



BANCA D'ITALIA  
EUROSISTEMA

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(Occasional Papers)

Looking ahead to Basel 3: Italian banks on the move

by Francesco Cannata (coordinator), Marco Bevilacqua, Simone Casellina,  
Luca Serafini and Gianluca Trevisan

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# LOOKING AHEAD TO BASEL 3: ITALIAN BANKS ON THE MOVE

by

Francesco Cannata (coordinator), Marco Bevilacqua, Simone Casellina,  
Luca Serafini and Gianluca Trevisan<sup>♦</sup>

## Abstract

In December 2010 the Basel Committee on Banking Supervision published a set of new regulations for banks in response to the financial crisis. This paper aims at evaluating the possible effects of the new framework on banks' available regulatory capital and risk-weighted assets and assessing their positioning with respect to future leverage and liquidity constraints. The evidence, based on the data collected from a representative sample of 13 Italian banking groups updated to 30 June 2012, show that capital and liquidity positions relatively to the Basel 3 targets have improved considerably over the last two years. Furthermore, compared to banks in other jurisdictions, Italian intermediaries are likely to be less affected by the reform, due to a business model more focused on credit intermediation. Importantly, the estimates cannot be interpreted as a forecast of capital and liquidity needs as they do not incorporate any assumption about future balance-sheet items or banks' reactions to the changing regulatory and economic environment.

**JEL Classification:** G21, G28.

**Keywords:** Basel 3, QIS, impact assessment, bank, capital, liquidity.

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<sup>♦</sup>Banca d'Italia, Banking and Financial Supervision Area.



## 1. Introduction <sup>1</sup>

In December 2010 the Basel Committee on Banking Supervision (BCBS) issued a new regulatory framework for banks in response to the financial crisis that set under way in 2007. The new rules (Basel 3) followed the measures introduced in July 2009 to increase trading-book capital requirements and enhance the three pillars of the Basel 2 framework, with the aim of strengthening micro-prudential regulation and introducing macro-prudential tools to address systemic risks.

Basel 3 is the most significant result achieved so far by international authorities.<sup>2</sup> Even though the regulatory process has not yet come to a close, the direction of the reform is clear enough<sup>3</sup>: more capital and liquidity for financial institutions, less leverage in their balance sheet, more instruments to mitigate the potential pro-cyclical effects of regulation, and a balanced and somehow innovative interaction between micro-prudential and macro-prudential rules. Moreover, the cornerstones of the current regulatory paradigm (i.e. risk-sensitivity, three-pillar approach, range of alternative methods for banks to compute capital requirements) have been maintained.

This paper aims at evaluating the likely impact of the Basel 3 rules on the available regulatory capital and risk-weighted assets of Italian banks and assessing their positioning with respect to future leverage and liquidity constraints. Information is provided on the evolution of the above profiles to account for the adjustments made by the intermediaries in the run-up to the new prudential targets.

The simulation exercise relies on the conceptual framework and dataset currently used in the semi-annual monitoring activity carried out since 2010 by both the Basel Committee and the European Banking Authority. Based on a sample of 13 major Italian banking

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<sup>2</sup> Importantly, the Basel 3 rules are not the only policy action that G20 leaders and international regulators – under the aegis of the Financial Stability Board – have agreed upon in the aftermath of the crisis. Additional prudential rules for systemically relevant financial institutions (SIFIs), a stronger framework for crisis management of financial institutions, less reliance of financial regulation on external ratings, and an adequate regulatory umbrella for the ‘shadow banking’ system are amongst the other items that have already been addressed or are still on the agenda in international fora. Broad consensus has also emerged on the need to strengthen and harmonize the available supervisory tools, so as to converge towards a more effective and intrusive supervisory model; the revision of the institutional settings of supervisory authorities in some jurisdictions also goes in this direction.

<sup>3</sup> The final calibration of some of the liquidity and leverage standards will be agreed upon only in a few years time, once a thorough impact assessment would be completed; in addition, local implementation of the framework is still under way in some jurisdictions.

groups, which account for more than 70 per cent of the total assets of the domestic banking system, the analysis focuses on the major components of the new prudential framework: stricter definition of regulatory capital, new rules to better capture financial risks in risk-weighted assets (RWAs) calculation, a leverage ratio and quantitative liquidity standards. The simulation is based on the Basel rules text, including the latest changes introduced at the beginning of 2013 on the Liquidity Coverage Ratio, whereas it does not reflect the likely impact of specific rules introduced in the EU framework.

The paper is organized as follows. Section 2 provides an overview of the Basel 3 rules. Section 3 summarizes the features of the international monitoring exercises and the main results for international banks as of 30 June 2012. Section 4.1 discusses the results of the simulation of the new rules on capital for the sample of Italian banks, investigating the different drivers behind the observed pattern: the new definition of capital (section 4.1.1) and the rules on RWAs (section 4.1.2). Section 4.2 presents some evidence on the leverage ratio. The likely effects of the new standards on liquidity are examined in section 4.3. Section 5 concludes.

## **2. The Basel 3 framework**

The new prudential rules reflect the commitment of policy-makers to improve the quality and quantity of banks' regulatory capital and to enhance risk coverage, especially for more complex financial businesses. These measures are underpinned by an internationally harmonized leverage ratio and supplemented by macro-prudential buffers to limit systemic risks and pro-cyclicality. Finally, new quantitative standards on liquidity risk complete the framework.<sup>4</sup> The original rules text, published at the end of 2010, has been later revised to embed further policy choices endorsed by the Group of Governors and Heads of Supervision (GHoS)<sup>5</sup> and integrated by a set of Frequently Asked Questions.

As regards the definition of capital, the new regulation aims at raising the quality of banks' capital base by means of stricter criteria for the eligibility of common equity Tier 1 (CET1) instruments. The main idea is that common shares and retained earnings must represent the predominant form of regulatory capital; also, the treatment of deductions has been harmonized across jurisdictions by detailing the items to be deducted and the capital layers from which the deductions must be made.

On the RWAs side, the Committee has added to the rules introduced in 2009 (Basel 2.5) a number of other significant revisions to the current framework, establishing new

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<sup>4</sup> BCBS (2010c, 2010d, 2013a).

<sup>5</sup> The GHoS serves as the oversight body of the Basel Committee on Banking Supervision.



requirements for counterparty credit exposures arising from derivatives, repo and securities financing activities.<sup>6</sup>

Measures to mitigate pro-cyclicality of capital standards have also been introduced. The capital conservation buffer is designed to curb the discretionary distribution of earnings (or bonuses) if banks' capital ratios fall below predefined target ratios. The countercyclical buffer – a truly macro-prudential tool – shall be activated only when aggregate credit growth is judged to be associated with the build-up of system-wide risks and switched off during normal times. Banks' inability to meet the additional requirements will entail restrictions on dividends and bonuses.

