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Banking prudential regulation and resolution strategies:
main effects and implications on the Italian banking system

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Introduction

Before the financial crisis, banks relied too much on short-term funding to finance their long-term activities, meaning that long-term assets' growth was not complemented by a similar increase in stable funding sources, which implied a poor liquidity profile and a weak funding structure. At the same time, excessive risk-taking policies pursued by these institutions and a lax prudential and supervisory regulation increased the risk of banks' failures, further magnified by the interconnectedness existing between financial institutions in the global market. In addition, the undue use of securitization instruments and unregulated cross-holdings between market players helped to spread risks in the economy.

In this context, the financial crisis highlighted the lack of an adequate monitoring and regulatory system and insufficient resolution tools to handle a systemic shock. When the market turmoil turned into a liquidity crisis, credit institutions were either forced to request emergency liquidity assistance from central banks or engage in massive asset sales. Many of them were eventually driven to insolvency, which called for the intervention of national governments to save those institutions perceived by the market as *too big to fail*. However, the application of a *bailout* strategy implied significant fiscal and financial cost for the economy at a large: in fact, taxpayers were bearing the fiscal burden of public capital injections, first in the form of a higher tax rate and then in terms of public spending cuts. These factors emphasized the need to introduce appropriate macro-prudential tools within a harmonized regulatory and resolution framework in order to provide competent authorities with the instruments to manage potential banking crises more efficiently than in the past.

Moreover, imprudent lending policies pursued by financial institutions in the crisis years led banks to hold a significant amount of deteriorated exposures, while lacking appropriate tools for managing them. A situation that clearly outlined the necessity of a deep restructuring of the banks' liabilities and called for the development of a secondary market for non-performing loans.

The events arising from the 2008-2009 financial crisis are relevant to the extent that they provide appropriate insight with respect to regulatory deficiencies, at the same time making the European legislator aware of a social interest to systemic stability. This work proposes to analyse the effective contribution brought by prudential regulation and resolution strategies in the post-crisis years. This discussion is part of a broader debate weighing the benefits associated to the new regulatory

reform against the costs that may derive, by assessing the impact of possible drawbacks originating from the adoption of stricter regulatory requirements. In particular, these may come in the form of increased levies for banks and tightened credit supply in the long-term. By exploiting the contribution of existing literature, this work aims to bring to the attention the different points of discussion arising from the establishment of a new set of rules at the European level, by providing a comprehensive framework of existing regulatory and resolution tools, their limitations and hints for further improvements. For the purpose of this debate, the recent events concerning the Italian bank "Cassa di Risparmio di Genova e Imperia" (Carige) will be used to illustrate how regulatory requirements can effectively provide feedback for assessing the soundness of single institutions and represent a concrete example of potential resolution actions and exit strategies today available at the national level.

1 Banking system outlook and the main challenges arising from the last financial crisis

1.1 The role of banks in the financial system and the identification of potential weaknesses

The financial system is a complex mechanism and plays a major role in the economy. It is therefore important to fully understand how it works by analyzing the factors that may trigger a structural failure, in order to appreciate the activity of the legislator, aimed at ensuring an overall financial stability both at a national and European level. A peculiar aspect of the financial system attains to the interconnections between financial institutions and markets: banks lend and borrow money from each other (inter-bank markets) and are becoming more and more integrated, by raising international connections between domestic financial systems, following the path of globalization. As a result, the risk of failure of a particular institution can have consequences on the overall financial system, due to the strong interrelations that exist between these institutions and markets. Banks, as the main players of the financial system, act as direct intermediaries between savers and borrowers, providing a solution for information asymmetry and aligning financial preferences of depositors and investors. The banking activity is described as deposits taking and loans making.[1] Deposit-taking differentiate banks from other financial institutions, as the money collecting activity attains to banks only. Banks play a relevant role in the financial system by performing some fundamental functions, whose intrinsic characteristics may also represent potential drivers for financial instability. Firstly, banks perform liquidity transformation: banks convert depositors' liquid assets into long term loans and mortgages; at the same time, they are required to keep sufficient available cash reserves to constantly ensure depositors' money withdrawal exercise. Through maturity transformation banks convert short-term deposits into long-term investments. The liquidity transformation function is strictly linked to maturity transformation, whose combined effect may generate a liquidity mismatch between assets and liabilities banks hold in their balance sheets. In times of stress, banks may face liquidity problems if they are no longer able to promptly convert their illiquid assets into cash, triggering the "bank run" phenomenon; this is characterized by a large fraction of depositors withdrawing money at the same time, driven by a general sentiment of concern and seeking the strategy of "first mover". This phenomenon was frequently experienced during the past financial crises, leading to a

[1] Testo Unico Bancario (TUB), art. 10

further worsening of the bank's liquidity, sometimes driving the bank to insolvency. Lastly, banks perform credit transformation by converting money from depositors, which are low risk by definition, into risky investments. In this context, an effective assessment of the inherent risk embedded in each financial position becomes relevant for the determination of the overall bank's risk exposure. Overall, the banking activity attains to risk diversification: banks can manage investments risks at a lower cost compared to other financial participants; at the same time, they become more exposed to risk-shifting events that can largely affect their business activity. Beside these primary functions, typical of traditional Commercial Banks, banks can also provide other accessory services, such as underwriting and advisory, sales and trading activities, typical of Investment Banking. However, "tradition banks" lately abandoned the "*originate to hold*" model, to operate according to an "*originate to distribute*" model, acting as merely service providers. Hence, banks started to engage in securitization operations, by selling loans to special purpose vehicles (SPV) that issue notes backed by the banks' term loans and eventually sell those notes in the market to private investors. By this mean, banks no longer have a balance sheet position in the risky asset, while non-banking entities are bearing the full risk of counterparty insolvency. Following this assumption, the concentration of credit risk exposures created a pre-condition for the last financial crisis. Financial crises provide evidence that market failures are likely to occur, which can be interpreted as the result of many forces coming into play. These are mainly linked to information asymmetry, negative externalities arising from the mismatch between prices and incentives of different market participants, imperfect competition and behavioral biases of investors.[2] Also, moral hazard plays a major role in this context, to the extent that it represents an incentive for banks to take on higher risks by using liquidity in their own balance sheet and relying on liquidity provisions granted by the central bank in times of crisis. By setting higher quality standards for financial assets used as collaterals and making access to liquidity provisions conditional upon more severe capital standards, banks' risk-taking attitude can be effectively mitigated.

Given the prominent role banks play in the economy and the underlying weaknesses embedded in the system, it has become more and more important to constantly monitor banking activity and provide real insurance to depositors to foster

[2] *Armour, J., Awrey, D., Davies, P. L., Enriques, L., Gordon, J. N., Mayer, C. P., & Payne, J. (2016). Principles of financial regulation. Oxford University Press*

trustworthiness in the financial system. Banks are subject to financial regulation, which contemplates a set of operating "strategies"; some of which are implemented *ex ante*, to discipline the bank's entrance in the market, while others operate *ex post*. Entry regulation is an example of *ex ante* strategy; the ability of a financial institution to engage in financial transactions is conditional upon licensing requirements and structural restrictions (a good example of structural restriction is the separation between commercial and investment banking). Differently, conduct regulation establishes specific behavioral standards for conducting financial business, while information regulation concerns information disclosure to both investors and regulatory authorities. Prudential and governance regulation are other *ex ante* strategies: the first looks at the bank's balance sheet, by imposing capital and liquidity adequacy ratios; while the second disciplines how financial firms are organized and managed (i.e. Board structure, compensation regulation, ownership restrictions, etc.). Insurance and resolution are instead *ex post* strategies. They both operate in conditions of financial distress, while insurance arrangements aim at providing the bank with backup liquidity provisioning through deposit insurance schemes and liquidity insurance from the European Central Bank; resolution mechanisms are designed to avoid - or at least minimise - losses associated to banks failures by exploiting private solutions before recurring to the state intervention, (in the form of public insurance and bailouts). The interest in banks' restructuring mechanisms increased after the last financial crisis, when new regulatory guidelines were introduced to address situations of financial stress and prevent systemic shocks in the economy.

1.2 How the 2008-2009 financial crisis led to a change in bank crisis management

1.2.1 Creating the prerequisites for a systemic failure

At the heart of the global financial crisis, originating with the United States housing bubble, there is an excessive and imprudent recourse to lending. Less severe lending requirements and inadequate monitoring by the supervisory authorities created the prerequisites for the subprime crisis. In a context with low interest rates and favorable monetary and fiscal policy pursued by the Fed, large liquidity injections fueled in the economy leading to an excessive use of debt. Structured finance products played a major role in the underestimation of risk and mispricing of financial products, as happened with mortgage backed securities: subprime loans – loans assigned to low credit rating - were securitized and then sold in the market to those investors seeking for higher returns. As a result, subprime mortgages were not retained by the originating

bank issuing the loan and the risk of counterparty default was transferred to the final investor. It was initially thought that by this mean risk would be allocated in the economy to those investors best able to bear it, but when interest rates started to rise, following the Fed direct intervention, subprime borrowers became unable to meet their contractual obligations and started defaulting on mortgages. Likewise, credit default swaps (CDS) on mortgage backed securities were mainly used to offset the counterparty credit risk and protect the buyer against the borrower's defaulting event, but when all debt came due at once, the "credit protection seller" showed unable to provide insurance to the counterparty and failed to cover swap contracts. This is also consequence of the CDS market being largely unregulated prior to the crisis as swap contracts failed to cover large and widespread defaults. As a result, the market lost confidence in the solvency and liquidity of banking institutions, while weaknesses in the banking sector were rapidly transmitted to the rest of the financial system and the real economy. Therefore, credit derivatives and complex financial instruments that were supposed to spread risk among market participants, actually helped to create interconnections between financial institutions with a poor balance sheet structure and served to concentrate risk in the system. From this perspective, it is fair to say that financial innovation comes with a cost, as new financial instruments are often mispriced and lack a proper regulatory framework. In this context, credit-rating agencies failed to effectively assess the risk associated to mortgage backed securities, overestimating the creditworthiness of their underlying exposures. By their side, investors lacked the financial expertise and knowledge to fully understand the risks they were exposed to, also having regard of the high level of complexity embedded in these financial instruments.

1.2.2 The European regulatory response to the financial crisis

The global financial crisis outlined the inadequacy of existing regulatory tools to deal with bank failures and the necessity of a deep restructuring of Italian banks' liabilities. Although failures in the market have shown similarities across the years, each crisis represents a unique and complex event. A legal definition of "crisis" does not exist: the competent authorities have a discretionary power to assess every specific situation and decide among the different available tools in order to minimise the cost of intervention. In addition, a bank crisis imposes specific priorities, among which the preservation of the essential banking functions and the need to mitigate the consequences associated to a systemic financial shock. For some aspects, banks are

very similar to any other enterprise operating in a competitive market, however the structural characteristics of banking activity expose banks to risks which may impact financial stability on a large scale. One of the main challenges of the supervisory authority is to reduce risk on a systemic level without compromising the bank's lending activity and the ability to support household consumptions and firms' investments. Although existing literature identifies several definitions of systemic risk[3], on broader terms, systemic risk can be identified in a triggering event - an exogenous macroeconomic shock or bank's failure - which generates a chain of negative economic consequences affecting more financial institutions at the same time. To this extent, the financial crisis was of systemic dimension in the sense that it affected the access to funding of a large proportion of credit institutions. Likewise, Systemically Important Financial Institutions (SIFIs) are defined as those institutions whose failure would cause significant disruption to the wider financial system and economic activity because of their size, complexity and systemic interconnectedness.

Following the financial crisis, the European legislator achieved the greatest regulatory reform of the financial sector in the last few decades. Prior to the crisis, it was assumed that ensuring the soundness of single individual banks was itself sufficient to safeguard the stability of the financial system as a whole. Systemic risk was seen as a simple contagious effect from a financial institution to another, without taking account of the variety of contagion channels and the level of interconnection between financial institutions, whose balance sheets become indirectly linked when banks pursue correlated investment strategies. When the effects of the financial crisis revealed the inadequacy of this perspective, a *macro-prudential* framework was addressed for the first time. While a *micro-prudential* approach is primarily designed to protect investors by controlling agency costs in financial firms, a *macro-prudential* approach shall focus on the stability of the financial system as a whole, rather than looking at individual institutions. It is worth to notice that an overlap between *micro* and *macro* prudential approach exists and it is embedded in traditional banking regulation. In fact, some *micro-prudential* tools (i.e. capital adequacy requirements), which are designed to reduce the risk of failure of individual firms, actually hold macroprudential benefits, by reducing systemic risk and the possibility of loss contagious.[4]

[3] Jajuga, K., Orlowski, L. T., & Staehr, K. (2017). *Contemporary Trends and Challenges in Finance*. Springer

[4] *Armour, J., Awrey, D., Davies, P. L., Enriques, L., Gordon, J. N., Mayer, C. P., & Payne, J. (2016). Principles of financial regulation. Oxford University Press*

Hence, having regard to the cross-sectional outlook of financial markets and in response to the crisis, the Basel Committee identified some *Global Systemically Important Institutions* (G-SIIs), whose distress or failure might trigger a systemic shock. The negative externalities associated with these institutions, perceived as *"too big to fail"*, are related to their size, complexity and interconnectedness. G-SIIs are therefore subject to specific disclosure requirements and are asked to comply with higher liquidity and capital ratios to absorb potential losses in order to prevent future systemic shocks in the economy. The definition of "global systemic importance" does not represent the degree of probability that a bank's failure has to occur, instead it relates to "*the impact that a bank's failure can have on the global financial system*".[5] Specific methodologies have been established to assess the systemic risk in global banks, following an indicator-based measurement approach. The indicators are based on previous fiscal year-end data provided by the bank and are related to: size (total exposure); global cross-jurisdictional activity (claims and liabilities), level of interconnectedness, available substitutes or financial institution infrastructure for the services provided (i.e. assets under control, payments, etc.) and complexity. This approach allows to take account of different aspects by capturing the bank's global footprint, including its network of contractual obligations and its global role as market participant and service provider. Likewise, *Global Systemically Important Financial Institutions* (G-SIFIs) shall have a higher portion of their balance sheet funded by capital or other loss-absorbing instruments, as to increase their resilience in times of financial stress. These institutions are subject to more intensive supervision and resolution planning by the competent authority with a view to reduce the probability and systemic impact of their failure. In addition, national legislation may contemplate further prudential measures for G-SIFIs, including liquidity surcharges and more severe restrictions to large cross-holding exposures, aimed at reducing the potential risks that these institutions pose to the financial system.[6] At the same time, effective cross-border coordination mechanisms shall be implemented in order to foster cooperation with resolution authorities in the euro area.

On a more general basis, the Basel Committee started rethinking the overall existing regulatory framework, as it failed to provide sufficient protection against a global systemic shock. The resulting Basel framework is based on three pillars that build on one another and aims to create incentives for banks to improve risk

[5] Basel Committee on Banking Supervision, Global systemically important banks: updated assessment methodology and the higher loss absorbency requirement (2013)
[6] FSB Recommendations and Time Lines, Reducing the moral hazard posed by systemically important financial institutions (2010)

management practices and enhance dialogue between banks and supervisors. Pillar I establishes a set of binding capital requirements to improve the banks' capital base, while Pillar II is designed to complement Pillar I requirements by integrating a current and a forward-looking approach, as implied by stress testing practices. In order to improve their capital base, banks shall look at more stable capital instruments, to the extent that these are less vulnerable to changes in market interest rates. In this context, Christiano and Ikeda (2014) recognise the importance of introducing restrictions to banking leverage. They identify leverage restrictions as a device to correct agency problems in the private economy between banks and their creditors. Leverage restrictions move macroeconomic equilibrium towards the efficient allocation, by reducing the interest rate spread faced by the banks and promoting incentives to identify good and less risky investment projects. To complete the framework, specific disclosure requirements, widely recognized under the name of Pillar III, have been established to foster market discipline on a global scale. The details of capital and liquidity regulation addressed by the Basel framework will be fully analysed in Chapter 2. With respect to bank crisis management, the intent of the legislator was to coordinate the different resolution procedures shaped at a national level, by creating supra-national principles and tools. The Bank Recovery and Resolution Directive (BRRD) introduces a set of harmonized rules to manage bank crisis and prevent systemic risks. These include "early intervention tools" and pre-emptive strategies, according to which national authorities should prepare resolution plans to be implemented in the event of a crisis, in order to intervene in a timely manner and enhance the possibility for individual banks to return viable. (see Chapter 3-the BRRD).

1.2.3 The harmonization of Supervision and Governance Authorities

Regulatory authorities coordinate and supervise the overall regulatory structure through an architectural scheme where each sector of the financial system follows under the jurisdiction of a specific regulatory authority. The European authority for the banking sector is the *European banking Authority* (EBA), sided by the *European Systemic Risk Board* (ESRB), which stands at a higher level and acts as a "macro-prudential authority". From a wider perspective, the creation of the ESRB responds to the need of managing systemic risk at a global level and aligning the different regulatory goals. When the decisional power is kept at a national level, national authorities have a strong flexibility in the execution of resolution and recovery

strategies, potentially leaving floor for a general sentiment of mistrust in the financial system, while creating higher social and financing costs for single interventions. For this reason, the European legislator introduced a centralized mechanism to manage financial crisis in the banking sector, the *Single Resolution Mechanism* (SRM). This system is designed to support the principles and procedures established by the BRRD, involving a direct collaboration between the *Single Resolution Board* (SRB) and the competent national authorities. The role of the SRM can be effective only if considered as part of a trinity with the *Single Supervisory mechanism* (SSM) and the *Single resolution Fund* (SRF). The SSM, established in 2013 and effectively operating since 2014, represents the first step towards the creation of a banking union. Under the SSM, the European Central Bank is the responsible authority for prudential supervision of systemically important banks; it has monitoring powers to ensure banks' compliance with capital, liquidity and leverage requirements and it is the governing body responsible for setting supervisory rules. Only those banks that are subject to the SSM fall under the Single Resolution regime: the intent of the legislator is indeed to establish a stronger interrelation between the SSM and the creation of a uniform pattern for resolution interventions. The SRF represents an essential element for the functioning of the SRM, to the extent that it ensures the application of a uniform and integrated approach in the financing of resolution procedures between all member states. The fund is financed by *ex-ante* contributions from financial institutions for each member state and its primary objective is to guarantee financial stability in the long term. However, if specific circumstances are recurring, the fund can provide a direct contribution to banks which are under a resolution procedure; in any case, contributions from the fund cannot exceed 5% of the bank's total liabilities, inclusive of the bank's own funds. In the Italian context, the management of bank crisis falls under the jurisdiction of the national supervisory authority, the Bank of Italy, which has the power to coordinate and implement recovery and resolution procedures, to approve the intervention of the deposit assurance scheme and to activate the State intervention upon recurrence of specific circumstances.

1.2.4 Evidence from the Italian experience - overview of main resolution actions

The effects of the 2008-2009 financial crisis on the Italian economic framework are marked by the different resolution actions adopted by the Bank of Italy, in accordance with the European Commission directives, in order to address specific situations of financial distress in which some Italian banks were reversing. In

particular, three main events can be deemed as relevant in order to identify the Italian post-crisis financial condition:

i. Monte dei Paschi di Siena precautionary recapitalization;

ii. the compulsory liquidation applied to Banca Popolare di Vicenza and Veneto Banca, followed by the acquisition from Intesa San Paolo;

iii. the restructuring process applied to four Italian banks, then submitted to special administration procedure (Banca delle Marche, Banca Popolare dell'Etruria e del Lazio, CariChieti and Cassa di Risparmio di Ferrara).

1.2.4.1 Monte dei Paschi di Siena precautionary recapitalisation

From the second half of 2008 the effects of the financial crisis started to show and by the second half of 2009, the Supervisory authority had intensified liquidity controls over the Italian banking system. From several supervisory investigations conducted by the Bank of Italy between the years 2010 - 2016, it emerged that Monte dei Paschi di Siena ("MPS") was operating under an unacceptable level of risk (in 2014 non-performing loans amounted to €45 billion) and a poor governance structure. The bank repeatedly recorded capital shortfalls in the crisis years, failing to comply with minimum requirements, while further investigations also brought light over irregularities in the bank's accounting practices and insufficient liquidity margins, mainly linked to some structured operations carried by the bank on long-term government securities, correlated with high-risk profiles. At this stage, two major government interventions were implemented, in 2009 and 2013 respectively, both aimed at improving the bank's liquidity in the short-term. In addition, a €5 billion capital increase was achieved as to provide the bank with additional funding.[7] In 2014, the Bank was subject to a *Comprehensive Assessment* [8] which included both an *Asset Quality Review* (AQR) and a Stress Test. When the Bank did not pass the stress test even after the €5 billion capital increase, the European Central Bank called for an additional €3 billion capital increase in 2015, in order to compensate the capital shortfall. However, the following stress test carried out in 2016 revealed that MPS was still reversing in critical financial conditions (CET1 to -2.4%). In the same year, a private rescue plan was announced, involving the recapitalisation of the bank and the

[7] MPS was furthered hit by the European sovereign debt crisis, as a consequence of the substantial stock of government debt held in its portfolio, following the above-mentioned operations of public recapitalization.

[8] The *Comprehensive Assessment* has the objective to identify the effective financial condition of financial intermediaries on the basis of predefined common criteria and eventually quantify capital improvement measures. The AQR aims at assessing the adequacy level of the main capital indicators (i.e. CET1), focusing on the banks' riskiest assets. The Stress test contemplates a base scenario and an adverse scenario, in order to verify the impact of a drastic worsening of macroeconomic and financial conditions on the banking performance indicators

deconsolidation of its non-performing loan portfolio. However, the plan failed due to its complexity and risk concentration, making it difficult to estimate an intrinsic value for MPS. In 2017, the bank obtained the authorisation for a precautionary recapitalization, based on the burden sharing principle: subordinated claims were converted into equity for a total amount of €4.7 billion, while the Italian government was committed to purchase of 3.9 billion shares from MPS. The restructuring plan also included the securitization of toxic assets through the fund Atlante II[9] for a total value of €26.1 billion. The *bail out* strategy unavoidably lead to an increase in public debt; which turned into an increasing fiscal burden for taxpayers, eventually implying higher borrowing costs in the long term. On the bank side, existing shareholders suffered from the dilution effect due to the government capital injections and the losses related to the sale of non-performing loans.

MPS is a clear example of how national authorities may intervene as a last resort, when the market solution is not a viable strategy. Moreover, it may suggest that existing regulation may fail to provide adequate recovery tools if applied to banks which are already weak and unstable.

1.2.4.2 The resolution of the four Italian banks

Banca delle Marche, Banca Popolare dell'Etruria e del Lazio, CariChieti and Cassa di Risparmio di Ferrara were hit by the effects of the last financial crisis and eventually submitted to special administration procedure. Although these banks only account for 1% of national market share for total deposit amount, the Bank of Italy aimed at preserving their banking activity in the interest of local economies, by avoiding the negative externalities associated to an ordinary liquidation procedure. However, differently from the MPS case, no public intervention was realised; instead a "*good bank*" (also called *bridge-bank*) and a "*bad bank*" were identified to achieve the separation of the ongoing business activity from the distressed part of the bank that was unlikely to return viable. Both the bad and good bank were provided with a capital base, subscribed by the Resolution Fund. The burden of accounting losses primarily fell on the riskiest instruments, i.e. equity and bond holders, in compliance with the burden sharing principle introduced by the BRRD, while residual deteriorated exposures were transferred to a single New-Co - the *bad bank* - with the intent to achieve the disposal of non-performing exposures. Differently, a *good bank* was created for each individual bank and received all the activities classified as

[9] It is a private investments fund which can only buy non-performing loans from Italian banks, with a yield of investments set at 6%.

"performing", mainly deposits. The *good bank*, temporary run under the supervision of the Bank of Italy, was to be sold in the market in the short run as to compensate the Resolution Fund from the initial capital investment. Eventually, the original banks retaining the initial losses in their own accounts, were submitted to compulsory liquidation procedure.

The following implications can be derived with respect to the applied resolution framework. Firstly, the State, and indirectly the taxpayers, did not suffer from the cost of the resolution procedure, as this was ultimately borne by the banking system, through the intervention of the Resolution Fund. Total financing provided by the Fund amounted to approximately €3.6 billion, of which € 1.8 billion for the recapitalization of the *good banks*. Moreover, the applied strategy allowed the authorities to intervene in a timely manner, hence avoiding a situation of prolonged financial instability, with related benefits for the local and national economy.

1.2.4.3 Banca Popolare di Vicenza and Veneto Banca

Banca Popolare di Vicenza and Veneto Banca troubled financial conditions originated from the global financial crisis and from the irregular accounting practices adopted by the two banks. In particular, the capital used for self-financing operations was not deducted from the calculation of minimum capital adequacy ratios, as required by the European legislator, undermining the composition of the supervisory capital. In addition, both the excessive risk exposure and liquidity mismatch further worsened their already unstable financial conditions. In 2016, the Atlante Fund[10] subscribed a capital increase for a total amount of €2.5 billion, while competent authorities replaced the governing bodies of the two banks, thus initially evading the possibility of a recourse to ordinary liquidation. In 2017, in order to address the banks' permanent liquidity shortfall, a first and second tranche of public secured bonds were issued for a total amount of €6.5 billion, followed by the arrangement of a 5-year restructuring plan, which outlined funding requirements for €4.7 billion. When the private rescue plan failed, the banks asked for the application of the precautionary recapitalization which was however rejected by the European Commission. In this context, the European Commission, as the responsible authority for providing mandatory judgement upon the application of state direct intervention measures, did not recognise the prerequisites for a public intervention. In particular, the situation was not classified as systemic crisis and, given the absence of public interest, it ought to be managed at

[10] It is a private investment fund established in April 2016, with the objective to provide funding to banks experiencing a liquidity shortfall

national level according to ordinary insolvency procedures. The banks were eventually submitted to liquidation procedure in June 2017 and lately acquired by Intesa San Paolo. The acquisition aimed at preserving ongoing business operations and existing contractual relationships; at the same time, non-performing exposure were sold to a state-controlled society, SGA S.p.A, specialized in the recovery process of non-performing loans. The cashflows coming from the loans' disposal were to be assigned in favour of the liquidation procedure, the entity of the State intervention and related costs being partly dependent on the same outcome. The overall cost sustained by the Italian government, mainly used to provide Intesa San Paolo with sufficient funding to complete the acquisition and implement the agreed restructuring plan, was estimated for €4.8 billion. It is worth highlighting that an alternative solution, in the form of single-assets disposal within an ordinary liquidation procedure, would have driven higher costs for all market participants; i.e. retail depositors, the Italian government (through the reimbursement of public secured bonds) and the whole banking system through the application of the insurance scheme.

In the light of these events, the legislator should consider the possibility to establish an asset management vehicle at a European level to enhance financial stability, while an effective market for NPLs may create stronger incentives for the disposal of deteriorated exposures.

