) to portfolios with lower PDs (sovereign portfolio), partially explain why the increase in RWA discussed above is smaller than increases in exposure amounts. In addition, the outcome may be driven by the time lag inherent in PD revision process.

## **20. IMPACT OF CAPITAL REQUIREMENTS ON BANK LENDING ACTIVITY**

In order for regulatory capital requirements to have an effect on bank lending, they must be binding on the level of capital that banks hold. Regulatory requirements, however, may not be the only relevant factor for banks in deciding how much capital to hold. Economic capital models, expectations of other market participants and, in particular, requirements of credit rating agencies (CRAs), may force banks to increase their capital levels even when they comply with their regulatory requirements.

CRAs play a predominant role in the determination of the desired capital level. This factor is possibly even more relevant than the regulatory capital for large, internationally active banks. This suggests that the changes in the level of desired capital and the related effects on banks' lending may primarily be influenced by the objective of individual institutions to receive specific ratings from CRAs. Similarly, for large banks, economic capital models could potentially be more important factors in capital allocation than regulatory requirements.<sup>49</sup> The recent financial crisis highlighted the significance of market participants' expectations in setting bank capital levels. It appears that the pressure on banks to refrain from drawing down capital buffers was driven by the concerns of market participants about adequacy of the quality and the level of capital in the stress period, rather than the cyclical volatility of the MRC.

In order for regulatory capital requirements to have an effect on bank lending, it (bank lending) should be driven by loan supply rather than demand. Furthermore, capital requirements should also represent a major determinant of lending cyclicality in comparison with other loan supply and

---

<sup>49</sup> *ibid.* 35

demand factors. Demand-side factors influencing bank loan growth include consumer expectations, inflation and unemployment levels.

The ECB's Bank Lending Survey (BLS)<sup>50</sup> suggests that the CRD had some impact on banks' lending policies. Banks surveyed reported that the impact of the CRD on credit standards was more pronounced with respect to corporate loans (both SMEs and large firms) compared to household loans. The importance of the CRD, however, varied substantially across banks: while at the aggregate euro area level the large majority of banks reported that the CRD so far had basically no impact on their credit standards, a substantial dispersion across countries is notable. Whereas in some countries banks reported that the CRD had little or no impact on their policies with respect to lending to enterprises, up to 80% of the banks in other countries reported that the CRD had led to a net tightening of credit standards. Similarly, while contributing to a net tightening of credit standards applied on loans to households in most countries, the CRD was reported to have led to a net easing in a few countries.

Recent events have shown that certain weaknesses in regulatory capital requirements may also have pro-cyclical implications. In the buoyant years preceding the turmoil, many large banks aggressively increased leverage thus amplifying risks, including risks held in the trading book, that were not adequately captured by regulatory capital. The crisis prompted concerns over banks' capital adequacy and in order to achieve higher capital ratios deemed appropriate by the market participants, many banks have had to quickly de-leverage their operations and raise additional capital in a difficult market environment, adding to the stress. Up to 50% of the banks reported to the ECB that the financial turmoil had negative implications on both their capital position (reflecting substantial write-downs and losses on trading books<sup>51</sup> and disruptions of access to wholesale funding) and lending decisions.

Nevertheless, the ECB analysis concluded that the recent decline in loan growth was to a considerable extent influenced by declining loan demand. The long-run trends of aggregate loan

---

<sup>50</sup> BLS of July 2009, covering a sample of more than 100 euro area banks, included questions about the impact of the CRD on the banks' lending policies (measured by their credit standards) during the period from Q1 2008 to Q2 2009, in ECB (2009) *The Euro bank lending survey*, available at [http://www.ecb.int/stats/pdf/blssurvey\\_200907.pdf?80f8ca8c05e0638c49fbbce9ecf88627](http://www.ecb.int/stats/pdf/blssurvey_200907.pdf?80f8ca8c05e0638c49fbbce9ecf88627)

<sup>51</sup> After trading account profit (including unrealised gains and losses) of €82 billion in 2007, a sample of 105 EU banks incurred trading account loss of €94 billion in 2008, available at <http://www.bloomberg.com/apps/quote?ticker=ORBGLEF:BH>;

growth and economic activity in the euro area illustrate that historically lending has tended to move pro-cyclically with the business cycle. Notwithstanding the pressures experienced by the euro area banks during the financial turmoil and the transition to the CRD, loan growth at the aggregate level recently moved more-or-less in line with historical patterns. Household loan growth declined broadly in parallel with the slowdown in economic activity, whereas growth of loans to non-financial corporations only started declining with a lag, which is consistent with what has been observed in the past.

Overall, the extent to which the introduction of the CRD has led to more procyclical bank lending is still difficult to assess. Although the evidence presented in the European surveys does point to some potential links between CRD and bank lending behaviour, analysis over a longer period is needed to draw more robust conclusions. Moreover, it is important to stress that as the implementation of the Basel II framework coincided with the outbreak of the financial crisis, disentangling the effects of these two events is particularly difficult.

## **21. IMPACT OF CREDIT AVAILABILITY ON ECONOMIC CYCLE**

The final step of my analysis concerns the extent to which CRD-induced changes in bank loan supply have an impact on the economic cycle. For the CRD to have amplifying effects on the real economy, a significant number of borrowers must be 'bank-dependent', meaning that they cannot substitute bank loans by other means of finance. The ECB data shows that in terms of new business loans granted to non-financial corporations small-sized loans peaked in mid- 2008 but have since declined by around 15%, while large-sized loans peaked in early 2009 and declined by around 10% by December 2009. While this indicates that lending to SMEs has been more strongly affected by the economic downturn, lending to large corporations has also declined in recent months.