A harmonized leverage ratio will supplement solvency requirements with the objective of creating a backstop against model risk and measurement error under the risk-based metrics. Most of the policy debate has focused on how to capture properly both on- and off-balance sheet sources of financial leverage, while keeping the new measure as straightforward as possible. The proposed definition and minimum level of the leverage ratio (3 per cent of Tier 1 capital vis à vis total exposures) will be tested for an adequate observation period, in order to verify its dynamics over the economic cycle and the interaction with the risk-based capital ratios. Subject to final review and calibration, it will be embedded into Pillar 1.

As concerns liquidity, the new framework relies on two quantitative standards designed to ensure that financial institutions maintain a balanced position both in normal times and in stressed conditions. A short-term liquidity ratio (Liquidity Coverage Ratio, LCR) should ensure that banks have sufficient high-quality liquid assets (HQLA) to withstand net cash outflows estimated under a stressed funding scenario within a 30 days horizon; a structural ratio (Net Stable Funding Ratio, NSFR) aims at curbing excessive liquidity mismatches, i.e. by requiring banks to use stable sources to fund long-term activities. A range of additional monitoring tools, such as metrics to capture information related to banks' cash flows and balance sheet structure, will help supervisors to complete the picture of banks' liquidity position.

The definition of the level of the ratios (calibration) and the phasing-in arrangements complete the picture.

Concerning the solvency ratios, a minimum requirement has been set at 4.5 per cent for common equity Tier 1 (as a Pillar 1 measure). The Tier 1 capital requirement has been increased from 4 to 6 per cent, whereas the overall 8 per cent total capital minimum

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<sup>6</sup> In particular, institutions will be subject to a new capital charge for potential mark-to-market losses associated with a deterioration in counterparties' creditworthiness (Credit Value Adjustment); risk-weights on exposures to financial institutions have also been increased for banks adopting the internal ratings-based (IRB) approach, in order to take account of the higher inter-connections in the financial sector observed during the financial crisis.

requirement has been kept unchanged. The capital conservation buffer and the countercyclical buffer have been calibrated at 2.5 per cent each, with the former to be met with CET1 capital, and the latter – which could be required in expansionary phases only – with CET1 capital or other fully loss absorbing capital. Therefore, a 7 per cent level (4.5 minimum plus 2.5 per cent capital conservation buffer) can be considered as the new target CET1 that banks will have to meet in normal conditions to avoid restrictions on distributions.

The fully-fledged standards on liquidity require banks to keep their ratios at a minimum of 100 per cent in normal times; the minimum requirement has been set at 60 per cent in 2015 and will be increased by 10 percentage points per year until 100 per cent in 2019.<sup>7</sup> Importantly, during periods of stress it would be entirely appropriate for banks to use their stock of HQLA, thereby falling below the minimum. It will be the responsibility of bank supervisors to give guidance on usability according to circumstances.<sup>8</sup>

The final calibration of both the liquidity standards and the leverage ratio will be agreed upon only at the end of the transition period, after the results of the monitoring exercises have been assessed.

As regards transitional arrangements, most jurisdictions are in the process of finalizing the local implementation of the internationally agreed standards. The Basel rules text indicated January 1, 2013 as the starting date of the new discipline, followed by a long phasing-in period to allow banks to approach the new standards through reasonable earnings retention, fund raising and liquidity management and to not jeopardise economic recovery. However, in many jurisdictions, such as the EU and the US, the new rules will come into force later than initially planned.<sup>9</sup>

### **3. An overview of QIS results for international banks**

Since the publication by the BCBS of the 2009 consultative document, market participants and regulatory authorities have put much effort into estimating the likely impact of the Basel 3 rules on banks and on the economy as a whole. A careful assessment of the new framework's implications is a necessary step for all stakeholders in the process: i) for regulators, to define the possible policy adjustments to the proposed rules and their

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<sup>7</sup> The compromise text made public by the Council of the European Union sets a slightly different implementation schedule: 60 per cent in 2015, 70 per cent in 2016, 80 per cent in 2017 and 100 per cent in 2018. However the Commission is empowered to defer the 100 per cent phase-in of the LCR until January 1<sup>st</sup>, 2019, in line with the Basel schedule.

<sup>8</sup> BCBS (2013a).

<sup>9</sup> In the EU the new rules will apply from January 1<sup>st</sup>, 2014 if publication takes place in the Official Journal by June 30, 2013 (Council of the European Union, 2013).

final calibration; ii) for supervisors, to activate a prompt dialogue with banks; and iii) for banks, to plan timely strategic responses to the changing regulatory environment.

The Financial Stability Board and the Basel Committee have published two reports assessing the expected macroeconomic impact of the financial reform both in the transitional period and in the longer run (BCBS, 2010a; MAG 2010). A work from the IMF (Oliveira Santos and Elliott, 2012) focuses on the impact of the financial reform on the overall cost of credit. A similar objective is achieved by a comprehensive study made by industry representatives (IIF, 2011), which looks primarily at the transition effects in the short- to medium-term. With the exception of market reports based on publicly available data (Pillar 3), less effort has been devoted so far to investigating the implications of Basel 3 for individual institutions. The main reason is lack of data: given the highly innovative content of the new rules, current reporting schemes do not allow a realistic estimation of their impact on banks' balance sheets.

A reliable source of information is the monitoring exercise conducted in the last two years by international regulators, following the comprehensive quantitative impact study (C-QIS) published in December 2010. To our knowledge, QIS exercises are the most accurate simulation available so far of the micro-effects of the Basel 3 rules: data are submitted by the banks themselves and accurately checked by national supervisors before they are made available to the BCBS and the EBA for aggregate analysis; the information is collected through a commonly agreed template and therefore definitions are fairly comparable across banks and jurisdictions. The results of these simulations are periodically published by both authorities.

Some important caveats head the interpretation of the results. First, the exercises simulate the impact of the reform had the full package been implemented at the reference date, i.e. no transitional arrangements are considered. Second, no reactions by banks in response to the changing economic and regulatory environment are assumed (“static approach”), i.e. the figures do not take banks' estimated future profits into account. Third, the simulation is based on the Basel rules, which might differ in specific aspects from their implementation in the single jurisdictions, and does not account for a few minor components of the framework (i.e. capital charges for exposures to central counterparties).

Participating banks are divided into two groups, based on size and geographical scope<sup>10</sup>; the heterogeneity of Group 2 institutions calls for greater caution in interpreting the results. Overall, data quality is satisfactory and has improved throughout the various waves of the monitoring exercises.

