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"BAD BANKS: A MODERN WAY TO DEAL WITH BAD ASSETS"

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INTRODUCTION

The economic scenario

After 2008 crisis, panic and lack of confidence took the lead in the market. This situation tilted banking and financial sector. The crisis moved fast to Europe and the resulting worldwide financial contagion opened the road to the sovereign debts' crisis, which would affect Europe from 2012. At first limited to the financial world, the 2008 crisis hit also the real economy and affected less risky debtors too, surprised by events.

The difficult situation faced by debtors worsened banks' health: the number of people unable to pay back loans was growing and this would have meant more losses to book.

A short-term remedy for banks to staunch bad situations was shrinking activities in balance sheet. It meant less retail and business loans, in other words a depressive pressure on firms and economy. In little time banks' balances became full of bad assets.

These troubled credits and mortgages made up a new category of assets, called NPLs. NPLs are distressed credits, defined by EBA as "90 days past overdue"¹. The large amount of NPLs² not only exposed banks to the risk of significant losses. It also caused them a wide lack of credibility, since quality of assets was no longer distinguishable.

Banks must face two urgent problems: on one side, they must get rid of bad assets, restructuring and selling them or waiting until their maturity. Waiting maturity could cause too long recovery time; their sale could expose bank to fire selling, with dramatical consequences for their balances.

On the other side, banks urgently needed to restore stability, credibility and transparency, sending encouraging messages to the market. A solution seemed to solve both problem: bad banks.

¹ In Chapter 3 this paper will focus on the distinction between NPLs categories.

² In early 2015, the most 130 important banks of Europe held about € 1 trillion of NPLs. (Source: <https://www.ecb.europa.eu/pub/pdf/other/financialstabilityreview201611.en.pdf>). In the third quarter of 2018, the amount of NPLs in Europe is still about € 628 bn. (ECB, 2019, p.14)

Bad banks: main features

Bad banks (or Asset Management Companies) are economic and juridical institutions that allow a bank to ring-fence or remove NPLs from balances (Brenna et al., 2009). A bad bank could be an internal unit of the original bank, which applies in an exclusive way to the restructuring, disposal and handling of these assets. On other hand, AMC could be a separated entity, publicly or privately funded, which can assume the SPV shape (Special Purpose Vehicle) or bad bank spinoff shape. External form is the most complicated one. Assets are subject to real transactions -between the original bank and the AMC- and this creates the problem of assets price definition. With these transactions, claims on NPLs are transferred to AMCs in exchange of monetary compensation.

Most external AMCs have a main common point: despite their name, they usually don't have banking license (AMC Blueprint, 2018). It means that they cannot provide credit and collect deposits. They must focus only on the handling and disposal of bad assets.

The use of these special entities grows a lot in last decade, leading to the creation of national AMCs in some European countries. The need of a specific legal framework emerged: AMCs face both the constraints imposed by BRRD³ and the risk of a fire sale. Bad banks required a new set of rules and guidelines (operational, legal and fiscal) to clarify their action field. According to this, Eurostat and European Commission created the European AMC Blueprint, a non-binding document that regulates and supports bad banks in UE.

The first aspect that we analyze is the bad banks' ownership and its influence on funding structure.

³ Bank Recovery and Resolution Directive, 2015, European Council and Parliament

1. WHO AND HOW FUNDS AMCs?

The structure of an AMC depends on its purposes, which are determined on their turn by the features of the NPLs crisis. This sort of crisis can affect the whole banking system, a group of banks or a single bank. The ownership structure of the AMCs influences their funding method and their functioning too. Bad banks usually intervene to stabilize banking sector (macroeconomic purpose) or to rescue a single bank.

When the whole banking sector or few banks are troubled, a centralized AMC (or systemic bad bank) is the most suitable for dealing with such a crisis. Centralized AMCs are usually endowed with a wide mandate (AMC Blueprint, 2018). They face large-sized NPLs amounts in their countries and intervene when a market-driven solution is not feasible. They're tasked with avoiding fire sales of NPLs, being a sort of buffer for the lack of their secondary market.

For systemic AMCs, public majority ownership became more and more rare over time. This happened because Eurostat rules try to reduce State involvement in AMCs funding (see 1.2.2). Over time, governments reacted to these rules in two ways. They increased the share of private ownership in bad banks⁴ or they found new methods to contribute to AMCs funding⁵. Despite Eurostat and EC restrictions, publicly owned AMCs are still feasible for those countries that aren't under budgetary pressure, as Germany⁶. Instead, if we consider private systemic bad banks, we can see the increasing use of non-mandatory inter-banking funds to finance them. Those funds replace the direct intervention of banks in the rescue of other troubled banks. Money given by participating banks are pooled in a structure that provides bridge loans or equity injections, in place of single financial institutions.

These AMCs purchase a lot of NPLs portfolios from troubled banks, so they usually manage a large amount of distressed assets⁷ (Medina Cas and Perasa, 2016). This creates scale and scope economies.

When NPLs crisis affects a single bank, instead of whole banking sector, ad-hoc AMCs are more fitting tools. Ad-hoc AMC are mainly built through the so-called bank de-merger: the

⁴ As it happened for NAMA (Ireland) and SAREB (Spain) (Cas and Perasa, 2016)

⁵ Banking loans that Italian Resolution Fund received in 2015 were guaranteed by Postal Saving Bank, controlled by the Treasury but outside the government perimeter.

⁶ Actually, the rescue of banking sector was very costly for Germany. The creation of FMS WM – Hypo Real Estate's bad bank- caused a 7.4% debt/GDP ratio increase between 2009 and 2010. So, FMS caused most of the overall ratio increase in that period (8,9%). (Cas and Perasa, 2016; Deutsche Bundesbank, 2018).

⁷ In 2015, in Ireland NAMA had EUR 74.2 bn of distressed assets (43.8% of Irish GDP), in Spain Sareb had EUR 107.4 bn of distressed assets (10.3% of Spanish GDP) [Gross Book Value before haircuts]

troubled bank is split in a “good” bank and in a bad one (Lehmann, 2017). The resulting bad bank has a fixed deadline and keeps NPLs to handle them. It might be funded by the troubled bank or by an inter-banking fund⁸, remunerated in a similar way.

The residual kind of ad-hoc AMC involves banks that are yet gone bankrupt. In this case, subordinated bondholders and shareholders might be bailed-in in the new-born bad bank, as it happened for Banco Espírito Santo in Portugal (Gandrud and Hallerberg, 2014). A part of bondholders that are not bailed-in would become the shareholders of the newborn good bank.

After an AMC (centralized or ad hoc) removes NPLs from a troubled bank, the latter becomes a bridge bank or a good bank. Their functions are usually similar: they should continue basic operations of banks (handle of good loans, deposits and checking accounts). Nevertheless, bridge banks would temporarily perform them, since they’re always intended to be purchased by some other financial institution, after a lapse of time.

Now, the funding method concerns two different entities: the good/bridge bank and the bad bank.

1.1 How AMCs are funded?

Let’s start from AMCs: how they are funded? The funding method changes if AMC is public or private.

Private AMCs can either be entirely private or with minority public ownership. A well-functioning equity market lacks for this entities: it’s hard to induce investors to purchase equity, since AMCs house distressed assets with an uncertain profitability. When AMCs are funded by the troubled bank itself, they receive a bridge loan which may be guaranteed by the government. The AMC would repay the credit once it generates incomes, as for SGA at its origin⁹. Even when they’re financed by private inter-banking funds, bridge loans have similar terms. Then, a mixture of bail-in and bridge loan is a feasible option too. In very few case and under extraordinary conditions, a bad bank might have a banking license that make access to capital markets easier and enable direct access to central bank funding. In case of a mixed ownership

⁸ See study case in Chapter 3

⁹ SGA was the bad bank of Banco di Napoli, which issued the initial loan -on its turn financed by Banca d’Italia- to SGA, paid back with a market interest rate (between 7 and 10 %).

Source: <<https://ricerca.repubblica.it/repubblica/archivio/repubblica/1997/03/29/per-il-banco-napoli-conti-ancora-in.html?ref=search>> e <<https://ricerca.repubblica.it/repubblica/archivio/repubblica/1997/10/31/banco-napoli-torna-in-utile-arrivano-nuovi.html?ref=search>>

with private majority, government could contribute laterally purchasing equity (rather acting as a private agent¹⁰).

AMC Blueprint (2018) suggests a different funding method for public bad banks. They could acquire assets issuing senior unsecured bonds to originating banks. The senior bonds would be fully guaranteed by the national Treasury. They could be used as collateral in Eurosystem credit operations by their holders. These senior bonds are usually short-termed (one-year) and could have restrictions on transferability, to limit roll-over risks. We can divide funding amount in two parts: the large majority of the funding should consist of senior guaranteed bonds. The equity part should aim to cover earlier losses -due to devaluation of assets at fair value- with a buffer that would allow the AMC to work out assets, with no risk of negative equity. The second part could consist in subordinated debt that would cover unexpected losses on the assets. These bonds minimize the liquidity needs of the AMC. Indeed, the AMC wouldn't need to raise cash to acquire the assets and could lock up or reduce the funding from originating banks. Additionally, banks would benefit from replacing high-risk distressed assets with low-risk assets. These assets would improve their funding position without large requirements of regulatory capital, although their balance sheets would not shrink substantially.