However, volumes of small-sized loans declined more than those of large-sized loans, and the spreads between the rates on small-sized and large-sized loans have increased since the beginning of 2008. However, according to recent surveys<sup>52</sup> of European SMEs, most of them appear still to have access

---

<sup>52</sup> A survey conducted by the ECB in cooperation with the Commission between June 17 and July 23, 2009, covering 6,000 SMEs and large firms in the euro area, in *Survey on the access to finance of small and medium-sized enterprises in the Euro area*, European Central Bank 2009, available at <http://www.ecb.int/pub/pdf/other/accesstofinancesmallmediumsizedenterprises200909en.pdf>; *Surveillance of Intra-Euro-Area Competitiveness and Imbalances*, European economy 1, 2010, European Community 2010, available at [http://ec.europa.eu/economy\\_finance/publications/european\\_economy/2010/pdf/ee-2010-1\\_en.pdf](http://ec.europa.eu/economy_finance/publications/european_economy/2010/pdf/ee-2010-1_en.pdf)

to bank financing in spite of deterioration in terms and conditions of borrowing. The results of the surveys showed that applications for bank financing were mostly successful: 60% of the euro area SMEs reported that in the first half of 2009 they had received the full amount of loans applied for and a further 17% received part of the amount; only 12%<sup>53</sup> of the applications were rejected.

In terms of extent to which corporate borrowers are able to cushion the impact of restrained lending in the context of the economic downturn, evidence shows that market-based financing, such as equity and debt securities issuance, has somewhat mitigated the decline in long-term bank financing observed since late 2008. As regards SMEs, while the majority of those that had applied for trade credit or other external financing in the first half of 2009 received the full amount requested, some businesses reported to have not been able to obtain any funding from these alternative sources (13 % and 15%, respectively)<sup>54</sup>.

Notwithstanding the indications of ongoing substitution between market-based and bank-based financing in recent months, the predominant role of banks in providing funds for spending and investment should not be underestimated, especially given the fact that obtaining the necessary funding from alternative sources has been burdensome for some, particularly smaller, businesses. Moreover, there is recent empirical evidence that shocks to loan supply have the potential to affect economic activity in the predominantly bank-based euro area financial system.<sup>55</sup>

## 22. MEASURES TO ADDRESS PRO-CYCLICALITY

Since it is not possible to achieve greater risk sensitivity across institutions at a given point in time without introducing a certain degree of cyclicity in the MRC over time, some degree of pro-cyclicality may be unavoidable. The CRD responded to this trade-off by introducing a number of

---

<sup>53</sup> The larger the firms, the more successful they were in obtaining a loan as only 5% of large firms had their loan applications rejected

<sup>54</sup> *ibid.* 45

<sup>55</sup> Capiello, L., A. Kadareja, C. Kok Sørensen and M. Protopapa (2009), "Do bank loans and credit standards have an effect on output? A panel approach for the euro area", ECB Working Paper, No.1150/January 2010, available at <http://www.ecb.int/pub/pdf/scpwps/ecbwp1150.pdf>. provides empirical evidence on the existence of bank lending channel of monetary policy transmission in the euro area. The authors find that changes in the supply of credit, in terms of both volumes and credit standards applied to loans to enterprises, have significant effects on real economic activity. Therefore, bank balance sheet constraints, such as binding regulatory capital requirements - to the extent that they lead banks to reduce their loan supply - may have negative repercussions on real economic growth; Ciccarelli, M., A. Maddaloni and J.-L. Peydró (2009), "Trusting the Bankers: a New Look at the Credit Channel of Monetary Transmission", ECB Working paper series, No.1228/July 2010, available at <http://www.ecb.int/pub/pdf/scpwps/ecbwp1228.pdf>, they use a panel VAR for the euro area with GDP, prices, short-term interest rates, loan demand and loan supply conditions. Using impulse response functions, the authors find that a tightening of credit standards lead to a significant decline in real GDP growth. Hence, to the extent that the CRD affects bank credit standards, this finding suggests that eventually economic activity would be also affected by the CRD.

safeguards to limit potential pro-cyclical effects, including stress testing (as part of Pillar 2), transitional floors to capital levels, more favourable risk-weights for exposures to less cyclical borrowers (SMEs) and inputs to the capital calculation to be based on long data histories (for PDs) and downturn estimates (for LGDs).

However, the recent crisis has shown that market participants expect a rise in capital levels where they do not believe that an institution is well placed to absorb losses. Enhanced counter-cyclical measures within the regulatory framework for capital requirements could help to restore confidence in banks' balance sheets, and thus reduce the likelihood that banks will have to increase capital requirements or sharply de-leverage their credit portfolios to meet market participants' expectations. The Commission agrees with international institutions such as the FSB and the Basel Committee that additional measures are necessary to avoid excessive pro-cyclicality.

**CAP. IV**  
**PROPOSALS**

## 23. INTRODUCTION

So far we have analyzed the Basel II framework pointing out its failures and shortcomings helped by the lessons we have learned from the recent credit crisis. In this final section we look at the set of proposals that have been made to make the financial system more resilient and therefore to avoid the occurrence of another global meltdown in the coming years. We will introduce all the ingredients that can improve the regulatory architecture one by one.

