

A DOUBLE GUARANTEE FOR LIQUIDATING PROBLEMATIC ASSETS

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1. The gravity of the problem

Market tensions, which manifested themselves in Italy's banking sector in recent days, has shed light on the fragility of our financial system, which is plagued by a large amount of non-performing loans on the balance sheets of banks. This situation has existed for a long time, but it became more difficult to contain it in the beginning of 2016, once new European regulations stemming from the second pillar of the Banking Union came into force. Moreover, these new regulations were preceded by the failure of some regional and local Italian banks and the worsening of the global macroeconomic outlook.

The goal of the proposal presented here is to allow even the more fragile Italian banks to find a solution for their non-performing loans (NPLs) through market tools that are supported, as a last resort, by state guarantees. Without these guarantees, which, per our proposal, will be added to the one provided by banks and serve as a "double guarantee," the solutions under discussion (including various forms of bad banks and market guarantees) will prove ineffective. Moreover, the feasibility of our proposal assumes that the European Commission will recognize the systemic nature of the problem and treat NPLs as a serious threat to the financial stability not only of Italy, but of the entire Eurozone. In accordance with the European treaties, this presents an exceptional circumstance that would allow the suspension of the bail in regulations—specifically, the involvement of private shareholders and investors in subordinate bonds in the bank's rescue—and allow the use of public funds.

2. The factors determining instability

The end of 2015 and the beginning of 2016 was marked by a change in the global economic outlook that created an environment opposite to that of the fall and winter of 2014. The crisis in emerging economies, the excessive fall in energy prices, the slowdown in the Chinese economy, the fragile growth of the US economy that coincided with an increase in interest rates by the Federal Reserve, and the as yet uncertain additional monetary stimulus from the European Central Bank (ECB) combined to create worsening growth prospects for Eurozone economies.

Added to this, was a specific shock for Italy resulting from the resolution of four regional and local banks that represent a small fraction of the country's banking activity (around 1%). In principle, the episode should not have had systemic relevance. However, the impact was

accentuated by two factors: above all, due to European regulations introduced in the summer of 2013, the restructuring of these four banks shifted some of the burden to investors in subordinate bonds (small and big); secondly, this process made it clear that additional European regulations governing state aid to banks centered on the bail in process, which went into force in January 2016, would increase the cost to investors for all future bank restructuring.

The worsening of the macroeconomic outlook and the idiosyncratic shock to Italy explains why it is even more imperative to find a solution for the stockpile of non-performing loans, which has weighed down the Italian banking sector and represents its major structural weakness. Finding an effective solution is more difficult now than in the recent past, due to the fact that new European regulations require the use of market mechanisms. As already stated, these new regulations continue to recognize the possibility of state intervention, in the form of guarantees connected with the process of recapitalizing the banks in question, in the event that market solutions are not conducive to stable financial conditions.

3. Critical weaknesses of *bad bank*

To confront the problem, it is necessary for each Italian bank to have the opportunity to offload a portion of their non-performing loans, bringing them down to a level more consistent with their overall budget equilibrium. In principle, they must get rid of these liabilities at market price and have a vehicle of securitization as a potential buyer, i.e., a special purpose vehicle (SPV). However, it should be considered that, over the past three to four years, the average differences between market prices of each NPL and the corresponding value on bank balance sheets (book value) have remained high. A rough calculation shows that, on average, this difference comes out to be around 25-30 basis points. If our calculations are correct, the offloading of an adequate portion of NPLs would result in a loss significant enough to force the more fragile Italian banks to recapitalize. This carries a non-negligible risk that each attempt to “frontload” the solution will threaten the overall stability of the Italian banking and financial sector, with repercussions for the Eurozone as a whole.

Setting up a bad bank by each of the banking groups in question would lead to a similar problem. While NPLs could be gradually offloaded on the market, the transfer of these loans from the originating bank at market prices will result in an immediate capital loss—as happened in the case of the four recently restructured Italian banks. Conversely, if this sale occurred not at market price, and therefore closer to book value, it would reallocate the anticipated loss to the balance of the bad bank. However, since the bad banks fall under the same group, the losses would still show on the consolidated balance of the originating bank. Consequently, it is likely that, in the latter case, the creation of the bad bank will trigger a resolution process, where the Bank Recovery and Resolution Directive (BRRD) applies, with the resulting application of new (January 2016) regulations governing bail in. As already stated, this type of restructuring would have even more severe consequences for savers than when the four small Italian banks went through this process in 2015.

