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The new European bank resolution framework: policy implications on European banks

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ABSTRACT

The change in bank resolution policy in Europe Union generated some implications for the EU banking system. We discuss the bail-in resolution tool introduced within the European Banking Union project alongside a review of the literature. Moreover, we analyse two important policy implications of the transition from a bailout to bail-in resolution. we observe the change in the banks' liabilities composition; second, we examine the reallocation of banks' bond holdings, according to the point of view of mis-selling. We observe a change in the liability composition towards cheaper liabilities and a reallocation of bank bonds toward more financially sophisticated investors, after the implementation of the bail-in mechanism.

Keywords: *Bail-in, EBU, Banking resolution.*
J.E.L. Classification: G21, G28

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1. Introduction

One of the factors that brought the European sovereign debt crisis in 2010-2011 was the increase in government debts due to the bailout of several banks deemed to be Too-Big-To-Fail (TBTF) using taxpayers' money. This phenomenon has been labeled as "sovereign-debt nexus" and represents the strong link between the stability of sovereigns and the stability of their domestic banks. The bailouts involved several European countries where public finances were used to rescue significant banks. Well-known cases are for example the Monte Dei Paschi di Siena in Italy - the European Commission approved state aid to the Italian bank in December 2012, for 3.9 billion euros - or Alpha Bank in Greece, for example. At the same time, in some cases, the European Commission decided to implement, a partially bail-in to cover the bank losses, like in the case of the Spanish Bankia.

The unfolding of these events and the implementation of different resolution procedures brought the EU to agree on the realization of a European Banking Union (EBU), a project structured in three main pillars, which would foster orderly crisis management and resolution of European banks. In this paper, we will focus on the second pillar of the EBU project, concerning the resolution of banks. First, we review the EU resolution regulation (which takes its foundation in the Bank Recovery Resolution Directive) and we review the literature on the effects of changes in the resolution framework. Finally, we discuss some of the policy implications arising from the introduction of the new resolution framework in Europe.

The second pillar of the EBU project takes its foundation from the Bank Recovery Resolution Directive (BRRD). The Directive established the Single Resolution Mechanism (SRM), which is the institution in charge of the resolution process for European banks since 2015. Specifically, the BRRD prescribes four tools to resolve a bank declared as "failing" or "likely to fail" by the European Central Bank (ECB), which is the institution generally in charge of supervision. We will explore the new resolution framework under the BRRD during this paper. The bank resolution is a crucial debate in the last 10 years, at least in European Union, and the bail-in makes a radical change to the European framework about bank resolution. The bail-in is the resolution tool that plays a prominent role. This had generated important implications for the system. Policy implications of the new resolution regime in the European Union are worthy of study.

The bail-in represents a significant change in the resolution policies adopted in Europe for failing banks. It goes in a very different direction compared to the resolution strategies that were implemented by the European governments after the last financial crisis (bailout). The bailout imposes bank losses upon taxpayers (cause the state aid provided by the national government to failing banks), while the bail-in requires the bulk of bank losses to be borne by equity holders, bondholders, and lastly (and partially), depositors.

This regulatory change had several consequences on the bank funding costs and on the allocation of bank debt across investors in the economy. The purpose of this paper is to highlight these "side effects" of the implementation of the new resolution framework. In particular, the increase in risk bore by banks' creditors, and consequently, their expectation of higher returns to compensate for the higher risk of their investments increased the funding costs for banks issuing debt securities. This in turn created an incentive for European banks to reallocate among their sources of funding. There is an incentive for banks to reduce the bank's more expensive sources of funding (e.g., bonds), and increase the cheaper sources of funding for banks (e.g., deposits). This might represent a risk for the banking system: excessive reliance on short-term liabilities (e.g., deposits) increases the liquidity risk. This constitutes the analysis of the first side effects carried out in Section 4.1.

We argue that another side effect of the implementation of the new resolution framework is to change the allocation of bond holdings across investors. The higher risk perceived by banks' investors might have changed the allocation of bank bonds. From a consumer protection point of view, bail-inable securities should not be directed to retail investors, but rather to the banking sector itself, which is rather more sophisticated (de Dreu and Bikker, 2012). Although we have to say that a bank's investments in other banks' bail-inable bonds may hinder financial stability via a contagion effect that might culminate into a systemic crisis. According to this point, one of the aims of the new resolution regime is to improve market discipline enhancing financial stability.

The rest of this paper is structured as follows. The review of the main literature on the banking resolution is described in Section 2. Section 3 describes the institutional background. Then, Section 4 presents the analysis of two of the potential unintended consequences of the bail-in regulation: Section 4.1 compares the banks' liabilities composition before and after the launch of the new resolution mechanism, and Section 4.2 shows the bond allocation among categories of investors. Section 5 concludes.

2. Literature review

The literature about the effects of the new resolution framework over the recent years and the different legislations worldwide is rapidly growing. Concerning specifically the introduction of the new European legislation about the resolutions of failing banks there are several papers analyzing the effects arising from the bail-in introduction.