## 24. PROPOSALS

### 24.1 BASEL III/CRD IV

On 20 July 2011, the EC published its much-anticipated proposals to implement in Europe the international standards on bank capital recommended by the Basel Committee on Banking Supervision (the “**Basel Committee**”), commonly known as Basel III. The EC’s proposals comprise a draft regulation (in three parts: regulation I, regulation II and regulation III) and a draft directive (together, “**CRD IV**”). In putting forward these CRD IV proposals, the EC observed that “*banks have been at the centre of the financial crisis*” and that “*lessons have been drawn from this and mistakes of the past should not repeat themselves*”.

As part of the overall response of regulators to the global financial crisis, on 16 December 2010 the Basel Committee published “Basel III: A global regulatory framework for more resilient banks and banking systems” which contained the Basel Committee’s guidelines relating to the quality, definition and quantum of bank capital and the capital conservation and countercyclical buffers. The guidelines relating to the definitions of AT1 and tier 2 capital substantially replicated the Basel Committee’s draft proposals issued on 17 December 2009 entitled “Strengthening the resilience of the banking sector”.

In addition, on 13 January 2011 the Basel Committee published “Minimum requirements to ensure loss absorbency at the point of non-viability” which contained a requirement that AT1 and tier 2 capital instruments of “internationally active” banks should, in the absence of any applicable effective statutory resolution regime, include loss absorption mechanisms which are triggered at the

point of the relevant issuer's "non-viability". This release and the 16 December 2010 release are together referred to herein as "**Basel III**".

The graphic below summarises the impact of the Basel III proposals on capital requirements:

QuickTime™ e un  
decompressore  
sono necessari per visualizzare quest'immagine.

### **Basel III proposals for reform.**

#### **24.1.1 TO RAISE THE QUALITY , CONSISTENCY AND TRASPARENCY OF THE CAPITAL BASE**

Tier 1 capital will consist of going concern capital in the form of common equity (common shares plus retained earnings) and some equity-like debt instruments which are both subordinated and where dividend payments are discretionary. Criteria for Tier 2 capital will also be tightened (subordinate to depositors, five-year minimum maturity and no incentives to redeem). After a quantitative impact study, it is proposed to fix minima for common equity as a percentage of RWA, and similarly for Tier 1 capital and total capital. It is proposed to abolish Tier 3 capital.

As far as improving the definition of capital is concerned, the Committee stresses that equity is the best form of capital, as it can be used to write off losses. Not included in (to be deducted from) common equity are:

- **Goodwill.** This can't be used to write off losses.
- **Minority interest.** That if a company takes over another with a majority interest and consolidates it into the balance sheet, the net income of the 3rd party minorities can't be retained by the parent as common equity.
- **Deferred tax assets** (net of liabilities). These should be deducted if they depend on the future realization of profit (not including tax pre-payments and the like that do not depend on future profitability).
- **Bank investments in its own shares.**
- **Bank investments in other banks,** financial institutions and insurance companies – all cross-share holdings and investments in sister companies, all holdings if a bank's position in another institution is 10% or more, and an aggregation adjustment of all holdings that amount to more than 10% of common equity. The aim here is to avoid double counting of equity.
- **Provisioning shortfalls** (see below).
- **Other deductions.** Such as projected cash flow hedging not recognised on the balance sheet that distorts common equity; defined benefit pension holdings of bank equity; some regulatory adjustments that are currently deducted 50% from Tier 1 and 50% from Tier 2 not addressed elsewhere.

#### **24.1.2 ENHANCING RISK COVERAGE**

One major problem in the crisis was the failure of the Basel approach to capture on and off balance sheet risks (related Special Purpose Vehicles (SPVs) for example). Going forward, it is proposed that banks:

- Must determine their capital requirement for counterparty credit risk using **stressed inputs**, helping to remove pro-cyclicality that might arise using current volatility-based risk inputs.
  - Must include **capital charges** (credit valuation adjustments) associated with the deterioration in the creditworthiness of a counterparty (as opposed to its outright default).
  - Implement a Pillar 1 capital charge for **wrong-way risk** (transactions with counterparties, especially financial guarantors, whose PD is positively correlated with the amount of exposure). This will be done by adjusting the multiplier applied to the exposure amount identified as wrong way risk.
- 
- Apply a multiplier of 1.25 to the **asset value correlation (AVC)** of exposures to regulated financial firms with assets of at least \$25bn, (since AVC's were 25% higher during the crisis for financial versus nonfinancial firms). This would have the effect of raising risk weights for such exposures.
  - Will be required to apply **tougher (longer) margining periods** as a basis for determining regulatory capital when they have large and illiquid derivative exposures to a counterparty.
  - Will qualify for a zero risk weight for counterparty risk exposure if they deal with **centralised exchanges** (that meet certain criteria): hence creating an incentive to use centralised exchanges (since higher charges will apply for bilateral OTC derivatives).

The Committee is also trying to improve the usefulness of external ratings in the above recommendation, and so proposes to require banks to assess these ratings with their own internal processes. As with most other aspects of the report, the quantitative impact study will help to calibrate the reforms on coverage.