The launch of an (unadvisable) European resolution process for a large part of the Italian banking sector would be almost certain if a single bad bank were created for all banks under consideration. It is true that, in this case, those banking groups with high amounts of non-performing loans would maximize the advantages of a gradual offloading of their liabilities on the market, having transferred them to a single bad bank. However, as the Italian government found out in recent months, the European Commission frowns upon this type of solution because it is equivalent to a public bailout.

The resulting standoff between European institutions and the Italian government seems to have brought about a compromise, foreshadowed in statements made by European Commissioner for Competition Margrethe Vestager and Italy's Minister of Economy and Finance Pier Carlo Padoan. The compromise would allow each Italian bank to offload, at market prices, an adequate portion of their non-performing loans to a special purpose vehicle. Additionally, in order to bridge the difference between these prices and book prices, it would be possible for each bank to buy state or public insurance for their non-performing loans. The crucial condition is that this coverage would have to be bought at market prices, which poses two difficulties likely to render the compromise ineffective. The first concerns the impossibility of deciding on a specific price *ex ante* for each type of guarantee for every specific kind of non-performing loan, given that their actual buying and selling does not happen on the market. The second difficulty is that, even if it were possible to set equilibrium conditions using a *mark to model*, the cost of guaranteeing each NPL would be exactly equal to the increase in price deriving from the market transaction had there been no guarantee between the bank and SPV.

4. Escaping the vicious cycle

The conclusion reached is, to a certain extent, self-evident. By definition, the state guarantees at market prices must not alter the losses each bank would incur securitizing its own non-performing loans. The implication is, however, anything but self-evident. None of the examined market mechanisms offers an effective solution for liquidating the excess of NPLs on the balances of Italian banking groups. The resulting losses risk being inadequately covered by reserve funds and excess capital, as recorded in a recent verification by the Single Supervisory Mechanism (SSM). It would be difficult to satisfy the resulting need for capital given that many of our banks have just finished an intense and laborious process of recapitalization and suffers from relatively low expected profitability.

The ineffectiveness of the proposed solutions becomes even more evident when two other factors are taken into consideration: (i) at least a part of the banks' capital reserves is at risk of being eroded by the fall in the stock value of more fragile banking groups, as had occurred at the beginning of 2016; (ii) potential losses and capital endowments are neither correlated with each other nor distributed in a homogeneous manner among the different banks. Empirical evidence offered by microeconomic data on the distribution of non-performing loans and capital reserves show that banking groups with more non-performing loans tend to also be ones with little or no excess of capital reserves.

More fragile Italian banks are caught in a vicious cycle. The high incidence of NPLs on their balances merits the liquidation of a subset of these NPLs on the market, so as to restore full banking operations and the consequent potential of credit supply. Such a liquidation of NPLs on the market would come with losses; hence, even the simple expectation that this liquidation will happen will likely cause a devaluation in the banks' stocks that would erode its capitalization. This would make securitization more difficult, further worsening market expectations with respect to the sustainability of the bank's assets.

5. The need for state guarantees

To escape this vicious cycle, state guarantees must be introduced that would, at least indirectly, sustain sale prices of non-performing loans. In this manner, even the more fragile banking groups could offload a part of their various NPLs at closer to book prices and, if necessary, they could pursue recapitalization in a better financial position.

Our proposal relies on multiple special purpose vehicles dedicated to buying NPLs. These SPVs would need to benefit from a system of incentives based on the application of two levels

of guarantees: one on the part of the banks themselves and the other, as a last resort, on the part of the state. For each acquisition of a subset of NPLs, SPVs would benefit from a guarantee from the bank, up to a predetermined limit, for eventual losses that could occur due to the difference between purchase price of each subset and the revenue generated from the subsequent issuing of tranches of asset-backed securities (ABS) of different seniority. The more reliable the guarantees offered by banks, the better the SPV's revenue outlook, and, as a result, the higher the sale price of various subsets of NPLs subject to securitization. Additionally, to make each guarantee even more reliable, SPVs could benefit from a second public guarantee, i.e., a government backstop, which would trigger whenever an individual bank is not able to honor the guarantee it had issued. The state or one of its agents will guarantee, in this unfavorable eventuality, coverage up to an initially agreed upon limit through the recapitalization of the failing bank.

As a whole, the proposal implies: (a) indirect support for sale prices of each subset of non-performing loans that would allow liquidation even by more fragile banks; and (b) the possibility of not triggering a bail in. Point (b) is based on the conviction that state aid as a last resort, as detailed in our proposal, is compliant with the Treaty on the Functioning of the European Union (TFEU) and doesn't require application of resolution mechanisms stemming from the Banking Union.

