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## LA CRISI FINANZIARIA E LA GESTIONE DEI RISCHI NEGLI INTERMEDIARI FINANZIARI

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# THE BASEL III GLOBAL REGULATORY FRAMEWORK: A REVIEW

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## **Abstract**

The Basel II capital standard proved to be a failure and necessitated fundamental review. Minimum capital requirements were too low and “required” capital was only partly able to absorb losses. The RW filters did not capture many important risks. The assumption that OtT banking models and securitisation took risks away from the banks was mistaken. The regulatory framework was strongly procyclical and excessive reliance was put on external ratings. Liquidity and maturity mismatch were inadequately treated. Insufficient attention was paid to the activities of the “parallel banking system”. More broadly, Basel II was regarded in isolation, without recognition of critical interactions with macroprudential supervision and firm-oriented surveillance.

The enlarged Basel III capital regulatory framework represents an important step towards correcting the shortcomings of the previous standard and is a crucial component of the overall reform of the financial system. A fair and comprehensive assessment of the new framework is not easy, largely because several key issues remain unresolved, such as the amount and form of additional capital for systemically important institutions and the interaction with Pillars 2 and 3.

The basic thrust of the new system goes in the right direction and should be supported, but key areas of the agreement appear in need of refinement/reconsideration.

The key features of Basel III are critically reviewed, with specific reference to: increased and higher quality capital requirements, capital conservation and countercyclical buffers; leverage, liquidity and net stable funding ratios, systemic risk and interconnectedness, corporate governance.

Proposals for adaptation/correction of the overall framework are presented, notably in terms of: the timeline of the capital requirements, the application of non-risk based measures, the formulation of the capital buffers, the definition of uniform risk-weighting filters to different banking models, the inadequate recognition of the intertwining of sovereign and SIFI risks, the treatment of resolution procedures, the inadequate approach to toxic assets, the disincentives to long-term finance in banking, the still insufficient attention to shadow banking. As is argued, all these issues deserve further attention and in-depth corrective action.

## List of contents

1. Introduction.....	4
2. Basel III: key features .....	8
2.1. Increased Capital Requirements on RWA .....	8
2.1.1. Common Equity Risk-Based Capital .....	8
2.1.2. Tier 1 Risk-Based Capital .....	8
2.1.3. Total risk-based capital .....	9
2.1.4. Capital Conservation Buffer .....	9
2.1.5. Countercyclical Capital Buffer .....	10
2.2. Details of Transition Arrangements.....	10
2.3. Other Requirements .....	10
2.3.1. Leverage Ratio .....	10
2.3.2. Liquidity Ratios .....	11
2.3.3. Liquidity Coverage Ratio.....	11
2.3.4. Net Stable Funding Ratio.....	11
2.3.5. Systemic Risk and Interconnectedness .....	12
2.3.6. Corporate governance .....	12
3. Suggested adaptations.....	12
3.1. The timeline of capital requirements .....	12
3.2. Non Risk-Based Complementary Requirements (leverage and liquidity ratios).....	13
3.3. Capital buffers.....	14
3.4. One size fits all?.....	15
3.5. The intertwining of sovereign and SIFI risk.....	16
3.6. Systemically important banks and resolution procedures.....	17
3.7. Toxic assets.....	17
3.8. Removing disincentives to long term finance in banking.....	18
3.9. Shadow banking and capital market activity .....	19
4. Summary and Conclusion.....	19
List of acronyms .....	21
References.....	22

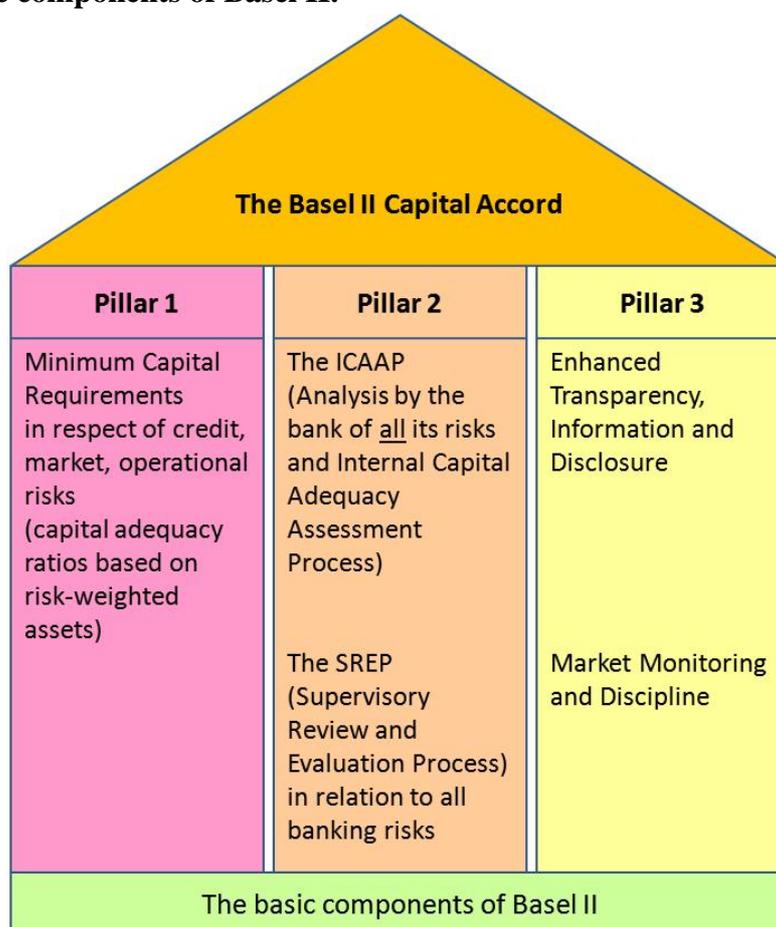
## 1. Introduction

The Group of Central Bank Governors and Heads of Supervision, the oversight body of the Basel Committee on Banking Supervision (BCBS), announced on 12 September 2010<sup>1</sup>, a substantial strengthening of the capital requirements, and its full endorsement of the agreement it had reached on 26 July 2010<sup>2</sup> in relation to the proposed changes to the Basel II framework. These elements formed part of a package of reforms, which was submitted to the November 2010 G-20 Summit and broadly endorsed. On 16 December 2010, the BCBS published the new regulatory framework: Basel III<sup>3</sup>.

A preliminary point to be made is that the new Basel framework is broader in scope and application with respect to its predecessor, the Basel II Capital Accord.

This is illustrated in the following two charts which offer a streamlined representation of the basic components in the old and the new standards.

**Chart 1: The basic components of Basel II.**

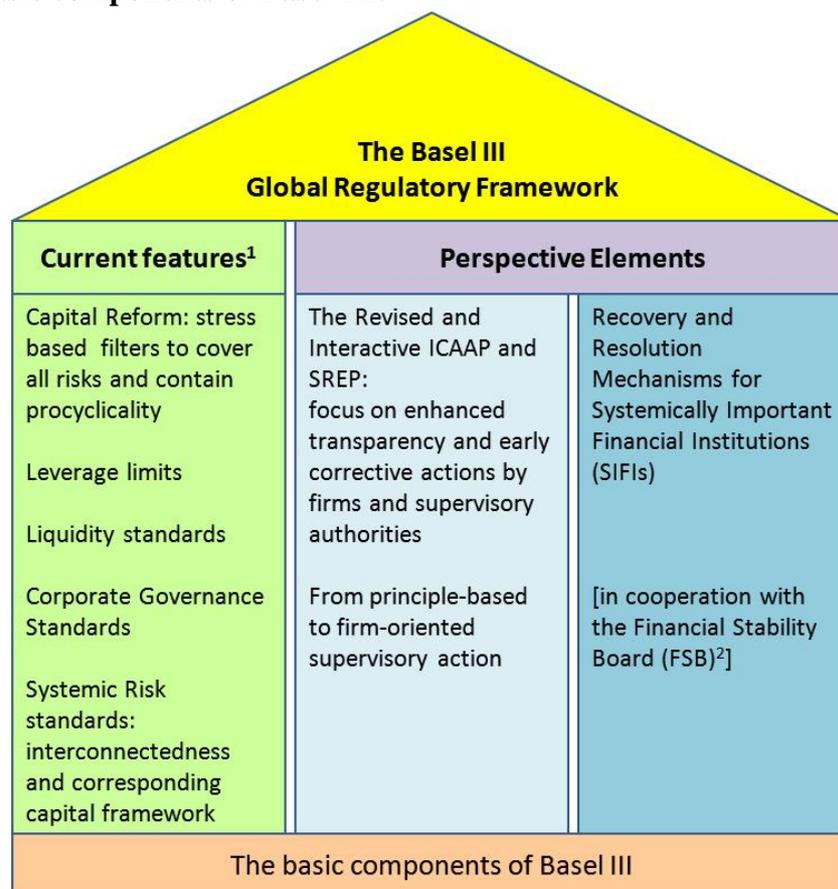


<sup>1</sup> BIS, Basel Committee on Banking Supervision (2010e).

<sup>2</sup> BIS, Basel Committee on Banking Supervision (2010b).

<sup>3</sup> BIS, Basel Committee on Banking Supervision (2010g).

**Chart 2: The basic components of Basel III.**



<sup>1</sup> Timeline: 2011-2022.

<sup>2</sup> In the US the key elements of these mechanisms have been already outlined in the Dodd-Frank Act (2010)

The representation of Basel III, as currently defined by the Basel Committee, is focused on the elements of the first column in Chart 2. The other two columns contain concepts foreseen in the proposed framework, but not yet fully outlined: these components appear however necessary to ensure a sound, comprehensive regulatory structure.

Repair of the capital standards is a crucial component of the overall reform of the financial system. The new agreement represents an important step in the right direction.

The Basel II framework proved to be a failure, and necessitated fundamental review<sup>4</sup>.

Minimum capital requirements were too low, and “required” capital was only partly able to absorb losses. The RW filters did not capture many important risks and overestimated banks’ ability to handle them.

The inherent assumption that OtT banking models and securitisation took risks away from the banks also turned out to be mistaken. The apparent geographical and business diversification of large banks was regarded, and allowed, to be risk and capital reducing, while the moral hazard implications of too big to fail were neglected. Excessive and inappropriate reliance was put on external ratings. The regulatory framework was strongly procyclical (in combination with mark-to-

<sup>4</sup> See de La Rosière J. (2009), Masera R. (2009), Herring R.J.(2011).

market accounting principles<sup>5</sup>). Liquidity and maturity mismatch issues were inadequately treated. The Basel II framework did not pay sufficient attention to the activities of the “parallel banking system”, and its links with regulated banking activities.