And good banks? They might be recapitalized by the State, respecting BRRD constraints, if they bear losses from haircuts and they can't address capital shortfalls in private ways (*ibidem*). Alternatively, they might fix the lack of equity with the bail-in of some categories of bondholders, writing off many shareholders too. Finally, inter-banking funds may recapitalize them besides AMCs, as Atlante fund did for the 4 Italian good banks in 2015 (see Chapter 3). Avoiding these shortfalls in good banks is crucial, otherwise equity crisis will join NPLs crisis in banking sector. This increases the probability that banks will turn in failed or likely to fail (FOLF), even because financial institutions are strictly linked to each other.

1.2 A common AMCs Blueprint for Europe

1.2.1 The Blueprint reason: sovereign debt crisis

Eurostat, the rule maker on theme, tries to increase as much as possible the private ownership in bad banks. Why? First, AMCs mustn't stress too much States' balance sheets, still affected by bailouts done during the sovereign debt crisis in 2012. Eurostat wants to hinder the birth of

¹⁰ In this way the operation is classified as “financial transaction”, i.e. the government spend money to purchase something that has an equivalent value. This allow the State to not affect public finances. (Gandrud and Hallemberg, 2014)

“zombie bad banks” too, which wouldn’t account losses and would be maintained by the government finances. Moreover, Eurostat wants to change principles of banking resolution for the future, introducing some resolution strategies that should raise the direct responsibility of banks themselves, avoiding phenomena as “too big to fail” or zombie banks.

1.2.2 Public is evil?¹¹

Over time, Eurostat gradually toughened parameters to define what’s a public AMC/intervention, introducing specific rules to “punish” too wide State help. These rules must concern also funding structures of bad banks, in particular the percentage of equity (and eventually the amount of warranty provided) owned by State itself.

Before the introduction of new Eurostat rules, ESA (European System of Accounts) 1995 was in force, but it didn’t impose any limit to public ownership in AMCs. First restrictions were introduced only in 2009. New Eurostat rules imposed that AMCs with private ownership share below the 51% minimal threshold would be counted against sovereign debt (see box 1 for more details). This had an immediate impact on bad banks structure across whole EU. Especially in countries where there was high debt pressure (mostly GIIPS), AMCs’ ownership quickly turned in a larger private participation, in order to avoid sovereign debt increase.

The last evolution of legal framework took place in mid-2014 with ESA 2010 (published in 2013). This version of ESA considers also the level of State warranty on AMCs’ assets to determine the presence of State aid. In particular, though a bad bank is at least 51% privately owned, if most of its assets are backed or guaranteed by the State, it must be counted against sovereign debt¹².

¹¹ Data by “Bad banks in the EU: the impact of Eurostat Rules”, Gandrud and Hallerberg, December 2014

¹² If the State is assuming the majority of risks with its guarantee, it enters into government sector (Eurostat, 2016)

Additional (September 2009) requirements for exempting AMC's from the public sector for debt calculations

Eurostat's September 2009 guidance note expanded on the 51 percent private ownership rule by adding the following three requirements for an AMC to be treated as being outside of the public sector and as a contingent liability for debt calculations:

- They were temporary institutions.
- They had a reasonable business plan that would ensure no or minimal losses.
- A large haircut was applied to the purchase price of acquired assets and the haircut required public recapitalisation of the affected bank. This recapitalisation would be counted against the public budget.

Table 1.1 Source: *Bad banks in the EU: the impact of Eurostat Rules*, Gandrud and Hallerberg (2014)

1.3 Haircuts: banks' savers or balances' killers?

Governments usually tried to avoid massive public intervention to finance bad banks, supporting a private ownership. Nevertheless, their efforts often didn't give results and public intervention remained the only feasible solution. In this condition, private market mechanisms could help to offer the right incentives through haircuts¹³ on assets. If haircuts are sufficiently high, bad banks can buy compromised assets at a reasonably low price. Indeed, a reduction in purchase price increases the probability to make profits through asset sale. It would more easily attract private investors: higher the haircut on assets, higher the expected return for them. It makes more appealing to finance AMCs and allows wider private buy-ins.

Eurostat legal commitment increases the importance of haircuts: before ESA 2010, bad banks were able to attract private investors also through State warranty on NPLs. That strategy worked quite well to entice private buy-ins in the past. Nevertheless, according to new rules, it would affect public finances: at this point, governments would reduce guarantees on bad assets. Lost an important weapon to attract non-public funds, haircuts grew in importance for AMCs.

¹³ In financial markets, a haircut refers to a reduction applied to the value of an asset. It is expressed as a percentage. Haircuts' dimension depends on many factors, as assets' riskiness and liquidity degree. See <https://www.ecb.europa.eu/explainers/tell-me-more/html/haircuts.en.html>

Haircuts tended to be used mostly when a private bad bank is involved in transaction, rather than a public one. They impose immediate losses to banks. If government imposed too hard sale conditions to troubled bank (as it should do actually), it would probably lose electorate support. This aspect grows in importance when a public bank is involved. We can argue that losses would be borne by public finances (taxpayers), i.e. new taxes, cutting funds to other public sectors or issuing new sovereign debt. For a politician these might be a very unpopular act. On the other hand, private banks can more easily bear haircuts imposition. Private investors would provide new funds for bank recapitalization, with no effect on public finances. There's not political pressure for them, so this operation usually ends faster.

Haircuts must not be too high: they should help to avoid fire sales effect on balance sheet allowing an orderly sale of assets, with negotiations that prevent prices collapse. Indeed, too heavy haircuts would have the same effect of fire selling on NPLs prices.

1.4 Transfer price: avoid the State Aid

As we see, haircuts impact on banks' balance sheet and impose losses, since their selling price is lower than their book value. Private AMCs won't pay NPLs more than their fair value, since it would reduce their profitability. Public AMCs might pay them more than their estimate value: this would reduce the losses by NPLs sale. Indeed, their main goal is the macroeconomic stabilization of banking sector rather than the only profit extraction. So, they could bear "antieconomic" conditions in NPLs transactions. Nevertheless, this kind of operation involves many European rules, as BRRD limitations and rules about State aid boundaries.

The ability to make profits depends on three main entities: REV¹⁴, EMV and NBV.

To determine if there's State aid (and his compatibility with IAC¹⁵) we must compare the transfer price with some other important values: estimated market value (EMV), REV and net book value. We can find three cases: 1) if the transfer price is equal to estimated market value, AMC acts as a private agent and there's no State aid. 2) if the transfer price is over EMV, this implies that assets purchase by the public AMC is State aid, but if the price is below or at most equal to REV impaired asset measure is compatible with IAC. The amount of the aid, called Impaired Assets Aid, is given by the difference between EMV and transfer price. 3) if transfer

¹⁴ Introduced by the Commission's Impaired Asset Communication of 2009, REV is defined as the "underlying long-term economic value of the assets, on the basis of underlying cash flows and broader time horizon". See section 4.4 of AMC Blueprint, European Commission, (2018) for the different versions of REV equation.

¹⁵ Impaired Asset Communication (2009)

price is above REV, the impaired asset measure is not compatible, unless the bank can contribute later to the losses for instance via recovery or claw back clauses, or if it proposes wider restructuring measures, or presents an orderly winding-up plan.

The presence of a State aid is not a secondary aspect, since it would affect sovereign debt, becoming another source of cost in context of banking resolution.

2. AMCs: ASSET DISPOSAL VEHICLES OR EXTRACTION VEHICLES?

This chapter studies the nature of AMCs through the analysis of their purposes. Two definitions fit bad banks: asset disposal vehicle and extraction vehicle. A bad bank has two purposes: cleaning up the banks' balances by bad assets (asset disposal vehicle) and maximizing the recovery value of these assets (extraction vehicle). Neither of two purposes prevails, rather they're complementary. At the beginning, AMCs act as asset disposal vehicles: they purchase toxic assets from banks' balances to collect and handle them.

2.1 Negative effects of NPLs presence in banks

Why is it important to remove NPLs from banks as soon as possible?

First, NPLs cause credibility problems to the bank: investors and financial agents can doubt the viability of a bank if its balance contains distressed assets (see below). Sometimes banks try to deny or partially cover their existence.

Bad assets threaten the financial health of a bank too. With non-performing loans, a bank is unable to get back the amount of liquidity lent. This happens when some adverse event lowers debtor's ability to pay, for example an economic crisis or a firm bankruptcy. NPLs deprive banks from their liquidity, which is a crucial element for their lending activities. Through loans, a bank usually supports consumes and investments in real economy, especially in bank-centered countries as Italy. A credit crunch might affect firms' life, inducing them to underinvest or fire their workers. At the same time, the cut of retail loans reduces consumers' purchase power. It makes market demand drop, damaging firms. In this worsened economic situation, also creditors that were performing might face some adverse event (for example, fired workers or troubled firms). So, the lack of liquidity in banking system increase the likelihood that good debtors turn in bad. If the number of troubled debtors increases, the amount of NPLs potentially grows. As we see, often debtors are linked to each other. If a problem hit one of them, some other may be affected: this is a financial contagion.

