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**Non-performing loans in
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issues and management strategies

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To my Family,

Index

Introduction	1
Chapter 1	5
Financial crisis of 2007 and non-performing loans	5
1.1 Definition and classification of NPLs	5
1.2 The financial crisis.....	11
1.3 Types of bank risks: the credit risk.....	17
1.4 Banks capital requirements: the evolution of Basel accords.....	21
1.4.1 Basel accords	21
1.4.2 The Basel 2 agreement	23
1.4.3 The new Basel 3 agreement	24
1.4.4 Credit risk capital requirements.....	26
1.5 The recovery rate of impaired loans.....	28
1.5.1 Recovery rates for assets: secured vs unsecured.....	33
1.5.2 Recovery rates: companies vs families.....	34
1.5.3 Recovery rates for seniority.....	35
1.6 Reasons behind the growth in NPLs stock.....	36
Chapter 2	41
Strategies to manage non-performing loans	41
2.1 Internal management vs outsourcing.....	41
2.1.1 Internal management	41
2.1.2 Outsourcing	48
2.1.3 Internal management vs outsourcing: the differences	54
2.2 Sale of the portfolio	56
2.3 Securitization.....	60

2.3.1	Securitization of non-performing loans.....	65
2.4	Bad Bank.....	67
2.4.1	Bad Banks in Europe.....	71
2.4.2	Bad Banks in Italy.....	75
Chapter 3	83
The Italian NPLs market	83
3.1	Overview of the Italian trend	83
3.2	Determinants of the NPLs' increasing in Italy	85
3.3	The recent slowdown.....	88
3.4	The buyers' side.....	96
Conclusions	101
References	105

Introduction

The present work has aimed to analyze the current problem of non-performing loans for banks, mostly Italian, both with a view to understanding the causes that triggered the issue and also in terms of methods and management tools that the latter have available to reduce these exposures.

In Chapter 1 is analyzed the classification of these types of credit in the Italian and European context, in particular studying the differences and innovations made by the European Banking Authority in terms of homogenization of the definitions at European level.

The recent financial and economic crisis that has been triggered since 2007 due to financial innovation without rules has also been analyzed, which has led to a radical change in the banking paradigm, from the *originate-to-hold* to the *originate-to-distribute*, which has discouraged banks from carrying out proper screening and monitoring of borrowers. As a consequence there was the explosion of *sub-prime* mortgages that banks around the world had granted to individuals without adequate creditworthiness and adequate guarantees, driven by the possibility that the system gave to securitize the portfolios collecting immediate liquidity and moving the mortgages out of their budget.

The subjects that suffered from this crisis were first and foremost the same banks, in whose budgets were and there are impaired loans, which have severely damaged the bank assets and the ability of intermediaries to give credit to companies by causing a global *credit crunch* and the deterioration of relations between the bank and the companies. The interconnection of the banking system has significantly increased the severity of the crisis and the under-capitalization of the most exposed banks has contributed to the contagion. The combination of these factors has led to an inevitable consequence that is the loss of trust in the financial system.

In addition, the Basel regulations are illustrated in terms of minimum capital requirements that banks must comply with for the various asset categories and also with the evolution of the same from the first Basel agreement to Basel 3, which adapted the legislation to the consequences of global financial crisis.

The last part of the chapter deals with a statistical analysis conducted by the Bank of Italy which illustrates lots of aspect related to NPLs like how much do the banks recover on bad debts, the relation between recovery rates and guarantees, type of counterparty (households or companies), the seniority of positions and so on.

In Chapter 2 we moved on to introduce and analyze the main modalities of management of the NPLs that banks, and the financial system in general, have available to reduce the amounts of these credits in the individual financial statements and in the entire system.

The first topic dealt with the internal management of impaired loans that should be conducted on the basis of non-binding provisions issued by the Mechanism Supervisory Authority (ECB Banking Supervision). The guidelines are in substantial continuity with the Italian legislation on the subject, for most of them referring to the relevant legislation, with the aim of summarize harmonized best practices in a single document.

On the other hand, if banks do not have an adequate internal structure, in terms of resources and skills, for the management of these types of loans, they can rely on outsourcing that consists in the assignment to external servicers of portfolios of impaired loans with the objective to recover credit at better conditions both in terms of quantity and timing.

Faster and more immediate management techniques are then illustrated, such as the sale of non-performing credit portfolios on the market, which allow banks to receive short-term benefits in terms of cleaning the bank balance, efficiency of resource allocation and recovery of capital. However, the sale of such credits on the

market often takes place at very low prices which on the one hand reflect different expectations in terms of credit recovery and on the other an information asymmetry between the assignor and transferee that often does not have adequate information on the loans sold. This pricing gap therefore inevitably generates an immediate negative effect on the income statement and on the bank's profitability.

In addition, always with the aim of cleaning the balance sheet in the short term, banks can rely on the practice of *securitization*, which is also described in Chapter 2, taking into account both the positive and negative aspects of using this practice. On the one hand, in fact, the incorrect use that the banks have made in the past years has brought out a series of problems from the point of view of the allocation process, on the other hand the securitization allows to improve the distribution of credit risk to other subjects which can support it.

Finally, from a systemic point of view, the subject of the Bad Bank is described. It's a vehicle called *Asset Management Company* (AMC) that can collect all the impaired positions on a systemic level, or single bank level, thus separating the "good" part of a bank from the "bad" one. The various solutions adopted in Europe, Spain and Ireland in particular, and in Italy are therefore illustrated.

Finally, in Chapter 3, the non-performing loans theme is downsized in the Italian context by describing the growth trend of the stock of impaired loans over the years, but also by investigating the country-specific determinants that triggered development.

However, it is necessary to underline the inversion of the trend that took place from 2016 which led to a decrease in the NPL stock thanks to a series of initiatives, partly from the State, partly from privates, and macroeconomic situations that are described in the continuation of the third chapter.

This chapter closes with the analysis of the non-performing loan market also from a point of view of buyers that are intermediaries and investors that represent the demand side of impaired loans that they buy from the major Italian commercial

banks to obtain usually higher returns than those that offer other markets such as stocks and bonds.

Chapter 1

Financial crisis of 2007 and non-performing loans

1.1 Definition and classification of NPLs - 1.2 The financial crisis - 1.3 Types of bank risk: the credit risk - 1.4 Bank capital requirements: the evolution of Basel accords - 1.5 The recovery rate of impaired loans - 1.6 Reasons behind the growth of NPLs' stock

1.1 Definition and classification of NPLs

The definitions of non-performing loans (NPL) in the UE context are very heterogeneous and the one adopted by Italian banks is particularly wide.

Financial analysts showed an higher incidence of impaired loans on total loans (non-performing loans ratio, NPL ratio) and a lower ratio between the value of the loan and the value of the asset given as collateral (loan to value, LTV) in Italian banks. For example, in December 2011 the NPL ratio and the LTV ratio were respectively 4,5 and 51,1 for the 15 main European banks, against values of 11,2 and 39,2 for the Italian banking system. By the way, several studies showed that this differences can be explained by many determinants.

The most important element of divergence found was the different method of classification and definition of the non-performing loans between Europe and Italy. For European intermediaries NPLs were defined based on the value of the collateral received from the loans. From the examination of the financial statements of the main 15 banking groups of the other European countries emerges that most of them don't include bad debts for which it is expected, in the face of the warrants available,

not to record losses in the future (positions entirely granted from the collateral: LTV 100%).

On the other hand, Italian banks follow criteria defined by Bank of Italy in compliance with prudential regulation, which identifies impaired exposures exclusively on the basis of the creditor's creditworthiness, even in the presence of broad collaterals. This criterion, among the most transparent and prudent in the European comparison, increases the value of NPL ratio and reduces the coverage rate of Italian banks compared to foreign ones.

Particularly, in the last years, Italian banks started to ask for more collaterals and to reduce the ratio between the value of the loan and the value of the asset given as collateral. In fact, if we apply to Italian system the definition of NPL adopted by the primaries European banks, that leaves out positions entirely granted, the loan to value ratio will result higher and will show a positive trend in the last three years¹.

The definition and classification adopted by Bank of Italy in 2008 considers non-performing loans as assets that are no longer able to repay capital and interest to creditors². These are credits for which the collection is uncertain both in terms of the maturity and the amount of exposure. According the old Bank of Italy classification rules the Italian NPL definition is included in the macro definition of Impaired Loans. Impaired Loans include the following sub-categories³:

- 1) "Sofferenze" or "NPL": for Bank of Italy these type of Impaired Loans are credits whose collection is unreliable because of the state of insolvency⁴ or in similar situations. For this type of credit's risk usually banks allocate funds in proportion to the credit risk and its condition;
- 2) "Incagli" or "Watchlist": this category is for the exposures to subject which are in an objective, but temporary, situation of difficulty. The difference with the first category is in term of time, in fact, unlike the "sofferenze" credits in

¹ BANCA D'ITALIA, *Rapporto sulla stabilità finanziaria*, n.5, pp. 27-28

² www.borsaitaliana.it

³ PWC, *The Italian NPL market, Increasing expectations*, April 2014

⁴ Wider definition than the legal one

the Watchlist are deemed to be recoverable within a reasonable period of time. In a risk metric, therefore, these type of impaired credits are less risky than the NPLs and require lower allocations in risk reserves;

- 3) “Ristrutturati” or “Restructured Loans”: these are typically credits for which (alone or in pool) a bank decides to modify contractual terms in order to meet the deterioration of the financial condition of the debtor. This may result, for example, in a debt replenishment and will register in a loss written in the balance sheet.
- 4) “Scaduti” or “Past Due by more than 90 days”: the last category consists of exposures that are not classifiable typically in the previous categories and are not honored for more than 90 days (the loan with three monthly notes not payed.)

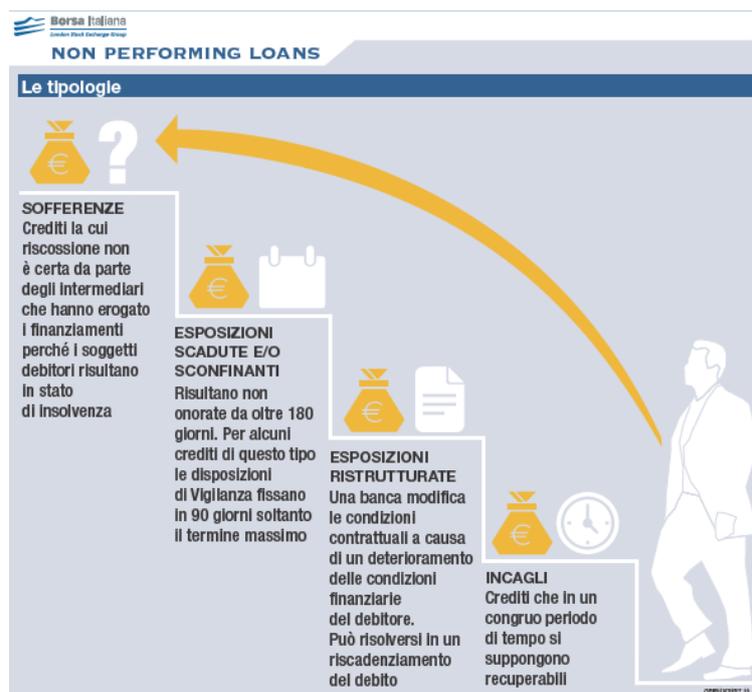


Figure 1. Classification of non-performing loans by Bank of Italy
Source: Borsa Italiana

These categories are not separate each other but rather can happen that a credit passed through a category to another based on the valuation that the bank makes upon the credit.

In addition, in order to monitor the systematic risk and the over-indebtedness, the Bank of Italy has created the Risk Center, an information system on credit and guarantee relationships that the financial system (banks, financial intermediaries, vehicle companies of securitization of credits) has with its own costumers.

The aim pursued by Bank of Italy with the Risk Center is to improve the quality of the application of funds of participating intermediaries and, on this way, to increase the stability of the financial system.

Participating intermediaries shall provide Bank of Italy with all relevant information about exposures to their customers and receive, on the other hand, information about the overall exposure with the financial system of the subjects reported and their related. In addition, paying a fee to pursue the cost-effectiveness of the service and the correctness of its use, they can also query the Risk Center asking for information on subjects other than those reported. The only requirement is that the query is related to risk assumption and management of credit.

With the Risk Center, the Bank of Italy aims to provide intermediaries participants an information tool that can enhance the assessment capability customer creditworthiness and credit risk management. Intermediaries Participants may use the information available at Risk Center both in the stage monitoring of exposure to its customers, both in the phase of granting loans to new customers. It remains, however, in their fullness autonomy the task of evaluating all the objective and subjective data that compete with the formation of judgment on the actual economic potential of the entrusted, second what is determined by the corporate credit policies. The Risk Center also determines potential benefits for the reported subjects: favors, for the deserving clientele, access to credit and the reduction of its costs.

It is also important to remind that since 30 September 2014 entered into force the new definitions⁵ on non-performing exposures and *forbearance* published by the *European Banking Authority* with the aim of harmonization of the financial supervisory across Europe, adopted by the European Union on 9 January 2015 and implemented in Italy on 20 January 2015 through the 7th update of Circular 272

⁵ BANK OF ITALY, *Financial Stability Report*, May 2014

Matrice dei Conti (2008) of the Bank of Italy. The legislation contains a precise definition of what is meant by impaired assets, also standardizing their classification and eliminating the previous notions of “watchlists” and “restructured loans”.

By the way, these new definitions are basically in line with those already used in Italy. According to the EBA’s “*unlikely to pay*” criteria, exposures must be classified as non-performing, regardless if they are backed by collateral or guarantees, when:

- a) banks consider the debtors unable to repay the credits in full;
- b) debtors are more than 90 days past-due and their amount is significant⁶.

The EBA does another specification; as in Italy, the expired exposures to the same counterpart may be accounted with the *debtor approach* or *transaction approach* for what concerns retail costumers (households for example). With the second (*transaction approach*) the bank has the possibility, among the total position of a costumer, to classify only specific loans as non-performing while with the debtor approach all the exposures to the same costumer must be classified as non-performing exposures. It must be said that, when the past-due exposure is more than 20 per cent⁷ of the total on-balance-sheet exposure for a debtor, for the so called “*pulling effect*”, the debtor approach becomes mandatory. In addition, the debtor approach is always used when the borrower is a non-retail category (Institution, Company, ecc.).

The EBA document⁸ also introduces the category of “*forbearance*” which includes exposures on which forbearance measures have been granted. The forbearance measures are changes in the original contractual terms of the credit that the bank grants to costumers in order to address the debtor’s financial difficulties. This category is divided into two sub-categories: *performing* and *non-performing* exposures. Only the latter belongs to the total non-performing assets.

The new classification takes into account only three categories of impaired loans that are:

⁶ According to the criteria established at national level

⁷ 10 per cent currently in force in Italy

⁸ BANK OF ITALY, *Financial Stability Report*, June 2016

- *Bad loans*: the total of cash and "off-balance sheet" exposures to a subject in a state of insolvency (even if not judicially established) or in situations substantially comparable, regardless of any loss forecasts formulated by the bank. Exposures whose anomalous situation is attributable to profiles to country risk are excluded.
- *Unlikely to pay*: the classification in this category is, first of all, the result of the bank's assessment of the improbability that, without the appeal to actions such as the enforcement of guarantees, the debtor fully complies (in line capital and / or interest) to its credit obligations. This evaluation must be carried out independent of the presence of any overdue and unpaid amounts (or installments).
- *Past due*: cash exposures, other than those classified as bad loans or unlikely to pay, which, as of reference to the report, have expired or overdrawn for over 90 days and exceed a pre-established materiality threshold.

The figure below shows the evolution of the classification.

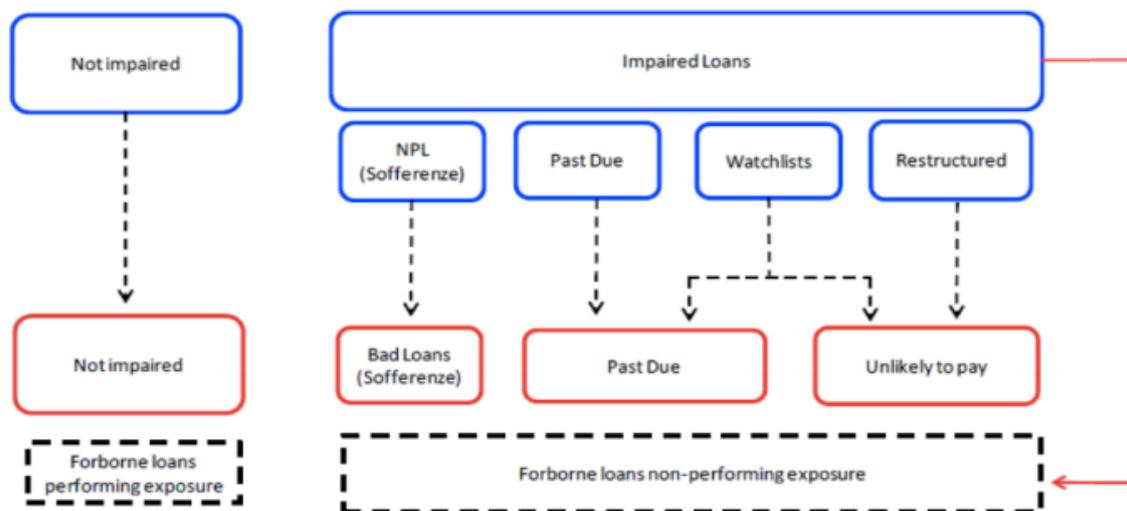


Figure 2. New classification of impaired loans
Source: Borsa Italiana

As we can see, the EBA definition of NPEs is broadly in line with the Italian one that already took into account the forbearance exposures under the category of "restructured loans". Even in this case Bank of Italy was already in line with the European dictum and in some aspects provided more severe dispositions. In fact, in order to get out from the non performing class of forbearance, Bank of Italy requires

that two years must have passed since the loan was restructured and that there was a resolution of the company's top management that attest the return to solvency.

Under the EBA approach, on the other hand, exit from the “non-performing” subcategory of forbearance is possible one year after the restructuring agreement, without a specific requirement for a management decision, whenever the risk of non-payment of the restructured loans has been superseded.

Performing	Non-performing
Fully performing Loans and debt securities that are not past-due and without risk of non-repayment and performing off-balance sheet items	Generic criteria: past due more than 90 days and / or unlikely to pay All other non-defaulted and non-impaired loans and debt securities and off-balance sheet exposures meeting the generic criteria
Performing assets past due below 90 days Loans and debt securities between 1-30 days past due Loans and debt securities between 31-60 days past due Loans and debt securities between 61-90 days past due	Defaulted Fair value option Fair value through other comprehensive income Amortised cost
Performing assets that have been renegotiated Loans and debt securities which renegotiation or refinancing did not qualify as forbearance	Impaired off-balance sheet items: Loan commitments given Financial guarantees given (except derivatives) Other commitments given

Forbearance

Forborne loans and debt securities (and eligible off-balance sheet commitments)

performing or non-performing

Refinancing

Modifications of terms and conditions

Other

Figura 3. EBA's new definitions

Source: EBA final draft implementing technical standards (EBA/ITS/2013/03/rev124/2014)

1.2 The financial crisis

The years before the crisis of financial markets broke out in the summer of 2007 had been characterized by a sustained expansion of world economies. After the slowdown in 2001, the world economy recorded a very high growth in the three-year period 2004-06.

The three-year period 2004-06 is also characterized by extremely low inflation interest rates, in the presence of high levels of savings in Asian economies. The reduced cost of credit is fueling a very strong expansion. There is a sustained rise in the prices of financial and real assets, which results in an increase in the value of the

financial and real assets of the families. The rise in house prices is particularly high in some countries, and particularly, in the United States. The wealth effect due to asset value growth feeds consumptions, sustaining the growth of the economy. At the same time there is a rapid expansion of debt and the contraction of family savings. In addition, a new appetite for risky assets started to grow because of the low level of interest rates paid to investments.

Investors, who were not satisfied with the low interest rates that monetary policy set on the safest markets, started to seek for new products with higher returns. In response, the credit industry started to issue increasingly sophisticated bonds linked to securitization of loans. The Securitization allowed banks to transform loans into marketable securities, which moreover can boost issue of mortgages and expand the real estate bubble.

The development of this mechanism, which we will see in depth later on, represents a radical change in the *modus operandi* of a bank that passes from the “*origin to hold*” to the “*origin to distribute*”.

The intermediary no longer holds the mortgages up to maturity, but assumes them to distribute through securitization. This new paradigm, on one hand, may seem positive for the many benefits that securitization can bring but, on the other hand, it no longer encourages the intermediary to track down receivers. This means that it generates a *moral hazard* problem for the broker who is no longer encouraged to worry about the creditworthiness of the borrower since the relevant risk has been surrendered; as a result the quality of the loans decreases.

Innovation in the financial markets has highlighted increasingly innovative techniques and financial risk management models as well as a monstrous development of financial instruments in circulation. If we think about finance as well as the “promise of payment market”, which must then be met by real economic output, it is useful to compare the value of these “promises”, i.e. the instruments in circulation, with the underlying GDP. At the end of 2007, the sum of financial assets and derivatives was 16 times the world GDP!⁹

⁹ M. ONADO, *Inodi al pettine*, Editori Laterza, 2009

Starting from the outbreak of the New Economy's 2000 stock bubble, the Fed adopted a low interest rate monetary policy to avoid recession and restart the economy through investment and consumption. The expansiveness of this policy led to the development of a new speculative bubble linked to the real estate market. The causes of the extraordinary rise in property prices must be sought in three conditions in the market that bite into one another creating a vicious circle:

- a) the development of the securitization technique allows banks to broaden their offer of mortgages, even those directed to the riskier borrowers;
- b) the possibility, linked with the regular growth of the house prices, of renegotiating mortgages increases the demand for the same ones;
- c) low interest rates boost demand for investment in real estate.

This is the framework that allows the *sub-prime* mortgage segment to explode in parallel with the rise of the real estate bubble as shown in the following table. In 2001, the sub-prime share of total mortgages was 8.6%; in 2006 it has gone up to 20.1%.

	Mutui (mld \$)	M. <i>subprime</i> (mld \$)	Quota (%)
2001	2.215	190	8,6
2002	2.885	231	8,0
2003	3.945	335	8,5
2004	2.920	540	18,5
2005	3.120	625	20,0
2006	2.980	600	20,1

Fonte: Inside Mortgage Finance, The 2007 Mortgage Market Statistical Annual.

Figure 4. The growth of sub-prime mortgages
Source: The 2007 Mortgage Market Statistical Annual

Specifically, such mortgages, are subject to high insolvency risk (NINJA, No Income, No Job, No Assets), and are characterized by special terms and conditions of sale. First of all, unlike the majority of the mortgages of those years, they are contracted at a floating and tempting rate, low for the first two or three years, but destined to grow in the next ones. They are also based on a *predatory lending* placement technique, using aggressive techniques and at the limit of legality.

Net of the early years, therefore, subprime mortgages are far from beneficial and sustainable for the borrowers and very risky for the originators. In fact, the interest rates applied becomes very high in few years, which drives away the best borrowers and attracts bad prospects that worsen the quality of the broker's portfolio.