### 24.1.3 LEVERAGE RATIO

The introduction of a leverage ratio is intended to help to avoid the build-up in excess leverage that can lead to a deleveraging 'credit crunch' in a crisis situation. The Committee refers to this as a 'backstop' measure for the risk-based approach. It is proposing a simple leverage ratio based on Tier 1 capital, with a 100% treatment to all exposures net of provisions, including cash and cash-like instruments. Certain off-balance sheet exposures will be included with a 100% credit conversion factor, and written credit protection will be included at its notional value. It is proposed that there be no netting of collateral held and no netting off-balance sheet derivative exposures.

### 24.1.4 PRO-CYCLICALITY

The Basel Committee places considerable emphasis on the role of procyclical factors in the crisis resulting from mark-to-market accounting and held to maturity loans; margining practices; and the build-up of leverage and its reversal amongst all financial market participants. The following ideas are proposed to deal with this:

- To dampen the cyclicity of the minimum capital requirement the Committee is looking to focus on longer-term calibration of the probability of default in the modelling of risk; the use of Pillar 2 supervisory override is also being recommended when necessary.
- The Committee will promote **forward-looking provisioning** by strongly supporting the IASB principles to base it on the 'expected' (rather than the current 'incurred') losses of banks' existing portfolios. It also proposes to deduct from bank capital any shortfall in these provisions (*i.e.* to expected losses) to provide an incentive against underprovisioning.
- Very importantly, the Committee is proposing that banks hold buffers of capital above the regulatory minimum – large enough that they remain above the minimum in periods of significant sector-wide downturns. Furthermore, when the **buffers** are run down banks would be required to build them again by reducing discretionary dividend distributions, buybacks and staff bonus payments.
- The Committee is proposing that the buffer system might be used in a macro prudential framework to help restrain credit growth when it is perceived as excessive

## **24.2 RISK SENSITIVITY SHOULD NOT MEAN TIME SENSITIVITY**

What we have been stressing repeatedly when discussing issues of procyclicity in the Basel II framework is that it is certainly desirable that a higher level of risk in the balance sheet should correspond to a larger capital requirement (in absolute terms). This was one of the original purposes of the Basel committee when the Basel II accord was drafted. As we said in chapter I the measure of risk implicit in the Basel I accord was too granular and that produced incentives for regulatory arbitrage and accumulation of "bad" assets in the banks' balance sheets. However the changes introduced by Basel II did not take into account the issue of procyclicity in that together with risk sensitivity they brought into the picture a new element, namely the **time sensitivity**. For time sensitivity we mean the change of capital requirement due solely to a change in market condition rather than to a change in the composition of the balance sheet or to any default having occurred. As

we saw this property was first introduced with the market risk amendment of 1996 and lately extended to the treatment of credit risk in the Basel II framework. What we ask to a sound regulatory framework is therefore for risk sensitivity to be introduced at no cost, which is taking care to avoid time sensitivity to enter the framework from the back door. There have been several proposals in this sense. The one that has received the greatest attention until now is the so-called through-the-cycle approach which applies both to market risk and credit risk calculation. As we discussed in chapter I all the capital requirement calculations make use of inputs which at the moment represent essentially snapshots of market conditions in the form of asset volatilities, probability of defaults, loss given defaults and a few other parameters. To the degree that this inputs are instantaneous, i.e. snapshots, there is no way of getting rid of time sensitivity by construction. As time passes market conditions will change, thus the inputs to risk models will change too and capital requirements will move around even if the balance sheet composition has not changed. It sounds reasonable then to replace those instantaneous inputs with time averages spanning period which are long enough to capture at least the full length of the economic cycle. A move in this sense is represented by the introduction of a stressed value-at-risk requirement for the purpose of calculating market risk approved in July 2009 by the BCBS and coming into effect in January 2012. As stated in the BCBS paper the latter are based on “model inputs calibrated to historical data from a continuous 12-month period of significant financial stress relevant to the bank’s portfolio” which implies by construction that the additional charge will be de-facto immune to time changes.

### **24.3 LIQUIDITY MATTERS**

What has been acknowledged by regulators in their post-crisis analysis of the recent financial meltdown is that during the years leading to 2007 banks’ balance sheet have progressively become crowded with illiquid assets. Making an analogy with a car engine, banks’ margins are the fuel that creates revenues whereas liquidity is the oil that allows the engine to run. When in the summer of 2007 the money market froze on insolvency rumors the global financial system came close to a grinding halt. For the first time after the 9/11 terrorist attack the ECB and the FED were forced to pump liquidity into the banking system (150 billion EUR and 40 billion USD respectively). The fact that banks’ balance sheets were highly leveraged on illiquid loans rather was recognized as a circumstance to be avoided in the future. What needs to be stressed is that during the years preceding 2007 the same assets had experienced a remarkable volume and liquidity. Therefore the lesson to be

learned from the crisis is that the capital requirements for banks should take into account scenarios whereby liquidity that is given for granted in good times suddenly dries out.

