CAPITAL ADEQUACY, COST OF THE RISK AND PROFITABILITY: DURING A CRISIS, A REAL PUZZLE FOR BANKS

SOURCE: AVANTAGE REPLY OBSERVATORY
ON BANKING SYSTEM SOLIDITY

ABSTRACT

Following the burst of the real estate bubble on the US sub-prime lending market and following the bankruptcy of Lehman Brothers, the worst economic crisis since 80 years has now passed through, and in some cases overcome, different stages, both from a real (two recessions) and from a financial point of view. In such a context, the banking industry is still facing several and complex challenges and issues.

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1. INTRODUCTION

Over the last years, significant progress was made in order to improve the financial stability of banks. Institutions are actually working for reviewing the regulatory framework and the bank supervisory architecture. In particular, last year was characterised by:

→ the approval of CRD IV, the European Directive which implements the dictates defined by the new agreement on the minimum capital requirements imposed on banks by the Basel Committee (the so-called Basel 3);
→ the establishment of the European Banking Union, whose first step led to the introduction of the single supervision and the establishment of the Single Supervisory Mechanism (SSM) which will involve the first 15 banks in the new European supervision, which shall be governed by the European Central Bank (ECB);
→ the evolution of National Supervision, which led to the introduction of new requirements, among which we list:
    - Circular 284 issued by the Bank of Italy which introduces a new analytical reporting, on an annual basis, for all the supervised intermediaries (bank and financial). The reporting focuses on the historically recorded losses on default positions (loss given default, LGS) and provides the basis for an evolution of the impairment accounting model, based on a notion of expected losses (IFRS 9) rather than of incurred losses (IAS 39), as well as supervision and disclosure of information.
    - the 15th update to Circular 263 issued by the Bank of Italy which evolves the role of the CRO from a mere "technician" up to an active party in the definition of the Risk Appetite Framework, of the risk management processes and of the monitoring of the risk profile of the bank contributing, if required, to correct its misalignments, if any, from the defined strategy, providing rules on the matters regarding the "Internal Control System", the "Information System" and the "Business Continuity".
    - the establishment of the European Banking Union which led to the establishment of the Single Supervisory Mechanism (SSM) which will involve the first 15 banks in the new European supervision.

Regarding the last point, according to the rules of the SSM, the EBC shall perform a "comprehensive assessment" developed on three blocks.

- Risk Assessment;
- Asset quality Review;
- Transparency and Stress Test.

The assessment aims to measure the risk, the capital adequacy and the transparency of the financial statements through an evaluation which is made:

- on the quality of the risk management and control processes, and
- on the quantity on the selected portfolios which are selected on a legal entity and rwa percentage basis

The assessment is part of a scenario which, over the last years, led to significant transformations in the Financial statements of the banks:

- reduction of the assets (deleveraging);
- rationalizing of the credit and (mostly during the last two year period) credit crunch;
- reallocation of the assets, with an increase of sovereign debt exposure to the detriment of receivables (namely the corporate loans);
- increase of non performing credits and the connected cost of the risk;
- fall in profitability;
- unavoidable increase in capital levels.

Relying on the data provided by the Avantage Reply Observatory, a company belonging to Reply Group specializing in consultancy services for the Financial Services market on the risk, regulatory, capital and financial performance management e treasury issues, on the strength of the banking system, it is possible to trace back the main challenges currently tackled by the Italian banking system.

In order to facilitate the reading, we highlight that
the main hot topics faced by the banking system are classified and described under paragraph 2.
Paragraph 3 describes the data sample employed for the empirical analyses covered by the article.
The following paragraphs present and describe the empirical evidence found, with an analysis of the main *Key Performance Indicator* monitored on the different aggregations of banks employed. Namely, paragraph 4 is dedicated to the analysis of the indicators linked to the risk-weighted exposure amounts (RWA) and to the capital recorded by the financial statements for meeting the requests from the regulators. Paragraph 5 reviews the credit portfolio of the bank, focusing on deteriorated loans and the relevant hedging policies. Paragraph 6 analyses the cost of the risk given to the provisions on receivables and the relevant impact on the profitability of the different cost items.
Lastly, paragraph 7 provides the conclusions of the analysis identifying the first main paths to follows and the strategic levers that may be adopted by the banks in order to solve the puzzle and exit in the best way from the crisis.

2. CAPITAL, ASSET QUALITY AND PROFITABILITY: THE HOT TOPICS FOR THE BANKING SYSTEM

The recent financial crisis highlighted not only relevant factors of a systemic fragility which are in-built in the structure, in the composition and in the operating modes of financial systems (markets and brokers), but also some significant criticalities of the Basel regulatory framework.
The continuing economic crisis manifested itself both on a real level with a new recession (double dip) and on a financial level with the crisis of sovereign debts and the negative impact on the financial statements of the banking institutions.
The analyses and the assessments which the institutions are performing on the health of banks continue in such atmosphere of uncertainty and alarm. Furthermore, together with the Banking Union it is more and more significant the importance played by the European Central Bank (ECB), which, while it is about to take over the single supervision, started, as from November, a number of new assessment on the capital and economic situation of 130 European banks, among which 15 Italian banks.
The current scenario leads the banks to face a real puzzle which will not be easy to solve. Said puzzle is made of three main hot topics which are jeopardising the solidity of the banking system:

1. capital adequacy (paragraph 2.1)
2. credit quality (paragraph 2.2)
3. profitability and loans (paragraph 2.3)

Among said hot topics, a particular emphasis shall be given to the risk assessment and to the quality assessment on the assets which, together with the stress test topic, are the key criteria on which the ECB's agenda itself is focused for the assessment which will be performed during the next year.

2.1 Capital adequacy

The economic and financial crisis which is still under way led to a review of the principles of bank prudential regulations: the new Basel 3 regulatory framework introduced new and stricter capital requirements for banks.
In particular, banks are called to carefully monitor the amount of the capital held for hedging the risk-weighted assets in the light of the new requests coming from:

→ the Basel committee which, through "Basel 3", increased the requirements on higher quality capital (c.d. common equity Tier 1);
→ the even more binding recommendations from the European Banking Authority (EBA) which, for example, requested, within end 2012 a core tier 1 ratio of at least 9%;
→ the ECB which, with the establishment of the Banking Union will carry out a number of assessments aimed to identify, within a system framework which still highlights some issues in terms of efficiency and capitalization, which are the banks needing the deeper adjustments.

The main current challenges on capital adequacy require therefore a careful assessment on the compliance with the new regulatory requirements imposed to the banks by the regulator. Said analyses are based, in first place, on the observation of the exposures to risk recorded by the financial statements of the banks, assessed in particular basing on the weighting assigned following the Provisions of Basel's framework (the so called Risk Weighted Assets, RWA). The weight of RWA on the non weighted assets (RWA density) shows, furthermore, a significant indicator of the efficiency through which banks meet the new requests for re-capitalization arising from the new regulations.

The paths which the banks may follow for improving their capital ratios and increase capital adequacy are several. For said purpose a particular focus must be put on the effort that banks are spending in identifying the spaces for a RWA optimization, aimed to reduce the capital absorptions keeping constant the nominal exposure recorded by the statement. We will return to this topic in the last part of this document.

2.2 The deterioration in the credit standing

The real economic crisis, which began in 2008 and continued during the last two year period with a new recession, is still producing its harmful impact on the financial statements of the banks. The main negative outcome regards the deterioration in the credit with an increase in bad debts and of the other types of deteriorated receivables. The increase in non performing exposure impacts in turn on the cost of the risk which keeps growing due to the need of the banks to increase provisions and impairment losses on loans.

During the last two year period, the hedging policies implemented by Italian banks have not been thoroughly consistent. The audits performed by the Bank of Italy during the second part of 2012 on the 20 main Italian banks gave rise to a further increase in impairment losses on loans, also for those banks which during the previous six months periods preferred to boost gains by adopting less cautious and discerning budgetary and credit hedging policies.

Furthermore there are different standards on hedging policies, on the classifications of deteriorated credits and on the definition of the coverages between each different national jurisdiction. There is, actually, a different disclosure between countries on the credit standing issue:

- in the International disclosure only bad debt are usually disclosed, while Bank of Italy requires from our banks to notify any status of credit standing deterioration (bad debts, doubtful loans, restructured debts, past due);
- for the evaluation of coverage ratio there is no consistency in the definition of the hedging instruments to be included among the write-downs on impaired loans.

This issue is subject to discussion and recently ABI, the Italian Banking Association, for the reasons described above, contested some of the data published by the International Monetary Fund, which show an higher deterioration of the credit standing of Italian banks as compared to their European competitors.

2.3 Profitability and loans

The increase on Allocations to provisions for loan impairment is causing a deterioration of the profitability of banks. The containment currently performed on operating costs do not appear at the moment capable to prevent a fall in gains. For this reason, profitability cannot be further defended only through operations on overall costs[1] (for example the policies for the reduction of branches and the current redundancies for reducing staffing cost which, in perspective, may become a constraint, unless appropriate technological management policies are adopted[2].