However, due to the securitization technique, mortgages are transferred to third parties, the bank has no incentive to check that interest rates remain low in order not to worsen their portfolio.

They are rather incentivized to increase the volume of concessions and thus raise commissions and liquidity. "At the basis of these incentives there is the possibility to transfer the credit risk from the broker who originates the mortgage to the final investor who buys the stock created from the securitization in a framework full of asymmetric information because the originator of the mortgage knows the risk of the loan itself better than the final investor.¹⁰".

This mechanism supporting real estate speculation was interrupted though in 2006 when the Federal Funds Rate surpassed 5 per cent following the Fed's monetary policy launched in 2004 to counter inflation that had been driven by expansive policy years. From then on, the market came into crisis as access to finance became more expensive and consequently lowered demand for mortgages and therefore housing: property prices began to spiral downward.

The banks were no longer able to renegotiate the mortgages from time to time, as the value of the houses did not grow anymore, effectively eliminating the only instrument that allowed sub-prime debtors to sustain their debts.

It was at that point that the first insolvencies of sub-prime borrowers began to emerge, which saw a rapid growth at the beginning of 2007. Banks began to record losses, which also dropped 70 percent or 80 percent of the securities derived from securitization. "As soon as the cash flow from the debts and the repayment of mortgages by the debtors have failed, these securities have suffered huge losses that

¹⁰ ASSBB, *La crisi dei mutui subprime*, Osservatorio Monetario, February 2008

hit all the involved operators¹¹".

Another key milestone in the series of events is August 9, 2007 when the interbank market rates plunged upwards. It is an event defined by the experts " Black Swan ", which shows a fundamental evidence: banks do not trust each other anymore and prefer to hold liquidity rather than lending, waiting for worse times. Despite the tremendous amount of cash flowing through the system because of the expansive monetary policies over the last few years, central banks, Fed primarily, made available to major world banks an extraordinary amount of funds to avoid a lock of the interbank market.

Since the summer of 2007 the phase of turbulence was transmitted from the United States to Europe, where many brokers held in securities portfolio related to the subprime market.

In the first phase of turbulence, a particularly critical moment is reached at mid-March 2008, with the crisis of the business bank Bear Sterns: in the first quarter of 2008 credit default swap rewards (CDS) - the price paid by an investor to cover the risk of issuer's failure - of major international banks considerably increase. For the the US CDS average of five years maturity, equivalent at 200 basis points at the beginning of 2008, it will grow to close to 300 basis points in mid-March 2008; for European banks it passed from about 60 basis points to 170 basis points in mid-March (Figure 3)¹².

The most upsetting news of the entire financial crisis for markets around the world was undoubtedly the bankruptcy of Lehman Brothers business bank. The 1850-based bank was one of the world's largest MBS and CDO market participants, as well as of over-the-counter derivatives, and in recent years boasted record-high profit rates, however, from high levels of leverage. Being very exposed to the real estate market, it felt strongly the turmoil from the sub-prime segment, which led to losses

¹¹ V. CUSSEDDU, *La cartolarizzazione e l'esplosione della crisi finanziaria*, Eica Onlus, 2011

¹² S. MIELI, *la Crisi finanziaria internazionale e le banche italiane*, March 2009

of \$ 3-4 billion a quarter. As a result of the news, confidence in the bank collapsed and interbank refinancing, vital for such indebted institutions, became increasingly difficult until the large losses forced the bank to seek the acquisition.

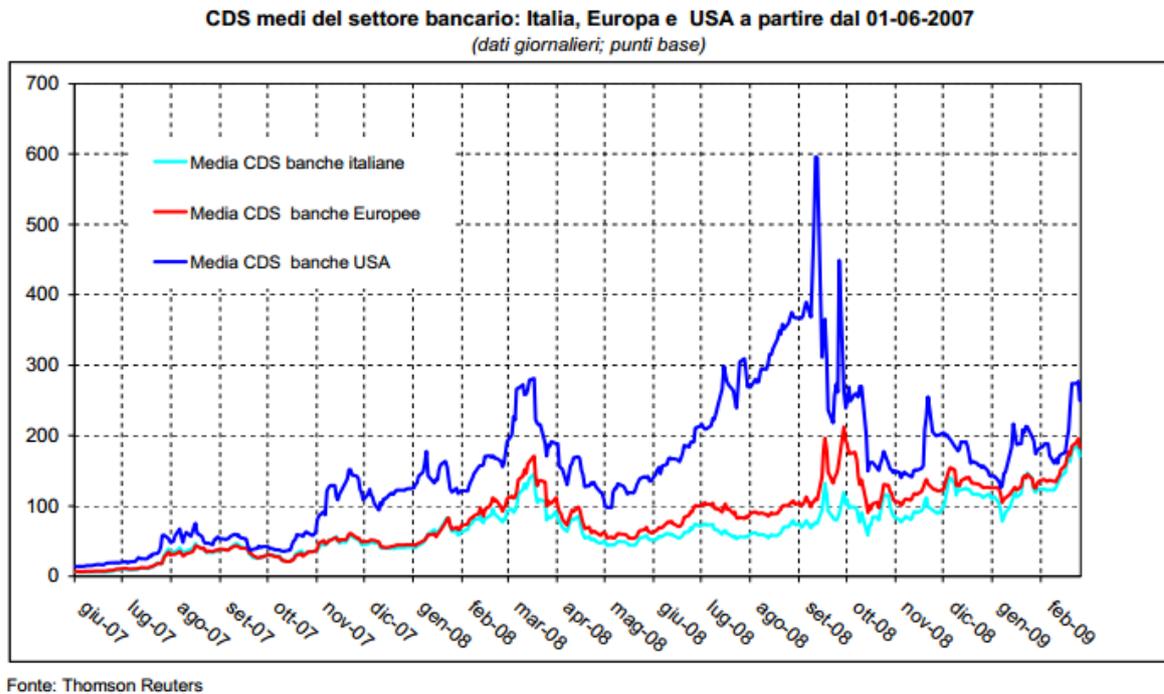


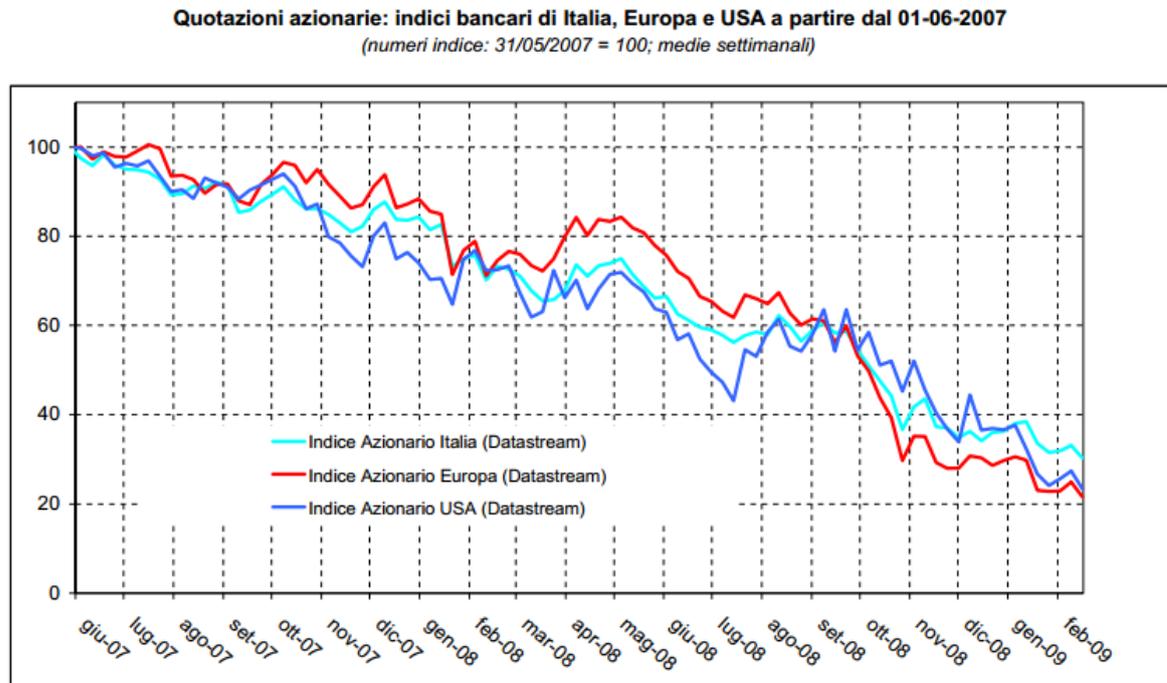
Figure 5. CDS growth in 2008
Source: Thomson Reuters

After complicated events with potential buyers (Barclays on all), no agreement was reached and on September 15, 2008, the bank was left to failure by the authorities by tracing a significant change in the management of the crisis. Before then, the banks, Bear Stearns, for example, were recapitalized to avoid the typical counterparty risks that would arise following the failure of an institution so interconnected with the financial world.

The consequences of the fall were tragic. Banks did not trust each other anymore, and interbank interest rates sparked record figures, causing a global credit crunch.

At this point, the crisis also moved to Europe where many banks, especially British, French and Swiss, had similar debt levels to those in the United States. Banking stocks collapsed to historic lows and according to BCE data, " the capitalization of

large euro banks declined from the beginning of September to the end of November by 250 billion euros, bringing the total loss from the beginning of the crisis to 450 billions, which means halving their stock value."¹³



*Figura 6. Stock value of banks
Source: Thomson Reuters*

1.3 Types of bank risks: the credit risk

The definition of "credit risk" is *"the possibility that an unexpected change in a counterparty's creditworthiness may generate a corresponding unexpected change in the marketvalue of the associated credit exposure¹⁴."*

In order to understand the definition of credit risk that is universally accepted, three concepts must be taken into account.

¹³ M.ONADO, *I nodi al pettine*, Editori Laterza, 2009

¹⁴ A.RESTI, A. SIRONI, *Risk management and shareholders' value in banking*, 2015

1. *Default risk and migration risk*: first of all we should underline that credit risk is not only connected with the default of the counterpart but also with the simple deterioration of his creditworthiness. On one hand, the risk of actual insolvency that means no more payments; on the other, the loss resulting from a deterioration of its credit rating. For example, considering a fixed-interest loan, the market value of the loan is determined by the present value of future cash flows; a deterioration in the borrower's credit worthiness will inevitably result in a reduction of the market value of the loan. In fact, the present value of the future cash flows are determined using a discount rate which incorporates, in addition to the risk-free rate for the corresponding maturity, also a *spread* (or risk premium) that takes into account the likelihood of the counterpart's default.

A deterioration in credit worthiness increases the likelihood of the borrower's default and, automatically, the risk premium goes up and the present value reduces. *"In general, the greater the variation in spread and the greater the residual life of the debt, the greater the reduction in the value of a credit exposure resulting from a deterioration in the borrower's credit rating¹⁵."*

2. *Risk as an unexpected event*: the risk should be understood as an unexpected or random event because if it could be determined it would mean that the deterioration of the borrower quality would be appropriately considered when granting the loan. So the real risk is the one representing the possibility that those evaluations conducted at the beginning may be incorrect because something unexpected happened.
3. *Credit exposure*: means how much the lender is exposed to the risk of credit. This definition doesn't only apply to traditional banking (loans and securities) but also to "off-balance-sheet" operations such as guarantees, derivatives and so on.

About credit risk it is also important to distinguish between expected and unexpected loss.

¹⁵ A.RESTI, A. SIRONI, *Risk management and shareholders' value in banking*, 2015

- a) Expected loss (EL): *“it is the mean value of the probability distribution of future losses¹⁶.”* This type of credit risk can't be considered, however, as a real risk because it represents the *ex ante* estimation of the future loss. This means that the lender takes into account this type of risk and apply a suitable spread to the interest rate of the loan in order to hedge its risk.

It can be estimated taking into account three parameters of a credit exposure that are:

1. *Exposure at default (EAD)*: the total amount of exposure when the default takes place. It can be thought as the initial credit exposure minus or plus the variation in the size of the residual credit from now to the future date of possible default;
2. The probability of the borrower's default (*PD*);
3. *Loss given default (LGD)*: the percentage of the exposure that the lender forecasts, when the default happens, not to be able to recover by seizing collateral, guarantess or jurisdictional procedure.

The formula is: $EL = EAD * PD * LGD$

- b) *Unexpected loss (UL)*: this represents the true credit risk because it's the risk that the loss will be greater than expected. *“In general terms, this can be defined as the variability of the loss around its mean value¹⁷”.*

Talking statistically about a diversified portfolio the expected loss of such portfolio can be identified as the sum of the expected losses of every individual loans in it while the volatility of the portfolio total loss is generally lower than the sum of volatilities of every loans because of the negative correlation between every single loan. This implies that the expected loss is, in a certain way, fixed and can't be reduced by diversification while unexpected loss (volatility of the portfolio) can be reduced diversifying across industries, geographically and so on. This will end in a reduction of the total credit risk of the portfolio.

Economically speaking, the expected loss of a portfolio is taking into account with

¹⁶ A.RESTI, A. SIRONI, *Risk management and shareholders' value in banking*, 2015

¹⁷ A.RESTI, A. SIRONI, *Risk management and shareholders' value in banking*, 2015

reserves in the bank balance sheet accounted as a cost in the profit and loss account; on the other hand the unexpected loss, instead, is covered with the institution's capital because it's part of the shareholders' risk. If the total loss is less than expected they will benefit from the result but if it's higher (there is unexpected loss) they will have to cover with their own funds.

The main types of credit risk are:

- *Default risk*: occurs when the loss comes from complete failure of the counterparty. The borrower is considered to be in default when the creditor bank feels very unlikely that the debtor can cope with its own bonds or when 90 days (past two) have elapsed since the expiration of position;
- *Migration risk*: it occurs when the variation of the credit to a counterparty generates a loss of position value or increases the possibility of a future insolvency. The reduction in creditworthiness can for example occur as a result of the downward revision of the counterparty rating (Downgrading), operated by external agencies;
- *Spread risk*: is the risk of an increase in the interest rate asked by the market to the bond issuers (for example in case of increased risk aversion); in this case the market value of the securities in the market declines;
- *Recovery risk*: represents the risk that the capital of the insolvent counterpart under liquidation will be less than expected or the recovery process takes too much time;
- *Pre-settlement or substitution risk*: in a OTC (over the counter) derivative the counterpart may become insolvent before expiration of the maturity of the contract forcing the other to find a new (and potentially less favorable) market condition;
- *Country risk*: the risk arises when the state fails to fulfill its obligations; the

Country risk can also be termed sovereign risk and may be due to political or economic instability of the country itself.

1.4 Banks capital requirements: the evolution of Basel accords

In this part, the evolution of the Basel regulations from birth to the changes applied after the financial crisis will be presented in order to introduce the issue of minimum capital requirements that intermediaries must comply with the risks undertaken.

1.4.1 Basel accords

The regulation of capital, commonly known as the "Basel Accords", effectively assigns to the capital the task to absorb the risks assumed by each bank in order to reduce the probability that any "unexpected" losses could reduce the value of the assets below that of liabilities, thus placing the bank itself in a situation of insolvency.

The Basel Committee on Banking Supervision is an advisory body established in 1974 by the supervisory bodies of the G10 countries, which pursues the objective of improving and strengthening international risk management techniques.

The first regulatory scheme of capital was formulated in 1988 and is known as "Basel 1"; this agreement was based on a simple mechanism of capital requirements and was substantially amended by the agreement on capital known as Basel 2, whose final version, published in 2004, was implemented in Italy in full settlement in 2008.

The Basel 2 agreement promoted the adoption of more sound risk management practices by credit intermediaries, introducing, inter alia, the possibility for banks to adopt advanced risk-weighting approaches, which means based on internal models of evaluation.

Finally, in 2009, in response to the global financial crisis and the criticism of Basel 2, the Basel Committee initiated a regulatory review process and in December 2010 issued provisions concerning the new regulatory requirements on capital adequacy and liquidity of credit institutions, known as the "Basel 3 Accord". The new rules

have been in force since 2013 in some countries such as China and Japan and from the following years in the remaining ones.

In this regard, the main regulatory changes contained in Basel 3 relate in particular to the introduction of measures aimed at strengthening capital adequacy and the liquidity position. A difference compared to Basel 2 is represented by the fact that the new Basel 3 rules also have a macroprudential approach, as they also address the problems related to systemic risks that may accumulate in the banking sector, to the pro cyclical amplification of these risks over time and the existence of systemically important banks.

Specifically speaking, the Basel 2 capital adequacy scheme, like that of Basel 3, is based on three pillars, whose presence represents the fundamental difference with the previous Basel 1 agreement, which was based exclusively on a minimum capital requirement against credit and market risk.

- i. *Pillar 1 or "minimum capital requirements"*: The first pillar includes minimum total capital requirements that are applied at a consolidated level to banks and banking groups operating internationally against the risks assumed. The main objective of the first pillar is to ensure that the bank holds a minimum amount of capital to face the three typical risks of banking activity (credit, market and operational risk), in order to protect depositors from risk of insolvency of the bank.
- ii. *Pillar 2 or "supervisor review process"*: The second pillar requires banks to adopt a strategy and a process to check capital adequacy, both current and future, entrusting the supervisory bodies with the task of supervising and verifying the reliability and consistency of the related results and adopting, if necessary, the appropriate corrective measures. Among the Pillar 2 requirements, the Bank of Italy includes, for example, concentration risk, liquidity risk, strategic risk and reputational risk.
- iii. *Pillar 3 or "market discipline"*: The third pillar requires banks to make public information regarding capital adequacy, exposure to risks and the general characteristics of the systems responsible for identifying, measuring and

managing them. The objective of the third pillar is to communicate information to investors in order to strengthen market discipline.

1.4.2 The Basel 2 agreement

The first pillar of Basel 2 is mainly based on a minimum capitalization condition, defined through an overall capitalization index, that is a ratio between the regulatory capital and the total risk weighted assets assumed by the bank.

The overall capital ratio is defined as the *risk asset ratio* (RAR) is given by the ratio between the *total regulatory capital* and the total assets, both on balance sheet and off-balance sheet, weighted for the risk or the *risk weighted assets* (RWA).

The denominator RWA is obtained by multiplying the capital requirements against the market and operational risks by 12.5 and adding the product to the sum of the weighted assets for credit risk. $RWA = RWA_{rc} + 12.5 \times (K_{rm} + K_{ro})$. This overall capital ratio must be at least 8%. The minimum capital requirement is therefore based on the aggregation of the three risks recognized by the Basel Accords.

The regulatory capital, in accordance with the provisions of Basel 2, consists of the sum of the *Tier 1 capital*, admitted in the calculation without any limitation, and of *Tier 2 capital*, admitted in the maximum limit of Tier 1 capital. In particular:

- a) *Tier 1 capital*: in turn, it can be divided into upper or core Tier 1 and lower Tier 1. The upper consists mainly of paid-up share capital, outstanding reserves, such as the share premium reserve, retained earnings, the legal reserve. The lower, on the other hand, is made up of innovative capital instruments, deemed lower quality than the capital paid for the capital adequacy requirements of the bank.
- b) *Tier 2 capital*: it consists of instruments that are more similar to debt, in particular it consists of revaluation reserves, hidden reserves, general provisions for credit risks, hybrid capital instruments and ordinary subordinated loans.

According to the Bank of Italy regulations, the regulatory capital consists of the algebraic sum of a series of positive elements, which must be fully available to the

bank so that they can be used without limitation for the coverage of risks and losses, and negative items such as intangible assets, value adjustments on loans, losses, etc.

1.4.3 *The new Basel 3 agreement*

With respect to Basel 2, the new Basel 3 agreement provides both capital strengthening and a strengthening of the liquidity position through the introduction of liquidity management and monitoring indices.

With reference to capital strengthening, it is pursued through:

- a) the holding of a qualitatively and quantitatively higher level of capital that allows to absorb any losses in phases of tension;
- b) the introduction of a leverage index;
- c) the maintenance of capital resources in excess of the minimum requirements (*capital buffers*).

According to the first point, the increase in the quality of the assets is obtained both through the recompositing of the capital of the banks, recognizing a substantial preference for "*core*" capital instruments, which are the component of better quality of the assets, and through the adoption of more stringent criteria for the computability of equity instruments. According to the Basel agreement, the regulatory capital is divided into two main components that vary according to the level of asset quality of the elements that make it up:

- a) *Tier 1*: it is also known as *going concern capital* because it must be able to absorb losses in terms of business continuity and is in turn made up of primary quality assets (*common equity*) and *additional Tier 1* capital. *Common equity* consists mainly of: paid share capital, share premium reserve, profit reserves, valuation reserves and other obvious reserves. For Basel 3, only ordinary shares belong to common equity, while the preference shares and savings shares do not. The tier 1, instead, is composed of capitalization instruments
- b) *Tier 2*: the additional capital must instead be able to absorb the losses in the event that the bank is put into liquidation in advance and is therefore also called *gone concern capital*. The instruments that make up the supplementary capital have the following characteristics: 1) they are

subordinated with respect to depositors and other creditors of the bank, 2) the absence of guarantees by the issuing bank that increase the degree of pre-emption against the debtors of the bank, 3) have a maturity of at least 5 years, 4) are *callable* because the issuer has the faculty of early repayment after at least five years from issue, 5) are not *credit sensitive dividend* that means that the level of due interest or dividends can not be changed based on the creditworthiness of the issuer.

Compared to Basel 2, which provided the division of the Tier 2 into upper and lower components, the instruments eligible for additional capital were therefore harmonized.

Finally, the capital instruments allowed for the calculation of Tier 1 and Tier 2 must include a *bail-in* clause on the basis of which the supervisory authority has the right to reduce its value in order to cover losses (*write-off*) or to convert them into common equity in order to absorb losses in the event that the bank is the object of public bailout.

The total regulatory capital is calculated as the sum of Tier 1 and Tier 2 capital, net of an expanded and harmonized list of deductions or negative elements, such as:

- losses relating to the current year;
- start-up and other intangible assets;
- deferred tax assets that are based on future profitability;
- investments in treasury shares;
- others.

The minimum total capitalization ratio remained unchanged compared to Basel 2 and must be at least 8%. An important change is instead represented by more stringent requirements for high quality asset quality instruments, as well as by the provision of a further instrument represented by a minimum Tier 1 capital requirement that the banks must hold compared to the total risk weighted assets and off-balance sheet exposures (*leverage ratio*). This is to prevent banks from developing excessive debt levels but also to mitigate the abrupt deleveraging processes that occurred during the crisis.

Moreover, Basel 3, compared to the previous capital agreement, introduces a series of macro-prudential elements into the asset structure that should contribute to limiting systemic risks deriving from the degree of procyclicality of the financial system and the interconnections between financial institutions. One of the main instruments adopted by Basel 3 in this regard is the provision of capital buffer called *buffers*, which have as their objective to preserve capital resources in excess of the minimum requirements during the expansion phases, or in favorable contexts, and then draw these in the phases of tension.