1.3 Introduction to Non-Performing Exposures

Since the 2008 financial crisis, the amount of *non-performing loans* (NPLs) held by European banks has substantially increased, raising concerns over the soundness of the banking sector. In Italy, NPLs reached a peak in 2015, accounting for the 18% of total loans. Credits generally classify as deteriorated exposures when the counterparty is no longer able to meet its contractual obligations and / or repay its debt for the settled amount or within the agreed time. Although national definitions of NPLs have substantially evolved in the past five years, there has recently been a convergence towards EBA/international NPL standards, in order to enhance comparability of NPL data.[11] The Bank of Italy identifies three categories of NPLs: *past due* (PD), *unlikely to pay* (UTP) and *bad loans*. *Past due* represent exposures for which principal or interest is 90 days (or more) overdue for a material portion of the exposure. The credit

[11] For further consultation: Barisitz, Non performing loans in CESEE – a brief update on their definitions and recent developments, (2019)

classifies as UTP when the debtor is assessed as unlikely to pay its obligation in full and without realization of collateral; however, these loans are expected to be recoverable within a reasonable timeframe. Then, *bad loans* identify exposures to customers who are insolvent or in a state similar to insolvency.

NPLs are particularly relevant for determining the soundness and riskiness of financial institutions, as increases in the stock of NPLs might have different implications on the institution's capital base and affect its economic performance through the profit and loss account. Generally, a large and unexpected rise in NPLs implies different accounting adjustments for banks, made to restore balance sheet conditions.[12] Most of the adjustments operate through the profit and loss account, by the establishment of an appropriate coverage ratio to protect banks against the risk of future growth in the share of NPLs, as loan loss provisions can effectively reduce their exposure to borrowers' defaults. However, an increasing level of loan loss provisions has the effect of lowering the bank's profit and, consequently, its return on equity (ROE). Whether the bank's net profit becomes negative due to a permanent and significant increase in the level of loss provisions, the bank's capital base is depleted. Therefore, banks should be able to adjust provisions in the long term to cover expected risk without compromising their profit margins too heavily. At the same time, higher NPL ratios may increase banks' funding costs arising from stronger market pressures and may alter banks risk-taking attitude. The market may take higher stocks of NPLs as a sign of higher idiosyncratic risk and/or lower managerial abilities of the bank. In this case, whether this is not fully offset by an adequate coverage ratio, the bank's external funding costs may substantially rise, causing a decline in loan supply. Even banks' risk-taking attitude can change with respect to changes in NPL exposures: banks may have incentives to lend to risky borrowers at times of low interest rates (this is especially true for banks with a smaller capitalization), possibly more than they should and at excessively lax conditions.

Higher NPL ratios are in principle correlated to a riskier bank asset side, which may call for the application of more stringent capital requirements. In fact, a worsened credit quality translates into higher risk weights in the calculation of regulatory capital ratios. Consequently, in order to cope with increasing risk weights, banks may decide to reduce the size of their balance sheet, which may in turn contribute to a contraction in credit supply. Existing literature has deeply discussed the effect on bank loans'

[12] The situation is further worsen when the rise in non performing exposures is experienced at times of low profitability

supply following a significant deterioration in the credit quality of the banking system, measured in terms of both the NPL ratio and loan-loss provision ratio.[13] The fact that an increase in NPLs may impair the bank's capacity to finance the real economy has been brought to the attention of the legislator in the past few years. Balgova et al. (2016) brought a contribution to this debate, by studying the causality relationship between output growth and changes in NPL stocks in different countries. They found that countries that actively reduced their NPLs typically experienced higher growth rates between 1997 and 2014. However, the impact of external macroeconomic forces that may simultaneously affect the banking sector and the real economy should be taken into account when assessing the correlation between NPLs stock and economic growth (the latter being triggered by a contraction in credit supply). In order to examine the origin of positive changes in the amount of deteriorated exposures, the existing literature identifies some drivers for NPLs, which depend both on bank characteristics and on the macroeconomic performance of the economies in which banks operate.[14] Macroeconomic dynamics are relevant to the extent that NPLs are higher in periods of economic stagnation and in countries with weak credit demand. From this perspective, the direct impact of NPLs on credit supply is indeed undermined by different macroeconomic forces coming into play. At the same time, a decline in the banks' cost efficiency, weaker credit expansion policies and the loosening of banks' lending standards often anticipate increases in NPLs.

In the light of the above, a greater amount of NPLs is likely to be associated with higher risk weights and higher funding costs; however, the effect on credit supply strongly depends on whether the bank is able to offset market pressures through a credible strategy aimed at strengthening the capital base and increasing the level of coverage ratios. In this context, the NPL phenomenon might trigger a vicious cycle: the lower growth connected to a tightening in credit supply, generates further deterioration in the balance sheets of banks; the worsening of the banks' asset side in turn affects the supply of bank loans through a lower credit quality, ultimately impacting bank capital via risk weights. Carpinelli et al. (2017) examine the impact of different NPL ratios over the supply of bank credit in Italy between the years 2008-2015, by exploiting the variability of non-performing exposures in a panel of over 500 banks. Results show that the banks' lending behavior ultimately appears to be unrelated to the level of NPL ratios, if negative externalities are not taken into account.

[13] These ratios work as proxies for the credit quality of the bank's portfolio

[14] Balgova, M., Nies, M., & Plekhanov, A. (2016), The economic impact of reducing non-performing loans

On the other hand, "exogenous" shocks to NPL ratios can have a negative impact on credit supply; in fact, NPL shocks are intuitively similar to other negative externalities impairing the capitalization or profitability of a financial institution.[15] Likewise, supervisors required banks to adopt several adjustments to their balance sheets which, being out of the control of the banks, can represent an "exogenous" variable (consider for example the impact of provisions over banks' operating profit).[16] At the same time, the correlation between NPLs and credit supply shows to be also driven by demand-side effects. From this perspective, a decline in the profitability of national firms and poor investment opportunities might determine a decreasing trend in credit demand in the market, representing a common driver for both the rise in NPLs and reduced credit flows. According to this scenario, changes in NPL ratios may originate from cyclical phenomena, rather than from bank-specific features. A significant deterioration in the banks' asset quality could indeed derive from a condition of prolonged macroeconomic weakness: in times of economic uncertainty, firms are known to invest less, which leads to a decline in their need for external funding.

In conclusion, the role of NPLs in shaping banks' lending activity might be sometimes overestimated. In any case, it is fair to say that NPLs might influence credit supply according to other dimensions, for instance by making loans more expensive, while "exogenous" shocks leading to higher NPL flows and increasing loss provisions can tighten credit supply in the economy. Even if high NPL ratios do not discourage banks from lending, an exogenous variation in these ratios may push banks to modify their lending policies.

1.3.1 Focus on the asset quality of the Italian banks

The aggregate NPL ratio of the Italian banks almost doubled between the years 2008 - 2015, also marked by the economic slowdown of the country. According to a study conducted by the Bank of Italy, it emerged that 90% of the flow of NPLs registered between 2007 and 2015 originates from the global financial crisis. In addition, the rise in the stock of NPLs might have impaired European countries' ability to rely on a stable credit supply, under the assumption that a decline in the credit quality weakens banks' lending, making it more difficult for national economies to recover from the crisis. Today, the national macroeconomic scenario is experiencing an overall slowdown, with a stable decline in firms' expectations and investment trends. Lending

[15] Accornero, Alessandri, Carpinelli and Sorrentino (2017); Non-performing loans and the supply of bank credit: evidence from Italy
[16] For the purpose of the analysis, the AQR was used to identify exogenous variations in the banks' NPL ratios through balance sheet adjustments. The AQR, as an overall assessment of the quality of the bank's assets works as a comprehensive indicator of the soundness of the European banking system. The AQR led to an increase in provisions and requirements across the participating banks

to firms has slowed as well. Surveys show that credit supply conditions are tightening, owing to both the deterioration in the macroeconomic outlook and the increase in funding costs. Moreover, the increase in risk premium of government debt was gradually transmitted to the private sector borrowing costs, further shrinking the credit supply.

Today, the current Italian economy is largely affected by downside risks, originating from the uncertainty around growth prospects, the current fiscal policy and the lack of a credible path to reduce the burden of public debt. Only in the second half of 2018, industrial production in the euro area declined by 0.5% (0.8% in Italy).[17] Also, weaker investment trends and worsening in foreign demand expectations represent additional drivers which contributed to the economic slowdown of the country. In this context, the ECB announced a series of expansionary measures, mainly driven by low interest rates, that are expected to remain unchanged at least until year-end 2019 and the renewal of targeted longer-term refinancing operations (TLTROs).[18] However, the national economic and financial activity is slightly recovering: employment rate appears to stabilize and export developments are favourable, despite the drop in international trade; also, financial market conditions show signs of improvement (since the start of the year, the general index of the Italian stock market has gained 19%).[19]

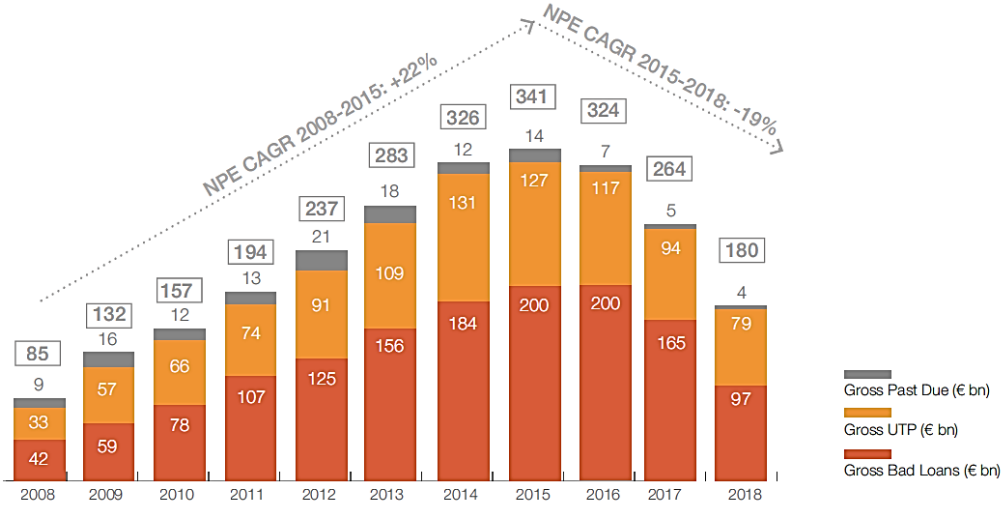
Beside the unstable economic conditions, the improvement in the credit quality of Italian banks, started in 2015, continued in 2018 and can be analysed by taking account of the decreasing amount of NPLs held in the banks' balance sheets, also thanks to a large number of NPL disposals. During 2018, several major NPL transactions took place in the Italian banking sector that involved the participation of significant banks, including Banca Monte dei Paschi di Siena, Intesa Sanpaolo and Banco BPM.[20] NPLs reductions also attain to significant groups, in line with the more stringent requirements introduced by the supervisory authorities for G-SIIs. For these institutions, the coverage ratio shall be raised by having regard of the specific situation in which the single institution operates. At the same time, the NPL secondary market is gradually growing following the exit strategies pursued by previous investors and the increasing interest of new external players. In the past years, the failure to develop a secondary market for NPLs in Italy was mainly due to the substantial difference

[17] Speech of Ignazio Visco, Feruary 2019
[18] Targeted Longer-Term Refinancing Operations (TLTROs) provide financing to Eurosystem credit institutions with maturities longer than one year. TLTROs are designed to improve the monetary policy transmission mechanism by stimulating bank lending to the real economy. Their pricing, to be defined in the coming months, will take account of future economic developments.
[19] Bank of Italy, Economic Bulletin No. 2 - 2019
[20] Banca Monte dei Paschi di Siena closed the disposal of a €24.1bn mixed secured – unsecured portfolio of bad loans; Intrum acquired a €10.8bn bad loans portfolio from Intesa Sanpaolo, while Banco BPM sold a €5.1bn bad loans portfolio

between the book value of these assets and the price investors were willing to pay. This difference fundamentally lied in the different valuation criteria used by banks and investors in assessing the value of NPLs and it was to some extent proportionate to the length of the recovery procedure (judicial or extra-judicial).[21]

The table below is a graphical representation of the evolution of the Italian stock of gross *non-performing exposures* (NPEs).[22] The amount of gross NPEs decreased from €264 billion in 2017 to €180 billion at the end of 2018, where gross bad loans visibly account for the greatest portion of NPEs. The upward trend in the stock of NPEs has reverted over the years and it is expected to continue in the light of heavy NPE disposals, lower inflows of deteriorated exposures and improved economic conditions. At the same time, the gross NPE ratio (defined as total distressed assets to loans to clients) was equal to 10.2%, decreasing by 130 bps in the first half of 2018 from year-end 2017.

Table 1. Gross NPEs trend (€/b)



Source: PwC analysis on Bank of Italy "Banche e istituzioni finanziarie: condizioni e rischiosità del credito per settori e territori», December 2018

In terms of geographical concentration, more than a half of the amount of total gross bad loans is located in four Italian regions (Lombardy, Lazio, Emilia Romagna, Toscana). Similarly, in terms of volumes, the highest UTP concentration is in Lombardy and Lazio, accounting for 25.7% and 15.3% of total volumes, respectively.

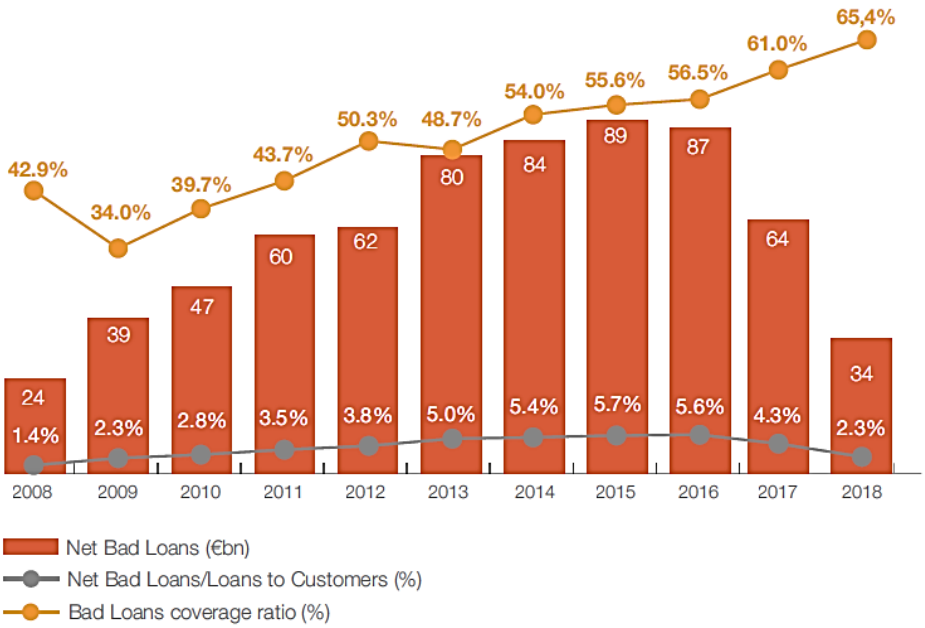
[21] See: −Ciavoliello, L. G., Ciocchetta, F., Conti, F. M., Guida, I., Rendina, A., & Santini, G. (2016). What's the value of NPLs? Notes on Financial Stability and Supervision

[22] For the purpose of this work, NPEs will be used as a synonym to NPLs

At the end of 2018, the "Corporate & SME" sector represent the greatest share of Italian gross bad loans (70.9%), followed by consumer loans (21.1%).[23]

The table below shows the trend of net bad loans and the respective coverage ratio in the years following the financial crisis. In particular, net bad loans coverage ratio increased sharply over the last two years, reaching a peak of 65% at year-end 2018, in line with the requests put forward by the EU legislator to increase minimum provisioning levels. Moreover, the implementation of IFRS 9 first time adoption (FTA) rules allow banks to improve their asset quality, while sustaining growth in loan origination, which are both necessary conditions for the recovery of the national economy. In fact, higher NPE coverage mainly resulted from the application of FTA rules based upon the IFRS9 forward looking and expected loss approach.

Table 2. Net bad loans and coverage ratio trends (€/b)



Source: PwC analysis on ABI Monthly Outlook and Bank of Italy data, December 2018

The UTP market, yet in an early stage and still limited in terms of volumes and number of transactions, represents the next challenge for the Italian banks, leaving floor for the implementation of innovative deleveraging structured solutions. At September 2018, UTP figures recorded a GBV of approximately €83bn of which 55% is concentrated in the north of Italy.[24] At year-end 2018, gross UTP loans showed a slower decline, amounting to €79 billion (see Table 1). Over the last few years, UTP

[23] Pwc, The Italian NPL market, July 2019
[24] EY, The Italian NPEs market, 2018

disposals have involved a limited number of sellers and involved large-size deals, with portfolios priced around 40-43% of their GBV.

In the near future, banks shall consider further measures for an effective and efficient management of their NPEs, with a view of improving resilience and rebuilding confidence in the banking system, both at national and European level. In the last months the EU regulator continued to exert stronger pressure in order to achieve a consistent coverage of NPEs in the medium term. The comprehensive package on NPLs proposed by the European Commission in March 2018 works as an additional risk-reducing measure. The package aims to preserve the banking sector's lending and financing ability by facilitating the market disposal of NPLs and by preventing the build-up of new ones in the future. New rules on minimum NPE provisioning levels, known as *calendar provisioning*, have been included in the ECB Addendum in March 2018. In particular, the Addendum introduces quantitative expectations about the timing and the minimum loss coverage levels for banks by establishing an impairment level equal to 100% of the new flows of NPEs within 2 and 7 years for unsecured and secured exposures, respectively. The Addendum is applicable since April 26th, 2019 to all exposures originated from such date onwards and to those exposures reclassified as "non-performing" as from April 1st 2018. This analysis will be part of the SREP from 2021: whether reported coverages do not meet the supervisory requirements, banks shall provide an explanation for this discrepancy and eventually apply specific accounting adjustments.

1.3.1.1 The GACS scheme

A substantial contribution to NPL disposals comes from the *Italian State Guarantee scheme* (GACS - *Garanzia Cartolarizzazione Sofferenze*), which applies to the senior tranches of NPE securitization operations. Tanks to the public guarantee, Italian banks can secure their senior notes issued by a SPV within a bad loans securitisation. Under the GACS scheme, senior tranches shall receive investment-grade rating, which requires a deep loan data tape analysis and the examination of portfolios' business plans from rating agencies. In particular, a good data quality is crucial for the process, as it helps the issuer to achieve a higher senior tranche and therefore maximize the benefits connected to a lower funding cost.

This strategy has strongly contributed to the resizing of the Italian stock of NPLs: since it has been established, it helped the Italian banking system in the disposal of NPL portfolios for a total GBV of approximately €63 billion, by broadening the

spectrum of potential investors. In addition, the GACS can be applied to multi-originator securitizations, which allow less significant banks (i.e. groups of smaller cooperative and mutual banks) to easily gain access to the secondary market and sell their NPE portfolios more efficiently than on a single basis.[25]

Since 2016, the GACS scheme has witnessed an increasing number of NPE disposals; following this path, many banks have decided to include GACS-backed securitization transactions in their 2019 disposal programs.

1.3.2 The Servicing market and principal restructuring actions

As already mentioned, increases in NPL ratios presumably produce effects via the profit and loss account, leading banks to revise their lending strategy while adjusting their coverage levels. Following regulatory pressures, banks have focused on the disposal of NPE portfolios and have started outsourcing servicing and recovery activities to specialized players, sometimes through the transfer of whole NPE platforms. Increasing pressure on the demand side, as well as increasing competition are now shaping the transforming of market dynamics. Up to now, big players have been capturing the larger transactions. However, the large deal size and the request for specialization, that characterised the NPL market in the last years, might lead to a growing demand for sub-servicing activities, which may in turn represent an interesting opportunity even for smaller players. Above all, banks can choose between an internal management and an outsourcing management of their NPL portfolios. By opting for the first strategy, the NPL management process is carried out within the originating bank; alternatively, the bank can seek for partnerships with specialized operators, in order to achieve a reduction in the operating costs and improved economic efficiency. Outsourcing strategies may involve the disposal of non-performing securities through securitisation: deteriorated exposures are transferred to a SPV and then sold in the market in the form of newly issued notes. The notes are assigned to different ratings, thereby attracting investors with different risk profiles: in this way, the bank attains the desired effect of achieving credit risk transfer while maximising the investor base.

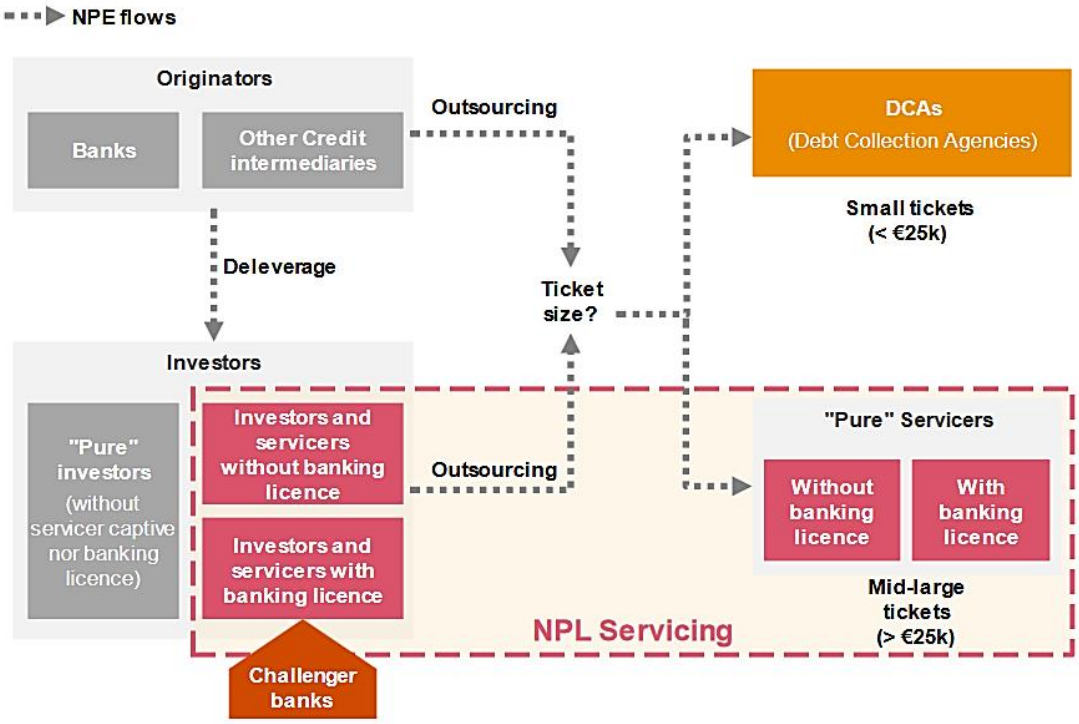
In order to cope with a growing trend in NPE transactions, the NPE Servicing industry has been growing as well in the recent years, leading to the coexistence of different business models in the credit management industry. The evolution of the credit servicing market has been primarily driven by the following factors: the

[25] LuzzattiS.p.A. announced the securitization of approximately €1.6 billion of NPLs (to the vehicle POP NPLs 2018) on the side of 17 cooperative banks

presence of financial and strategic investors operating through credit collection platforms; significant portfolio disposals and the increase in strategic carve outs of NPL banking platforms, accompanied by multi-year servicing contracts.[26]

The following figure exemplifies the NPE and servicing market structure. Investors acquiring NPEs might be "pure investors" or captive servicers also performing credit recovery activities. Whether the originators or the investors decide to outsource their credit portfolio, exposures are committed to different agencies according to their size. Usually, small exposures (e.g. below €25k) are committed to DCAs (*Debt Collection Agencies*); while exposures above €25k are committed to NPL Servicers, sometimes acting with banking license.

Table 3. The NPE market and its actors



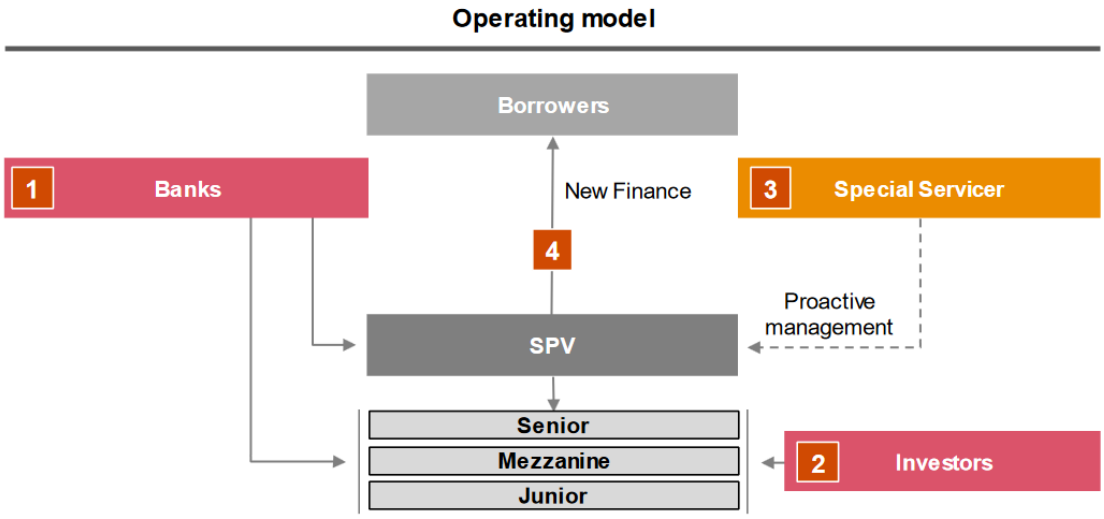
Source: Pwc, The Italian Unlikelyto PayMarket, May 2019

On the other side, the recent increase in the number of transactions involving UTP exposures has further raised the attention over this asset class. According to a proactive management approach pursued by the regulator, banks shall identify the best solutions for the deleveraging of their UTP portfolios among several strategic options.

[26] Pwc, The Italian Unlikelyto PayMarket, May 2019

For instance, the synthetic securitisation is a structured refinancing solution potentially suitable for the UTP market, in order to achieve the disposal of UTP loans. A graphical representation of a synthetic securitisation of non-performing exposures is outlined below. According to this securitisation structure, the acquirers of asset-backed securities can be investors with different risk profiles, including the banks originators underwriting the SPV notes (however, banks cannot retain the credit risk through the junior notes).