In consideration of said evidence, which we will better detail in numerical terms in the second part of the article, it can be asserted that one of the first steps which the banks must do in order to produce gains again is related to the cleaning of the loan portfolio. A reduction in the non performing portfolio, will imply a reduction of the cost of the risk which, in this period is one of the main causes of fall in banking profitability.

[1] The first three main banks, basing on the results of the ~~latest~~ 2012 review period, are stifled by the increase of the devaluations on credits (following the decay in the quality of the loans). The result is a varied picture, where the deficit of MPS (weak on multiple fronts, ranging from the negative interest rates paid on capitalization tools - such as Tremonti and Monti Bonds - and the impact, also for the valuation of goodwill, of the derivative case), is higher, on its own, to the recovery in profitability shown by Unicredit and Intesa Sanpaolo.

[2] Adoption of new technologies or contracting/outsourcing are the new frontiers sought for gain efficiency the structure costs of banks - the on-line and/or separate infrastructure, guarantees the fencing of costs with substantial advantages with the increase of the use of the services (economies of scale and scope).

Recession, the fall in the aggregated demand (consumption and investments) and the increase of capital requirements (Basel 3 and EBA) are furthermore reducing the capability of banks in granting loans to families (retail portfolio) and enterprises (corporate portfolio), causing a credit crunch situation which is now hard to deny. Strategies and mechanisms for cleaning the bank financial statements, which can be achieved through the reduction of the excessive and growing importance of pathological loans are the first path that banks must follow in order to create again that virtuous cycle which leads then to a higher risk appetite for banks and a new increase of loans. Among the possible solutions to be adopted we deem as significant the establishment of a Bad Bank, taking the good example from the recent Spanish experience.

3. AVANTAGE REPLY OBSERVATORY AND FEATURES OF THE ANALYSED SAMPLE

The analyses described hereinbelow were performed employing the data gathered and monitored by the Avantage Reply Observatory on the solidity of the banking system. Said observatory is developed on a quarterly database over the period 2009 Q1 - 2013.Q2 and gathers the micro data of the main Italian and European banking groups. The data was collected from the disclosure of the banks and from the public system data provided by the Bank of Italy. The micro data regard the financial statements (balance sheet, income statement and explanatory notes) and the Pillar 3 report which provide the information on the risks and the capital absorptions of the Bank according to the provisions of the Basel rules.
The examined sample consists of 18 Italian banking groups which cover around 80% of the total of the credit of the banking system and 14 among the main European banking groups. Table 1 shows the detail of the observed banks.

Table 1 – Avantage Reply Observatory: sample of banks – *(data as of Q4.2012 compared to the previous year)*

Italian Banks and Banking Groups				European Banking Groups			
Ranking	**Bank**	**Total Assets** (Euro Bn)	**Class**	**Ranking**	**Bank**	**Total Assets** (Euro Bn)	**Countries**
1	Unicredit (≈)	926.8	**1**	**1**	Deutsche Bank (≈)	2,012.3	**Germany**
2	Intesa San Paolo (≈)	673.5	**1**	**2**	BNP Paribas (≈)	1,907.3	**France**
3	MPS (≈)	218.9	**1**	**3**	Credit Agricole (+1)	1,842.4	**France**
4	UBI (+1)	132.4	**1**	**4**	Barclays (-1)	1,764.2	**United Kingdom**
5	Banca Popolare (-1)	131.9	**1**	**5**	RBS (+2)	1,553.5	**United Kingdom**
6	BNL (≈)	83.2	**1**	**6**	Banco Santander (≈)	1,269.6	**Spain**
7	Mediobanca (≈)	62.5	**2**	**7**	ING (-2)	1,169.0	**Benelux**
8	BPER (≈)	61.6	**2**	**8**	UBS (≈)	1,012.0	**Switzerland**
9	BPM (≈)	52.5	**1**	**9**	Unicredit (≈)	926.8	**Italy**
10	Carige (+1)	49.3	**2**	**10**	Credit Suisse (≈)	742.8	**France**
11	BPVI (+1)	46.7	**2**	**11**	Intesa San Paolo (+1)	673.5	**Italy**
12	Cariparma (-2)	44.9	**2**	**12**	BBVA (+1)	637.8	**Spain**
13	Veneto Banca (≈)	40.2	**2**	**13**	Commerzbank (-2)	635.9	**Germany**
14	Credem (≈)	30.7	**1**	**14**	Dexia (≈)	357.2	**Benelux**
15	Mediolanum (≈)	17.7	**2**				
16	CR Bolzano (≈)	8.9	**2**				
17	Volksbank (≈)	5.9	**2**				
18	BP Spoleto (≈)	3.8	**2**				

Table 2 – Data aggregation: cluster of monitored banks

CLUSTER OF BANKS	FEATURES OF THE CLUSTER	BANKS BELONGING TO THE CLUSTER AS OF Q2.2013
AIRB BANKS	Banks authorised to employ advanced methods for calculating the capital requirements for credit risk (6 banks)	Unicredit, Intesa Sanpaolo, Banca Monte Paschi di Siena, Credem, UBI, Banco Popolare
NON AIRB LARGE BANKS	Banks whose consolidated assets > 30 billion Euro which employ the standard approach for calculating the capital requirements for credit risk (8 banks)	BNL, Mediobanca, BPER, BPM, Carige, Cariparma, Banca Popolare di Vicenza, Veneto Banca
NON AIRB SMALL BANKS	Banks whose consolidated assets < 30 billion Euro which employ the standard approach for calculating the capital requirements for credit risk (7 banks)	Banca Mediolanum, CR Bolzano, Volksbank, BP Spoleto, Banca del Fucino, BRA, Banca Etica

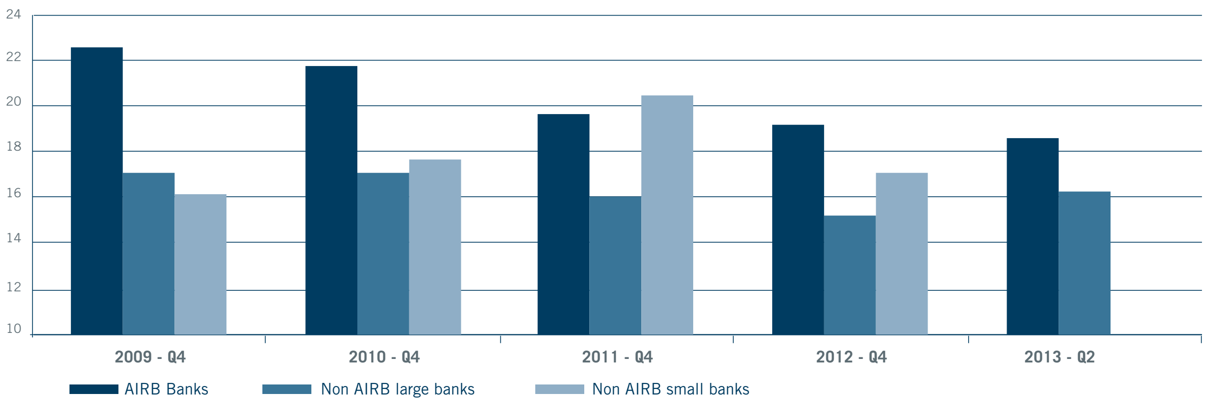
In the analyses performed in this article and described below, the bank and the available data sample was divided and clustered between banks which already apply advanced approach for establishing the capital requirements for credit risk (AIRB banks) and banks which are still employing the Standard approaches provided by the Basel rules (see Table 2). The latter were in turn divided on a dimension basis (consolidated assets higher or lower than 30 billion Euro).

4. RWA AND CAPITAL: THE BENEFITS OF AIRB APPROACHES

4.1 Leverage and RWA density

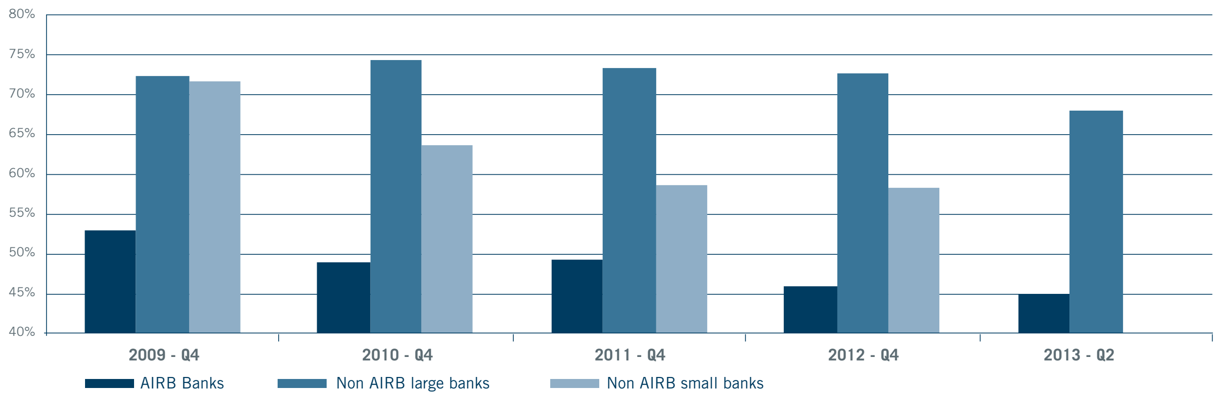
During the 2009-2012 three year period, Italian banks have continued to show the deleveraging which started when the crisis begun.
The financial leverage, calculated as the ratio between total assets and Tier1 capital has decreased for the six banks which adopt the AIRB approach from a 22.6 level at end 2009 to 19.3 at end 2012 (see Chart 1). A decreasing trend for the financial leverage is recorded also for non-AIRB banks which show, however, a lower financial leverage (from 17.1 in 2009 to 15.2 at end 2012). 2013's first half recorded a new fall of leverage for AIRB banks (18.7 at half year), against a partial raise for large non AIRB banks: although the distance is smaller, the financial leverage of validated banks is still 2,3 points higher.