The presence of bad assets causes also equity problems. They're risky assets and a bank might have to raise its mandatory capital, that must be at least 8% of Risk Weighted Asset (RWA) value (Basel III, 2011). Indeed, if an asset becomes riskier, its weight increases in RWA calculation -up to 150% of its book value (Basel III, 2017). The bank may have to collect more

equity (or convert bonds into equity) to respect 8% threshold. We saw that a high amount of bad assets¹⁶ creates many reputational problems to banks. It implies also that capital increases would be harder in the future. If mandatory capital requirements aren't respected over time, the bank would lose its license and might undergo liquidation, according to BRRD rules¹⁷.

Furthermore, the original book value of bad assets is higher than their fair value, because they're deteriorated¹⁸. New European rules¹⁹ impose a mandatory time term to write down bad assets: 7 years for secured loans and 2 years for unsecured loans. Moreover, for secured loans provisions for losses start from third year (40% of their value) and increase by 15% per year. For unsecured loans provisions must be 100% of their value in the second year yet.

	Unsecured	Secured
After two years of NPE vintage	100%	
After three years of NPE vintage		40%
After four years of NPE vintage		55%
After five years of NPE vintage		70%
After six years of NPE vintage		85%
After seven years of NPE vintage		100%

Provisions have a double negative impact on banks' activities: first, they lower the economic result and reduce the profitability. But above all they bind a relevant amount of capital that might be used to issue new loans (Jassaud and Kang, 2015)²⁰.

As we see, NPLs affect banks' ability to lend in many ways, absorbing liquidity and equity.

¹⁶ When Mediobanca does tests about credit risk in banking sector, it uses 20% as critical threshold for NPL ratio as one of four parameters, so this could be considered as the critical percentage of NPLs in balance sheet (Source: <https://st.ilsole24ore.com/art/finanza-e-mercati/2018-02-01/la-pagella-npl-414-banche-solo-38-bocciate-063830.shtml>).

¹⁷ http://www.treccani.it/enciclopedia/vigilanza-bancaria_%28Diritto-on-line%29/

¹⁸ Debtors can't repay the loans because of individual difficulties or systemic economic crisis. So, the discounted cash flow deriving from the assets becomes lower and this reduces their fair value.

¹⁹ "Addendum to the ECB Guidance to banks on non-performing loans: supervisory expectations for prudential provisioning of non-performing exposures" (ECB, 2018)

²⁰ In 2014 UniCredit's Eur 81 bn NPLs absorbed 2,7 bn of equity, i.e. 6% of CET1. If opportunely wrote off or sold, they would have free 1,6 bn of equity, sufficient to lend 56 bn.

2.2 Possible reactions to NPLs problem

Banks can try to restructure NPLs in an internal way, postponing their deadline or changing their interest rate (forborne exposures); it can also try to get back the money through legal actions. These methods have a main weakness: there isn't a complete separation between bad and good assets, since the former continue to stay on bank balance sheet too. If restructuring or legal action aren't successful, the lack of asset separation will exacerbate the riskiness of NPLs' presence in the balance sheet.

Moreover, if these proceedings aren't immediately effective, bank continues to face liquidity problems too. In the most negative scenario, at the end of 2-years or 7-years term a bank should abruptly book the entire amount of write off in the balance sheet. The booked fair value of assets will be their new book value, lower than the initial one.

Alternatively, the bank could try to pursue an effective asset separation selling NPLs on their secondary market – buyers are other banks, investment funds (factoring operations) or AMCs. The on-sale assets are deteriorated and no buyer in the market would purchase them at their net book value (NBV), because the underlying discounted cash flow is decreased. The assets transfer price is lower than the original NBV and banks must apply haircuts on assets, with resulting losses on banks balances.

2.3 AMCs or internal asset management?

Both internal and external asset management could cause losses. The internal one doesn't force a bank to account all the losses immediately, like transactions do. Besides, the troubled bank is supposed to have more information on its debtors than anyone else, since it is the original loan issuer. The knowledge about debtors should determine a better handle of assets. Alongside these ostensible advantages, the internal management shows some weaknesses.

First of all, the informational advantage isn't critical for the bank: many assets booked in balance sheet (that later will turn in bad assets) are bought from other banks. Transactions caused a partial loss of information, as a consequence of asymmetric information²¹. Then, NPLs have different forms and complexity and they require special skills, that are usually scarce in these financial institutions. Indeed, the management of bad assets isn't the core business of

²¹ When the buyer effects due diligence operations on the on-sale asset (or group of assets), he doesn't know about the real creditworthiness of debtor (differently from the original bank), so he suffers from informational disadvantage.

banks (at least in the past). These skills must be created from the scratch. The training of workers and the construction of units cause a lot of costs both in terms of money and time, as well as coordination problems.

Finally, as we've seen before, the internal management²² creates a separation that is valid only from an organizational point of view. It doesn't eliminate credibility issues and contagion risk.

The alternative for the bank is the sale of assets. Banks and investment funds are a feasible option when there's a well-functioning secondary market for bad loans. Nevertheless, the creation of such a market isn't immediate, especially when NPLs systemic crisis erupts. The crisis dimension makes a market-driven solution hard at the beginning. Moreover, these kind of private investors don't pursue banks stabilization, but only profit maximization. Given their purposes, it's unlikely that they purchase most deteriorated NPLs.

Instead, AMCs can work even if a secondary market lacks. Indeed, they're tasked with preventing failures in credit market. AMCs don't have weaknesses of internal asset management (see below), but their effectiveness depends on their structure.

A centralized AMC allows a bank to focus on assets that fit best a direct handle, in order to make a good use of its skills. AMCs should purchase NPLs that are easier to sell afterwards: collateral-backed loans (CRE)²³-that make value recovery easier- and large corporate loans - that allows a higher expected return. These assets are more likely to have a well-functioning secondary market and this simplifies value extraction process. So, the bank would keep on loans that are less attractive and liquid for the secondary market: unsecured retail loans²⁴, small business (SME) loans - backed by worse collaterals (or not backed at all)- and loans to the public sector -that give lower returns. These assets lack of a well-functioning market and are more suitable to be handled by other impaired asset measures (IAMs)²⁵ rather than by AMCs. If a bank selects bad assets to keep, their workout process can be more specific and focused, with less coordination issues and lower costs.

The other possible structure is the ad-hoc bad bank. As centralized AMCs, this form effectively separates assets, but it can't benefit from scale economies and relative homogeneity of managed

²² In the form of a workout department or an "internal bad bank".

²³ Commercial Real Estate, their value is probably restored if there's a new positive economic situation.

²⁴ Their duration is usually short and this gives less time to AMCs to recover them (AMC Blueprint, 2018). Moreover, they aren't covered by any collateral.

²⁵ Historical evidences (AMC Blueprint, 2018) show that these assets are more suitable to be restructured than sold (the only exception are the unsecured consumers loans, that usually are sold, but they aren't much attractive because of lack of collaterals).

NPLs. Indeed, ad-hoc AMCs remove them from the original bank with no distinction based on their liquidity and complexity. They intervene when a bank is too compromised to be fixed by an internal management unit or when a bank can't afford it. If there's no place for an internal unit, the bank must completely be cleaned from toxic assets, regardless their compatibility with AMCs' mechanisms.

2.4 AMCs for the bank: asset disposal vehicles

When banks sell their NPLs, they must face a trade-off between losses -deriving from haircuts on sold assets- and resulting earnings in terms of financial health and credibility.

Asset disposals help to improve liquidity ratios of rescued banks and entails benefits for them in private equity market. Newborn good banks are more attractive to new investors or buyers, since risk has been transferred outside (see next chapter). Sometimes, this operation anticipates the acquisition by another sound bank, when it's the only way to ensure the continuity of its critical functions. The 4 Italian banks case (the case study of chapter 3) will show the importance of asset separation, since otherwise they would barely perform also more basic operations, (such as those that concerns depositors, as counters activities) or even worse they would fail.

On the other side, besides haircuts, there are some other unfavourable consequences of asset separations. First, an excessively prudent assessment of assets value, due to asymmetric information and market panic, can lower even more the market value of NPLs, increasing losses. Finally, we saw that AMCs are tasked with avoiding fire sales. Nevertheless, large dimensions of traded NPLs portfolios might push down their prices in the secondary market. If we look at these side effects, we can argue that transaction features make value extraction very hard to pursue, while they're effective in solving the asset separation problem. This confirms that the primary goal of these transactions is the removal of assets from distressed bank: if we consider their relationship with the original bank, AMCs are mainly asset disposal vehicles.

2.5 AMCs for themselves: extraction vehicles

The asset transfer is only the first step of the process that involves bad banks. In post-transaction phase, AMCs can pursue their own goal: maximize the value extraction from NPLs (AMC Blueprint, 2018)²⁶.

AMCs aren't empty box where bad assets are dumped, otherwise they would simply bear losses from credit worsening in place of banks. In that wrong view, AMC performances would seem unimportant. Indeed, at this point the good bank is cleaned out, gets fresh liquidity and can fully restart its operational cycle (for example loans, front-office functions).