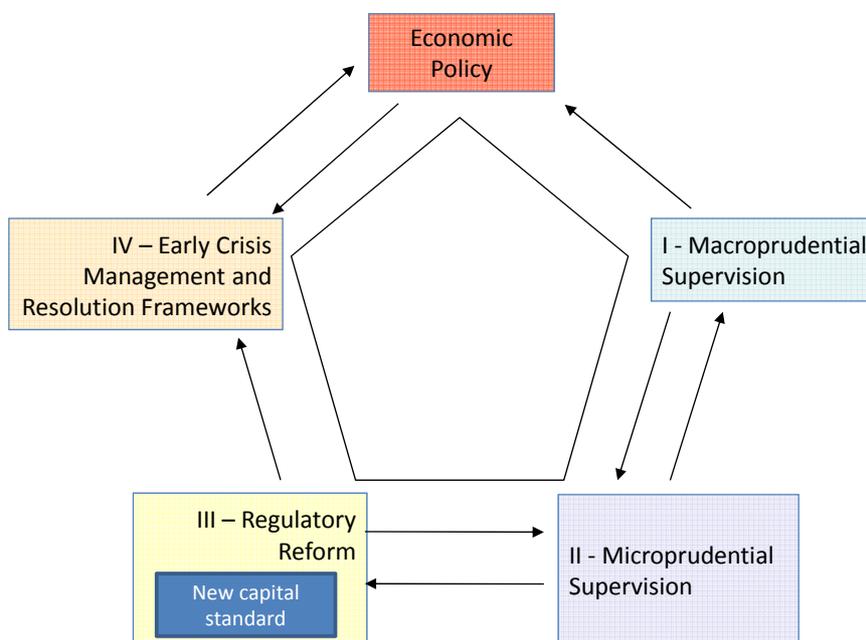
Finally and more broadly, Basel II was regarded in isolation, without recognition of critical interactions, on the one hand, with macroprudential supervision and, on the other, with in depth firm oriented surveillance.

As indicated, also Basel III must be seen as only one element of the overall reform of the approach to risk, regulation and supervision in the financial sector. Basel III cannot therefore be assessed in isolation. Its contribution to financial stability must be seen in terms of the enhanced complexity and interdependency within the global regulatory landscape: its benefits and costs.

In particular, the soundness and sustainable profitability of financial institutions is necessarily linked to the macroprudential environment and specifically to sound and sustainable monetary and fiscal policies (Chart 3).

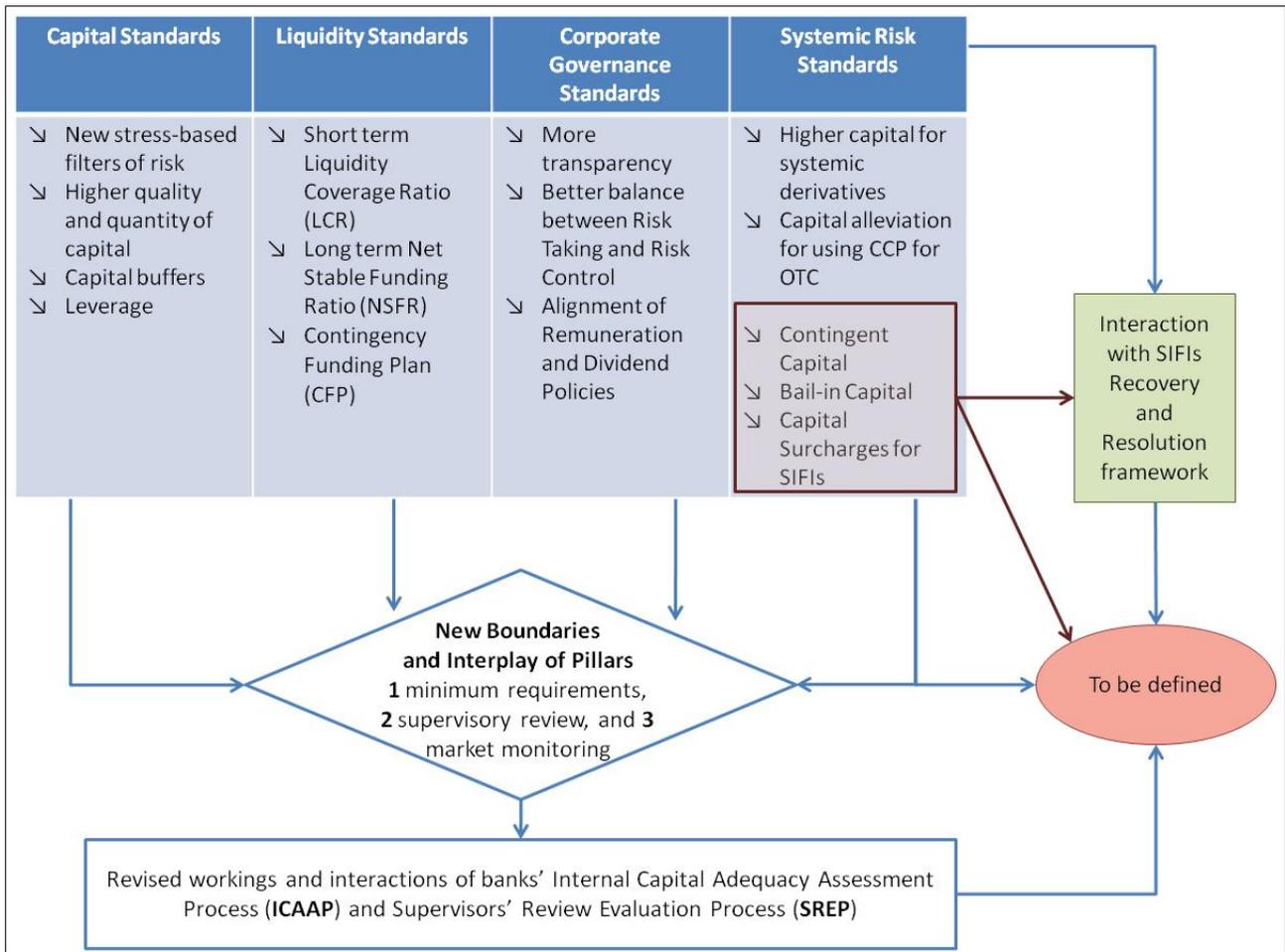
A fair and comprehensive assessment of Basel III is not easy, largely because several key issues remain unresolved even at the Committee level, including the amount and form of additional capital that will be required for systemically important institutions and the interaction with the “old” Pillars 2 and 3. Additionally, many of the details of the new framework will remain unclear for some time to come, as is indicated in Chart 4, which offers an enlargement of the stylized representation of Chart 2.

**Chart 3 – The Interactive de Larosière Report Approach to Financial Stability Reform.**



<sup>5</sup> IAS accounting principles are being revised and the issue of consistency between the expected loss and the incurred loss approaches is being addressed. These points and the implication of IAS on the definition of required loss absorbing capital are not dealt with in this paper.

**Chart 4 - The new enlarged framework of Basel III.**

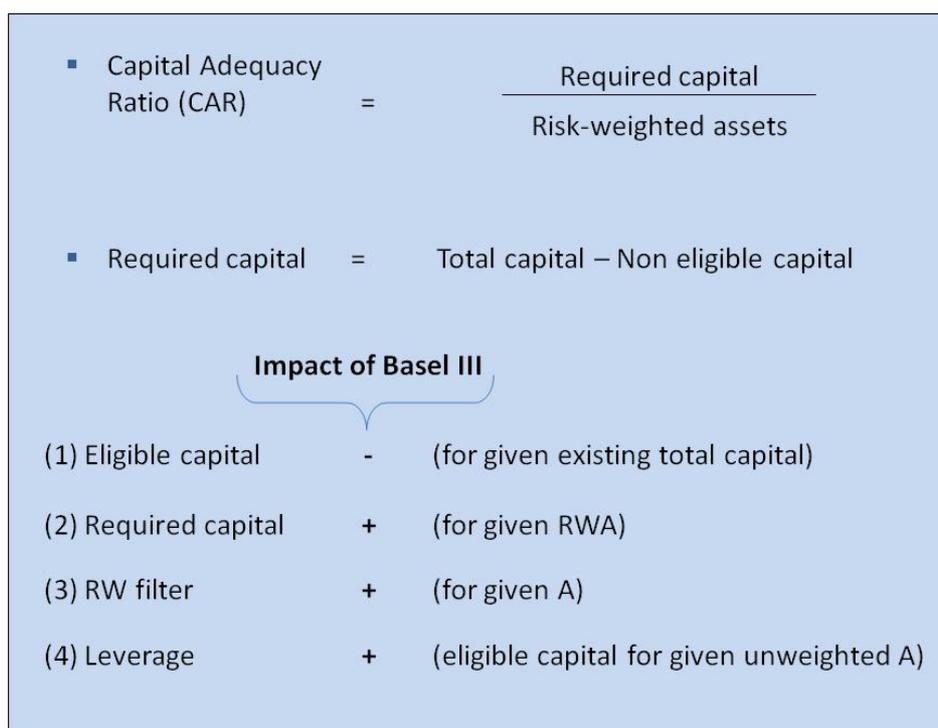


The basic thrust of the new system goes in the right direction and must be supported, notably in respect of its broader perspective and the emphasis on the quality of the capital base.

The wave of criticism – epitomised by the lead article of the FT on September 15, 2010 by Martin Wolf (2010), according to whom the new Basel III will not help create a safe system (“the mountain of Basel has brought forth a mouse”) – should not be followed. Indeed, as will be argued, the opposite is nearer the truth (Chart 5).

As indicated, the new Basel regulatory framework goes in the right direction, but key areas of the agreement appear in need of refinement/reconsideration. Accordingly, this survey is structured as follows: the following paragraph summarises the principal elements of the agreed framework. Suggested areas of further reflection and adaptation are outlined and corrective proposals are made.