Chart 1 - Financial Leverage



Against a higher leverage level, AIRB banks employed the adoption of internal models on credit risk in order to reduce their capital requirements.
Observing the RWA Density indicator, which represents the risk-weighted assets in percentage of the total assets (of Balance Sheet), for AIRB banks is recorded a lower index with a reduction trend (from 52.8% at end 2009 to 45% of first half 2013), against a more stable (although in reduction) and around 23 percentage points higher (68% at 2013's half) for large non AIRB banks (see Chart 2). Said evidences show then that the adoption of internal models is allowing the six already validated banks to reduce the capital absorptions, although they have a level of financial leverage significantly higher than the other main bank groups which still adopt standard approaches.

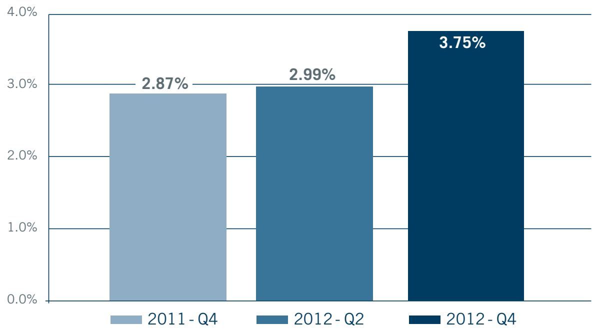
Chart 2 - RWA density



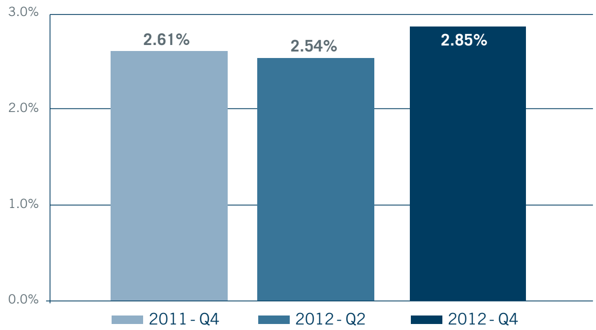
The reduction in RWA density and therefore of the implicit average weighting factors obtained through the AIRB approaches occurred in a period in which the counterparty risk has increased: this is clear also observing the average probability of default of the validated banks (see Chart 3) which increased during 2012, both on the corporate segment (to 3.8%, +0.9 percentage points on an yearly basis) and on the retail (to 2.9%, +0.3 p.p. against 2011), confirming the benefits obtained through the adoption of AIRB approaches. During 2011 banks appear to have underestimated the risk level of the counterparties and during 2012 reviewed and corrected the predictive capacity of their rating models, adjusting upwards the estimations of PD, mainly for larger counterparties which are more sensible to the systemic risk which characterises the current financial crisis.

Chart 3

Central average PD of the Corporate segment

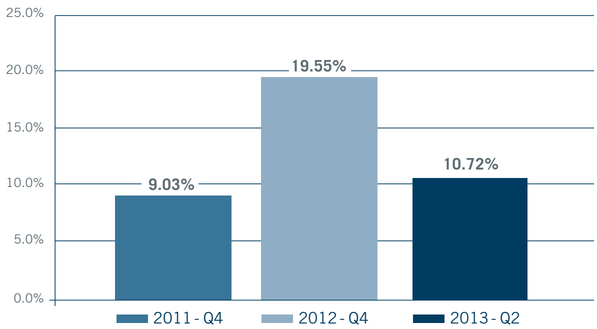


Central average PD of the Retail segment

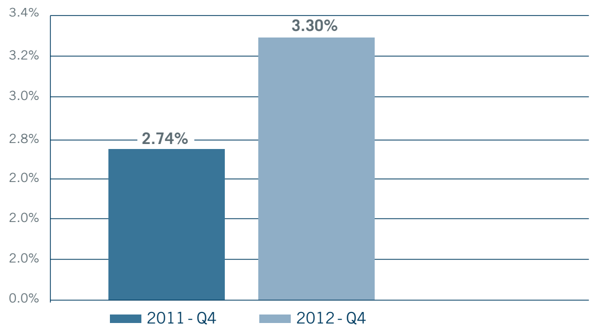


The comparison - performed on an subset of the main AIRB banks[3] - between the annual growth rate of deteriorated loans (proxy of the default cycles) and the average overall PD obtained with the internal models appears to confirm the underestimation of the risk made in 2011 (see Chart 4). The PD of 2011 does not appear actually capable to forecast the strong increase of defaults in 2012 which led to an almost double growth rate of deteriorated loans: it appears that the forward looking approach which should characterise the calculation of said risk parameter is no longer applied[4]. In 2012 the estimation was adjusted upwards but, according to the data, it probably occurred one year late.

Chart 4 - Average PD and increase of deteriorated loans of AIRB banks



Yearly increase of deteriorated loans (financial statement figure)



Average PD

[3] In this in-depth analysis, shown in Chart 4, in order to perform a consistent comparison on the available data, in the AIRB banks sample only Unicredit, Intesa Sanpaolo and MPS were considered.

[4] The PD, according to the requirements set by the Basel rules, must show "the probability that the counterparty enters into a default condition within 1 year".

4.2 The composition of absorbed capital

The allocation of capital requirements by type of risk highlights that around 85% of the absorbed capital hedges the credit risk (Table 3). The remaining risk types explain actually a residual share of the overall capital requirements provided by the first Basel pillar: averagely around 3% for market risks and around 8% for operational risks.
During the 2009-2012 three year period, for AIRB banks, due to the progressive adoption of the internal models provided in the roll-out plan of the banks and to the validation of new bank Groups (see for example Banco Popolare and UBI), showed a fall in the share of capital requirements explained by the credit risk (from 87.9% to 84.5%), to the advantage of other types of risk. Non-AIRB banks kept, on the other hand, the share of credit risk absorbed capital share basically unchanged, evidencing that the re-allocation detected on AIRB banks can be explained by the progressive validation of the approaches advanced on new banks or new asset class of the same bank, rather than an actual increased importance of the other risk types.

Table 3 – Composition of overall capital requirements

Composition of absorbed capital	2009.Q4			2012.Q4		
	AIRB Banks	Non AIRB large banks	Non AIRB small banks	AIRB Banks	Non AIRB large banks	Non AIRB small banks
Credit Risk	**87.87%**	**88.92%**	**86.36%**	**84.51%**	**88.59%**	**87.73%**
- STD	*49.34%*	*88.92%*	*86.36%*	*41.56%*	*88.59%*	*87.73%*
- IRB	*38.53%*	-	-	*42.96%*	-	-
Market Risk	**3.61%**	**3.50%**	**3.37%**	**4.61%**	**2.89%**	**1.78%**
Operational Risk	**8.34%**	**7.55%**	**9.36%**	**10.15%**	**6.67%**	**10.49%**
Other requirements	**0.17%**	**0.03%**	**0.91%**	**0.73%**	**1.86%**	**0.00%**

Table 4 – Composition of capital requirements on credit risk: Allocation by asset class of the Standard approach

Asset Class	AIRB Banks		Non AIRB Large Banks		Non AIRB Small Banks	
	2009.Q4	2012.Q4	2009.Q4	2012.Q4	2009.Q4	2012.Q4
Central administrations and central banks exposures	0.28%	1.87%	0.07%	0.04%	0.00%	0.67%
Territorial entities exposures	0.95%	1.65%	0.19%	0.34%.	0.29%	0.37%
No-profit and public sector entities exposures	0.62%	0.01%	0.84%	0.00%	0.59%	0.00%
Multilateral development banks exposures	0.00%	3.65%	0.00%	1.66%	0.00%	0.69%
International Institutions exposures	0.00%	1.26%	0.00%	0.00%	0.00%	0.00%
Supervised intermediaries exposures	4.38%	7.74%	4.76%	4.21%	4.94%	7.92%
Corporate exposures	17.62%	34.15%	43.47%	39.92%	19.31%	35.59%
Retail exposures	9.56%	18.26%	13.30%	12.94%	12.05%	12.81%
Mortgage retail exposures	2.86%	7.94%	10.13%	9.80%	11.02%	14.94%
Past due exposures	2.69%	8.04%	7.79%	10.16%	4.37%	7.57%
High-risk exposures	0.68%	1.18%	0.22%	0.07%	0.10%	0.17%
Guaranteed bank bonds exposures	0.00%	0.34%	0.00%	0.04%	0.00%	0.30%
Short term exposures with corporates	0.25%	0.29%	0.01%	0.00%	0.00%	0.00%
Exposures in the form of Collective Investment Undertakings (CIU)	0.82%	1.92%	0.33%	0.79%	1.36%	2.42%
Other exposures (including the counterparty risk)	48.51%	10.37%	20.71%	19.47%	45.38%	16.41%
Securitisations exposures	0.12%	1.34%	1.11%	0.56%	0.76%	0.14%

A final picture of the 2012 on the asset class of the standard approach which composes the capital requirements on the credit risk shows that, with regards to AIRB banks, around 34% of the capital is absorbed by total assets (of Balance Sheet) (Table 4), the corporate share of non-AIRB large banks is even higher (39.9%). In the standard approach, Retail exposures cover, overall, a 26.2% share for AIRB banks and 22.7% for non-AIRB large banks (respectively 7.9% and 9.8% the share covered by mortgage exposures).