Actually, bad bank's performances are relevant and this is shown also by the AMC Blueprint (2018). Referring to the asset valuation, the Blueprint stated that prudence principle must be adopted to "maximize the chances of the AMC to at least break even" (p. 49). A bad bank must properly repay its funders or, in worst-case scenery, prevent them from bear additional losses. The achievement of this goal is important in particular when bad banks are financed by bridge loans issued from saved banks (as Banco di Napoli did for SGA S.p.a.).

If bad banks aren't able to pay back the bridge loan over time, it becomes a sort of non-performing loan for the good bank. It loses the amount due and the AMCs is similar to a troubled debtor. In general, negative performances of AMCs would always damage both private and public owners and bondholders -they won't receive repayments of debt and dividends by profits.

So, AMCs extraction work is crucial to take out the highest possible value from bad assets through many asset workout methods²⁷. In particular, the effective restructuring of NPLs helps to get profits that are necessary to pay dividends to AMC equityholders -if their selling price is higher than their purchase price. On the other side, the liquidity that would originate from the repayment of the loans is necessary to remunerate bondholders.

Liquidity is important for AMCs as for banks, but it has a different function. AMCs don't issue new loans, but actually must repay its creditors. However, the repayment terms to pay back bridge loans aren't always so pressing, as showed by the 6%/year expected return not delivered

²⁶ "The main objective of an AMC is to maximize recovery value deriving from the disposal and management of the assets transferred to the AMC, while considering a number of constraints", p. 69

²⁷ AMC Blueprint suggests some optimal asset disposal methods: foreclosure and sale of collateral; insolvency proceeding and liquidation; sale of the loan; restructuring (traditional, debt-to equity swap); out-of-court arrangements (and quick recovery programs).

to Atlante Fund in Italy²⁸. In general, these terms are less urgent than bank debtors' ones and that allows a more comfortable asset management for the bad bank, pursuing profits with lower pressure. This admit waiting for a better economic situation that could restore assets value.

2.6 From theory to reality: the current NPLs market

These were theoretical basis of AMCs actions. But what situation do they face in NPLs market?

The European NPL market is flourishing, with disposals totaling EUR 205.1bn in gross book value (GBV)²⁹ in 2018 (Pirolo and Finch, 2018). AMCs usually have a good profit margin: for example, in Italy the medium recovery rate on NPLs is 44,3% of their BV, in front of an average purchase price that's 26% of their BV (Fischetto et al., 2018). Recovery rate increases in comparison with 2016 (+0,8%), but it's lower than previous years. Purchase price increases too (+3%) and it reaches its peak since 2012 (29,8%), with a steady growth in last three years (ibidem).

These data show us an improving situation in NPLs market for sellers. Banks get a higher amount of money when they sell NPLs. It means that the risk of fire sales is lower and losses from haircuts are gradually decreasing. On the other side, the market trend determines a decrease in profitability for AMCs, despite there's still a good profit³⁰ level (about 18% of NPLs BV).

Actually, data leave us some other conclusions. Though growing incomes from NPLs sale to AMCs and servicers, when a bank sells its bad assets it loses almost 20% of BV³¹ that might be recovered. This may induce banks to prefer internal management systems of these assets. Obviously, such an internal unit has a lot of costs and only large-sized banks can afford it. Nevertheless, AMCs might have less NPLs portfolios to buy. Moreover, banks with internal recovery units would get rid of worst NPLs, difficult to handle and barely profitable. In this case, AMCs would receive less and lower-quality portfolios of distressed assets, reducing their chances to get a sufficient profitability from NPLs workout.

²⁸ The fund doesn't repay investors (Parigi, 2018) and lose 24% of its value in 2017 (<https://www.milanofinanza.it/news/deloitte-il-fondo-atlante-vale-il-24-in-meno-201701311351424951>).

It wound up and was sold to Dea Capital S.p.a. (<https://bebeez.it/2019/08/01/dea-capital-si-aggiudica-la-gestione-dei-fondi-atlante-la-maggioranza-relativa-quaestio-holding/>).

²⁹ This amount is important also in relative terms, since in the second quarter of 2018 the gross carrying amount of NPLs in the EU was EUR 746bn (EBA, 2018).

³⁰ Intended as the difference between the final recovery rate (44,3%) and the purchase price (26%). The latter is also the recovery rate get by original owners from NPLs sale.

³¹ An approximation of 18% profit margin found above.

The profitability of AMCs may depend from the length and the size of NPLs “cherry-picking”. Unless some other economic or financial shocks arise in the next future (despite actually it is a probable scenario), market dimensions will decrease and the average quality of remaining assets will drop. The increase in recovery rate may depend on the fact that this market reached or is close to its maturity peak. It might imply that in the near future this rate can start to decline, instead of growing.

Moreover, many sources³² hypothesize the presence of a bubble in NPLs sector. The increase of their price should depend on some external factor too -such as the trust in a future economic recovery- and not only on the extraction ability of AMCs and banks. NPLs demand grew in the recent times, thanks to their low prices and their high potential yield-to-maturity. It pushes up their market value and they can be acquired in a held-for-trading strategy, gambling on the prosecution of prices’ growth. Nevertheless, the link between their value and the underlying expected return seems to get weaker. The negative expectations about the economic worldwide situation in the next three years suggests that the credit recovery would be harder. It clashes with the improving situation of bad assets market. AMCs and other buyers might purchase NPLs while the bubble is growing. If they sell these assets quickly enough, they can get relevant profits. Otherwise, they may face the bubble burst, with a strongly negative impact on their economic result.

However, when the bubble bursts, the pressure on AMCs is lower than the other agents. Indeed, troubled banks need an immediate asset separation (to preserve market confidence) and might go through a run for the exit (Pedersen, 2013). Instead, bad banks can keep NPLs and try to repair and sell them when the price fall will slow down. Even in this adverse market situation, AMCs should be the best solution.

³² <https://www.ilsole24ore.com/art/npl-rischio-bolla-il-mercato-crediti-deteriorati-AF4lfMK>

3. AMCs AND RISK TRANSFER

Beyond liquidity injection, the risk transfer is the most important output produced by AMCs. The purchase of assets eliminates the relationship between the troubled bank and NPLs portfolios, counteracting their negative effects on bank activities. What are operational risks that a bank must face with NPLs? And how do AMCs operate this risk transfer?

3.1 Banks' operational risks

When the bank issues a loan, two risks appear (European Commission, 2018): counterparty risk (made up by credit risk and settlement risk) and price risk. If we consider the sale of loans, another risk arises and impacts on price risk too: the interest risk.

Counterparty and price risks are higher when related to NPLs, since NPLs are distressed loans. When a loan became non-performing, there's a partial concretization of above-mentioned risks, since debtor's ability-to-pay decreases. Nevertheless, NPLs aren't a uniform kind of distressed assets and each category is distinguished by a different risk level. We find three categories of NPLs: 90 days past-due exposures, unlikely to pay (UtP) and outstanding loans (source: Bank of Italy³³). With 90 days past-due exposures, a bank faces the settlement risk mainly: debtors don't pay instalments when they're due. This is the less risky NPLs category, since debtors aren't likely to be insolvent and they soon become performing payers again (usually in 1-2 month). Nevertheless, with a similar payment delay, a debtor is more likely to be insolvent than performing debtors in future. This implies that also 90 days past-due slightly increases the counterpart insolvency risk for the bank.

When the delay in payments continues, the loan might become an UtP exposure: bank has doubts about the actual ability-to-repay of debtor, since he's expected to fail. UtP exposures are a hybrid category³⁴ from the risk point of view: their settlement and credit risks is higher than 90 days past-due ones, but lower than outstanding loans ones.

Lastly there are outstanding loans, that push settlement and credit risks to the maximum. Indeed, borrowers are insolvent or in similar state and they won't pay back the credit. Usually, when the debtor goes bankrupt, he goes through liquidation or winding-up process. A bank should

³³ In the transposition of "EBA FINAL draft Implementing Technical Standards-On Supervisory reporting on forbearance and non-performing exposures under article 99(4) of Regulation (EU) No 575/2013"

³⁴ "UtP category may include on one end borrowers featuring overdue instalments (similar to Past Due exposures) and on the opposite end borrowers whose critical financial situation could lead easily to the status of bad loans" (PwC, 2018)

wait the end of winding-up to recover (part of) lent money. When a loan is unsecured, the bank would get claims on debtor’s assets only when pledged assets and residual liquidity have been assigned to secured and preferential creditors. It increases the probability to not recover the credit. Unfortunately, most of distressed assets in banking sector are UtP and outstanding loans, as shown by table 3.1. It means that AMC’s usually deal with riskier assets (table 3.2) and this makes their task harder.