6. State aid

Before entering into the analytical details of the proposal (sections 7 and 8), it is necessary to justify our last assertion.

In our opinion, the severe tensions evident in financial markets in January were not linked to changes in the financial stability of Italian banks. This indicates the presence of systemic factors of instability that justifies the reconsideration, on the part of the European Commission, of the application of regulations governing state aid to banks. Article 45 of the Communication from the Commission on the application, from 1 August 2013, of state aid rules to support measures in favor of banks in the context of the financial crisis (the so-called 'Banking Communication'), allows for the possibility of veering from the new regulations governing bank resolution if the implementation of these measures risks financial instability or could produce disproportionate results.

This has already happened at the beginning of the international financial crisis of 2007-09, when the Commission adapted traditional methods of state aid to banks to the changing economic environment, temporarily introducing increased flexibility to safeguard the stability of the financial system. According to Article 107(3)(b) of the Treaty, high volatility of financial markets and the uncertainty in the economic outlook and the resulting persistent risk of a serious disturbance in the economy of member states justifies maintaining, as a safety net, the possibility for member states to grant crisis-related support measures. This constituted the legal basis, used by the Commission during the crisis, to adapt the manner in which they confronted the European (and, to a certain extent, Italian) banking crisis to benefit the general interests of the system.

Consistent with this approach, starting in 2008, the Commission issued various communications that took into account the changing economic and financial conditions. Starting out more flexible, until the summer of 2013, it progressively tightened evaluation criteria for state aid to the banking sector with the aim of returning, once the turbulent times ended, to a more stable application of the evaluation criteria. In this context, the July 2013 communication was issued, in which the Commission announced it will no longer consider

state aid for bank recapitalization acceptable, and that the burden of recapitalization should be shifted to shareholders and holders of subordinate bonds.

Recent events, which resulted in severe volatility in the shares of certain Italian banks and overall stock prices, amount to an objective threat to the stability of the Italian, and therefore the European banking sector. Moreover, the instability was not caused by an average worsening of the quality of bank balance sheets or by new losses incurred by individual Italian banks, but resulted from the application of burden sharing to the four regional banks previously mentioned and from signals, real or perceived, from European supervisory authorities, erroneously interpreted by the market as either the start of a new regime of asset valuation or a requirement for increased provisions for bad loans. In essence, even though the case of the four Italian banks were dealt with in a prudent manner, it triggered a chain of events that severely destabilized markets. Even though the dumping of stock eventually halted and stabilized the fragility that led to the recent shock persists and could lead to renewed turbulence.

Under these circumstances, it is reasonable, fully justifiable, and in line with the approach followed until now for emergency situations, to work with the European Commission to create a new legal instrument to provide state guarantees for recapitalization, valid for a limited window of time and applicable to all European banks that find themselves under attack and that are, therefore, unable to sustain the obligations connected to the process of securitization. The activation of this instrument should exclude, until the situation normalizes, the application of bail in to individual banks. In fact, the process of bail in would have a destabilizing effect on a systemic level.

7. A bit of algebra

Our proposal limits state intervention to only what is necessary for avoiding systematic financial instability, which is within the bounds of what the Treaty allows. Going into detail, however, a number of points remain, which can be synthesized into two steps: (i) how to determine the prices of NPLs, and (ii) how to create demand for them.

Both questions require complex analysis, broken down into four steps.

(a) Each subset j (with $j = 1, 2, \dots, m$) of non-performing loans that bank i (with $i = 1, 2, \dots, n$) decides to offload on the market needs to be bought by either an existing special purpose vehicle or one created *ad hoc*. The SPVs are managed by non-banking financial intermediaries dedicated to the acquisition of one or more of these subsets, which will later be divided into tranches of asset-backed securities (ABS) that are assigned different seniority and placed on the market. For reasons detailed prior, at least one of these SPVs needs to have public-private characteristics still remaining outside the perimeter of public administration.

(b) Each of these transactions, as defined in (a), will fall under a quasi-monopolistic bilateral regime: on the supply side, bank i faces high research costs in order to identify an appropriate SPV for each subset j of non-performing loans in need of securitization; for demand, each SPV faces high costs for assigning values to specific tranches of asset-backed securities (ABS) composed of j . In a bilateral monopoly, there would not be a single equilibrium price. Instead, several “satisfactory prices” will be identified by both sides of the market. Obviously, a transaction occurs when a contractual agreement is reached by means of the determination of a “satisfactory prices.”