The trend of the 2009-2012 three year period shows, furthermore, with regards to the standard asset class, the significant increase in incidence of past-due exposures which, due to the economic crisis and the deterioration of the credit standing resulting from it, increased from 2.7% to 8% for AIRB banks and from 7.8% to 10.2% for non AIRB large banks (the share of smaller banking groups is increasing as well, from 4.4% to 7.6%).
A detail focus on the asset class which compose the capital requirements calculated with the internal models for AIRB banks shows how the most significant part is related to the corporate portfolio, whose incidence stood at 73.6% at end 2012 (80.7% in 2009). Over the three year period, the IRB absorbed capital share of the structured finance transactions (specialised lending) recorded an increase, from 2.4% to 4.4% as well as the mortgage asset class, whose incidence increased from 4.6% to 8.1% (see Table 5).

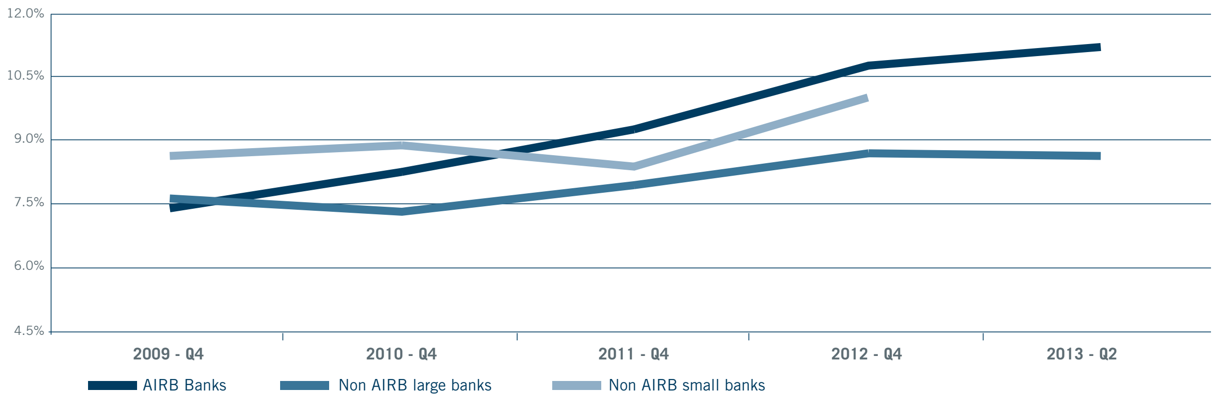
Table 5 – Composition of capital requirements on credit risk: Allocation by asset class of the advanced approaches for AIRB banks

Asset Class	2009.Q4	2012.Q4
Central governments and central banks exposures	0.06%	0.14%
Supervised intermediaries exposures	4.41%	3.99%
Corporates exposures	80.70%	73.61%
Specialised lending corporates exposures	2.43%	4.35%
Mortgage retail exposures	4.55%	8.07%
Retail exposures – qualified revolving facilities	1.53%	0.23%
Retail exposures – other retail asset	3.89%	6.92%
Capital instruments exposures	2.02%	0.63%
Securitisations exposures	0.00%	1.79%
Other exposures	0.42%	0.27%

4.3 Capital adequacy with the new regulatory scenario

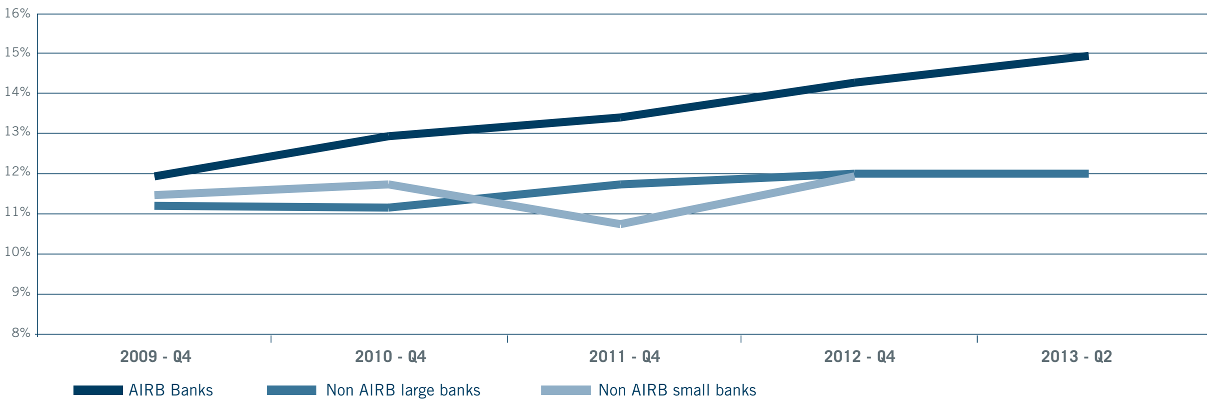
The new capital constraints imposed by Basel 3 for the next years, together with the immediate demands from EBA, led to a significant increase in capital ratios. To tackle the crisis and to satisfy the new requirements set by the regulator, the banks increased in particular the higher quality capital: the core tier 1 ratio, i.e. the ratio between the bank's core equity capital to its total risk-weighted assets, increase in aggregate for AIRB banks from 7.4% in 2009 to 11.2% of first half 2013, with a constantly increasing trend (see Chart 5); it is worth noting that the rush occurred in 2012 which brought the validated banks and the other main groups to exceed the 9% level imposed by EBA in order to tackle the increasingly more uncertain and depressed economic scenario.
The actions implemented in order to satisfy the meeting of the requirement were twofold: both levers composing the ratio were operated. On one side, the component of the primary capital (as impact strategy) was increased, on the other the foundations for decreasing the incidence of RWA (as long term levers) were laid down, through the progressive employment of the internal models of the main banking groups[5].
Thus, the bank's core equity capital was strengthened both finding external resources, through a recourse to the market recapitalization or purchase of hybrid capitalization tools[6] - and through internal measures such as those linked to the positive effect of the write downs of the good-will[7] or to the reduction of the shortfall[8].
The aggregate figure of non AIRB large banks recorded a smaller increase in the capitalization rate (from 7.6% in 2009 to 8.6% recorded at half 2013). The capitalization trend on the core tier 1 recorded by the aggregate number of the smaller banks was stable during the 2011 two year period but recorded a significant growth in 2012 (10% at the end of the year).

Chart 5 - Core Tier 1 ratio



[5] Consider, for example, the roll-out plan of the main banks, with the extension of the internal model subject portfolios (such as for example the validation of the models on the Retail segment for ISP during the last year), or the discontinuation of the Standard Approach for UBI and Banco Popolare right at Q2 2012.
[6] Reference is made to the 1.9 bn € contribution given by Tremonti Bonds on the determination of the MPS primary capital (22.3% as of Q4.2012), or the later impact of the Monti Bonds (3.9 bn €, included in the capital as from Q1.2013) - when the scandal linked to the derivatives - bought for balancing the 0.55 bn cost of interests paid on Tremonti bonds - broke.
[7] Respectively 44.86% for AIRB banks and 78.54% for non AIRB large banks 11.43% for non AIRB small banks, between Q4.2009 and q4.2012.
[8] Shortfall means the exceeding value of the Expected Loss against the impairment adjustments on loans. The increase in adjustment allows to better hedge the expected loss and to contain in this way the negative effects implied by it at a capital level.

Chart 6 - Total capital ratio



The total coverage ratio on regulatory capital, whose minimum threshold was kept even under Basel 3 at 8% showed during the three year period under review a slightly weaker growth trend. The trend was different for the three examined clusters (see Chart 6): for AIRB banks the total capital ratio increased from 11.9% in 2009 to 15% at half 2013: the banks waiting to be validated recorded on the other hand a tendentially stable ratio (averagely from 11.9% in 2009 to 12% in 2012), a trend which was confirmed also by the figures recorded at half 2013.