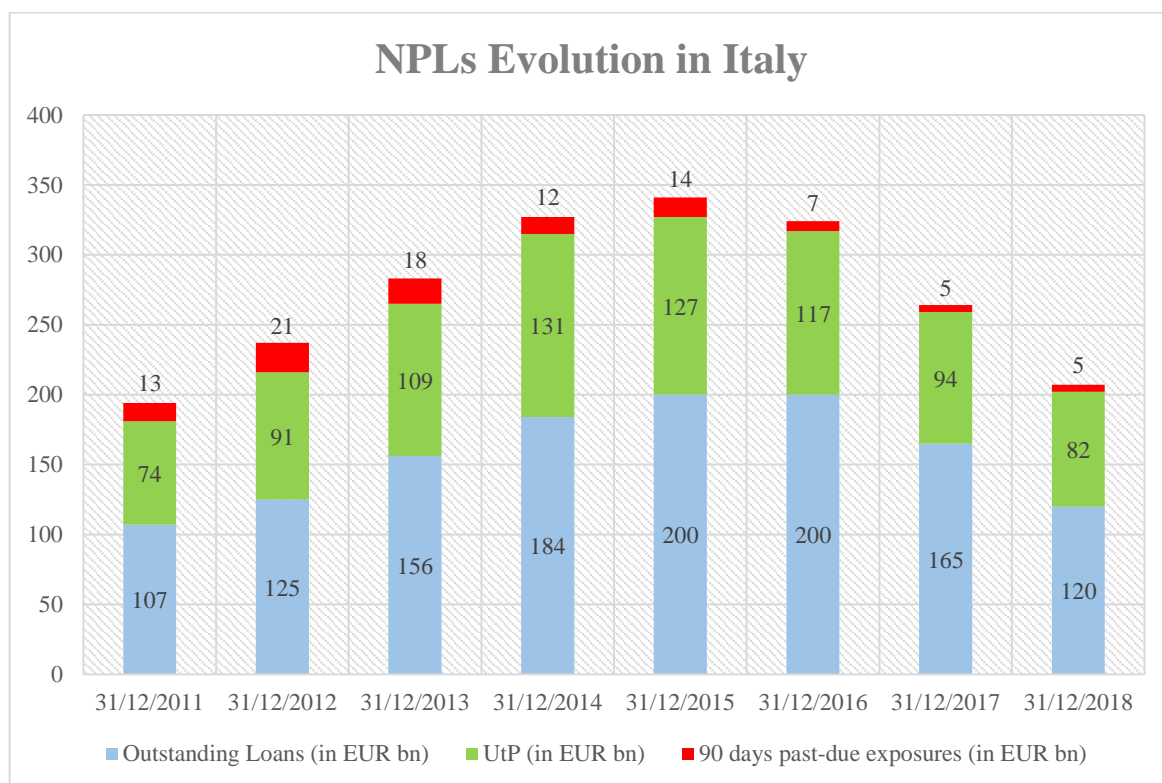


Table 3.1 “NPLs evolution in Italy”, source: Bank of Italy

EXPOSURE	SETTLEMENT RISK	CREDIT RISK
Performing loans	Close to zero	Close to zero
90 days past-due exposures	Medium	Low
Unlikely to pay	High	Medium/High
Outstanding loans	Very high	High

Table 3.2 Risks associated with different kind of loans

These three may be defined as “micro” risks, because they concern single loans. When very few debtors lose their ability-to-pay, their impact on bank health is irrelevant. Nevertheless, if the number of bad debtors increase, the resulting risks cause significant damages to the troubled bank.

Liquidity and contagion risks can be named as “macro” risks, since they materialize when there’s a high amount of NPLs.

Liquidity risk arises when a financial institution can’t meet commitment towards its creditors, i.e. depositors and bondholders. In chapter 2 we saw that NPLs “dry up” banks’ liquidity and absorb their capital, that might be used for lending activities instead. The presence of distressed assets in bank balance sheet prevent the bank from issuing new performing credits (Bruno and Marino, 2017). These credit would return liquidity and interests (i.e. financial incomes), ensuring bank viability. Within banks, credit crunch causes an imbalance between lending and borrowing activities. Low-quality bank activities don’t support banks to pay bond coupons or interests on deposits within the due date.

The price risk can indirectly increase the liquidity risk too. Banks sell their credits before the deadline to receive liquidity ready to be used. As we’ve seen before, the deterioration of debtor creditworthiness affects the asset market price. If there won’t be any economic growth in the near future, debtors won’t improve their economic health. When the market value of NPLs continue to decrease, the bank might decide to sell its NPLs portfolios as soon as possible, using a sort of stop-loss strategy³⁵ to avoid supplementary losses. When loans’ quality declines, their sale gives less cash receipts and it’s less likely to be a buffer for liquidity shortfalls.

Contagion risk takes place when the presence of toxic assets affects good assets too and then real economy. We can divide contagion risk in two forms: “informational” contagion risk and “financial” contagion risk.

The “informational” contagion risk is caused by lack of segregation between assets. When it’s impossible to distinguish high-quality loans from low-quality ones, the good credits’ market fails (lemon market theory). If it happens, the bank loses a potential source of liquidity (i.e. factoring). Moreover, it faces credibility problems, since investors can’t assess the overall quality of its assets.

³⁵<https://argomenti.ilsole24ore.com/parolechiave/stop-loss.html>

On the other side, we have a “financial” contagion risk when liquidity shortfalls affects banks’ lending activities. As we see in chapter 2, NPLs crowd out new lending and reduce bank’s capacity to extend new credit. When banks reduce loans to consumers and firms, it damages domestic economy. Indeed, the foregone GDP growth due to overhang of NPLs is about 2% in average (Balgova et al., 2016).

If we analyze more in details the relation between credit crunch and unemployment (2.1) we can get other insights. As anticipated, less favorable credit conditions and credit supply shocks are usually associated with a lower employment rate in firms (Berton et al., 2017). It’s important to notice that firms subject to negative credit shocks tended to fire less-skilled workers, the less profitable ones. They usually have lower wages and lack of other sources of income³⁶, so they’re more likely to ask for credit to support their consumes. Unsecured retail loans are among the riskier ones (2.3). Furthermore, the continuous growth of retail loans in USA³⁷ and Italy³⁸ in 2018 and 2019 shows us that credit crunch caused by NPLs might increase the risk of another NPL crisis. These data have a critical meaning if we consider that a worldwide economic downturn is expected between the end of 2019 and 2020³⁹.

Banks with NPLs issues shrink their assets more than non-troubled ones. Moreover, during the reallocation of their assets, they tend to increase riskier asset class, presumably the most profitable ones (Bruno and Marino, 2019). This attitude hinder the reduction of risks related to NPLs in the market.

³⁶ I.e. financial wealth or real estates.

³⁷ +18,9% in 2018, +16.9% in 2019 (Source: https://www.business-standard.com/article/economy-policy/retail-loan-growth-slows-to-17-in-may-reflects-slowdown-in-economy-119062900028_1.html)

³⁸ +5% in 2018, + 11,5% in 2019 (Source: <https://www.crif.it/area-stampa/comunicati-stampa/2019/aprile/barometro-prestiti-marzo-2019/> and <https://www.crif.it/area-stampa/comunicati-stampa/2019/gennaio/barometro-mutui-prestiti-dicembre-2018/>)

³⁹ (<https://www.ilsole24ore.com/art/rallenta-crescita-nell-eurozona-pil-02percento-secondo-trimestre-11percento-sull-anno-AC75jNc>, https://www.corriere.it/economia/finanza/19_luglio_15/cina-l-economia-cresce-solo-62percento-mai-cosi-lenta-ultimi-27-anni-8cad53a0-a6db-11e9-8722-90fee69fd06f.shtml?refresh_ce-cp and https://www.agi.it/economia/economia_usa-5761146/news/2019-07-05/)