**Chart 5 - The four-pronged tightening of capital requirements under Basel III.**



## 2. Basel III: key features

### 2.1. Increased Capital Requirements on RWA

#### 2.1.1. Common Equity Risk-Based Capital

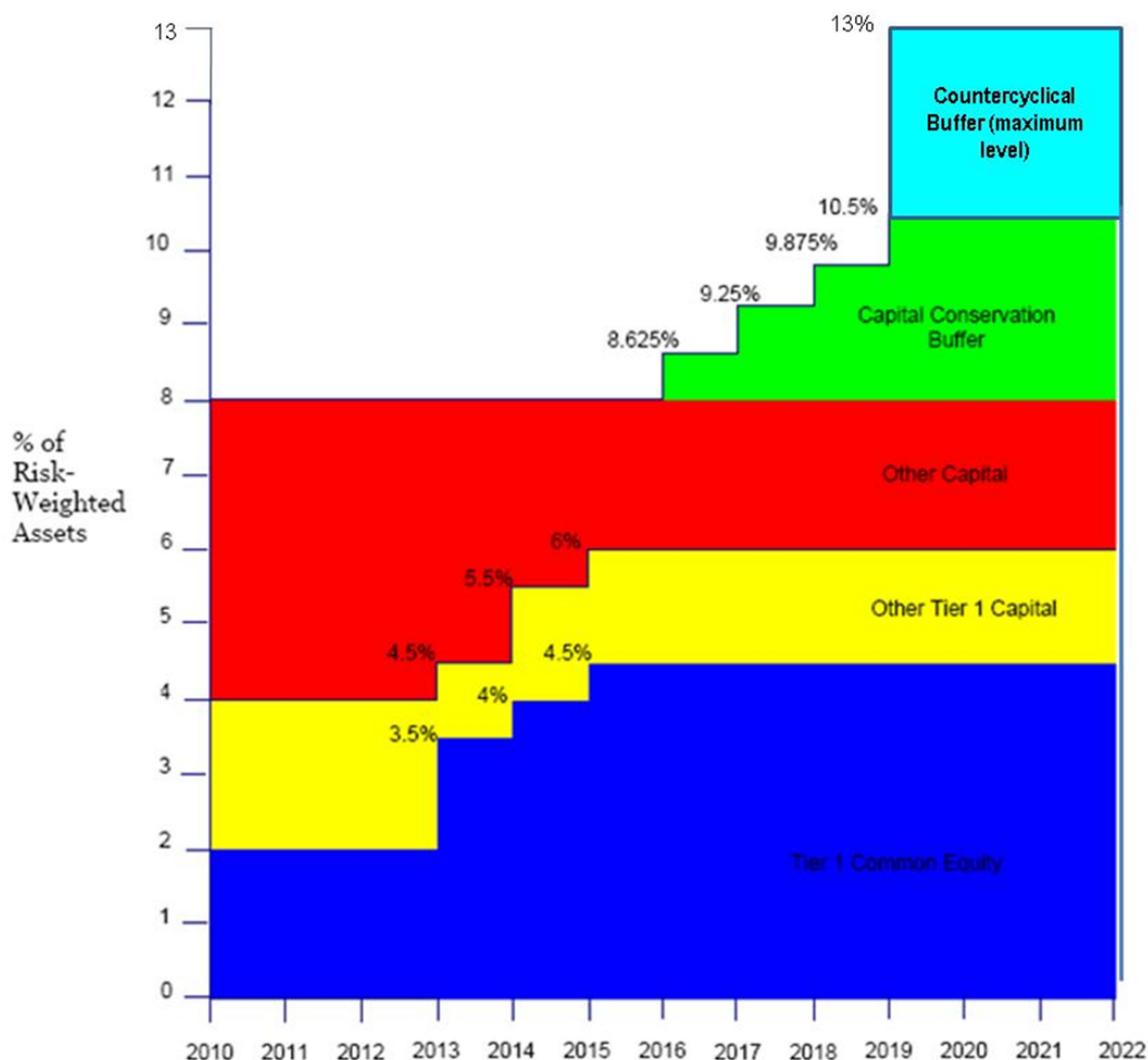
The minimum requirement for the common equity component of Tier 1 capital will be increased from 2% of risk-weighted assets under the current framework, measured before the application of capital deductions, to 4.5% of risk-weighted assets, measured after the application of the stricter capital deductions required under the Basel III framework. However, when combined with the capital conservation buffer (described below), the resulting common equity requirement under Basel III will be 7% of risk-weighted assets.

The new minimum requirement for common equity will be phased-in beginning with a 3.5% requirement in January 2013 and increasing to 4.5% by January 2015.

#### 2.1.2. Tier 1 Risk-Based Capital

Over the same transition period (i.e., 2013 to 2015), the minimum Tier 1 capital requirement will increase from 4% of risk-weighted assets, as under the current framework, to 6% of risk-weighted assets using Basel III's narrower definition of Tier 1 capital.

**Chart 6 - Basel III: Minimum Capital Requirements.**



### 2.1.3. Total risk-based capital

The minimum requirement for total capital under the Basel III framework remains unchanged at 8% of risk-weighted assets. Again, however, the 8% requirement must be satisfied using Basel III's more stringent definition of capital. Thus, when combined with the capital conservation buffer, the total capital requirement under Basel III is effectively 10.5%: this should effectively be compared with 2% under Basel II, a five-fold increase!

### 2.1.4. Capital Conservation Buffer

The capital conservation buffer, which must consist of common equity, is a capital cushion to be maintained above the Basel III minimum capital requirements that is intended to be available to absorb losses during times of financial stress. Under the Basel III framework, the capital conservation buffer will be set at 2.5% of risk-weighted assets. Although banks will be permitted to draw on the conservation buffer during periods of stress, as regulatory capital levels get closer to the minimum requirements (i.e., as the buffer is depleted), greater constraints on earnings distributions such as dividend payments and discretionary employee bonuses will be triggered.

Institutions subject to Basel III are likely to target levels of capital that exceed not just the regulatory minimums, but rather the regulatory minimums plus the capital conservation buffer.

#### *2.1.5. Countercyclical Capital Buffer*

In addition to the capital conservation buffer, the Basel III framework also contemplates a countercyclical capital buffer that would be funded on a jurisdiction-specific basis during periods of excess credit growth resulting in a build-up of systemic risk. According to the announcement, the countercyclical capital buffer would cover a range of 0% to 2.5% of risk-weighted assets, would need to be composed of common equity “or other fully loss absorbing capital” when funded, and would be implemented “according to national circumstances”.

## **2.2. Details of Transition Arrangements**

The increases to the minimum common equity and Tier 1 capital ratios will be phased-in over two years beginning in January 2013, with the full increases taking effect in January 2015. This will be followed by a three-year phase-in beginning in January 2016 of the capital conservation buffer, with the full 2.5% buffer requirement taking effect in January 2019. In addition, the deduction from Tier 1 capital of excess (i.e., over 15% of common equity in the aggregate) minority investments in financial institutions (FIs), mortgage servicing rights (MSRs), and certain deferred tax assets (DTAs) will be phased-in over a five-year period in 20% increments beginning in 2014, so that the full deduction will not take effect until January 2018.

Public sector equity investments are fully grandfathered until January 1<sup>st</sup>, 2018. Instruments no longer qualifying as non-common equity Tier 1 capital (e.g., trust preferred securities) or Tier 2 capital will be phased out over a 10-year period beginning in January 2013, with recognition of those instruments as qualifying capital being reduced by 10% each year, using the nominal amount outstanding on January 1<sup>st</sup>, 2013, as a baseline.

Capital instruments that no longer qualify as common equity, however, generally will be excluded altogether from common equity as of January 1<sup>st</sup>, 2013.

## **2.3. Other Requirements**

### *2.3.1. Leverage Ratio*

The minimum risk-based capital requirements under Basel III will be supplemented by a non-risk-based minimum Tier 1 leverage ratio, which has been tentatively set at 3%. The appropriateness of the 3% ratio (and the use in the numerator of Tier 1 capital as opposed to total capital or common equity) will be assessed during a parallel run period from 2013-2017, with the leverage ratio requirement not becoming final until 2018.

### 2.3.2. Liquidity Ratios

Two liquidity ratios are introduced: the liquidity coverage ratio, to ensure short-term liquidity, and the net stable funding ratio, to deal with longer term financing requirements.

### 2.3.3. Liquidity Coverage Ratio

The liquidity requirements prescribe that banks hold liquid investment sufficient to cover cash outflows over a 30-day period. But, this higher proportion of liquid, low-yield assets has a negative impact on profitability.

The liquidity coverage ratio (LCR) may tilt banks' investment towards public debt investment. This can exacerbate the intertwining of sovereign and SIFI risk.

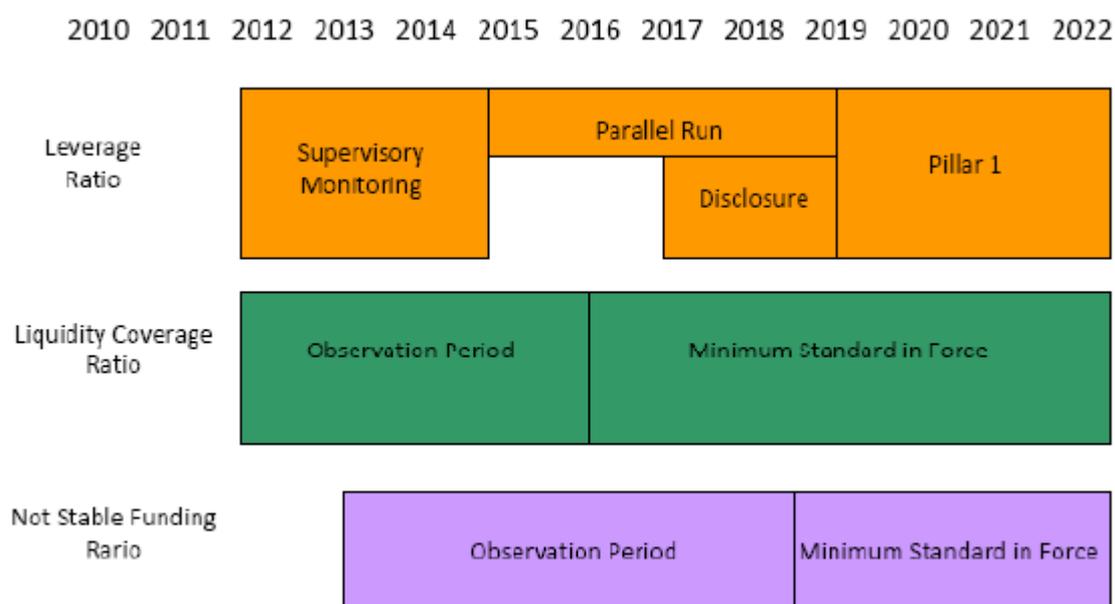
### 2.3.4. Net Stable Funding Ratio

The Basel III release reiterates the Committee's commitment to issue a revised minimum net stable funding ratio (NSFR), which is intended to promote longer-term structural funding of banks' balance sheets, off-balance sheet exposures and capital markets activities.

As first announced in July 2010, the NSFR released as part of the December 2009 Basel III proposal is in the process of being revised. The revised NSFR is not scheduled to take effect as a minimum standard until 2018.

The reliance on bond and long term deposits will be difficult, also because these funds will become prone to haircuts in case of difficulties (the moral hazard issue).

**Chart 7 – Timing for Leverage and Liquidity Ratios.**



### *2.3.5. Systemic Risk and Interconnectedness*

To deal with correlated shocks across the financial system and the economy some measures have been outlined, others are still at study level:

- (i) capital incentives are introduced for banks to use central counterparties for OTC derivatives;
- (ii) higher capital requirements must be met in respect of inter-financial sector exposures;
- (iii) liquidity requirements will penalise reliance on short-term interbank funding to support longer dated assets.

As to systemically important institutions, the Basel III document confirms, without providing any further detail, that systemically important banks will be expected to maintain capital beyond the minimum regulatory requirements. The announcement simply notes that the Committee, together with the Financial Stability Board, continues to work on a “well-integrated approach” to systemic institutions that could include “combinations of capital surcharges, contingent capital and bail-in debt”. G-SIFIs are supposed to have even higher loss absorbency capacity.

### *2.3.6. Corporate governance*

To correct the internal incentives leading to excessive risk taking by banks, various indications are made:

- (i) criteria are offered for remuneration and incentive policies for Directors and Top Management. Compensation incentives should be fully transparent and closely aligned with long-term shareholder interests and sustainable firm-wide profitability;
- (ii) governance rules are introduced in respect of dividend payments on capital included in Tier 1;
- (iii) Board of Directors and Senior Management must be actively involved in the risk control process;
- (iv) the Bank risk measurement must be closely and directly integrated into the risk management process;
- (v) banks must have a routine in place for ensuring compliance within an integrated and well documented set of internal policies, controls and procedures concerning the operation of the risk measurement system;
- (vi) an independent review of the risk measurement system must be carried out regularly in the bank’s internal auditing process.