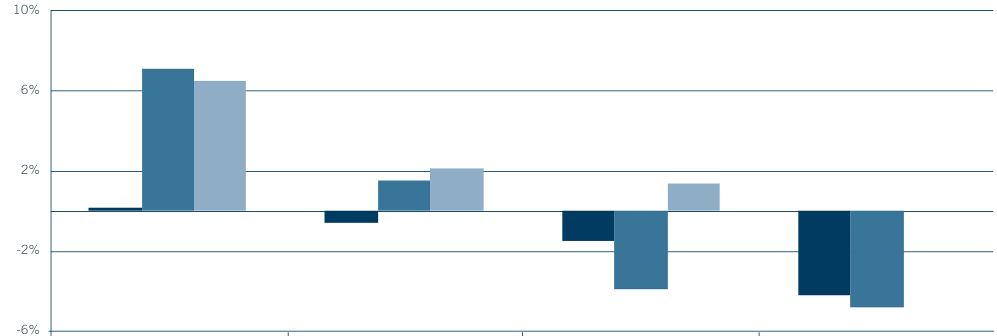
5. DETERIORATION OF CREDIT QUALITY: MORE ATTENTION ON HEDGING RATES

5.1 Credit trend

During the last three year period, the growth of credit to families and enterprises kept slowing down. Credit crunch, which during the first part of the crisis appeared to have been avoided or at least justified by the bleak economic scenario, by the fall in investments and the reduction of requests for loans, appeared during the last two year period, more and more clear, involving in particular, loans to the production sector.
The latest system data published by the Bank of Italy highlight this ever more negative trend: in September the overall loans to families and enterprises fell by 3.2% as compared to the amounts recorded the year before: furthermore, loans to the private sector are recording negative trend growth rates since more than a year and a half. The increase of loans to non financial companies is particularly negative (-4.2% in September), against a slightly less negative evolution of loans to families (-1.1%).
The reduction or the slowing down of the credit growth is observed, in particular, on performing exposures, in a period in which the share of deteriorated loans on the overall outstanding has an ever increasing importance.
The increase of exposures turning to non performing, the restructuring of the same loans, the higher importance that, overall, deteriorated loans are taking, are all factors which are reducing the risk appetite for banks which are more and more strangled by the new capital constraints: this is considerably reducing the ability or willingness of the banks to grant new loans to their customers and to renew their customer portfolio.

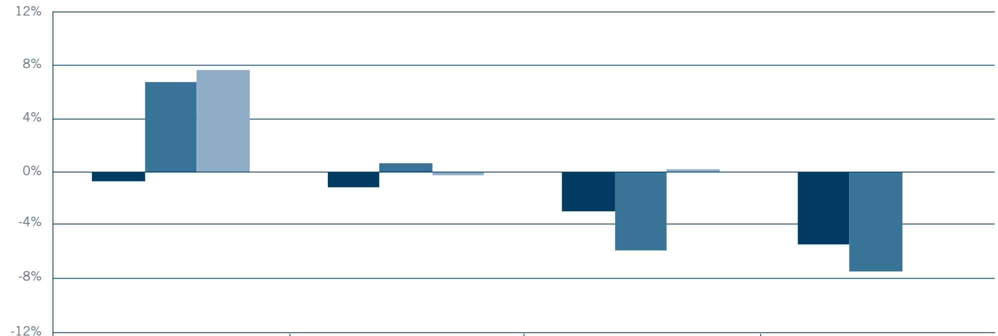
Empirical evidence confirm the above described scenario (see Chart 7): the growth of loans to customers slowed down significantly during the 2009-2012 three year period, reaching at end 2012 negative growth ratios for bigger banks (-1.5% for AIRB banks, -4% for larger non validated banks) The negative trend is confirmed also during the first half 2013, both for validated banks (-4.3% the figure at half year), and for large non-AIRB banks (-4.8%). The trend of performing exposures, net thus of deteriorated loans, follows the same trend of the gross positions, recording even worse trend growth rates (see Chart 8): -3.1% at end 2012 for AIRB banks (-5.6% at half 2013), -5.9% for large non AIRB banks (-7.4% at June 2013) and +0.2% for smaller banks.

Chart 7 - Loans to Customers *(y-o-y pecentage variation)*



	2010 - Q4	2011 - Q4	2012 - Q4	2013 - Q2
AIRB Banks	0.09%	-0.64%	-1.49%	-4.29%
Non-AIRB Banks	7.21%	1.50%	-4.01%	-4.82%
Small Banks	6.51%	2.16%	1.37%	

Chart 8 - Performing Exposures *(y-o-y pecentage variation)*



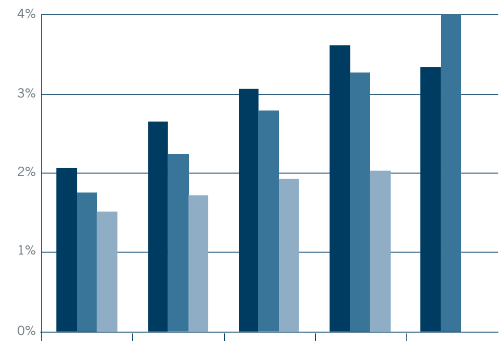
	2010 - Q4	2011 - Q4	2012 - Q4	2013 - Q2
AIRB Banks	-0.70%	-1.30%	-3.07%	-5.58%
Non-AIRB Banks	6.72%	0.60%	-5.91%	-7.40%
Small Banks	7.56%	-0.30%	0.21%	

5.2 Deteriorated loans and coverage rations

The asset quality of Italian banks is recording an increasingly worrying deterioration.
The latest system data regarding September 2013 show that gross non-performing loans amount to around 144.5 bn Euro, 2.7 billion more than the previous month and almost 27 billion more than the same month in 2012 with a yearly increase of around 23%. Compared to the overall stock of loans, net of write-downs bad loans are around 4%, a percentage point more than one year ago.
Deteriorated loans are having then an increasingly higher importance within the loan portfolios of Italian banks and are showing increasingly growing rates, in particular for larger banks.
Analysing the data of our micro database, which contains also the other types of deteriorated exposures (further than bad debts also doubtful loans, restructured debts, past due loans), the ratio between deteriorated loans net of write downs and overall loans to customers is confirmed increasing, throughout the whole 2009-2012 three year period (see Chart 9).

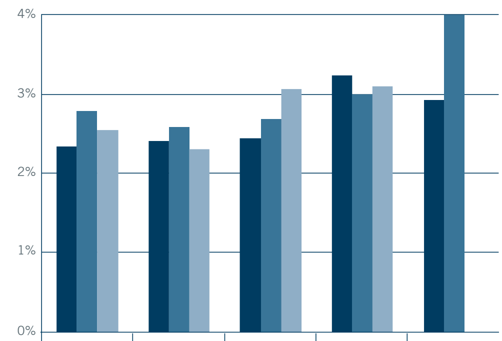
Chart 9

Net non-performing loans / loans to customers (in %)



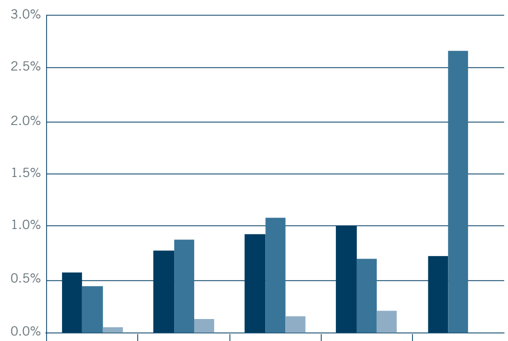
	2009 - Q4	2010 - Q4	2011 - Q4	2012 - Q4	2013 - Q2
AIRB Banks	2.06%	2.65%	3.06%	3.62%	3.34%
Non-AIRB Banks	1.75%	2.23%	2.77%	3.28%	6.08%
Small Banks	1.53%	1.73%	1.93%	2.03%	

Net Doubtful loans/ loans to customers (in %)



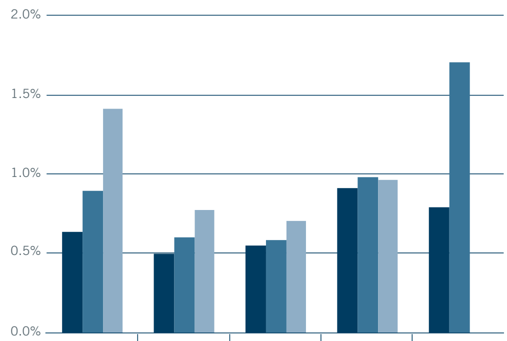
	2009 - Q4	2010 - Q4	2011 - Q4	2012 - Q4	2013 - Q2
AIRB Banks	2.34%	2.43%	2.44%	3.24%	2.93%
Non-AIRB Banks	2.79%	2.59%	2.69%	3.00%	6.71%
Small Banks	2.53%	2.30%	3.05%	3.09%	

Net Restructured positions / Loans to Customers (in %)



	2009 - Q4	2010 - Q4	2011 - Q4	2012 - Q4	2013 - Q2
AIRB Banks	0.57%	0.78%	0.93%	1.01%	0.72%
Non-AIRB Banks	0.44%	0.88%	1.08%	0.69%	2.65%
Small Banks	0.06%	0.12%	0.16%	0.22%	