The excessive interconnection between systemically relevant banks has strongly counteracted the recent financial crisis to transmit the shocks to the financial system and the real economy. Basel 3 recognizes that some banks are characterized by a *systemic risk*, that means that the insolvency of other financial institutions and, therefore, of the entire financial system is associated with the insolvency of one of these banks; therefore it requires that they have a loss absorbing capacity that goes beyond the minimum requirements.

In addition, the recent financial crisis drew attention to another risk that had not received specific prudential treatment: *liquidity risk*. Basel 3 therefore envisages the introduction of two minimum liquidity coefficients whose value can not fall below the unit. On the one hand, they are aimed at measuring the resistance of banks to potential short-term liquidity crises and, on the other, to signaling any structural imbalances in the composition of financial assets and liabilities over a time horizon of one year.

1.4.4 Credit risk capital requirements

As already seen in the previous paragraphs, the term credit risk indicates the possibility that an unexpected change in the creditworthiness of a counterparty with respect to which an exposure exists, generates a corresponding unexpected change in the market value of the credit position.

The Basel agreement allows banks to choose between two methods for calculating the minimum capital needed to deal with unexpected losses in the face of credit risk. Both methods are based on the idea that riskier positions require a larger allocation of capital and that the degree of risk of a credit position is measured by the *rating* method. The two methods that can be adopted by a bank are:

1. the standard method;
2. the method based on internal ratings, which in turn is divided into:
 - basic approach or *foundation approach*;
 - *advanced approach*.

The standard method is the simplest method and consists in measuring weightings with the help of external valuations of creditworthiness carried out by external credit rating agencies recognized as suitable by the Bank of Italy.

For the purpose of applying the weightings, the portfolio is divided into different classes, depending on the nature of the counterparty, the technical characteristics, and the methods of carrying out the credit relationship. The ratings associated with each category are pre-established by the Basel agreement on the basis of a logic according to which lower debts are assigned to the debtors with higher credit standing in the calculation of the risk-weighted assets.

In particular, for *past-due* credits such as bad debts, substandard loans and restructured exposures, risk weighting is a function of the percentage of the outstanding amount that is covered by specific provisions; more precisely, the weighting is 150% if the provisions are less than 20%, otherwise, the weighting is 100%.

The *internal rating based (IRB)* method allows the bank to assign to each counterpart a rating resulting from an internal process of measuring its creditworthiness. The advanced method may allow a more adequate measurement of the credit risk of an exposure based on the assumption that each bank has an information advantage about the creditworthiness of its customers which translates into more sensible weightings. Obviously the IRB method must be verified and validated by the Bank of Italy.

For the purposes of calculating capital requirements, the portfolio is subdivided into categories of exposures (to governments, banks, to companies, retail, securitization), for each of which a specific function of calculating the minimum capital requirement is provided. The Basel Committee has therefore identified the four parameters necessary to measure the credit risk related to a single exposure, which are those already introduced in the paragraph related to credit risk:

1. Probability of default;
2. Loss given default;
3. Exposure at default;
4. Maturity.

With the exception of the PD, which is always estimated by the bank, the other inputs can be assigned by the supervisory authority (*foundation approach*), or be estimated by the bank and subject to validation (*advanced approach*).

1.5 The recovery rate of impaired loans

The shortage of reliable public data on recovery rates historically achieved by banks on non-performing loans creates uncertainty in the market and tends to be negatively reflected on the evaluation of this type of credits.

Bank of Italy tried to fill this gap with a recent study using the data of the Central Credit Register, which allow to obtain estimates recovery rates for the period 2006-2015. The note analyze lots of aspect related to NPLs like how much do the banks recover on bad debts, the relation between recovery rates and guarantees, type of counterparty (households or companies), the seniority of positions, if there are margins of improvement in the recovery rates achievable by banks, how long does the recovery process takes, when selling bad debts instead do banks make “*cherry picking*” between the different positions.

The analysis shows the following results.

For the Italian banking system the recovery rates on non-performing loans are averaged on values which are consistent with the coverage rates resulting from the financial statements¹⁸. In December 2015 the average coverage rate was 59%, which corresponds an expected recovery rate of 41%. In the years 2006-2015 the recovery rate was on average of 43%.

In the period from 2014 to 2015 there was a fall in the recovery rate at 35% on average because of the increase in the amount of positions sold on the market.

What's important is that the recovery rates of the positions closed by sale on the market are significantly lower than those recorded for positions closed on an ordinary basis (23% against 47% in average during the period considered).

The recovery rates of loans backed by collateral are significantly higher than those recorded on other positions (55% on average for the period against 36%).

The rates of recovery of bad debts to households are higher than those towards non-financial companies (53% on average in the period compared to 40%).

Recovery rates are decreasing according to the seniority of the positions closed.

Recovery rates differ significantly from bank to bank. During the period considered, some banks show a systematically higher or lower recovery capacity of the average. Average closing times for non-performing loans increased significantly over the period analyzed. However, since 2014 there has been a noticeable increase in the number of closures, which could signal an inversion of this trend.

These results has important implications for banks and Authorities. The recovery rates are much higher than the prices that banks generally manage to get from a sale to private investors, and vary significantly from bank to bank. This indicates that intermediaries have margins and incentives to continue decisively in the interventions already launched to increase the efficiency of internal credit management and recovery processes of impaired (non performing loans, NPLs), identifying which is the mix - between management in-house, outsourcing to

¹⁸ The coverage rate is defined as the ratio between value adjustments and gross exposure amount.

external servicers, sale on the market - able to maximize the value of these assets.

The Supervisory Authorities, on the other hand, must evaluate carefully the validity of the strategies of the single companies and identify the measures of more appropriate intervention in relation to the situation of the single intermediary, in the awareness that the generalized adoption of policies of rapid disinvestment of the NPLs would result in a transfer of value from banks to investors active on this market. In this direction, the non-binding Guide on NPLs recently placed in consultation by the Single Supervisory Mechanism, requires banks to adopt a policy of active management of these assets¹⁹.

Now we're going to analysis in details with some graphs the recovery rates for every category that we introduce before.

For what concern the recovery rates for non-performing loans in general, on average for the period 2006-2015, it was 43% (Figure 1), oscillating between a minimum value of 34% and a maximum of 49%.

The series does not highlight a clear trend. In particular, there is no decrease in recoveries with the beginning of the crisis in 2007.

¹⁹ **Draft guidance to banks on non-performing loans, ECB, September 2016.** The Guide, addressed to significant banks, it is non-binding and covers all the main aspects of the management of NPLs. In particular, it requires banks to to define an effective management strategy for NPLs, which foresees quantitative objectives of stock reduction in the medium period and considering all the available options (internal or external management, sale on the market, acquisition of assets a guarantee, stipulation of out-of-court agreements, ...) for maximizing the value of these assets. It also requires the adoption of management structures capable of ensuring the effective execution of the strategy and minimizing conflicts of interest.

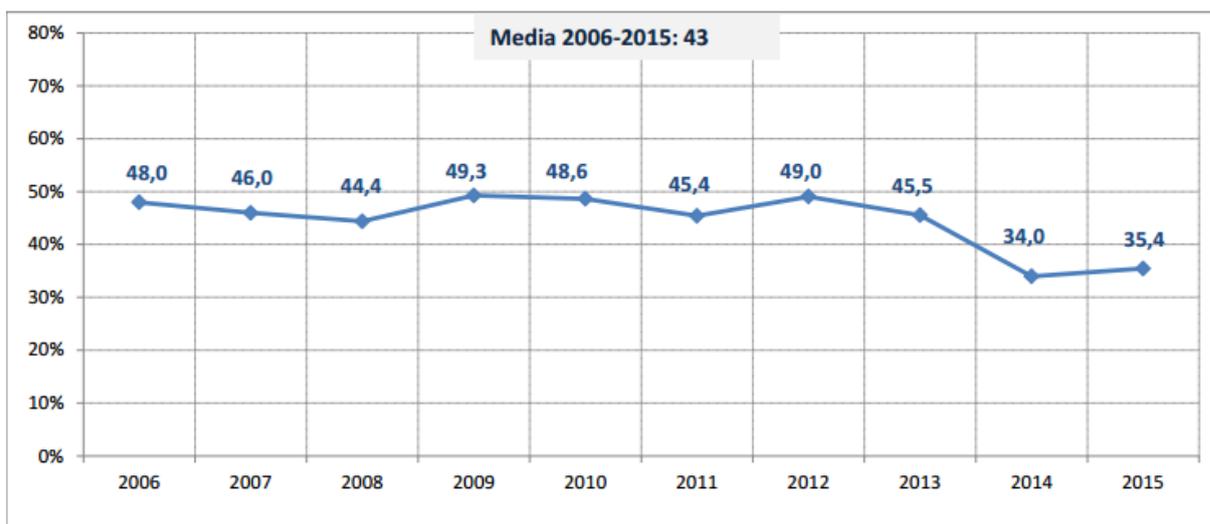


Figure 7. Recovery rate of non-performing positions for closing year
Source: Bank of Italy

However, recovery rates are relatively low in the two-year period 2014-15 (35% on average in the two-year period). The decline was due to a change in the composition of bad loans closed during this period compared to previous years. In particular, the incidence of the positions sold to third parties increased (23% of the total number of closed positions, against 13% in the average for the period 2006-2013, 34% against 7% if the amounts are considered in the respective periods); we will see that the positions sold to third parties are characterized by much lower recovery rates rather than those closed internally (fig. 4).

The average recovery rate that it would have been recorded in the two-year period would have been 40% if the incidence of positions sold on the market remained equal to the average observed in the period 2006-2013. That is, the composition effect explains almost half of the decline observed in the two-year period 2014-15 compared to the average value recorded in the previous period (47%).

The clean-up of financial statements conducted by intermediaries - also following the quality review exercise assets (*asset quality review*, AQR) - by closing positions that showed lower recovery margins, may have contributed to this change in the composition explained before.

This hypothesis seems in line with the sharp increase in positions closed in the two-year period: 270,000 every year on average, compared to around 140,000 in the average of the previous period (fig. 5).

Anno di uscita	Num. Posizioni chiuse	Num. Posizioni entrate	Num. Posizioni in essere in ciascun anno	Posizioni chiuse / posizioni in essere a inizio anno (%)
2006	198.588	158.713	547.175	36,3
2007	161.209	189.720	575.686	28,0
2008	123.615	176.769	628.840	19,7
2009	133.976	183.033	677.897	19,8
2010	128.168	233.966	783.695	16,4
2011	145.538	199.196	837.353	17,4
2012	128.653	230.694	939.394	13,7
2013	112.331	228.153	1.055.216	10,6
2014	287.685	341.271	1.108.802	25,9
2015	257.965	325.488	1.176.325	21,9
TOTALE	1.677.728	2.267.003		
Media	167.773	226.700	833.038	21,0

Figure 8. Number of position closed and on going
Source: Bank of Italy

The growth in the stock of non-performing loans observed over the entire period reflects a number of annual closed position almost always lower than that of new entrances. This may be due to the fact that the "technical disposal skill" of bad loans has remained fixed, or has not increased sufficiently: if the number of courts and magistrates remains unchanged and the processing technology used by the banks does not improve significantly, the number of bad positions that will be possible to close in one year will be more or less the same; in a period of strong growth in impaired loans, such as that recorded in the years of the crisis, the percentage of positions closed compared to those opened at the beginning of the year will therefore tend to decrease.

From the following figure two interesting facts emerges. First, the recovery rates of the closed positions through sale to third parties amounted to 23% on average over the decade considered, systematically lower than those obtained by the banks for positions normally closed (47%). This gap is affected by the evaluation criteria of the NPLs taken into account by buyers operating on this market, which reflects in a sale's price that incorporates their high earnings expectations. Notes in particular the fact that buyers discount the cash flows expected over time from non-performing loans with the target investment return rate, while banks, based on the

accounting principles, use the interest rate charged on the positions. The gap on the other hand, it's affected only for a small part by the different composition of the non-performing loans sold compared to those normally closed²⁰. In addition, the high number of positions closed in the last two years also reflects an increase in sales to third parties, both in terms of value absolute (62 thousand on average over the two-year period, against an average of 27 thousand in the whole period) and impact on the total, as stated above.

Anno di uscita	TOTALE			di cui: posizioni non oggetto di cessione			di cui: posizioni cedute a terzi sul mercato (1)		
	Tasso di recupero (%)	Posizioni chiuse		Tasso di recupero (%)	Posizioni chiuse		Tasso di recupero (%)	Posizioni chiuse	
		Importo (€/mln)	Numero		Importo (€/mln)	Numero		Importo (€/mln)	Numero
2006	48,0	9.039	198.588	48,4	8.803	183.345	30,2	236	15.243
2007	46,0	8.742	161.209	50,1	7.443	135.983	22,1	1.299	25.226
2008	44,4	6.580	123.615	44,8	6.225	110.509	37,4	355	13.106
2009	49,3	6.109	133.976	50,0	5.893	117.707	28,9	216	16.269
2010	48,6	6.667	128.168	49,3	6.454	108.591	26,7	213	19.577
2011	45,4	8.718	145.538	46,1	8.442	127.922	23,3	276	17.616
2012	49,0	7.472	128.653	53,0	6.207	102.510	29,8	1.266	26.143
2013	45,5	7.683	112.331	46,9	7.229	96.714	23,8	454	15.617
2014	34,0	13.613	287.685	39,0	9.463	241.056	22,4	4.150	46.629
2015	35,4	13.258	257.965	44,9	8.157	180.898	20,3	5.101	77.067
Totale		87.881	1.677.728		74.316	1.405.235		13.565	272.493
media	43,2	8.788	167.773	46,9	7.432	140.524	23,0	1.357	27.249

Figure 9. Recovery rates for category of recover: selling or internal management
Fonte: Bank of Italy

1.5.1 Recovery rates for assets: secured vs unsecured

Recovery rates related to loans secured by collateral are much higher: 55% on average over the period, against 36% for other positions (Table 3). The table shows also the considerable difference in unit amount of the two types of exposure (equal to 215,000 on average for the former against 35,000 for the others), which reflects both the existence of a positive relationship between the amount of the loan and the

²⁰ The recovery rate on the sold positions would increase by only one percentage point (from 23% to 24%) if the composition, in terms of bad loans assisted or not by collateral, coincided with that of the positions closed on an ordinary basis.

presence of a real guarantee, either the high number of consumer credit transactions, characterized by smaller amounts and the lack of collateral.

Recent analyzes show that in the period analyzed banks have increased the use of loans backed by collateral: the share of new non-performing loans backed by collateral grew by 25% in 2006 to 46% in 2015. This is due to the attitude of increasing prudence adopted by banks during the economic crisis.

Anno di uscita	TOTALE			di cui: in presenza di garanzie reali			di cui: in assenza di garanzie reali		
	Tasso di recupero (%)	Posizioni chiuse		Tasso di recupero (%)	Posizioni chiuse		Tasso di recupero (%)	Posizioni chiuse	
		Importo (€/mln)	Numero		Importo (€/mln)	Numero		Importo (€/mln)	Numero
2006	48,0	9.039	198.588	61,6	3.038	18.707	41,1	6.001	179.881
2007	46,0	8.742	161.209	60,3	2.690	16.617	39,6	6.051	144.592
2008	44,4	6.580	123.615	55,7	2.752	13.183	36,2	3.828	110.432
2009	49,3	6.109	133.976	60,6	2.698	13.544	40,3	3.411	120.432
2010	48,6	6.667	128.168	58,6	2.564	12.539	42,4	4.103	115.629
2011	45,4	8.718	145.538	55,2	3.706	13.672	38,2	5.012	131.866
2012	49,0	7.472	128.653	60,0	3.111	14.858	41,2	4.361	113.795
2013	45,5	7.683	112.331	57,6	3.060	13.154	37,5	4.623	99.177
2014	34,0	13.613	287.685	45,6	5.469	23.942	26,2	8.144	263.743
2015	35,4	13.258	257.965	45,1	5.221	19.352	29,2	8.038	238.613
Totale		87.881	1.677.728		34.309	159.568		53.572	1.518.160
media	43,2	8.788	167.773	54,5	3.431	15.957	36,0	5.357	151.816

Figure 10. Recovery rates for category of recover: secured vs unsecured loans
Source: Bank of Italy

1.5.2 Recovery rates: companies vs families

The recovery rates on non-performing loans for non-financial companies were equal, on average over the period considered, to 40%, that is clearly below what was recorded for families (53%, fig.7). For both categories there was a decreasing in the years 2014/2015, more important for families. This dynamic is largely due to the fact that many intermediaries have carried out numerous operations for the sale of small/medium-sized positions, in many cases with high seniority and almost entirely devalued, also because they are not assisted from real guarantees.

Anno di uscita	TOTALE				di cui: imprese		di cui: famiglie		
	Tasso di recupero (%)	Posizioni chiuse		Tasso di recupero (%)	Posizioni chiuse		Tasso di recupero (%)	Posizioni chiuse	
		Importo (€/mln)	Numero		Importo (€/mln)	Numero		Importo (€/mln)	Numero
2006	48,0	9.039	198.588	43,7	6.555	76.415	59,2	2.484	122.173
2007	46,0	8.742	161.209	41,8	6.510	66.183	58,2	2.231	95.026
2008	44,4	6.580	123.615	40,8	5.029	46.749	55,9	1.551	76.866
2009	49,3	6.109	133.976	44,9	4.594	46.278	62,6	1.515	87.698
2010	48,6	6.667	128.168	46,5	5.135	47.265	55,8	1.532	80.903
2011	45,4	8.718	145.538	41,9	7.100	55.902	60,7	1.618	89.636
2012	49,0	7.472	128.653	44,6	5.807	52.589	64,5	1.666	76.064
2013	45,5	7.683	112.331	41,0	5.948	47.467	61,2	1.735	64.864
2014	34,0	13.613	287.685	32,5	9.852	87.755	37,9	3.760	199.930
2015	35,4	13.258	257.965	34,3	10.222	89.519	39,4	3.036	168.446
Totale		87.881	1.677.728		66.752	616.122		21.129	1.061.606
media	43,2	8.788	167.773	40,1	6.675	61.612	52,9	2.113	106.161

Figure 11. Recovery rates for category: non-financial companies vs families
Source: Bank of Italy

1.5.3 Recovery rates for seniority

Recovery rates are decreasing according to the seniority of the closed positions: the longer the permanence of the bad debts in bank balance sheets, the less the recovery capacity of that banks to manage these credits (fig. 8).

Tempo di recupero	TOTALE	di cui: presenza di una garanzia reale	di cui: assenza di garanzie reali	di cui: imprese	di cui: famiglie
< 1 anno	60,6	77,8	51,7	57,2	60,2
tra 1 e 2 anni	54,1	70,8	44,8	46,8	60,4
tra 2 e 3 anni	50,1	60,8	41,2	40,6	58,9
tra 3 e 4 anni	43,9	53,2	35,3	37,8	52,6
tra 4 e 5 anni	41,1	52,5	32,2	35,3	50,6
oltre 5 anni	29,8	38,8	23,7	27,8	38,2

Figure 12. Recovery rates for seniority of the position
Source: Bank of Italy

It could however be hypothesized that banks carefully choose the positions to be

closed, holding on the books those from which they know they can recover little or nothing and close those characterized by high recovery rates ("cherry picking"). In this case the observed rates of recovery would not be representative of the entire stock of non-performing loans. The available data do not allow us to exclude this hypothesis, but provide evidence of the contrary hypothesis. In particular, we have seen that the average recovery rate declines with the seniority of the position. If the banks did cherry picking, they will select as a priority to close the most "young" ones for limit losses; such behavior would be reflected in a decrease of the share of "old" bad debts closed in each year. The table 7 shows that this does not happen. The share of non-performing loans with seniority exceeding 5 years does not show a clear trend in the observed period. Therefore do not emerge behaviors of cherry picking.

Sofferenze chiuse composizione per anno di chiusura e tempo di recupero						
Tempo di recupero	2015	2014	2013	2012	2011	2010
< 1 anno	4,3	3,7	5,7	6,4	6,1	8,2
tra 1 e 2 anni	12,6	9,1	10,0	9,2	10,4	18,8
tra 2 e 3 anni	11,7	7,5	7,6	11,4	9,1	7,5
tra 3 e 4 anni	10,2	8,1	7,5	10,0	8,6	6,4
tra 4 e 5 anni	7,2	7,4	8,8	7,1	8,0	7,7
Oltre 5 anni	54,0	64,2	60,3	55,9	57,7	51,4

*Figure 13. Closed positions for year of closing and recovery time
Fonte: Bank of Italy*

1.6 Reasons behind the growth in NPLs stock

Moving from some conjunctural considerations, it can be said that the strong deterioration of quality of credit and the dramatic growth of NPL volumes are a legacy left to the European financial system by the economic crisis.

To understand what role the recession has played, suffice it to note that the increase

in amounts involved almost all intermediaries with a traditional business model: between 2007 and 2016 the rate of increase in bad debts recorded by significant intermediaries, on average, exceeded 500 per cent and was found particularly high (above 350 per cent) even among the most virtuous intermediaries (the 25 percent of intermediaries which recorded lower increases)²¹. From 2008 till today the amount of impaired exposures is substantially quadrupled, while the ratio between gross non-performing loans and bank loans has more than quadrupled and nowadays is over 11%.

The role of the economy as the main explanatory variable of evolution of the credit riskiness is well evident in the following chart which consider a very wide period (from 1992 to the present day) and highlights the existence of a clear inverse correlation between GDP trends and the incidence of non-performing loans.

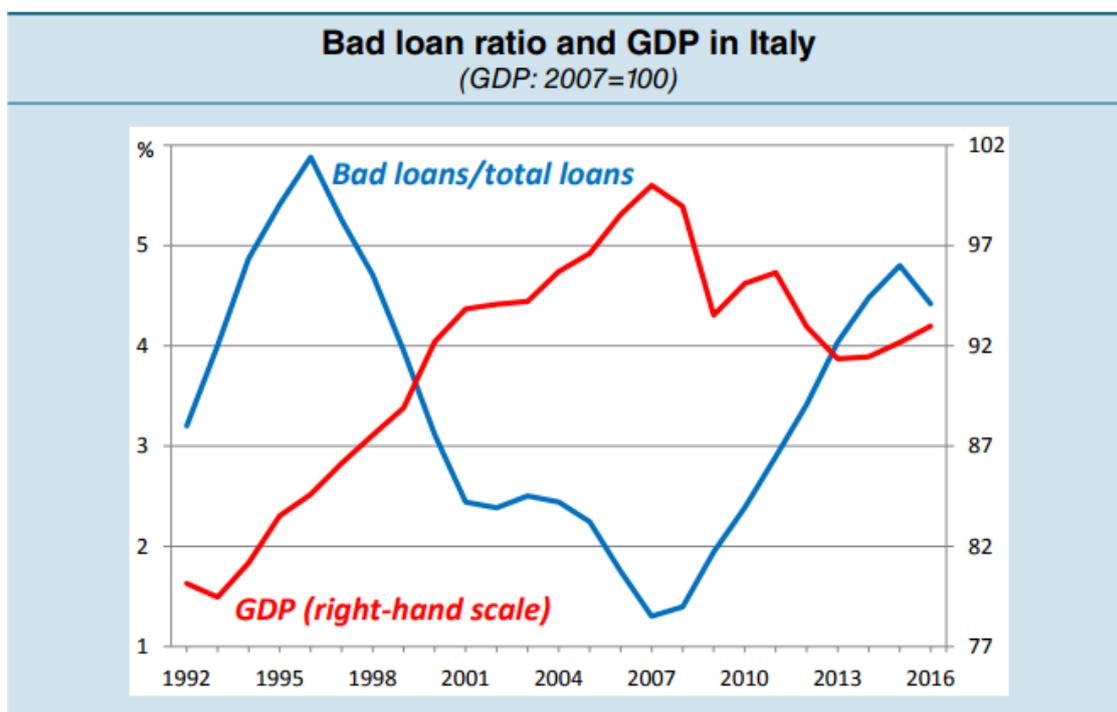


Figure 14. GDP and bad loans: a clear invers correlation
 Source: The Governor's Concluding Remarks on 2016, Bank of Italy, Maggio 2017

With particular regard to the Italian situation, there are numerous reasons for this

²¹ C.BARBAGALLO, *I crediti deteriorati nelle banche italiane: problematiche e tendenze recenti*, Bank of Italy, Rome 6 June 2017

such a high stock of NPL.