Table 4. Synthetic securitisation of non-performing exposures



Source: Pwc, The Italian Unlikelyto PayMarket, May 2019

The first step foresees the bank's credit disposal to a SPV; the notes issued by the SPV are then subscripted by market investors, while a Special Servicer provides proactive management to the SPV. The peculiarity of a synthetic securitisation is given by the opportunity for the SPV to provide new financing to the borrowers. Whether the synthetic securitisation is assisted by a public guarantee (GACS), the risk related to bonds' senior notes are further reduced, thereby cutting the financing costs faced by the SPV.

However, this is not the only available UTP strategy. Other strategic options shall be identified according to a solid due diligence process, differentiating between a going concern and a gone concern approach. Under a going concern approach, the debt repayment is conditional upon the borrowers' operating cash flows. To increase the possibility to effectively receiving the expected cash flows, the bank can recur to forbearance measures. These allow a proactive management of UTP exposures and may involve one or more of the following: interests and capital amortization

rescheduling; new financing; restructuring plans; debt restructuring agreement and composition with creditors. The ECB Guidance emphasizes that forbearance measures are designed to allow debtors to exit their non-performing status or prevent performing borrowers from reaching one. Differently, under a gone concern scenario the bank can achieve the disposal of the UTP portfolio through a full or partial asset transfer or alternatively push the debtor into bankruptcy.[27] Alternative opportunities of value creation are also represented by the UTP servicing market, where UTP loans are outsourced to specialised servicers; these shall operate according to a proactive management approach based on a continuous assessment of the credit performance.

In the near future, we expect that new players and a fast-changing environment will drive the evolution of the NPE servicing market. Notwithstanding the expected reduction in the dimension of future NPE stock, servicing volumes are expected to continue growing, following a stable trend of NPE disposals. In this context, the increasing level of specialisation in the servicing market and growing UTP trends may represent alternative business opportunities. In particular, the evolution of the UTP market will push players to re-think their business models as different capabilities are required, within a combination of restructuring, lending and servicing skills. On the other side, the stabilization of portfolio prices and a possible increase in operating costs may leave floor for potential reductions in the profitability levels of the European banks; unexpected costs may also derive from regulatory requirements and compliance restrictions. Hence, banks shall revise their internal processes for the management of their deteriorated exposures, while carefully considering the advantages of outsourcing loans to specialized operators, including UTP exposures.

[27] The disposal of the UTP portfolio can also employ a securitization structure, in order to attract a broader base of investors

2 The evolution of banking regulation

2.1 Update of the EU regulatory framework - principles of financial regulation

Negative economic externalities arising from market failures usually emerge after a longer period, when their consequences may have a larger impact on the whole economy. This raises evidence of the need for external intervention; in particular, it is the role of the legislator to improve the functioning of the system, correct its failures, at the same time trying to prevent them. We can identify three stages when implementing a regulatory system. First, it is important to assess the nature and scale of each market failure. The second step is to identify a range of possible solutions to be implemented, or a combination of these, given a set of possible regulatory interventions and according to specific objectives that have been previously defined. The last step is to perform a cost- benefit evaluation, in order to establish whether it would be convenient to implement a particular strategy, such that its benefits would outweigh the costs.[28]

In particular, reducing risks in the banking sector is the first step for a more stable financial system. Financial regulation and the way regulatory system is organized has changed very rapidly since the global financial crisis and it is under continuous evolution. In order to evaluate whether regulatory tools for banking crisis management are appropriate and effective, they should be able to address every specific situation of financial distress (i.e. liquidity or solvency problems, governance weaknesses, etc.). For this purpose, it is also important to distinguish between a temporary state of weakness and a bank close to insolvency.

The Basel Framework is a set of rules established by the Basel Committee on Banking Supervision (BCBS) designed to enhance financial stability and increase the resilience of financial institutions. In particular, capital and liquidity requirements are regulatory tools introduced by the Basel framework and designed to *prevent* the risk of bank failures, for this reason they are called "prudential strategies". Capital requirements aim to increase the bank's loss absorbing capacity by demanding a higher capital base against a possible decrease in the bank's assets value, while liquidity requirements are designed to address potential liquidity shortfalls and ensure the bank's ability to meet depositors' withdrawals. With this regard, the regulatory framework introduces more risk-sensitive capital requirements and more accurate methodologies for addressing the actual risks banks are exposed to. It is fair to say that

[28] *Armour, J., Awrey, D., Davies, P. L., Enriques, L., Gordon, J. N., Mayer, C. P., & Payne, J. (2016). Principles of financial regulation. Oxford University Press*

the new legislation should reconcile the need to set higher standards for capital requirements with the need to ensure that banks hold an adequate amount of liabilities to deal with times of financial difficulty. With the intent to introduce additional risk-reduction measures in the financial sector, the European Parliament has approved a banking reform package in April 2019, which can be considered an additional step towards the completion of a supra-national regulatory framework. The banking package updates the existing '*Single Rulebook*' for banks established in the wake of the financial crisis, by introducing specific measures to further reinforce the banks' ability to withstand potential shocks.

The following paragraphs outline the basic concepts of banking capital and liquidity regulation, with additional focus on Pillar II supervisory requirements. Other regulatory tools, which are not subject to further analysis for the purpose of this work, can be identified in the *deposit insurance scheme* and in the Central Bank systemic intervention. More specifically, the Central Bank plays the role of "*lender of last resort*" in the financial system, by granting short-term loans to banks facing liquidity problems, as long as they are able to provide adequate collateral and hold enough capital reserves to protect the Central Bank in the event of a bank's default. In addition, when the bank is facing a solvency problem, depositors can benefit from complete insurance only through an appropriate *deposit insurance scheme*, ensuring a full coverage of their credit positions, under the assumption that a partial insurance will not prevent a possible bank run.

2.1.1 Capital Regulation

As already discussed, the Basel framework is based on three pillars, among which Pillar I requirements provide details for capital regulation in banking institutions. When it was first introduced in 2007, Basel II, by updating the existing Basel I framework, allowed for a more complete and accurate dependency between regulatory capital requirements and the bank's overall risk exposure. Basel II envisaged different risk measurement options depending on the operational/organizational complexity of the bank, but it did not provide banks with adequate tools to face a liquidity crisis and address cyclical changes in the financial markets. In this context, Basel III established a more severe regulation, addressing all the critical issues unveiled by the global financial crisis, in order to "*strengthen global capital and liquidity regulations with the goal of promoting a more resilient banking*

sector".[29] In particular, the capital reform, with specific reference to Pillar I, does not modify the general credit risk measurement framework, it rather improves the quality and consistency of the capital base. Minimum Tier 1 capital (represented by core capital, including equity and disclosed reserves) is still set at 6% of risk-weighted assets - of which common equity (CET1) must be at least 4.5% - while total capital requirement shall account for 8% of risk-weighted assets. However, to complement minimum requirements, Basel III introduced an extra mandatory capital, i.e. the *capital conservation buffer* (set at 2.5% of risk-weighted assets for common equity) and combined with a *counter-cyclical buffer* (ranging from 0% to 2.5%, also established as a percentage of risk-weighted assets), which is designed to reduce the procyclical nature of lending. The excessive level of indebtedness experienced during the financial crisis, mainly due to regulatory arbitrage and unwise recourse to asset securitization, pushed the legislator to create measures for containing leverage; accordingly, the *leverage ratio* establishes that Tier 1 capital cannot exceed 3% of both on / off balance sheet assets, creating incentives for banks to hold a "sustainable" amount of debt. To complete the capital reform, a *risk coverage measure* revise the standard approach for the calculation of credit, market and operational risk for banks, increasing the risk-sensitivity and comparability across different evaluation methods. Basel III also regulates concentrated exposures in the financial system, in order to mitigate systemic risk arising from interlinkages across financial institutions. As already mentioned, banks with a systemic relevance are required to have a higher loss-absorbency capacity, in addition to risk-based capital and leverage ratio requirements.

2.1.2 Pillar II Supervisory Requirements – basic principles for SREP and stress testing

Pillar II is part of the Basel framework regulatory standards and it was designed to complement Pillar I requirements by providing principles for risk management and supervision. In particular, supplemental Pillar II requirements address governance and risk management issues in credit institutions, with specific focus on off-balance sheet items and the use of securitization. In fact, regulatory authorities acknowledged that Pillar I requirements, although addressing a wide range of risk factors (i.e. credit, counterparty, market and operational risk), were not sufficient to fully capture a bank's risk profile. Consequently, Pillar II complements Pillar I binding-requirements with specific supervisory actions, based on a comprehensive assessment of a bank's risk

[29] ECB, Financial Stability Review, December 2010

profile, including a review of its self-assessment process. Pillar II principles address risks to capital not covered, or insufficiently covered, by Pillar I by introducing add-on capital measures, while providing incentives for banks to overcome specific deficiencies identified in the evaluation process. Given the complexity of the banking system and the heterogeneity among the related risks, setting appropriate risk-measurement tools represents a first line of defense for achieving financial stability.

In particular, Pillar II framework is based on four principles[30]:

i. *banks' own assessment of capital adequacy:* banks can perform an internal valuation for assessing their capital adequacy, which should create the prerequisites for an effective risk monitoring and reporting system;

ii. *Supervisory Review Process*: beside conducting their own internal assessment process, banks are subject to an external review to assess their overall capital adequacy and risk positioning;

iii. *capital above regulatory minima*: banks are expected to hold capital requirements above the minimum set by the regulatory authorities under Pillar I and can be asked to hold additional capital to promptly address cyclical market features;

iv. *supervisory intervention*: it is in the power of supervisors to promptly intervene against the risk that banks' capital is depleted, depriving the institution of a stable funding base. Among different alternatives, supervisors can put constraints on dividend distribution, call for the execution of capital restructuring plans and ask for a capital increase.

In 2006, the Capital Requirements Directive embraced the Basel principles by including Pillar II requirements into the European legislation. The Directive sat the basics for performing a comprehensive evaluation over the risk profile of the single institution; accordingly, an *Internal Capital Adequacy Assessment Process* (ICAAP) and a *Supervisory Review and Evaluation Process* (SREP) are identified. While the first is a self-assessment performed by individual banks, the SREP is an external evaluation carried out by competent authorities. There is a strong debate over the drawbacks connected to the implementation of the ICAAP, as for the difficulty to align and compare self-assessments results arising from bank-specific evaluation methods. In this context, the possibility to create a link between the ICAAP and the strategic objectives of the bank may improve the *reliability* of this process. Moreover, an

[30] Bevilacqua, M. et al., Bank of Italy Occasional Papers; The evolution of the Pillar II framework for banks: some thoughts after the financial crisis (2019)

appropriate balance between flexibility and comparability can allow banks to benefit from a tailor-made approach while ensuring a level playing field in the financial system. However, the Capital Requirements Directive included very broad outlines for the definition of both the ICAAP and the SREP, leading to a rather heterogeneous application of the same principles in the euro area.

In 2013, an updated version of the Directive - "Capital Requirements Directive IV" (CRD) - was introduced. The CRD provides a legal basis for the SREP; in particular, supervisors shall review the strategies and the capital / liquidity adequacy of the institution, in order to assess whether these are adequate for warranting a sound management system and a proper risk coverage policy. With respect to risks, the legislator also addresses the risks the single institutions pose to the financial system as a whole, partly encouraging a macroprudential interpretation of Pillar II requirements. However, the CRD still contemplates relatively general terms of implementation; in fact, it is left to the EBA to further specify the methodologies for conducting the SREP, by considering the specificities of the single credit institution (i.e. size, the structure and complexity)[31]. In this perspective, the EBA SREP Guidelines - the "Guidelines" - entered into force in 2016, complement the European rules covering all aspects of the SREP in details, while identifying a broader set of supervisory powers, as early intervention measures.

The Single Supervisory Mechanism is a further step forward towards the regulatory harmonization process, as it establishes a common framework for banks' *risk assessment.* The SSM Supervisory Manual, published in 2018, stresses the role played by the SREP in determining the adequacy of the bank's overall risk profile, also forming "*the basis for a decision on the adequacy of the levels of capital and liquidity*".[32] Under the SSM, the SREP is used to assess the overall risk profile of a bank by identifying four main drivers. These are closely interrelated and are represented as follows: the bank's business model; its governance and risk management system; its capital and liquidity risks and the sustainability of its funding structure. By considering the outcome of the assessment, the overall SREP decision might lead to the determination of additional liquidity or capital requirements and other qualitative supervisory measures in order to address specific deficiencies identified in the assessment process. In other words, supervisors quantify the additional own funds

[31] Directive 2013/36/EU, Art 107 (3)

[32] Bevilacqua, M. et al., Bank of Italy Occasional Papers; The evolution of the Pillar II framework for banks: some thoughts after the financial crisis (2019)

required to restore an adequate risk coverage level, by defining the size and composition of the regulatory capital demand. In particular, capital add-ons distinguish between a *binding* and a *non-binding* component, known as *Pillar II Requirement* and *Pillar II Guidance* respectively. Pillar II Guidance has the objective to incorporate the results of stress testing and it shall be covered by the most loss-absorbing capital instruments (i.e. CET1 capital). It is fair to say that banks would have the incentive to fully disclose the SREP results only if they thought this could translate into a benefit in terms of higher share price or lower funding costs, under the assumption that a complete disclosure may penalize weaker banks in terms of more severe market discipline, tightening their ability to gain access to a broader investor base.

To complete the framework, the CRD also identifies specific guidelines for conducting stress testing; in particular, stress testing results should be interpreted having regard of the nature and complexity of the single institution [33]. In this context, stress testing becomes a tool to *"facilitate the review and evaluation process"*[34] and contributes to the setting of Pillar II requirements. In fact, supervisory stress testing results are key drivers when establishing the level of supervisory capital add-ons, as these quantify the potential losses that may arise under adverse economic scenarios. However, capital measures should not represent the main response to banks' shortcomings and cannot be used as a substitute for other recovery measures. In line with this view, the SSM considers a *holistic approach* in the risk assessment process. It is worth highlighting that, under Basel II, stress testing was not originally intended as an independent supervisory tool to address bank's resilience under a stressed scenario; it was instead generally described as a risk management tool, lacking a set of specific references for its implementation. Only following the financial crisis, the urgency to create a standardized framework for stress testing led to the publication of the *Principles for sound stress testing practices and supervision* (2009) and the *Guidelines on Stress Testing* (2010), which aim at converging supervisory stress testing practices across the EU. However, it is worth noticing that stress testing models are based on a wide range of assumptions and necessary imply a considerable degree of uncertainty. Under the SSM approach, stress tests contribute to the SREP assessment and to the determination of Pillar II Guidance. Stress testing is also relevant within the resolution framework; indeed, stress testing results contribute to the determination of the solvency status of the bank, which is required for the application

[33] Directive 2013/36/EU, Art 97 (1)

[34] Directive 2013/36/EU, Art 100 (1)

of the precautionary recapitalization scheme. Likewise, the overall SREP score expresses the viability of a bank, thus determining whether the institution can be considered as "failing or likely to fail".

Under the new package of reforms recently approved by the European Parliament in April 2019, the conditions for the application of Pillar 2 capital add-ons are furtherly clarified. The agreement also ensures that competent authorities have the necessary flexibility in the application of Pillar 2 requirements and that Pillar 2 capital add-ons should be restricted to a purely micro-prudential perspective, to avoid overlaps with the existing macro-prudential tools.

2.1.3 Liquidity Regulation

As already discussed, by performing liquidity transformation, banks convert short-term funds (mainly retail deposits) into long-term maturity assets; the bank is therefore exposed to the liquidity risk arising from the structural mismatch between its assets and liabilities. This risk is strictly linked to the event of a sudden and unexpected withdrawal of funds well in excess of the bank's cash reserves, which may trigger a systemic "bank run" effect. In the crisis years, many banks, despite being solvent, showed unable to absorb credit losses because of insufficient liquidity buffers and experienced liquidity shortages, as they lacked a proper liquidity management system.

The above described regulatory reform also aims to provide an "*international framework for liquidity risk management standards and monitoring*", by introducing specific liquidity thresholds and by monitoring the liquidity risk in credit institutions, distinguishing between short and long-term risk. In particular, Basel III introduces for the first time a clear list of liquidity principles to be applicable on a wider basis. These are designed to improve the bank's liquidity position, this latter intended as the capacity to respond to a sudden withdrawal of short-term funds without having to sell off illiquid assets.[35] Liquidity regulation imposes two liquidity constraints to banks, the *Liquidity Coverage Ratio* (LCR) and the *Net Stable Funding Ratio* (NSFR). More specifically, the LCR is designed to enhance the bank's short-term resilience to liquidity shocks, by improving the quality of its liquidity reserves. Banks are indeed required to hold enough high-quality liquid assets to withstand a 30-days stressed funding scenario. In other words, the amount of high-quality liquid assets the bank has to keep at all times is a function of the stability of its short-term funding. The stressed

[35] *Armour, J., Awrey, D., Davies, P. L., Enriques, L., Gordon, J. N., Mayer, C. P., & Payne, J. (2016). Principles of financial regulation. Oxford University Press*

scenario partly replicates the liquidity shocks experienced by credit institutions in the crisis years, also having regard of minimum *"run-off" rates* associated to the different liability classes. High-quality liquid assets are mainly incorporate cash, treasuries and high-quality corporate bonds, also including some securitized instruments. In this context, the bank faces a restriction on its asset-class, in a way that the asset and liability side of the balance sheet are directly linked.

Differently, the NSFR is designed to address potential liquidity mismatch and provide banks with stable sources of funding. The ratio is defined as the amount of available stable funding compared to the amount that is required and it can be represented as follows:

$$\frac{\text{Available amount of stable funding}}{\text{Required amount of stable funding}} \geq 100\%$$

Actually, this ratio creates stronger incentives for banks to seek for more stable funding sources on an ongoing basis, without unduly relying on short-term funding. The NSFR introduces the concept of "*stable funding*", which is the portion of capital and liabilities expected to be reliable over the time horizon considered by the NSFR, which extends to one year. The ratio implies a different valuation for assets and liabilities: the assets are valued according to the possibility of being liquidated at face value (which depends also, but not entirely, on the asset maturity); by contrast, the value of liabilities reflects the likelihood of deposits being withdrawn at the same time. It is obvious that log-term funding (more than one-year maturity) is considered more stable than short-term funding; accordingly, banks may decide to shorten the maturity of their assets or rather increase the maturity of their sources of funding, in order to comply with the defined threshold.

For these reasons, liquidity ratios have a significant impact on the financial cost borne by the banks, indirectly compromising their access to cheaper short-term funding. As already said, the LCR requires that a certain portion of the bank's assets shall be promptly liquidated at all times, as to retain liquidity in periods of market stress. However, in order to allow financial institutions to rely on a wider range of liquid assets in times of financial difficulty, banks can recur to alternative funding sources. For example, banks can use highly rated loans as collateral to obtain cash from a third party, mainly a central bank, in exchange for a portion of their illiquid assets. In order to ensure a correct application of this instrument, in which the central bank plays the role of "lender of last resort", interest rates should be set slightly above

the level at which money can be exchanged in the private markets in ordinary times, so that banks may have the incentive to stop relying on extraordinary liquidity support when a normal market condition is restored. Through this mechanism, banks are provided with a "*liquidity assurance*", as they have the possibility to retain market liquidity in the event of a crisis. It is sometimes argued that central banks should only lend to solvent banks and upon good collateral guarantees, with the intent to reduce the risks to its own balance sheet.

Associated to liquidity regulation is the idea of the Deposit Guarantee Scheme (DGS). Instead of providing assistance to banks in the form of short-term funding, assurance is provided to short-term funders (i.e. depositors) by national funds in case of banks' defaults. An effective DGS, should be designed in a way that retail depositors are quickly and fully repaid. Under the assumption that depositors have poor incentives in monitoring the bank's activity, the DGS ensures a minimum degree of protection to retail depositors and mitigates the bank run phenomenon.

2.1.4 Implications for the Governance of banking institutions

According to official documents, bank failures experienced during the 2008 financial crisis also resulted from poor corporate governance practices. In particular, boards of directors rarely understood the magnitude of the risks their banks were exposed to, while managers remuneration structures fostered risk propensity in single institutions, which unduly relyed on short-term incentives. The management body, by its side, might have underestimated the complexity of the risks involved, and consequently failed to identify excessive risk-taking. The increasing attention assigned to corporate governance in financial firms can be effectively tracked back to the years following the financial crisis, when regulation and supervision have been enhanced as a complement or a substitute for corporate governance policies in financial intermediaries, in order to correct the institutions' weak internal governance structures.

Corporate Governance in banks assumes a relevant feature due to the central role played by these institutions in the financial system, above all their role of market intermediaries; in this context, a sound corporate governance ensures an efficient capital allocation in the economy. When addressing governance issues, the regulator should bear in mind the "specialness" of financial institutions compared to non-financial firms, as their intrinsic characteristics largely matter from a corporate governance point of view. First, the conflict of interests arising between shareholders and creditors is particularly stressed in financial firms - which are highly leveraged by

definition - under the assumption that leverage magnifies gains and losses for financial intermediaries. Moreover, given the nature of their business, banks are more exposed to risk shifting events; consequently, agency costs are significantly stronger between banks' shareholders and stakeholders, mainly bondholders and depositors. Also, the moral hazard issue is particularly relevant from a corporate governance standpoint, as deposit insurance schemes and the expectations of government bailouts incentivize managers to engage in excessive risk-taking, while further depressing the monitoring activity of depositors and creditors over the credit institution.

However, evidence has shown that aligning the interests of banks' managers and shareholders does not ensure banking stability in the long term. This can be explained by the fact that losses resulting from an excessive risk-taking attitude of bank managers are easily externalized to creditors and depositors, while gains are fully retained by the same shareholders and managers. A study conducted by Ellul and Yerramilli[36] brings a contribution to this debate; in particular, the study examined the risk management structure of different credit institutions by constructing a specific measurement index. The results unlighted that poor risk management practices possibly led to an excessive risk-taking attitude, contributing to the burst of the financial crisis. On the other side, credit institutions that had appropriate internal risk controls in place before the financial crisis, generally recorded a higher operating and stock market performance. As prudential regulation aims at reducing managers risk-taking attitude through capital requirements; similarly, corporate governance should have a role in mitigating managers' risk-taking incentives. It is therefore possible that implementing an effective risk management system and appropriate board monitoring tools is functional for building a "*good*" banking governance structure, beside the traditional corporate governance goal of the interest-alignment between firm's managers and shareholders. In fact, the institutions that were less hit by the effects of the financial crisis, have proven to be those with a sound risk management system, in the belief that it would help to identify and prevent too risky strategies. In other words, corporate governance serves the purposes of supervisors to the extent that it mitigates excessive risk-taking by financial firms.

In this context, the corporate governance reform for financial institutions introduced significant changes to general corporate governance and compensation practices, developing a new framework for prudential regulation, following the

[36] A. Ellull and V. Yerramilli, "Stronger Risk Controls, Lower Risk: Evidence form U.S. Bank holding Companies", Journal of Finance (2013)

hypothesis that banks' failures experience in the crisis years actually originated from governance failures. When the Basel Committee on Banking Supervision published a set of Guidelines on *Corporate Governance principles for Banks* (1999), its main goal was to provide banks with a comprehensive risk governance framework by increasing responsibilities of the boards of directors and putting the accent over some concepts, mainly risk culture and risk appetite, as key components of a bank's governance structure. In particular, the Guidelines identify suitable roles for each governance body of the institution, with specific reference to the board of directors (including risk committees), the senior management body and the control functions, stressing the role played by the compliance function and the bank internal audit. The Guidelines apply the principle of *proportionality*, by weakening or reinforcing governance requirements on the basis of the single institution's risk profile and business model. The same applies to *systemically important financial institutions* (SIFIs), having regard of the potential threats they pose to financial stability on a global scale.

The theme of executive compensation, which is mainly linked to country-specific factors, has been addressed by the Financial Stability Board, by including specific requirements for "significant financial institutions" that reflect the general best practices already in place before the crisis. By marking a break with pre-crisis practices, the legislator recognized the additional need to *align management compensation with prudent risk-taking* in financial institutions, such that compensation and risk outcomes become symmetric and closely related [37].

Likewise, the *Principles for an Effective Risk Appetite Framework* should increase supervision over SIFIs, while proportionately applying the same principles also to non- SIFIs. These specify that risks should be taken within a well-defined framework describing the institutions' risk strategy and appetite, thereby setting an effective system of limits and controls.

Similarly, the EBA introduced an update set of draft guidelines to further harmonize institutions' internal governance arrangements and develop a sound risk culture that complete the various governance provisions already included in the Directive 2013/36/EU. As already mentioned, sound internal governance practices, including the setting of an appropriate appetite level and a comprehensive risk management framework helped some institutions to deal with the financial crisis significantly better than others. Similarly, the idea behind the draft guidelines is that

[37] G. Ferrarini and M.C. Ungureanu, 'Economics, Politics, and the International Principles for Sound Compensation Practices: An Analysis of Executive Pay at European Banks', Vanderbilt Law Review (2011)

effective internal governance arrangements shall increase the reliability in the financial system. These consider the so-called "*three lines of defence*" model aimed at identifying the institutions' internal functions which are responsible to address and manage the inherent risks of banking activity. The first line of defence is represented by the business line, which is assigned to the responsibility of managing risks arising from the ordinary course of business activities. The independent risk management and compliance functions, as a second line of defence, are assigned to the power to further identify, monitor and report banking risks, acting independently from the first line of defence as to avoid that the success of the defence strategy is undermined. Lastly, the independent internal audit function shall review the effectiveness of whole internal governance processes.

To conclude, aligning the interests of boards, managers and shareholders is not *per se* sufficient to bring risk-taking of financial institutions to an optimal level from a social perspective; instead increasing the quality of the risk management system and an effective board monitoring shall contribute to the soundness of the financial system. However, it is worth stressing that the above-mentioned corporate governance principles should not translate in operating impediments for the board of directors, by excessively constraining their ability to take autonomous decisions, thereby leaving directors with the discretionary power to decide upon the executive remuneration structure. Regulatory constraints should mainly apply to the capital structure of financial institutions and to the conditions upon which their activity is exercised. For instance, related party transactions actually turn profitable for shareholders but embed a high degree of risk, raising concerns over financial stability. Exposures to related parties can be effectively mitigated by requiring institutions to provide an adequate level of collateralization or by deducting such exposures from the capital adequacy calculation. Moreover, regulators should take account of the trade-off arising from value-maximization in financial institutions and the pursuit of a social interest to systemic stability; as wealth maximization is often constrained by regulatory or supervisory practices that hamper banks' risk-taking, recognizing the primacy of depositors' interests above the interests of shareholders'. In is worth to notice that while a supervisory approach to corporate governance entails some degree of flexibility within its implementation, as it can be shaped depending on the specific circumstances; a regulatory approach is based upon well-defined rules, which are known *ex ante*.