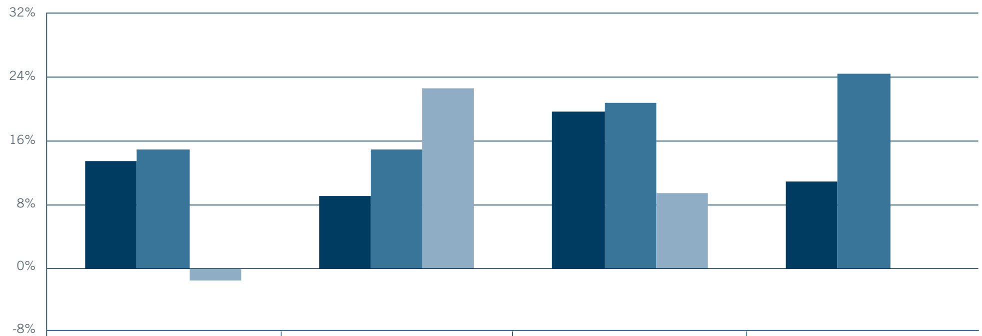
Net Overdue / loans to customers (in %)



	2009 - Q4	2010 - Q4	2011 - Q4	2012 - Q4	2013 - Q2
AIRB Banks	0.64%	0.50%	0.55%	0.91%	0.79%
Non-AIRB Banks	0.89%	0.61%	0.59%	0.99%	1.71%
Small Banks	1.41%	0.77%	0.70%	0.97%	

The growth of the net non-performing loans percentage was significant, from 2.1% to 3.6% for AIRB banks, from 1.8% to 3.3% for non-AIRB banks and from 1.5% to 2% for smaller banks.
The incidence on the overall loan portfolio of doubtful loans (more than 3% average for the bigger banks), restructure debts (from 0.5% to 1% in average for main Groups) and net past-due loans recorded a similar growth trend.
First half of 2013 showed a further growth, in particular for non-AIRB large banks on all the types of deteriorated loans: the large non validated banks, the incidence reached 6.1% of the bad debts, 6.7% on doubtful loans, 2.7% for restructured loans and 1.7% on past due loans.
The increase in past due exposures has a particular relevance if it is considerate the switch to 90 days of the PastDue on the Corporate segment, against the 180 days applied until 2011.
Observing the evolution of the overall net deteriorated loans, that is the sum of bad debts, doubtful loans, restructured debts, past due net of write-downs (see Chart 10), a double figure growth rate both for AIRB banks (+19.6%) and for yet to be validated large banks (+20.8%) is highlighted at end 2012; the amount of deteriorated loans also for the sample of smaller banks records an increase (+9.2%).

Chart 10 - Net deteriorated loans *(y-o-y percentage variation)*

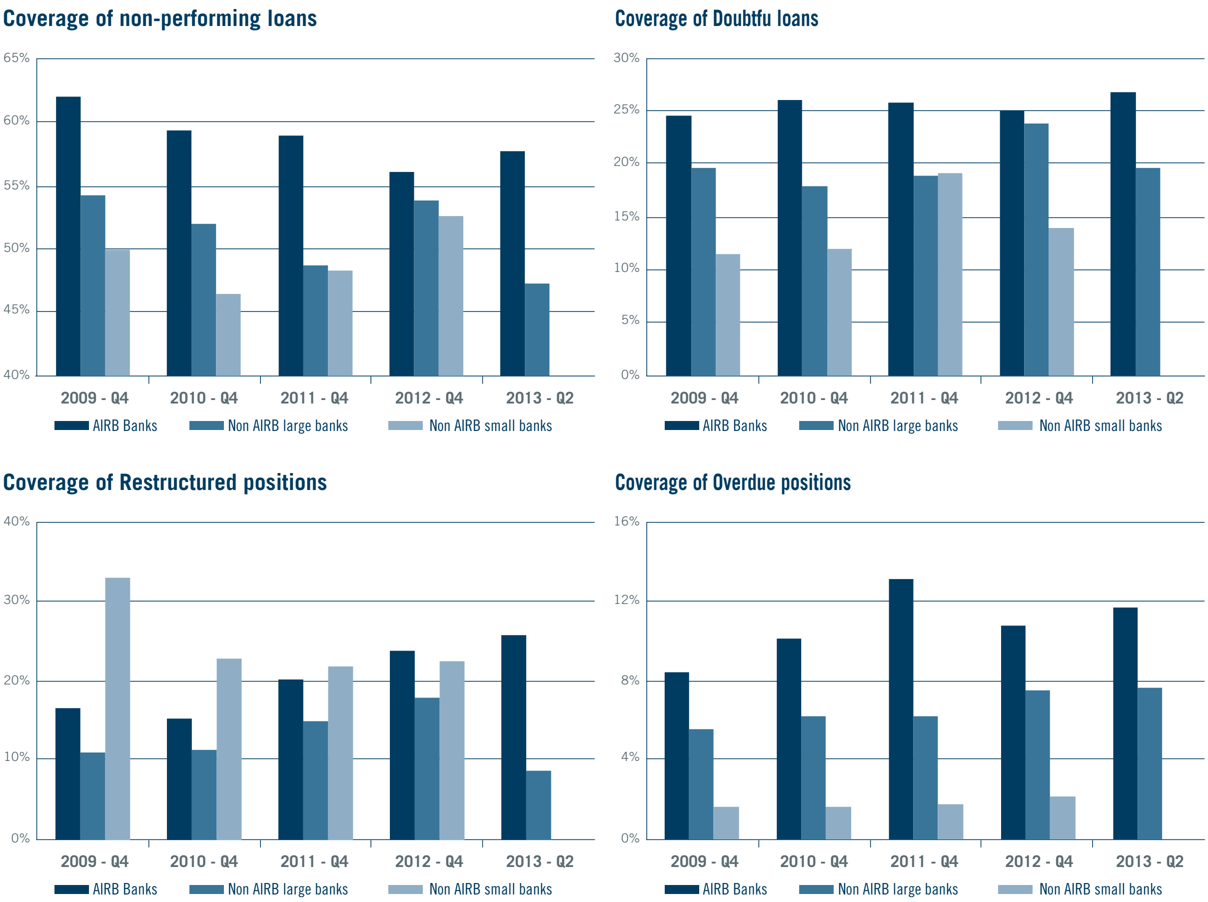


	2010 - Q4	2011 - Q4	2012 - Q4	2013 - Q2
AIRB Banks	13.47%	9.07%	19.55%	10.74%
Non AIRB Banks	14.95%	14.84%	20.76%	24.25%
Small Banks	-1.58%	22.71%	9.21%	

The double-figure growth is confirmed also during first half 2013: +10.8% for validated banks and +24.3% for the aggregate non AIRB large banks.
The reduction of credits to customers and the simultaneous increase of the amount of deteriorated loans are producing direct effects both on the financial statements of the banks and on the definition of solvency ratios.
From the first point of view, the fall of the credits to the customers causes an immediate effect on the main causing factor of the assets in the balance sheet. Lower nominal values imply a reduction of positive interests on loans and therefore the reduction of a positive component of the intermediation margin. If this is added to the increasing effect of negative write downs of loans due to the increase of non performing loans, the incidence on the generation of value in the income statement cannot be other than highlighted.
Furthermore, the increase of non performing loans is causing a higher capital absorption, with higher weighing coefficients and RWA: this is starting a negative mechanism which tends to reduce the capital adequacy ratios, in a period during which the banks are making several efforts for increasing capital levels.
The strategies for hedging the deteriorated loans were progressively modified during the 2009-2012 period (see Chart 11). The empirical evidence, analysed by comparing the write-downs on the different types of deteriorated loans in relation to the gross positions, shows that the mainly increasing tendencies during the latest periods occurred mainly on restructured and past due loans (25.9% and 11.8% in 2013 first half respectively for AIRB

banks which show the best levels). In any case, an attempt was made, although difficult, to keep stable the coverage also on bad debts and doubtful loans (57.7% and 26.6% respectively for AIRB banks at mid-2013), whose nominal amount significantly grew during the period under exam.

Chart 11



The inspections made by the Bank of Italy during the second half of 2012 have undoubtedly increased the attention on the coverage levels of the Italian banks, favouring also the growth of coverage rates on bad debts and doubtful loans occurred during the year. Said inspections led the intermediaries to adopt more careful provisioning policies which, increasing the coverage rates on the different types of non-performing loans, as we'll see in the next paragraph, are impacting on the cost of the risk and the overall profitability of Italian Banks.

6. COST OF RISK AND FALL OF PROFITABILITY: THE EFFECTS ON THE INCOME STATEMENTS

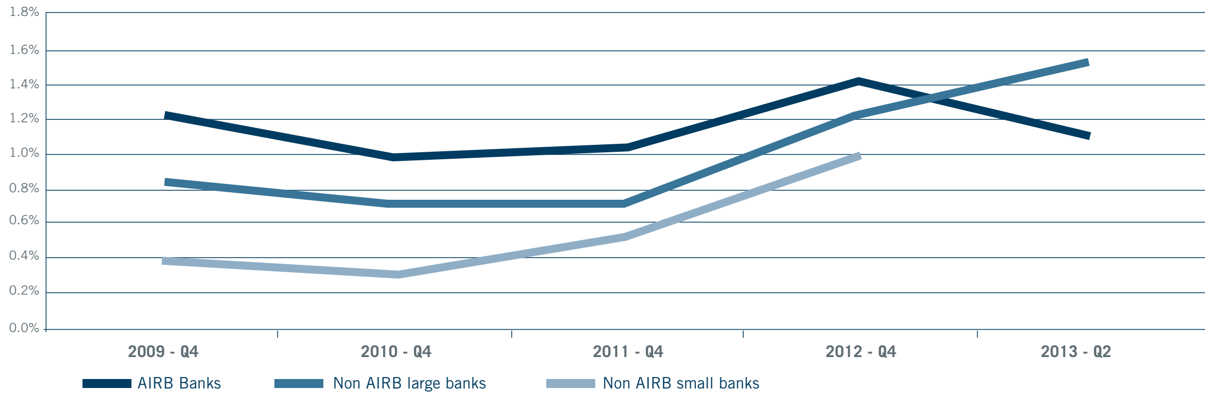
6.1 Cost of the Risk

The extension of the economic crisis on the asset quality of the banks made an increase of the coverage level on the non performing exposures required: this implied a significant effect during the last two year period on the raise of the cost of the risk. Said raise, started in 2011, become more intense at bank system level during 2012, above all during the second part of the year following the inspections of the Bank of Italy which imposed an increase or an improvement of the provisions on receivables for the 20 main banking groups.