## **3. Suggested adaptations**

In this final paragraph key points of the Basel III overall framework which require further reflections and possible adaptations, are outlined. Some proposals are made to complement the existing approaches.

### **3.1. The timeline of capital requirements**

It is no doubt difficult to strike the right balance between strengthening banks balance sheets and allowing financial institutions to sustain economic recovery. The new capital, leverage and

liquidity standards described above were undoubtedly influenced by concerns about the impact of higher capital requirements on bank lending and the faltering pace of economic recovery.

As result, the timeline for implementation of the new requirements (grandfathering) is exceptionally long (12 years), as indicated in detail in Paragraph II.

Lengthy transitional periods to implement announced long-term targets may have important drawbacks. If the truly “sound” standards are to be met so far away, the markets, in case of impending stress, may well react adversely and force financial institutions towards immediate respect of the stricter criteria. This would exacerbate procyclicality.

There are already worrying signs that markets push for a very early implementation of the new final quantitative standards, which is detrimental to the still fragile recovery. There are also clear instances of a trend spurred by regulators and market operators to set ambitious compliance deadlines, in order to gain a long term competitive advantage (e.g.: large Swiss banks and Swiss supervisory authorities aim at a 19% overall capital ratio, while in the US current stress tests are set in the framework of a 7% common equity requirement).

Estimates of the potential requirements of loss absorbing Tier 1 securities as a result of the implementation of Basel III show a very wide range depending on the models used, the assumptions made, the time horizon considered and the sources. These effects could be mitigated by the parallel running of the standard and the internal models.

In any event, the figures are very large, in the order of \$1 to 3 trillion for the largest banks globally<sup>6</sup>. Even larger amounts are projected in respect of debt securities.

Even taking into account the broad range, under reasonable assumptions on the perspective profitability of the banking system, these figures underline the need for novel solutions, such as bail-in and contingent capital. These approaches are mentioned in the Basel III documents, but await clarification.

### **3.2. Non Risk-Based Complementary Requirements (leverage and liquidity ratios)**

As indicated (Chart 7), the phase-in period is especially long also in respect of these crucial limits. One of the fundamental defects of the traditional Basel approach was the misuse of Risk Weighted Assets (RWA) in the assessment of required capital. There were three main problems with this approach:

- (i) it was backward-looking since it assumed that the securities which had been risky in the past would be the same as the securities that would become risky in the future. This is not necessarily true;
- (ii) it was easy to game. Taking any additional measurable risk requires more capital. The game became how to increase returns without increasing measured risk! Correct application is, therefore, of fundamental importance. It was here that the supervisory process proved inadequate;
- (iii) models used were inappropriate, since they were based on too short historical references and on normal distributions<sup>7</sup>.

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<sup>6</sup> See McKinsey&Company (2010), BCBS Impact Study (2010),Goldman Sachs (2011), BIS, Basel Committee on Banking Supervision (2010a).

<sup>7</sup> For an elaboration of these points see Masera R. (2009a).

Risk could therefore be made exceedingly small in Basel I and Basel II. Even in Basel III very high leverage is allowed, especially in respect of securities with high ratings (Zazzara, 2011).

The RWA methodology is an important step forward and the basic approach is fundamentally right. The solution to avoid past mistakes is not to go back to non-weighted schemes, but to find the right balance between the various measures. As indicated, the balance rests fundamentally on competent understanding and application of the analytical models used and on sound, effective analysis and supervision of banking groups and firms. What must at all costs be avoided is a mechanical application of across-the-board coefficients.

This is the reason why unweighted criteria, such as leverage and liquidity coefficients, should also be taken into account, to avoid relapses into the excesses of the past. Doubts can, therefore, be expressed on the proposed time horizon of their implementation.

As indicated, the leverage ratio, which represents a key back-stop to the risk-based measures discussed above, will be phased-in only by 2017, and applying a low minimum threshold of 3%. Migration to a Pillar I treatment would take place in 2018. The difficulty of reconciling weighted and unweighted risk ratios should be clearly recognised.

Also the liquidity ratios will undergo long observation periods, prior to their introduction, as minimum standards, due to take place ultimately in 2018.

### **3.3. Capital buffers**

The new additional capital conservation buffer is introduced to absorb losses in periods of financial and economic stress, and should be met exclusively with common equity. The BCOB also agreed on a countercyclical buffer. This buffer will be triggered in good times, so that banks can be more stable during financial crises. But no objective trigger point has been indicated to signal when banks will need to build up the buffer and when they will be allowed to draw on that capital if needed. This decision will be left to regulators in each individual country. The lack of clarity in the timing and form of implementation creates considerable uncertainty. The envisaged framework is complex and burdensome from an operational point of view.

Reliance on countercyclical provisioning by banks, with appropriate adaptation of fiscal and accounting rules, would represent a sounder and simpler approach. No bank would be allowed by the markets – and should be allowed by the supervisors - to run down its capital base precisely when things get difficult.

The problem with RWA incentives is that, if they are large and remain mechanically in place over the long term, they can produce unintended consequences, like over-exposure to a specific sector or form of lending for which there is no historical experience and a consequent under-pricing of risk<sup>8</sup>.

They can also, as the US mortgage experience and the fallout on the entire housing market has demonstrated, cause behaviors and forms of regulatory arbitrage that create but disguise risk. Good supervision, satisfactory enterprise risk management and appropriate corporate incentives are the first lines of defense against distortions. In this respect there is a clear need to redefine and enact on a sounder basis the interaction between ICAAP and SREP.

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<sup>8</sup> Risk weights are calibrated on historical data bases. They do not take into account that market volatility changes through time and that the riskiest assets in each risk class may be sought by managers gaming capital requirements.

In this respect, the revised Capital Requirements Directive (CRD)<sup>9</sup> requires that the consolidating supervisor and supervisors of subsidiaries of a cross-border banking group do everything within their power to reach a joint decision on the application of the Pillar 2 provisions related to the ICAAP and to the SREP<sup>10</sup>.

This joint decision should cover the determination of the adequacy of the consolidated level of own funds held by the group with respect to its financial situation and risk profile, as well as the required level of own funds, above the regulatory minimum, applied to each entity within the group.

The supervisors shall carry out this task within the colleges of supervisors.

According to the EBA guidelines, SREP should encompass the following three elements: (i) identification, review and evaluation of all material risk and control factors; (ii) assessment, review and evaluation of the ICAAP and (iii) assessment, review and evaluation of compliance with the various minimum requirements of the CRD.

The process designed by EBA defines some important principles and procedures. However, it must be stressed that in practice some important issues must be solved to achieve a prompt and efficient decision on the risk-based capital adequacy for a cross border institution:

- (i) the process is extremely articulated and may require a long time horizon before reaching a joint assessment on capital adequacy (6-12 months), by jeopardizing in this way its utility for home and host supervisors<sup>11</sup>.
- (ii) diversification of risk (intra and inter-risk) has not been explicitly considered by EBA guidelines. Obviously group-wide economic capital is not given by the sum of idiosyncratic level of capital. A cross-border group may enjoy intra and inter risk diversification benefits between different business lines located in different legal entities (under different jurisdictions).

### **3.4. One size fits all?**

The increasingly and exceedingly complex mathematical regulatory models are based on the highly questionable belief that the risk-weighting filters applied to assets (and liabilities) of the banks' balance sheets can be made uniform and consistent independently of the banking model (wholesale, retail, investment, universal, commercial, OtT) and size (with higher capital requirements in respect of large, complex groups). (One framework fits all).

This approach can be challenged on analytical and empirical grounds. It is not by chance, for instance, that in the US the Basel II approach was never applied to medium (small) sized commercial banks. The Italian banking model represents a paradigm which should deserve closer scrutiny (Mussari G., 2011).

After the collapse of Bear Stearns and the failure of Lehman on 15 September 2008 the demise of investment banking seemed inevitable. Today, in spite of the Volcker Rule, the regulation to distinguish clearly between investment and commercial banking is waning.

Basel III does not endorse in any way the split approach. It is instead consistent with subsidiarisation, and well specified living wills. Paradoxically, it could lead commercial banks to

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<sup>9</sup> Directive 2006/48/EC and Directive 2006/49/EC, amended in May 2009.

<sup>10</sup> In order to facilitate the joint decision process and to avoid inconsistencies in the approaches followed by the various colleges, the CRD required EBA to elaborate guidelines for the convergence of supervisory practices with regard to the joint decision process. See CEBS (2010).

<sup>11</sup> A different (time-to-market) approach is suggested by Masera (2011).

increase funding in wholesale markets. The intrinsic stability of a well-run “traditional” bank model, based on core deposits, is not recognized. And yet this should be a clear lesson of the crisis, particularly evident from the Italian experience.

Thus, the banking model most conducive to financial stability and growth in economies characterized by the importance of SMEs might be a casualty of the Basel framework (de Larosière, 2010 and 2011).

The risk entailed by the new rules is that the continental Europe’s universal banks, focused on retail and corporate lending operations, fund management and other activities mainly concentrated on a client base, if required to increase their return on investment, will reduce activities with modest margins, such as lending to SMEs, to favour the more profitable parts of their portfolios; or, alternatively, that the rules might translate in higher credit costs, with negative effects on the real economy and on the soundness of the financial system (Bassanini, 2011 and de Larosière, 2011).

For all these reasons, to maintain the banks’ capability to grant the same amount of credit to SMEs after the introduction of the capital conservation buffer compared to the current level, it appears necessary to amend the capital treatment of such assets.

An operational scheme along these lines is proposed by Italian Banking Association (ABI). A scale (or balancing factor) would be introduced in the transposition of Basel III to CDR IV, to be applied in the total RWA calculation for loans to SMEs, so as to balance out the quantity increase in minimum capital requirements.

### **3.5. The intertwining of sovereign and SIFI risk**

In Europe, the intertwining of sovereign and SIFI risk is not adequately recognised and, contrary to United States, a specific recovery and resolution procedure is not in place.

The hypothesis of orthogonality between government “risk free” interest rates and risk premiums of private borrowers cannot be regarded as a general axiom.

Stress tests, according to the Basel framework, also very recently, have been conducted without full recognition of this point. Specifically, the use of haircuts to government paper only in respect of the trading book should be questioned. Boundaries between banking and trading books are blurred and respond to financial innovation and regulatory arbitrage. The relevance of these points, especially in Europe, has been explored in Masera (2011) and Mazzoni (2011).

A point which must be stressed is that the sovereign risk of banks should comprise the exposure deriving from any protection sold through derivatives in respect of country risk. This is a paramount reason in favour of the introduction of well-capitalised Central Clearing Counterparty (CCC) houses for credit default swaps in the EU, as recommended in the de Larosière Report (2009).

More generally, as has been rightly observed (Reinhart and Rogoff, 2009 and Reinhart, 2010), the Basel III approach continues to push banks towards investment in (domestic) government bonds. This may be “politically correct” under current circumstances, but may entail significant risks, especially in the European context.