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<sup>10</sup> Group 1 banks must have a Tier 1 capital above of €3 billion and be well-diversified and internationally active; the remaining banks participating in the exercise are classified as Group 2.

The evidence described below is based on the latest publications by both authorities, using data for June 2012 (BCBS, 2013b; EBA, 2013).<sup>11</sup>

As regards the impact on capital, Table 1 shows the magnitude of the CET1 shortfall with respect to the 7 per cent target for both the BCBS and the EBA samples. Figures are all but negligible. However, though not directly comparable, they are significantly lower than the ones reported in the C-QIS based on December 2009 data;<sup>12</sup> in addition, profits after tax reported in previous years – used as a point of reference – suggest that the process of capital strengthening via retained earnings could be a major driver in the run-up to the new prudential targets.<sup>13</sup>

**Table 1 – Shortfall (€ bn) against 7 per cent CET1 ratio and CET1 ratio (%) for international and European banks<sup>14</sup> as of June 30, 2012**

	<b>Shortfall</b>	<b>CET1 ratio</b>		<b>Shortfall</b>	<b>CET1 ratio</b>
BCBS Group 1	208.2	8.5%	EBA Group 1	112.4	7.8%
BCBS Group 2	16.0	9.0%	EBA Group 2	17.9	8.0%

CET1 additional needs are driven both by the new definition of capital (notably the deductions) and the increase in risk-weighted assets. The relative contribution of the two factors is led by several drivers, and prominently banks' business models. Monitoring results confirm that large and complex banks which are more heavily engaged in finance-oriented businesses and activities subject to counterparty credit risk report higher capital absorption under Basel 3 than institutions focused on traditional intermediation. In both BCBS and EBA samples, the impact on the amount of eligible capital as compared to current rules is similar for Group 1 and Group 2 banks, while the increase in RWAs is much higher for larger and more finance-oriented banks than for small ones (for the EBA sample, 18.4 versus 8.8 per cent).

<sup>11</sup> The sample is composed of 210 banks from BCBS member countries (101 Group 1 and 109 Group 2 banks) and 151 banks from 18 EU countries (41 Group 1 and 110 Group 2 banks). Data of banks operating in the European jurisdictions which are represented also at the Basel Committee (such as Italy) are included in both exercises.

<sup>12</sup> As of December 2009 the estimated shortfall against the 7 per cent target was €577 bn for BCBS Group 1, €25 bn for BCBS Group 2. As for the EBA sample, shortfalls equalled €263 bn and €28 bn respectively.

<sup>13</sup> In 1H2012 after-tax profits prior to distribution amounted to €214.8 bn for BCBS Group 1 banks (€16.6 bn for Group 2 banks).

<sup>14</sup> Figures include G-SIB capital surcharges..

As regards the leverage ratio estimated as of 30 June 2012, the average value for participating banks is already above the 3 per cent Tier 1 minimum. In particular, for Group 1 banks the average values are estimated at 3.7 and 3.0 per cent for BCBS and EBA samples respectively; for Group 2 banks the values are 4.4 and 3.6 per cent respectively.

Turning to liquidity standards, the average NSFR values are very close to 100 per cent in both the BCBS sample (99 per cent for Group 1, 100 per cent for Group 2) and the EBA one (94 per cent for Group 1, 99 per cent for Group 2). Estimates on the LCR, taking into account January 2013 changes, will be released in the next reports.

#### **4. The impact on Italian banks**

This section discusses the results of the simulation exercise on Italian banks, based on a sample of 13 banking groups representing more than 70 per cent of the total assets of the domestic banking system. Consistently with the aggregate results for international banks, the reference date is June 2012. However, information is also provided on the pattern of capital and liquidity profiles over time to account for the actions and adjustments undertaken by banks in the run-up to the new prudential targets.

Data, which are collected under a confidentiality agreement, are shown on an aggregate basis for the “Top 5” banking groups versus “Others”<sup>15</sup>. Measures of dispersion are also provided when relevant.

##### **4.1 Solvency**

The prospective solvency position of Italian banks under fully implemented Basel 3 rules progressed significantly between end-2010 and mid-2012. The overall shortfall against the 7 per cent CET1 capital requirement declined from €35.3 bn to €9.4 bn (Table 2). Shortfall figures are computed as the sum of individual shortfalls for banks with a CET1 ratio below 7 per cent, without netting with the excess capital held by other institutions.

Capital strengthening was driven mainly by the top 5 banks, whose management policies have been in most cases highly responsive to the evolving regulatory framework. This has led to the build-up of a significant capital surplus over the 7 per cent target.

Most banks in the “Others” group also strengthened their solvency position and in June 2012 the overall surplus for the whole sample (€14.5 bn) exceeded total shortfall (€9.4 bn)

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<sup>15</sup> The very small number of Italian institutions in BCBS Group 1 entails a different classification in order to respect the confidentiality clause under which data are collected.

for first time. It is worth recalling that the very small amount of state-aid instruments issued and not redeemed before June 2012 (€2.7 bn) is not included in the common equity Tier 1 but in the additional tier 1 (AT1) for the purpose of this simulation.

**Table 2 – Shortfall (bn) against 7 per cent CET1 ratio target<sup>16</sup>**

	<b>Dec 2010</b>	<b>June 2011</b>	<b>Dec 2011</b>	<b>June 2012</b>	<b>% Δ Dec 2010-June 2012</b>
Top 5	30.1	19.0	15.0	6.0	-80%
Others	5.3	5.2	4.9	3.4	-36%
<b>Total</b>	<b>35.3</b>	<b>24.2</b>	<b>20.0</b>	<b>9.4</b>	<b>-73%</b>

**Table 3 – Excess (bn) over 7 per cent CET1 ratio target**

	<b>Dec 2010</b>	<b>June 2011</b>	<b>Dec 2011</b>	<b>June 2012</b>	<b>% Δ</b>
Top 5	0.0	3.9	6.8	13.6	NA
Others	0.6	0.6	0.4	1.0	68%
<b>Total</b>	<b>0.6</b>	<b>4.5</b>	<b>7.2</b>	<b>14.5</b>	<b>2455%</b>

The rise in the average CET1 ratio (Table 4) mirrors the figures above. Progress was particularly significant in 1H2011 and 1H2012, while slowing down in the second semester of 2011, partly because of the substantial year-end losses recorded by several institutions<sup>17</sup>. As of June 2012, the average CET1 for the sample treated as a “composite bank”<sup>18</sup> equalled 7.4 percent. Top groups would have enjoyed in the aggregate a 170 basis points edge over other banks, overturning the initial positioning. Smaller banks have been slower in addressing the residual capital needs but eventually started gaining ground in 1H2012.