(c) In the absence of guarantees, a “satisfactory price” for subset j of non-performing loans of bank i exists only if it meets two conditions. The first is that bank i recovers a certain minimum amount (X_j^i) from the sale of j , and this amount would depend on the book price of j

on the balance sheets of bank i (an aspect we henceforth take as a given in order to avoid complicating the analysis). The second condition is that the actualized value of the revenue that the SPV expects to recover through the transformation of subset j into tranches of asset-backed securities with varying seniority and subsequent operations needs to be at least equal to the actual cost of purchase (i.e., at least X_j^i). Representing the revenue the SPV expects to recover with $E(R_j^i)$ and the interest rate that reflects the financing and opportunity cost with r , we arrive at the following condition for realizing the transaction:

$$\frac{E(R_j^i)}{(1+r)} \geq X_j^i + u^i \quad (1)$$

where: $u^i \geq 0$ represents bank i 's monopolistic rent in its dealings with the SPV.

(d) In the absence of guarantees, an SPV averse to risk would make the transaction if (1) is satisfied as a strict inequality; in either event, it must assume the complete risk for the operation. To make (1)'s condition less stringent, it is therefore, generally speaking, cost-effective for bank i to share some of the risk with the acquiring SPV. To this end, bank i could offer the SPV a guarantee (D_j^i) for each tranche of asset-backed securities composed of j . D_j^i would cover the maximum difference (D_{max}) between the effective future revenue (R_j^i) recovered by the SPV and bank i 's revenue each time:

$$\frac{R_j^i}{(1+r)} < X_j^i + u^i \quad (2)$$

with: $D_j^i = \min [D_{max}, (X_j^i + u^i) - \frac{R_j^i}{(1+r)}]$.

8. The double guarantee

Each of the four points above requires analytical specifications in order to be implemented. This applies, in particular, to (d), which requires an answer to a crucial question: why would bank i find it cheaper to offer a guarantee on the SPV's risk of losses instead of negotiating directly with the SPV a price for subset j in a quasi-monopolistic bilateral regime?

In recent economic literature, the dominance of the risk-sharing solution is robust. For this specific case, it serves to recall three factors.

(i) By providing a guarantee, bank i can immediately obtain a higher sale price for j ; additionally, the presence of a public-private SPV, which serves as an implicit alternative for the transaction, reinforces the price. This means that the revenue bank i obtains from the divesting of j to the SPV becomes:

$$X_j^i + u^i + v_j^i$$

with $v_j^i \geq 0$;

and the corresponding expected revenue for bank i , taking into account the guarantee becomes:

$$X_j^i + u^i + v_j^i - P(D_j^i) \quad (3)$$

where $P(D_j^i)$ is the expected cost of the guarantee; with $P(D) \leq v_j^i$.

(ii) Before having to eventually take on the burden D_j^i , both bank i and the original borrowers of non-performing loans j , now insolvent, will have time to improve their balance sheets; this buying of time, which is different from the immediate reallocation of expected losses in

consolidated balances (as in the case of a bad bank created by a group of failing banks), can more than compensate for the cost of the guarantee.

(iii) Bank i will not bear the entire risk of capital loss from j , since the determination of D_j^i assigns part of the risk to the SPV; this incentive is essential for motivating the SPV to maximize its own revenue.

Point (iii) brings out an aspect that had been left in the background until now. In addition to designing an incentive scheme to motivate each SPV to maximize revenue from various tranches of asset-backed securities backed by non-performing loans j , it is also necessary to deter these SPVs from excessively delaying complete securitization. As implied in the specifications of (1) and (2), the problem would not exist if we assume that the market placement of obligations taken on by the SPV has a predetermined deadline (T) and that $D_j^i = 0$ (i.e., the transaction between bank i and the SPV occurs at the original sale price) each time the SPV does not recover the maximum possible value from tranches corresponding to j within the timeframe $t = T$.

Despite the advantages of the first market guarantee, it is possible (and probable) that the more fragile group of Italian banks will not be able to arrive at a “satisfactory price” for subset j of their non-performing loans. The SPV could attribute a high enough risk of insolvency for these more fragile banks to imply that not even D_{\max} can significantly boost X_j^i . For this reason, it seems necessary to introduce the state as a guarantor of last resort for D_j^i . This state guarantee would only come into effect after the public recapitalization of bank i in the event that it is not able to honor its own guarantees as soon as the above-specified condition (2) is met.

By virtue of existing, the public guarantee preempts the expectation of insolvency for banks with particularly high amounts of non-performing loans. For this reason, it would limit the number of actual bank recapitalizations, meaning that our proposal leads to the minimum amount of state aid necessary for avoiding financial turmoil. In light of the considerations detailed in section 6, this proposal would serve as a public back-stop compatible with European regulations on state aid to banks.