Markets are aware of this, as witnessed by the fact the very sound industrial and services corporations, based in triple-A rating countries, are able to borrow in better terms than most banks and many governments. Spillovers between sovereign risk and financial stability are especially relevant in respect of large financial groups.

The new regulations (including Solvency 2) may de facto represent disguised forms of financial repression: portfolio constraints in favour of public debt (Masera, 2011).

### **3.6. Systemically important banks and resolution procedures**

Taking the moral hazard out of banking is the next fundamental step in financial reform. As indicated, this issue is complicated in Europe by the interaction with sovereign risk (See Masera, 2011).

This especially important area is still work in progress in Basel.

The BCOB states that SIFIs should have higher “loss absorbing capacity” than required by the new standards. The integrated approach potentially includes combinations of capital surcharges, contingent capital and bail-in debt, in addition to the measures to strengthen resolution regimes. As we have seen, the Dodd-Frank Act imposes some general principles and also details the basic procedures for resolution.

The position taken in this presentation is that SIFIs should be made to bear the systemic risks they pose, so that bail-outs with public money are ruled out. The existence of excessively large, complex, difficult to manage and to supervise financial conglomerates with no clear specialization and focus should be discouraged. However this should be done preferably through systemic-risk-related fees, to be paid to a resolution fund (a model similar to that outlined in the Dodd-Frank Act), rather than by imposing capital surcharges (Masera, Mazzoni, 2010). In this respect, objective criteria should be developed to identify such institutions and monitor their contribution to risk.

More generally, the problems by SIFIs cannot be effectively dealt with without simultaneously addressing the issues of crisis management and resolution regimes. The Dodd-Frank Act shows clearly this point, which is not yet satisfactorily treated in the new Basel framework.

As indicated, in the EU important difficulties must be overcome in this area. National authorities and jurisdictions will detail their own resolution regimes, which must be made consistent at European level. Additionally, the specific business models of systemically important financial institutions in Europe can be very different, and their dangerousness evidently varies. This critical issue is not yet satisfactorily addressed.

### **3.7. Toxic assets**

The issue of toxic assets has largely been addressed in the US. In Europe, markets are not convinced that this is the case: this leaves lingering poisonous doubts on certain banking systems (and hence on the significance of stress tests on this side of the Atlantic)<sup>12</sup>.

The dire indications given by the IMF and its Director General in 2009-10, with estimates of huge amounts of toxic assets, and related perspective bank losses amounting to some \$ 4 trillion, were accompanied by explicit action undertaken by the US. The Geithner Plan defined in early 2009 met with a positive response by markets and banks. In Europe it proved more difficult to act transparently, rapidly and in a coordinated way. It is now time to address the problem in a definitive way.

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<sup>12</sup> Masera R. (2008), Posen A.S., Veron N. (2009), Reinhart C.M. (2010).

To start with, the term “toxic assets” is misleading and should be abandoned: not only the words suggest that the assets are, at best, unrealised writedowns in opaque balance sheets, but also convey the impression of poison running through the system, with disease and contagion repercussions. Truly “toxic” assets, sometimes referred to also as nuclear waste, should therefore be identified, isolated and buried away - especially when dubious operations with offshore centres are involved - thereby cleansing balance sheets.

But there are good reasons to believe that, in Europe, many of these assets are simply illiquid and continue to be difficult to evaluate. Fair value and mark-to-market techniques perhaps continue not to be applicable. Many of these structured non-standardized securities were built to be held until maturity. In any event, it is vital to distinguish between mark-to-market losses and expected credit losses (present values of expected cash flow until maturity).

The exercise of transparency and separation of these assets, perhaps within the framework of special PPP’s (private public partnerships) can therefore be rewarding, with a view to repairing banks’ balance sheets, improving capital ratios and restoring lasting confidence.

Two available options can still be examined in Europe, which the banks themselves should assess in the first place:

- (i) Spin off: the bank creates a SPV with VVAs (variable-value assets) and related liabilities. The vehicle is demerged to existing shareholders and open to new investors (Public Funds, Private Equity Funds, Sovereign wealth Funds);
- (ii) SPV refinancing: the bank transfers at book value the VVAs to a SPV possibly created by EFSF and, in perspective, managed in the framework of the European Recovery and Resolution Mechanism to be created, which issues corresponding bonds. The bank pays guarantee fees to the vehicle.

### **3.8. Removing disincentives to long term finance in banking**

The existing regulatory framework is not neutral towards long term investments, as a result of the simultaneous operation of banking, accounting and fiscal requirements. This is detrimental to sustainable growth in all advanced countries.

The need to reexamine the whole set-up was underlined, and corrective proposals were advanced, in the de Larosière Report (2009).

As already indicated, differences between business models in banking should be explicitly recognised. Intermediation of credit and liquidity requires disclosure and transparency but not necessarily mark-to-market rules which, while being appropriate for investment banks and trading activities, are not consistent with the traditional loan activity and the policy of holding long term investments. Long-term economic value should be central to any valuation method: it should be based on an assessment of the future cash flows deriving from the security as long as there is an explicit minimum holding period and as long as the cash flows can be considered as sustainable over a long period.

These points have been elaborated in terms of a comprehensive set of proposals by the Long Term Investors Club, with endorsement by the G-20<sup>13</sup>, which underline the risks of incentivising banks to a short-term transaction-oriented behaviour.

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<sup>13</sup> See, for instance, Bassanini F. (2010) and (2011).

These suggestions should be taken into account in the implementation of Basel III, whose provisions on liquidity and loan funding and capital for securitized assets would add to the difficulties of long term financial intermediation.

### **3.9. Shadow banking and capital market activity**

The very high capital charges that are targeted in the medium term, but can be forced by markets much sooner, propose again the issues of regulatory arbitrage and the operation of the “shadow banking system”.

In any event, there will be a shift towards capital markets, which may be costly for economies based on SMEs.

It is therefore necessary to:

- (i) extend appropriate regulation, in a proportionate manner, to all firms or entities conducting financial activities of a potentially systemic nature, even if they have no direct dealings with the public at large; regulatory gaps permit financial vulnerabilities to grow and become unmanageable;
- (ii) improve transparency in all financial markets - and notably for systemically important hedge funds - by imposing, in all EU Member States and internationally, registration and information requirements on hedge fund managers, concerning their strategies, methods and leverage, including their worldwide activities;
- (iii) introduce appropriate capital requirements on banks owning or operating a hedge fund or being otherwise engaged in significant proprietary trading and to closely monitor them.

## **4. Summary and Conclusion**

The third of the Basel capital accords was published in December 2010, after endorsement by the BCOB and by the G-20 Summit. Basel III is a crucial component of the overall reforms under way to risk, regulation and supervision in the financial system, and is broader in scope and application with respect to its predecessors.

The Basel II capital standard proved to be a failure and necessitated fundamental review. Minimum capital requirements were too low and “required” capital was only partly able to absorb losses. The RW filters did not capture many important risks. The assumption that OtT banking models and securitisation took risks away from the banks was mistaken. The regulatory framework was strongly procyclical and excessive reliance was put on external ratings. Liquidity and maturity mismatch were inadequately treated. Insufficient attention was paid to the activities of the “parallel banking system”. More broadly, Basel II was regarded in isolation, without recognition of critical interactions with macroprudential supervision and firm-oriented surveillance.

The enlarged Basel III capital regulatory framework represents an important step towards correcting the shortcomings of the previous standard and is a crucial component of the overall reform of the financial system. A fair and comprehensive assessment of the new framework is not easy, largely because several key issues remain unresolved, such as the amount and form of additional capital for systemically important institutions and the interaction with Pillars 2 and 3.

The basic thrust of the new system goes in the right direction and should be supported, but key areas of the agreement appear in need of refinement/reconsideration.

The principal features of Basel III have been critically reviewed in Paragraph 2, with specific reference to: increased and higher quality capital requirements, capital conservation and countercyclical buffers; leverage, liquidity and net stable funding ratios, systemic risk and interconnectedness, corporate governance.

Proposals for adaptation/correction of the overall framework are made in Paragraph 3. Proposed changes refer principally to the timeline of the capital requirements, the application of non-risk based measures, the formulation of the capital buffers, the issue of uniform risk-weighting filters in respect of different banking models, the inadequate recognition of the intertwining of sovereign and SIFI risks, the treatment of resolution procedures, the inadequate approach to toxic assets, the disincentives to long-term finance in banking, the still insufficient attention to shadow banking. As is argued, all these issues deserve further attention and in-depth corrective action.

## List of acronyms

ABI	Italian Banking Association
BCBS	Basel Committee on Banking Supervision
BCOB	Basel Committee Oversight Body
BIS	Bank for International Settlements
CAD	Capital Adequacy Directive
CAR	Capital Adequacy Ratio
CCC	Central Counterparty Clearing
CFP	Contingency Funding Plan
CoCos	Contingent Convertibles
CRA	Credit Rating Agency
CRD	Capital Requirements Directive
DTAs	Deferred Tax Assets
ECB	European Central Bank
ECOFIN	Economic and Financial Affairs Council
EFSF	European Financial Stability Facility
ESMA	European Securities and Markets Authority
EU	European Union
Fed	Federal Reserve System
FIs	Financial Institutions
FSB	Financial Stability Board
FT	Financial Times
G-7	Group of Seven
G-20	Group of Twenty
G-SIFI	Globally Systematically Important Financial Institution
ICAAP	Internal Capital Adequacy Assessment Process
IMF	International Monetary Fund
LCR	Liquidity Coverage Ratio
MSRs	Mortgage Servicing Rights
NSFR	Net Stable Funding Ratio
OtC	Over-the-Counter
OtT	Originate-to-Transfer
RW	Risk Weighted
RWA	Risk Weighted Assets
SIFI	Systematically Important Financial Institution
SMEs	Small and medium-sized enterprises
SPV	Special Purpose Vehicle
SREP	Supervisory Review Process
US	United States
VVAs	Variable-Value Assets

## References

- Acharya V. (2009), “A Theory of Systemic Risk and Design of Prudential Bank Regulation”, *Journal of Financial Stability*, 5(3), pp. 224-255.
- Acharya V., Pedersen L., Philippon T., Richardson M. (2009), “Regulating Systemic Risk,” in Acharya V., Richardson M. (eds.), *Restoring Financial Stability: How to Repair a Failed System*, Hoboken (NJ): John Wiley & Sons, pp. 283-303.
- Acharya V., Richardson M. (eds.) (2009), *Restoring Financial Stability: How to Repair a Failed System*, Hoboken (NJ): John Wiley & Sons.
- Acharya V., Yorulmazer T. (2008), “Information Contagion and Bank Herding”, *Journal of Money, Credit and Banking*, 40(1), pp. 215–231.
- Adrian T., Brunnermeier M. (2008), “CoVaR”, Staff Report, No. 348, New York: Federal Reserve Bank.
- Aguilar L.A. (2010), “An Insider’s View of the SEC: Principles to Guide Reform”, Speech, Berkeley: U.S. Securities and Exchange Commission, October 15.
- Akerlof G. (2002), “Behavioural Macroeconomics and Macroeconomic Behaviour”, *American Economic Review*, 92(3), pp. 411-433.
- Allen F., Babus A. (2008), “Networks in Finance: Network-based Strategies and Competencies, Chapter 21”, Working Paper, n. 08-07, Philadelphia: Wharton School.
- Allen F., Gale D. (2000), “Financial Contagion”, *Journal of Political Economy*, 108 (1).
- Athanasopoulou M., Segoviano M., Tieman A. (forthcoming), “Banks’ Probability of Default: Which Methodology, When, and Why?”, IMF Working Paper, Washington (DC): International Monetary Fund.
- Bair S. (2009), “Too Big To Fail”, Committee on Banking, Housing and Urban Affairs, US Senate, Senate Office Building, May 6.
- Bank for International Settlements (BIS), Consolidated banking statistics, available online at the URL: <http://www.bis.org/statistics/consstats.htm>
- Bank for International Settlements (BIS), Basel Committee on Banking Supervision (2010a), Comprehensive quantitative impact study, February.
- Bank for International Settlements (BIS), Basel Committee on Banking Supervision (2010b), Agreement on Basel Committee capital and liquidity reform package. Annex, Basel: BIS, July 26.
- Bank for International Settlements (BIS), Basel Committee on Banking Supervision (2010c), Proposal to ensure the loss absorbency of regulatory capital at the point of non-viability, Consultative Document, Basel: BIS, August 19.
- Bank for International Settlements (BIS), Basel Committee on Banking Supervision (2010d), Countercyclical capital buffer proposal, Consultative Document, Basel: BIS, July.