<sup>16</sup> Shortfalls are computed as the net CET1, after all adjustments and deductions, needed to reach the 7 per cent target. By construction, this measure can be translated into an RWA-equivalent reduction by multiplying it by 100/7.

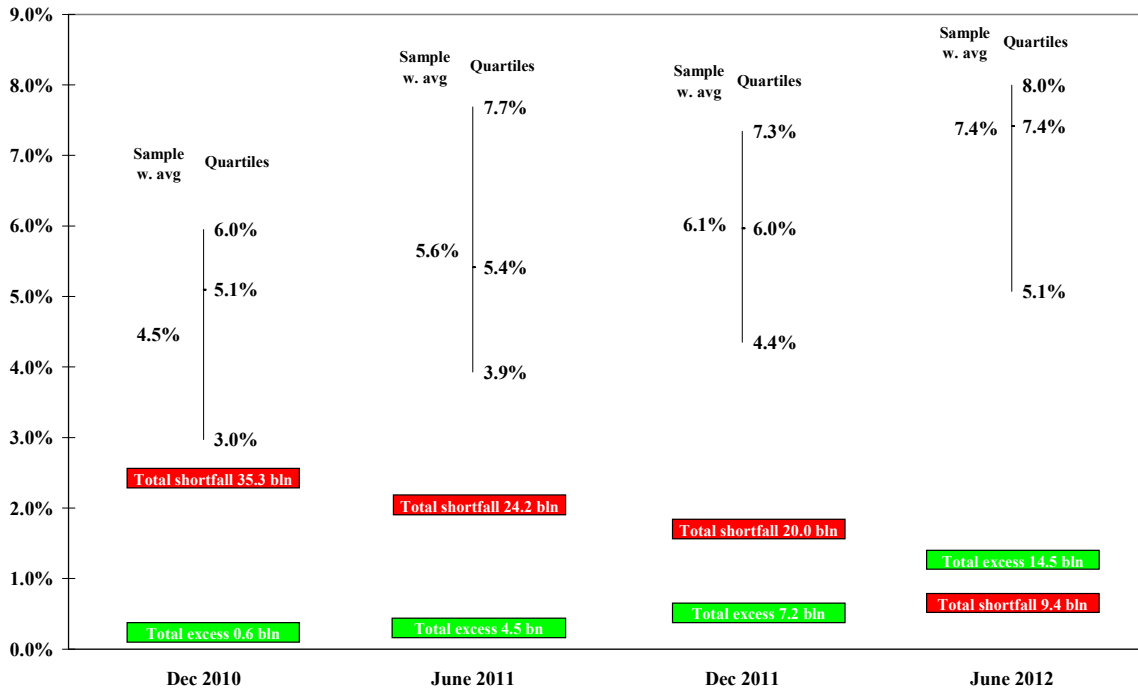
<sup>17</sup> Losses for Top 5 groups totalled about €26 bn; however, a large share of these losses was neutral in prudential terms, being due to the write-off of goodwill, which had to be deducted in Basel 2 as well.

<sup>18</sup> The CET1 ratio for the sample and the sub-samples is computed by dividing the sum of CET1 for banks in the sample by the sum of RWA.

**Table 4 – Average CET1 ratio (%)**

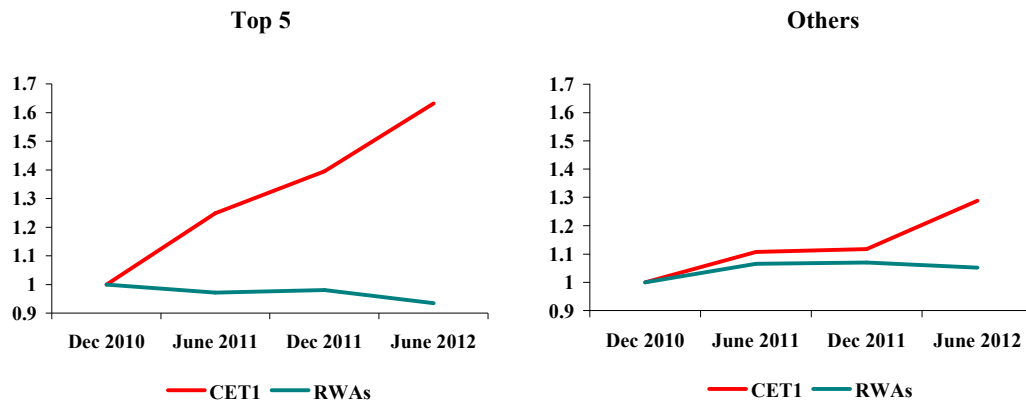
	Dec 2010	June 2011	Dec 2011	June 2012	Δ bps Dec 2010-June 2012
Top 5	4.4%	5.7%	6.3%	7.7%	329
Others	4.9%	5.1%	5.1%	6.0%	110
<b>Total</b>	<b>4.5%</b>	<b>5.6%</b>	<b>6.1%</b>	<b>7.4%</b>	<b>290</b>

**Figure 1 – CET1 ratio (%), shortfall (bn) and excess capital (bn)**



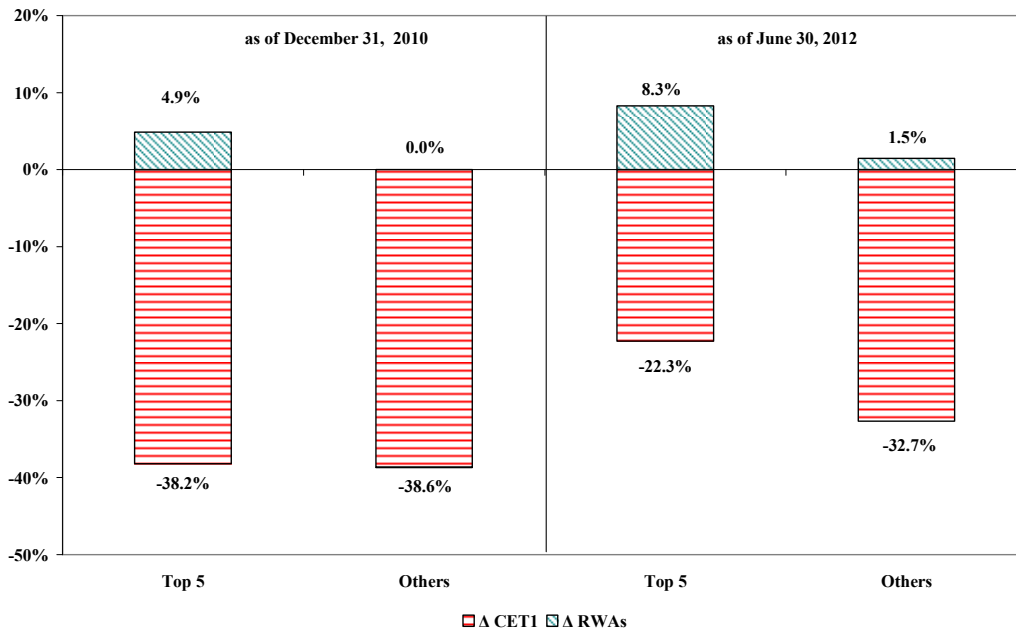
For both sub-samples of banks the improvement in solvency ratios was driven more by capital than by RWAs (Figure 2), even though the different amount of the two aggregates has to be considered in the interpretation of percentage changes. In the sample period, CET1 capital increased by 57 per cent, while RWAs decreased by 4.5 per cent.