2.2 Main implications of the new regulatory framework

2.2.1 Estimating the long run benefits and short run costs resulting from increases in capital requirements

Following the crisis years, a strong debate arose over the controversial effects brought by more stringent capital requirements with respect to banks profitability and the wider impacts on the real economy resulting from a more severe regulatory framework. It is not easy to assess an optimal level for regulatory requirements, in the sense that these would ensure a strong and resilient banking system without imposing undue costs to the real economy. For the purpose of the analysis, it is worth exploring the macroeconomic implications of bank capital regulation. Surely, stricter capital requirements make banks safer and are beneficial in the long run; however, they also entail transition costs in the form of tighter credit supply and reduced aggregate demand. The long-run effects of increasing capital requirements on credit supply largely depend on how these affect banks' funding costs. In particular, the higher borrowing costs borne by the Italian banks have been recently transmitted to loans interest rates to a lesser extent than in the past, thanks to the stronger balance sheet of financial institutions and a sounder capital structure. Nevertheless, signs of moderate tightening in credit access conditions started to emerge from recent business surveys.[38] In addition, if capital requirements increase very quickly, then banks' funding costs substantially rise for those institutions with a limited participation in the equity market, in turn affecting their lending activity in the short run.

A recently developed macro-banking model shows that 25% of the long run welfare gains connected to the implementation of regulatory requirements are lost due to higher transition costs. [39] Up to a certain point, the benefits connected to the reduction in deposit funding costs for banks, whether more stringent regulatory requirements apply, are predominant; however, when transition costs are considered, the overall reduction in credit and aggregate demand strongly offsets these benefits. The net effect on the economy depends on which factor is prevailing in the long run. According to this scenario, the strength of monetary policy accommodation and the degree of bank riskiness are key determinants in the trade-off between short-run costs and long-run benefits deriving from changes in capital requirements. The beneficial effects brought forward by the enhanced regulatory framework to the overall economy and social welfare are evident in the increased resilience of the banking system

[38] Speech of Ignazio Visco, Feruary 2019
[39] Mendicino, Nikolov, Suarez, Supera, Bank capital in the short and long run (2019)

following the financial crisis. Capital requirements effectively limit banks from taking on excessive leverage, at the same time reducing banks' fragility. As banks traditionally have risk-taking incentives, their cost of funding would be independent from their risk-taking attitude in the absence of a prudential regulation and under the assumption that information asymmetry actually exists between market investors and financial institutions. The extent to which capital requirements shall be raised critically depends on the degree of fragility of the banking sector and on how monetary policy is conducted. In a scenario of higher economic uncertainty and where banks fragility is consistent, boosting capital requirements may reap additional benefits in terms of increasing resilience for banks in the long run, at the same time proving less costly in the near term. For the above reasons, changes in capital requirements shall be implemented gradually and in conjunction with an accommodative monetary policy, measured by interest rate falls in response to changes in inflation (following a standard Taylor-type rule), such that transition costs are limited compared to longer term financial stability benefits.

It has been observed that higher capital requirements actually mitigate the misallocation of resources in the long run, this latter resulting from an excessive risk-taking attitude and excessive bank leverage. However, it is not easy to settle an optimal level for capital requirements once transition costs are factored in. Up to a certain extent, this depends on those variables that contribute to the determination of transitional costs. As already described, transition costs may decline due to a more accommodative monetary policy, a more gradually implementation or whether applied in a context of higher uncertainty and higher risk in the banking sector.

2.2.2 Assessing the impact of IFRS 9 principles on banks' regulatory capital

The IFRS 9 represent the finalization of the regulatory treatment of accounting provisions in the European framework. These principles respond to the need of addressing the accounting issues unveiled by the global financial crisis, when credit impairment provisioning of individual banks did not rise consequentially to the material deterioration of their credit exposures, leading the market to overestimate the asset quality of banks, also assuming the lack of adequate monitoring tools from the investors' side.[40]

IFRS 9, effective as from January 1st, 2018, introduces a "forward-looking" approach, opposed to an "incurred loss" model, according to which banks shall record

[40] Deloitte, The Impact of IFRS 9 on Banking Sector Regulatory Capital, November 2016

impairment provisions before the loss event actually occurs. The rationale behind this approach is that banks shall recognize credit impairment to reflect expected credit losses, while holding an adequate capital base to protect against unexpected losses. In particular, IFRS 9 also includes a specific methodology for the classification and measurement of financial assets, as different coverage ratios are assigned to different assets classes. Accordingly, three different credit stages can be identified:

Table 5. IFR9 credit stages

Source: Deloitte, The Impact of IFRS 9 on Banking Sector Regulatory Capital, November 2016

With the introduction of the *first-time adoption* principle, banks are required to increase their coverage levels, leading to higher credit impairment provisions with phased impacts on capital. In particular, as to avoid unexpected capital shortfalls, banks shall look for an alignment between credit impairment and regulatory capital. The transitional arrangements that complement IFRS 9 principles were intended to mitigate the impact of such principles on the banks' capital and lending ability. Accordingly, banks can continue to use their current approach to provisioning for regulatory capital calculations; the delta with respect to previous IAS 39 requirements calculation is then added back over the transitional period, subject to percentage thresholds going from 95% to 25%. Jurisdictions can choose between the application of a transitional arrangement and the adoption of an *expected credit loss* (ECL) model over a period of no more than five years. The calculation method can involve either a static or a dynamic approach, as follows: [41]

i. *static approach*: according to this method, the calculation of the transitional adjustment shall be performed only at the effective transition date, that is when the institution operates the transition to an ECL accounting model;

[41] EY, The Italian NPEs market, 2018

ii. *dynamic approach*: this method envisages the periodic recalculation of the transitional adjustment, as to reflect the evolution in the ECL provisions that the institution is required to operate within the transition period.

An empirical study shows that largest European banks are using transitional arrangements to a lesser extent; whether transitional arrangements are used, a combination of static and dynamic approaches is preferred. However, following the application of IFRS 9 transitional arrangements, supervisory reporting data for the second quarter of 2018 show that adding back provisions actually holds a positive impact on CET1 capital. Such positive impact has been estimated for 118 bps on simple average when considering a sample of 54 institutions, representative of the European banking sector.[42]

2.2.3 Regulatory arbitrage and the positive contribution brought by prudential regulation

Financial regulation imposes controls and restrictions to the financial system, which turn into a cost for credit institutions. Financial firms can then have substantial incentives to get around regulatory framework. Regulatory arbitrage can take different forms; securitisation, for example, by replicating the same economic exposure of the underlying asset but with a "non-ownership position", can be used as an alternative tool for reducing the costs associated to increasing capital requirements; banks can buy securities backed by term loans from a special purpose entity, with the intent to reduce the amount of capital to hold against risky assets for a similar credit risk exposure. In this context, market participants can take advantage of different national regulation and engage in regulatory arbitrage, seeking to do business in those countries that offer the most favorable regulatory environment. Supervisors should therefore consider how financial actors may respond to a change in regulation, in order to make sure that this latter would still be consistent with the identified objectives.

The introduction of a *Single Rulebook* establishes a level-playing field in banking regulation and supervision across EU countries, with a view to reduce risk-taking of financial institutions. Furthermore, the new regulatory framework aims to address the systemic risks and related moral hazard problems for those institutions considered by the market as *too big to fail*. A recent discussion paper published by the ECB unveils how banking regulation and supervision affect banking system

[42] EBAS Report, First observations on the impact and implementations of IFRS9 by EU institutions, December 2018

performance, in the form of stability and overall efficiency.[43] The paper proposes to investigate whether banks established in different countries, and therefore subject to distinct regulatory frameworks, are more or less likely to experience situations of financial distress. This empirical work contributes to the academic debate over the role played by prudential regulation on bank crisis management. In particular, it is argued whether a more stringent regulatory framework could have effectively avoided or at least reduced the effects associated to the recent banking crises.

By constructing cross-country indicators, identified by regulatory flexibility and supervisory discretion, it was possible to measure the effectiveness of prudential regulation in different countries, compared to their pre-crisis levels. Regulatory flexibility identifies a more favorable regulatory regime for all credit institutions with potential implications on their risk-taking incentives, while supervisory discretion denotes a more favorable regulatory treatment that is only applicable to specific banks, to be authorised by competent authorities in a case-by-case assessment. Results show that countries with a less stringent regulatory framework, measured both in terms of supervisory discretion and regulatory flexibility, were more likely to require public support during the crisis, in the form of public recapitalization, credit guarantee scheme and liquidity provisions. In addition, lower liquidity buffers and a more flexible regulatory framework are negatively associated to banks resilience. In fact, excessive lending and reliance on non-interest income sources, like derivative instruments, may represent potential causes for poor financial stability.

The research also highlights that larger exposures to government bonds are positively associated to a higher probability of banks being bailed-out during the crisis years. This topic is particularly relevant in the light of the euro area sovereign debt crisis - reaching its peak in 2011 - and in relation to the moral hazard problem. In fact, banks may have stronger incentives to hold more zero-weight instruments in their balance sheets in order to lower the level of minimum capital requirement; a result that can be easily achieved by increasing the level of sovereign exposures, as these are not subject to risk weighted capital under the existing Basel framework. However, this situation causes credit intermediaries to be heavily exposed to the risk of further drops in bonds' prices arising from tensions in the government bond market; the impact being grater for significant banks that generally have a higher portion of their assets invested in sovereign bonds.

[43] Rules and discretion in prudential regulation and supervision: evidence from EU banks in the run up to the crisis, Maddaloni, Scopelliti (2019)

3 The Resolution framework

3.1 The Bank Recovery and Resolution Directive: the new rules on bank crisis management

The ongoing review of the regulatory framework, with focus on capital and liquidity buffers and better tools for macro-prudential policies, should reduce the likelihood of future crises and enhance the resilience of institutions to economic stress. However, it is not possible to design a supervisory framework that can prevent financial institutions from even getting into difficulties. All jurisdictions should have in place an adequate set of recovery and resolution tools to handle a potential financial crisis, with the flexibility to tailor resolution measures to the specificities of national credit institutions. During the crisis, the lack of adequate tools forced national authorities to save failing credit institutions using taxpayers' money by implementing recapitalization strategies and adopting liquidity measures. In fact, national authorities were to choose between applying traditional insolvency procedures with the risk to increase the possibility of a systemic contagious, or rather recur to public funds to ensure the continuation of banking activity by preserving the systemically important functions of the institutions concerned. However, general corporate insolvency procedures showed to be inappropriate when applied to credit institutions, as they did not guarantee sufficient speed of intervention, the continuation of banking activity and did not preserve financial stability. On the other hand, the application of a *bailout* strategy revealed significant fiscal implications and the substantial cost borne by taxpayers in the light of public rescue plans was no longer sustainable. In the light of the above, a new framework on bank crisis management should effectively limit the recourse to public funds to save failing institutions, ensure the continuity of the fundamental banking functions and the overall stability in the financial system. In other words, an effective resolution regime should be able to minimise the resolution costs borne by taxpayers without compromising financial stability in the long term. In this context, government financial stabilisation tools, including temporary public ownership, should serve only as a last resort, with the additional effect of imposing restrictions to the moral hazard of financial firms.

The 2014/59 EU Directive, known as the Bank Recovery and Resolution Directive (BRRD), has the objective to create a harmonized recovery and resolution framework, by including mechanisms that allow authorities to effectively deal with institutions that are failing or likely to fail. For the application of a resolution action, national resolution authorities (the Italian law identifies the Bank of Italy as the

national resolution authority) should assess that all of the following conditions are met[44]:

i. the competent (or resolution) authority has to recognize the *failing or likely to fail* status of the bank;

ii. it is not likely that any alternative measure, both in the form of a private intervention or supervisory action, would prevent the failure of the institution within a reasonable timeframe;

iii. a resolution action is necessary in the public interest.

An institution shall be deemed to be *failing or likely to fail* in one or more of the following scenarios: the institution operates, or may operate in the near future, under circumstances that would justify the withdrawal of the authorisation to conduct banking activity (i.e. upon recurring of serious administrative irregularities, breaches of statutory or supervisory regulation); the institution is likely to incur losses that will deplete a significant amount of its capital base or such that it will be unable to repay its debts as they fall due; or the assets will probably be less than the bank's liabilities in the near term. However, the legislator does not provide a quantitative threshold to determine whether a bank is *failing or likely to fail*; the decision is instead left to the discretionary power of the supervisory authority. To this extent, the CET1 requirement - set at 4.5% of risk weighted assets – can represent a minimum standard, reflecting the fact that buffers and other capital instruments are already depleted. A more conservative approach would consider the case in which the institution has depleted its buffers and half of its Pillar 2 capital add-ons, where further breaches of additional supervisory capital requirements may justify the withdrawal of the authorisation to banking activity.[45] With respect to the public interest, it is worth to stress that resolution authorities have the power to adopt preemptive measures and apply resolution actions, that can directly affect creditors and shareholders' rights, in the event that part of the assets, rights or liabilities of the institution under resolution are transferred to another entity. In particular, competent authorities may decide for the disposal of shares without the prior shareholders' approval or may alter the *pari passu* treatment of creditors when capital instruments are written down or converted. It is thereby necessary that resolution actions are implemented only when the public interest condition applies.

[44] Directive 2014/59/EU, Article 59

[45] Huser, Halay, Kok, Perales, Van der Kraaij, The systemic implications of bail-in: a multi-layered network approach (2017)

As already mentioned, the resolution objectives are determined to ensure continuity in the banking activity by safeguarding the essential banking functions, avoid contagious effects from institutions with systemic importance (i.e. G-SIIs), to minimise the use of taxpayers money by limiting the recourse to public extraordinary intervention measures and eventually sustain sufficient market confidence in the institution or entity under resolution. These objectives, on which the BRRD fully relies, should be read in conjunction with that of ensuring the protection of depositors. The directive expressly states that covered deposits (which benefit from a certain degree of preference according to the national insolvency hierarchy) are fully protected[46] and they are excluded from the range of liabilities eligible for the bail-in, ensuring depositors an adequate level of protection in case one or more resolution tools apply. In order to achieve a more resilient and stable financial system, on April 16th, 2019 the European Parliament approved the final agreement on the Proposal for BRRD II further exploring the loss-absorbing and recapitalization capacity of credit institutions. In particular, the Proposal introduces a new total loss absorbing capacity (TLAC) requirement for global systemically important institutions and enhanced *minimum requirement for own funds and eligible liabilities* (MREL) subordination rules for global systemically important institutions (G-SIIs) and other large banks referred to as top-tier banks. Moreover, the Proposal focuses on breaches of MREL requirements; in this case banks can be subject to restrictions preventing them from distributing resources to shareholders or employees.[47]

3.1.1 Contingency plans and early intervention measures

Within the described framework, the directive introduces additional preemptive and preparatory measures in the form of *contingency plans*, i.e. recovery and resolution plans, and early intervention measures. Contingency plans aim at improving the resolvability of the single institution by ensuring that its viability would be restored in a timely manner, even in periods of severe financial stress, thereby limiting the economic and financial losses to the possible maximum extent and reducing the possibility of a systemic shock. With respect to *recovery plans*, they set out specific measures designed to restore the financial position of the institution following a material threat to its financial stability. Each credit institutions shall draw up, maintain and regularly update its recovery plan; the management body has the

[46] Directive 2014/59/EU, Article 34. A coverage level is granted to deposits below or equal to €100.000

[47] European Parliament. Adoption of the banking package: revised rules on capital requirements (CRR II/CRD V) and resolution (BRRD/SRM), April 2019

responsibility to approve the recovery plan before this is submitted to competent authorities for a complete assessment. Competent authorities shall review and assess the adequacy of the plan, taking into account whether it is deemed reasonable that the proposed arrangements will *maintain or restore the viability of the institution* if needed and whether these can be effectively implemented in a quick and effective manner. For this purpose, the competent authority shall consider the institution's capital and funding structure adequacy with respect to the level of complexity inherent in its business structure and related risk profile. Whether the competent authority notifies the inadequacy of the recovery plan, financial firms shall come up with a revised plan in order to compensate for the shortcomings previously identified during the assessment process. For obvious reasons, institutions are required to regularly update their recovery plans, at least on an annual basis, or following any *material change to their legal or organizational structure*, that may possibly impair the effectiveness of the plans. These include a set of indicators that identify the financial condition of the institution and define at which stage some of the actions outlined in the plan may be implemented. Such plans should be detailed and applied *proportionately*, having regard of the systemic importance of the institution, its business activity, risk profile and the level of interconnectedness. Accordingly, such indicators should reflect both the institution's funding base and its possibility to rely on external financial support in times of trouble.[48] In general, recovery plans should envisage a list of recovery options and provide the following information: a summary of the main recovery actions and the degree of the institution's overall recovery capacity, specific capital and liquidity measures complemented by additional arrangements designed to restructure the institution's own funds and liabilities.

Differently, *resolution plans* are drawn up by resolution authorities and provide the details for specific resolution options to be implemented in the event of a crisis.[49] Hence, resolutions authorities are assigned to a wide range of powers that will allow them to intervene in a timely manner and increase the resolvability of the institution. For the purpose of application, it is essential that resolution plans include a description of the institution's operating business also proving how the critical banking functions can be legally split from non-core business lines as to ensure the continuity in the operational processes in the event of failure of the credit institution. The plans should also outline the main resolution strategies to be applicable in a range of possible

[48] Directive 2014/59/EU, (21)
[49] Directive 2014/59/EU, Article 10

scenarios and the specification of the minimum requirement for own funds and eligible liabilities for the application of the bail-in tool. The BRRD further specifies that resolution plans shall not contemplate intervention measures in the form of extraordinary public financial support or central bank emergency liquidity assistance, in line with the objective to minimize banks' reliance on sovereign support.[50]

Lastly, *early intervention measures* are designed to ensure a quick and effective intervention in response to emerging situations of financial distress, by including a wide set of powers for the exclusive use of the competent authorities.[51] First, competent authorities may ask the management body of the institution to execute one or more of the actions outlined in the recovery plan or improve the same plan before implementation. When specific circumstances are recurring, the competent authority has the power to remove or replace one or more members of the management or senior management body if they are considered no longer capable to effectively perform their duties. The management body can be required to draw up a plan for the negotiation on debt restructuring or modify institution's business strategy or to its legal or operational structure. The final objective is to restore the financial condition of the institution and to reestablish a sound and prudent management. The removal of the senior management or management body (partly or entirely) can take place if there is a material deterioration in the institution's financial condition, following serious breaches of regulation or whether the institution has been responsible for serious administrative irregularities. However, if this measure proves to be insufficient, the competent authority can appoint one or more temporary administrators, who may replace or work with the existing management of the bank for a defined timeframe. If the temporary administrator is required to work with the management body, the first is assigned to specific duties and powers, while the management body shall obtain the consent from the temporary administrator prior to taking certain decisions. The powers assigned to the temporary administrator may include some or all of the powers of the management body currently in place, including the power to exercise ordinary administrative functions. In any case, the temporary administrator shall operate without causing prejudice to the shareholders' rights, by safeguarding their interests in the maximisation of business value.

[50] *Emergency liquidity assistance*' means the provision of financial assistance by a central bank to a solvent financial institution that is facing temporary liquidity problems, without such an operation being part of monetary policy; DIRECTIVE 2014/59/EU, Article 1 (29)
[51] Directive 2014/59/EU, Article 27

3.1.2 The resolution tools

For the purpose of application of the BRRD, a first important distinction to be made is about the difference between resolution and recovery processes: by the term "resolution", we refer to a situation of non-viability, where the bank is very close to insolvency, while the term "recovery" implies a reversible condition. According to the BRRD, the resolution tools include: the sale of business tool; the setting up of a bridge institution; the asset separation tool and the *bail-in* [52]. These tools are applicable on a singular basis or in conjunction with one another. The directive specifies that before applying one or more resolution tools, capital instruments shall be written down for an appropriate amount, as to avoid that their application would result in cumulative losses for the holders of subordinated claims. Although different resolution instruments apply to different and specific circumstances, they are all based on the following principles:

i. the "*burden sharing principle*" establishes that the shareholders of the institution under resolution are bearing the first losses, followed by unsecured creditors, in accordance with the order of priority of their claims applicable under general insolvency law. It is also provided that creditors of the same class shall be assigned to the same treatment;

ii. as to ease the application of the resolution tools, the management and senior management body of the institution shall be replaced, unless this may create impediments for achieving the resolution objectives;

iii. in accordance to the principle that "*no creditor worse off*", no creditor of the institution under resolution shall incur greater losses than those that would have been incurred if the institution were liquidated under normal insolvency procedures. It is therefore extremely delicate to make a correct and sound estimate of the potential losses that each class of creditors may suffer in the alternative event of an ordinary liquidation procedure. For the purposes of assessing whether shareholders and creditors would have otherwise received a better treatment under normal insolvency procedures, an independent person is entitled to carry out a specific valuation on the difference of treatment. In the event the "*no creditor worse off*" principle is not met, any shareholder or creditor suffering from the above condition is entitled to the payment of the difference in value.[53]

[52] Directive 2014/59/EU, (59)
[53] Directive 2014/59/EU, Article 75

3.1.2.1 Sale of business

By applying the sale of business tool, resolution authorities can transfer the shares (and instruments of ownership in general), assets, rights or liabilities of the institution under resolution to a third party, other than a bridge institution. The transfer is only subject to the purchaser approval; as a result, it shall not obtain the consent from its shareholders nor it shall comply with additional procedural requirements. The transfer shall be made according to transparency conditions and on commercial terms, aimed at maximizing the sale price, at the same time having regard to the need of achieving a rapid resolution action. The resolution authority may decide not to comply with the above requirements to market when this may impair the achievement of one or more resolution objectives and the effectiveness of the resolution tool (i.e. when material threats to financial stability may arise from the failure of the institution under resolution). Any consideration paid by the purchaser may benefit the owners of the shares to the extent that the sale involved the transfer of capital instruments rather than the transfer of the institution's assets or liabilities. The resolution authority shall entitle the purchaser with the authorisation to carry out the activity pertaining to the acquired business, such that "*the purchaser shall be considered to be a continuation of the institution under resolution*"[54]. These actions are taken with the intent to minimise business disruption and maintain access to the critical banking functions, in line with the above-mentioned resolution objectives.

3.1.2.2 Bridge institution

In the case no third party shows interest in acquiring part or all of the institution under resolution, the sale of business tool may have a *bridge bank* as a counterparty.[55] In this context, the lack of private investors may be a consequence of the fact that only a few market players can effectively bear the cost (and related risk) arising from the purchase of the institution under resolution, also having regard of the stringent timeframe imposed by the need to achieve a rapid resolution action. As already said, the purchaser is identified in a bridge institution; this latter being wholly or partially owned by public entities and controlled by the same resolution authority.[56] The bridge bank is created with the purpose of receiving the shares or other balance sheet items from the institution under resolution with a view to maintaining access to the critical banking functions and selling the entity at the latest stage to one or more private

[54] Directive 2014/59/EU, Article 38
[55] Directive 2014/59/EU, Article 39
[56] In some cases, the bridge institution can be the same resolution authority

investors. Although the bridge bank constitutes a separate entity from the institution under resolution, it is given the authorization to carry out the activities that it acquires, similarly to the sale of business tool, as to ensure continuity in the operating business. Nevertheless, the bridge institution operates with a view of selling the acquired business to private investors under favourable market conditions. In other words, the bridge bank operates as a temporary vehicle: when all of the bridge institution's assets, rights or liabilities are sold to a third party or when its assets are completely wound down and its liabilities fully discharged, the bridge bank ceases to exist. In any case, the resolution authority is entitled to terminate the operation of a bridge bank within two years after the date of the last transfer; this period can be extended if deemed as necessary to safeguard the essential banking services or to support the outcomes of the resolution tool. When the operations of the bridge institution are terminated according to the any of the described scenarios, the bridge institution shall be liquidated, any proceeds that may generate from the liquidation shall be assigned to the shareholders of the bridge bank.

3.1.2.3 Asset separation

This resolution tool involves the transfer of the assets, rights or liabilities of an institution (including a bridge bank) to one or more asset management vehicles. These shall manage the banks' assets with the aim of maximising their value at exit, similarly to a bridge institution. The asset separation tool implies the creation of two separate entities, a "bad bank" and a "good bank". In this way, the essential banking functions are preserved and retained by the *good bank*, while the *bad bank* is entitled to the deteriorated exposures with a view of selling the NPLs on the market at the best possible price. The asset separation can only be applied in conjunction with other resolution tools and upon recurring of specific circumstances; that is when the application of ordinary insolvency procedures could have adverse effects on financial markets or whether the asset transfer is expected to maximise the assets' liquidation value and minimize the possibility of business disruption.

3.1.2.4 Bail – in

One of the main objectives of the BRRD is to ensure that systemic institutions can be resolved without threatening financial stability. With the introduction of the bail-in tool, losses are allocated to creditors according to the burden sharing principle. In particular, losses should be absorbed first by the riskiest instruments (i.e. shareholders' equity) through the cancellation or dilution of shares; then, subordinated

debt should be converted or written down for an appropriate amount, followed by senior liabilities [57]. Following the application of the bail in tool, creditors bear losses for an appropriate amount, according to the *pari passu* treatment of creditors and the statutory ranking of their claims. Unless otherwise provided by the BRRD, creditors of the same class are treated in an equitable manner. It follows that the bail-in gives shareholders and creditors a stronger incentive to monitor the health of the credit institution, as they would suffer appropriate losses according to the burden sharing principle in the event that the institution falls under a resolution procedure. The bail-in tool can be applied for the purpose of recapitalization (in order to make the institution compliant with the conditions for authorisation) or following the application of another resolution tool, in order to convert / reduce the nominal value of those claims that have been subject to sale. In any case, the bail-in tool may be applied only whether there is a realistic prospect that the institution's long-term viability may be restored. This instrument aims at recapitalizing the institution under resolution with a view to restore its economic and financial condition in a narrow timeframe, ensuring continuity to the operating business activity. Nevertheless, it is provided that in extraordinary circumstances the institution under resolution may recur to alternative financing sources.[58] In particular, the resolution authority may authorize the public intervention only under the following conditions:

i. the contribution from the resolution fund cannot exceed the 5 % threshold of total liabilities and own funds;

ii. all unsecured, non-preferred liabilities, excluding eligible deposits, have been fully written down or converted for at least 8 % of total assets. By this mean, shareholders and creditors contribute for an adequate amount to the loss absorption and recapitalization capacity of the institution.