- Bank for International Settlements (BIS), Basel Committee on Banking Supervision (2010e), Group of Governors and Heads of Supervision announces higher global minimum capital standards, Press release, Basel: BIS, September 12.
- Bank for International Settlements (BIS), Basel Committee on Banking Supervision (2010f), “International banking and financial market developments”, Quarterly Review, Basel: BIS, September.
- Bank for International Settlements (BIS), Basel Committee on Banking Supervision (2010g), A global regulatory framework for more resilient banks and banking systems, Basel: BIS, December 16.
- Barley R. (2010), “Europe’s incredible shrinking bailout”, The Wall Street Journal, September 21.
- Barnier M. (2010a), “Building a new financial framework together”, Speech, Washington: European Institute, May 11.
- Barnier M. (2010b), “Effective Financial market Regulation After Pittsburgh – Achievements and Challenges”, Speech, Berlin, May 20.
- Barone-Adesi G. (2009), “Seven Pillars of Wisdom”, The Swiss Finance Institute, Lugano: University of Lugano, May 14.
- Bassanini F. (2010) “The Long-Term Investments in the Age of Globalisation”, Long-Term Investors Club, Rome, June 17th.
- Bassanini F. (2011), “What Kind of Financial Markets Do We Want? The new financial regulatory framework and the long-term investment”, Conference on Strengthening the Foundations for Integrated and Stable Financial Markets, Jointly organised by European Commission & European Central Bank, Brussels, May 2.
- Berger A., Herring R., Szegö G. (1995), “The Role of Capital in Financial Institutions”, Working Paper, No. 9501, Philadelphia: Wharton Financial Institution Centre.
- Bergo J. (2002), “Using Financial Soundness Indicators to Assess Financial Stability,” IMF Conference, Washington (DC), September 17.
- Bernanke B., Gertler M. (1989), “Agency Costs, Net Worth and Business Fluctuations”, American Economic Review, 79(1), pp. 14-31.
- Black F., Scholes M., 1973, “The Pricing of Options and Corporate Liabilities,” Journal of Political Economy, 81(3), pp. 637–59.
- Board of Governors of the Federal Reserve System, Office of the Comptroller of the Currency, Federal Deposit Insurance Corporation (2010), U.S. Banking Agencies Express Support for Basel Agreement, Joint Press Release, September 12.
- Borio C., Drehman M. (2008), “Towards an Operational Framework for Financial Stability ‘Fuzzy’ Measurement and Its Consequences”, Financial stability, monetary policy and central banking, 12th Annual Conference of the Banco Central de Chile, Santiago, November 6–7.
- Bowers T., Hamoir O., Marrs A. (2010), “Financial Services Practice. What’s next for global banks”, McKinsey Quarterly, McKinsey & Company, March.

- Brierley P. (2011), “Contingent Capital and Bail-in”, Workshop “How promising are contingent capital instruments and bail-ins to strengthen financial stability?”, Brussels: Bruegel , February 11th.
- Brunnermeier M., Pedersen L.H. (2008), “Market Liquidity and Funding Liquidity”, *Review of Financial Studies*, 22(6), pp. 2201-2238.
- Brunnermeier M., Crocket A., Goodhard C., Persaud A., Shin H. (2009), “The Fundamental Principles of Financial Regulation”, *Geneva Reports on the World Economy*, No. 11, CEPR.
- Capriglione F. (2009), *Crisi A Confronto (1929 e 2009). Il caso italiano*, Padova: Cedam.
- Capuano C. (2008), “The option-iPoD. The Probability of Default Implied by Option Prices Based on Entropy,” IMF Working Paper, No. 08/194, Washington (DC): IMF.
- Carmassi J., Herring R. (2009), “The Corporate Structure of International Financial Conglomerates”, in Berger A., Molyneux P., Wilson J. (eds.), *The Oxford Handbook of Banking*, Oxford: Oxford University Press.
- Carmassi J., Luchetti E., Micossi S. (2009), “Overcoming too-big-to-fail. A regulatory framework to limit moral hazard and free riding in the financial sector”, Brussels: Centre for European Policy Studies (CEPS).
- Chan-Lau J.A., Amadou S. (2007), “Distance-to-Default in Banking: A Bridge Too Far?”, *Journal of Banking Regulation*, 9(1), pp. 14-24.
- Committee of European Banking Supervisors (CEBS) (2010), *Guidelines for the joint assessment of the elements covered by the supervisory review and evaluation process (SREP) and the joint decision regarding the capital adequacy of crossborder groups (GL39)*, London, December 22.
- Cont R., Moussa A., Minca A., Basto E. (2009), “Too Interconnected to Fail: Contagion and Systemic Risk in Financial Networks”, Lecture presented at the IMF, Washington (DC), May.
- Counterparty Risk Management Policy Group (CRMPG) III (2008), “Containing Systemic Risk: the Road to Reform”, August 6th. Available online at the URL: [www.crmpolicygroup.org](http://www.crmpolicygroup.org)
- Cover T.M., Thomas J.A. (2006), *Elements of Information Theory*, 2nd Edition, New York: Wiley.
- Cross G. (2011), “Proposal for contingent capital, bail-ins and tools for orderly resolution. Some difficult questions in search of answers”, Workshop “How promising are contingent capital instruments and bail-ins to strengthen financial stability?”, Brussels: Bruegel , February 11.
- Davis P., Karim D. (2008), “Could Early Warning Systems Have Helped to Predict the Sub-Prime Crisis?”, *National Institute of Economic Review*, No. 206.
- Davis P., Wardwell L.L.P. (2010), “Agreement on Quantification and Timing of Basel III Capital Standards”, Client Memorandum, September 13.
- de Larosière J. (2009), *Report of the High Level Group on Financial Supervision in the EU*, Brussels: European Commission, February 25.
- de Larosière J. (2010), “Monetary policy has played a major role in the run up to the financial crisis”, EUROFI, February.
- de Larosière J. (2011), “Reforming Financial Regulation and the International Monetary System ”, *Central Banking Review*, May.

- de Villeroché H. (2011), Note for Workshop “How promising are contingent capital instruments and bail-ins to strengthen financial stability?”, Brussels: Bruegel , February 11.
- Demirguc-Kunt A., Detragiache E. (1998), “The Determinants of Banking Crises in Developing and Developed Countries”, IMF Staff Paper, 45(1), Washington (DC): IMF.
- Demirguc-Kunt A., Detragiache E. (1999), “Monitoring Banking Sector Fragility: A Multivariate Logit Approach,” IMF Working Paper, 99(147), Washington (DC): IMF.
- Demirguc-Kunt A., Detragiache E. (2005), “Cross-Country Empirical Studies of Systemic Bank Distress: A Survey”, IMF Working Paper, 05(96), Washington (DC): IMF.
- Deutsche Bank (2008), “Monitoring Banking Sector Risk,” Deutsche Bank Research, October 28; Available via the Internet: [www.dbresearch.com](http://www.dbresearch.com).
- Di Noia C., Micossi S., Carmassi J., Peirce F. (2009), “Keep It Simple Policy Responses to the Financial Crisis”, Brussels: Centre for European Policy Studies (CEPS).
- Dornbusch R., Park Y.C., Claessens S. (2000), “Contagion: Understanding How It Spreads”, The World Bank Research Observer, 15(2), pp. 177–197.
- Draghi M. (2009a), Indagine conoscitiva sulle tematiche relative al sistema bancario e finanziario, Commissione VI (Finanze) della Camera dei Deputati, Roma, 17 marzo.
- Draghi M. (2009b), “Remarks at the Turner Review roll-out”, The Turner Review Conference, London: Financial Services Authority (FSA), March 27.
- Draghi M. (2009c), “Keynote Speech” at IOSCO’s Annual Conference Financial Stability in the global environment? Learning the lessons from the market crisis, Tel Aviv, June 10.
- Draghi M. (2010), “Annual Report. Concluding Remarks”, Rome: Bank of Italy, May 31.
- Dragomir L. (2009), “European Prudential Banking Regulation and Supervision”, London: Routledge.
- Dungey M., Fry R., González-Hermosillo B., Martin V. (2006), “Contagion in International Bond Markets during the Russian and LTCM Crises”, *Journal of Financial Stability*, 2(1), pp. 1-27.
- Dungey M., Fry R., González-Hermosillo B., Martin V. (2007), “Unanticipated Shocks and Systemic Influences: The Impact of Contagion in Global Equity Markets in 1998”, *North American Journal of Finance and Economics*, 18, pp. 155-174.
- Elsinger H., Lehar A., Summer M. (2006), “Systemically Important Banks: An Analysis for the European Banking System”, *International Economics and Economic Policy*, 3(1), pp. 73-89.
- Emsden C. (2011), “Italy’s Tremonti: Triple-A Nations Need To Take Blame For Banks”, *The Wall Street Journal*, February 11.
- Enria A. (2010), Audizione - Lo stato del sistema bancario italiano e le prospettive per l’attività normativa, Camera dei Deputati - VI Commissione (Finanze), Rome, November 17.
- Ervin W. (2011), “Bank Resolution and Too Big To Fail: Is Bail-in the best answer?”, Workshop “How promising are contingent capital instruments and bail-ins to strengthen financial stability?”, Brussels: Bruegel , February 11.
- EUROFI (2010), “Defining priorities to reform the regulatory and supervisory financial framework in the global context”, Eurofi high level seminar co-hosted by the Spanish EU Presidency, Madrid, April 14-15.

European Central Bank (2006), “Special Feature on Identifying Large and Complex Banking Groups for Financial Stability Assessment”, Financial Stability Review, Frankfurt, December.

European Central Bank (2008), “Special Feature on Recent Policy Initiatives to Strengthen the Resilience of the Financial System”, Financial Stability Review, Frankfurt, December.