#### **24.4 SECURITIZATION, RATING AGENCIES AND THE SHADOW BANKING SYSTEM**

Securitization was introduced 40 years ago as a mechanism to pool risks and transfer them to a broad investor base that could stand losses better than single financial institutions. It is certainly one of the greatest inventions of modern finance and deserves special attention from the regulatory point of view. Unfortunately during the years that led to the subprime crisis, the securitization instrument have been abused by financial institutions with the complicity of rating agencies as many investors around the world have experienced. To quote the words of Financial Times journalist Martin Wolf<sup>56</sup>

*“ (...) what created the conditions for the crisis? It took foolish borrowers, foolish investors and clever intermediaries, who persuaded the former to borrow what they could not afford and the latter to invest in what they did not understand.”*

In some instances it was a problem of lack of due diligence by banks and rating agencies in assessing the real risk hidden in securitized assets. In other cases, it has been claimed, there was more<sup>57</sup>.

There are many considerations worth making.

First, the shift in the banks' business model from the credit intermediation sphere to the wholesale distribution of complex securitized packages has introduced issues related to corporate governance. In particular the old principal-agent dilemma where any potential loss arising from misconduct is limited to the banks' shareholders has been gradually supplanted by the problem of alignment of interests. In a market where the volume of products sold rather than their quality determines revenues there is an objective disincentive to conduct due diligence on the credit score of borrowers whose debts are being packaged. Possible remedies to this dilemma include limited capital requirement relief for securitized loans, retention by the banks of a substantial part (say 40-50%) of the tranches

---

<sup>56</sup> M.Wolf (2007) “*Questions and answers on a sadly predictable debt crisis*”, Financial Times, September 5 2007, available at <http://www.ft.com/cms/s/0/e114d850-5b48-11dc-8c32-0000779fd2ac.html#axzz1WYDovnh6>

<sup>57</sup> L.Story and G.Morgenson (2010), “*S.E.C. Accuses Goldman of Fraud in Housing Deal*”, NY Times, April 16 2010 , available at <http://www.nytimes.com/2010/04/17/business/17goldman.html>

sold to public and clarification of responsibilities in the securitization chains in order to define who an investor can sue when he buys a AAA issue which defaults little later.

Second, the rating agencies business model has proved prone to serious conflicts of interest. The practice of agencies to issue ratings and at the same time advise securities' issuers on how to improve the ratings on their issues calls for a legal separation of the rating and consulting arms of rating agencies<sup>58</sup>. Moreover the fact that underwriters paid for credit ratings on securitized packages is likely to have generated an inherent conflict of interest. In the words of Larry Summers, former US Treasury secretary

*“If you are hired by someone at twice your regular fee to work collaboratively with their people to design a security that will receive a triple A rating from yourself, you are likely to deliver certain results”<sup>59</sup>.*

Interestingly enough the loss of credibility of rating agencies has many analogies with the sell-side analysis fiasco witnessed in the 90s and yet regulators have allowed rating agencies' questionable practices to endure. Again, alignment of interests is key and steps should be taken to dismantle any systemic conflict of interest implicit in the rating agencies business model.

To mention the words of Joseph Stiglitz about the CRA<sup>60</sup>:

*“I view the credit ratings agencies as one of the key culprits. They were the party that performed that alchemy that converted the securities from F- rated to A-rated. The banks could not have done what they did without the complicity of the ratings agencies.”*

Third, in the last 20 years securitization has dramatically reshaped the global financial landscape and has boosted the extraordinary growth of the so-called **shadow banking system**. The latter is the system of credit intermediation taking place outside the financial institutions that have traditionally been in charge for it, namely commercial banks. Examples abound: money market funds, SIVs,

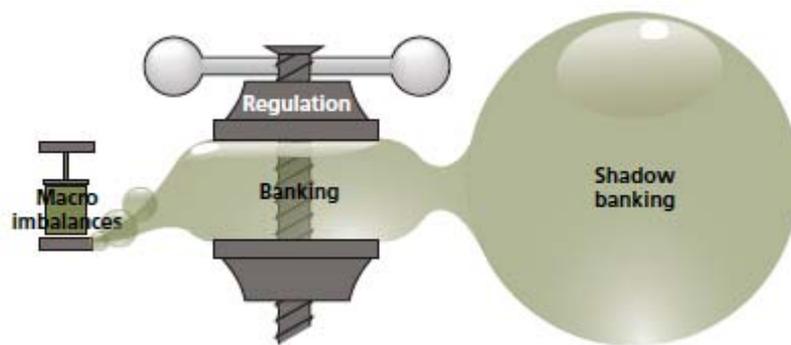
---

<sup>58</sup> E. Callan, K. Guha and S. Scholtes. “*Call to split US credit ratings agencies*”. FT Journal, September 27 2007 available at <http://www.ft.com/cms/s/0/7e8f44f4-6c5f-11dc-a0cf-0000779fd2ac.html#axzz1WiBMAYAu>

<sup>59</sup> Ibid. at 58

<sup>60</sup> E.B.Smith, “*Bringing down Wall street as ratings let loose subprime scourge*”, 24 Sept. 2008 available at <http://www.bloomberg.com/apps/news?sid=ah839IWTL9s&pid=newsarchive>

conduits, hedge funds to name a few components. Following the recent credit crunch debates on how to better regulate banks have abounded and some people are now expressing concerns that too much emphasis has been placed in approving stricter regulation for banks while little has been done to regulate the shadow banking system. This will likely create incentives for banks shareholders who see their margin squeezed by regulatory constraints to move their money to the shadow banking system where regulation is poor and margins comparatively higher. The picture below extracted from a publication by Oliver Wyman <sup>61</sup> is self explanatory.