**Figure 2 – Evolution of CET1 and RWAs (December 2010 =1)**



When measuring the impact of the new rules vis à vis the current regulatory framework (Figure 3), it emerges that the full implementation of Basel 3 would affect the numerator – via a reduction in eligible capital – to a much larger extent than the denominator of solvency ratios. This is consistent with one of the main objectives of the reform, i.e. to increase the quality and quantity of capital and introduce higher risk-weights for less traditional business models.

**Figure 3 – CET1 and RWAs: comparison between current and Basel 3 rules**





As of June 2012, the decrease in eligible capital with respect to the current CET1 proxy<sup>19</sup> amounted to 22.3 percentage points for Top 5 groups and to 32.7 points for the other banks in the sample, while the estimated increase in RWAs was 8.3 and 1.5 percentage points respectively.<sup>20</sup> The percentage impact arising from the new definition of capital was much larger at the end of 2010 but has been regularly declining over the last two years: this supports the view that the quality of capital has gradually increased and management actions by Italian banks have been planned bearing in mind also the requirements of the forthcoming new regulation. Also, exogenous factors have affected the variation in the estimated impact on capital and RWAs. This is the case for the revised prudential treatment of Deferred Tax Assets (DTAs), which partially shifted the impact from capital to RWAs.<sup>21</sup> Similarly, counterparty credit risk charges have been partially taken into account since June 2011 only, thus inflating RWAs estimates in the following periods.

#### ***4.1.1 Definition of capital***

The Common Equity Tier 1 of the banks in the sample has increased over the last two years by more than 60 per cent, from €62.1 bn to €97.5 bn (Table 3). The rise was more remarkable for Top 5 banks (63 per cent) and, as said, was the most prominent driver of the overall enhancement of Italian banks' solvency profile.

**Table 3 – CET1 (bn)**

	<b>Dec 2010</b>	<b>June 2011</b>	<b>Dec 2011</b>	<b>June 2012</b>	<b>% Δ Dec 2010-June 2012</b>
Top 5	51.0	63.7	71.2	83.3	63%
Others	11.0	12.2	12.3	14.2	29%
<b>Total</b>	<b>62.1</b>	<b>75.9</b>	<b>83.5</b>	<b>97.5</b>	<b>57%</b>

Several one-off and recurring factors underlie these figures:

<sup>19</sup> Since the CET1 definition does not exist under current regulations, a proxy has been used consistently with the BCBS methodology, i.e. the positive elements of current Tier 1 capital.

<sup>20</sup> As of June 2012 current RWAs already factor in Basel 2.5 amendments to market risk requirements, which are effective in Italy since end-2011.

<sup>21</sup> BCBS (2011). The 2010 rules text mandated the full deduction of DTAs that do not depend on future profitability; in December 2011 the BCBS revised the rule allowing for a 100 per cent risk-weighting instead of deduction. These items are particularly relevant for Italian banks because of the penalizing fiscal legislation.

- new capital increases by both major and second tier banking groups played a large role, particularly in 1H2011 and 1H2012;
- capital strengthening not only exerted a direct effect on solvency but also an indirect one, by shifting up the bar for threshold deductions (i.e. financial undertakings, DTAs) and consequently lowering the amounts to be deducted;
- self-financing contributed significantly in 1H2011 (€2.9 bn for the entire sample) before P&Ls were severely hit by the Eurozone crisis;
- the revision of the prudential treatment of DTAs partially alleviated the estimated capital needs since December 2011;
- CET1 also benefited, in some cases, from the issuance of AT1 and Tier 2 Basel 3 compliant instruments, which absorbed the deductions corresponding to these capital layers, preventing the residual shortfall from wearing away higher quality capital;
- on the other hand, the decline in the coverage of defaulted assets by provisions led to larger regulatory capital absorption for institutions using the Internal Ratings-Based (IRB) approach for credit risk;<sup>22</sup>
- similarly, the recording in the balance sheets of substantial losses from the mark-to-market of Available for Sale undertakings (AFS) (Table 4), mainly sovereign securities, has exerted a strong downward pressure on solvency figures since the end of 2011. In the second semester of 2011 only, incremental losses from AFS valuations totalled some €12.8 bn, as the sovereign credit spread soared (more than 500 basis points), before falling back slightly in the following period (€10.2 bn). This suggests how far the use of mark-to-market valuation might induce volatility in the level of prudential requirements, an issue which will be carefully monitored by regulators in the next few years.<sup>23</sup>

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<sup>23</sup> Art. 449.2 of the CRR compromise text made public by the Council of the European Union in March 2013 provides that “[...] the competent authorities may, in cases where such treatment was applied before the date of application of this Regulation, allow institutions not to include in any element of own funds unrealised gains or losses on exposures to central governments classified in the “Available for Sale” category of EU-endorsed IAS 39. The treatment laid down in the first subparagraph shall be applied until the Commission has adopted a regulation on the basis of Regulation 1606/2002 endorsing the IFRS replacing IAS 39”.