European Central Bank (2010), Fiscal Policies, Frankfurt, December, available online at the URL: <http://www.ecb.int/mopo/eaec/fiscal/html/index.en.html>

European Commission (2009a), “Communication to the Spring European Council, Driving European Recovery”, Brussels, March 4.

European Commission (2009b), “Recommendation on remuneration policies in the financial services sector for the remuneration of directors of listed companies”, Brussels, April 30.

European Commission (2009c), “Recommendation complementing Recommendations 2004/913/EC and 2005/162/EC as regards the regime”, Brussels, April 30.

European Commission (2009d), “Communication on European Financial Supervision”, Brussels, May 27.

European Commission (2009e), “Communication on Ensuring efficient, safe and sound derivatives markets”, Brussels, July 3.

European Commission (2009f), “Communication on Ensuring efficient, safe and sound derivatives markets: Future policy actions”, Brussels, October 20.

European Commission (2009g), “Communication on An EU Framework for Cross-Border Crisis Management in the Banking Sector”, Brussels, October 20th.

European Commission (2010a), “Proposal for a Directive of the European Parliament and of the Council on Alternative Investment Fund Managers (AIFMD)”, Brussels, April 30.

European Commission (2010b), “Communication on Bank Resolution Funds”, Brussels, May 26.

European Commission (2010c), “Communication on Regulating Financial Services for Sustainable Growth”, Brussels, June 2.

European Commission (2010d), “Green Paper. Corporate governance in financial institutions and remuneration policies”, Brussels, June 2.

European Commission (2010e), “Proposal for a Directive of the European Parliament and of the Council amending Directives 98/78/EC, 2002/87/EC and 2006/48/EC as regards the supplementary supervision of financial entities in a financial conglomerate”, Brussels, August 16.

European Commission (2010f), “Proposal for a Regulation of the European Parliament and of the Council on enforcement measures to correct excessive macroeconomic imbalances in the euro area”, Brussels, September 29.

European Commission, DG Internal Market and Services (2010a), Technical details of a possible EU framework for bank recovery and resolution, Working Document, Brussels, January 6.

European Commission, DG Internal Market and Services (2010b), Follow-up to the Green Paper on Corporate Governance in Financial Institution, Working Document, Brussels.

- European Community (2008), “Memorandum of Understanding on Cooperation between the Financial Supervisory Authorities, Central Banks and Finance Ministries on the European Union on Cross-Border Financial Stability”, Brussels, November 8.
- European Council (2010a), “Council to negotiate with Parliament on draft EU rules for hedge funds managers”, Brussels, 7500/10 (Presse 64), May 18.
- European Council (2010b), “Press release 3030th Council meeting Economic and Financial Affairs”, September 7th.
- European Council (2010c), “Strengthening Economic Governance in the EU”, Report of the Task Force to the European Council, Brussels, October 21.
- European Parliament and European Council (2002), “Directive 2002/87/EC on the supplementary supervision of credit institutions, insurance undertakings and investment firms in a financial conglomerate”, Brussels, December 16.
- European Parliament and European Council (2003), “Directive 2003/6/EC on insider dealing and market manipulation (market abuse) (MAD)”, Brussels, January 28.
- European Parliament and European Council (2004), “Directive 2004/39/EC on markets in financial instruments (MiFID)”, Brussels, April 21.
- European Parliament and European Council (2009a), “Directive 2009/65/EC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) (Recast of the Directive 85/611/EEC)”, Brussels, July 13.
- European Parliament and European Council (2009b), “Regulation (EC) No. 1060/2009 on credit rating agencies (CRA)”, September 16.
- Federal Reserve Bank of Dallas (2008), “Fed Intervention: Managing Moral Hazard in Financial Crises,” Economic Letter, 3(10).
- Financial Services Authority (FSA) (2009), “The Turner Review. A Regulatory Response to the Global Banking Crisis”, March. Available online at the URL: <http://www.fsa.gov.uk/>
- Financial Times (2010a), “Brown hails move on global bank tax”, April 4.
- Financial Times (2010b), “The new disintegration of finance”, September 10.
- Forti N. (ed.) (2010), Preventing and Managing Future Crises. New Regulation, Resolution Funds and Deposit Insurance as tools for European banking groups, Rome: Bancaria Editrice.
- Frank N., Gonzalez-Hermosillo B., Hesse H. (2008), “Transmission of Liquidity Shocks: Evidence from the 2007 Subprime Crisis”, IMF Working Paper, 8 (200), Washington (DC): IMF.
- Frank N., Hesse H. (2009), “Financial spillovers to Emerging Markets during the Global Financial Crisis,” IMF Working Paper, 09 (104) Washington (DC): IMF.
- Furfine C. (1999), “Interbank Exposures: Quantifying the Risk of Contagion”, BIS Working Papers, No. 70, Basel: BIS.
- Gaspar V., Schinasi G. (2009), “Global Financial Crisis, Current Market Conditions and Remaining Policy Challenges”, BEPA Monthly Brief, March.
- Geltner D. (1993), “Estimating Market Values from Appraised Values Without Assuming an Efficient Market”, Journal of Real Estate Research, 8(3), pp. 325-345.

- Geneva Association (2010), Systemic Risk in Insurance, Special Report of the Geneva Association Systemic Risk working Group, Geneva, March. Giliberto M.S. (1990), “Equity Real Estate Investment Trusts and Real Estate Returns”, *Journal of Real Estate Research*, 5(2), pp. 259-264.
- Goldman Sachs (2011), Contingent capital: possibilities, problems and opportunities, February 16<sup>th</sup>. available online at the URL: <http://www2.goldmansachs.com/ideas/global-economic-outlook/contingent-capital.html>
- Goldstein M., Véron N. (2011), “Too Big to Fail: The Transatlantic Debate”, Working Paper Series, WP 11-2, Washington (DC): Peterson Institute for International Economics.
- González-Hermosillo B. (2008), “The Role of International Investors’ Risk Appetite in Global Financial Crises: 1998-2007,” IMF Working Paper, 8(85), Washington (DC): IMF.
- González-Hermosillo B., Hesse H. (forthcoming), “Global Market Conditions and Systemic Risk,” IMF Working Paper, Washington (DC): IMF.
- Gorton G. (2008), “The Panic of 2007,” prepared for the Federal Reserve Bank of Kansas City Jackson Hole Conference, August.
- Gray D.F., Malone S. (2008), *Macrofinancial Risk Analysis*, Hoboken (NJ): John Wiley & Sons.
- Group of Ten (2001), *Consolidation in the Financial Sector*, Basel: Bank for International Settlements, Basel, January.
- Group of Thirty (2009), *The structure of financial supervision – Approaches and Challenges in a Global Marketplace*, Washington, D.C., April.
- Group of Twenty, Working Group 1 (2009), “Enhancing Sound Regulation and Strengthening Transparency,” Final Report, March. Available online at the URL: <http://www.g20.org/366.aspx>.
- Group of Twenty (2010), *Seoul Summit Document*, available online at the URL: <http://www.seoulsummit.kr/>
- Gyourko J., Keim D.B. (1992), “What Does the Stock Market Tell Us about Real Estate Returns”, *Journal of the American Real Estate and Urban Economics Association*, 20(3), pp. 457-485.
- Honohan P. (2010), “Two-way interdependence between the banking system and the State”, *BIS Review*, No. 66.
- Huang X., Zhou H., Zhu H. (2008), “A Framework for Assessing the Systemic Risk of Major Financial Institutions”, *BIS Working Papers*, No. 281.
- Hutchinson M.M. (2002), “European Banking Distress and EMU: Institutional and Macroeconomic Risks,” *Scandinavian Journal of Economics*, 104(3), pp. 365–389.
- Hutchinson M.M., McDill K. (1999), “Are All Banking Crises Alike? The Japanese Experience in International Comparison,” *Journal of the Japanese and International Economies*, 13(3), pp. 155–180.
- International Monetary Fund (2009), *Global Financial Stability Report*, Washington (DC), April.
- International Monetary Fund (2010), *Crisis Management and Resolution for a European Banking System*, Washington (DC), March.

- Inter-Institutional Monitoring Group (IIMG) (2007), Final Report Monitoring the Lamfalussy Process, Brussels, October 15.
- Juncker J.C., Tremonti G. (2010), “E-bonds would end the crisis”, Financial Times, London, December 5.
- Kahneman D. (2007), *Economia della Felicità*, Il Sole 24 Ore, Milano.
- Kaminsky G.L., Reinhart C.M. (1999), “The Twin Crises: The Causes of Banking and Balance of Payments Problems,” *American Economic Review*, 89(3), pp. 473-500.
- Kim O., Verrecchia R.E. (1997), “Pre-announcement and Event-period Private Information,” *Journal of Accounting and Economics*, 24(3), pp. 395-419.
- Lamfalussy A. (2001), Final report of the Committee of Wise Men on the regulation of European Securities Markets, Brussels, February 15.
- Langen W. (2010), Report on derivatives markets: future policy actions, Brussels, June 7th.
- Lastra R. (2006), *Legal Foundation On International Monetary Stability*, Oxford: Oxford University Press.
- Lawson S. (2011), Contingent Capital, Workshop “How promising are contingent capital instruments and bail-ins to strengthen financial stability?”, Brussels: Bruegel, February 11.
- Lehne K.H. (2008), Report of the European Parliament with recommendations to the Commission on the transparency of institutional investors, Brussels, July 9.
- Lo A. (2009), “Hedge Funds, Systemic Risk, and the Financial Crisis of 2007–2008”, Written testimony to the US House of Representatives Committee on Oversight and Government Reform, November 13.
- Lugaresi S. (2011), “Proposal for bail-ins, contingent capital and tools for orderly resolution”, Workshop “How promising are contingent capital instruments and bail-ins to strengthen financial stability?”, Brussels: Bruegel, February 11.
- Maino R. (2009), “Credito e mercato dopo la crisi: appunti per regole e regolatori post Basilea II”, *Bancaria*, No. 2.
- Maino R., Masera R., Mazzoni G. (2010), “Reform of the Risk Capital Standard (RCS) and Systemically Important Financial Institutions (SIFIs)”, pp. 75-136, in Forti N. (ed.), *Preventing and managing future crises. New Regulation, Resolution Funds and Deposit Insurance as tools for European banking groups*, Rome: Bancaria Editrice.
- Marsh I., Stevens I., Hawkesby C. (2003), “Large Complex Financial Institutions: common influence on asset price behavior?”, *Bank of England Financial Stability Review*, London: Bank of England, No. 15, pp. 91-101.
- Masera R. (ed.) (2009a), *The Great Financial Crisis. Economics, Regulation and Risk*, Rome: Bancaria Editrice.
- Masera R. (2009b), “Global finance, regulation and supervision in the light of the de Larosière report”, pp. 269-276, Villa Mondragone XXI International Economic Seminar 2009, June.
- Masera R. (2010a), “Towards a new regulatory and supervisory framework of the financial sector in Europe: role and contents of the AIFMD, with specific reference to Non-listed Real Estate Funds”, *Rivista Trimestrale di Diritto dell’economia*, No. 2, pp. 108-144.