First of all, the growth of new suffering in the long years of the crisis due to the progressive worsening of capacity income and assets of the debtors (in this regard, just think that the unemployment rate, although slightly decreased in the last three years, at the end of 2016 it stood at 11.5% - the third last place in the Euro Area - and the number of bankruptcies in 2016, although lower than the peak of 2014 - 12,000 against 14,000 - it was still double respect to 2007²²).

In addition, must be reported that, as the above analysis shows, the stability of recovery rates during the years (instead of improving) that is affected by the high average duration (around 7 years) of debt collection procedures, in turn closely connected with the well-known slowness of the Italian judicial system. The problem of slow procedures is accentuated in periods of economic recession because the "technical disposal capacity" of the courts tends to be constant in the short term period. If the number of courts and magistrates remains unchanged and do not have significant changes in processing methods (for example, thanks to the introduction of new technologies), the number of recovery procedures that will be possible to close in a year will be more or less constant. In a phase of strong growth of distressed credits, such as that recorded in the years of the crisis, this will be reflected in an increase in arrears and, consequently, in the average closing times of the procedures. By the way, about this issue, the Government tried recently to intervene particularly through some new regulations (such as the Legislative Decree n. 83/2015 and n.59/2016²³) as well as significant investments in digitization which enabled the start of a series of new telematic services active nowadays in the Ministry of Justice web portal.

In order to provide an overview, must be considered also other recent work by the Italian legislator to introduce new and more effective instruments of enforcement

²² JORIO, VELLA, CLARICH, *I crediti deteriorate nelle banche italiane*, Giappichelli 2017

²³ Concerning an improvement of sales procedures and enforcement of the collateral also through the computerization of judicial auctions

in terms of individual credit (think of the so-called “Banche” Decree of which to the law n. 119/2016²⁴) as well as new and more effective procedures of restructuring (consider, in particular, the law No. 132/2015 on “arrangement with creditors” and restructuring agreements, issued with the aim of promoting, in the short term, a reduction in the purchase price discount²⁵ and, in the long run, a balance between the volume of NPL and total bank loans).

Given the strong systemic effects of the NPL problem and its management, is easily understandable why governments and supervisors have begun to deal with it and are still nowadays active in order to free banks from deteriorated credit exposures as soon as possible. In fact, a reduction of NPLs in the portfolio led to many beneficial effects on the system, first of all in terms of an objective lowering risks and a capital strengthening but also with a view to reporting intermediaries on a balance plan that is indispensable for the recovery of a normal operativity and, in particular, a physiological credit lending.

In order to reduce the amount on NPLs can be found two lines of action: a first line is to stress -banks to organize themselves to manage the phenomenon and strengthen the information bases for monitoring and managing impaired loans; a second one is instead aimed at introducing system solutions for promote the disposal of NPLs and accelerate their recovery processes.

²⁴ With which were introduced the “non-possessory” pladge institutions and the Marcian pact

²⁵ that means an higher selling price of NPLs for commercial banks

Chapter 2

Strategies to manage non-performing loans

2.1 Internal management vs outsourcing - 2.2 Sale of the portfolio - 2.3
Securitization - 2.4 Bad Bank

2.1 Internal management vs outsourcing

In this section the two strategies for managing non-performing loans will be treated, representing, in general, two valid alternatives useful for solving the problem. In the first two subparagraphs the two modalities will be presented and in the third the main differences as well as pros and cons of each one.

2.1.1 Internal management

Waiting for a stabilization in the general scenario and, at the Italian and maybe European level, whether or not to take a system solution, banks, in addition to reducing the duration of litigation, must obviously equip themselves in order to maximize credit recovery. This objective depends, to a certain extent, on the characteristics of non-performing exposures but, generally, it presupposes improvement in terms of efficiency in the process used to recover credits and, above all, the increase in quality of the information available. In fact, as shown by several parties, data associated to impaired loans are often inaccurate. Only recently, however, banks and other specialized institutions have begun to increase their own investments in Information Technology and in “cleaning” the existing data bases, even as a result of the objective weakness, emerged during the crisis, in the ability of intermediaries to efficiently oversee collection and informatic organization of

information on contracts, procedures and collaterals.

Until a few years ago the organizational arrangements of banks in the credit sector were mainly defined according to the lending of the loans and credit monitoring. The attention devoted to the phase of credit recovery was much lower. At this stage, evidently considered to be scarce added value and with purely administrative connotations, have often been assigned insufficient resources and staff.

The process was typically characterized by low level of computerization as well as organized databases; moreover, the processing methods mainly where mainly carried with paper. As a consequence, it has experienced difficulties in managing a high flow of abnormal positions. Processing times have been lengthened, with negative impacts also on the capacity of recovery, which is closely connected with the timeliness of the actions started by the intermediary. In fact, On the NPL market only few specialized operators are active, which pursue double digit rates of yield. Part of their success is due to the inability of the banking system to extract value from this line of business.

More recently it has made its way to some banks the awareness that the management of impaired loans can constitute an important profit center, through the registration of write-backs as well as by reducing the adjustments. The intermediaries who have perceived this opportunity they have revised their business model, concentrating it on the recovery activity; others are reacting by improving their management skills in NPLs, with for example the creation of separate organizational units. The first results, although they are related to a still limited number of intermediaries, appear encouraging²⁶.

However, the management of impaired loans is not simple, because it involves many areas of operativity (from legal, commercial, to controls), requires multiple specialist knowledge (legal, economic, statistics), organizational skills and technological support. In order to tackle the problem of impaired loans is necessary

²⁶ C.BARBAGALLO, *I crediti deteriorati nelle banche italiane: problematiche e tendenze recenti*, Bank of Italy, Rome 6 June 2017

to start from the definition of the strategies and intervene on all the different stages of the credit process, in order to limit the entry of new anomalous loans and increase the number of recovery “*in bonis*”.

The analyzes carried out highlighted that often, in the past, the involvement of top management in defining the strategic guidelines in order to manage impaired loans often result lacking. In industrial plans, for example, there were absent or very lacking references to objectives on the level of abnormal items and their management methods.

The Vigilance however is urging a decisive change. Goes in this direction the non-binding²⁷ guidelines on impaired loans recently published by the Mechanism supervisory authority (ECB Banking Supervision). The guidelines are in substantial continuity with the Italian legislation on the subject, for most of them referring to the relevant legislation, with the aim of summarize harmonized best practices in a single document.

The main thematic areas covered by the guidance are²⁸:

- *Management strategy of NPLs*: Elaboration of a strategy and a plan for the management of NPLs to be integrated into the business plan and communicated annually to the ECB. The first step is to evaluate and review on a regular basis the context in which the bank operates both internally speaking by assess its own capacity to address the issue and externally by studying the macroeconomic environment as well as actors (servicers, investors, ecc.), regulations, taxation and so on. As a second step, the bank should set goals of NPL reduction in the long, medium (3 years) and short term (1 year), it should also develop an operational plan providing the banking supervision authority a summary of the management strategies and objectives for NPLs. In fact, banks are expected to share their own NPL strategy (operational plan included) with the ECB supervisory team in the first quarter of each year. The report must be supplied in the same format,

²⁷ Any deviations however must be explained and motivated upon request of the Supervisory Authority.

²⁸ *Linee guida BCE per le banche sui crediti deteriorati: Le novità in ambito normativo e l'approccio PwC*, September 2016

inserting the progress of the last 12 months and provided on an annual basis. Management must approve this document before sending to the authority.

- *Governance and operational structure*: the role of the top management of banks and, specifically, of the board administration in the management of impaired loans consists in the full involvement of the organ with strategic supervision function in the definition and monitoring of the NPL management strategy. This body must, inter alia, define and update annually the related operational plan, evaluating periodically the implementation status and taking care of any deviations from the established objectives. Operatively speaking banks have to create separated and specialized unit for NPLs with clear criteria for passing attribution to one unit to another and for management of collaterals. Another important request is to adopt a structured approach of segmentation of portfolios by classes of debtors with similar characteristics which require similar treatment. Moreover, intermediaries must ensure the presence of infrastructures adequate for units dedicated to NPLs and related control functions (eg system computer, tools, access to external register, possible grant measures). For what concerns the control framework banks should formulate clear connected guidelines for recovery of NPLs on these themes:
 - management of delays of payment/NPL;
 - measures of forbearance;
 - debt collection, liquidation and executive measures to collect the credit;
 - provision.

Finally, it's also important the monitoring's phase that consist in setting up an *early warning* system in order to promptly identify signals of deterioration. At the basis of the system there is the elaboration of key performance indicators (KPI) which allows the intermediary to monitor the progresses made in NPL recovery activities and identify possible signals of warning. Moreover, they should implement a workflow (which provide alerts and actions verification) to ensure effective and efficient procedures. ECB suggests grouping the KPIs into the following categories:

- aggregate measures of NPLs;
- customer commitment and cash recoveries;
- concession measures (eg redefault rates);
- liquidations;
- other (income statement items, ex-guarantees, outsourcing, etc.);

a) *Forbearance*: The focus is on the sustainability of the measures of concession selected and procedures for the recognition of these measures. It is useful to distinguish between short and long-term options included in the planned concession measure. The long-term sustainable concession options have the following features:

- the debtor has suffered an identifiable event that has caused financial problems but can cope with the new plan;
- include all or a large part of late payments;
- no long-term measures were previously recognized

Short-term options face difficulties of temporary nature (maximum 2 years) and should be considered sustainable only under strict conditions.

In the forbearance process, banks should always implement standardized grant measures wherever possible and compare them with other recovery options of NPLs (eg judicial) before arriving at one decision. Moreover, it is always necessary to carry out an assessment of the solvency of the debtor and on the borrowing capacity of the client or project based on all the information available for the intermediary.

b) *Detection of NPLs*: intermediaries should apply the prudential definition of NPE.

NPEs are positions that reflect one or both of the following criteria:

- Exposures expired longer than 90 days;
- the debtor was assessed with probable default;

They should also adopt internal policies to the bank that specify the criterion for the identification of the expired exposure, for the "Probable default" and the criteria identification for the return *in bonis* of the forbore. Moreover the EBA leaves to intermediaries also the definition of the treatment for the "*pulling effect*". This term,

as mentioned in the first chapter, *“is related to the threshold in terms of a percentage of the total credit obligations of an obligor that indicates when all exposures of an obligor should be considered non-performing. This means that for the purpose of supervisory reporting if 20% of exposures of one obligor are classified as non-performing all other exposures to this obligor should also be reported as non-performing.”*²⁹

In addition, as stated in the first chapter *“the pulling effect is in practice only applicable to retail exposures where the definition of default is applied at the facility level. In all other cases, i.e. where the definition of default is applied at the obligor level, if one exposure is considered defaulted then all other exposures also have to be classified as defaulted and therefore all exposures of the obligor are classified as non-performing.”*³⁰

- c) *Provisioning policies and cancellation of NPL:* Consistent with the current supervisory provisions the bank should formalize credit assessment policies that are as complete as possible and guarantee the consistency of the applied criteria³¹. The use of managerial discretion is regulated in the course evaluation and subject to appropriate supervision. In particular, banks:
- i. Should define the criteria for identifying the positions whose specific value adjustments are made determined on a lump sum basis (for example, for positions below a certain amount), also identifying the methodologies and parameters to be used for estimating the relative provisions; these parameters (for example, loss rates for unsecured and guaranteed) must be identified and updated through statistically robust analyzes, which they also take into account the historical observation of data differentiated by types of portfolios. On

²⁹ Final report on the application of the definition of default, EBA

³⁰ Final report on the application of the definition of default, EBA

³¹ BANK OF ITALY, *Linee Guida per le banche Less Significant italiane in materia di gestione di crediti deteriorati*, September 2017

Supervisory request, the bank must be able to demonstrate the goodness of the parameters themselves;

- ii. define the criteria to identify the positions whose specific value adjustments are analytically determined and to identify when the assessment should be performed according to a continuity operational scenario or according to a scenario of termination of the debtor's business. In this context, the banks define the methods to be used to estimate future cash flows that can be produced by the debtor for the payment of the remaining debt (in case of business continuity scenario) and the recoverable value of collateral (in the event of a scenario termination of the debtor's activity);
- iii. establish criteria for estimating potential losses from exposures in the form of guarantees and commitments, based on forecast cash flows or conversion factors determined on the basis of recorded historical experiences;
- iv. write-backs of value only when there is objective evidence that the reduction in value has become less than the amount previously accounted for;
- v. proceed promptly with the accounting cancellation (*write-off*) of exposures for the amount deemed irrecoverable.

d) *Evaluation of real estate collaterals*: Banks prepare and formalize procedures that guarantee the availability of valuations complete, updated and accurate. Banks should:

- i. make use of experts - internal or external - independent, from the organizational point of view, from process of lending and having the necessary qualifications and skills, avoiding excessive concentration of evaluations on one or a few subjects;
- ii. check the actions of the subjects referred to in point 1 above;

check at least once a year the value of the buildings used to guarantee the NPL; with purpose of determining the value of credit exposures secured by real estate can be used statistical methods for the calculation of the value of the buildings under guarantee, provided that exposures have a gross value not exceeding 150,000 euros

2.1.2 Outsourcing

An alternative way of managing impaired loans consists in outsourcing them to Servicers companies.

A Servicer is an intermediary to which a subject, not necessarily a bank, on an ongoing and systematic basis, it gives, generally pro solute and for a payback, impaired assets.

The assignee's task is to provide a recovery of these credits in less time, to a greater extent and at better cost conditions compared to what would happen in case of non-transfer and therefore of management through the internal structures of the transferor.

After an assessment of the opportunities and risks, the bank can outsource the management of non-performing loans, by contacting an independent subject servicer; the mandate agreement - assisted by a general power of attorney which may in addition to carrying out the necessary legal actions, to define agreements, transactions, repayment plans and moratoria - establishes the width of the tasks identifying the receivables under management by amount and category³².

It is important to establish the timing of assignment of tasks in relation to the moment in which the default in the credit relationship occurs, as the timeliness of the intervention is a direct function of the level of its success and therefore determines its costs, especially if, as in majority of the cases, the commissions are correlated exclusively to the result and not to the burden of management.

If a bank decides to outsource the management of the recovery, it is appropriate that the assignment to the servicer will be conferred as soon as the exposures have been revoked. In fact, timeliness plays an important role for two reasons:

- a) has an immediate substitutive effect of the commitment of the internal structure at a fixed cost;

³² D. CRIVELLARI, *Recupero crediti: dal contratto di servicing alla "business-line" bancaria*, Amministrazione & Finanza n.20/1999.

- b) a correct professional approach between servicer and debtor reduces the risks that the latter provides to raise technical defenses or behaviors such as to affect an economic management of the relationship in the continuation.

The mandate contract usually also establishes the deadline within which the management activity must be completed. The topic is particularly relevant as it is reconnected to the creditor's expectation in terms of time / expected results. In the event that the activity is merely tax collection (consumer credit, mortgage installments, trade receivables, leasing fees, etc.) it is undoubtedly essential to set a time limit for the servicer to intervene as the creditor entity must then assume decisions resulting from the result (contract resolution, for example).

In the management of ordinary credit in litigation (or in any case of compulsory relationships resulting from already resolved credit agreements), on the other hand, setting the time limit depends on the degree of outsourcing of the management that the creditor want to achieve.

On one hand, the servicer can be given the role of "*deterrent*" aimed at resolving the cases of temporary or partial difficulties by exploiting the useful circumstance that a stranger to the relation can, with due determination and within the limits of legality, obtain from the debtor the 'fulfillment of the obligation because it is intimidated by the timeliness of the intervention. Therefore, short time limits of the assignment can be set in these cases. However, since it is not easy to discern these cases from the more complex ones, using the servicer will prove to be more expensive and less effective. The servicer, in fact, having short times to get the result, will tend to activate more for cases of simpler and faster resolution neglecting others. However, having to bear the management charges for all the tasks assigned to it, it will tend to request higher levels of remuneration at the time of the contract. Moreover, the uncertainty about the amount of practices to return to the management of the creditor because not resolved, will prevent the latter from radically downsizing its internal structures or converting it to other functions, not benefiting, in the final analysis, of significant containment in the related costs³³.

³³ D. CRIVELLARI, *Recupero crediti: dal contratto di servicing alla "business-line" bancaria*, Amministrazione & Finanza n.20/1999.

On the other hand, the assignment to the servicer of *sine die* or long-term assignments, allows the creditor to deconstruct significantly some areas for the outsourced sector, eliminating its costs.

According to the opinion of Dino Crivellari, the cost / benefit ratio reaches the optimum point when a clause is provided in the contract that allows the client to cease the contract if there are facts that make the servicer's activity not dissimilar from that which the creditor could normal conduct with its own internal structure at a fixed cost (for example in the presence of bankruptcy proceedings).

In these circumstances, in fact, outsourcing of variable-cost resources remunerated as a function of the final result, loses its effectiveness due to the fact that the outcome of the result is not foreseeable in the expected time. It therefore follows that the servicer will ask for management costs that are not different from those of the creditor but with the difference that the degree of interest and therefore proactivity of the servicer will be lower than that of the creditor.

Another important point of analysis is represented by the setting the limits of autonomy. This represents a complex task, given that the relationship between the two counterparts is sometimes conflictual: the servicer, typically remunerated in the function of the result, may have different objectives from those of the transferring bank tending to minimize management costs and, therefore, to have a level of acceptability of the decision, especially in excerpts, lower; in other cases, the bank may prefer faster recoveries even if less, while the servicer, who does not supports financial costs but only operational, tends to achieve better results even if with re-entries delayed over time.

The tariff structure of the servicing contract typically consists of three elements³⁴:

- a) fixed commissions;
- b) commissions variable according to the result;

³⁴ ³⁴ Dino Crivellari, *Recupero crediti: dal contratto di servicing alla "business-line" bancaria*, Amministrazione & Finanza n.20/1999.

- c) reimbursement of miscellaneous charges and legal fees.

Fixed fees, usually annual for each position to be managed, depend on the installation costs, the quantity of assignments conferred and the level of automation in the transfer of data from the originator. Since the costs of implementing an adequate IT support are not irrelevant, the more the relationship between the principal and the servicer is stable and durable and the more the portfolio is conspicuous, the lower will be the fixed unit fees.

The *variable commissions*, on the other hand, are only realizable in the presence of collections and are established in relation to two factors:

- a) the degree of recoverability;
- b) the expected time.

Usually, they are therefore diversified on the basis of the credit to be managed, for example, unsecured or mortgage backed, and on the basis of the needs of the principal in terms of orientation to the speed of the achievement or to the absolute value of recovery.

Also in this case, when deciding the structure of the variables commissions to pay, the contraindications connected to the progressive lower interest of the servicer in relation to the passage of time must be considered. In fact, the servicer is interested in addition to the achievement of the objective also to its realization in the shortest time possible.

The Bank must therefore weigh well the structuring of a curve (obviously decreasing according to time) of the commissions in order to avoid that the latter crosses the line that represents the degree of interest of the servicer to commit to the result. The risk in these cases is therefore that with the passage of time and the decrease of the fees, the servicer tends to operate with less determination in the most complex positions.

Another element to consider in determining the tariffs is the amount of credit to be recovered. It is thought that the greater it is the lower amount should be the rate applied to the result for the decreasing impact of the structural costs compared to the higher revenue in absolute terms. This consideration is not true, however, if one

considers time and not the degree of difficulty. In fact, the higher the value of the litigation and the longer it takes to make it happen. It may seem strange, but it has been observed empirically that there are more difficulties in realizing more modest credits than in medium-large ones. The reason lies in the type of debtor: the modest amount is usually found in consumer credit where it is very unlikely that the debtor has residual income spots attackable for recovery. Basically, in these cases the debtor has little or nothing to lose and therefore it will be necessary to follow him constantly in a long but possible return, which is why the burden of the servicer will be greater and consequently also the tariff level offered by the creditor.

For medium and medium-large positions, on the other hand, there are usually counterparties such as small businesses, artisans, traders who are interested in continuing their business and therefore more willing to deal with them. It therefore follows that the possibilities of recover are, generally, greater.

However, the time tends to expand anyway, not so much with regard to the realization of the credit but for the achievement of a settlement agreement or extension which is usually preceded by legal actions aimed at favoring the negotiating position of the creditor and preventing behavior of defense of the responsive assets assumed by the debtor forcing the creditor itself to actions such as the instance of bankruptcy that will led to lose the credit.

Finally, as regards the legal and accessory costs, there are various solutions in practice ranging from being totally paid to the servicer, making it more prudent in the creation of legal safeguards to defend the responding assets, instead being borne by the principal would make the servicer less critical in the use of legal proceedings. According to Crivellari, in this case, a good combination of the interests that do not coincide between the principal and the servicer is to neutralize these costs, if not recovered, for the purpose of the fees due to the servicer without being held by the latter.

Given that the outsourcing contract must consider objectives, costs, behaviors and responsibilities - elements that can set up a bank and servicer on positions that sometimes do not coincide - in the implementation of the choices of outsourcing it must be established whether or not to renounce the management of a whole phase

of the activity on a permanent basis.

Positively assessed the convenience to make managing the dispute outside, the next step is the disinvestment of the its own dedicated internal structure, eliminating professionally qualified resources for the formation of which investments are not negligible: as can be to guess, it is a choice not easily reversible, and that once completed, conditions for a long-time future operational strategy.

A balanced and effective outsourcing contract for credit management in litigation is the result of the correct weighting of a series of factors (objectives, risks, costs, behaviors, responsibilities) that see servicer and client on positions not always coincident, as shown above.

Despite the exhortation to set the conventional relationship according to the logics of the partnership, then, in practice, we realize that the parties tend however each to maximize their own results as after all is right that is in any business relationship between companies.

But critical credit management, especially for banks, is not a mere one accident, even ineliminable, as it happens for any enterprise that sells its goods or services. It is a permanent factor in the process production a bit like the production waste for a manufacturing company.

This consideration weighs heavily on outsourcing choices.

A balanced solution that cancels this risk is to make sure that it is the bank to equip itself with its own operating structure with a method similar to that of the servicer with particular reference to the emphasis on variables cost management function of the result.