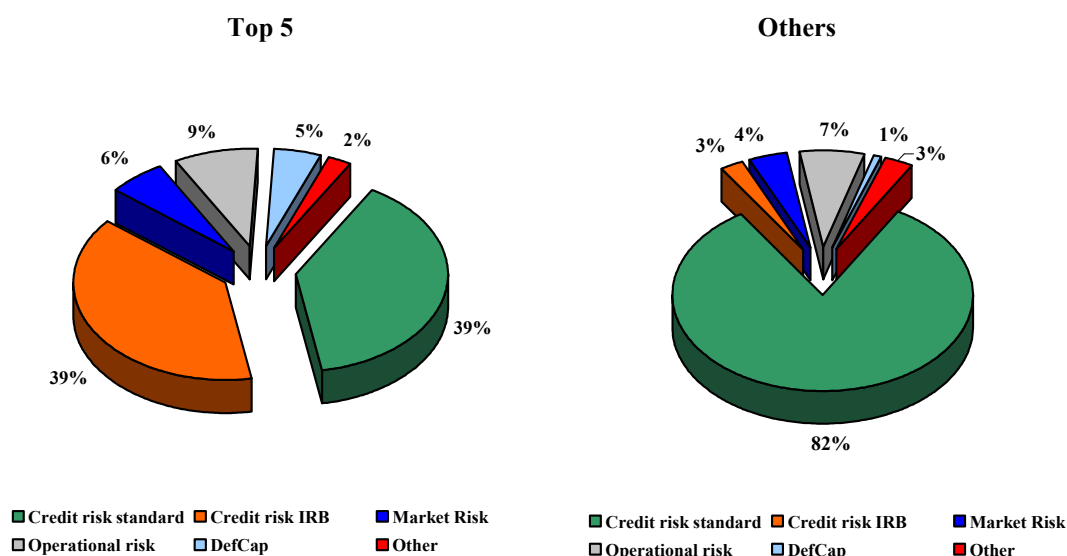
**Table 4 – Net gains or losses (bn) on Available for Sale items (AFS)**

	Dec 2010	June 2011	Dec 2011	June 2012
Top 5	-1.4	-0.9	-10.9	-8.6
Others	-0.0	-0.1	-2.9	-1.6
<b>Total</b>	<b>-1.5</b>	<b>-1.0</b>	<b>-13.8</b>	<b>-10.2</b>

#### 4.1.2 RWAs

A second driver of the evolution in the solvency profile of Italian banks as measured by the Basel 3 metrics is represented by RWAs. To this end, a preliminary step in the analysis is to assess their composition as regards different risk sources. Figure 4 shows how significant credit risk is in the balance sheet of Italian banks (around 80 per cent of total RWAs for both groups of intermediaries).

**Figure 4 – RWAs composition as of June 30, 2012**



For Top 5 banks the credit risk share is equally split between the IRB and the Standardised Approaches (SA) for the calculation of capital requirements, whereas medium-sized banks rely more on SA. Independently of banks' size, market risk plays a minor role (between 4 and 6 per cent of total RWAs), owing to the limited involvement of Italian banks in trading. The small portion of RWAs due to the new definition of capital

(“DefCap” in the chart below) comes from the risk-weighting of DTAs<sup>24</sup> not depending on bank’s future profitability (about 30 per cent of “DefCap” RWAs for Top 5 banks).<sup>25</sup>

Concerning their evolution over time, the simulated Basel 3 risk-weighted assets show, as previously discussed, a decline of 4.5 percentage points between December 2010 and June 2012 (Table 5). This is mostly driven by the variation of credit RWAs, which decreased by 6 per cent, with significant differences across banks: while large groups showed an almost 9 per cent drop, the other banks in the sample report a 6.6 per cent increase. The decrease in market RWAs was even more pronounced (-17 per cent), as a direct consequence of the eased financial markets conditions.

**Table 5 – Risk-weighted assets by main components (bn)**

		Dec 2010	June 2011	Dec 2011	June 2012	% Δ Dec 2010-June 2012
	<b>RWAs</b>	<b>1,157.4</b>	<b>1,124.8</b>	<b>1,139.1</b>	<b>1,082.2</b>	<b>-6.5%</b>
	<i>of which:</i>					
<b>Top 5</b>	<i>market</i>	6.4	5.3	4.8	5.3	-17.1%
	<i>credit</i>	918.2	931.2	920.7	837.7	-8.8%
	<i>other</i>	232.9	188.3	213.6	239.3	2.8%
	<b>RWAs</b>	<b>224.9</b>	<b>240.6</b>	<b>241.5</b>	<b>237.6</b>	<b>5.7%</b>
	<i>of which:</i>					
<b>Others</b>	<i>market</i>	0.9	0.9	0.8	0.8	-18.3%
	<i>credit</i>	189.8	205.5	205.5	202.3	6.6%
	<i>other</i>	34.1	34.2	35.2	34.6	1.4%
	<b>RWAs</b>	<b>1,382.3</b>	<b>1,365.4</b>	<b>1,380.6</b>	<b>1,319.9</b>	<b>-4.5%</b>
	<i>of which:</i>					
<b>Total</b>	<i>market</i>	7.3	6.2	5.7	6.0	-17.2%
	<i>credit</i>	1,108.0	1,136.7	1,126.2	1,040.0	-6.1%
	<i>other</i>	267.0	222.5	248.8	273.9	2.6%

The pattern of credit RWAs stems from several factors. Lending to the non-financial private sector (i.e. corporate and retail exposures) declined to a similar extent for both the Top 5 and the other banks, especially in 1H2012, reflecting weak credit demand from firms and households and banks’ increased risk aversion. However, the remarkable decline of the

<sup>24</sup> BCBS (2011).

<sup>25</sup> The remainder of ‘DefCap RWAs’ is due to the 250 per cent risk-weighting of the portion of significant financial undertakings and DTAs arising from temporary differences which remain not deducted after applying the 10/15 percent threshold. See BCBS (2010d), Paragraph 87-89.

average risk-weights for Top 5 banks led to a significant drop of RWAs as compared to a slight increase for other banks. The former can be partially ascribed to the adoption of IRB models by two major players and the different treatment of defaulted assets under the IRB approach<sup>26</sup>. Non-core assets disposals and increased holdings of government debt complete the picture.

#### **4.2 Leverage ratio**

The average fully phased-in Basel 3 Tier 1 leverage ratio for Italian banks was equal to 3.8 per cent as of June 30, 2012, 80 basis points above the agreed minimum level of 3 per cent. “Others” would have slightly outperformed “Top 5” at 4.1 per cent. As pointed out in Section 3, the ratios of Italian banks are well above the averages of European banks and substantially in line with those worldwide.<sup>27</sup>

**Table 6 – Leverage ratio (%)**

	<b>Dec 2010</b>	<b>June 2011</b>	<b>Dec 2011</b>	<b>June 2012</b>
Top 5	2.4%	2.8%	3.2%	3.8%
Others	3.2%	3.6%	3.6%	4.1%
<b>Total</b>	<b>2.5%</b>	<b>2.9%</b>	<b>3.3%</b>	<b>3.8%</b>

Compared with December 2010, the average leverage ratio benefited from a 130 basis points rise (from 2.5 to 3.8 per cent). This improvement was largely due to the increase in Tier 1, with total exposure substantially unchanged in the period.