Considering then the figures, the cost of the risk, calculated by comparing the total adjustments on impaired assets included in the income statement with the overall outstanding of loans to the customers, increased for all the banks of the observed sample from 0.89% in 2010 to 1.38% in 2012, with an increase of almost 50 basis points.

During the 2010-2012 two year period, the growth rate of the cost of the risk was on all the clusters of analysed banks (see Chart 12) particularly significant: the growth has been 44 basis points for AIRB banks (1.43% at end 2012), 51 basis points for larger non validated banking groups (1.23% in 2012) and 67 basis points for the aggregate of smaller banks (0.98% in 2012).

Chart 12 - Cost of the Risk



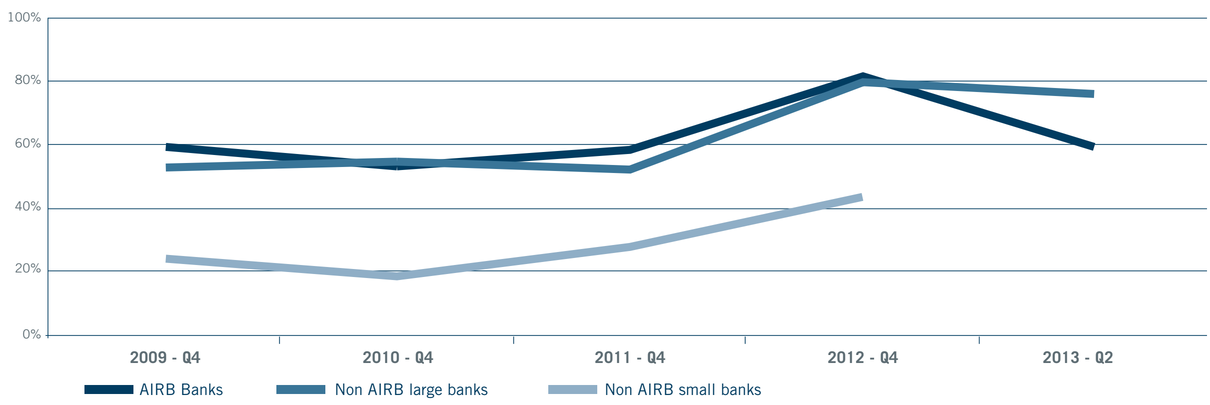
The data of first half 2013 as well as the latest quarterly statements which are issued with the September figures, confirm the growing trend on almost all the observed banks, although with a few particularly significant exception at a system level which impacts on the aggregated figure of the validated banks: the data of the second half 2013 show, in fact, a reduction to 1.10% for AIRB banks and a further growth to 1.54% for the aggregate other larger banking groups.

Comparing the levels of the analysed clusters, it can be furthermore noted that, notwithstanding the increase of the provisions is general for any banking group under exam, the larger banking groups and the banks which are already validated for the use of internal models continue to keep a higher cost of the risk level than smaller banks.

6.2 Impacts on profitability

The increase in the cost of the risk is giving a significant contribution to the fall of banking profitability. The incidence of Net adjustments for impairment of loans (on customers) on the Operating profit, after keeping a basically stable average during the 2009-2011 two year period, has significantly increased in 2012 recording an average increase of around 25 percentage points for bigger banking groups. Even if in slight reduction over the aggregated figures of the validated banks, also first half of 2013 confirmed a particularly high incidence of provisions on the profits of the banks.
Observing the figures basing on our clustering, a particularly significant incidence of the cost of the risk can be noted for larger banking groups (See Chart 13): it indeed increased during 2012, following the supervisory inspections, to 82% for AIRB banks (+23.3 p.p. over the previous year), to 79.8% for non AIRB large banks (+27.7 p.p., 76% at second quarter 2013) and to 43.8% for small banks (+16.1 p.p.).

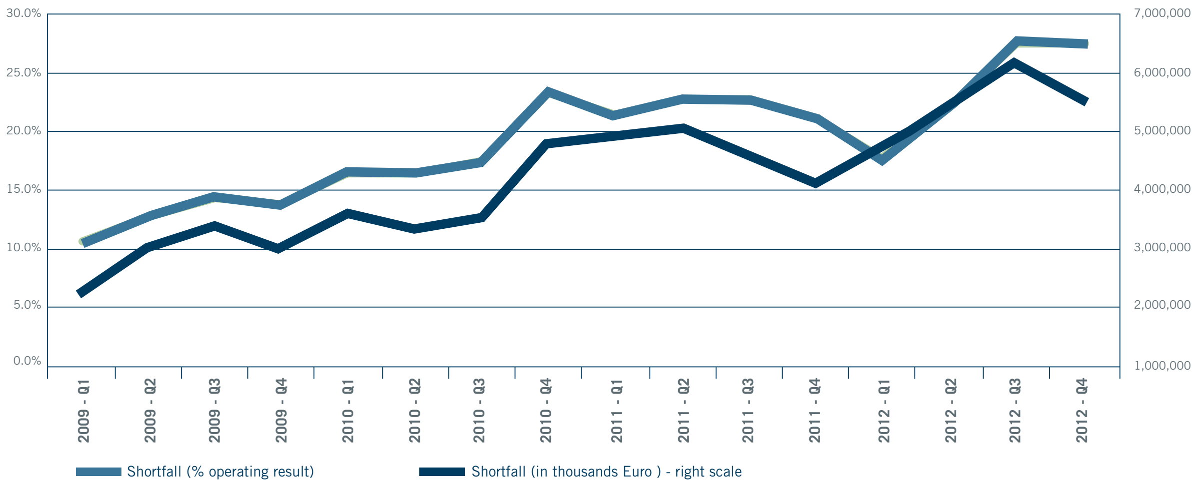
Chart 13 - Incidence of risk on profitability *(Net adjustments for impairment of loans (on customers)/ Operating profit)*



Also due to the significant increase of the cost of the loans, the income of the banks is thus continuing to decrease, showing profitability indexes now approaching to zero. The ROE, that is the ratio between net income and shareholder's equity, actually decreased during the three year period 2009-2012, from 3.7% to 0.3% for AIRB banks and from 3.8% to 2.1% for the main not validated banking groups.
On the other hand, the system data published by the Bank of Italy show that the ability of Italian banks to produce income keeps on being weak due to the strong incidence of the adjustments which eroded the savings obtained on the side of operating costs. Considered net of the extraordinary entries connected with the write downs of the good-will, the performance of capital and reserves actually fell in 2012 by 1.3 percentage point at system level, arriving to 0.4% considering the overall banking system and on even lower values taking as reference the 5 major groups.
Also the latest figures on the quarterly statements as of September 2013, confirm the profitability crisis of Italian banks: the twelve main listed banks recorded around 2 billion of income below the first nine months of last year.
The adoption of shorter term strategies focusing on smaller impairment adjustments on loans - which were actually debarred during the second part by the inspections of the Bank of Italy - cause a reduction of the coverage of the expected losses and therefore a bigger shortfall; this compresses the capitalization levels for AIRB banks but increases their income. On the setting of the shortfall is thus created a trade-off between profitability and capitalization, which forms a further issue to be solved within the puzzle which is currently faced by the banking system.
The trend of the shortfall in the 2009-2012 period (see Chart 14) confirms that the AIRB banks preferred to set aside less than what the expected loss requires in order to recover at least a part of the lost profitability due to the reduction of its traditional operations. The implied increase in shortfall was carefully monitored by the supervision

in the second part of 2012: the performed inspections allowed to reduce part of the created gap, stabilizing the impact on the gross operating result on a 27.6% average value.