This approach, from a general point of view, is to be framed in the widest phenomenon that sees the great structures engaged to articulate in "centers of responsibility ", subjects to the central strategic command, but more autonomous on the operational plan and more committed to the objectives.

Even Italian banks, regardless of the choice between "multi-functional group" or "Universal bank", have long taken this path from a public type's approach where the responsibility of the procedures was premium compared to that on achieving results.

It is natural to imagine this process of spreading responsibility managerial for objectives more immediately applicable to typical commercial functions. It is more difficult to imagine it in the context of debt collection, even for the Italian banking tradition that has always seen the sector in a specialist and mainly administrative light.

It is easier instead, to think of recovery as a business-line, aiming to transform what until recently was seen only as a "center of cost "in a" profit center ". It is a matter of acquiring a working method oriented towards economic and also objectives not towards the mere administration of litigation, equipping itself with the same instruments of the professional servicer.

A first concrete approach is to set up an *ad hoc* body, controlled by the bank, made responsible for the objectives, whose efficiency becomes measurable if it has sufficient managerial and economic autonomy, to be loaded with all stages of the production process after the onset of the fiduciary crisis between bank and borrower. This solution, called "*internal outsourcing*", overcomes some of the problems which we have previously mentioned about outsourcing and is particularly suitable for multi-functional groups where the servicer favors single management hand for the Group.

2.1.3 Internal management vs outsourcing: the differences

Comparing now the two solutions studied before for the maintenance of impaired loans in the banking book, it is evident how the assignment to third parties allows the bank to benefit from a number of advantages such as³⁵:

- A reduction of operating costs, through the transformation of fixed costs into variable costs, which are related to the collections on assigned positions (net or gross of expenses incurred);

³⁵ ASSBB, *Osservatorio Monetario Università Cattolica*, 2015

- free up production capacity of the bank, since the strong growth of impaired credit does not have led to an equal growth of the structures of internal management with consequent overload for the managers of the bank;
- have access to the best local practice on the subject of recovery, with consequent improvement in recovery performance.

On the other hand, however, the assignment of packages of impaired positions to third parties requires the creditor to be equipped with monitoring tools and management skills that are not typical of the banking structures usually responsible for overseeing these loans.

When assigning the portfolios is also appropriate to create a fair competitive environment among the operators in order to obtain the best conditions, as well as to define *Key Performance Indicators* (KPI) of reference (for example, target recovery rates, amounts of legal fees, etc.) to be respected throughout the duration of the assignment. These KPIs should then be monitored over time and compared with market benchmarks by placing therefore a synthesis dashboard useful for monitoring the results.

Internal management on the other side has the following benefits:

- the possibility of defining and pursuing an autonomous recovery strategy in line with the credit directives that the bank has set itself. This advantage is particularly felt for the large and / or complex positions;
- to be able to track the capacity for recovery on individual portfolio segments in order to build adequate statistics for risk management purposes.

On the other hand, internal management presents some problems that must be appropriately addressed and managed, such as:

- the management of external lawyers: should provide a standard convention with clear declination of decision-making powers with reference to actions to be taken on individuals dossiers and costs to be met for the completion of their services;
- the management of the practices: should provide a system of allocation of practices that allows to prioritize dossiers with a greater probability of collection;

- monitoring: it is advisable to monitor the workloads of internal managers as well as external lawyers, as well as the performance of the individual managers and lawyers;
- the definition of guidelines that managers must follow with reference to the strategies of extrajudicial recovery as well as legal with clear indication of how to pursue the out-of-court recovery effort;

If the above considerations could make incline for the outsourcing of the activity management, in reality most of the banks, in these years of significant growth in impaired loans, has not made massive recourse of outsourcing for the recovery service.

Only now, following the focus placed by the supervisory authorities (ECB in particular) on credit in general, on the high stock of NPL and its limited capacity recovery in particular, some banks are reviewing its overall management model, assessing the opportunity to outsource the management of some credit clusters and to pursue the disposal of others³⁶.

2.2 Sale of the portfolio

The sale of impaired loans allows the bank to achieve two types of benefits. The first type concerns the benefits resulting from the re-focusing of credit management on the positions considered *core*, with consequent improvement of the efficiency and effectiveness of the processes management. The second type concerns the impact of the selling of these credits on the balance sheet of the bank. The benefits mainly concern the following profiles³⁷:

- *Profitability*: Through the sale of assets the bank has got new liquidity that it can be used for the granting of new loans that, unlike those that have deteriorated and sold, produce flows of interest income;

³⁶ Osservatorio Monetario Università Cattolica 2015

³⁷ Osservatorio Monetario Università Cattolica 2015

- *Capitalization*: The elimination from the balance sheet of posts to which are associated high weightings for the determination of minimum requirements of capital allows the bank to recover some capital which, as in the previous point, makes it possible to grant new profitable loans;
- *Risk of the bank*: The sale of impaired assets improves market risk assessment and may result in benefits also in terms of rating (with positive repercussions on wholesale deposits) and on the valuation of shares.

Given these benefits, the sale can also generate some charges and disadvantages.

Among these the main is given by the possibility that there is a divergence between the net value of the loans recorded in the balance sheet (that is, in short, the nominal value of the credit minus the write-downs carried out) and their market value, or the price to which the investors are willing to buy these assets. This potential *pricing gap* determines an immediate negative effect on the income statement and on the bank's profitability. The loss recorded during the sale affects the income statement of the year in which the sale takes place for its total amount. Furthermore, if this capital loss causes a loss of income statement that also reduces the bank's capital, they can also have repercussions on banks' ability to comply with capital requirements.

As emerged by AQR, some of the major Italian banks, but also among those of smaller size, have a capital endowment lower or only slightly higher than that required by the supervisory bodies. This effectively limits the possibility for banks to absorb losses deriving from a possible *pricing gap*³⁸.

The pricing gap for these reasons is one of the main factors that until now have hindered the Italian banks' appeal to the sale of these assets and has instead encouraged them to manage them internally even if they are non “*core*” activities.

According to the operators' estimates, the entity of pricing gap is between 20% and 30% in the case of non-performing loans. The main reason for a gap between the assessment made by the banks and the market are multiple and explained like this:

- limited adjustments made by Italian banks to deteriorated positions. This tendency is partly due to the difficulties of the banks to account the rising

³⁸ ASSBB, *Osservatorio Monetario Università Cattolica*, 2015

cost of risk inside of economic accounts marked by a continuing reduction in the profitability of credit intermediation, and partly due to the penalizing tax treatment reserved in Italy for these costs. Until 2013, they were in fact only deductible to the extent of 0.3% of total loans and receivables for the remaining part they were deducted (Deferred Tax Assets) in 18 years; only from 2014 the adjustments are deductible over 5 years³⁹. Persists therefore a of competitive disadvantage compared to many European banks subject to less stringent tax regimes which causes Italian banks to limit the amount of devaluations;

- different expectations regarding performance obtainable from the management of impaired items. Considering that in recent years the level of interest rates has been decidedly low and the performance achieved by banks on the activity of credit intermediation has been equally low, discount rates used by banks to discount the expected flows from the recovery of non-performing loans are much lower than those used from potential investors, which require returns consistent with the high risk of the items purchased and that also need to recover management costs deriving from management of the transferred portfolios.

- different expectations regarding the recovery value of impaired loans and in particular those secured by real estate guarantees. To this it is useful to remember that in occasion of the AQR and after this exercise, the supervisory body has urged the banks to make a very conservative assessment of the guarantees and more generally the loan portfolio. Faced with a future and desired recovery the banks believe they can benefit from a recovery in value of these positions. These expectations clash with the even more conservative assessments of investors which also negatively affect the time required for the conclusion of the judicial and legal proceedings enforcement of guarantees that are particularly long in our country. It is evident that the extent of the benefits and the possible charges associated with the sale of

³⁹ Osservatorio Monetario Università Cattolica 2015

impaired loans depends both on the situation of each bank in terms of liquidity and capitalization both by the severity of the credit deterioration. With reference to the first aspect, the situation of the Italian banking system appears rather variegated: next to banks that have carried out in recent years, heavy devaluations, approaching book values to market values, and have at the same time adjusted its assets to the highest requirements imposed by supervision, there are banks for which the relationship between the adjustments made and the aggregate of impaired items is still rather limited and equally low are the capital ratios. For the banks of this second type, the obstacles to the sale of bad debts appears to be greater. With reference to the second aspect, the selling of the credits appears a solution usually more suitable for suffering credits. Consider the factors that cause a potential pricing gap, loans that are more likely to be the object of assignment are those characterized by a bigger coverage rate, that is, an appropriate adjustment fund that reduces the possible gap between the balance sheet value and the sale / purchase price and between the latter and the recovery value⁴⁰.

Today the market for the sale of non-performing loans in Italy is seen growing for a series of factors that affect both the economic situation of our country, both that of the international contest. Among the reasons relating to the domestic economy there are:

- a) signs of recovery of the economy as well as of the real estate market;
- b) the huge mass of non-performing loans, as well as in some cases the significant increase in coverage of the last 2 years;
- c) the proposed reform of the executive and real estate procedures.

These factors can act as a catalyst for a large number of international investors looking for investment opportunities in Europe.

To these are added factors related to the international context such as the achievement of a high level of competitiveness of other European markets (such as the Spanish one) that make less profitable the acquisitions of loans in those markets

⁴⁰ Osservatorio Monetario Università Cattolica 2015

and the substantial liquidity present in the system that involves a continuous lowering of returns achievable through low risk investments, for both government or senior corporate bonds.

2.3 Securitization

The securitization process as we know it today originated from the 1970s in the United States under the pressure of the government strategy to expand the offer of mortgages for the purchase of the house.

The first protagonists of securitization were two government agencies financed by the State in order to buy mortgages from banks with the aim of allowing them to increase their loan offer without the need to wait for the slow reintegration of liquidity deriving from a multi-year loan.

Under the pressure of the two agencies, known as Fannie Mae and Freddie Mac, a secondary mortgage market was created where no more only applicants (households) and lenders (banks) interacted but also third parties, such as investors, who buy mortgages from banks.

We can see the mechanism of securitization divided into three phases: in the first, the bank originates and aggregates the mortgages that are sold to a special company (*Special Purpose Vehicle*); in the second, the SPV issues and places on the market particular securities called *Mortgage Backed Securities* (MBS), so called because they are guaranteed by mortgages; in the third phase, the bank transfers the cash flow of mortgages to the vehicle company that turns it to investors as a return for the MBS. Anyway, securitization transactions may tend to have a more complex structure of the one just described, in relation to the presence of some subjects that can increase the appeal of securities and protect investors. They are represented by figures such as guarantors or *credit enhancer* that offer guarantees to cover a given percentage of the repayment value of the securities issued, *swap providers* that are the counterpart of the SPV in order to guarantee protection against interest rate and foreign exchange risks, and finally the *rating agencies* that evaluate the issue based

on the quality of the underlying assets, guarantees offered and the solvency of the guarantors. Moreover, depending on the characteristics of each operation, they can be involved other subjects such as the *arranger* that organizes the operation as a whole, the *servicer* who takes care of the collection and transfer from the seller to the transferee of the flows produced by the portfolio of assets in addition to their recovery in case of default of the debtor, function which can often be carried out by the originator himself, and finally the *investment bank* which deals with the placement of the ABS on the market.

Through securitization the originator intermediary transfers the fragmented credit risk of mortgages to an audience of final investors, carrying out a perfect risk transfer process. But not only that, the advantages for the bank also derive from the commissions received for the origination of the loan, for assessing the risk and for managing relations with the client.

In addition, by shifting mortgages away from the balance sheet, the bank manages to circumvent the regulatory capital reserve requirements that are proportional to the bank's exposure to credit risk and to use the new liquidity arising from the sale of mortgages, in others profitable activities.

The most frequent procedure to carry out the securitization consists in the creation by the bank of a legal entity, already introduced before, the *Special Purpose Vehicle* or SPV. The SPV buys mortgages from the bank and securitizes them by issuing securities that it sells to final investors. This vehicle will therefore have in the belly: on the side of the assets, mortgages, and from that of liabilities, the securities issued (MBS). As the debtors of the bank repay interest and mortgage capital, the SPV transfers the funds to the subscribers of the securities. Since there is no simultaneity between the revenues of the vehicle company deriving from the sale of the securities and the outgoings for the purchase of mortgages, the SPVs issue other short-term liabilities (*commercial papers*) that they use to raise resources in order to purchase mortgages from the bank. Once sold the MBS titles they repay the underwriters of the commercial papers that disappear from the budget.

The issue of securities that are the result of the securitization provides the

subdivision into three tranches which, in increasing order of risk and return, are: a) *senior*, b) *mezzanine*, c) *junior*. The senior tranche is destined for the more prudent investors looking for securities with a low but safe return while the junior ones to investors who are more likely to risk for higher returns. The inclusion of the various securities in the appropriate tranches is carried out by the rating agencies that have the task of assessing the risk of the collaterals that guarantees the MBS stock. To give an example, it is precisely in the junior tranche and in particular in the *equity* segment that ended the large part of the MBS guaranteed by *sub-prime* mortgages, that are the loans granted to subjects with low creditworthiness and therefore high risk of insolvency.

The rating agencies, such as Moody's, for example, had the task of assigning a risk assessment of the securities. In the senior tranche, a triple A rated shares flowed, in the mezzanine we went from double A to double B while the equity segment of the junior tranche was not even classified.

These institutions therefore played a fundamental role in assessing (bad) the riskiness of the securities and represented one of the causes of the crisis that broke out in 2007, so much that the charge for the conflict of interests fell on them. The contradiction of the rating agencies regards the nature of the person who pays them, that is the bank and not the investor to whom the securities valuation service is offered. It is therefore inevitable to suspect a collusion of interests between these and the issuing banks of the securities that has made the ratings of the MBS rise, allowing a wider placement.

In addition, it is also useful to remember that the commission that was assigned to the agencies for the evaluation of a structured finance security, such as an MBS or a CDO, was twice that of an ordinary security and in fact in 2006 Moody's obtained 44% of its revenue from the risk classification of structured finance securities⁴¹.

Even though mortgages lend themselves particularly well to securitization, since they historically ensured constant and secure cash flows, they are not the only

⁴¹ Assbb, *La crisi dei mutui subprime*, Osservatorio Monetario, February 2008

possible guarantees for structured finance securities. Securities in general are in fact defined as Asset Backed Securities (ABS) because they are guaranteed, in fact, by a collateral represented by a pool of assets.

I report the classification carried out by " Assbb, Osservatorio Monetario, 2008 ":

- *Mortgage Backed Securities* (MBS), that is, securities with collateral mortgage loans;
- *Collateralized Debt Obligations* (CDO), that is, securities with a portfolio of other securities as collateral;
- *Other ABS*, that is, securities with collateral for other different types of credit, typically consumer credit.

The securitization process is almost unchanged, compared to that already analyzed for the MBS securities, and consists in the packaging of securities, usually with fixed income, in a CDO that is then placed on the market by the Special Purpose Vehicle.

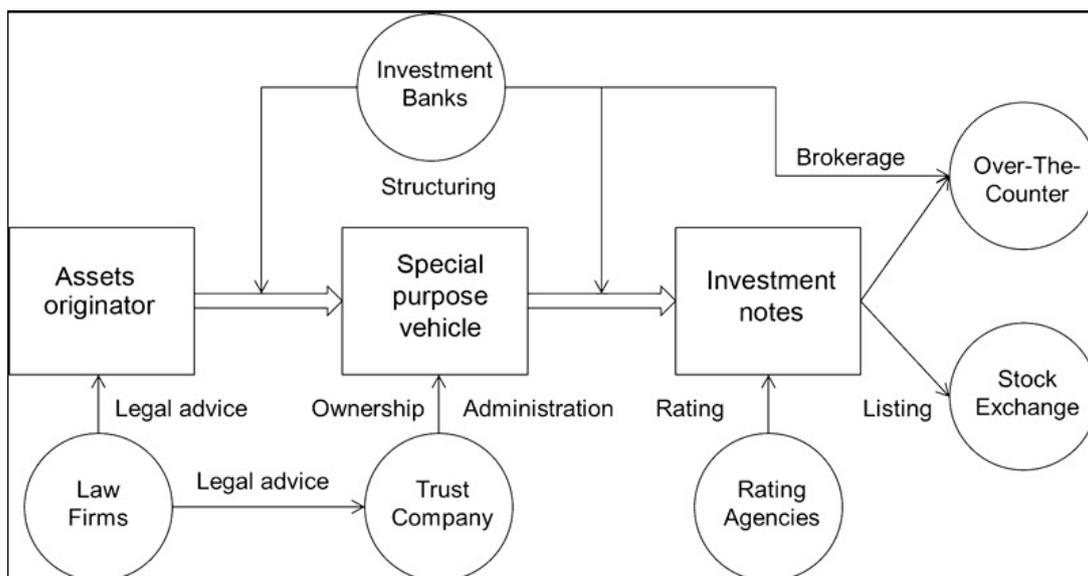


Figure 15: Securitization scheme
Source: Researchgate.net

The cash flows of the securities used as collateral are then turned over to the CDO underwriters or to the final investors. What changes is only the guarantee behind structured bonds, no more mortgage loans but securities portfolios. "CDOs can also be securitized to other CDOs, called *CDOs squared* (CDOs squared) since they have collateral other CDOs as collateral. With the same mechanism it is also possible to construct CDO to the cube (*CDOs cubed*), with the CDOs squared as collateral.

Potentially CDOs can be built on CDO indefinitely⁴².”.

The table below shows the development of securitization from 2000 to 2006, taking into account the volumes of the related structured securities, and the subsequent descending parabola from the outbreak of the crisis.

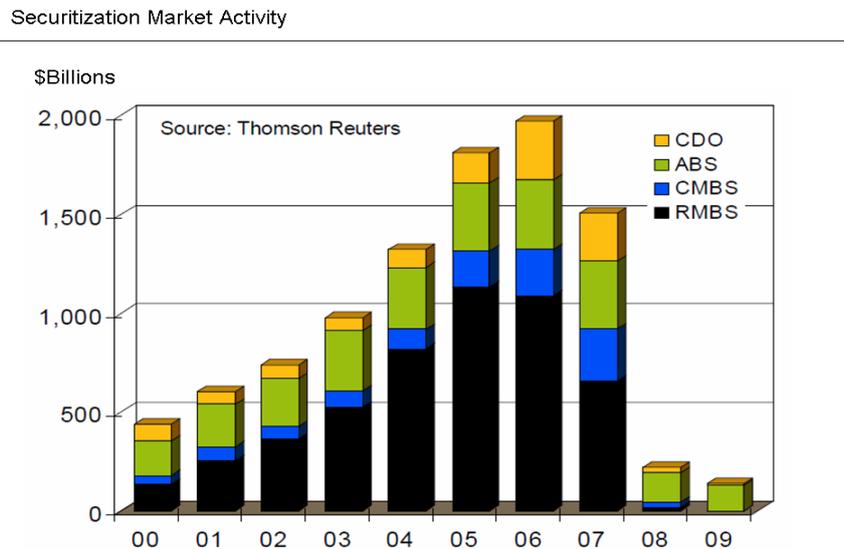


Figure 16: Securitization's trend
Source: Thomson Reuters

The securitization itself represented a great invention for finance that, if done well, allowed the fragmentation and transfer of credit risks and the whole series of benefits we have already discussed.

However, can be traced back to at least three contraindications:

1. The possibility of manifestation of a systemic risk due to the fragmentation of credit risks and the interconnection between intermediaries. The structural complexity of securities deriving from securitization (*MBS, CDOs squared*) leads to a difficult assessment of their risk and therefore prevents a prudent investment;

⁴² . CUSSEDDU, *La cartolarizzazione e l'esplosione della crisi finanziaria*, Etica Onlus, 2011

2. The accumulation in the portfolios of banks and investors more prone to the risk of so-called *toxic waste*, that is, those securities belonging to the *equity* category with a high degree of risk, such as MBS related to *sub-prime*.
3. The loss of the incentive to select the best borrowers (*screening*) and their subsequent monitoring (*monitoring*) due to the new banking model *originate-to-distribute*.

The securitization technique, in fact, involved some implications that played a key role in the expansion of the global crisis. First of all, the credit model originate-and-distribute based precisely on the securitization of loans made banks' credit standards lighten. These, in other words, granted loans with greater ease even to subjects that had not been financed until recently, because they did not have the right guarantees. We are talking about so-called *sub-prime* mortgages so defined because it is granted to untrustworthy borrowers because it is usually free of income, labor and assets (*No Income, No Job, No Asset*). All this led to an extraordinary multiplication of the credit volume amplified by the leverage mechanism.

2.3.1 *Securitization of non-performing loans*

In Italy the securitization is based on the the law of 30 April 1999 no. 130 on "*Disposizioni sulla cartolarizzazione dei crediti*" which gave normative recognition to the securitization transactions, filling a gap in the Italian legal system and eliminating the regulatory, civil and fiscal impediments that had made, in his absence, complicated and costly to carry out a securitization transaction in Italy.

The securitization operations usually concern performing loans, but the introduction of the above law in Italy as well as the state GACS⁴³, which we will discuss in later chapters, have also stimulated the securitization of non-performing loans for banks.

As a rule, the subject of securitization can only be credits with the following

⁴³GACS (Garanzia Cartolarizzazione Sofferenze) - The Italian State guarantee scheme for senior securities issued as part of NPL's securitization operations

characteristics:

- a. easily definable repayment terms;
- b. sufficiently long residual life;
- c. easily calculated default risk.

Except for point 2, non-performing loans would not correspond to these characteristics.

In a securitization transaction the "*temporal certainty*" aspect of the financial flows originating from the assets sold is more important than the degree of solvency of the assigned debtors, especially in view of a final investor who subscribes the securities issued by the SPV the objective of obtaining a return based on an interest rate and not on the profitability of a participation in the business risk. This is therefore one of the main reasons why the securitization mainly involved performing loans strongly characterized by a relative ease of forecasting of the relative cash flows (mortgages, leasing, consumer credit, etc.).

Despite these premises and the non-integral transfer of risk to the subscribers of the securities (as with the selling, instead), the banks can still find it advantageous to choose securitization rather than sell the loans because, in the event that there is a liquid secondary market for the securities issued by the SPVs, it is possible to obtain a better disposal price.

In this case, the credit enhancement techniques used and the ability to recover the transferred receivables are particularly important, since, unlike the securitization on performing loans, the transferred portfolio presents a considerable risk of insolvency. Another difference, moreover, concerns the ultimate purpose of the transaction, which for performing loans represents above all a practice of active management of the loan portfolio adopted as part of a long-term strategy, while for non-performing a technique of elimination from the balance sheet of impaired loans.