Therefore bank regulation should probably take a “holistic” tack and take into account the big picture given that money flows are nowadays extremely dynamic and regulatory arbitrage looms ahead. For these reasons some pundits <sup>62</sup>, quite courageously, are now suggesting an inversion of the regulatory trend and a relaxation of the rules on capital requirements for banks. The author acknowledges that this kind of counter-trend proposals though seemingly controversial do open new alleys for regulators and should at the least stimulate debates within regulatory circles. However some clear cut conclusion can be drawn from the picture described and that is, as stated in the report by Oliver Wyman, regulators should follow the money, which means whenever profits from investments are consistently above risk free returns, be it in the investment banking, commercial banking or shadow banking sector, supervisors should step in and at least increase the level of auditing.

<sup>61</sup> O. Wyman, (2011), “*The financial crisis of 2015. An avoidable history*”, State of financial services industries, 2011 available at:

[http://www.oliverwyman.com/media/OW\\_EN\\_FS\\_Publ\\_2011\\_State\\_of\\_Financial\\_Services\\_2011\\_US\\_Web.pdf](http://www.oliverwyman.com/media/OW_EN_FS_Publ_2011_State_of_Financial_Services_2011_US_Web.pdf)

<sup>62</sup> Ibid. at 61

## 24.5 COUNTERACT INTERBANK REGULATORY ARBITRAGE

One of the changes introduced by Basel II over the previous accord is to give banks three options as to how to calculate the capital requirement for credit risk. The three approaches in order of complexity are the standardised method, the foundation internal method and the advanced internal method. The reason this option was given is to exempt smaller banks from having to set up expensive risk management departments and at the same time give bigger banks the possibility of using advanced quantitative models that allow refining the granularity of risk measures. Moreover, starting from the consideration that it would be highly desirable to have banks embracing the second paradigm (use of advanced models and therefore more precise measure of risk) the Basel committee tried to establish incentives for sophisticated risk modelling. These incentives would be in the form of a capital relief for banks using the advanced internal model approach (AIRB) and in particular the committee calibrated the coefficients to be used in the three methods in such a way that banks using the AIRB method would automatically get a lower capital charge. However this has been shown not to be true in all cases. In particular it turns out that banks using the standardised method (i.e. smaller banks) obtain lower capital requirements for worst quality borrowers than banks using the AIRB. This phenomenon generates a form of interbank regulatory arbitrage whereby bad assets naturally migrate from big banks' balance sheets to small banks balance sheets'.

## 24.6 MEANINGFUL DISCLOSURE

Market discipline requirements represent one of the novelties introduced by the Basel 2 accord and their importance for improving financial stability cannot be stressed enough. In fact in a world where companies' shares value is battered on a rumor<sup>63</sup> transparency plays a key role in ensuring financial stability. Even though it is relatively early to draw conclusions on the outcome of the disclosure reporting process described in pillar 3 of the Basel 2 accord analysts have already pointed to the need for improving the information conveyed to stakeholders<sup>64</sup>. Criticisms include lack of clarity, and in particular too much quantitative data with no accompanying explanation and no qualitative information about banks' risk perception, assumptions made in calculating risks and banks' economic

---

<sup>63</sup> N. Hume *Le poison de la rumeur*. FT Alphaville, Aug 15 2011 <http://ftalphaville.ft.com/blog/2011/08/15/652896/le-poison-de-la-rumeur/>

<sup>64</sup> In the best light: making the most of Pillar 3. PricewaterhouseCooper publication. <http://www.pwc.com/gx/en/insurance/solvency-ii/bridging-risk-capital-best-light.html>

strategy in the light of the risks measured and last but not least lack of comparability between different banks' disclosure reports. The main issue with current reporting seems to be that accounting disclosure tends to be dry information to the average investor. Consider market risk and the Var measure of risk for example. Essentially Var should give the investor an idea of the maximum loss a bank expects to suffer in a quarter. It has been observed that real loss figures can be four times as big as what predicted with Var which means Var represents on its own a deceiving piece of information for investors. And logically so, how can one single number convey a meaningful perception of a bank's risk of insolvency. Thus we see now pundits roughly dividing into two groups: those which push for more precise quantitative information to be published and those who, like the author, believe that a more qualitative kind of report should be delivered to the public as not everyone is capable orienting through the jungle of quantitative measures used by accountants and risk manager.

#### 24.7 HEAD I WIN, TAILS YOU LOSE

The compensation policy of banks has been under the spotlight for years with bold headlines filling newspapers front pages<sup>65</sup>. The public opinion seems to be compact on having regulators entering the sphere of compensation today rather than tomorrow. Without any doubt the problem of sky-high compensation is just another episode of the principal-agent dilemma. In order to express some rational consideration on this issue rather than going through the path of anger we will make a comparison between sell-side and buy-side institutions within the financial industry. On the sell-side, i.e. investment banking, we have giants of the like of Lloyd Blankfein earning around 40 million dollars in 2008 alone<sup>66</sup>. On the buy side we have George Soros earning in 2009 in excess of 3 billion dollars in fees and investment gains. The "giant-to-giant" ratio, a staggering 100 in order of magnitude, seems to be objectively skewed in favour of the buy-side industry. Therefore public anger against banks executives pay may appear unreasonable and misguided.