- Masera R. (2010b), "Crescita, stabilità, regole di bilancio e regolazione finanziaria: l'Unione monetaria dopo la crisi della Grecia", *L'industria. Rivista di economia e politica industriale*, No. 2, pp. 193-202.
- Masera R. (2010c), "Reforming financial systems after the crisis: a comparison of EU and USA", *PSL Quarterly Review*, 63 (255), pp.299-362.
- Masera R. (2011), "Taking the moral hazard out of banking: the next fundamental step in financial reform", working paper, University G. Marconi, April.
- Masera R., Mazzoni G. (2010), "Contributi - La riforma dei requisiti prudenziali e la proposta di un Fondo di risoluzione per la gestione delle crisi / Crises and systemic risk: the proposal for a Resolution fund financed by Sifis", *Bancaria*, 66(6), pp. 13-24.
- Masera R., Mazzoni G. (2011), "A proposal for a Special Resolution Fund (SRF) for SIFIs (Systemically Important Financial Institutions) financed through risk-sensitive fees. A market based measure of systemic risk", University G. Marconi, working paper.
- Matthews B.C. (2010), "Preventing the Next Financial Crisis: Coordination and Competition in Global Finance", American Society of International Law Annual Meeting, Washington (DC), March 26.
- Mazzoni G. (2011), "Trading Book vs. Banking Book, how capital surcharges for systemic risk would affect bank's behaviour", mimeo.
- McCaffrey U., O'Brien C. (2011), "Rating agency downgrades unsecured bank debt", *The Irish Times*, February 12.
- McKinsey&Company (2010), *Basel III and European banking: its impact, how banks might respond, and the challenges of implementation*, EMEA Banking, November.
- Merton R.C. (1974), "On the Pricing of Corporate Debt: The Risk Structure of Interest Rates," *Journal of Finance*, 29(2), pp. 449-470.
- Merton R.C. (1995), "A Functional Perspective of Financial Intermediation", *Financial Management*, 24(2), pp. 23-41.
- Merton R.C. (1973), "Theory of Rational Option Pricing", *Bell Journal of Economics and Management Science*, 4(1), pp. 141-183.
- Merton R.C. (1990), *Continuous Time Finance*, Oxford: Blackwell.
- Messori M. (2009), "The financial crisis: understanding it to overcome it", Milan: Assogestioni, September.
- Moody's (2009), "Corporate Default and Recovery Rates", May.
- Moore M. (2011), "Contingent Capital and Statutory Bail-In Within a Crisis Prevention/Crisis Resolution Framework", Workshop "How promising are contingent capital instruments and bail-ins to strengthen financial stability?", Brussels: Bruegel, February 11.
- Morgan Stanley (2010), "Quarterly Short-Term Credit Market Update", 2 Quarter.
- Morrison & Foerster (2010), "The New Global Minimum Capital Standards Under Basel III", *News Bulletin*, September 15.

- Mussari G. (2011), Audizione del Presidente dell'Abi nell'ambito dell'Indagine conoscitiva sui mercati degli strumenti finanziari, Camera dei Deputati - Commissione VI (Finanze), Rome, January 12.
- New York Times (2010), "Europe's Web of Debt", May 1.
- Nuttall R., Sandoval S. (2010), "The new value at stake in regulation", McKinsey & Company, March.
- Obama B., Volcker P. (2010), <http://www.whitehouse.gov/photos-andvideo/video/volcker-rule-financial-institutions>, January 21.
- Oliver Wyman (2011), The Financial Crisis of 2015 - An avoidable history, State of the Financial Services Report.
- Pagliari J.L., Scherer K.A., Monopoli R.T. (2003), "Public versus Private Real Estate Equities: A Risk-Return Comparison", *Journal of Portfolio Management*, No. 29, pp. 101-111.
- Panetta F. (2010), Audizione, Camera dei Deputati, V Commissione (Bilancio, tesoro e programmazione), Rome, June 8.
- Pazarbasioglu C., Zhou J., Le Leslé V., Moore M. (2011), Contingent Capital: Economic Rationale and Design Feature. IMF Staff Discussion Note, SDN/11/01, Washington (DC): IMF, January 25.
- Pedersen L., Roubini N. (2009), "A Proposal to Prevent Wholesale Financial Failure," *Financial Times*, January 29.
- Pennacchi G., Vermaelen T., Wolff C.C.P. (2010), Contingent Capital: The case for COERCs, INSEAD Working Paper, 2010/55/FIN, Fontainebleau: INSEAD, August.
- Pianalto S. (2010), "Regulatory Reform: The New Face of Bank Regulation", Joint Convection of the Ohio Bankers League and the Illinois League of Financial Institutions, French Lick (IN), September 11.
- Posen A.S., Veron N. (2009), "A Solution for Europe's Banking Problem", Policy Briefs PB09-13, Washington, DC: Peterson Institute for International Economics.
- Quan D.C., Titman S. (1997), "Commercial Real Estate Prices and Stock Market Returns: An International Analysis", *Financial Analysts Journal*, 53(3), pp. 21-34.
- Rasmussen P.N. (2008), Report of the European Parliament with recommendations to the Commission on Hedge funds and private equity, Brussels, September 11.
- Reinhart C.M. (2010), "La carta straccia è ancora nei bilanci", *Corriere della Sera*, September 20th.
- Reinhart C.M., Rogoff K. (2009), *This Time Is Different: Eight Centuries of Financial Folly*, Princeton: Princeton University Press.
- Reinhart C.M., Rogoff K.S (2009), "The Aftermath of Financial Crisis", AEA meeting, San Francisco, January 3.
- Roncaglia A. (2010), *Why the economists got it wrong*, Anthem press.
- Rosengren E. (2009), "Challenges in resolving systemically important financial institutions", The Institute of Regulation and Risk North Asia, Hong Kong, May 5th. Rossi S. (2010), *Metodi di analisi economica: cenni ed esempi*, Roma: Gangemi Editore.

- Ruding O. (2010), From National to European regulation. Towards European Financial Supervisory Authorities, Frankfurt, May 19.
- Sabatini G. (2010), Intervento alla Tavola Rotonda “Regolamentazione, Autorità e Rischi Sistemici”, Presentazione del Dottorato di ricerca in Analisi dei Sistemi Finanziari e dei Processi di Gestione dei Rischi, Università G. Marconi, Senato della Repubblica, Rome, November 24.
- Saccomanni F. (2008), “La Crisi Internazionale: Elementi Di Dialogo Con Gli Operatori”, Proceedings of the Conference La turbolenza dei mercati finanziari: dialogo fra autorità e operatori, Milano, February 19.
- Saccomanni F. (2009), “Nuove regole e mercati finanziari”, SSPA - Scuola Superiore della Pubblica Amministrazione, Rome, January 19.
- Sarcinelli M. (2009), “2007: La Crisi da Subprime”, pp. 97-123, in Perez R. (ed.), Finanza privata e finanza pubblica, San Marino: Maggioli.
- Savona P., Oldani C. (2009), “Crisis, Response And Innovation In Europe”, Proceedings of “The 2009 Pre-G8 Summit” Conference, Rome, June 30.
- Segni L. (2010), “Verso un nuovo assetto della vigilanza europea”, pp. 152-186, in Marchesi D. (ed.), Priorità nazionali. Trasparenza, Istruzione, Finanza, Energia, Milano: Francoangeli.
- Segoviano M., Goodhart C. (2009), “Banking Stability Measures”, IMF Working Paper, No. 09(04), Washington (DC): IMF.
- Seiler M.J., Webb J.R., Myer F.C.N. (1999), “Diversification Issues in Real Estate Investment”, Journal of Real Estate Literature, 7(2), pp. 163-179.
- Siani G. (2011), “Proposal for contingent capital, bail-ins and tools for resolution. An update on the FSB and BCBS’ work, Workshop “How promising are contingent capital instruments and bail-ins to strengthen financial stability?”, Brussels: Bruegel , February 11.
- Signorini L.F. (2011), Intervento, 17° Congresso AIAF-ASSIOM-FOREX, Verona, February 25-27.
- Spaventa L. (2009), “La crisi della nuova finanza”, in Perez R. (ed.), Finanza privata e finanza pubblica, San Marino: Maggioli.
- Strauss-Kahn D. (2009), “Speech”, Washington (DC): School of Advanced International Studies, April 23.
- Strauss-Kahn D. (2010), “Speech”, Brussels: European Commission Conference, March 19th.
- Strauss-Kahn D. (2011), Transcript of a Press Conference following the Group of 20 Finance Ministers and Central Bank Governors Meeting, Paris, February 19. Available online at the URL: <http://www.imf.org/external/np/tr/2011/tr021911.htm>
- Strongin S., Hindlian A., Lawson S. (2009), Effective Regulation: Part 5. ending “Too Big To Fail”, Goldman Sachs, Global Markets Institute, December.
- Tarullo D.K. (2010), Comments on “Regulating the Shadow Banking System”, Washington (DC): Federal Reserve System, September 17.
- Tremonti G. (2009), “International Legal Standards”, available online at the URL: [www.tesoro.it/documenti/open.asp?idd=20499](http://www.tesoro.it/documenti/open.asp?idd=20499)

- Trichet J.C. (2010a), “Macro-prudential Regulation as an Approach to Contain Systemic Risk: Economic Foundations, Diagnostic Tools and Policy Instruments”, Speech at the 13 Conference of the ECB-CFS Research Network, Frankfurt am Main, September 27.
- Trichet J.C. (2010b), “Keeping the momentum for financial reform”, Keynote address at the EUROFI Financial Forum 2010, Brussels, September 29.
- Trichet J.C. (2010c), “Europe’s frameworks for macro-prudential oversight and economic governance”, Speech at the Economic Club of New York, New York, October 12.
- Trichet J.C. (2010d), “Global economic governance and euro area economic governance”, Speech at the World Policy Conference Marrakech, October 16.
- Trichet J.C. (2011), “Intellectual challenges to financial stability analysis in the era of macroprudential oversight”, Speech for the panel discussion on: “Global imbalances and financial stability” at the Eurofi G20 High Level Seminar, Paris, February 18, Available online at the URL: <http://www.ecb.int/press/key/date/2011/html/sp110218.en.html>
- Unicredit Group (2009), Forum on financial cross-border groups, Milan, March.
- United States Congress (110th) (2008), Emergency Economic Stabilization Act of 2008, Washington (DC), October 3.
- United States Congress (111th) (2010), Dodd–Frank Wall Street Reform and Consumer Protection Act, Washington (DC), July 21.
- United States Senate (2010), Collins Amendment SA 3879, Washington (DC), May 6.
- Vermaelen T. (2010), “Message to Basel: Another way to avoid bank bailouts”, The Wall Street Journal, August 20.
- Wells S. (2002), “UK Interbank Exposures: Systemic Risk Implications”, Bank of England Financial Stability Review, London: Bank of England, December, pp. 175–181.
- White W.R. (2003), “International financial crises: prevention, management and resolution”, Berne, March 20.
- Wolf M. (2010), “Basel: the mouse that did not roar”, Financial Times, September 15.
- Zazzara C. (2011), “Credit risk in the trading book Under Basel III: Benchmarking the Increment Risk Charge”, Synergia, Milan, March.