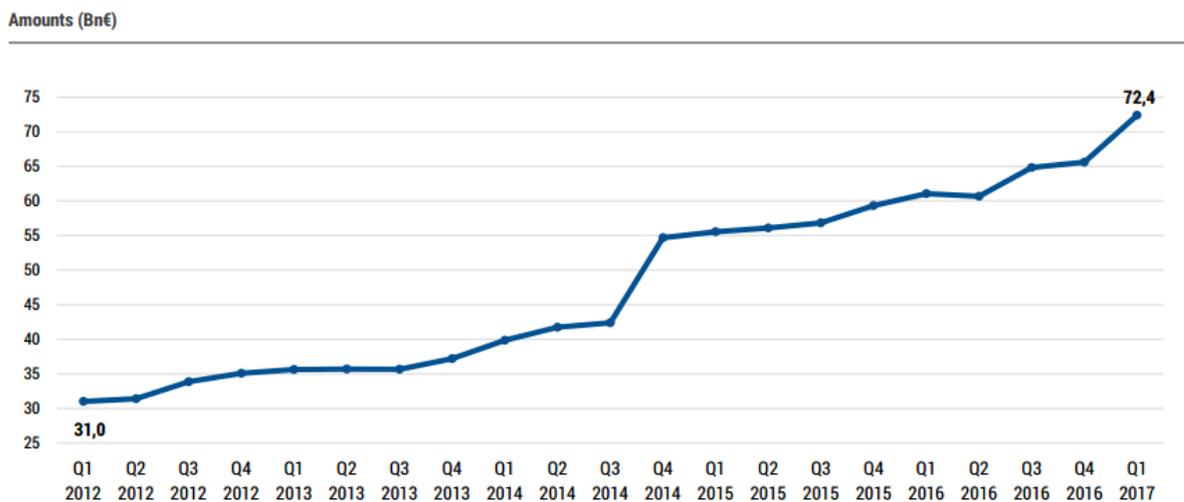


Figure 17: Securitization's trend
Source: NPL Market Watch Banca IFIS

The graph above shows the increase in the bad loans securitization that grew by 134% since 2012 reaching a new peak in Q1 of 2017.

2.4 Bad Bank

A bad bank consists in the creation of a company vehicle called Asset Management Company (AMC) in which the "toxic" assets of a bank can flow together. This term refers to the division into two of a bank, in its "good" part (good bank) and in the "bad" part (bad bank). The good bank will take care of all the healthy parts of the credit business, while the bad part will include all the so-called "toxic" activities. It is a tool used by banks to resolve crisis situations and has been repeatedly used by the European financial system in recent years. The most relevant are the NAMA in Ireland and the SAREB in Spain. "Moreover, it has received legal recognition and is expressly contemplated in the 'resolution toolbox' of the EU resolution directive (the 'BRRD')⁴⁴."

The division of the bank by itself does not represent a real strategy of solving the

⁴⁴ F.MINGUEZ, *Bad banks and their role in the deleveraging process*, November 2016

issue of non-performing loans, but it often represents the first step to foresee subsequent rehabilitation actions.

The idea and the underlying purpose of this strategy is simple: to separate problematic loans from the bank's profitable activities, since their coexistence in the same company is not only non-productive but also leads to financial, operational and management problems. The human and financial resources used to manage the NPLs can therefore be directed towards more profitable activities that generate added value.

The bad bank, as we said, is a solution to free the bank from toxic assets that represent a weight in the belly of the institutions. With the bad bank these securities are transferred to a new company so you can leave the bank free to function properly. Once the securities are isolated in the bad bank, a stock split is carried out. The form of subscription of preferred shares by the government, or the form of ordinary shares that may be sold on the market, may be used. What the bad bank will have to do next is to liquidate these securities, waiting for the market conditions to diminish the difference between the market value of assets and the nominal one. The high amount of these activities, however, for the majority of cases, requires the intervention of the States, the only candidates to provide funds for the purchase of these type of securities.

Ignazio Visco, the Governor of the Bank of Italy, has recognized the establishment of a Bad Bank as a strategic option that could raise more quickly the fate of Italian credit institutions. The objective in the short term is the improvement of bank balance sheets in order to make them more attractive to the market, and consequently strengthen the supervisory parameters, in compliance with the new Basel regulations and the results of the AQR.

As we said in the introduction to the chapter, there exists different type of this instrument (system or private, specialized in a single portfolio asset class or in different clusters of the same asset, and so on).

By the way, in all cases, it is a corporate structure established specifically to remove all bad assets (portfolios of non-performing loans) from all banks and transfer them

to the dedicated vehicle (SPV or AMC) that buys them at discounted prices. The benefits for the transferor bank are:

- a) the improvement of capital ratios as they will be able to release capital previously allocated against any losses on these loans;
- b) short-term liquidity improvement resulting from the disinvestment of these portfolios from their balance sheets which generate pay-offs in cash.

On the other hand, the AMC has the task of recovering as much as possible from such credits, having at its disposal specific tools and professional skills, as well as indeterminate horizons.

The governor of the Bank of Italy, on the examples of Spain and Ireland, had already begun to examine the idea of setting up a system bad bank since 2015, financed by public funds, in order to channel a large part of the non-performing loans of the Italian banks with the aim of reactivating a physiological credit's market. In order to understand why the bad bank solution is convenient for banks we have to think that this strategy, public bad bank in this case, is placed in an intermediate position between the strategies for the sale of the real loan on the market and internal management.

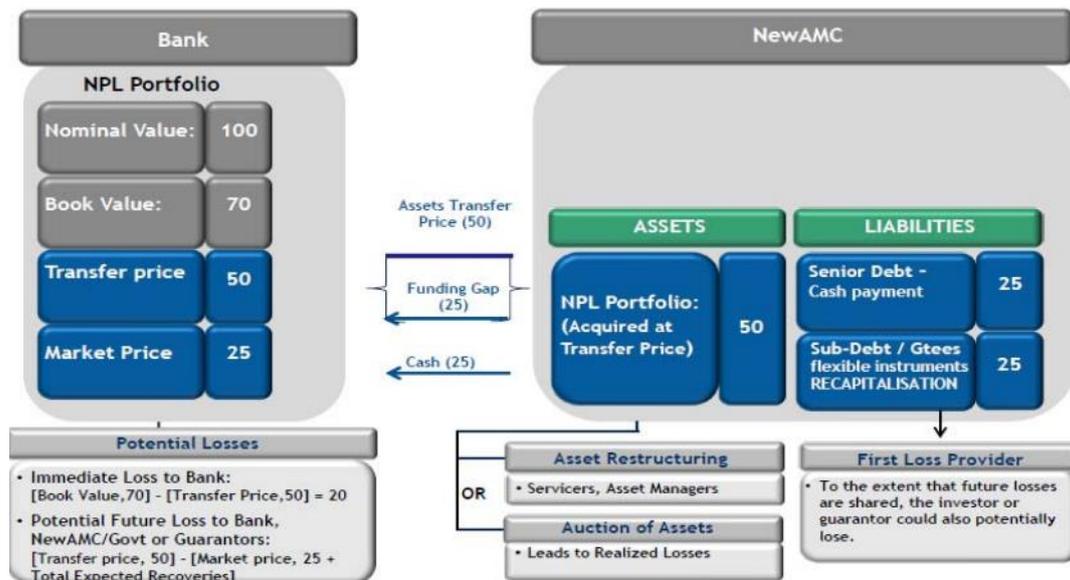


Figure 18. Bad Bank
Source: The World Bank and IFC 2012

Figure 11 makes it possible to understand how a system Bad Bank is structured. Imagining that the intermediary is forced to disinvest a NPLs portfolio with a face

value of 100 and that its book value is 70; furthermore, considering the changed economic conditions, the market value of the same has fallen to 25. Choosing the strategy of direct sales on the market, the intermediary will inevitably face a loss of 45 as it will sell the portfolio to the market price while the accounting value was 70. Instead, following the strategy of setting up an Asset Management Company, the transfer price of the portfolio to the Bad Bank will be less than the book value (70) but higher than the market value. The transfer price or long term economic value (LTEV) reflects the value that the asset could have in the hypothetical case of stabilization of the financial market. The estimate of this economic value takes place with conventional evaluation techniques approved by the European Commission. In general, we start from the market value to which we add the expected recovery within a time frame as in the AMC statute. The expected value is therefore given by a series of elements including the valuation of the collaterals, the portfolio due diligence in terms of strategies and recovery times as well as discount rates applied for the calculation of the current value. In the above example, therefore, in the case of the establishment of a system bad bank, the intermediary, at the time of the spin-off, would have recorded a loss due to the difference between the book value (70) and the transfer price (50, for example) which is less than it would have lost with the sale at the market price.

The Bad Bank, therefore, pays the transfer price to the intermediary in cash and the loss recorded by the intermediary itself as the difference between the market value and the transfer value can be covered in various ways, from the recapitalization with public money but also with notes guaranteed by the State.

As we can see from the figure above the internal structure of the balance sheet of a Bad Bank provides from the left side the assets or the NPLs portfolios purchased while on the right side the sources of financing of the company itself. In general, two macro-classes of resources can be identified with different payment priorities from which the system's Bad Bank can draw⁴⁵:

- a) senior level debt issuance that is issued and offered to an audience consisting of private investors and International Financial Institutions (such as

⁴⁵ FROB, *Asset Management Company for Assets Arising from Bank Restructuring*, November 2012

Development Banks and the International Monetary Fund). This issue has an essentially standardized layout and plans to repay the market price of the purchased NPL portfolio;

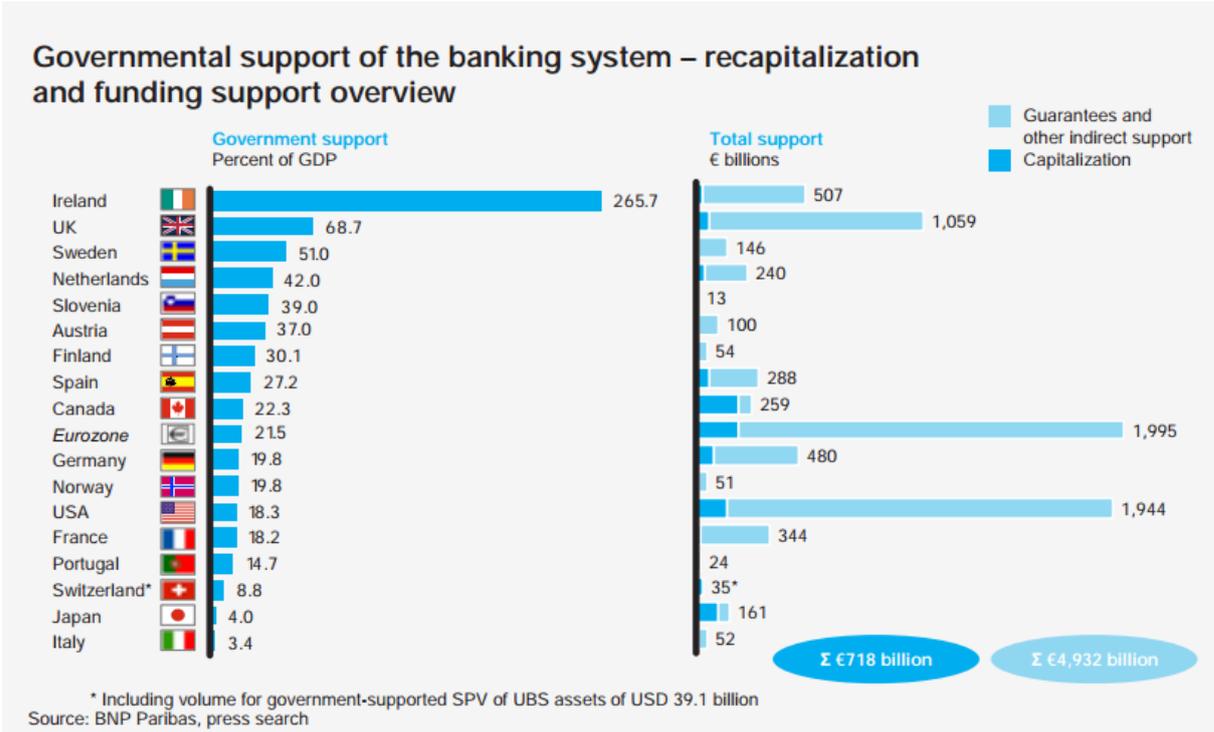
- b) issuance of subordinated debt which, in the case of a public bad bank, is provided by the government or by the International Financial Institutions and which serves to cover the difference between the market value and the transfer value. This type of instrument provides a higher risk that is remunerated with variable interest payment schemes based on the results achieved by the AMC and with a potentially unlimited upside pay-off.

Here is interesting to analyze also the impact that these type of strategy has on the citizens. The state could be able to recover from the impaired loans that it has taken on more than it has paid them, especially if the general conditions of the economy improve. It could regularly collect all interest on the funds it has placed in the banks for their recapitalization. Or, if the situation gets worse, it may end up losing money. What is certain is that the state anticipates the money that, through more or less complex mechanisms, eventually turn into public debt. Moreover, if the intervention is substantial, it could have a negative effect on the rating of the country and trigger a rise in interest paid on public securities. It is often difficult to estimate exactly the amount of doubtful loans that banks must discard to return to full operations, which usually start to decline 18/24 months after the start of the recovery. In the meantime, the burden on public funds can become very heavy.

However, there are also potential indirect benefits for citizens. If the operation is successful, the severity of the crisis can be mitigated and the timing of a recovery can actually be accelerated.

2.4.1 Bad Banks in Europe

As reported in the previous paragraphs, the theoretical tool of the bad bank, public in this case, has already been used several times in Europe to rescue banks but also, more generally, to revive a crisis economy. The figure below shows the percentage of government interventions related to the GDP of the country.



*Figure 19. Governmental support
Source: BNP Paribas, press search*

There are examples of bad banks in various European states including Spain, Ireland and Germany.

For example, in 2009 Germany set up two types of models⁴⁶:

- a. *SPV model*: The special purpose vehicles created receive assets in difficulty at a maximum discount of 10 percent of book value and issue bonds from SoFFin⁴⁷ in exchange. The SPV therefore had the role of the bad bank whose job was to liquidate the assets received, minimizing the value of these. Therefore, by receiving the SoFFin public guarantee, the banks had to pay the same annual amount to cover the difference between the nominal value and the fair value of the assets transferred.
- b. *Holding structure*: the alternative bad-bank solution offered by the German government is the holding structure scheme. This solution, designed in particular for the state owned banks known as "Landesbanken", envisaged going beyond the simple transfer of assets as the banks had the possibility of transferring whole divisions of toxic or non-strategic activities out of banking

⁴⁶ *Bad Banks: finding the right exit from the financial crisis*, McKinsey Working Papers of August 2009

⁴⁷ SoFFin: Special Fund Financial Market Stabilisation

regulation. In this case no loss was covered by the government and the shareholders of the bad bank were directly responsible for any future losses of the bad bank. Unlike the previous guaranteed scheme, the holding structure and the government offered support on re-sizing the business models of the remaining good bank thanks to the clear separation of assets. “The legal and regulatory framework put in place can offer significant relief in order more easily to separate and later run the bad bank, especially in that there are no regulatory capital requirements, no mark-to-market valuation, and no consolidation with the core bank⁴⁸.”

From the analysis carried out by McKinsey comparing the two models used in Germany, it emerges that the holding structure strategy is more favorable for the state-owned banks, as it “enables real risk transfer and thus the need re-sizing of their balance sheets”⁴⁹. However, the holding structure has very high requirements in terms of EU requirements and the respective banks or controlling entities may not be able to meet them. On the other hand, the SPV model seems to be more suited to private banks, which still have a solid financial structure and a solid business model.

A further example of setting up *bad banks* to manage the problem of NPLs is that adopted in Spain with SAREB.

The “Sociedad de Gestion de Activos procedentes de la Reestructuración Bancaria”, SAREB, is the largest bad bank experienced so far in Europe and was set up in 2012 with the € 41 billion allocated by the European fund save states for the restructuring of banks and has a 52% controlled corporate structure by the same banks while 48% by the State through the ordinary bank restructuring fund (Frob)⁵⁰.

The fact that state capital came into play forced the country to undergo a series of measures of austerity imposed by the European Commission and the ECB.

⁴⁸ Bad Banks: finding the right exit from the financial crisis, McKinsey Working Papers of August 2009

⁴⁹ Bad Banks: finding the right exit from the financial crisis, McKinsey Working Papers of August 2009

⁵⁰ <http://formiche.net/2016/02/28/viaggio-nelle-bad-bank-di-spagna-irlanda-e-germania/>

The objective pursued by SAREB is to collect suffering credits in the belly of Iberian banks and to manage them for a maximum period of 15 years. The Bad Bank was constituted under the will of the Spanish government with a view to restructuring the Spanish banking system, which included: on the one hand, the recapitalization of the banks by means of the FROB, as above, and on the other through the issuance of debt securities by the SAREB which, respecting the requirements set by the ECB, are covered by public guarantees and could therefore be repurchased by the same banks that transferred impaired loans.

It must be said, anyway, that the cleaning that the Frob can do in the balance sheets of the banks is not painless, the credits are acquired with a discount ranging from 45% to 61% of their nominal value. Shareholders and bondholders of the institutions involved (including Bankia and Banco de Valencia) take home massive losses totaling 8 billion euros.

Moreover, the financial results have not been exciting so far. The year 2014 ended with a loss for the year of 861 million, while the red of 2013 was even 2.7 billion euros. The loss for the year 2015, thanks to the reorganization of accounting, was recalculated to 103 million euros, while that of 2016 to 663 million euros. Despite, therefore, a declining rate of losses, 2016 is the fourth consecutive year that the bad bank recorded significant losses. Even though the SAREB was supposed to have produced utilizations from the second year onwards to the creation, the Chairman Jaime Echegoyen said that with the current financial and operating costs of 1.2 billion euros it did not seem reasonable to expect SAREB to turn a profit in the foreseeable future.

Another case of setting up a system *bad bank* to address the NPL problem comes from Ireland with the project NAMA: National Asset Management Agency. It was established in 2009 by the Irish government with the aim of solving the crisis in its banking sector and in particular for the five member banks: *Allied Irish Banks*, *Bank of Ireland*, the *Anglo Irish Bank*, the *Irish Notional Building Society* and the *EBS Building Society*.

The company is for 49% public and for the rest in private hands and not only operates as a bad bank but also as a bank issuing loans to the real estate sector. Since its formation it has realized liquidity for 23.7 billion euros, realized

disposals for 18.7 billion and has already repaid 16.6 billion bonds, equal to 55% of the total issued.

The Nama was a more successful project than the SAREB: the first program brought "the recovery of Irish real estate; it was characterized by a geographically diversified portfolio; it is endowed with higher quality guarantees; it has lower transfer values with consequent need for lower coverage; financing costs are cheaper as well as administrative costs."

2.4.2 Bad Banks in Italy

On 11 April 2016 a large number of banks, insurance companies, pension funds and other investors institutions decided to join the launch of an alternative investment fund called "Atlante". The creation of the Atlante fund is the last step of a series of actions set up by the government and financial sector operators trying to help the Italian banking system, whose situation, rather difficult for years, had worsened in the first years of 2016. The Atlante fund (technically a "closed reserved alternative Investment Fund") is an instrument managed by a private company, the Quaestio SGR of the financier Alessandro Penati, whose creation was coordinated with the Italian government and the main financial groups of the country. At the beginning, the endowment of the fund, that is, the capital that can invest in its "tasks", comes largely from the two main Italian banks, Unicredit and Banca Intesa, which each have allocated approximately one billion euro to the fund. Bank foundations and other institutions should invest around 500 million, while another 500 will come from Cassa Depositi e Prestiti, a formally private structure that is in fact fully controlled by the Ministry of the Economy.

Adesioni ad Atlante

Sono venute da 67 istituzioni italiane ed estere, classificabili in 4 gruppi. Impegni massimi a finanziare il fondo per gruppo di investitori

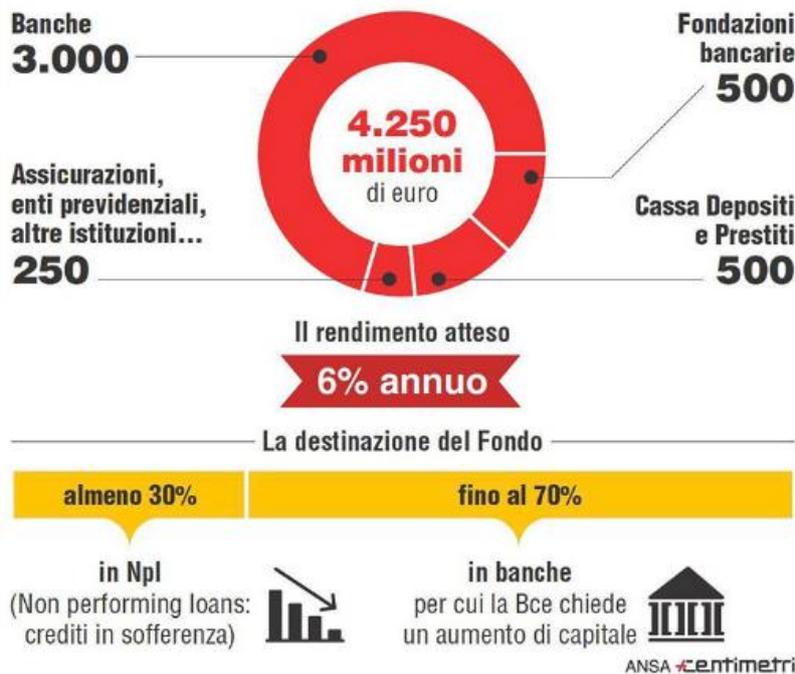


Figure 20. Atlante investors
Source: Ansa

A fundamental point is that all investors in the fund are private operators which excludes the risk that his intervention may be in conflict with the State aid framework⁵¹. This point is important because since 2015 the governor of the Bank of Italy had publicly expressed the desire to create a system bad bank and, if necessary, to do so with state aid.

In Italy, in fact, the problem of deferred loans does not derive from the irresponsible assumption of risks on the part of the system as a whole that has fueled unsustainable real estate bubbles, but rather from an "exceptional" crisis both for duration and intensity. This means that interventions aimed at relieving banks of this heavy burden can not be seen as the usual aid to people guilty of bad credit management but rather as a stimulus to revive the economy through the recovery of typical activity of banks granting loans to companies that, inevitably, has slowed down due to the huge amount of NPLs.

⁵¹ BANK OF ITALY, *Rapporto sulla stabilità finanziaria*, 2016

The idea of the Bank of Italy, therefore, was to involve the banks themselves in the cost of the operation and to make them pay the cost of guarantees. This made it easier to negotiate with Brussels and, above all, avoided on the internal level controversy over the umpteenth "gift" of the State to the Banks.

The two purposes that must be satisfied by the fund are:

- a) ensure the success of the capital increases required by the Supervisory Authority for banks faced with objective market difficulties;
- b) solve the problem of non-performing loans.



Figure 21. The two aims of the fund
Source: Ansa

Through the investments of the first type, a safety net is realized on the occasion of future capital increases of banks, starting with those already planned by Banca Popolare di Vicenza and Veneto Banca. For years, many Italian banks have been "undercapitalized", that means they have too few own resources compared to loans and other commitments that they have made and there are international regulations that establish how much "equity capital" must have a bank compared to its total commitments, in order to guarantee its stability. To remedy this situation, banks can issue new shares on the market, with an operation called "capital increase". The problem is that the markets are not always very tempting to buy the shares of Italian

banks, especially if they are in a bad situation. The role of the fund will be, by simplifying, that of buying any shares that banks will not be able to sell above a certain price.