Chart 14 - Shortfall for AIRB banks



6.3 Income statements: recomposition of the cost items

The significant negative impact on profitability given by the cost of the risk is leading banks to operate other levers for recovering value for their shareholders. The main strategy regards the containment action on operating and staffing costs which during the last period balanced at least in part the increasing costs for loans.
The income statements of the Italian banks showed, indeed, in particular during 2012, a recompositon of the cost items which can be seen clearly observing the indicator which compares the impairment adjustments on loans to operating costs: said index had during 2012 an average increase of around 15 percentage points on the observed banks, arriving to 54.7% for AIRB banks (+14.5 percentage point), to 49.2% for non AIRB large banks (+19.3 p.p.) and to 29.2% for the aggregate formed by smaller banks (+15.1 p.p.).
As shown in Chart 15, the figures of first half 2012 show a further increase of the index for non validated large banks (to 56.6%) and a reduction for AIRB banks (to 43.3%), consistently with the recent trend of the cost of the risk of some top players.
The evidence found in the financial statements, furthermore the incidence of the cost of the loans on the overall costs of the bank is higher for already validated or bigger banks, while for smaller banks operating costs keep covering almost 80% of the overall costs of the bank.
The incidence of the impairment adjustments on loans on the intermediation margin has thus significantly increased during the observed three year period, in particular in 2012 (see Chart 16), recording an average increase of almost 10 percentage points and arriving to 32.8% for AIRB banks (25% with the latest June 2013 figures), to 30.4% for bigger not yet validated banks (32.4% at mid 2013) and to 17.5% for smaller banks.

Chart 15 - Impairment adjustments on loans / operating costs

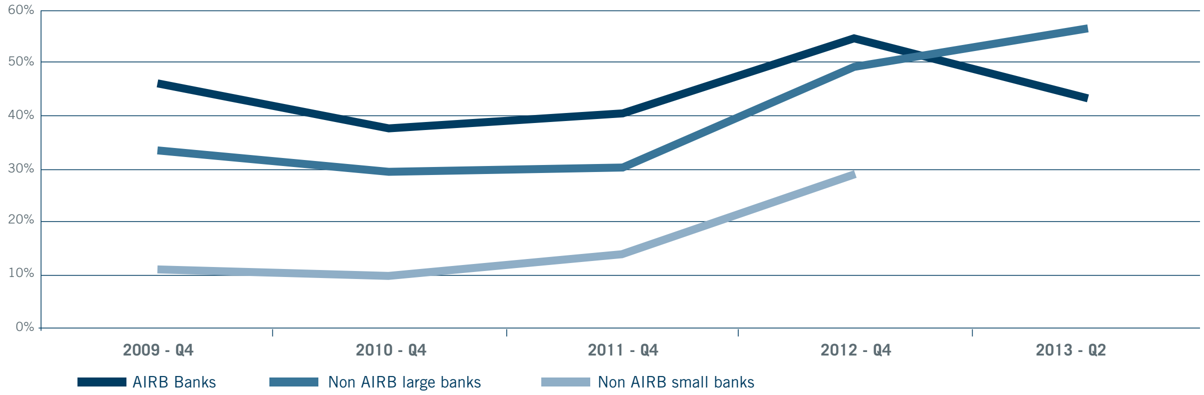
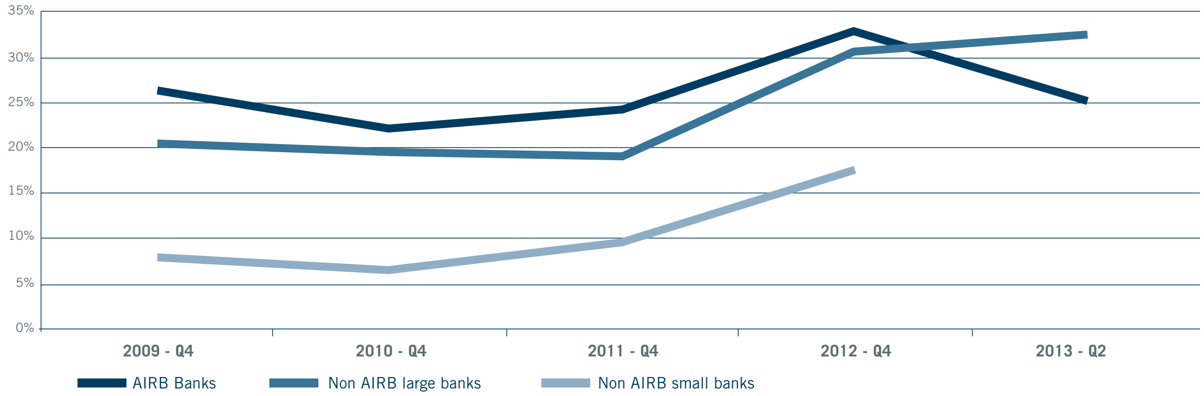


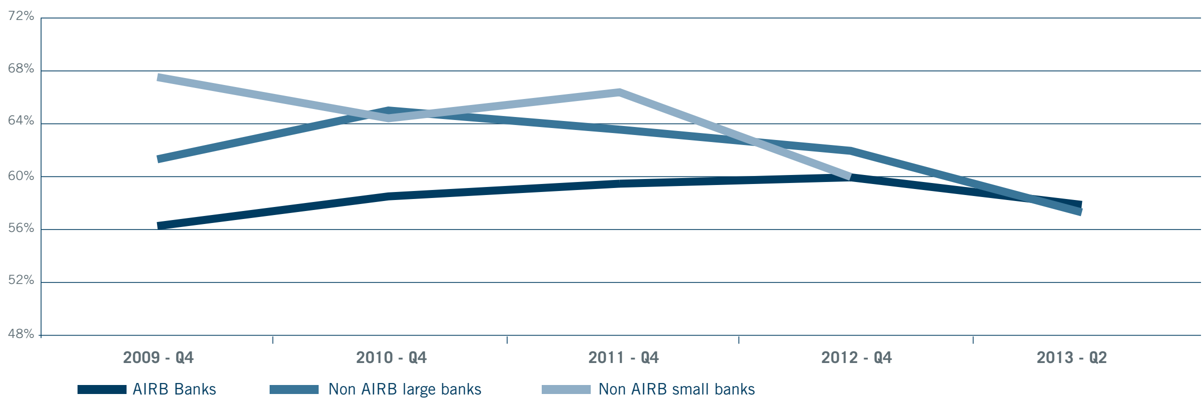
Chart 16 - Impairment adjustments on loans / intermediation margin



During 2012 the cost/income ratio, the ratio between operating costs and intermediation margin, increased only by 0.6 percentage points for validated banks and recorded a reduction of 1.6 percentage points for non AIRB large banks and of 6.3 p.p. for smaller banks, arriving to average values in the observed sample on values just above 60% (see Chart 17).
The figures of first half 2013 show a reduction of cost/income both on validated groups (57.8% in June) and on other large banks which are still employing standard approaches (57.3%). Also the latest figures which are about to be available with the September quarterly statements confirm the decreasing trend of operation costs.

Despite the trend was already decreasing during the last period for several banks of the sample, it appears that there are arising more optimisation spaces from the perspective of the operating and managing costs, in particular for larger banks, which during these years operated mainly on the side of staffing costs and still in a small measure on structure costs linked to the adoption of new technologies.

Chart 17 - Operating costs/intermediation margin



7. CONCLUSION

The data proposed by the Bank of Italy over November 2012 confirm the scenario in which the banks are operating characterised by the continuation of the reduction of loans and, on the contrary, by the raise in bad debts in line with the economic cycle which is yet to see the exit from the crisis.
In this scenario, the assessment of the ECB also in the light of the new scope of default "Forbearance and EBA Rules" and the potential of non "covered by adjustment" portfolio, should confirm or readdress the strategies of each bank.
The new supervision rules and the continuation of the crisis, shall strengthen in first place the need of higher capital solidity in order to recover that gap of around 15 billion which may be achieved through:

- interventions on capital complicated by the reduced liquidity and the low return on investments;
- mergers which are expected at least for popular banks;
- transfer of more or less strategic assets which may range from Business units dedicated to the management of insurance or saving products to credit assignments with priority on the NPL portfolio.

However, it is clear that the traditional model of bank is no longer capable to express a satisfactory profitability for shareholders and requires in parallel to extraordinary operations, a serious revision of the models which cannot be based on marginal adjustments.
The service fruition model, which is today too much focused on the branch network, is no longer capable to generate value and there is the need to increase share of "digital" customer and improve the quality of the services.
To this regard, the time has come to seriously work on the operative machine which, during years when the few resources were mainly employed for regulatory compliance, was not able to leverage on certain innovations (e.g. paperless processes, multi channels, Business Platforms, Process management) and activate, beyond the slogans, a "lean" Bank which is capable to produce appropriate cost/income rates and stimulate profitability.
Lastly, also in the light of the new role of CRO and the incidence of the cost of risk, there is the need for a significant rethinking of the whole credit value chain which is based on:

- a review of the granting policies which enables, on one side a better effectiveness of the business rules (policy, risk metrics, granting procedure) on the other side a deep rethinking of the employed platforms which show reduced abilities to follow the business decisions, enable multichanneling and the adoption of digital processes;
- a more accurate monitoring of the quality of the assets, also in relation to the introduction of new default determination metrics;
- the adoption of models, organization structures and platforms for credit collection which enable an improvement of the credit collection performance on the deteriorated credit portfolio (NPL) and a reduction in cost of the risk.

The strategies mix shall activate over time a virtuous circle which, passing through a higher availability of capital, a better degree of asset quality and a reduction of operational and risk costs shall be able to give room to a growth of the credit granting to the economy which keeps on recording negative trends even in the presence of signals of an awakening of the economy.