---

<sup>65</sup> J. Chapman, (2010) *Ministers cave in over £7bn bonuses for bankers*. Daily Mail January 11 2011 <http://www.dailymail.co.uk/news/article-1345961/Ministers-cave-7bn-bonuses-bankers.html>; E.Rowling, *IMF chief Dominique Strauss-Kahn blasts 'criminal' bank bonuses*, The Telegraph February 22 2011 <http://www.telegraph.co.uk/finance/newsbysector/banksandfinance/8339060/IMF-chief-Dominique-Strauss-Kahn-blasts-criminal-bank-bonuses.html>; Slap corporation tax on bank bonuses, say unions, The Guardian February 2011 <http://www.guardian.co.uk/business/2011/feb/14/tax-bonuses-like-profits>

<sup>66</sup> Though we report 2009 figures for the buy-side industry we compare those with 2008 figures of the buy side since because of the crisis 2009 figures for buy-side are nowhere near their typical value. Source: <http://www.businessinsider.com/meet-the-top-10-earning-hedge-fund-managers-of-2009-2010-4#2-george-soros-soros-fundquantum-endowment-33-billion-9>



## BIBLIOGRAPHY

J. Atik, (2010) *Basel II: A Post-Crisis Post-Mortem*, 19 *Transnational Law and Contemporary Problems*, Vol. 19, 731.

P. Atkinson, *The Basel Capital Adequacy Framework Should Be Reconsidered* 12 (Group d'Economie Mondiale de Sciences Po, Policy Brief, 2008) available at [http://gem.sciences-po.fr/content/publications/pdf/Atkinson\\_BaselIII17112008.pdf](http://gem.sciences-po.fr/content/publications/pdf/Atkinson_BaselIII17112008.pdf).

*Basel III: A global regulatory framework for more resilient banks and banking systems.*

Bank for International Settlements, 2010, available at <http://www.bis.org/publ/bcbs189.htm>

H. Benink & G. Kaufmann, *Turmoil Reveals the Inadequacy of Basel II*, NAKED CAPITALISM BLOG (Feb. 28, 2008, 2:37 AM), <http://www.nakedcapitalism.com/2008/02/turmoil-reveals-inadequacy-of-basel-ii.html>

BIS (2008), "*Addressing financial system procyclicality: a possible framework*", Note for the FSF Working Group on Market and Institutional Resilience, September 2008, available at [http://www.financialstabilityboard.org/publications/r\\_0904e.pdf?noframes=1](http://www.financialstabilityboard.org/publications/r_0904e.pdf?noframes=1)

R.Bonte (1999), "*Supervisory lessons to be drawn from the asian crisis*", BASEL COMMITTEE ON BANKING SUPERVISION WORKING PAPERS No. 2 – June 1999, available at [http://www.bis.org/publ/bcbs\\_wp2.pdf](http://www.bis.org/publ/bcbs_wp2.pdf)

C.Borio., C. Furfine, and P. Lowe (2001), "*Procyclicality of the financial system and financial stability: issues and policy options*", BIS Paper No 1

M. Brownbridge and C.Kirkpatrick (2000) '*Financial supervision in developing countries: a survey article*' *Journal of Development Studies*, October.

E. Callan, K. Guha and S. Scholtes. "Call to split US credit ratings agencies". FT Journal, September 27 2007 available at <http://www.ft.com/cms/s/0/7e8f44f4-6c5f-11dc-a0cf-0000779fd2ac.html#axzz1WiBMAYAu>

L. Cappiello, A. Kadareja, C. Kok Sørensen and M. Protopapa (2009), "Do bank loans and credit standards have an effect on output? A panel approach for the euro area", ECB Working Paper, No.1150/January 2010, available at <http://www.ecb.int/pub/pdf/scpwps/ecbwp1150.pdf>

Ciccarelli, M., A. Maddaloni and J.-L. Peydró (2009), "Trusting the Bankers: a New Look at the Credit Channel of Monetary Transmission", ECB Working paper series, No.1228/July 2010, available at <http://www.ecb.int/pub/pdf/scpwps/ecbwp1228.pdf>

S.Claessens and G.Embrechts (2002), *Sovereign ratings, and transfer risk: external versus internal ratings*, available at <http://www.bis.org/bcbs/events/b2eacla.pdf>.

A. Demirgüç-Kunt, and Detragiache, (1997) '*The determinants of banking crises: evidence from industrial and development countries*', World Bank Working Paper 1828

Demirguc-Kunt, A and Detragiache, (1998) '*Financial liberalization and financial fragility*', IMF Working Paper 1998/83, June

F. Dierick, F. Pires, M. Scheicher and K. G. Spitzer (2005), *The new Basel capital framework and its implementation in the european union*, European Central Bank occasional paper series, No. 42/December 2005, <http://www.ecb.int/pub/pdf/scpops/ecbocp42.pdf>

S. Fischer,(1995) "What does the Halifax communication imply for the international financial system?", lecture at Korea Institute of Finance, IFM edited version, available at <http://www.iie.com/fischer/pdf/Fischer168.pdf>

Griffith-Jones, S. and Ocampo, J.A. (2000) *Facing Volatility and the Concentration of Capital*

*Flows*, paper presented at a FONDAD conference, the Hague, 26-27 June.

Gordy M. (2003), "A risk-factor model foundation for ratings-based bank capital rules", *Journal of Financial Intermediation*, No. 12.