The second component aims to encourage the development of the impaired loans market, which is affected still of the long and deep recessive phase crossed by the Italian economy. The investments will concentrate on the most risky tranches (junior and mezzanine) of the securitization, whose market is particularly limited leaving those with higher seniority to others, given the manifest interest from investors for this category of securities because guaranteed by the GACS⁵².

The Atlante fund invested up to 70% of its assets in banks with capital ratios lower than the minimum stability in the SREP and therefore, at the request of the supervisory authority, need implement of capital strengthening measures by means of capital increases.

The investment of the fund that concerns the banks will take place through:

- by subscribing shares in offers to the market, through agreements with one or more members of the placement syndicate or through private placements dedicated to the fund itself;
- by subscribing a maximum of 75% for each issue, unless the subscription of a bigger share would be important for the good ending of the operation;
- the investment does not involve the obligation to OPA.

In addition, it is important to say that the fund does not exercise any management and coordination activity on the banks in which it participates and may actually perform a partnership operation or co-investments with other investors.

On the other hand, the fund invest up to 30% of its assets in non-performing loans of Italian banks guaranteed by assets through:

- junior tranches or (occasionally) mezzanines;
- ad hoc vehicles;

⁵² Improperly dubbed "bad-bank", they are another tool created by the government. It is a form of public guarantee that a bank can buy to "insure" its impaired loans and then resell them on market at a price that is not too disadvantageous.

- movable assets, real estate or other rights.

The market initially welcomed the launch of Atlante. From April 7th, the day they were spread the first news on the establishment of the fund, on the 26th of the same month the stock prices of the Italian banks increased by an average of 20 percent and average premiums for credit default swaps (CDS) fell by around 50 basis points⁵³.

The final outcome of the Atlante project was not, however, of the best since it was mostly conditioned by the compulsory administrative liquidation of the Veneto banks, Banca Popolare di Vicenza and Veneto Banca, for which the fund had invested a large part of its budget in recapitalizations in the order to avoid bankruptcy.

It is useful here to briefly review the events that led to the defeat of Atlante (and the Veneto Banks). The underlying cause is the tumultuous growth of loans over the years, which is accompanied by an imprudent policy of provisions for these loans, with provisions lower than those of the other banks. The outbreak of the financial crisis and the subsequent general deterioration of credit that led to the explosion of the Non Performing Loans bubble, caused these problems to surface. In particular, when the economic crisis multiplies the failures of companies, the hole came out and we realized that the sufferings was too much, the bank was allowed to raise funds with customers out of any rule as a first rough solution.

Meanwhile, stock values had become very high, far beyond those of listed banks. Which meant that for shareholders, not being the two banks listed on the stock exchange, it would then become very difficult to get rid of those securities that have become more riskier.

The next step was to transform the two popular ones in SpA in order to collect a capital increase prior to the stock exchange listing. It is precisely following the failure of the raising of capital on the market by the Veneto banks that the Atlante fund came into play.

In fact, the fund has invested 80% of its resources, € 2.5 billion initially and a further

⁵³ Rapporto sulla stabilità finanziaria, Banca d'Italia, 2016

one billion in October 2016, in the two Veneto banks, buying the shares of the institutions at 10 cents. Despite the huge sums invested by Atlante, the banks were still zombies without potential investors attracted and the government, through specific changes to the relevant legislation, started the administrative compulsory liquidation of the two banks.

After the bankruptcy, following the usual indications of the European Commission, an open and competitive procedure was started with the help of an independent consultant. A "data room" has been set up with analytical data from the two banks; five banking groups and an insurance group have requested access. At the end of the period granted two binding offers were made: one from Unicredit, referring only to a very small part of the complex to be sold, the other by Intesa Sanpaolo, which proved to be a winner.

The terms of the contract for the disposal of Banca Popolare di Vicenza and Veneto Banca to Intesa San Paolo were the following:

- a. sale to € 1 of the healthy part of the "old" Veneto banks which are credits from performing customers (€ 26.1 billion), financial assets (€ 8.9 billion) and tax receivables (€ 1.9 billion) due to the takeover amount of Intesa in debts to depositors and senior bonds;
- b. "financial support" from the State to Intesa for 3.5 billion: the acquisition of the activities of the Veneto banks required in fact for supervisory prudential purposes an increase in Intesa's shareholders' equity. The Bank has therefore set a necessary condition to prevent its shareholders from making additional resources for the capital increase, which were then made by the Italian government;
- c. Reimbursement to Intesa of charges for the management of redundancies of staff (4,000 employees) for 1.255 billion;
- d. concession by Intesa of a loan to "old" Veneto banks in liquidation (5.3 billion) to face the unbalance of assets created by the write-down of receivables (non-performing in particular); loan which will then be repaid to Intesa with absolute precedence drawing the funds from the proceeds of the liquidation.

Impaired loans of the two banks and of some companies controlled by them will be

transferred to the S.G.A. (Society for the Management of Activities, S.p.A.). The S.G.A., wholly owned by the Ministry of Economy and Finance, is a company specialized in the recovery of impaired loans, set up when the Bank of Naples was bailed out in 1997.

According to the Bank of Italy, the "patient management" of difficult loans (18 billion) by the bad bank S.G.A. will be able to return resources to the Treasury, which from its side provides financial support to the operation. The technical report to the decree on the Veneto banks even prospects collections of about ten billion from impaired loans, assuming - together with the sale of investments and net of commitments - a possible 700 million euro gain.

Furthermore, from August 2016, to compensate for the concentration of resources on the two Veneto banks which, with the elimination of the two institutions and the 80% write-down of nominal value, have literally drained the assets of the Atlante fund, Questio has split the fund, giving it a separate life to another fund called Atlante 2 born to try this time to solve the problem of NPLs buying them at higher prices from troubled banks.

Since its birth, Atlante 2 has invested around 2 billion to buy just over 39 billion gross impaired loans from 10 Italian banks, including the three good banks acquired by Ubi Banca (Banca Etruria, Banca Marche and Carichieti).

In conclusion, Atlante 1 has not been able to bear on its shoulders the weight of the Italian banking world and its crises. But he certainly avoided the bail of the Veneto banks, which would have had social and financial costs ten times those seen so far. And the fund 2, using leverage, has at least relieved the exchanges, and the fortunes, of its abnormal sufferings.

Chapter 3

The Italian NPLs market

3.1 Overview of the Italian trend - 3.2 Determinants of NPLs' increasing in Italy – 3.3 The recent slowdown - 3.4 The buyers' side

3.1 Overview of the Italian trend

Since the beginning of the financial crisis of 2007, going through the sovereign debt crisis of 2012, the general level of NPLs has undergone a sharp increase that has led to tripling the values both in terms of the ratio with total loans and also in absolute terms.

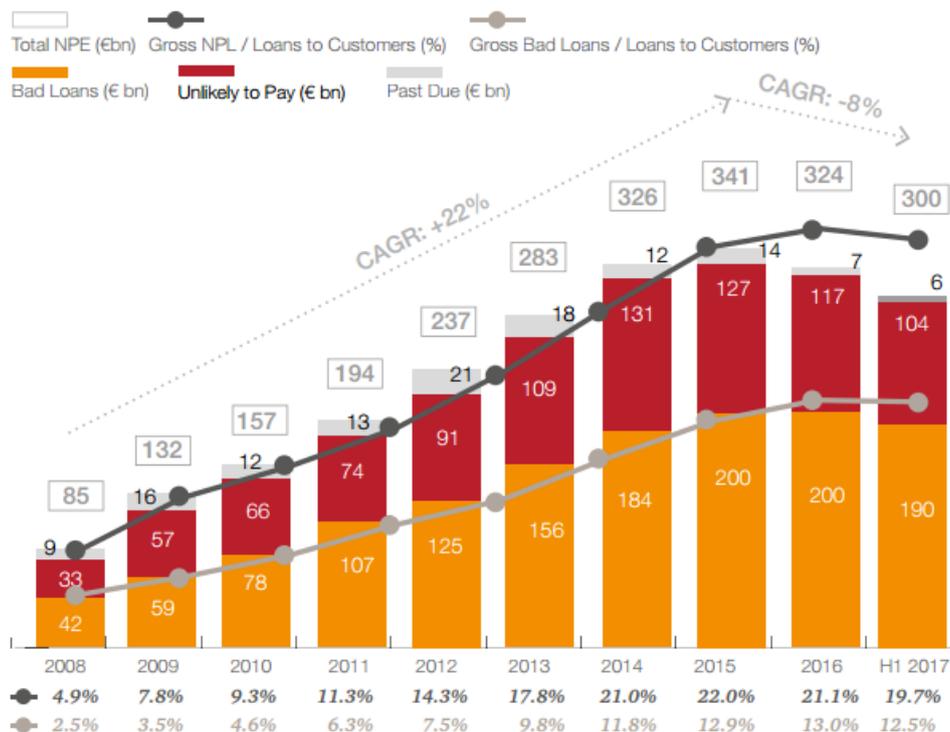


Figure 22. Gross NPL and Bad Loans trend

Source: PWC analysis data of Bollettino Statistico di Banca d'Italia and ABI Monthly Outlook

As can be seen from the graph above, the absolute value of NPLs rose from 85 billion euros in 2008 to a historical high of 341 in the end of 2015, which appointed the Italian banking sector as the market with more NPLs in Europe.

As can be seen from the graph, among the 340 gross non-performing loans, we can distinguish between “unlikely to pay”, categories for which the return between performing exposures is possible, which amount to 127 billion, and “bad debts”, or bad loans, that means loans to insolvent counterparties, equal to € 200 billion (in both cases these are gross values that do not express the actual weight of these positions on bank balance sheets). The actual value of these credits on balance sheet is given by the following graph that represents the trend of net bad loans.



Figure 23. Net Bad Loans trend

Source: PWC analysis data of Bollettino Statistico di Banca d'Italia and ABI Monthly Outlook

Even analyzing the ratio between impaired loans and total loans granted, the situation is no better: in 2008 this ratio was equal to about 5% while at the end of 2015 it was about 22%.

The considerable growth in the volume of impaired credits in Italy, as in Europe, was mainly the result of the decline of world economies that led to a fall in Italian GDP of about 10% and to a quarter's decline in industrial production. It is precisely the deterioration of creditworthiness and the ability to repay loans of companies, particularly small and medium-sized enterprises (SMEs), which has had the greatest impact on the total volume of NPLs.

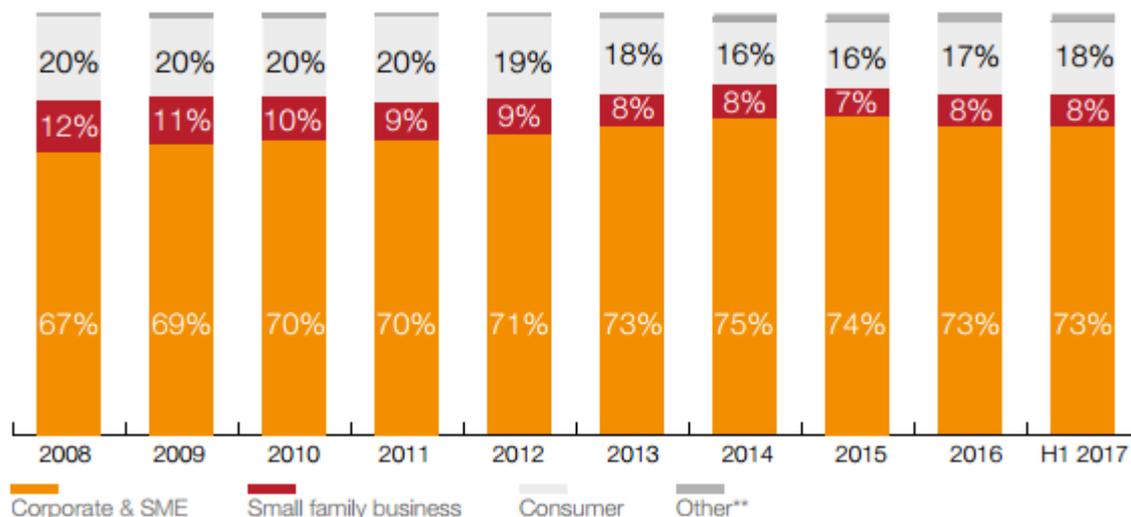


Figure 24. Breakdown of Gross Bad Loans by counterparty
 Source: PWC analysis data of Bollettino Statistico of Bank of Italy and ABI Monthly Outlook

As shown in the chart above, “Corporate & SME” has always represented the largest share of total NPL volume, going from 67% in 2008 to 73% in 2017.

3.2 Determinants of the NPLs’ increasing in Italy

In addition, there are other typically Italian factors that have slowed down the resolution of the problematic non-performing loans, in particular they are the slow pace of write-offs and the inefficiency of the Italian judicial system.

a) Slow pace of write-offs and sales

For what concerns the first point, these are strategies that allow the issue to be curbed as quickly as possible, but which have been used relatively little by Italian banks for a series of intrinsic reasons in the Italian financial system. First of all, Italian banks tend to prefer the internal management of impaired loans through debt restructuring and internal collection strategies. This type of approach, in economic growth situations, allows a slow recovery of positions and therefore a decrease in the volume of NPLs in the long run as the entry of new bad debts decreases with economic growth. In prolonged recessive economic frameworks, such as the one experimented since 2007, this strategy is not sufficient to stem

the amount of new bad debts that constantly take place at very high rates.

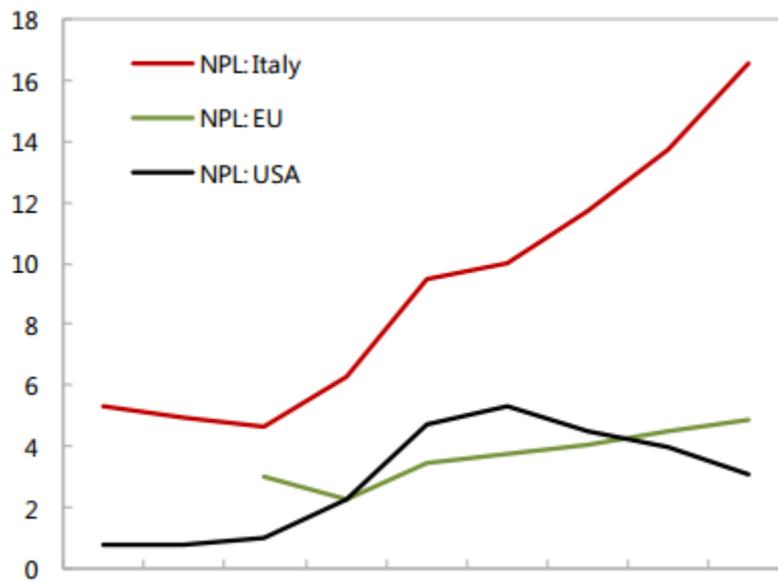


Figure 25. NPL ratios in USA, Europe and Italy (percent of total loans)
Source: ECB; Federal Reserve Economic Data; IMF, FSI.

The figure above clearly shows the growth trend in the volume of NPLs in Italy, Europe and the United States. In the United States, but also in other states of the world such as Japan, after the volume peak of 2009, there is an important drop in the quantity that is mostly related to the increase in write-offs and provisions made by US banks.

In this context, it is important to understand how the provisions are closely linked to the volume of NPLs sold and/or written-off. “When provisioning is too low, write-offs generate losses that are immediately taken out of bank capital. Similar to writing off, selling NPLs would imply some discount compared to book valuations, if investors perceive current provisioning as too low.⁵⁴”.

It is precisely the *pricing gap*, as already explained in chapter 2.3, that is created between the credit assessment by the bank and, on the other hand, by the market one of the main causes of reticence on the part of the Italian banking system in selling or write-off impaired assets, preferring instead an internal management. A further deterrent element for Italian banks, in particular for the writing-off of

⁵⁴ IMF, *Strategy for develop NPL market in Italy*, 2015

credits, is linked to the "provision coverage ratio" which consists in the average coverage rate of the loans granted by the institution and is given by the ratio between the coverage rate (provisions) and the total of mortgages. In a situation such as the one in which the percentages of impaired loans on the total amount of loans are very high, the cancellation of large amounts of NPL from the balance sheet, usually covered with hedging fees above the average of performing loans, would result in a drastic lowering of the provisions coverage ratio.

In addition, typically Italian factors that have slowed the sale of NPLs are represented by:

- extensive recourse to the use of guarantees by banks that usually request coverage of about 2/3 of the credit issued in particular in real estate or personal guarantees. This approach allows banks to think, sooner or later, to recover a large part of the loan, waiting for the enforcement of such guarantees.
- a tax regime which, at least until 2013, did not favor the sale or writing-off of NPLs because "write-offs in Italy were not tax deductible without a court declaration of insolvency, which could take several years⁵⁵". While in Europe there is a total deductibility of provisions on impaired loans, in Italy up to decree n.83 / 2015 only 20% of provisions was deductible during the year, while the remaining 80% generated a temporary increase of the taxable income that gave rise to the entry of deferred tax assets. Before this, the write-downs on loans were deductible over 18 years.

b) Inefficiency of the Italian judicial system

As already indicated in the previous chapters, the Italian judicial system is a system that has always presented very long times both for the resolution of bankruptcy proceedings (7 years on average) and for the enforcement of property guarantees (3 years on average). From this point of view, considerable improvements have been made in the past few years that have speeded up the procedures but which, however, make it difficult to dispose of the huge amount

⁵⁵ IMF, *Strategy for develop NPL market in Italy*, 2015

of backlog.

3.3 The recent slowdown

By the way, after the peak reached at the end of 2015, the total volume of NPL, but also the ratio with total loans granted, has undergone a decisive turnaround, going from 341 billion to 300 in the first half of 2017. The relationship with the total loans went from 22% in 2015 to 19.7% in 2017 H1.

Certainly the recovery of economic growth, represented by the increase in the nation's gross domestic product, was one of the key factors that characterized the decline in the volume of bad debts. The following graph shows that, since 2014, the economic recovery measured by the increase in GDP has progressively led to the stabilization of the volume of bad debts.

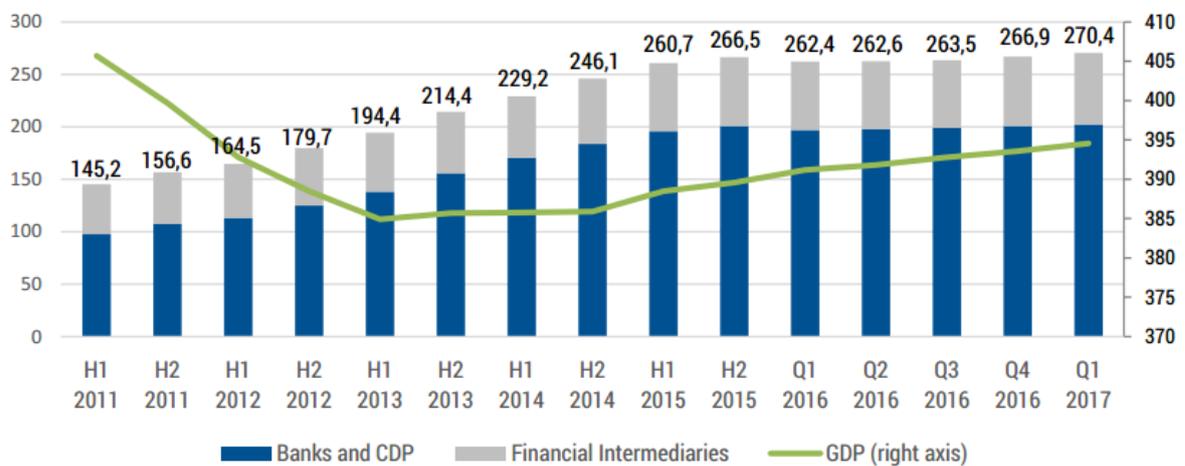


Figure 26. Relation between bad loans and GDP
 Source: Banca IFIS Market Watch NPL, July 2017, Italian Scenario

A fundamental element for the stabilization of NPLs is represented by the sharp decrease in bankruptcy episodes, as shown in the following figure. The economic recovery has indeed been decisive in this respect and the decrease of bankruptcies is the most encouraging element of 2017.

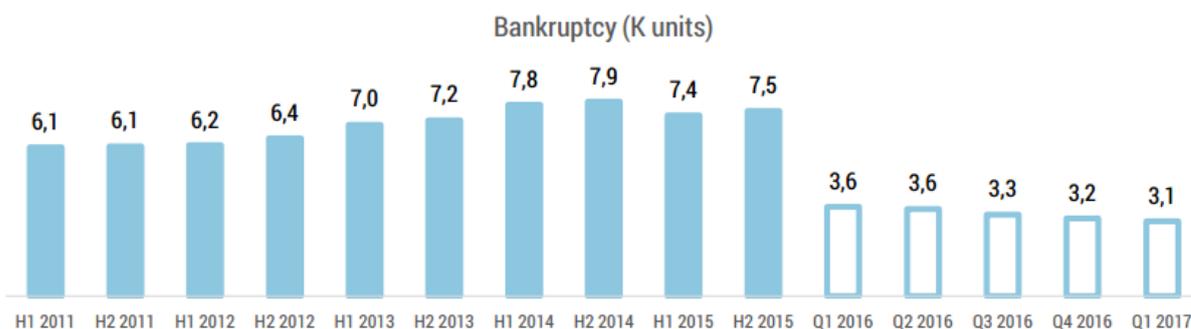


Figure 27. Number of bankruptcy
Source: Banca IFIS Market Watch NPL, July 2017, Italian Scenario

Furthermore, starting in 2015, new innovations in the banking system have been introduced that have certainly contributed to the slowdown of the non-performing loan problem, including: the reform of the popular banks, the self-reform of the banking foundations supported by the government, the reform of banks of cooperative credit (BCC), the introduction of the guarantee mechanism on the securitization of non-performing loans (GACS), and the speeding up of credit recovery times.

a) Reform of the mutual banks and the BCC:

The reform of the popular banks opens to a modernization of the Italian financial system and does so by changing the text in several points of the Consolidated Act of Banking and Credit Laws (Legislative Decree No. 385 of 1 September 1993).

The reform, welcomed by the ECB, involves the legal form and the governance of institutions and introduces dimensional limits for the adoption of the form of a popular bank, with the obligation to transform into a public limited company for popular banks with assets exceeding 8 billion euros; moreover, provides for the discipline of the companies extraordinary events (transformations and mergers) with the aim of introducing one uniform discipline for all the popular banks, subtracting to the statutes of the single ones the determination of the majorities envisaged for these corporate events; the introduction of the possibility of issuing financial instruments with specific patrimonial and financial rights vote; the loosening of the restrictions on the appointment of corporate governance bodies, with the attribution of greater powers to the shareholders' bodies; the introduction of voting limits, allowing the constitutive statute to give to members which are legal

persons more than a vote. The same decree provides important news also for smaller banks, in order to encourage shareholder participation and make more attracting these banks to institutional investors. “The reform of the cooperative credit banks is part of the package of measures introduced by Decree-law No. 18 of 14 February 2016, “Urgent measures concerning the reform of the cooperative credit banks, the guarantee on securitization of the non-performing loans, taxation treatment in relation to insolvency proceedings, and collective funds management”.⁵⁶”

The reform of the Cooperative Credit Banks (BCC) allows to reduce the fragmentation of the sector and overcome the structural weaknesses deriving from the business model, particularly exposed to the performance of the economy of the reference territory, the organizational structures and the small size of the individual banks.