As regards the composition of exposures, 79 per cent is made of on-balance-sheet items; of these, derivatives and securities financing transactions represent only 5 per cent (Fig. 5). Concerning off-balance-sheet items (21 per cent of the overall figure), potential future exposures for derivatives<sup>28</sup> and unconditionally cancellable commitments (which attract a reduced 10 per cent conversion factor for the purpose of exposures calculation) account for 11 and 7 per cent respectively. More than a half of the off-balance sheet

<sup>26</sup> Under the Standardised approach (SA) defaulted exposures are assigned a 150 per cent risk-weight as compared with 0 per cent under the IRB; in the latter, they directly affect the available regulatory capital through the deduction of the difference between Expected Loss and provisions, if positive.

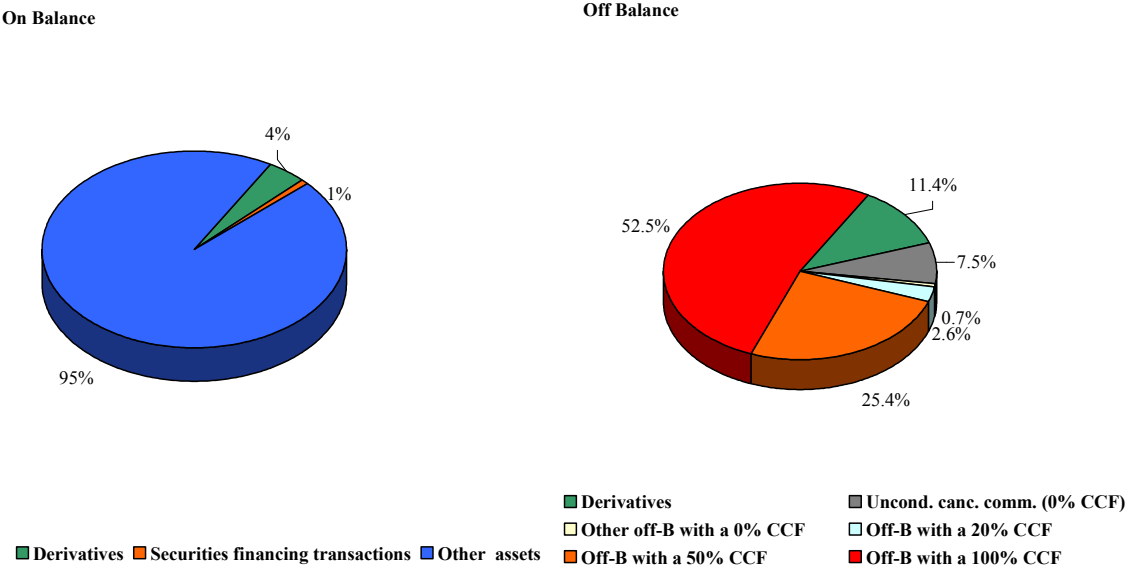
<sup>27</sup> For further comparison between the degree of financial leverage of Italian banks and that of the main European banking groups, see Banca d'Italia (2012).

<sup>28</sup> Coherently with the Basel 3 monitoring exercise, the current exposure of derivatives is classified within on-balance-sheet exposures, while the add-on for potential future exposure is reported under the off-balance-sheet exposures.

exposures is attributable to positions attracting a 100 per cent credit conversion factor under the Standardised Approach for credit risk.<sup>29</sup>

The Basel 3 rules provide for a long observation period before the leverage ratio comes into force. In the years to come the Basel Committee and the EBA will continue to gather data to assess the behaviour of the ratio with respect to a range of factors, such as its dynamics over the cycle, the interaction with the risk-based capital ratios and its impact on banks’ business models. Final adjustments to the definition and calibration of the leverage ratio should be made by 2017, before embedding the new rules into Pillar 1 starting from 2018.

**Figure 5 – Exposure composition<sup>30</sup> as of June 30, 2012**



**4.3 Liquidity standards**

The liquidity position of Italian banks under fully-fledged Basel 3 rules, as amended in January 2013<sup>31</sup>, improved significantly over the observation period, with regard to both the short term liquidity needs (i.e. LCR) and the structural position (i.e. NSFR). As for capital, both micro and macro drivers warrant consideration; the Long Term Refinancing Operations (LTROs) realized by the European Central Bank (ECB) in December 2011 and March 2012 have clearly played a prominent role.

<sup>29</sup> E.g. sale and repurchase agreements where the credit risk remains with the bank.  
<sup>30</sup> The breakdown of off-balance-sheet items by credit conversion factors as provided by the Basel 2 framework is shown for information purposes only.  
<sup>31</sup> BCBS (2013a).

### 4.3.1 Liquidity Coverage Ratio

Short-term liquidity needs<sup>32</sup> in mid-2012 added up to €3.9 bn for the whole sample (Table 6), with four banks in the “Others” group below 100 per cent. Importantly, in all but one case the LCR exceeded 60 per cent, the first milestone in the phasing-in schedule due to begin in 2015. None of the top 5 banks reported short-term liquidity shortages. In both sub-samples the average level of the ratio exceeded 140 per cent. In any case, banks will be allowed, subject to strict supervisory scrutiny, to temporarily breach the minimum requirements under stress.<sup>33</sup>

**Table 7 - HQLA (bn), net cash outflows (bn), LCR (%) and shortfall (bn)**

	Dec 2010	June 2011	Dec 2011	June 2012(*)	% Δ Dec 2010-June 2012	
<b>Top 5</b>	HQLA buffer	99.3	101.8	112.7	159.5	60.6%
	Net cash outflows	122.8	143.0	130.8	111.4	-9.3%
	<b>LCR</b>	80.9%	71.2%	86.2%	143.2%	
	LCR shortfall	24.5	42.9	21.3	0.0	-100%
<b>Others</b>	HQLA buffer	15.1	14.0	20.8	28.4	88.6%
	Net cash outflows	21.5	23.4	21.6	19.1	-11.1%
	<b>LCR</b>	70.1%	60.0%	96.5%	148.7%	
	LCR shortfall	10.9	11.2	8.2	3.9	-64%
<b>Total</b>	HQLA buffer	114.4	115.8	133.6	187.9	64.3%
	Net cash outflows	144.3	166.4	152.4	130.5	-9.5%
	<b>LCR</b>	79.3%	69.6%	87.6%	144.0%	
	LCR shortfall	35.5	54.1	29.6	3.9	-89%

(\*) Both numerator and denominator have been updated after January 2013 GHoS decision; denominator only at previous dates.