Hannoun, H. (2010). *The Basel III Capital Framework: A decisive breakthrough*. Bank for International Settlements. Available at:  
<http://www.bis.org/speeches/sp101125a.pdf>

N. Hume *Le poison de la rumeur*. *FT Alphaville*, Aug 15 2011 <http://ftalphaville.ft.com/blog/2011/08/15/652896/le-poison-de-la-rumeur/>

J.Hawkins and P. Turner (2000) '*International financial reform: regulatory and other issues*', paper presented at a conference in Washington, D.C., 3-4 February

G.L. Kaminsky and , C.M. Reinhart (1998) '*The twin crises: the causes of banking and balance of payments problems*' International Finance Discussion Paper No. 544, Federal Reserve Board of Governors

C.J. Lindgren, G. Garcia, and M. Saal (1996) *Bank soundness and macroeconomic policy*, Washinton, D.C.: IMF

N. Masschelein, (2007), "*Monitoring pro-cyclicality under the capital requirements directive: preliminary concepts for developing a framework*", NBB Working Paper Document No. 120

M.Obstfeld, (2007) *International Finance and Growth in Developing Countries: What Have We Learned?*, University of California, Berkley press.

Pesenti, P and Tille, C (2000) '*The economics of currency crises and contagion: an introduction*', FRBNY Economic Policy Review, September

E. Prasad, K. Rogoff, Shang-Jin Wei, and M. Ayhan Kose (2003), *Effects of financial globalization on developing countries*, IMF Occasional Paper 220, Washington.

Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directives 2006/48/EC and 2006/49/EC as regards capital requirements for the trading book and for re-securitisations, and the supervisory review of remuneration policies, Brussels, COM(2009)final, available at [http://ec.europa.eu/internal\\_market/bank/docs/regcapital/com2009/Leg\\_Proposal\\_Adopted\\_1307.pdf](http://ec.europa.eu/internal_market/bank/docs/regcapital/com2009/Leg_Proposal_Adopted_1307.pdf)

*Report from the Commission to the Council and the European Parliament on effects of Directives 2006/48/EC and 2006/49/EC on the economic cycle*, COM(2010)327, available at [http://ec.europa.eu/internal\\_market/bank/docs/regcapital/monitoring/23062010\\_report\\_en.pdf](http://ec.europa.eu/internal_market/bank/docs/regcapital/monitoring/23062010_report_en.pdf)

E.Rowling, *IMF chief Dominique Strauss-Kahn blasts 'criminal' bank bonuses*, The Telegraph February 22 2011 <http://www.telegraph.co.uk/finance/newsbysector/banksandfinance/8339060/IMF-chief-Dominique-Strauss-Kahn-blasts-criminal-bank-bonuses.html>

C. Sholz and J. Zentes (2006), *Strategic Management: New Rules for Old Europe*, Gabler, Betriebswirt.-Vlg

H. M. Schooner & M. W. Taylor,(2010) *Bank regulation: principles and policies*, Elsevier 2010

E.B.Smith, *“Bringing down Wall street as ratings let loose subprime scourge”*, 24 Sept. 2008 available at <http://www.bloomberg.com/apps/news?sid=ah839IWTL9s&pid=newsarchive>

M.V. Stichele, (2008), , *Financial regulation in the european union; mapping EU decision structure on financial regulation*, report commissioned by Bretton woods project, available at: [http://www.eurodad.org/uploadedFiles/Whats\\_New/Reports/EUMapping\\_Financial\\_Regulation\\_FIN\\_AL.pdf](http://www.eurodad.org/uploadedFiles/Whats_New/Reports/EUMapping_Financial_Regulation_FIN_AL.pdf)

L.Story and G.Morgenson (2010), *“S.E.C. Accuses Goldman of Fraud in Housing Deal”*, NY Times, April 16 2010 , available at <http://www.nytimes.com/2010/04/17/business/17goldman.html>

*Surveillance of Intra-Euro-Area Competitiveness and Imbalances*, European economy 1, 2010, European Community 2010, available at [http://ec.europa.eu/economy\\_finance/publications/european\\_economy/2010/pdf/ee-2010-1\\_en.pdf](http://ec.europa.eu/economy_finance/publications/european_economy/2010/pdf/ee-2010-1_en.pdf)

*Survey on the access to finance of small and medium-sized enterprises in the Euro area*, European Central Bank 2009, available at <http://www.ecb.int/pub/pdf/other/accesstofinancesmallmediumsizedenterprises200909en.pdf>

R. Trotz (2006), *Implementation of Basel II in the EU (CRD)/Property Valuation*, IVSC Information Paper, October 2006

Williamson, J and Mahar, M (1998) '*A Survey of Financial Liberalization*' Princeton Essays in International Finance No. 211, November

M.Wolf (2007) "*Questions and answers on a sadly predictable debt crisis*" , Financial Times, September 5 2007, available at <http://www.ft.com/cms/s/0/e114d850-5b48-11dc-8c32-0000779fd2ac.html#axzz1WYDovnh6>

O. Wyman, (2011), "*The financial crisis of 2015. An avoidable history*", State of financial services industries, 2011 available at: [http://www.oliverwyman.com/media/OW\\_EN\\_FS\\_Publ\\_2011\\_State\\_of\\_Financial\\_Services\\_2011\\_US\\_Web.pdf](http://www.oliverwyman.com/media/OW_EN_FS_Publ_2011_State_of_Financial_Services_2011_US_Web.pdf)