For the purpose of application of the bail in tool, it is important to assess the effective value of the assets and liabilities of the institution under resolution and estimate the impact of losses and default rates. Therefore, a "*fair and prudent*" valuation shall be performed before exercising the power to write down or convert debt and capital instruments. Once the exact amount of losses has been estimated, the resolution authority shall proportionally reduce the value of the equity and other capital instruments and subsequently write down the eligible liabilities for the required amount; at this stage, the net asset value of the institution under resolution is equal to

[57] Directive 2014/59/EU, (77)

[58] Directive 2014/59/EU, Article 44

zero. A portion of the existing liabilities is then converted into equity in order to provide the institution with an appropriate level of capitalization and restore its CET1 capital ratio. Equity and outstanding liabilities are subject to write down / conversion according to their seniority ranking: CET1 instruments represent the riskiest capital, followed by Additional Tier 1 equity instruments (AT1), Tier 2 subordinated instruments¸ other subordinated debt, senior non-preferred bond, senior unsecured debt / obligations and deposits exceeding the covered amount.[59] The following is a graphical example of loss absorption and recapitalisation after a bail-in.

Table 6. Loss absorption and recapitalization after a bail-in

Source: ECB (2016), Financial Stability Review, May 2016

All of the bank's liabilities are subject to the bail-in, unless they fall within a predefined class, for which the write down or conversion power shall not apply. The liabilities excluded from the bail-in are the following: covered deposits; secured liabilities; any liability arising from the holding of client assets; interbank liabilities, excluding intragroup entities, with an original maturity of less than seven days and liabilities owed to clearing systems with a remaining maturity of less than seven days. [60] This last category is excluded from the application of the bail-in under the

[59] AT1 is mainly composed by hybrid debt instruments that convert to equity in the event the firm's CET1 falls under a pre-defined threshold; Tier2 is mainly long-term subordinated debt representing additional provisions for regulatory capital purposes

[60] Directive 2014/59/EU, Article 44

assumption that the short life to maturity of these obligations may have direct contagious effects in the event of write down. Also excluded from the eligible liabilities are those obligations taken in pursuant the ordinary business activity: mainly liabilities owed to employees and to commercial creditors and liabilities arising from tax and deposit guarantee schemes. In such a way, all those activities that are critical to the daily functioning of the institution are preserved with a view to maintaining access to essential banking functions and ensure the protection of depositors. It is still in the power of the resolution authority to exclude (or partially exclude) certain liabilities from the application of the write-down or conversion power upon recurring of exceptional circumstances and whether it is functional to achieving one or more resolution objectives. However, the resolution authority shall take into account the level of loss absorbing capacity of the institution that would result from excluding some of the eligible liabilities from the application of the bail-in.

In order to ensure an effective and timely functioning of the bail-in tool, banks should hold an appropriate amount of eligible liabilities they can rely upon in times of need. For this purpose, banks are required to have in place an adequate funding structure, as to ensure that the results achieved within the application of the bail-in tool are not compromised. This is the basic concept underpinning the introduction of a minimum requirement for eligible liabilities (MREL) that should discourage financial institutions from excessively relying on (cheaper) non-eligible liabilities, thereby strengthening the recapitalization ability of the institution. However, the BRRD does not establish a predefined level for the recapitalization of the institution under resolution; instead it relies on a more qualitative assessment: the failing bank should be recapitalized up to a level which is *sufficient* to restore its ability to comply with the conditions for authorization and to sustain sufficient market confidence. The Regulatory Technical Standards (RTS) set by the EBA provide additional criteria for the determination of the MREL. According to these standards, the level for recapitalization is sufficient whether it ensures that the failing entity is able to comply with minimum capital requirements and buffers following the implementation of the resolution strategy.

Upon recalling one of the fundamental principles of the BRRD, shareholders and creditors whose claims have been written down or converted to equity following the application of the bail-in tool, shall not incur greater losses compared to losses

originating from normal insolvency procedures[61]. The bail in tool actually simulate the effect of an ordinary liquidation procedure with respect to the costs borne by both shareholders and creditors, while retaining the advantages offered by this resolution tool. More specifically, shareholders experience a drastic reduction in the value of their proprietary assets, while creditors are satisfied according to the seniority ranking of their credit, similarly to what happens in a liquidation procedure. On the other hand, the bail-in differs from ordinary insolvency procedures as it avoids business disruption by operating with a view of going concern and abbreviates the timeframe for implementation, therefore allowing resolution authorities to intervene in a timely manner. Lastly, the directive also addresses some recovery and reorganization measures that complete the bail-in framework. In particular, business reorganization plans are drawn up by the failing entity and they set out measures aiming to restore the long-term viability of the institution within a reasonable timeframe.[62]

3.1.3 Loss-absorption tools - MREL and TLAC

It is fair to say that the principles introduced by the BRRD indirectly modify the riskiness and the pricing of the different securities eligible for the bail-in, according to their loss absorbency capacity. Institutions may then have the incentive to minimise the recourse to those liabilities eligible for bail in with the intent to reduce their funding cost, as such liabilities carry higher risks. By consequence, the institution may end up having less liabilities than what would be appropriate as to ensure the effective application of the resolution tool. For this reason, institutions are required to comply with a *minimum requirement for own funds and eligible liabilities* (MREL) on an individual basis. The MREL shall be met at all times and it is calculated as the amount of own funds and eligible liabilities (including derivatives) expressed as a percentage of the total capital and liabilities.[63] It aims at ensuring that each bank has an adequate loss absorbency capacity to restore minimum capital requirements following the application of the bail-in. The minimum requirement shall be determined by having regard to the size, business model, funding structure and risk profile of the institution and to which extent the failure of the institution may represent a threat to financial stability. Liabilities, in order to be considered eligible for the MREL calculation, shall meet some specific criteria, for instance they cannot be owned to or guaranteed by the

[61] Directive 2014/59/EU, Article 73

[62] Directive 2014/59/EU, Article 51 - 52

[63] Directive 2014/59/EU, Article 45

institution itself and they are required to have a remaining maturity of at least one year.[64]

With respect to the quality of capital instruments designed to assist capital requirements, it is fair to say that increasing flexibility and a wider spectrum of capital instruments would allow credit institutions to achieve a stronger capital base; accordingly, the MREL framework incentivizes the issuance of capital instruments other than CET1. In the light of the above, MREL aims to preserve financial stability, by encouraging a sound and effective bank crisis management system, while preserving an appropriate degree of confidence in the financial market. The MREL brings additional benefits to the extent that it reduces excessive risk-taking in financial firms with the effect to enhance resilience in the banking system and reduce the probability that a crisis event has to occur. Excessive risk-taking – connected to a moral hazard issue - can be measured according to different variables; i.e. the ratio of total lending over total assets, the fraction of bank income not related to interest-earning activities and the ratio of liquid assets over short-term liabilities. In any case, the negative externalities connected to a crisis event would be sensibly reduced whether a MREL applies, leading to perceived benefits for the whole economy. At the same time, the introduction of a minimum requirement may lead to an increasing cost of funding for financial institutions, with the effect of constraining their ability to access capital markets. In other words, the additional need for eligible debt financing may lead to an increase in the average funding cost and in the market credit spread, tightening the credit supply in the economy.

In addition, the *total loss absorbency capacity* (TLAC), which only applies to G-SIIs (*Global Systemically Important Banks*), establishes that eligible liabilities held by other G-SIIs shall be deducted from MREL calculation, creating strong disincentives for banks to hold instruments issued by other G-SIIs. In this way, the risk of direct contagious from a failing institution to its credit counterparty is extremely reduced in the event the first is subject to bail-in. The TLAC represents a standard for assessing the adequacy of the loss-absorption and recapitalisation capacity of G-SIIs. TLAC establishes a common Pillar 1 requirement of 16% (18% as from 2022) of risk-weighted assets and 6% (6.75% as from 2022) of the Tier 1 leverage ratio, as a bottom floor for all G-SIBs. Authorities have the possibility to top up the requirement on an individual basis with Pillar 2 additional components. MREL and TLAC standards are

[64] Directive 2014/59/EU, Article 45

two complementary measures designed to avoid that banks structure their liabilities in such a way that the effectiveness of the bail-in tool is compromised (i.e. by excessively relying on secured debt). In other words, MREL and TLAC establish a minimum level of loss absorbency by considering two distinct approaches.[65] Yet, they still entail some significant differences: TLAC applies as a minimum requirement for G-SIIs establishing a minimum level for loss absorbency capacity; differently, MREL is applicable for all banks on a discretionary basis. Moreover, TLAC standards define measures to mitigate the risk of contagion deriving from the bail-in of creditors, by providing strong disincentives for banks to hold liabilities issued by other G-SIIs that are likely to be bailed-in, as banks are required to deduct such liabilities from the calculation of the TLAC and, more generally, from their regulatory capital exposures. It is therefore important that banks have in place an adequate funding structure as to ensure a correct application of the bail-in, while limiting cross-holdings of liabilities between significant banks, in order to avoid direct contagious effects and preserve financial stability.

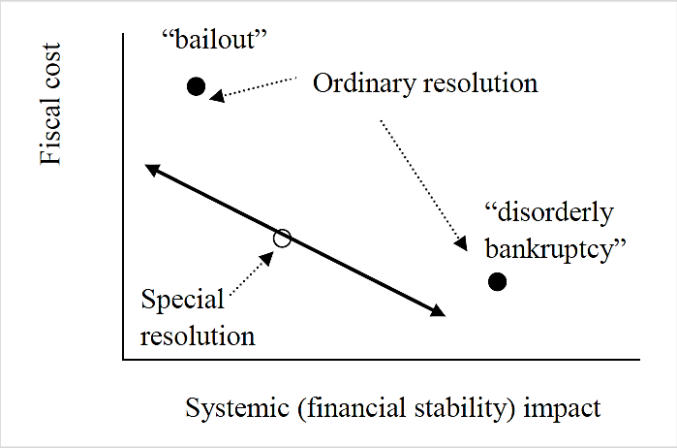
3.2 Major implications from a bailout strategy

As repeatedly said, public intervention comes with a cost and implies the decision on how the cost for banks insolvencies should be allocated in the financial system. In the last years, national governments used a large amount of public money to save banks close to default. The absence of a robust resolution regime during the crisis years made the fiscal cost of saving individual banks unsustainable and compromised the longer-term stability of the financial system, at the same time increasing the market expectation of a bailout. [66]

The following figure shows the impact in terms of fiscal cost and systemic risk following the application of different resolution regimes. It is observable that an appropriate resolution regime can lead to a net improvement in terms of both fiscal costs and financial stability. This is only possible by imposing on shareholders some of the losses that would be otherwise borne by taxpayers through the injection of public money. The application of a special resolution regime also gives more flexibility to national authorities between achieving a fiscal cost reduction or systemic risk control.

[65] Financial Stability Review, May 2016
[66] Čihá; Nier, The Need for Special Resolution Regimes for Financial Institutions. The Case of the European Union (2009)

Table 7. Fiscal cost and Systemic impact in different resolution regimes



Source: M. Čihá,E. Nier: The Need for Special Resolution Regimes for Financial Institutions — The Case of the European Union, September 2009

There are several negative externalities arising from the application of bailouts. First, domestic bailouts trigger a cyclical effect: failing banks undermine the creditworthiness of the government, which in turn undermines the financial stability of those banks recurring to public funds in times of financial need and which eventually come to hold a large amount of domestic sovereign debt, being exposed to the risk of a drop in bonds' prices. Secondly, when providing capital support, competent authorities may afford little control over the actions taken by the firm's managers and may lack a credible and effective power to intervene against an excessive risk-taking attitude, with a view to prevent moral hazard. For instance, authorities should have the discretion to limit dividend payments to existing shareholders and adopt other necessary measures to prevent the bank from depleting its capital resources, as to avoid value shifting away from creditors and towards shareholders. However, when public authorities perceive bankruptcy as "too costly" for the national economy, ordinary liquidation ceases to be a credible threat and in the absence of appropriate resolution tools, extraordinary interventions in the form of public support represent the obvious alternative, thereby creating strong incentives for moral hazard behavior. In this context, the expectation of public support may reduce the force of market discipline: banks are likely to hold smaller amounts of common equity instruments with respect to total capital in the hope to receive public refinancing and may have little incentives to hold and disclose higher capital buffers. Moreover, bailouts create an uneven playing field among banks, as larger and more complex banks are perceived as more likely to be bailed out (they are indeed *too big to fail*); for

this reason, they can gain access to cheaper founding sources compared to smaller banks.[67]

3.3 Additional considerations

The introduction of a credible resolution framework and a Single Resolution Mechanism (SRM) enables to address banks' failures without recurring to public support, while situations of financial instability can be effectively resolved without impairing the banks' ability to provide financing to the real economy. Indeed, the costs arising from banks' failures are shifted from taxpayers to the shareholders and creditors of the failing bank; in this way, the cost is effectively borne by those players who have taken the risk. By credibly removing the market expectation of public interventions upfront, the negative effects connected to the application of large-scale bailouts are minimised. The bail-in tool actually helped to reduce moral hazard and other problems connected to a strong reliance on bailouts.[68] The benefits connected to the application of the bail-in, should however be weighed against the risk of direct contagious between credit institutions, arising from the cross-holding of liabilities eligible for bail-in. Via the bail-in tool the resolution authority has the power to write down or convert to equity a wide range of claims; in this context, financial firms holding bail-inable securities of the institution under resolution may in turn be affected. If bank's cross holdings are sufficiently large, then the bail-in could potentially undermine the soundness of those institutions, entailing systemic implications.

Empirical research provided evidence that low interbank cross-holding of bail-inable securities actually appear to prevent effects of direct contagion; accordingly, resolution authorities are creating stronger incentives for banks to reduce their cross holding exposures. [69] In addition, resolution authorities shall take into account the level and composition of the loss absorbing capacity of each credit institution, in order to avoid that unsecured creditors are hit by the write down or conversion effect. The resolution authority may call for the issuance of additional subordinated debt aimed at increasing the institution's loss-absorbing capacity. This is the rationale behind the introduction of a TLAC requirement, which has the objective to provide G-SIIs with a stronger capital base to rely upon both before and in case of resolution. Lastly, resolution authorities shall regularly monitor the effects of the bail-in on the single

[67] Financial Stability Review, May 2016
[68] Financial Stability Review, May 2016
[69] Huser, Halay, Kok, Perales, Van der Kraaij, The systemic implications of bail-in: a multi-layered network approach (2017)

institution, in order to avoid wide-spread contagion, as on average banks become more interconnected when exiting resolution.

Nevertheless, up to the present date, the BRRD has only been applied to a limited number of cases, which may result from its principles being of too difficult application or being excessively strict, especially for the smallest institutions (including the 8% threshold for write down and conversion of total liabilities and capital established under the bail-in). Aside from the practical difficulties of implementation, the conditions for eligibility required by the BRRD indirectly exclude smaller bank, to the extent that the resolution authority may not recognize a public interest in saving these institutions, therefore precluding the intervention of the Single Resolution Fund. In this case, smaller banks, in the absence of private investors, will be forced to an atomistic liquidation procedure, with the effect of compromising the continuity of critical banking functions at a local level. Moreover, banks may take some time to adequate their existing liabilities to the level required by the MREL, a situation that may compromise the funding ability of the Italian banks in the longer term. Hence, the composition and level of MREL should take into account the resolution strategy, business model and the specificities of each single bank, refusing a one-size-fits-all approach.[70] Lastly, the need to guarantee an appropriate loss-absorbency capacity should be reconciled with that of ensuring that such liabilities are issued in an orderly manner, without tightening credit supply in the economy.

In the light of the above, and in order to achieve a credible bail-in tool, the co-legislators recently agreed to tighten the rules on the subordination of MREL instruments (BRRD II). Beyond the existing G-SIIs category, the co-legislators identified the so-called "*top-tier banks*", i.e. banks with a balance sheet size greater than €100 billion, with are subject to more prudent subordination requirements. However, a study recently conducted by the ECB[71] shows that the ability of the euro area banking system to withstand potential shocks has increased compared to the crisis years, thanks to the positive impact of the post-crisis reform on bank capital and banks' increasing loss-absorbing capacity. The research estimates the euro area banking system's Loss-Absorbing Capacity (LAC) both in 2007 and 2017, over Total Assets, represented as a simple average across all banks. For the purpose of the work, two alternatives are considered: bail-in – *option 1* means that only MREL-eligible liabilities can be subject to bail in; while under *option 2* all eligible liabilities can be

[70] Financial Stability Review, May 2016
[71] Carmassi, Corrias, Parisi, Is taxpayers' money better protected now? An assessment of banking regulatory reforms ten years after the global financial crisis (2019)

effectively bailed in. The results show that the ability of the banking system to absorb losses while minimising costs to taxpayers has increased by 3.5 times between 2007 and 2017 when assuming that only MREL-eligible bonds can be bailed-in, whether all eligible liabilities are bailed in, the banking system's loss-absorbing capacity increases to 55.5% of total assets. In addition, the average probability of default of banks from the euro area decreased to 1.1% in 2017, compared to its pre-crisis value of 3.5%, mainly due to the stricter capital buffers required by the Basel regulation and the new resolution framework introduced by the BRRD. In short, the increase in the financial stability of the euro area banking system is mainly correlated to a significant decrease in the average probability of default and a substantial increase in the banks' loss-absorbing capacity, also thanks to the contribution of the Single Resolution Fund.

4 Banca Carige case study

4.1 Background

Cassa di Risparmio di Genova was founded in 1846, lately becoming Banca Carige S.p.A. in 1991 and part of Gruppo Banca Carige after the statutory corporation was split into Banca Carige S.p.A. and Fondazione Carige. In 1967, Banca Carige S.p.A. as the holding company of Banca Carige Group, acquired the denomination of Cassa di Risparmio di Genova e Imperia S.p.A. (hereafter the "Bank", "Carige" or the "Group"). In January 1995 Carige entered into Borsa Italiana as a listed company and it acquired Cassa di Risparmio di Savona and Banca del Monte di Lucca in 2000, thereby strengthening its market positioning. Carige Vita Nuova Assicurazioni and Carige Assicurazioni were created in 2000 and 2002 respectively from existing insurance companies. However, in 2014, the Bank sold its insurance subsidiaries to some investment funds managed by Apollo Global Management for €310 million. Two years later, the new board of directors decided to sue Carige previous executives for mismanagement practices by claiming that selling the insurance companies was actually harmful to Carige financial condition; however, the court lately rejected the suit.

As of 31 December 2018, the Group was composed by Banca del Monte di Lucca (60% controlled by Carige), Banca Cesare Ponti and Creditis Servizi Finanziari (entirely controlled by Carige) and other minor subsidiaries and could count on 493 branches, with about 25.7% of market share located in the home region Liguria. The shareholding structure as of January 4th, 2019, was represented by: Malacalza Investimenti Srl, a company entirely owned by the Malacalza family and representing the main shareholder with a 27,55% of ownership, followed by Compania Financiera Lonestar (9,08%) and Capital Investment Trust (4,98%), while other shareholders accounted for the remaining 58,98% of total capital (of which 40-42% are retail investors). Since he replaced the largest shareholder (Fondazione Carige) in 2015, Malacalza Investimenti had a prevailing role and a significative influence over the Bank in the light of the events that followed and that affected the Bank's economic and financial condition. A brief overview of Carige material events will be outlined below.

First, it is due to consider that Carige has been loss-making since 2012, reflecting its weak ability to generate revenues and a heavy cost structure, along with sizeable credit impairment charges. Moreover, in September 2013, the Bank of Italy

blamed Carige for using irregular accounting practices and ascertained the unstable financial position of the Bank, partly arising from the acquisition of derivative assets, having Deutsche Bank as counterparty. In 2017, the Bank struggled to meet its third cash injection in four years, accounting for a total of €2.1 billion of shareholding value destroyed in the same timeframe. In September 2018, Carige was worth less than a quarter of the €2.2 billion it had raised since 2014, when it failed European stress tests and became under direct ECB oversight.

In September 2018, an inspection conducted by the Bank of Italy over the credit portfolio of the Bank revealed that Carige was operating under a poor capital structure, also having regard of the significant amount of deteriorated exposures, which called for the need to strengthen the Bank's capital base. At that time, Pietro Modiano had just been appointed as new president and Fabio Innocenzi was the new CEO of Carige, while Vittorio Malacalza had the majority in the shareholders meeting with a 29% of capital share. Last November, the capital strengthening was achieved through the issuance of a Tier 2 subordinated bond, subscribed by the Voluntary intervention Scheme of the International Deposit Protection Fund (Fitd) for a total amount of €318.2 million; the operation allowed Carige to be compliant with ECB's overall capital requirement of 13.125% (inclusive of capital conservation buffer). The bond issuance was connected to a capital increase of €400 million expected for the first semester of 2019, according to which the debt should have been reimbursed (fully or in part) with the financial resources deriving from the capital increase or either it should have been converted into ordinary shares whether the recapitalisation was not subscribed for the whole amount. On December 22nd, 2018, Carige called for an extraordinary meeting in order to deliberate the capital increase. However, the meeting failed due to the abstention of the major shareholder, Vittorio Malacalza, while the majority of the Bank's directors tendered their resignations with effect as of 2 January 2019, with the entire Board ceasing to hold office on the same date, leading to a situation of strong uncertainty.[72] As a consequence of the failed capital increase, the Tier 2 bond yield sharply rose, leading to a further worsening in the debtor position of the Group.

The ECB successively notified the removal of the administrative and controlling body of the Bank and placed Carige under temporary administration as from February 2nd, at the same time, the Consob ordered the suspension of Carige

[72] At the meeting only 40% of shareholders base was represented.

shares from the Italian trading market. The ECB subsequently appointed a Surveillance Committee and Pietro Modiano, Fabio Innocenzi and Raffaele Lener as temporary administrators. The administrators are charged with the duty to *temporary* run the Bank according to the powers they have been assigned by the European authority. It is worth highlighting that the application of a temporary administration procedure does not actually influence the Bank's outstanding client relationships and contracts. Temporary administration, as an *early intervention measure*, aims at ensuring an effective management of the Bank, in order to complete the full deleveraging of its credit portfolio, the capital strengthening and the pursuit of a potential business combination. Such measures are applicable under the condition that Carige is fully compliant with existing capital requirements following the bond issuance and with respect to solvency conditions.

At the end of January 2019, the Italian government approved the decree containing the details for the application of a State Guarantee, assigned for a total amount of €2 billion over Carige newly issued bonds, in order to support the Bank's funding in the medium term and stabilise its liquidity profile.[73] The decree contains a series of technical measures designed to support the Bank's operating business and enhance trustworthiness in financial markets. These represent external aid measures aiming to provide extraordinary liquidity support to Carige. In particular, the Italian government decided to allocate supplementary €1 billion to potentially achieve a public recapitalization and further €300 million were stored for emergency liquidity assistance. At this stage, it became clear that prompt recovery measures were to be found within a short timeframe, possibly in the form of a private intervention from potentially interested investors, as to avoid further deterioration in the economic and financial condition of the Bank and the incurrence of a situation of non-viability. On February 27th, the temporary administrators drew up Carige strategic plan, which also envisaged a capital strengthening to be realised within the first semester of 2019.

A description of the initial strategic plan and the main exit strategies reviewed by the European authority aimed at saving the distressed Bank will be described and analysed in the following paragraphs. The strategic plan to which reference is made was drawn up by Carige temporary administrators in February 2019. It is due to specify that in the following months the plan has been subject to further revision and updates reflecting the new expectations on market interest rates and partly as a consequence of

[73] Two bonds have been subsequently issued by the Bank: the first for €1.0 bn of nominal value with 0.5% coupon expiring in January 2020; the second for €1.0 bn of nominal value with 0.75% coupon expiring in July 2020

the ECB decision to renew targeted long-term refinancing operations (TLTRO III). However, the updated strategic plan remains in line with the initial February plan to the extent that it is built on the same business levers.

In the next paragraph, the economic and financial performance of the Bank will be analysed in order to give a more comprehensive framework.

4.2 Overview of Banca Carige economic and financial performance

4.2.1 Profitability and financial structure

The economic performance of a bank is exemplified by its income statement, which gives evidence of the bank's total revenues – mainly resulting from net interest income and net commission income - calculated net of its operating expenses – personnel expenses and other administrative expenses. The amount of "net losses on impairment of loans" is particularly relevant for financial institutions as it expresses the amount of provisions required in connection to non-performing exposures, which in turn contribute to determination of the riskiness of the institution.

The following table is a reclassification of Carige income statement, based on the Bank's publicly available financial data for the years 2016-2018.

Table 8. Income Statement

Data in €/m	2016A	2017A	2018A	CAGR '16-'18
Net interest income	300	234	227	(13%)
Net commission income	241	239	231	(2%)
Other revenues	75	(92)	(61)	n.s.
Total revenues	**616**	**381**	**397**	**(20%)**
Net losses/recoveries on impairment of loans	(471)	(439)	(244)	(28%)
Operating expenses	**(562)**	**(627)**	**(534)**	**(3%)**
Personnel expenses	*(296)*	*(359)*	*(280)*	*(3%)*
Other administrative expenses	*(266)*	*(268)*	*(254)*	*(2%)*
Profit before tax	(431)	(589)	(316)	(14%)
Net profit	**(296)**	**(388)**	**(273)**	**(4%)**

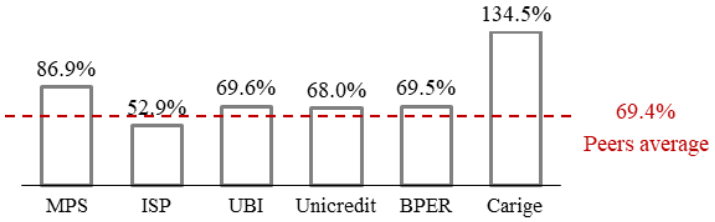
Note: Profit before tax at 2018 also takes into account €67 million of net income from participations and investment

At December 2018, the Bank was recording losses for €272.8 million resulting from the interconnection of different variables, mainly stricter accounting criteria, extraordinary expenses and the effects of major deleveraging operations pursued by

the Bank in the last two years. Firstly, net interest income decrease is mainly due to significant asset disposals, the level of current market yields, non-recurring components in interest expenses (partly related to public guarantee bonds) and subject to the effects of the implementation of IFRS9 principles.[74] Secondly, the disposal of UTP loans and non-performing exposures recorded "losses on disposal" for a total amount of €42.9 million, while net losses on credit exposures recorded a 28% decrease compared to 2016 values (amounting to €244 million in 2018) with implied cost of risk of about 170bps. In addition, 2018 financial results were to a certain extent affected by the recognition of extraordinary contributions and other banking system charges (Single Resolution Fund, Deposit Guarantee Scheme, the Italian voluntary scheme and the Atlante Fund), including €41.7 million in net provisions to the fund for risks and charges, primarily traceable to Amissima recourse.

Although Carige was still recording significant losses, net results for 2018 show an improvement in the Bank's outstanding performance compared to 2017 figures (where losses were recorded for €388.4 million). In this regard, differences between 2018 and 2017 values principally derive from the recalled NPE de-risking strategies, leading to a reduction in net costs for impairment of loans, and from significant savings in operating expenses, mainly driven by a cut in personnel costs following the optimisation of the Bank's operational structure. Coherently, the Bank's cost income ratio[75] was slightly decreasing with respect to 2017 value, going from 164.3% to 134.5%. However, as shown in the table below, Carige still recorded a cost income ratio well above the average of comparable Italian banks at the end of 2018.