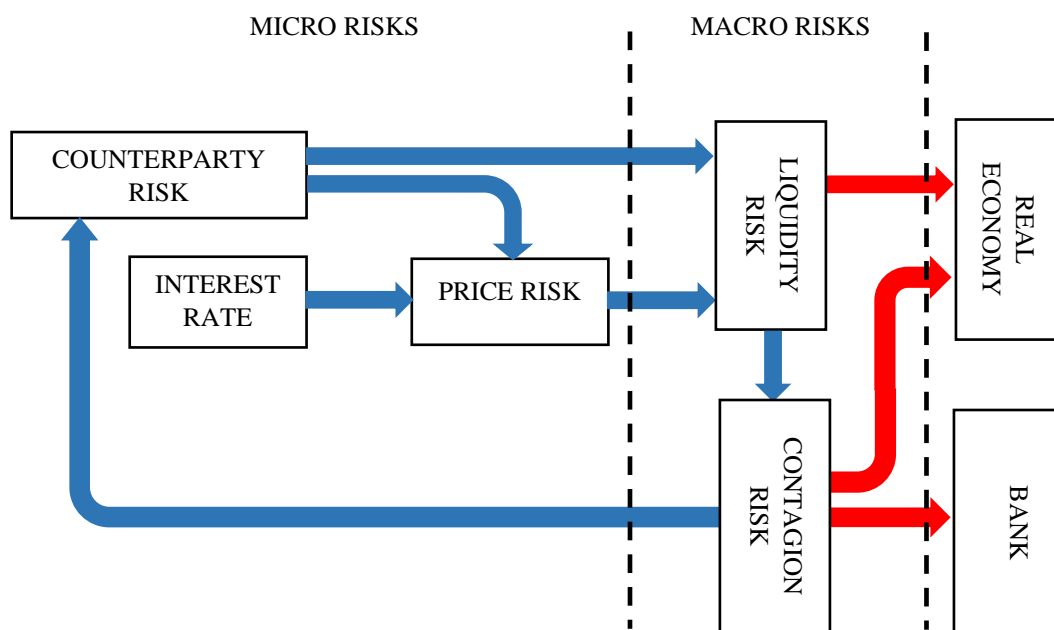


Table 4.3 Drawing scheme of risks' cycle

3.2 How much does risk transfer help banks?

When AMCs buy NPLs from troubled banks, they break off links between bank and distressed assets. Indeed, an asset purchase is a contractual shifting of pure risks from one party to another. In this way, the uncertainty about incomes from NPLs moves to the AMCs, that restores banks' viability. A new study shows that the resolving insolvency effectiveness has positive effects on lending activities (World Bank, 2019)⁴⁰. In chapter 2 we remark that AMC are effective vehicles in facing debtors insolvency, in particular when credit worsening is abrupt and a quick solution is needed (Baudino and Yun, 2017). Then AMCs can provide a solution to credit crunch, since they reduce financial contagion risk- with positive effects on GDP growth too. Moreover, a clear asset separation reduces the reputational contagion risk for the bank and increases market trust in bank viability. It supports future capital increases and reduces the risk of capital flights. Actually, not only banks, but also their shareholders could benefit from the risk transfer (Lucchetta and Parigi, 2016). If legacy loans are likely to impose losses to the bank and these losses would absorb all the revenues got from new loans, the bank won't issue new loans, even if their net present value is positive. This is a specific version of debt overhang problem that regards troubled banks. If profits by new loans are expected to cover losses from legacy assets, banks has no incentive to extend new loans: at this point underinvestment takes place. The segregation of good assets from bad ones is a solution to underinvestment. Indeed, once cleaned

⁴⁰ "Doing Business 2019" report shows a 0.53 positive correlation between resolving insolvency effectiveness and issue of loans (page 132, table 9.3).

from NPLs, banks can keep incomes from performing loans and it provides an incentive to restart lending activity.

3.3 Risk transfer weaknesses

The risk transfer has negative aspects too. Let's focus on haircuts that lower NPLs prices. Through NPLs purchase, AMCs inject cash in banks. Nevertheless, cash amount is much lower than the amount due by debtors. It's nothing but a stopgap solution, yet it protects banks from risks in the future at least. Actually, the risk transfer brought by the asset disposal is not complete. A performing loan turns in an NPL when debtor insolvency/difficulty to pay is no longer a mere risk⁴¹, but a certain event. So, haircuts and the resulting price reduction of NPLs derive from a yet concretized risk, that even asset disposal can't get rid of. Haircuts are dangerous since resulting losses push down bank's equity, breaking Basel III rules on mandatory capital in some cases. In chapter 2 we saw that in the worst scenario the bank might undergo banking license's revoke or even worse go bankrupt. If it happens, debtors insolvency risk- reflected in low NPLs selling price- increases bank insolvency risk in post-transaction phase too.

Moreover, to make the asset sale successful, the time to buy assets should be limited (AMC Blueprint, 2018). The purchase of NPLs portfolios by the bad bank should be a "one-shot" operation. "One-shot" is not referred to the duration of the operation. Indeed, asset transactions may be preceded by long negotiations or can be divided in stages. Nevertheless, the purchase must have a precise deadline. It constrains banking institutions to immediately offload all the distressed assets. A precise deadline should induce market agents to believe that the NPLs removal is definitive and complete. This is crucial, especially in case of ad-hoc AMCs. Sometimes market agents might think that the asset value assessment done by bad banks is approximate or imprudent, underestimating the real amount of risky assets. If investors believe that the bank still houses potential non-performing loans -in contrast with AMCs estimation-, they wouldn't trust the bank's return to stability. It can happen that the sale of NPLs doesn't have positive influence on market expectations about bank's viability. In that case, losses which comes from haircuts aren't compensated by credibility improvement for the bank.

⁴¹ Intended as the uncertainty about a bad event.

3.4 Risk transfer is not risk elimination

The last aspect to analyze is the fact that the risk moves away from banks to AMCs, but it's far from disappearing from the market (Lucchetta and Parigi, 2016).

When AMCs get claims on NPLs, they bear same operational risks of banks. AMCs determines a lower contagion risk, since they don't play banks' macroeconomic role: the lending activity. If the newborn good bank lend money to its own bad bank, it's still slightly linked with its NPLs. But if we consider the dimension of bridge loan compared with the total assets of rescued banks, we can argue that this specific risk is usually negligible for the bank⁴². On the other hand, if bad banks process assets with a factory approach⁴³, they can actively improve credit quality (AMC Blueprint, 2018). This might reduce overall risks for the economy.

Moreover, bad banks may not be ultimate NPLs buyers. AMCs sell NPLs that fit best direct sale or securitization to private investors. It's a turning point: NPLs, once housed in a single institution, are sold to many economic agents. Risks linked to NPLs are spread on a greater number of economic institutions. This redistribution of bad assets lower their impact on economy, since now there's a sort of diversification over market. Indeed, a multitude of investors isn't likely to default at the same time because of NPLs impact, as bank would do instead. Under certain conditions, securitization is helpful in reallocating risk in the economy (DeMarzo et al., 2004). Pooling and tranching NPLs, it creates low-risk securities starting from risky assets, concentrating default risk in worst tranches.

Nevertheless, the higher the number of transactions, the higher the resulting asymmetry information. This lack of information makes credit monitoring harder and increases mis-buying likelihood, leading to future market failures.

3.5 The four Italian banks: PROs and CONs of AMCs⁴⁴

The chapter ends with the analysis of a case study, useful to analyze more in detail advantages and limits in risk transfer brought by AMCs. The case is about four small-sized Italian banks: CariFerrara, CariChieti, Banca Marche and Banca Popolare dell'Etruria e del Lazio. These

⁴² For example, Intesa San Paolo contribution in Atlante Fund was about EUR 1 bn, in front of about 830 bn of total corporate assets (Source:

https://www.group.intesasanpaolo.com/scriptIsir0/si09/chi_siamo/ita_profilo.jsp#/chi_siamo/ita_profilo.jsp)

⁴³ Also known as "repair and sell", factory approach is more suitable is when there's no visible near-term growth. The alternative is the warehouse approach, known as "wait and sell".

⁴⁴ Data taken by Carmelo Barbagallo's report (2017) for Italian Parliamentary Banking Committee of Inquiry.

banks were characterized by years of mismanagement, that lead to the overall accumulation of 8.5 bn of NPLs (90 days overdue) in 2014. Many Bank of Italy's reports remarked imprudent criteria of assets assessment, inefficient handle of loans, illegal conducts and creative finance. These banks were outside the perimeter of AQR, the supervisory tool used by ECB before becoming the supervisor of European banks. Before their crisis erupted, these banks tried to be purchased by other financial institutions, with a merger & acquisition procedure. Negotiations failed because banks' stability was too compromised. Moreover, the financial crisis of banks hindered a new capital increase (bank were recapitalized two years before yet), since no investor would have put equity given the situation. At the same time, State aid was forbidden by the new BRRD framework. First, banks were put under the administration of an external commissioner in mid-2013. In this period, the dramatic situation of these financial institutions fully emerged: their Tier 1 ratio⁴⁵ were far below⁴⁶ the 6% mandatory threshold (Basel III, 2013). Ad-hoc AMCs seemed the most suitable tools, because the nature of crisis required a quick solution (Baudino and Yun, 2017). The four banks went under bank de-merger procedure. Banks activities were sold on 22nd November 2015 to four bridge banks, that should have continued bank's activities until its sale to other financial institutions. At the same time a new bad bank was created, the REV Gestione Crediti S.p.A. It received all bad assets (with an average 83% haircut⁴⁷, since their new book value was about EUR 1.5 bn) in two tranches, on 1st February 2016 and on 1st January 2017. This allowed to separate bad loans and assets from the good ones, in order to preserve the sound part of banks, i.e. safeguard depositors, senior bondholders and checking account holders. The bridge banks were recapitalized by Resolution Fund (RF), managed by Bank of Italy, with no State aid. They were financed by bailed-in shareholders and subordinated bondholders, converted in equity holders, and by new equity provided by banking industry. Since RF was just created, it hadn't enough funds to recapitalize bridge banks. It receives a EUR 3.6 bn loan by Unicredit, Intesa San Paolo and Ubi Banca- 18-month termed, at a market interest rate and guaranteed by Postal Saving Bank (Parigi, 2018). New equity of bridge banks was higher than 9% of RWA. Nevertheless, the recapitalization led also to write off of 130K original shareholders and 10K subordinated bondholders suffered EUR 750 m losses. On the other hand, the bad bank was financed by RF with EUR 140 m and didn't have banking license. After the bank de-merger, Bank of Italy open negotiations to find potential purchasers. Nevertheless, soon emerged that the segregation of assets done in bank de-merger

⁴⁵ The Tier 1 capital ratio is the ratio of a bank's core tier 1 capital—that is, its equity capital and disclosed reserves—to its total risk-weighted assets.