The reform lines therefore have as their objective the confirmation of the role of the BCCs as cooperative banks of the communities and territories through: better quality of governance, a more efficient allocation of resources within the system and the timely collection of capital in the event of tensions assets, too through the access of external capital to the cooperative world.

b) Self-reform of the banking foundations:

The memorandum of understanding signed on 22 April 2015 by the Minister of Economy and Finance, Pier Carlo Padoan, and the President of ACRI (Association of Foundations e savings banks) Giuseppe Guzzetti, marks the start of the self-reform of the foundations of banking origin.

Among the cardinal principles contained in the protocol is the diversification of investments: a foundation cannot concentrate more than 33% of assets in a single entity. Furthermore, recourse to forms of leverage is not envisaged, except in the case of temporary and limited liquidity requirements, and the use of derivatives is not allowed, except for hedging purposes or in transactions in which there are no

⁵⁶ MEF, Italian Banking Sector: recent developments and reforms, July 2016

risks of capital losses.

With the protocol, the foundations are committed to ensuring transparency in their activities by publishing on their websites the financial statements, the information on tenders, the calls for procurements, the procedures through which requests for financial support can be made and the criteria for selecting initiatives.

This auto-reform definitively cuts the link between local political circuits and management of institutions that in some cases has made possible the incorrect management of the institutions themselves.

c) More rapid credit recovery:

The time to recover for credits in the event of litigation is higher in Italy than in others Countries. However, the gap with best practices has been reducing in recent years thanks to these innovations:

- the telematic civil process, thanks to which the average time for the conclusion of the first degree in civil cases fell to 367 days;
- the court of the enterprises, or the institution of courts specialized in the trade disputes, thanks to which 80% of the litigation is managed in a year.

In the last two years these innovations have been reinforced by further measures. The Decree Law 59/2016 (Urgent provisions concerning executive procedures and bankruptcy, as well as to investors in liquidation banks) converted from Parliament in the law 30 June 2016, n. 119 contains important measures for simplifying the compliance formalities and streamline the procedures for the recovery of credits. The the provision introduces, in particular, a series of measures to support businesses and for the acceleration of debt collection, which give certainty and speed to the procedures, including through the use of information and communication technologies.

The introduction of the use of IT tools will make a fundamental contribution through:

- the creation of a register of forced expropriation procedures, insolvency procedures and crisis management tools that will be used to create a market for impaired loans;
- the access of the bodies of the insolvency procedures to the information contained in databases;
- the acceleration of bankruptcy proceedings, with a greater use of information technology which will take place first of all when the creditors' committee is set up, but also during the hearing to ascertain the bankruptcy liabilities and, in the arrangement with creditors, in the meeting of creditors too.

In addition, the establishment of the so-called "*Patto Marciano*" allows to shorten the time with which the Bank enters into the property of the real estate guarantee. This agreement provides for the out-of-court allocation of the buildings placed as collateral to a loan to an entrepreneur. Following the signing of this agreement, in the event of default of the debtor, the property placed as collateral by the entrepreneur, passes very easily under the ownership of the lender without the passage through the judicial system. The property given as a guarantee can not coincide with the home of the entrepreneur or of a relative. The value of the property given as collateral is estimated by an expert and, in case it is higher than the residual part of the debt, the difference must be paid to the owner.

The condition of default that triggers the agreement occurs when the non-payment continues for more than nine months after the expiration of at least three monthly installments, even non-consecutive, or only one installment if it has terms of expiry longer than the monthly period. If, at the end of the first installment of unpaid installments, the debtor has already repaid at least 85% of the principal amount of the loan granted, the period of default that triggers the transfer of the property to the creditor is raised to twelve months.

The introduction of the Pact changes radically prospects of debt collection in the future, with timeframes that have passed from 40 months, currently estimated for property executions through the judicial procedure, to about 12 months with this

agreement.

The sum of these measures is in addition to those already launched last summer with the *decree law 83/2015* which contains measures to address the problem of credit crunch. The main changes introduced by the decree concerned access to credit during a corporate crisis, the opening of the company competition in the preventive arrangement, debt restructuring, the figure of bankruptcy receiver, the speeding up of sales operations, the modification of the loss deductibility regime.

A further measure aimed at favoring the recovery of non-performing loans is represented by facilitations on real estate sales by auction. For these operations a clear reduction of the registration tax is foreseen, which is paid in the fixed amount of 200 euros. The facilitation is usable on condition that the property is resold in the following two years, a condition that does not apply in the case in which the property is the first house for the buyer.

The whole of the interventions is part of an organic reform that will have a positive impact on the real economy as the banks, which are more easily reimbursed for their loans, will have larger spaces in the budget to provide loans to businesses. At the same time, it becomes easier for companies to obtain financing from credit institutions, which can rely on simplified and speedy procedures to recover the sums paid in the event of default in the payment of installments.

d) Guarantee on Securitisation of Non-Performing Loans (GACS)

The decree law n.18 of 14 February 2016 (the "Decree-Law"), published in the *Gazzetta Ufficiale* no. 37 of 15 February 2016 and in force since 19 February 2016, introduced, inter alia, new provisions on the granting of the State guarantee in the context of securitization of non-performing loans (so-called GACS).

It is therefore an instrument that the Treasury makes available to the operators of credit and finance to facilitate the disposal of impaired credits, a guarantee that the Treasury lends to the operators who request it. The legislation introduced aims to facilitate banks and financial intermediaries based in Italy in the activities of the disposal of impaired loans and to facilitate the development of an Italian market for

non-performing loans. The new measure, in agreement with the European Commission, was constructed in such a way as to exclude the applicability of state aid legislation.

In order to access the GACS, the securitization transactions must have the following characteristics:

- the liabilities issued as part of securitization transactions will have to be realized against the transfer, by the banks and financial intermediaries, to a transferee company (securitization company, so-called "SPV") of qualified loans as non-performing loans;
- the receivables to be transferred must be transferred for an aggregate amount not exceeding their aggregate gross value at the date of sale;
- SPV will have to issue securities called asset-backed ("ABS") and the collections and recoveries deriving from the liabilities will be exclusively allocated to the satisfaction of the rights embedded in the ABS securities, as well as to the payment of the costs of the relative securitization;
- the securities must be divided into at least two classes, one subordinated to the other: the holders of the junior securities will not be able to receive interest payments or capital repayment until the holders of senior securities - the only ones to benefit from the GACS - will not be fully repaid. Classes of intermediate risk (*mezzanine*) securities may also be issued too.
- for the purpose of issuing the State guarantee, senior securities must have previously obtained a rating level of not less than the last step of the *investment grade* credit rating scale;
- credit management must be entrusted to a third party (so-called NPLs Servicer) with respect to the transferor company and not belonging to its group. The Servicer may be replaced by the holders of the securities during the transaction, provided that this does not lead to a deterioration in the rating of senior securities.

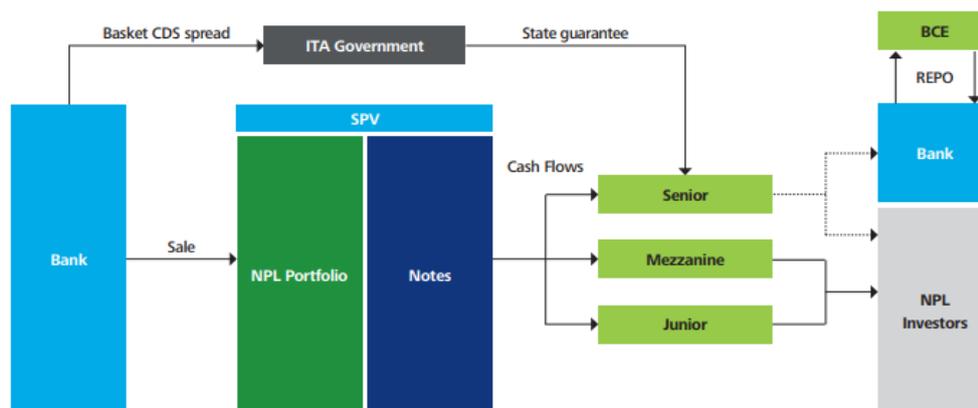


Figure 28. GACS scheme

Source: Italian non-performing loans: State guarantee and securitisation scheme, Deloitte 2016

Guarantees may be requested by banks that securitize and sell non-performing loans, against payment of a periodic commission to the Treasury, calculated as an annual percentage of the guaranteed amount. The price of the guarantee is on the market, as also acknowledged by the European Commission, which agrees that the scheme does not include state aid. The price will be calculated based on the CDS prices of Italian issuers with a level of risk corresponding to that of the guaranteed securities. The price will grow over time, both to take into account the greater risks associated with a longer duration of the notes, and to introduce in the scheme a strong incentive to quickly recover the credits. The price set for the first three years is calculated as the mid-price of the three-year CDS for issuers with a rating corresponding to that of the guaranteed tranches. In the fourth and fifth years the price will increase as a result of the application of a first step up (5-year CDS) and the payment of an incentive increase, to offset the lower rate paid for the first 3 years. From the sixth year onwards the price of the guarantee will be full (7-year CDS). For the sixth and seventh years a further incentive increase will also be due, to offset the lower rate paid for the first 5 years.

All in all, the intervention should not generate burdens for the state budget. On the contrary, it is expected that the commissions collected are higher than the costs, and that there is therefore a positive net income.

With regard to the duration of the State guarantee, access to the same is limited to a

period of eighteen months from the date of entry into force of the Decree -Law; this deadline may be extended up to a maximum of eighteen additional months, subject to approval by the European Commission.

e) Atlante Fund

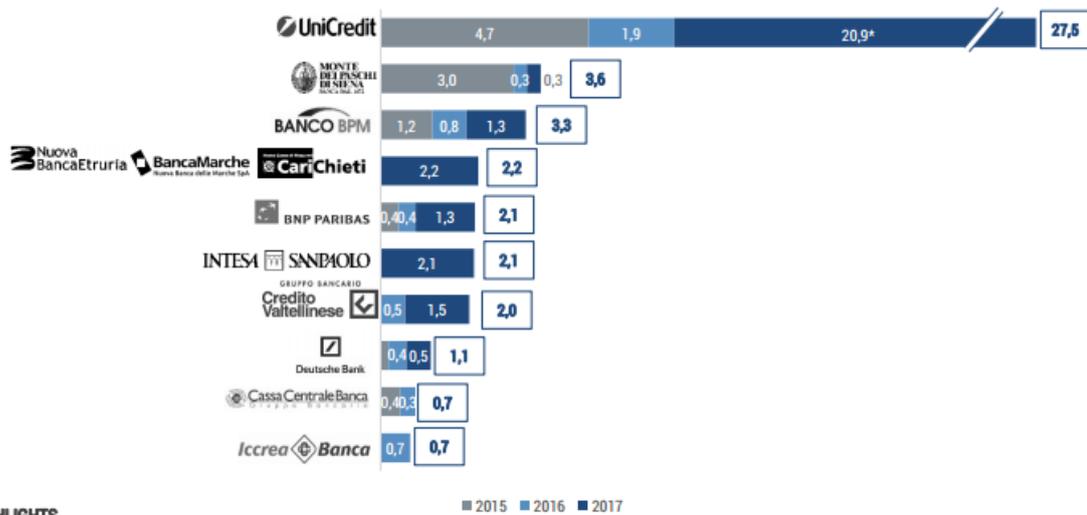
The evolution under way in the Italian banking system also includes the Alternative Investment Fund (FIA) called Fondo Atlante, which is widely described in the previous chapters. As we said this was an initiative of the Govern and the private sector, consisting of an independent asset management company which collects capital from financial institutions (banks, insurances and foundations that participate on a voluntary basis) with the aim of:

- ensure the success of the capital increases required by the Supervisory Authority to banks that were facing difficulties (Veneto Banca and Banca Popolare di Vicenza, above all);
- to enhance a market for non-performing bank loans: the amount of bad debts that can be deconsolidated from bank balance sheets should have been far higher than those acquired by the Fund, as Atlante could concentrate its investments on the junior tranche of securitization vehicles instead of those with higher seniority for which there is a manifest interest from investors also because of the CAGS.

3.4 The buyers' side

As we can see from the picture below, the market of distressed credits is a very huge one that sees Unicredit, Monte dei Paschi di Siena and Banco BPM as the top originators, respectively with 27,5 billion €, 3,6 billion € and 3,3 billion €. The three new banks Etruria, Marche and Carichieti are in the ranking because they sold a portfolio to Atlante II of new loans generated after the bail in of 2015 as we see from the dedicated chapter.

Top originators (Bn€)



HIGHLIGHTS

Figure 29. Banks disposal of NPLs
Source: Banca IFIS Market Watch NPL, July 2017, Italian Scenario

Non-performing loans, on the one hand, are a major issue for the majority of credit institutions, on the other hand they represent a significant source of income for other market operators specialized in the purchase and management of non-performing loans.

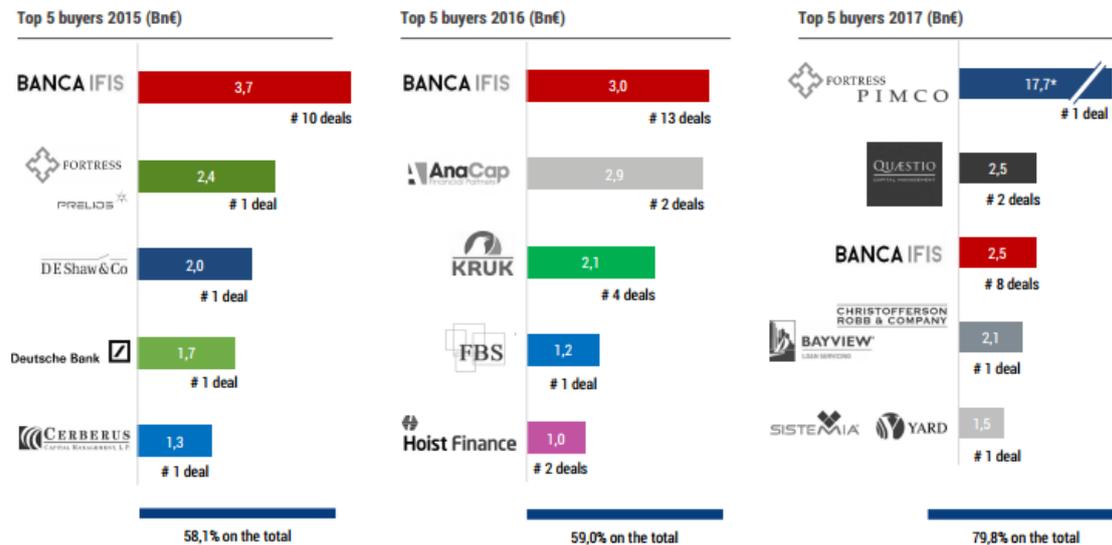


Figure 30. Top buyers
Source: Banca IFIS Market Watch NPL, July 2017, Italian Scenario

The assets in question are deteriorated, but they are attractive for those who know how to evaluate their actual value. They are particularly tempting to international investors, who have a culture on NPLs for a long time and they are back on one greater economic stability and therefore less uncertainty about the value of the assets.

Despite the huge interest shown by international buyers in 2015 and 2016, in 2017 domestic buyers are showing an increasing commitment to the Italian market: 61% of the deals are in domestic buyers' portfolios.

The non-performing world represents a particularly attractive profitable source that has recorded performance levels in recent years higher than those of all other markets such as equity, mortgage backed-secured, the technology sector, the fixed income market.

Looking at the Italian reality, those who are able to operate in this sector can classify on the basis of two indicators: the specialization, or funds that have like social object to invest and operate in the specific market, or from their own investment capacity, depending on their willingness to intensify the platform servicing for operation in the NPLs.

One of them is Banca IFIS, with a total of 13.2 billion NPL loans in portfolio at the end of 2017, Banca IFIS confirms its position as the market leader in the unprotected retail segment. 17 transactions closed to date in 2017; approximately 13.2 billion euro of loans managed, corresponding to 1 million 520 thousand positions; more than 700 people including collaborators and sales networks dedicated to NPL business and digital projects designed to offer a more concrete service to those with financial difficulties. This, in short, is the NPL area of the Banca IFIS Group. The business unit dedicated to the purchase, management and collection of impaired loans announced on December 11th closed two separate transactions for the purchase of NPL loans totaling 336 million euros (nominal value) in the retail and corporate segments. The first of these transactions, stipulated with Intesa Sanpaolo, provides for a portfolio of unsecured loans with no guarantee contracts, for a total of 2,400 positions, for a nominal value of approximately 85 million euro. The NPL area has expanded considerably on several fronts during 2017. Among the most important developments that have occurred were significant portfolio purchases, the recruitment of new team members (a total of 200 resources that equals 85% more new items in September 2017 compared to the same period of 2016) and entry into the loan market with salary-backed loans giving new profitable opportunities to all retail customers of Banca IFIS.

For what concerns price of operations, the average prices of secured portfolios (secured by property or real estate) show a drastic drop after the surge at the end of 2016. In the second quarter of 2017, the price level for these assets fell to 33%, a consequence of an increase in this market segment.

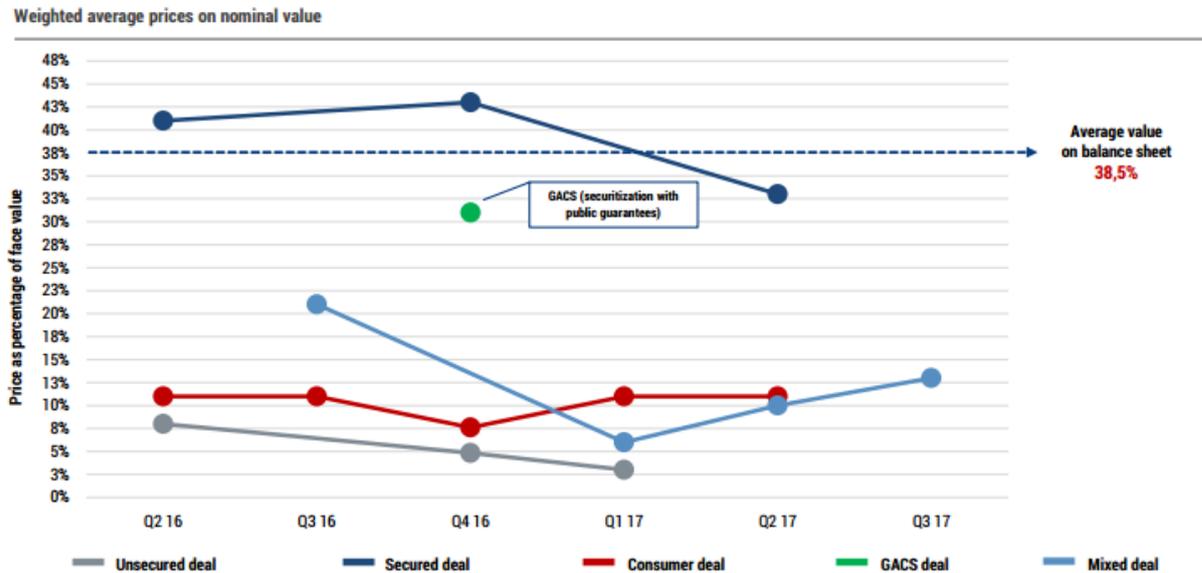


Figure 31. Average prices trend
 Source: Banca IFIS Market Watch NPL, July 2017, Italian Scenario

If the prices of the secured assets fall, those of the consumer portfolios rise instead. The average price is around 11% thanks to an increase in demand and higher quality of loans (and their information assets).

Conclusions

The aim of this thesis was to analyze the scenario of non-performing loans, which represents a problem for Italian and international banks, with a view to presenting and understanding the causes and possible solutions currently available to the financial system, including the selling, internal management, securitization and bad bank.

Specifically, the recent global financial crisis of 2007, which, in the new paradigm *originate-to-distribute*, contributed significantly to the general deterioration of creditworthiness of borrowers of funds. The economic crisis, in general, has brought out structural problems in bank balance sheets and in particular in terms of hedging and capitalization that often proved to be inadequate to cover the amount of impaired loans and insolvent practices. The banking system in fact represents an engine of the real economy in Italy and for this reason it is very important that the banks manage to clean up their budgets from the NPLs in order to free up useful resources to return to granting credit to businesses.

In this context, the recent management practices of the problem were presented and illustrated mainly in an Italian but also European perspective.

Firstly, the internal management of these credits, under the directives set by the ECB, with the relative results achieved at the Italian level that shows the recovery rates are much higher than the prices that banks generally manage to obtain from a sale to private investors, and they vary significantly from bank to bank. This indicates that intermediaries have margins and incentives to continue decisively in the actions already started to increase the efficiency of the internal processes of management and recovery of impaired loans, identifying which is the mix - between management in house, outsourcing to servicers or sale on the market - able to maximize the value of these assets.

Secondly, were illustrated the techniques for eliminating NPLs from bank balance sheets such as actual sale and securitization that allow banks to improve their

balance sheet in the short term, but discounting very low selling prices that reflect a *pricing gap* mainly due to information asymmetries (absence of data and information on loans sold) as well as different expectations regarding performance obtainable from the management of impaired items.

Furthermore, the system *bad bank* is presented, as well as private, as a possible solution for solving the problems experienced in various European countries such as Spain and Ireland but also in Italy with the variant private fund called Atlante.

Italian banks have begun to attract capital from abroad, which are constantly looking for high returns and are aware that the NPL business, because of its inherent riskiness, it can offer it.

The Italian NPLs have therefore become much sought after by various international operators such as hedge funds and private equity which see the opportunity for investments given the magnitude of the relative Italian market (around 300 billion euros) and particularly high returns.

There has also been a lot of talk about *Pricing Gap* which has severely hampered the deleveraging of Italian banks. Currently, this problem seems to have resized thanks, on the one hand, to the signs of economic recovery that stimulate investors to enter the Italian market and, on the other, to the ECB policy that stimulates the cleanness and transparency of financial statements, pushing banks to bring forward management strategies.

The theme of the Italian NPL market is so crucial that even the International Monetary Fund has dedicated a Working Paper on the need to better manage the huge amount of non-performing loans in Italy, encouraging the creation of a type of market.

With regard to the systemic management of the problem, however, the creation of the Italian "private" Bad Bank did not produce the expected results in terms of creating a real NPLs market, mostly due to the critical situations of some Italian

banks that have dried up the fund's capital endowment. However, it must be said that the price of the bankruptcy of the Veneto banks, for example, without the initial capital endowment of Atlante would have been worst.

Having reached the end of the path, it can be said that the management methods most used by banks and described in the report, thanks to the recovery of a favorable economic situation and the initiatives proposed by the State, have led to a decrease in the non-performing stock and the recovery of confidence and security in the Italian banking system.

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