Table 9. Cost income ratio – Data at December 31st, 2018



To complete the framework, Carige balance sheet items displayed below highlight a remarkable decrease in shareholders' equity in the three-year horizon (CAGR -9%) and a reduction in the amount of direct funding (CAGR -13%).

[74] IFRS9 imply that interest income is calculated by applying the amortised cost to the net carrying amount, rather than to the gross carrying amount

[75] Calculated as operating expenses over total revenues

Table 10. Balance sheet

Data in €/m	2016A	2017A	2018A	CAGR '16-'18
Loans to customers	18,246	15,754	14,393	(11%)
Financial assets	2,327	2,055	2,268	(1%)
Property and equipment / intangible assets	818	773	780	(2%)
Other assets	4,720	6,338	4,654	(1%)
Total assets	**26,111**	**24,920**	**22,095**	**(8%)**
Liabilities due to banks	3,468	4,657	4,593	15%
Direct funding	19,154	16,860	14,500	(13%)
Financial liabilities	461	349	240	(28%)
Other liabilities	890	785	993	6%
Shareholders' equity	**2,138**	**2,269**	**1,769**	**(9%)**
Total Liabilities and Shareholders' equity	**26,111**	**24,920**	**22,095**	**(8%)**

In particular, the Bank's overall funding structure was affected by a slight decrease in the level of direct funding from retail and corporate customers (going from €14 billion in 2017 to €12.3 billion at the end of 2018). This is mainly due to bonds coming to maturity in the second half of the year, a decrease in the institutional medium/long term funding and a substantial run-off from depositors. Consequently, total direct funding fell to €14.5 billion in 2018 compared to €19.1 billion in 2016, as a combined effect of the above factors. The decrease in loans to costumers is partly a consequence of Carige credit portfolio de-risking strategy and of the implementation of IFRS9 principles (estimated negative impact for approximately €350 million).

At the same time, shareholder's equity (equal to €1.8 billion in 2018) was in turn affected by the significant economic losses recorded during the year and by the negative impact deriving from the IFRS9 adoption (estimated for €239.4 million net of tax effect).

4.2.2 Asset quality

Thanks to the deleveraging of a substantial portion of its NPE portfolio, Carige decreased the amount of its non-performing exposures to €3.5 billion (gross amount at December 2018) compared to €4.8 billion recorded at the end of the previous year. Although the Bank's credit portfolio is mainly composed by UTP exposures - amounting to €2.5 billion - the most significant reduction is with respect to bad loans, experiencing a 65% decrease compared to 2017 figures. As already said, the Bank was

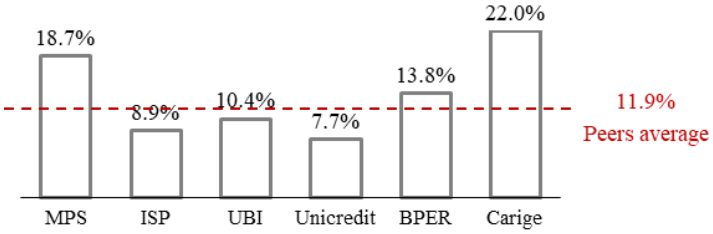
involved in some major NPE transactions in 2018, generating a trend that is expected to continue in the following year. More specifically:

i. the disposal of two UTP secured portfolios (GBV above €400 million)

ii. bad loan securitisation assisted by the CAGS scheme for a gross book value of €964 million

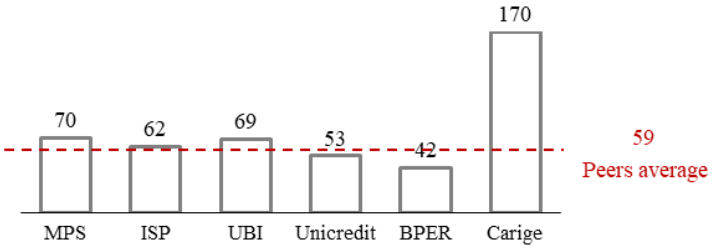
Moreover, on May 2018, Carige signed the final agreement for the disposal of its bad loan management platform to Credito Fondiario, which includes a 10-years partnership for the management and collection of part of the Group's bad loans so as to ensure higher quality standards in line with best market practices. However, despite the significant credit disposals, Carige still held a large amount of NPLs at the end of 2018 with a NPE ratio of 22%, which is almost twice its peers' average.

Table 11. Gross NPE ratio – Data at December 31st, 2018



Consequently, Carige is required to maintain rather high coverage ratios for all credit exposures to compensate for a risky asset side; in particular, bad loans accounted for the highest coverage in 2018 (coverage of 67.3%). In relation to this, the table below shows Carige cost of risk (CoR) with respect to a panel of comparable banks; indeed, the CoR is a quantitative measure for the asset quality of credit institutions, calculated as the amount of credit coverage over total gross NPEs. Despite a strong CoR reduction achieved by the Bank between 2017 and 2018 (CAGR of approximately -40%), Carige CoR was well above its peers' average, leaving floor for additional de-risking operations for the following years.

Table 12. Cost of Risk (bps) – Data at December 31st, 2018

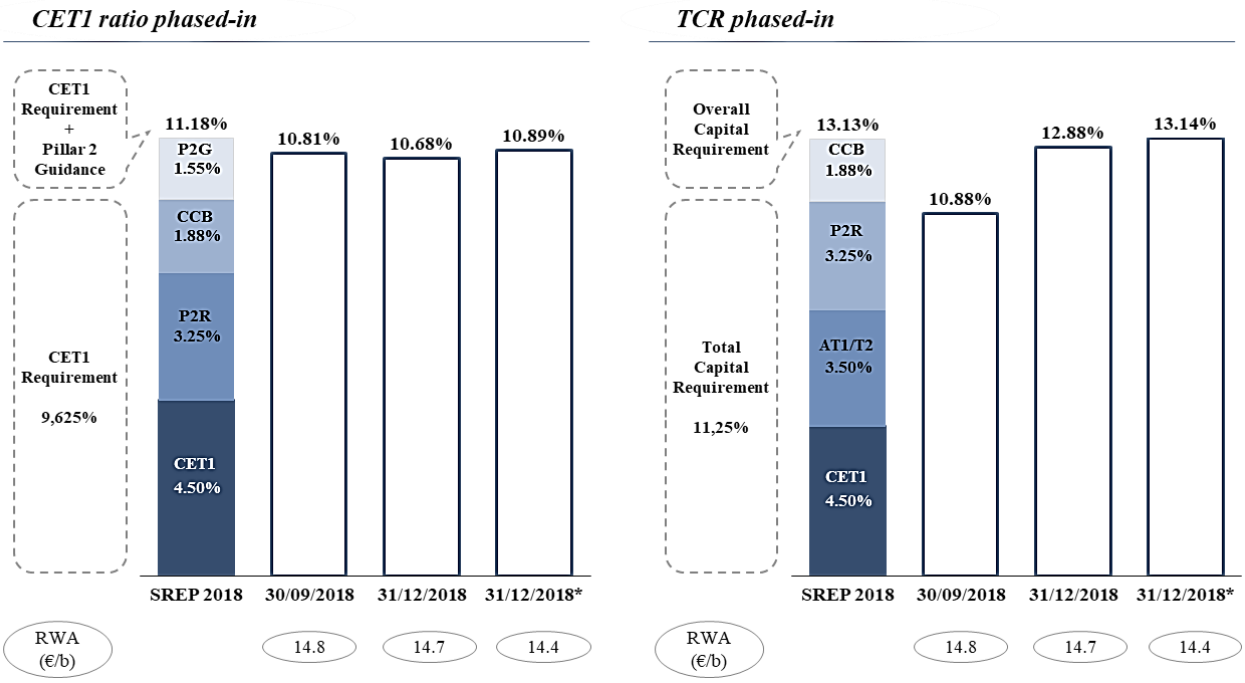


4.2.3 Capital requirements and liquidity

A strong capital base aims at providing banks with an effective tool against situations of financial distress. Banks must preserve a minimum level of capital adequacy by meeting different layers of capital requirements, including Pillar 2 Guidance and capital buffers. Whether banks breach these thresholds, they can be forced to take capital actions such as raising equity, balance sheet deleveraging or moving to less risky activities. One of the main strategic objectives of the Group is to strengthen its capital position and achieve a gradual return to profit under more stable financial conditions, meeting the Bank's prudential requirements identified under the SREP.

As shown by table below, Carige SREP requirements for 2018 include a minimum CET1 ratio of 9.625% (composed of a minimum coefficient of 4.5%, additional Pillar 2 requirement of 3.25% and a capital conservation buffer of 1.875%). The Bank is also assigned to a Pillar Guidance requirement of 1.55%. It is observable that although Carige was still compliant with its capital binding requirement at December 2018, it failed to meet additional Pillar Guidance, falling below its minimum SREP CET1 threshold (CET1 ratio *phased-in* equal to 10.68% at December 2018 vs required SREP of 11.175%). A first improvement is expected to stem from the two operations of NPE-portfolio disposal, leading to an expected reduction in the Bank's RWAs, with pro-forma CET1 ratio and TCR respectively standing at 10.89% and 13.14% as at December 2018. On a consolidated basis, minimum total SREP capital requirement is set at 11.25% that sums up to the Bank's capital conservation buffer, leading to a minimum Overall Capital Requirement of 13.125%. As represented above, at year-end 2018, Carige TCR *phased-in* was equal to 12.88% and below minimum SREP level, despite the Tier 2 bond issuance for €320 million in November 2018.

Table 13. Capital requirements

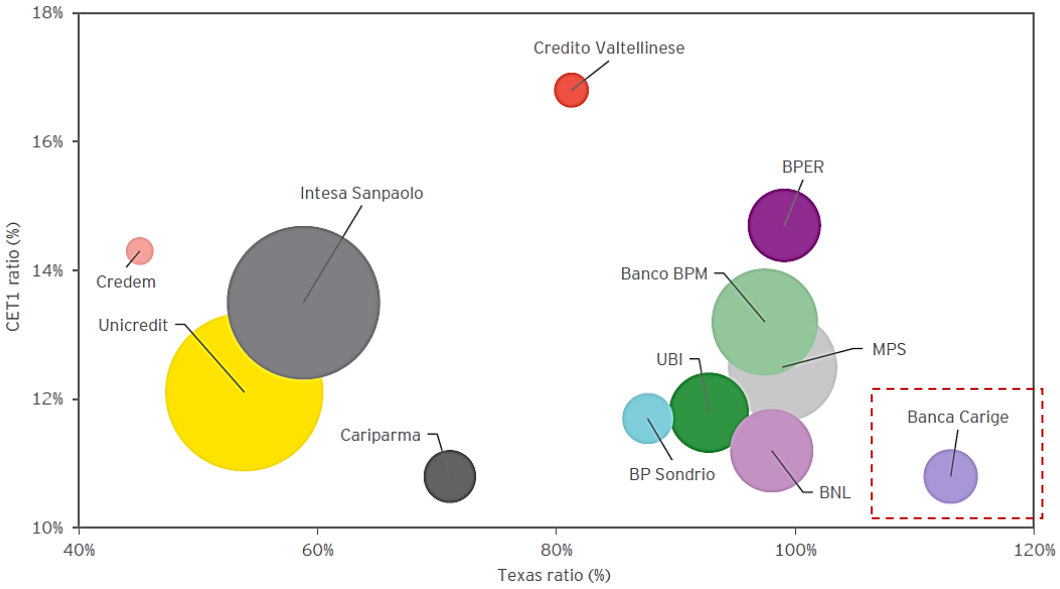


Elaboration on Carige results presentation - Carige website, Risultati di sintesi 2018
Notes: (*) Carige CET1 and TCR ratios adjusted for the RWA derecognition due to the disposal of NPEs realized in the last quarter of 2018

The table below illustrates the positioning of the main Italian banking groups in terms of Texas ratio[76] and CET1 ratio (calculated upon CET1 phased in figures), with average of approximately 83% and 13% respectively. Data show a general improvement compared with previous years thanks to the restructuring of some Italian troubled banks (i.e., MPS, Veneto Banca and Banca Popolare di Vicenza) and higher provisioning levels. Nevertheless, in the third quarter of 2018, Carige was performing worse compared to its peers, both in terms of CET1 ratio and Texas ratio. In particular, a lower CET1 ratio indicates that the Bank was operating under a poor capital structure, while a higher Texas ratio originates from the combined effect of high stock of NPLs and provisioning and a small equity value.

[76] Calculated as NPLs over the sum of net tangible equity value and credit provisioning. Tangible equity refers to equity capital net of any intangible components, such as goodwill

Table 14. Texas ratio and CET1 capital ratio – 3Q 2018



Source: EY, The Italian NPEs market, December 2018
Note: (2) Group Consolidated Financial Reports as at 3Q18 (Cariparmaas at 1H18 and BNL as at 31 December 17)

With respect to the Bank's liquidity profile, as of December 31st 2018, Carige had a Liquidity Coverage Ratio of 87%, partially restored following the issuance of the two state guarantee bonds for an aggregate amount of €2 billion, intended to stabilize the Bank's liquidity state. The NSFR was relatively stable compared to previous year results, slightly above 100%, making the Bank compliant with the Basel framework definition of "stable funding".

4.3 Focus on Carige administration and analysis of the emerging governance issues

Once the ECB had ascertained a significant deterioration in Carige financial position (the Bank was risking a capital shortfall in the near term), the competent authority placed the Bank under temporary administration, a decision that clearly reflected the emergency status in which the same Group was reversing.[77] Moreover, the ECB has been looking at Carige frequent management changes, demanding the Bank to fix its governance issues. In these circumstances, the competent authority acted as to avoid that an overall sentiment of concern would have spread between depositors, bondholders and more generally in the market. In fact, Carige has long been affected by governance issues and weakened by several years of mismanagement. At the same time, regulatory audits repeatedly highlighted poor lending practices and

[77] The temporary administration was further accelerated by the resignation of some of the Bank's directors, a decision that lead to the decline of the whole Board

questionable accounting methods. In particular, the Bank was operating under the guide of a board of directors driven by a general sentiment of distrust towards its shareholders and whose members have been very close to resignation in more than one occasion. The Bank witnessed the appointment of four different CEOs since the establishment of the Malacalza family: Piero Montani, Guido Bastianini, Paolo Fiorentino and Fabio Innocenzi. Vittorio Malacalza, Carige top investor, was seeking to replace CEO Paolo Fiorentino with the UBS banker Fabio Innocenzi, criticising the recapitalisation strategy pursued by Fiorentino in the previous months. Moreover, Malacalza has been historically opposed by three other shareholders led by the Italian financier Raffaele Mincione[78] who repeatedly asked for a shareholders' vote in order to replace the Bank's existing board. Despite the fact that Mincione and the two other investors together held the 15.2% of Carige, their voting rights were capped at 9.99% as they lacked the regulatory authorisation to hold more than 10% of equity capital. This situation gives evidence of the great power exercised by the single top investor Malacalza, striving Carige business events and holding the majority at the shareholders' meeting.

In July 2018, Malacalza, as Carige deputy chairman, threatened legal action against the management and later resigned because of disagreements with the board of directors over the Bank's governance. His resignation does not come alone but follows that of Chairman Giuseppe Tesauro and two other directors that same month. At that time, when Carige was already selling off assets to survive, the market perceived a situation of strong uncertainty and, although it was believed that Carige still had a solid client base, concerns were raised over potential shareholders' conflicts, which may complicate its search for a merger partner. After that, on July 20th 2018, the ECB asked Carige to hold a shareholders' meeting with the purpose of appointing a new Chairman by the end of September of the same year.

It is evident that the appointment of different top executives in the course of Carige troubled management history eventually lead the Bank to a further distressed condition, without having regard of other stakeholders' interests. The temporary administration installed since last February also aimed to address the outlined governance issues, by restoring a sound and prudent management. Today, two of the three temporary administrators appointed by the European authority – president Modiano and CEO Innocenzi – are Carige current directors, a condition that clearly

[78] Mincione and his family were holding a 5.43% stake in the Bank as of September 2018, lately reduced to a 4.98% by the beginning of the year

emphasises the continuity with the previous management body and that represents an additional guarantee for Carige existing contracts.

In conclusion, it is worth considering that material weaknesses embedded in the Bank's corporate governance practices also translated into a downgrade in the Bank's short and long-term ratings by credit rating agencies. In August 2018, Moody's downgraded the baseline credit assessment of Carige to Caa2 from Caa1, leaving floor for potential further downgrades. Moody's downgrade clearly reflects the breach of total regulatory capital requirements and the Bank's failure to achieve a capital strengthening in the previous months. Anyway, the decision was also taken in the light of Carige recent corporate governance tensions which, according to Moody's, represented an effective impediment to the Bank's restructuring process, referring to the Bank's ability to make asset disposals, strengthening capital base, issuing debt and pursuing a merger with a potential partner.

4.4 The steps that lead to Carige restructuring plan

4.4.1 The failure of the initial capital increase and private rescue plans

When Carige failed to meet its CET1 non-binding capital requirement (Pillar 2 Guidance) and failed to fill a gap in its Tier 2 capital, the ECB requested a new capital conservation plan to be presented by the Bank before the end of November. In November 2018, with a draft decision the ECB approved the capital conservation plan which estimated a €400 million capital need. The Bank was given until the end of December 2019 to meet regulatory capital requirements "*in a sustainable manner*", unless it would merge with a stronger partner. In this context, the Bank's capital strengthening was initially achieved through the issuance of a Tier 2 subordinated bond, which was strictly connected to a contextual capital increase, functional to the reimbursement of the subordinated debt. Even if it would have reduced the risk of regulatory intervention in the near term, the capital increase "*still represented an extraordinary provision of support"* and was deemed as necessary for re-establishing the Bank's viability.[79] Eventually, Carige assembly meeting failed to deliberate the capital increase due to the abstention of its major shareholder, Vittorio Malacalza.

By the end of 2018, Carige had started looking for market investors to achieve a potential business combination and between February and March of the following year the Group received a non-binding offer from the private equity investor Blackrock. In particular, Blackrock was working to expand the investor base for the

[79] Fitch Ratings website, press release 13 December 2018

purchase of Carige to other coinvestor funds and was expected to formalize a binding offer by May 17th. The US asset management company, assisted by the advisor Mediobanca, was dealing with minor private equity funds and credit funds in order to underwrite part of the 630 million capital increase. Also, Malacalza family was supposed to participate in the capital increase, by subscribing a tranche between €60 and 90 million and thus diluting its participation from 27% to about 10%. At this stage, once the intervention of the Voluntary Scheme of the Fitd was no longer considered a cause for concern, assuming its availability to convert the Tier2 subordinated bond into equity, the role played by Carige major shareholder rather became one of the main topics of discussion. In this regard, concerns were also arising over the future governance of Carige, in the light of the Bank's recent governance issues. In addition, connected to Blackrock intervention was the disposal of a €2.1 billion credit portfolio; of which €1.9 billion (about half bad loans and half UTP) was expected to be sold by the end of the second quarter of 2019. The binding offer was put forward on February 22nd by SGA S.p.A.[80]; in any case, the offer was intended to remain open for a few months, so as to leave the possibility for new equity investors to eventually acquire the credit portfolio, while allowing the Bank to reduce the stock of NPLs. However, Blackrock ultimately denied its interest in acquiring the whole NPL portfolio, shading further uncertainty upon the completion of the operation.

In the light of the above, Blackrock eventually decided to withdraw from negotiations with the Bank. According to financial sources, the absence of adequate funding resources from coinvestors eventually lead to the failure of the plan; alternatively, Blackrock motivation could have derived from a pure financial assessment of the investment, unveiling a poor rate of return. Once the restructuring plan presented by Blackrock failed, the Voluntary Scheme was asked to deliberate the conversion of the subordinated bond in May 2019 to provide immediate financial support to the Bank. However, the VIS denied its consensus as Blackrock financial support represented a necessary condition for the capital increase to take place (for further details see *paragraph 4.4.1.2*).

In this context, the credibility of a private rescue plan was indeed undermined, raising concerns over the complexity and the size of the operation. Negotiations were open once again. In particular, the American investment fund Varde, which has been looking at Carige deal, initially showed interest in achieving a comprehensive solution,

[80] debt servicer fully-owned by the Italian state

which included the sale of the Bank's non-performing loan portfolio. Anyway, a non-binding offer form Varde was never submitted to Carige temporary administrators. The due diligence activities performed by the private investor in the following months clearly outlined the complexity of Carige rescue plan.

However, Carige received a non-binding proposal from the private equity fund Apollo Global management. The proposal, requiring the participation of the Fitd and Carige key shareholders, was deemed as "unacceptable" by the same Fitd, which asked for an improvement in conditions. In particular, the proposal outlined a capital increase for a total amount of €500 million to be split in two tranches (compared to the €720 million capital increase included in Blackrock plan). Accordingly, the first effort was required from the Italian banks through the conversion of the €320 million bond subscribed by the Voluntary Scheme in late 2018, to be acquired by the Fitd. Indeed, the private equity fund was available to purchase Carige at a symbolic price, while raising an additional €100 – 150 million, only whether concrete signs of improvement would have shown following the first capital injection. In this context, Apollo contribution would have been rather limited in terms of financing support. Moreover, by purchasing the Tier2 bond, the Fitd would have end up holding a majority stake in Carige, a possibility that is excluded by the statute of the same Fitd. In fact, by its own nature, the interbank fund cannot take a controlling ownership position or exercise governing powers over a single institution.

Apollo represented an interesting partner to the extent that it had a deeper knowledge of Carige and multiple economic interests in saving the Bank. Above all, the private equity fund had been involved in two judicial disputes with Carige: the first following the acquisition of the insurance company Amissima (at the heart of the dispute was the insurance company deal, brought to court by the Malacalza family in 2016 and subsequently rejected); the second refers to a previous attempt pursued by Apollo in acquiring Carige NPL portfolio some years before. Moreover, Apollo could no longer take advantage of Carige network for the distribution of Amissima insurance policies, in the event that Carige was placed under compulsory liquidation, thereby strengthening its incentives to intervene in favour of the Bank. However, Apollo never revised its strategic lines and the proposal was never submitted to Carige shareholders' approval.

In this context, it is difficult to trace back the drivers of the failure of the private rescue plans, which can be intended as the result of several factors. In particular, these relate to the strong degree of uncertainty upon the successfulness of the outlined

strategies and the overall instability arising from Carige governance issues. Furthermore, having regard to the fact that the Bank does not have free access to capital markets at the present date and that its refinancing abilities wholly depend on the state guaranteed bond, it is to some degree understandable the investors' decision as not to take part in a rather risky recapitalization.

4.4.1.1 The market perspective – analysis of rating agencies' reports

As already mentioned, in August 2018 the credit rating agency Moody's reviewed the baseline credit assessment of Carige to Caa2. The decision clearly reflected the risk that Carige could be placed under resolution in the near term, in the event the Bank's capital conservation plan was ultimately rejected by the European authority, shading light over the Bank's reduced viability.

In December 2018, in its rating report Fitch outlined an increase in the Bank's viability and removed the rating "*watch negative*" following Carige recapitalisation through the issuance of the €320 million Tier2 bond. However, Fitch acknowledged that Carige standalone profile remained *very weak despite its restored compliance with minimum capital requirements*. According to Fitch, Carige capital strengthening was not commensurate to the Bank's effective risks, the success of any turnaround strategy being highly vulnerable to prevailing economic conditions. Despite the Fitd intervention bringing stability to Carige funding structure and deposit base, the Bank's liquidity remained exposed to possible deposit outflows. In addition, Carige current debt buffers may have not been sustainable in the near future, given the Bank's significant reliance on senior state-guaranteed debt and tentative access to the debt market. According to Fitch, although external support from the Italian government had been provided, this could not be relied upon in the longer term. In fact, in January 2019, Fitch cut Carige long-term issuer default at CCC (previously confirmed at CCC+) following the ECB decision to place Carige under temporary administration.

It is fair to say that, on a general basis, rating agency assessments are very likely to drive the general market sentiment. In the specific case, they may have increased or reduced the probability of finding an industrial partner for Carige. In this context, the possibility for a change in Carige rating standards and a positive review from the rating agencies will fully depend on Carige ability to develop a credible capital conservation plan (and the consequent regulatory response) and upon the evolution of its loss-absorbing capacities; although rating upgrades are very unlikely in the current scenario. In fact, any upgrade would require stronger capital levels,

stability above regulatory requirements and the execution of a credible strategy to achieve the Bank's turnaround. Moreover, the possibility of an upward revision is contingent on a positive change in the Italian government propensity to support the Bank. As at June 27th, 2019, Fitch ratings were CCC to long-term issuer default rating on "*Rating Watch Evolving*", upon consideration of Carige recent developments.

4.4.1.2 The role of the FITD

The Interbank Deposit Protection Fund (Fitd) acts with the mandate to guarantee deposits in all member banks. In turn, the Italian banks, by participating in the deposit guarantee scheme, provide adequate financial resources to the interbank fund. Therefore, when the Voluntary Intervention Scheme (VIS) of the Fitd voted in favour of the subscription of the €320 million bond[81] in December 2018, the Italian banking system indirectly took part to the capital strengthening operation, meant to help Carige being compliant with minimum capital requirements. In that case, the amount was made promptly available to the Bank thanks to a bridge financing from two major banks: Banco BPM and Banca Sella.

Lately, the private equity fund Apollo called for the Fitd intervention through the purchase of the €320 million bond subscribed by the Voluntary Scheme in late 2018; the acquisition being financed with the Italian banks' contributions made to the fund over a three years horizon and now amounting to about €1.5 billion. This alternative, ultimately rejected by the same Fitd, deserves some point of attention.

On one hand, the Fitd support would have allowed a partial recovery of the cumulative losses incurred by the VIS by subscribing the senior Tier2 bond (in fact, the bond was already fully depreciated by that date), with potential benefits captured by VIS participant banks. On the other hand, it is due to consider that the interbank fund cannot exercise controlling functions, nor it can hold a majority stake in a bank, as expressly provided by its statute. In addition, by its own nature, the Fitd cannot cover the whole capital need with own financing resources, rather it shall intervene in a broader recapitalisation framework that embeds the participation of multiple investors. The Fitd intervention is further conditioned to the fact that Carige is itself a participant bank to the VIS; it follows that VIS financial aid shall be authorized only when further support is given from a private investor. For these same reasons, the Voluntary Scheme was forced to deny its consensus to the conversion of the subordinated bond in May 2019, following Blackrock withdrawal from the

[81] The bond has annual yield of 13% and a 10 years maturity. €1,8 million of the total €320 million are due from Banco Desio, which into part of the VIS

negotiations, as Blackrock capital injection was indeed a preliminary condition for VIS intervention and for the successfulness of Carige rescue plan.