⁴⁶ Tier 1 ratios: Cassa di Risparmio di Ferrara=1,5%, Banca delle Marche=0,7%, Cassa di Risparmio della Provincia di Chieti=5,5%, Banca dell'Etruria e del Lazio=1,3%.

⁴⁷ 68,9% for mortgage-backed loans, 92,7% for unsecured loans.

was ineffective. Indeed, the good banks weren't so good, since they still had EUR 3 bn of NPLs on their balances. UBI Banca was interested in buying Banca Marche, Banca Etruria and CariChieti, but without NPLs. After few months of negotiations, Atlante 2 Fund must intervene to allow the operation. The fund bought about EUR 2,2 bn assets and cleaned the banks balances on 10th May 2017. Once the asset were removed, UBI purchased the three banks on the same day. CariFerrara wasn't involved in the transaction: saved by Fondo Interbancario di Garanzia, it would be purchased by BPER on 1st July 2017.

The four banks clearly underestimated debtors' counterparty risk. Mis-lending activities, started in early 2000s, affected bank viability and caused high NPLs ratios⁴⁸. Most of distressed assets were large exposures, issued with no strict assessment of debtor's creditworthiness. The large number of NPLs increased the liquidity risk, since also depositors -usually bank's safest creditors- risked losing their money. The fact that they were regional banks determined an increase in contagion risk. Indeed, when the crisis erupted it affected the local economy quickly. Finally, high losses⁴⁹ -imposed by haircuts- nearly caused their bankruptcy. The first asset removal, far from being definitive, interfered with negotiations with potential buyers and this constrained Atlante 2 fund to intervene in 2017. Despite the impediments, banks rescue was successful; nevertheless, it wasn't able to prevent economic crisis in banks' regions. Finally, the large number of bailed-in bondholders shocked public opinion and damaged the credibility of Italian banking sector.

⁴⁸ CariFerrara 33%, CariChieti 29%, Banca Etruria 33%, Banca Marche 20%

⁴⁹ EUR 2,6 bn

CONCLUSION

The question mark on bad banks effectiveness is far from having a clear answer.

We saw that they contribute to transfer risk outside the bank through the asset disposal. This isn't a specific ability of AMCs though. Each kind of NPLs disposal that happens in a transaction form, mainly direct sales, reach this goal.

The difference is that direct sales require the presence of a secondary market that must be well-functioning yet. Otherwise, banks should underprice their assets to attract buyers, with a heavier impact on their balances. Instead, AMCs are built exactly to buffer the lack of such a market, so they are more often a feasible tool. Despite the asset disposal, let's remark that risks linked to NPLs aren't eliminated from the economy, so AMCs' actions don't make credit market completely safe.

Moreover, in chapter 2 we've seen that, through the sale of bad assets, banks renounce to about 20% of profits they could make with the internal management. Nevertheless, this kind of management isn't affordable for each financial institution. It doesn't lead to a complete asset separation in balance sheets, that allows a quick reputational restore to the bank. The last critical aspect regards the funding structure of this entities, tightened up between BRRD constraints and the risk of fire sales on the other side. The AMC Blueprint and the renewal of ESA help to clarify AMCs range of action, but they don't completely solve doubts about what AMCs can do to get funds.

Despite the controversial aspects, AMCs seem to have quite success. They were created in many European countries, including GIIPS but also virtuous nations such as Germany, Belgium and Nordic Countries. Many of them accomplish their tasks, restoring domestic banks and supporting economic recovery after the two crisis: in particular Irish NAMA, German FMS (Cas and Perasa, 2016), but also Atlante Fund and Atlante Fund 2 (both partially) in Italy. Some other bad banks, as SAREB, are performing worse than they should, but the outlook for the future is positive (ibidem). Most recent news say that Deutsche Bank too, after failure in stress tests by EBA and financial problems over years, will entrust his "resurrection" to an AMC. Will a bad bank save this German banking giant too⁵⁰?

⁵⁰ <https://www.bloomberg.com/news/articles/2019-07-06/deutsche-bank-plans-to-replace-retail-head-strauss-in-overhaul>

ABSTRACT (EN)

This paper focuses on many aspects of AMCs and on their role in NPLs crisis resolution.

In the introduction, we will briefly define the context in which bad banks grew up. 2008 (worldwide) and 2012 (European) crisis make suddenly worsen the quality of overall credits in banking sector. Banks' balances quickly filled up with NPLs. These toxic assets created both financial and credibility problems and they must be ring-fenced or removed from banks. AMCs could be an effective tool for this cleaning.

Chapter 1 studies ownership and funding structure of bad banks. First, it focuses on distinction between private and public AMCs. Then, it shows constraints imposed by Eurostat and European commission for State intervention, reflected by limits on state aid and the minimum threshold for the private ownership. Moreover, it introduces also the concept of haircuts, that impact on AMCs profitability.

Chapter 2 focuses on the real nature of this institutions: they're asset disposal vehicles, since they help banks to get rid of bad assets, but operatively they act as extraction vehicles, since their goal is maximizing value extraction from assets. It tries to show why AMCs should be preferred to internal asset management and what categories of NPLs fit best bad banks rather than other impaired assets measures.

Chapter 3 studies the risk transfer linked with NPLs removal from banks. In particular, it will show what kind of risks are neutralized by asset disposal, how much this neutralization costs and how real economy could benefit from this operations too. It shows that risk transfer doesn't mean the elimination of risk from the market, though securitization and NPLs restructuring may reduce it. Finally, the paper portrays the case study of 4 Italian banks (CariFerrara, CariChieti, Banca Etruria, Banca Marche). It shows success/unsucces factors for AMCs effectiveness and steps of their intervention on troubled banks.

ABSTRACT (IT)

L'elaborato approfondisce vari aspetti delle bad bank e del loro ruolo nella risoluzione delle crisi degli NPL.

Nell'introduzione si andrà a definire il contesto in cui tali entità si sono diffuse, strettamente legato alla crisi mondiale del 2008 e a quella europea del 2012. Esse causarono il peggioramento

della qualità del credito nel settore bancario, causando la proliferazione degli NPLs. In tale contesto iniziarono ad emergere le AMC come possibile strumento di risoluzione.

Il capitolo 1 si occupa della struttura proprietaria e di chi finanzia le bad bank. In primis, opererà una distinzione tra AMC pubbliche e private. In seguito, porrà l'accento sui vincoli introdotti da Eurostat e Commissione Europea, i quali si riflettono nei limiti posti agli aiuti di Stato e nella soglia minima di partecipazione privata che tali istituti devono rispettare. Infine, introdurrà anche il concetto di haircut, elemento che impatta sulla capacità delle AMC di generare profitti.

Il capitolo 2 si focalizza sulla reale natura di tali istituzioni: sono veicoli per la dismissione degli asset tossici, ma operativamente agiscono come “extraction vehicles”, puntando alla massimizzazione del valore estratto dagli NPL. Inoltre, cercherà di illustrare i motivi per cui le bad bank dovrebbero essere preferite ad unità interne di gestione dei crediti deteriorati, specificando quali categorie di questi ultimi sono più adatti ad essere lavorati esternamente.

Il capitolo 3 studia il trasferimento all'esterno del rischio, consentito dalla rimozione degli NPL dalle banche in difficoltà. In particolare, mostrerà quali rischi sono neutralizzati da tale rimozione, quanto costa tale neutralizzazione dei rischi e in che modo essa può avere effetti positivi sull'economia reale. Inoltre, sottolinea che il trasferimento del rischio non implica la sua eliminazione dal mercato, sebbene la cartolarizzazione e ristrutturazione degli NPL lo possano ridurre. Infine, verrà trattato il caso di studio di quattro banche italiane (CariFerrara, CariChieti, Banca Etruria, Banca Marche). Esso mostrerà quali sono i fattori critici di successo e insuccesso per le AMC e le varie fasi del loro intervento sulle banche in difficoltà.

BIBLIOGRAPHY

BALGOVA, M., NIES, M. AND PLEKHANOV, A., 2016. *The economic impact of reducing non-performing loans*. European Bank for Reconstruction and Development, Working Paper No. 193.

BANK OF INTERNATIONAL SETTLEMENT, 2011. *Basel III: A global regulatory framework for more resilient banks and banking systems*.

BANK OF INTERNATIONAL SETTLEMENT, 2017. *Basel III: Finalising post-crisis reforms*.

BARBAGALLO, C., 2017. *Cassa di Risparmio di Ferrara Banca delle Marche Cassa di Risparmio della Provincia di Chieti Banca Popolare dell'Etruria e del Lazio*. Roma, 12/11/2017. Senato della Repubblica-Camera dei Deputati. Commissione Parlamentare di inchiesta sul sistema bancario e finanziario Legge 12 luglio 2017, n. 107.

BAUDINO, P. AND YUN, H., 2017. *Resolution of non-performing loans–Policy options*. Bank for International Settlements, Financial Stability Institute. FSI Insights on financial stability, no. 3.