Concerning the dynamics of the LCR determinants, it appears at first sight that increased net outflows led to a marked worsening of the overall liquidity position in 1H2011, before gradually falling back towards the initial level (-9.5 per cent overall from December 2010 to June 2012). On the other hand, the counterbalancing capacity made up of highly liquid assets soared by 64.3 percentage points in the reference period.

<sup>32</sup> In the context of liquidity a measure of shortfall should be interpreted as the amount by which the high quality liquid assets (HQLA) buffer should be increased or, alternatively, as the reduction in the net cash outflows needed in order to comply with a 100 per cent level of the ratio.

<sup>33</sup> “Once the LCR has been implemented, its 100% threshold will be a minimum requirement in normal times. But during a period of stress, banks would be expected to use their pool of liquid assets, thereby temporarily falling below the minimum requirement” BCBS (2013a).

More in detail, a marked rise in expected outflows mirrored liquidity tensions peaking in the first part of 2011. New bond issuances and significant drawing on central bank reserves alleviated the burden of diminishing unsecured wholesale from non financial corporates. Increased reliance on secured financing carrying high run-off rates lifted outflows estimates further up. A substantial amount of unsecured funding – including maturing liabilities and interbank funds – was then substituted with ECB financing as a result of the first LTRO, launched in December 2011; consequently, a sizeable drop in the estimated cash outflows was observable in end-2011 figures. Simultaneously, some rebalancing took place on the asset-side, featuring sovereign bonds purchases and larger central bank reserves holdings.<sup>34</sup> More expansion in the HQLA buffer was then supported by the second LTRO, in March 2012. In this occasion, 3-year central bank funds partially replaced short-term collateralized interbank funding, fostering further rebalancing in the funding structure, particularly among the largest banking groups.

The remarkable improvement in the LCR reflects the attention devoted to the liquidity profile by both supervisors and intermediaries. However, such a reassuring picture should not draw attention away from liquidity risk. Careful and continuous monitoring should support the planning of a smooth adjustment towards post-LTRO conditions. In this regard, Banca d'Italia continues its action to increase banks' awareness of the importance of a more balanced and stable liquidity position.

#### ***4.3.2 Net Stable Funding Ratio***

Structural liquidity needs (or maturity mismatch) as measured by the Net Stable Funding Ratio (NSFR) – whose full enforcement is scheduled in 2018 – decreased for both groups of Italian banks in the sample in the reference period, as indicated by the rise in the ratio from 95.2 to 104.7 per cent.

**Table 8 – NSFR (%)**

	<b>Dec 2010</b>	<b>June 2011</b>	<b>Dec 2011</b>	<b>June 2012</b>
Top 5	95.2%	96.6%	101.9%	104.7%
Others	94.4%	93.0%	99.6%	102.6%
<b>Total</b>	<b>95.1%</b>	<b>96.0%</b>	<b>101.6%</b>	<b>104.4%</b>

<sup>34</sup> It is worth noting that increasing the stock of assets by means of Level 1 (L1) assets (including, for instance, demand deposits held at the central bank) may result in a larger overall impact on the total amount of the buffer, since a larger L1 stock eases the constraint on the computability of Level 2 (L2) assets, which cannot exceed 40 per cent of L1 assets.



The remarkable strengthening observed in the last year is largely due to the increased amount of Available Stable Funding (ASF) as a result of liability rebalancing towards long-term secured funding with maturity over one year, such as the central bank funding obtained through the LTROs. The borrowed amounts are classified as stable funding with a 100 per cent weighting factor. It must be stressed that a moderate but positive trend was already present in 1H2011, as an indirect effect of capital increases; the slow (or negative) evolution of credit supply recorded by most players is a further element that helped to prop up the balance between required and available resources.

Compared with the more severe short-term liquidity needs arising at the peak of the 2011 sovereign crisis, the NSFR depicts a rather reassuring picture even before the ECB intervention, with no bank below 80 per cent and most intermediaries close to or beyond the target level.<sup>35</sup>

## **5. Concluding remarks**

The Basel 3 framework is a major achievement in the policy agenda designed by G20 leaders and international regulators in the aftermath of the 2007-08 financial crisis. Since their publication in 2010, the new rules have been amended by further policy decisions; residual issues regarding the calibration of liquidity and leverage standards will be resolved following the completion of ongoing impact assessments. The objectives of the reform are nevertheless clear enough. It is therefore of great importance, for banks and supervisors alike, to continue assessing the new rules' probable effects .

In the context of the reform of the global financial system, transparency and information-sharing are crucial to restoring investors' confidence and trust, the foundation of financial stability. The publication in March 2013 of the last release by the Basel Committee and the EBA of the international monitoring exercises offers Banca d'Italia the opportunity to follow suit, disclosing for the first time – albeit in aggregate form – the evidence gathered in the last two years on the position of a representative sample of Italian banking groups under the Basel 3 rules. This work is also intended as due feedback to participating banks.

Recalling that the simulation is based on fully-fledged rules and does not consider banks' future behavioural responses to the changing regulatory environment, it is clear enough that several factors, difficult to predict indeed, will continue to reshape the economic and financial environment. Thus, simulations are not meant to be a forecasting exercise. Banks' actual capital and liquidity profiles in the future will be affected by

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<sup>35</sup> The structural balance shown by Italian banks is also a legacy from the limits on maturity transformation mandated by the Bank of Italy, which were in force until 2006.

developments in the credit quality of exposures, the mark-to-market valuation of financial instruments and the conditions in the interbank markets; the policy stance of monetary and fiscal authorities will contribute to frame the broad picture, also influencing both supply conditions and demand factors in the credit markets.

Bearing this in mind, it is still possible to set out some preliminary findings.

Italian banks are moving steadily towards the future prudential standards, despite the difficult economic conditions. The overall capital and liquidity position of the sample banks improved considerably between the end of 2010 and mid-2012. Multiple factors, ranging from banks' management actions to ECB policies, produced this outcome. A significant part of the progress in the solvency level has been achieved by raising new capital, whereas action to shrink risk-weighted assets has played a limited role.

As to the overall effectiveness of the reform package, the results discussed in the paper seem consistent with one of the main objectives of the framework: to reduce the gap between prudential requirements and the actual risks posed by banks' business activities. Nevertheless, further work on the potential unintended consequences of the new regulation and their spill-over to the real economy remains crucial. In a complex and changing landscape, more challenges lie ahead of banks, first of all a sustainable recovery of profitability. Not only is the run-up to Basel 3 contributing to make Italian intermediaries more resilient to risks, which remain significant in the current economic environment, but it can also be an opportunity for them to enrich their strategic decision-making with a sound risk management culture, ultimately enhancing their ability to serve the financial needs of the real economy.

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