Moreover, VIS statute provides that VIS can intervene in favour of distressed banks mainly by providing financing resources, collateral guarantee or through the acquisition of an equity stake in the bank. In any case, VIS intervention is subordinated to a concrete possibility that the institution's long-term viability may be restored, this latter built on a credible and effective restructuring plan with a view of minimising VIS contribution. As for Carige, the long-term viability shall be achieved mainly through the derisking of its credit portfolio, capital strengthening initiatives and the restructuring of its operating business, focusing on the pillars outlined by the 2019-2023 strategic plan that will be subject of analysis in the following paragraph.

4.4.2 The Bank's restructuring strategy: 2019 – 2023 strategic plan

The strategic plan presented by Carige temporary administrators in February, with the heading "*Winning back our Future*" (the "Plan"), shows projections of the Bank's economic and financial performance in the up-coming years and represents the basis for an acquisition or a business combination with a potential investor. The Plan was prepared according to specific guidelines shared with the Bank's management, by rebuilding Carige business model from a standalone perspective, as to allow a satisfactory return on equity by the end of 2023. However, it is worth highlighting that the inherent assumptions are rather conservative and therefore they do not fully capture any additional potential of the Bank.

The Plan contemplates the Bank's NPE portfolio disposal and a capital increase, originally expected by the first half of 2019, in conjunction with a potential business combination to be achieved by the end of September of the same year. The Strategic Plan represents the pre-requisite for achieving capital, profitability and efficiency objectives. In particular the Plan is based on three pillars:

i. fortify the Bank's balance sheet through the *de-risking* of its credit portfolio and capital strengthening measures;

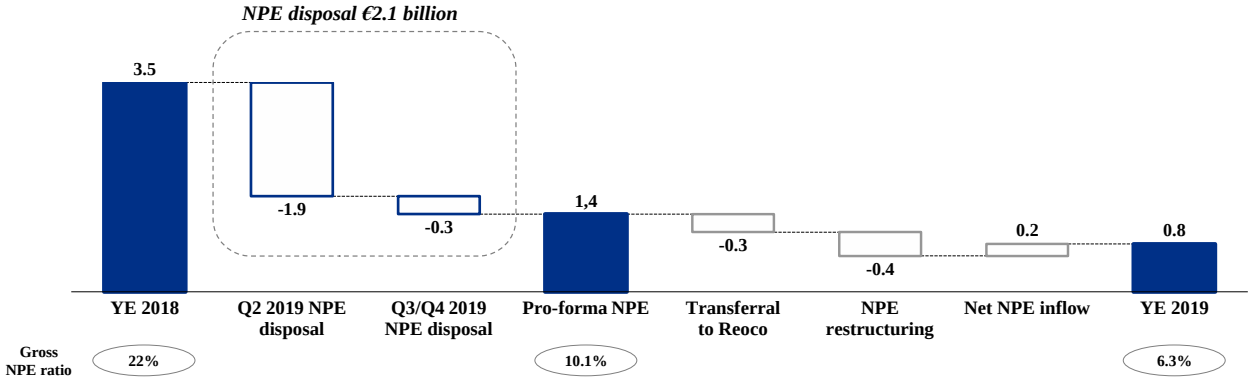
ii. reach breakeven in 2020 thanks to the implementation of short-term business levers, while achieving a significant cost reduction;

iii. reach a sustainable profitability starting with the 2019 turnaround and exemplify the Bank's process by focusing on core clients and segments (*lean revolution*).

In particular, the relaunch of the business includes the sale of € 2.1 billion of impaired loans by the end of the year and the restructuring of additional €0.7 billion of NPEs, leading to a cut of gross NPE ratio from 22% (recorded at the end of 2018) to around 6.6% at the end of 2023. As already sad, a binding offer for the acquisition of €1.9 billion of NPEs has already been presented by SGA last February. In addition, small-ticket portfolios should be outsourced to a specialized servicer as to increase the collection rate. Consequently, Carige total assets would decrease to €20.3 billion in 2023, following the deleveraging of the Bank's balance sheet through the disposal of bad loans/ UTP exposures and additional reduction in financial assets.[82]

As shown by the figure below, the net reduction in NPEs is related to the sale of € 2.1 billion of impaired loans and to the NPE restructuring for a total value of €0.7 billion (also including a partial credit transfer to the asset management vehicle Reoco). By the end of 2019, Carige was expected to have a stock of NPLs of approximately €0.8 billion.

Table 15. Gross NPE evolution (€/b)



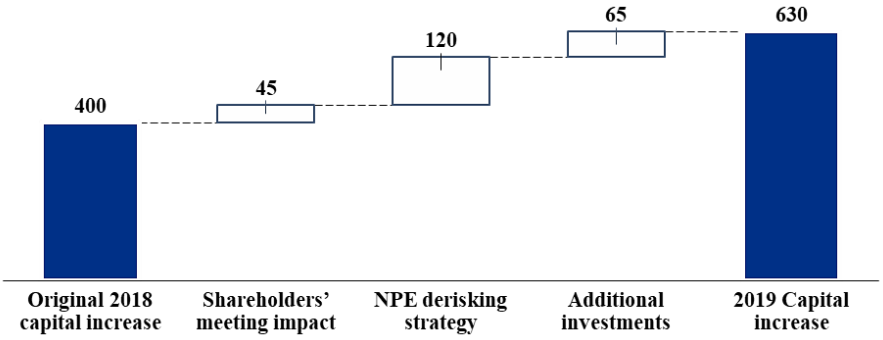
Elaboration on Carige Strategic Plan 2019-2023

These initiatives are part of a broader framework built on proactive management initiatives as to improve Carige key credit risk parameters. These also include the upgrade of the Bank's credit monitoring system and the improvement in the RWA calculation process in order to enhance the structural data collection/management capabilities of the Bank. At the same time, the cost of risk is expected to stabilise at 50bps by the end of 2023 (following a 71% reduction from 2018), in line with Carige main competitors.

[82] Carige will also transfer of some large real estate exposures to the Reoco unit

At the same time, the capital strengthening should be achieved through a capital increase (for a total amount of €630 million, including the substitution of the €320 million Tier2 bond) and the development of a stable funding structure.[83] The overall capital increase includes the original €400 million of capital increase and an additional €230 million, of which €45 million aimed to offset the negative outcome of December Shareholders' meeting.

Table 16. Capital increase (€/m)



Elaboration on Carige Strategic Plan 2019-2023

However, the capital strengthening shall be read in conjunction with the achievement of a more stable funding and liquidity structure. In particular, a solid liquidity structure and the new capital increase should in turn create adequate capital buffers; as a result, CET1 and total capital are expected above regulatory thresholds from the end of 2019 onwards (expected CET1 ratio of 14% at the end of 2019), with a beneficial impact on rating and funding costs. In addition, a stable funding structure shall be attained through an increase in the Bank's deposit base and the stabilization of the Bank's cost of funding in the long run. Although market average cost of funding is expected to increase in the following years (mainly driven by the rise of market interest rates), the Bank's cost of funding spread over Euribor is expected to substantially drop from 115bps in 2019 to around 36bps in 2023, determining a positive impact on net interest income and a more solid funding base[84]. The Plan also takes into account the necessity to provide Carige with an exit strategy following the expiration of the state guarantee bond and the end of TLTRO II, of which €3.5 billion will become due between 2020 and 2021. The Bank shall therefore recur to alternative sources of funding, including external partnerships with international retail deposit

[83] The capital increase is also functional to the repayment of the Tier2 subordinated debt issued at the end of November 2018 and underwritten by the Voluntary Intervention Scheme
[84] Macro-economic scenario foresees 3-month-Euribor to increase from -0.3% in 2018 to 0.8% in 2023

gathering platforms. This will lead to a shift of funding mix towards cheaper funding sources, while reducing reliance on institutional funding. Such measures would likely translate into a higher degree of stability for Carige liquidity position; accordingly, liquidity ratios (LCR and NSFR) are expected to exceed regulatory requirements over the Plan timeframe.

As already said, the Plan also predicts the Bank's return to profit from 2020 onwards. More specifically, Carige is expected to reach breakeven in 2020, a result to be achieved through a substantial reduction in its operating expense (total decrease of 23% to be reached in 2023, including a significant personnel cost reduction)[85]. Short term actions also envisage the closure / merger of some of Carige existing branches and the outsourcing of non-value adding activities (e.g., mortgage factory), as to achieve a simplification of the organizational structure of the Bank.

At the same time, a €12.1 million increase in commission income is expected between 2018 and 2021, mainly connected to the relaunch of Carige Wealth management business. However, the increase in commission income is slightly offset by a reduction in net interest income (-€3.3 million) mainly deriving from major UTP disposals. Nevertheless, it is fair to consider the positive contribution brought by a reduction in the amount of interest expenses expected for the upcoming years, following the gradual improvement of Carige rating standing and funding mix. In addition, restructuring expenses for €123 million represent one-off items expected in 2019 and that will not be recorded in the following years, as these are linked to the implementation of the Strategic Plan and business combination. Consequently, cost income is expected to decrease in the upcoming months, following the operating cost reduction foreseen by the Plan. In the light of the above, ROE is expected to reach a 7% threshold by the end of the 2023.

Last of all, the Plan shall operate through a simple and lean model of digital bank, to be achieved thanks to the outsourcing of non-value adding activities and focusing on the Bank's core competencies. This comes with a reduction in the costs for crisis related activities, mainly a decrease in the management cost of NPEs, following the clean-up of the Bank's balance sheet. It also follows a reduction in the number of managed products and increased focus on core segments, namely households' wealth management and services for SMEs, as to optimise the return on Assets under Management. In addition, Carige shall consolidate its branch network as

[85] The personnel cost reduction is linked to net reduction of 1,050 FTEs

to enable a more efficient coverage of core regions and close branches with insufficient profitability. The lean revolution would lead to the resizing of the organisation by approximately 1,050 FTEs and over 100 branches, in order to reduce direct costs of network and to improve the overall efficiency, with beneficial effects on the Bank's profitability levels, as outlined above.

4.5 The final agreement – formalisation of private solution

On August 9th, 2019 Banca Carige entered into a binding framework agreement intended to relaunch the Bank's local business activity by restoring its financial condition. This strategy envisages the participation of different financial actors, including private investors and the Italian banking system through the intervention of the Deposit Guarantee Scheme (represented by the Interbank Deposit Protection Fund and the Voluntary Intervention Scheme). In order for the private solution to be effective, it shall receive the authorisation from the competent authorities and the approval by the shareholders' meeting, which has been convened for September 20th, 2019. The following players will be involved in the Group's capital strengthening: the Italian Interbank Deposit Protection Fund (Fitd), the Voluntary Intervention Scheme of Fitd (VIS), the banking group Cassa Centrale Banca - Credito Cooperativo Italiano (CCB)[86], the public asset management company Società per la Gestione di Attività (SGA) and other leading financial institutions.

The transaction is based on the Strategic Plan drawn up by Carige temporary administrators. As already discussed, the Plan contemplates a set of capital strengthening, risk mitigation and efficiency boosting measures, creating the prerequisites for a successful business combination and aimed to align Carige ratios with industry KPIs over the next years. These involve the disposal of a significant amount of the Bank's non-performing portfolio, as to achieve a full de-risking of the Bank's assets. In particular, the full-scale disposal of the non-performing portfolio (€3.1 billion out of total €3.5 billion in GBV) will have SGA as counterparty, which has already delivered a binding offer.

On the other hand, the Bank's recapitalization scheme involves a €700 million capital increase (at symbolic subscription price of €0.001 per share including share premium) broken down into different tranches and the issuance of a Tier2 subordinated bond worth €200 million. The capital increase is intended as follows:

[86] CCB is a banking group comprising about 80 Italian mutual banks and representing the major banking partner in the operation

i. €313.2 million will be subscribed by the VIS against conversion of the subordinated bond. In addition, and upon completion of the transaction, the VIS shall assign (free-of-charge) shares for a €10 million value to the Bank's shareholders holding a number of shares below a certain threshold. This initiative aims at encouraging "*an active management in the Bank's corporate life*"[87], by fostering the participation of minor investors;

ii. €63 million will be assigned to CCB;

iii. €85 million will be given to the Bank's current shareholders, in proportion to their respective holdings. In addition, warrants shall be assigned free of charge to current shareholders, upon subscription of the capital increase, at a ratio of 1 warrant for every 4 shares.[88] These instruments will allow the purchase of new shares at a 50% discount;

iv. €238.8 million will be subscribed by the Fitd. Moreover, the interbank fund has formalised an underwriting commitment on the tranche reserved to the Bank's existing shareholders. In this view, Fitd level of commitment ranges between €324 million and €239 million, as to guarantee for the successfulness of the capital increase.

With respect to the €200 million Tier 2 bond, multiple private and public financial investors have already delivered a binding commitment. In particular, the Tier 2 bond will be covered by Cassa Centrale Banca for an amount of €100 million. As part of the agreement, VIS and Fitd have granted Cassa Centrale Banca a call option to be exercisable in the period between 1 July 2020 and 31 December 2021 on all of the Bank's ordinary shares that will be held by VIS and Fitd following the capital increase.

In this context, the Bank's capital strengthening is functional for ending temporary administration and reestablishing a sound and prudent management. However, it is worth noticing that the foreseen capital increase is slightly above the amount outlined in the original Strategic Plan, which has been subject to further revision by Carige temporary administrators in the past months, as already mentioned. In conclusion, although the framework agreement at its very first stage only contemplates a capital strengthening of the Bank for both its CET1 and Tier2 components, it is fair to say that a business combination would follow in the event that

[87] Carige Press Release August 30th, 2019

[88] Warrants are derivative instruments that give the right to buy or sell a security at a certain price before expiration. Warrants represent an important tool from investors either because they are tradable as independent instruments on the market and are highly liquid and also because they bear an upside potential, as ordinary equity instruments

CCB exercised the call option to purchase all of the shares held by the interbank fund and the VIS, over the next two years. To this extent, the transaction actually holds a strong industrial footprint. In fact, a potential merger between Carige and CCB will allow the Bank to achieve significant industrial synergies in the medium / long term, while the Group turnaround will be realised with the support of multiple financial investors.

4.6 Assessing the social and financial impact of alternative exit strategies

Before the private solution was formalised, alternative exit strategies have been carefully analysed by competent authorities; however, these still represent viable strategies at least until the market solution envisaged by the framework agreement becomes effective. In particular, Carige temporary administrators are left with the following alternatives:

i. *market strategy*: the equity contribution from a private investor (i.e. private equity fund) and the business combination with another banking group;

ii. *systemic intervention*: Fitd and VIS contribution;

iii. *public rescue plan*: the application of a precautionary recapitalization according to Montepaschi model and the example of the Italian Banche Venete;

iv. *resolution* and *bail-in*;

v. *compulsory liquidation procedure*;

However, the first and second alternative are closely interrelated and are to be intended in conjunction with one another. In fact, due to the material entity of Carige capital need and the complexity of the operation, neither the equity contribution from a single investor nor a business combination with a market peer, would represent sustainable strategies in the long run, unless further support is given from the banking system. In this context, a systemic intervention would come through the contribution from the Fitd and the Voluntary scheme, which is subject to the approval of the ECB and Carige shareholders.

For the purpose of this analysis, it is worth to evaluate the different implications deriving from both a business combination and the contribution given by an external financial investor. At the time of negotiations, the Malacalza family repeatedly asked to follow the path for a business combination: entering into negotiations with an industrial investor was the condition for an effective merger to take place. In this context, the 2019 – 2023 Strategic Plan shows the upside in value that prospective

partners and investors - both industrial and financial - shall obtain from closing a deal with the Bank. Additional profit (consisting in operating cost/revenue synergies and reduced cost of funding) may be unlocked by a business combination (such benefits are only marginally included in the stand-alone scenario).

A business combination (characterized by a strong industrial outreach) would have strong implications on Carige economic and financial performance, mainly depending on the partner size. Potential synergies achieved with the business combination also include the possibility to exploit the advantages associated to an increase in the level of *Deferred Tax Assets* (DTA). The business combination shall operate with a view to minimise business disruption, while achieving a more rapid recovery of the financial position of the Bank. First, it is assumed that the Bank's operating income would be grater in the event that Carige merged with a stronger peer (potential upside of 7% for large banks and 4.5% for mid-size banks). At the same time, potential savings connected to the reduction in operating expenses are estimated at 10% for mid-size banks and 15% for larger banks. In addition, the potential benefits associated to the stock of accounting DTA would be much greater whether Carige merged with a stronger bank. The analysis has focused on €700 million of convertible DTA for large banks, assuming the amount will be fully derecognized over a 5-years horizon. The benefit is reduced to a 30% for mid-size banks, given lower taxable income and sizeable DTA stock, while Carige stand-alone plan only contemplates possible DTA of €80 million[89]. However, poor benefits are expected from a potential combination with mid-size banks in the form of capital strengthening, as these banks generally maintain current capital ratios in line with Carige pro-forma estimated levels.

Alternatively, the equity contribution from a private financial investor would allow Carige to strengthen its capital base. Benefits from capital add-ons would be estimated up to €120 million, assuming a potential Pillar 2 requirement softening over time and a reduction of Carige capital buffer (i.e. 4.8% based on 2019 target CET1 of 14.0%), while delta vs. SREP Pillar 2 Guidance for Tier2 capital is to be fulfilled by subordinated instruments. On the other hand, overall financial results are expected to be in line with Carige stand-alone plan as potential business synergies are not achieved in this case.

On the other hand, the state intervention represents a viable strategy only in the event that a private solution would prove unsuccessful, leaving temporary

[89] Estimations are included in Carige strategic plan 2019 – 2023

administrators with very few alternatives on the table. According to the BRRD, government financial stabilisation tools shall intervene only as a last resort, after private solutions have been addressed and requires subordinated claims to participate in losses before the bank receives sovereign support.

The Italian government has already provided a guarantee on new liabilities issued by the Bank, while any additional intervention from the public authority would represent a point of further discussion. In particular, Carige could call for a precautionary recapitalisation of up to €1 billion (funds that the Italian government has already made available, as expressly stated within the decree issued in January). In any case, state aid can only be applied if the ECB confirms that Carige is still solvent and following the European Commission approval. The hypothesis of a State intervention in the form of a precautionary recapitalization according to the Montepaschi model would remain on the table as long as the European authorities recognise Carige national systemic importance. An assumption that should be weighed against the fact that Carige has assets of just €22 billion against the €153 billion of Montepaschi at the end of 2016. A precautionary recapitalisation would have the effect of diluting the participation of the Bank's existing shareholders, with the Italian government becoming the major investor, while junior creditors (Tier2 bondholders) would be subject to the *burden-sharing* principle. Whether the ECB denied the conditions for a state intervention, the risk of a further regulatory intervention would increase, which could in turn result in losses for senior creditors.

As MPS case demonstrates, public intervention becomes necessary when a market solution is not a viable strategy. In this case, taxpayers would bear the fiscal burden of the public capital injection, both in the form of a higher tax rate and in terms of future spending cuts. In addition, saving Carige by using taxpayers' money could cause the country-risk perception to raise dramatically between investors, that is especially true in the current situation, characterized by strong political uncertainty.

According to the credit rating agency Moody's, a precautionary recapitalisation would benefit senior bondholders and depositors, but it would affect holders of subordinated claims (following the application of the bail-in tool). In particular, the size of potential losses incurred by senior creditors largely depends on whether Carige would recapitalize, thereby avoiding resolution or liquidation; as a private sector intervention or the transferal of the Bank's assets and liabilities to an external entity may actually allow senior creditors to avoid losses. Differently, senior unsecured bondholders would significantly suffer appropriate losses under a liquidation scenario,

due to depositor protection scheme and the Bank's liability structure, which heavily relies on customer deposits, secured instruments or other forms of preferred funding.

An alternative scenario sees the state intervention following the example of the Italian Banche Venete, when the European authority did not recognize a systemic interest in saving the failing banks. Consequently, a precautionary recapitalization could not be pursued and the competent authority called for the application of a compulsory liquidation procedure, with the good bank being transferred to Intesa Sanpaolo. Such a scenario would prove extremely costly for the Italian government, who would sustain the costs incurred by the bad bank to achieve the disposal of toxic assets. It is worth highlighting that, following a state intervention, there would be no consequences for neither the Bank's depositors nor for its bondholders (Carige has no outstanding bonds at the present date except for those subscribed by the Voluntary scheme of the Fitd). As for existing shareholders, under a precautionary recapitalisation they would be overdiluted by the state capital injection; while the separation of the good from the bad bank would see shareholders equity being cancelled following the compulsory liquidation.

Alternatively, the application of the bail-in tool is entirely dependent on whether the recovery strategies currently envisaged by the Bank (i.e. capital increase and seek for industrial partner) would prove successful. If these failed, the European authority will be left with the alternative to declare the *failing or likely to fail* status of the Bank (at the present date, Carige does not meet the regulatory definition of a bank that is *failing or likely to fail*)[90]. It is reasonable to say that no alternative measure could be achieved within a reasonable timeframe in the event that Carige temporary administrators ultimately failed to reach an agreement with the Italian banks, Carige shareholders and private investors. Yet a certain degree of uncertainty remains on whether the resolution authority would effectively recognize a public interest in saving Carige.

Eventually, a compulsory liquidation procedure shall be considered only as an extreme solution. Such strategy would imply a higher cost for all market participants: shareholders value will be destroyed; creditors will be satisfied according to their seniority ranking and according to the extended timing applicable to judicial procedures; while retail depositors will be reimbursed for the secured amount. Ultimately, the State will suffer from the reimbursement of public secured bonds

[90] See Paragraph 3.1

issued by the Bank, while the whole banking system will bear the costs related to the application of the insurance scheme.

Following the above considerations, it becomes clear that a private solution backed by a systemic intervention from the Deposit Guarantee Scheme represents the preferable strategy, by also ensuring the continuity of Carige operating business. On one hand, the cost of the Deposit Guarantee Scheme intervention, including the conversion of the Tier2 bond, may fall upon the Italian banking sector in the form of increased levies for banks. On the other, it is fair to say that in this case the costs borne by the Italian banking system would be to some extent reduced, if compared to the compulsory liquidation alternative. If successful, the use of the national Deposit Guarantee Scheme to support the Bank recapitalisation could be a blueprint for providing capital backup to other troubled European banks in the future.

Conclusions

The financial crisis has revealed the inadequacy of existing regulatory and supervisory tools to ensure stability in the financial system. Hence, the European legislator has been called upon to intervene in the name of a social interest in the preservation of the critical banking functions. The establishment of a Single Resolution Mechanism and the recent regulatory reform, namely Basel III and the Bank Recovery and Resolution Directive (BRRD), should effectively increase the capability of credit institutions to withstand a systemic financial shock. This work examined the contribution brought by prudential regulation and the newly introduced resolution strategies in terms of increased resilience in the banking system, by establishing a level-playing field in banking regulation and supervision, at the same time assessing the potential drawbacks deriving from their application.

The role played by Basel III *prudential regulation* in shaping the current economic environment was deeply discussed. Today, it is still unclear to which extent regulatory requirements shall be raised as to fully capture the benefits connected to more severe capital and liquidity standards; in fact, stricter requirements have proven to be beneficial in the long run, as they effectively improved the resilience of credit institutions, but social gains are smaller when transition costs are taken into account. These may come in the form of tighter credit supply in the economy, under the assumption that increasing capital requirements negatively affect banks' funding costs, in turn impairing banks' lending ability. Therefore, it should be advisable for the legislator to consider an adequate transition period for banks in order to align with more stringent regulatory requirements and avoid repercussions on their cost of funding. At the same time, it can be argued that general market sentiment actually plays a role in determining the effectiveness of prudential regulation and its ability to promote stability in the financial system. In fact, the way market players may react to increasing regulatory requirements is rather unpredictable and heterogeneous, leaving the legislator with a strong degree of uncertainty, as it is not possible to know in advance how the market may respond to changes in regulation.

In a scenario of higher uncertainty, the recovery and resolution principles introduced by the BRRD effectively represent an important step forward towards the creation of a comprehensive framework on bank crisis management. Indeed, the new resolution framework should allow competent authorities to address banks' failures without recurring to sovereign support, at the same time mitigating moral hazard and other issues connected to the application of *bailouts*. However, there are still many

challenges ahead and further efforts may be required as to ease the application of the such principles among credit institutions. From this perspective, a wider range of *flexibility* may help to overcome structural impediments and constraints imposed by existing resolution processes. In fact, by refusing a one-size fits all approach, the legislator would be able to tailor resolution tools the *specificities* of the institution concerned; by this mean, banks without a systemic importance and with limited access to capital markets (i.e. with limited investors' base) would not be too penalized.

Though, an adequate set of prudential and resolution tools may not be enough to ensure stability in the banking system. In fact, we found evidence that corporate governance issues can be underestimated as for the stronger implications these may have on the bank's soundness and risk profile, as outlined by Carige recent events. In that case, wrong corporate governance practices created impediments for achieving a full restructuring of the Bank and impaired its ability to access capital markets while searching for a merger partner. In this view, the updated set of guidelines on Corporate Governance principles for banks, introduced with the intent to mitigate banks' risk-taking incentives, may require additional intervention to *further align corporate governance principles with prudential regulation* as to prevent situations of financial instability arising from discontinuity in the ordinary management of the business. Another consideration can be made with respect to this topic. In fact, while it is fair that public authorities intervene in the governance structure of the bank (temporary administration is a concrete example), this should not translate into greater impediments to the bank's ordinary course of business and the choices made in pursuant its operating strategy, in order to increase the possibility for the institution to return viable within a short timeframe.

Despite the recent innovations brought by prudential and resolution strategies, the post-crisis regulatory intervention also aimed to create an appropriate exit strategy for the considerable amount of deteriorated exposures held by financial firms, thereby improving the asset quality of these institutions. In fact, we found evidence that banks holding a significant stock of non-performing loans were more likely to be hit by the effects of the financial crisis and consequently require public support in the crisis years. It is due to consider that designing a more effective framework for the management of NPLs may also entail additional benefits in terms of supporting cross-border interbank lending and international capital flows, with a view to retain the benefits connected to risk diversification in the global financial market.

Throughout this work it has been emphasized how reducing public costs associated to large-scale *bailouts* - by the avoidance of the sovereign state direct intervention - has driven the recent legislative choices. However, too little attention was raised over the potential involvement of national banking systems in providing capital back up to weak or failing banks. Carige case gives a contribution in this sense, as the intervention of the Italian Interbank Deposit Protection Fund (Fitd) and the Voluntary Scheme effectively helped the Bank in reaching a private agreement with multiple market players. In that circumstance, the private agreement represented a value-adding solution to the extent that it carefully considered and helped to match the different interests involved. Above all, it attained the protection of depositors while promoting economic stability at the local level.