BERTON, F. et al. 2017. *Banks, firms, and jobs*. Banca d'Italia. Working Papers, no. 1097, February. In: *Review of Financial Studies*, v.31, 6, pp. 2113-2156. Rome: Printing and Publishing Division of the Bank of Italy.

BRUNO, B. AND MARINO, I., 2017. *Bad loans and resource allocation in crisis and post crisis years: Evidence from European banks*. BAFFI CAREFIN Centre Research Paper Series, No. 2017-52.

BRUNO, B. AND MARINO, I., 2019. *How Banks Respond to NPLs? Evidence from the Euro Area*. CSEF Working Paper, no. 513. Italy: University of Naples.

DEMARZO, P. M., 2004. *The Pooling and Tranching of Securities: A Model of Informed Intermediation*. Review of Financial Studies, Forthcoming.

DEUTSCHE BUNDESBANK, 2018. *Maastricht debt: methodological principles, compilation and development in Germany*. Monthly Report, April, p. 55-78.

EUROPEAN BANKING AUTHORITY, 2018. *Risk assessment of the European banking system*. Luxembourg: Publications Office of the European Union.

EUROPEAN CENTRAL BANK, 2018. *Addendum to the ECB Guidance to banks on non-performing loans: supervisory expectations for prudential provisioning of non-performing exposures*.

EUROPEAN CENTRAL BANK, 2019. *ECB Annual Report on supervisory activities 2018*.

EUROPEAN COMMISSION, 2018. *Commission Staff Working Document AMC Blueprint*. SWD/2018/52 Final.

EUROSTAT, 2016. *Manual on Government Deficit and Debt*. Luxembourg: Publications Office of the European Union.

FELL, J. et al., 2016. *Addressing market failures in the resolution of non-performing loans in the euro area*. European Central Bank. Financial Stability Review, November, pp. 134-146.

FISCHETTO, A. L. et al., 2018. *I tassi di recupero delle sofferenze nel 2017*. Banca d'Italia, Note di stabilità finanziaria e vigilanza, n.° 13, December 2018.

GANDRUD, C. AND HALLERBERG, M., 2014. *Bad banks in the EU: the impact of Eurostat Rules*. Bruegel Working Paper no. 15, December.

JASSAUD, N. AND KANG, K., 2015. *A Strategy for Developing a Market for Nonperforming Loans in Italy*. IMF Working Paper 15/24. Washington: International Monetary Fund.

INTESA SAN PAOLO, 2019. *Leader italiano di dimensione europea*.

LEHMANN, A., 2017. *Carving out legacy assets: a successful tool for bank restructuring?* Bruegel, Policy Contribution Issue no. 9.

MEDINA CAS, S. AND PERASA, I., 2016. *What Makes a Good 'Bad Bank'? The Irish, Spanish and German Experience*. European Union, Discussion Paper no. 036. Luxembourg: Publications Office of the European Union.

LUCCHETTA, M. AND PARIGI B. M., 2016. *Bad Banks and Underinvestment*. CESifo Area Conferences on Applied Microeconomics.

PARIGI, B. M., 2018. Lecture Notes, University of Padua.

PEDERSEN, L. H., 2013. *When everyone runs for the exit*. National Bureau of Economic Research. NBER Working Paper no. 15297.

PIROLO, A. AND FINCH, A., 2018. *European NPLs-FY18. An overview of the non-performing loan market*. Debtwire.

PWC, 2018. *The Italian Unlikely to Pay market / Is now the momentum?*

WORLD BANK, 2019. *Doing Business 2019: Training for Reform*. Washington, DC: World Bank.

SITOGRAFIY

ANON., 2019. Eurozona, rallenta la crescita: +0,2% il Pil nel 2° trimestre, +1,1% sull'anno. *Il Sole 24 Ore* [online], 31st July. Available at < <https://www.ilsole24ore.com/art/rallenta-crescita-nell-eurozona-pil-02percento-secondo-trimestre-11percento-sull-anno-AC75jNc> > [Access date: 03/09/2019]

ARONS, S. AND BASAK, S., 2019. Deutsche Bank Culls Top Leadership, Dumps Unwanted. *Bloomberg* [online], 06th July. Available at < <https://www.bloomberg.com/news/articles/2019-07-06/deutsche-bank-plans-to-replace-retail-head-strauss-in-overhaul> > [Access date: 11/07/2019]

BEBEEZ, 2018. *Dea Capital si aggiudica la gestione dei fondi Atlante e la maggioranza relativa di Quaestio Holding* [online]. Available at < <https://bebeez.it/2019/08/01/dea-capital-si-aggiudica-la-gestione-dei-fondi-atlante-la-maggioranza-relativa-quaestio-holding/#> > [Access date: 02/09/2019]

BRENNA, G., POPPENSIEKER, T., AND SCHNEIDER S., 2009. *Understanding the bad bank* [online], December. McKinsey, Zurich and Munich Offices, December. Available at < <https://www.mckinsey.com/industries/financial-services/our-insights/understanding-the-bad-bank> > [Access date: 01/04/2019]

CAPUA, P., 1997. Banco Napoli torna in utile e arrivano nuovi capitali. *La Repubblica-Archivio* [online], 31st October. Available at < <https://ricerca.repubblica.it/repubblica/archivio/repubblica/1997/10/31/banco-napoli-torna-in-utile-arrivano-nuovi.html?ref=search> > [Access date: 11/07/2019]

CRIF, 2019a. *Nel 2018 si consolida la crescita delle richieste di nuovi prestiti da parte delle famiglie (+5,0%) ma rallentano quelle di mutui (-0,6%) a causa del ridimensionamento delle surroghe* [online]. Bologna. Available at < <https://www.crif.it/area-stampa/comunicati-stampa/2019/gennaio/barometro-mutui-prestiti-dicembre-2018/> > [Access date: 26/08/2019]

CRIF, 2019b. *Non si arresta la crescita delle richieste di prestiti da parte delle famiglie italiane: +11,5% nel primo trimestre 2019* [online]. Bologna. Available at < <https://www.crif.it/area-stampa/comunicati-stampa/2019/aprile/barometro-prestiti-marzo-2019/> > [Access date: 24/08/2019]

EUROPEAN CENTRAL BANK, 2016. *What are haircuts?* [online]. Available at < <https://www.ecb.europa.eu/explainers/tell-me-more/html/haircuts.en.html> > [Access date: 14/05/2019]

FILIPPI, E., 2017. Deloitte: il fondo Atlante vale il 24% in meno. *Milano Finanza* [online], 31st January. Available at < <https://www.milanofinanza.it/news/deloitte-il-fondo-atlante-vale-il-24-in-meno-201701311351424951> > [Access date: 02/09/2019]

LELE, A., 2019. Retail loan growth slows to 17% in May, reflects slowdown in economy. *Business Standard* [online], 29th July. Available at < https://www.business-standard.com/article/economy-policy/retail-loan-growth-slows-to-17-in-may-reflects-slowdown-in-economy-119062900028_1.html > [Access date: 02/09/2019]

LONGO, M., 2019. Npl, rischio «bolla» per il mercato dei crediti deteriorati. *Il Sole 24 Ore Finanza* [online], 11th February. Available at < <https://www.ilsole24ore.com/art/npl-rischio-bolla-il-mercato-crediti-deteriorati-AF4lfMK> > [Access date: 03/09/2019]

MESSINEO, D., 2019. *Vigilanza bancaria* [online]. Treccani. Available at < http://www.treccani.it/enciclopedia/vigilanza-bancaria_%28Diritto-on-line%29/ > [Access date: 02/09/2019]

OLIVIERI, A., 2018. La pagella degli Npl: su 414 banche solo 38 bocciate. *Il Sole 24 Ore* [online], 1st February. Available at < <https://st.ilsole24ore.com/art/finanza-e-mercati/2018-02-01/la-pagella-npl-414-banche-solo-38-bocciate-063830.shtml> > [Access date: 17/06/2019]

PISCIOTTA, I., 2019. Perché per gli analisti nel 2020 l'economia americana entrerà in 'zona pericolo'. *Agi* [online], 5th July. Available at < https://www.agi.it/economia/economia_usa-5761146/news/2019-07-05/ > [Access date: 03/09/2019]

SANTEVECCHI, G., 2019. Cina, l'economia cresce solo del 6,2% Mai così «lenta» negli ultimi 27 anni. *L'Economia-Il Corriere della Sera* [online], 15th July. Available at < https://www.corriere.it/economia/finanza/19_luglio_15/cina-l-economia-cresce-solo-62percento-mai-cosi-lenta-ultimi-27-anni-8cad53a0-a6db-11e9-8722-90fee69fd06f.shtml > [Access date: 03/09/2019]

SIGNORETTI, F.M., 1997. Per il banco di Napoli conti ancora in rosso. *La Repubblica-Archivio* [online], 29th March, p. 29. Available at < <https://ricerca.repubblica.it/repubblica/archivio/repubblica/1997/03/29/per-il-banco-napoli-conti-ancora-in.html?ref=search> > [Access date: 11/07/2019]

“STOP LOSS” (2016). *Il Sole 24 Ore-ARGOMENTI* [online]. Available at < <https://argomenti.ilsole24ore.com/parolechiave/stop-loss.html> > [Access date: 26/08/2019]