On a more general basis, the use of national Deposit Guarantee Schemes could represent an interesting alternative for providing adequate support to troubled European banks in the future, which can rely on stable funding sources coming from the contributions of the banking network. In this view, the BRRD may consider the possibility to introduce specific principles aimed to foster the Deposit Guarantee Scheme intervention, to *complement* existing resolution tools. At the same time, Carige case shows that interbank institutional funds may suffer sizable losses if they are not ensured an adequate level of protection. In that case, the Voluntary Scheme of the Fitd experienced significant losses connected to a drop in the value of the subordinated bond subscribed in November, while under the hypothesis of a bail-in it would have been further hit by the effects of the burden sharing principle. Therefore, the European legislator should consider setting specific protection measures in order to minimise the costs borne by national interbank funds and avoid that capital resources are depleted, reducing available funds in the light of future interventions.

Summary

1. Banking system outlook and the main challenges arising from the last financial crisis

In the recent years, the need of ensuring stability in the financial system has been repeatedly brought to the attention of the European legislator. The last financial crisis raised evidence over the fact that the failure of a single institution can actually entail spillover effects via the interbank market. This is the result of the strong *interconnections* existing between credit institutions, which are becoming more and more interrelated, following the path of globalisation. In particular, by performing risk diversification, banks became more exposed to risk-shifting events, while the structural characteristics of banking activity – exemplified by liquidity and maturity transformation – exposed these institutions to specific risks that impaired financial stability on a larger scale. In particular, the risk of *liquidity mismatch* arising from the combination of illiquid assets and short-term liabilities called for emergency liquidity assistance during the crisis years, as the banking system was no longer able to promptly convert its long-term assets into cash to meet the money demand from depositors.

According to existing literature, extremely lax lending policies pursued by credit institutions and an unregulated market for structured finance products created the prerequisites for the burst of the global financial crisis. In particular, credit derivatives and other complex financial instruments as *mortgage backed securities* and *credit default swaps* actually helped to create interconnections between financial institutions with a poor balance sheet structure and served to concentrate risk in the system. In this context, market participants were likely to overestimate the soundness of these institutions as they lacked appropriate tools for effectively identifying and assessing risk.

It is worth underlying that the event of a bank crisis differs from the crisis experienced by other corporate entities as we can effectively identify a social interest in the preservation of the critical banking functions with a view to safeguard the orderly functioning of the global market and avoid future threats to financial stability. In response to the crisis, the European legislator achieved the greatest regulatory reform of the financial sector in the last few decades, by adopting for the first time a *macro-prudential* approach to systemic stability. The new set of rules was introduced with the intent to improve risk management practices in financial institutions while increasing supervision over institutions with a systemic importance. In this view, the Basel Committee identified *Systemically Important Financial Institutions* (SIFIs),

which are subject to more extensive supervision and are required to comply with stricter capital and liquidity standards as to ensure a higher loss-absorbing capacity, having regard of the strong correlations existing between these institutions and the risks they pose to systemic stability.

It is important to stress that the regulatory reform was complemented by the harmonization of supervision and governance authorities, where national and European institutions are asked to cooperate towards the creation of a centralized mechanism for managing potential crises in the banking sector. The establishment of a supra-national authority, which is identified in the *European Systemic Risk Board* is functional for aligning different regulatory goals, among which primary importance is given to the protection of depositors through the creation of an appropriate *depositor insurance scheme*.

At the same time, the Bank Recovery and Resolution Directive (Directive 2014/59/EU) served to create a comprehensive framework on bank crisis management, leaving national authorities with the discretion to choose among different resolution options, designed to increase the resolvability of banking institutions. In fact, during the crisis years, many national governments were forced to use public money to rescue those institutions perceived by the market as *too big to fail*, which proved very costly for the public authority and for the banking system as a whole. In the Italian context, the national government and the Single Resolution Fund had to provide adequate financing resources to rescue some distressed banks hit by the effects of the global financial crisis. In particular, the precautionary recapitalisation applied to Banca Monte dei Paschi di Siena led to a substantial increase in the Italian public debt, while the Single Resolution Fund borne the whole cost for saving four Italian banks (i.e. Banca delle Marche, Banca Popolare dell'Etruria e del Lazio, CariChieti and Cassa di Risparmio di Ferrara) that were very close to default. More specifically, the Single Resolution Fund sustained the initial capital investment for the set-up of the *bridge bank*, designed to receive all of the banks' contractual relationships; that allowed for the separation of the ongoing business activity from the distressed part of the bank that was unlikely to return viable. Differently, the European Commission did not recognise the prerequisites for a public intervention in saving Banca Popolare di Vicenza and Veneto Banca, that were liquidated according to ordinary insolvency procedures. In that case, the subsequent acquisition from Intesa Sanpaolo allowed to preserve the critical banking functions of the two banks.

In the light of the above, the Italian post-crisis financial condition can be partly intended as the result of excessive risk-taking and poor lending strategies pursued by banking institutions, which ended up with a significant amount of deteriorated exposures (NPLs) in their balance sheet. In fact, the amount of NPLs can be a good indicator of the soundness of credit institutions and of the level of inherent risk, as a greater stock of NPLs is in general associated to a riskier asset side. To this extent, empirical research showed that the origin of NPL flows registered in Italy in the past few years can be effectively traced back to the financial crisis, as a consequence of banks' imprudent lending policies.

There is a strong debate on the role played by NPLs in the national economy. In particular, it is argued whether an increasing stock of NPLs can lead to higher funding costs for banks arising from stronger market pressure, which may in turn lead to a contraction in credit supply. In fact, if the increase in NPLs is not complemented by an adequate level of loss provisions, the bank's external funding may substantially rise, triggering a decline in credit supply. For these reasons, banks are required to operate accounting adjustments and maintain an adequate coverage level to reduce their exposure to borrowers' defaults. In line with the requests put forward by the legislator, banks have engaged in massive sales of deteriorated exposures in the last years, further eased by the introduction of the Italian public guarantee scheme (GACS). In particular, at the end of 2018, the stock of NPLs in Italy recorded a gross book value of €180 billion, tracing a total decrease of nearly 20% with respect to 2015 figures, when NPLs reached a peak of €341 billion. At the same time, the impressive growth experienced by the credit servicing industry enabled a more effective management of NPL portfolios, as banks and other intermediaries started outsourcing servicing and recovery activities to specialized players more often than in the past.

2. The evolution of banking regulation

Financial regulation has changed consistently since the global financial crisis following the above-mentioned regulatory reform, aiming to increase the resilience of financial institutions and enhance financial stability. In fact, evidence has shown that countries with less stringent capital requirements were more likely to ask for external support in times of financial difficulty, by receiving public recapitalization and extraordinary liquidity assistance.

In this context, the Basel framework establishes a set of prudential strategies designed to strengthen capital and liquidity regulation on a global level. More

specifically, these should create more risk-sensitive capital requirements and advanced tools for addressing liquidity shortfalls and cyclical changes in financial markets (namely Pillar I requirements). In addition to Pillar I, supervisors can impose supplementary Pillar II requirements which are *tailor-made* and designed to address *specific* capital or liquidity deficiencies in individual banks.

With respect to liquidity regulation, banks are now required to meet a specific thresholds intended to address a potential liquidity mismatch between assets and liabilities – *Net Stable Funding Ratio* (NSFR) – and ensure an appropriate amount of high-quality liquid assets to rely upon in times of need – *Liquidity Coverage Ratio* (LCR) -. In fact, banks excessively relied on extraordinary liquidity support from the central bank in the crisis years and showed unable to meet money withdrawals from depositors in times of market turmoil, clearly lacking a proper liquidity management system.

In order to verify whether banks are actually operating under a sound capital structure and consistent liquidity profile, supervisors can rely on specific assessment tools. By conducting a S*upervisory Review Process* (SREP), competent authorities can evaluate the capital adequacy of the institution and may intervene to restore an acceptable risk coverage level. In particular, the assessment process may lead to the determination of additional liquidity or capital requirements; the capital add-on being actually split between a binding and a non-binding component (respectively known as *Pillar II Requirement* and *Pillar II Guidance*). However, the level of Pillar II Requirement should be set by also taking into account the results of *stress testing*, giving evidence of the bank's ability to withstand potential shocks under adverse economic scenarios. *Guidelines on stress testing* have been introduced in 2010 with the intent to create a harmonized set of rules for conducting stress testing in the euro area and enhance comparability of data. It is worth to notice that results coming from SREP and stress testing practices are particularly relevant for determining the solvency status of a bank and whether this latter meets the conditions for application of the public recapitalisation scheme, as identified by the Bank Recovery and Resolution Directive.

To complete the framework, Pillar III imposes specific disclosure requirements, as to provide material information on the capital adequacy and supervisory requirements of the single institution to all market participants.

It is due to underline that banks failures experienced in the wake of the financial crisis are also the result of poor corporate governance practices. Corporate governance

assumes a relevant feature in financial institutions with reference to their role as primary market intermediaries. In addition, internal governance frictions are particularly stressed in this case, as agency costs are significantly stronger between banks' shareholders and stakeholders (mainly bondholders and depositors). Mitigating risk-taking in financial firms seems to be a crucial aspect for determining a "good" governance structure. A study conducted by Ellul and Yerramilli brings evidence to the fact that weak risk management policies may have played a role in encouraging risk-taking during the crisis years, while a sound internal governance system effectively helped some institutions to deal with the financial crisis better than others. Accordingly, in 2013 the European Banking Authority published a set of draft guidelines for the harmonization of internal governance arrangements in financial institutions and the development of a sound risk management culture.

Though, there is a strong debate over the effects that improved prudential regulation – mainly in the form of more stringent capital requirements – may have on the real economy and on how it may affect the normal course of banking activity. In particular, if banks' cost of funding increases following the application of more severe capital regulation, then banks may decide to review their lending policies. Consequently, interest rates on loans are expected to rise, which may lead to a contraction in credit supply, that is particularly true under a weak and unstable macroeconomic scenario. In this context, the need of reducing risk in the banking sector through the implementation of a more severe capital and liquidity regulation should be weigh against the need of sustaining banks' lending in the longer term.

At the same time, the new regulatory framework actually helped to create a more resilient banking system and rectify the misallocation of resources resulting from excessive risk-taking and lax leverage policies. In addition, the introduction of a *Single Rulebook* established a level-playing field across EU countries, also providing a solution to moral hazard in financial institutions. As a result, it is not easy to establish an optimal level for increasing regulatory capital; the legislator should therefore carefully consider how transition costs may affect the real economy, mainly in the form of tighter credit supply and reduced aggregate demand. Empirical studies suggest that the extent to which capital requirements shall be raised critically depends on the degree of fragility of the banking sector and on how monetary policy is conducted, as these prove most beneficial if implemented in a scenario of higher uncertainty and where banks fragility is consistent.

3. The Resolution framework

The inadequacy of the existing resolution tools emerged during the 2008 financial crisis, when national authorities were to choose between applying ordinary bankruptcy procedures typical of corporate entities or recapitalising failing institutions with public funds (*bailouts*), as to ensure the continuation of banking activity by preserving the systemically important functions of the institutions concerned. Both these alternatives have shown to be too costly: on the one hand, ordinary liquidation entailed negative implications in terms of financial stability as it did not prevent contagion effects between failing institutions in the financial market; on the other hand, public intervention posed significant costs to taxpayers, as these suffered from the fiscal burden of public capital injections, first in the form of a higher tax rate and then in terms of public spending cuts.

Bailouts also triggered a cyclical effect: failing banks undermined the creditworthiness of national governments under a public recapitalisation, while being in turn exposed to the risk of a future drop in bonds' prices, as these eventually came to hold a large amount of domestic sovereign debt. At the same time, the expectation of bailouts worked as an incentive for excessive risk-taking and moral hazard among banks during the financial crisis, as larger institutions were perceived as more likely to be bailed out (i.e. they were *too big to fail*). By credibly removing the market expectation of public interventions upfront, the negative effects connected to the application of large-scale bailouts would be minimised.

Moreover, general corporate insolvency procedures showed to be inappropriate when applied to credit institutions, as they did not guarantee sufficient speed of intervention and did not preserve financial stability. In this context, the absence of an adequate set of resolution instruments called for the creation of a harmonized framework on bank crisis management with the intent to minimise the resolution costs borne by taxpayers, without compromising stability in the financial system. The Bank Recovery and Resolution Directive (BRRD) introduces a wide set of resolution tools and defines the conditions upon which the public support is conditional. The directive also contemplates preemptive measures in the form of recovery and resolution plans. While the first apply to all credit institutions and set out specific measures to help these recover from prolonged conditions of financial instability; resolution plans define a wide range of powers assigned to resolution authorities, to be exercised according to specific circumstances. Resolution plans shall provide evidence of how the critical banking functions can be effectively split from other business activities in order to

ensure an efficient management of the banking crisis if necessary. Moreover, competent authorities can directly intervene in the ordinary course of business of the credit institution, for example by removing or replacing members of the management body, these representing *early intervention measures* aimed to promptly address emerging situations of financial distress.

However, when the institution is very close to default and the enforcement of preemptive measures shows unsuccessful, competent authorities may call for the application of one or more resolution tools if three specific conditions are met. First, the institution must reverse in critical financial conditions, i.e. it must be *failing or likely to fail*; second, any other alternative, including a private market solution, has already been addressed o it would not prevent the failure of the institution within a reasonable timeframe. Lastly, competent authorities shall recognize a public interest and a threat to systemic stability in saving the failing institution.

The *bail-in* is one of the resolution tools introduced by the BRRD and it allows to resolve failing institutions without threatening financial stability, as losses are allocated between different actors according to the *burden sharing principle*. In fact, shareholders are required to bear losses for an appropriate amount through the cancellation or dilution of their shares and before subordinated creditors, who would suffer losses through the write down or conversion of their instruments. By this mean, the costs arising from banks' failures are shifted from taxpayers to shareholders and creditors of the institution. In any case, creditors subject to the bail-in tool shall not incur greater losses compared to those they would have incurred if the institution were placed under special administration procedure and then submitted to ordinary liquidation ("*no creditor worse off principle*"). Ultimately, through the conversion of debt instruments, the recapitalization of the failing bank is achieved. Indeed, the bail-in aims at recapitalizing the institution with a view to restore its economic and financial condition in a narrow timeframe, ensuring continuity to the operating business activity.

Other resolution tools include the possibility to transfer the assets, liabilities of shares of the institution under resolution to a third party (*sale of business tool*), in order to avoid business disruption and maintain access to the critical banking functions. Whether the transferal has a *bridge bank* as counterparty, this latter operates as a temporary vehicle with a view of selling the acquired business to one or more private investors when market conditions are favorable. Alternatively, the competent authority may decide to apply the *asset separation tool* in conjunction with another resolution tool when this is necessary to maximise liquidation proceeds or whether functional for

ensuring continuity in the banking activity. Accordingly, the assets of the failing institution are split between a good and a bad bank; while the first is entitled to the part of the business that is likely to return viable, the bad bank receives the deteriorated exposures, that will be eventually sold in the market at the best possible price.

Differently from the above-described resolution tools, the bail-in actually simulate the effect of an ordinary liquidation procedure, while retaining the advantages offered by this resolution tool (i.e. it avoids business disruption by operating with a view of going concern). More specifically, shareholders experience a drastic reduction in the value of their proprietary assets, while creditors are satisfied according to the seniority ranking of their claims, as would happen under an ordinary liquidation. With this respect, the BRRD establishes that all liabilities can be subject to the bail-in unless they fall within a predefined class. As a consequence, credit securities eligible for the bail-in will be perceived as riskier by the market and therefore they will be priced differently. Institutions may then have stronger incentives to reduce their funding cost by unduly relying on *not eligible* liabilities, in a way that the appropriate functioning of the bail-in tool may be compromised.

For this reason, the legislator introduced a *minimum requirement for own funds and eligible liabilities* (MREL), which is calculated as the amount of own funds and eligible liabilities expressed as a percentage of total assets. Likewise, the *total loss absorbing capacity* (TLAC) works as a loss-absorption tool by creating strong disincentives for *global systemically important banks* (G-SIIs) to hold liabilities issued by other G-SIIs, as these instruments must be excluded from the calculation of the MREL requirement. In fact, if banks cross holdings are sufficiently large, then the application of the bail-in can potentially undermine the soundness of other G-SIIs, entailing systemic implications.

To conclude, along with other resolution tools, the bail-in effectively contributes to mitigate moral hazard in financial firms while efficiently addressing the issues connected to an excessive reliance on public bailouts, as experience during the financial crisis. However, up to the present date, the BRRD has only been applied to a limited number of cases, which may derive from its principles being of too difficult application or being excessively strict. For example, the composition of the MREL should take into account the specificity of each single bank, refusing a one-size-fits-all approach. At the same time, the need to guarantee an appropriate loss-absorbency capacity should be reconciled with the need of ensuring that liabilities are issued in an

orderly manner, as to contain banks' funding cost without constraining credit supply in the economy.

4. Banca Carige case study

Carige has been under temporary administration since January 2019, following the resignation of the majority of its board members. Just one month before, an extraordinary meeting had been called to decide upon a €400 million capital increase, as Carige was risking a capital shortfall in the near term; in that circumstance, the major shareholder (the Malacalza family with a 29% of capital share) abstained from the vote, leading the Bank to temporary administration. From that moment, Carige temporary administrators started engaging in negotiations with multiple financial investors as to achieve the restructuring of the Bank in a reasonable timeframe and avoid further disruption to the Bank's already weak financial condition.

The troubled condition of the Bank has in part originated from several years of mismanagement, associated to a weak governance structure, while a considerable amount of deteriorated exposures contributed to worsen its financial stability. In particular, the Bank witnessed the appointment of different top executives in the last few years and concerns were often raised over potential shareholders' conflicts affecting the ordinary course of business of the Bank. To this extent, Malacalza, as Carige deputy chairman, threatened legal action against the existing management in July 2018 and later resigned because of disagreements with the board of directors. At the same time, a poor economic efficiency is outlined by the fact that the Bank has been loss-making since 2012, partly due to a heavy cost structure and significant impairment charges.

With respect to the capital structure, before year-end 2018 Carige was not compliant with its overall capital requirement, set at 13.125% - as defined under the SREP – and with its CET1 requirement set at 11.18%. In this context, the above-mentioned capital increase served to fortify the Bank's CET1 capital base and to reimburse a Tier 2 subordinated bond of €318.2 million issued in November 2018 and subscribed by the Voluntary Scheme of the Interbank Deposit Protection Fund. However, even following the bond issuance, the Bank's TCR remained below the minimum level defined by the capital conservation buffer, while the Bank still failed to meet its Pillar 2 Guidance due to the unattained capital increase which called for the ECB direct intervention. Indeed, Carige was placed under temporary administration in February 2019, this latter representing an *early intervention measure* as to ensure an

effective management of the Bank while seeking for a suitable exit strategy, possibly in the form of a business combination with a stronger peer.

In this view, Carige temporary administrators drew up a Strategic Plan under the name "*Winning back our future*", which outlines specific drivers for restoring the economic and financial condition of the Bank in the light of a future acquisition or potential business combination. Above all, the Plan contemplates the Bank capital strengthening, a significant reduction in its level of impaired loans and the relaunch of the Bank profitability in a 5-years horizon. The 2019-2023 business plan[91] is based on three pillars that represent the pre-requisite for achieving capital, profitability and efficiency objectives. More specifically, the Plan envisages a capital strengthening of €630 million, to be undertaken through the conversion of the Tier2 bond and through a capital increase. Consequently, the CET1 ratio is expected above minimum SREP threshold, reaching a value of 14% at the end of 2019, entailing a beneficial impact on rating and funding costs. In addition, a stable funding structure shall be attained through an increase in the Bank's deposit base and the stabilization of the its cost of funding in the long run, also consolidating its liquidity profile.

At the same time, the Bank shall achieve the *de-risking* of its credit portfolio mainly through the sale of € 2.1 billion of impaired loans and the restructuring of additional NPEs, leading to a cut of gross NPE ratio from 22% (recorded at the end of 2018) to around 6.6% at the end of 2023, in line with the industry average. A binding offer for the acquisition of a large portion of the Bank's NPE portfolio has already been presented by "Societa per la Gestione di Attivita SpA" (SGA), the debt servicer fully owned by the Italian state.

As a result of efficiency boosting measures, Carige is expected to reach breakeven in 2020 (the Bank recorded losses for €273 million at the end of 2018), a result to be achieved through a substantial reduction in its operating expense, following the simplification of its organizational structure. Coherently, Carige is expected to operate through a simple and lean model of digital bank, thanks to the outsourcing of non-value adding activities, while focusing on core competencies (namely households' wealth management).

As already mentioned, the Strategic Plan creates the prerequisites for a future business combination or for closing a deal with a financial partner. To this extent, different private investors presented their non-binding offers to acquire Carige, but

[91] Reference is made to the initial version of the Plan dated February 2019

negotiations did not lead to concrete results due to the complexity of the operation and the narrow timeframe investors were given for performing due diligence activities. In this regard, concerns were also raised over the future governance of Carige, in the light of its recent governance issues. First, the private equity investor “Blackrock” and the American investment fund “Varde” showed potential interest in acquiring Carige but lately withdrew their offers. Some months later, the private equity fund “Apollo Global management” presented a proposal which required extraordinary effort form the Voluntary Scheme and the Interbank Deposit Protection Fund (Fitd). More specifically, the Fitd was asked to purchase the Tier2 bond subscribed by the Voluntary Scheme; consequently, the Fitd would have end up holding a majority stake in Carige. The proposal was deemed as unacceptable by the same Fitd, which asked for an improvement in conditions, but Apollo never revised its offer. Among the reasons that led the Fitd to refuse the proposal there is the fact that the interbank fund, by its own nature, cannot take a controlling ownership position nor exercise governing powers over a single institution, rather its contribution should be part of a broader recapitalisation framework that embeds the participation of multiple investors.

In the light of the above events, at the beginning of August a binding framework agreement was reached between Carige temporary administrators and different financial actors. The agreement outlines a private solution backed by the Deposit Guarantee Scheme intervention. In particular, the Bank's recapitalization scheme involves a €700 million capital increase broken down into different tranches and the issuance of a Tier 2 subordinated bond for a total amount of €200 million. Indeed, the Bank’s capital strengthening is functional for ending temporary administration and reestablishing a sound and prudent management. In particular, multiple private and public financial investors have already delivered a binding commitment for purchasing the Tier 2 bond. As for the capital increase, €313.2 million will be subscribed by the Voluntary Intervention Scheme against conversion of the subordinated bond and €238.8 million will be purchased by the Fitd. In this context, a central role will be played by the banking group Cassa Centrale Banca - Credito Cooperativo Italiano who will be assigned €63 million of equity capital. The remaining tranche is to be assigned to the Bank's current shareholders, in proportion to their respective holdings.

As structural part of the agreement, Cassa Centrale Banca is entitled of a call option on all of the Bank's ordinary shares that the Voluntary Intervention Scheme and the Fitd will eventually come to hold following the capital increase. In this context,

whether Cassa Centrale Banca decided to exercise the option it would become the major shareholder in Carige, indirectly achieving a business combination with the Bank. By this mean, Carige may benefit from significant industrial synergies in the medium / long term, at the same time gaining advantage of the support from multiple financial investors.

However, it is due to consider that the private solution is subject to the authorisation from the competent authorities and the approval by Carige shareholders' meeting. To this extent, alternative exit strategies will remain on the table at least until the private solution becomes effective. These can be represented as follows:

i. *market strategy* in the form of a financial contribution from a private equity fund or a business combination with a peer banking group;

ii. *systemic intervention* involving the participation of the Interbank Deposit Protection Fund and the Voluntary Scheme;

iii. *public rescue plan*, mainly a precautionary recapitalization according to the Montepaschi model;

iv. *resolution* and *compulsory liquidation procedure* as a last resort.

First, the market strategy may envisage a business combination characterized by a strong industrial outreach or a financial contribution from a private equity fund as to achieve the Bank's capital strengthening. To this extent, the Strategic Plan shows the upside in value that prospective industrial partners and financial investors shall obtain from closing a deal with the Bank. In particular, a business combination may unlock additional profits in the form of operating cost/revenue synergies, whose size strongly depends on whether the partner is a mid-size bank or a larger banking group. Differently, the equity contribution from a financial investor would allow Carige to strengthen its capital base also assuming a potential softening of SREP capital buffers and non-binding requirements over time.

However, given the material entity of Carige capital need and the complexity of the operation, it is fair to say that the market alternative may require further support from the banking system through the Interbank Deposit Protection Fund and the Voluntary scheme intervention (i.e. a *systemic intervention*).

Alternatively, Carige could look for external public support in the form of a precautionary recapitalization in line with the Montepaschi model. However, in order for a precautionary recapitalization to apply, the European authority shall recognize a systemic interest in saving the Bank, provided that existing shareholders and senior

creditors will contribute to absorb losses for at least 8% of total liabilities and equity, as expressly required under the BRRD. Indeed, junior creditors (Tier2 bondholders) will be subject to the *burden-sharing* principle, while the sovereign intervention would have the effect of diluting the participation of the Bank's existing shareholders, with the Italian government becoming the major investor in the Bank. Hence, a precautionary recapitalisation would surely benefit senior bondholders and depositors, while affecting holders of subordinated claims following the application of the bail-in tool. It is worth noticing that Carige has already received sovereign support in the form a state guarantee over newly issued bonds, aimed to support the Bank's funding in the medium term. In addition, the Italian government originally allocated supplementary €1 billion to potentially achieve a public recapitalization and further resources were stored for emergency liquidity assistance.

Whether the above-mentioned strategies proved unsuccessful, it would likely follow a regulatory action, i.e. resolution or liquidation. Accordingly, the European authority will be left with the alternative to declare the *failing or likely to fail* status of the Bank, possibly calling for the application of the bail-in tool. Yet, this alternative is conditional upon the resolution authority effectively identifying a public interest in saving Carige, given that no alternative measure could be achieved within a reasonable timeframe.

Eventually, a compulsory liquidation procedure shall be considered only as an extreme solution if the Bank does not meet the conditions for resolution. In this case, a compulsory liquidation would imply higher costs for all market participants; in particular the Italian State would suffer from the earlier reimbursement of the publicly secured bonds issued by the Bank at the beginning of the year. The costs borne by the national government would further increase whether the compulsory liquidation was backed by a state intervention following the example of the Italian Banche Venete. In that case, the Italian government ultimately sustained the costs incurred by the bad bank to achieve the disposal of toxic assets. At the same time, senior unsecured bondholders would suffer significant losses under a liquidation scenario, following the application of the depositor protection scheme and due to the Bank's liability structure, which heavily relies on customer deposits, secured instruments and other forms of preferred funding.

Therefore, following the above considerations, the Deposit Guarantee Scheme intervention envisaged by the framework agreement would effectively allow to

preserve the continuity of Carige current operating business in the interest of the local and national economy, while minimizing the costs borne by the Italian banking system.

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