Regarding the effects generated by the new resolution framework on the yield of bank securities in the EU, the literature generally agrees on an increase in the yield on the outstanding securities issued by banks, resulting in a higher cost of funding for banks (Cutura, 2018; Giuliana, 2019; and Crespi and Mascia, 2018). In turn, the broad increase in the cost of funding leads to changes in the composition of banks' liabilities. Brown et al.

(2017) analyze the Bank of Cyprus bail-in, finding that households withdrew their deposits and reallocated them in cash holdings. Carboni and Scardozzi (2021) find a decrease in depositors' trust after the announcement of the bail-in. This supports the notion that the new legislation needs an effective deposit insurance scheme and well-informed depositors to prevent bank runs (Diamond and Dybvig, 1983).

Concerning the analysis of bailinable bonds, Pigrum et al. (2016) study the holders of bail-inable securities. Home bias plays an important role in the allocation across different sectors. Concerning the type of the holders, they show that one-third of bailinable securities are held by the Euro Area banking sector, which may hinder financial stability because of the contagion effect. The other major holder of bail-inable bonds is the household sector, which also carries significant financial stability concerns, since retail investors may not be able to properly evaluate the risks implicit in banks' liabilities (Lusardi et al., 2014). Conversely, professional and institutional investors (such as insurances, mutual, and pension funds) are the ideal target for complex financial products: they have the capability, professional skills, and available data to accurately evaluate the risk-return combination of complex financial products instruments (de Dreu and Bikker, 2012). This implies that the allocation of bailinable bonds was not ideal from a financial stability point of view (Pigrum et al., 2016). The new resolution regime aims, among the others, to improve the market discipline, hence the bond allocation. Maddaloni and Scardozzi (2021) provide an experiment showing that before the approval of the bail-in, the mis-selling was a financial phenomenon widespread especially in Southern Euro Area countries. However, the bond allocation changed after the launch of the bail-in resolution mechanism; households sold their bank bonds to other, more sophisticated, financial intermediaries.

Finally, concerning market reactions following the resolution events: Shafer et al. (2016) analyze the credibility of bail-in by looking at CDS premia. They find stronger reactions when the bail-in mechanism is implemented compared to the announcement or approval of the bail-in regulation (Fratianni and Marchionne, 2013). Other papers run event studies around the dates of the regulation and/or around some resolution cases analyzing the stock returns (Fiordelisi et al., 2020) and CDS (Pancotto et al., 2019). Scardozzi (2021) comprehensively analyzes equity holders' different reactions after bank resolution by comparing the type of the event (bailout or bail-in), the time of the event (before or after the approval of the BRRD), and the failing bank's country. Capital flights constitute, in fact, another critical collateral effect of the new EU resolution regime.

Although, there are no papers analyzing the resilience of the new resolution tool during the COVID-19 period. From a financial point of view, bank liquidity during COVID-19 might be seriously affected caused the several lockdowns. We argue that this literature gap needs to be fil out by analyzing the effects of a possible bail-in implementation during bad times.

3. The EBU project

Because of the 2007–2009 global financial crisis and the EU sovereign debt crisis, policymakers realized the need to harmonize resolution procedures across the European countries to enhance financial stability and initiated the project of the Banking Union. The project rests on three pillars. The first pillar concerns the supervision of the banks. As of 4 November 2014, the Single Supervisory Mechanism (SSM) directly supervises those banks listed as significant by the European Central Bank, while national supervisory authorities supervise the remaining banks. The second pillar of the EBU concerns the resolution framework for insolvent banks. This framework was endorsed through the BRRD directive in 2014. The directive established a Single Resolution Board (SRB) and four tools that are available to resolve financial institutions declared by the competent authority as failing or likely to fail. The directive became effective in 2015 (except for the bail-in provision which entered into force on January 1st, 2016). Finally, the third pillar of the EBU concerns the implementation of a European Deposit Insurance Scheme (EDIS). This pillar (still in development) has been proposed in November 2015, and it should work in combination with the national Deposit Guarantee Schemes, which already ensure bank deposits up to €100'000 (we refer to it as deposit insurance). Thanks to the third pillar, the level of deposit insurance would not be dependent on the countries in which banks operate.

The operationalization of the EBU takes some time to complete: the European Banking Union project began in May 2012. The Single Supervision Mechanism (SSM) was effective in November 2014, the Single Resolution Board (SRB) in January 2015 (except the Bail-in tool became effective in January 2016), and the European Deposit Insurance Scheme (EDIS) is still in development.

3.1 The BRRD

We focus the analysis of this paper on the second pillar of the EBU project which takes its foundation in the Bank Recovery and Resolution Directive (BRRD - 2014/59/EU). The BRRD was approved on May 15, 2014, by the European Parliament and the European Council. This directive aims to provide authorities with efficient tools to deal with failing banks. The rationale behind the directive is the going concern principle of the banks, which implies transferring losses to investors, rather than using public funds which hamper the sovereign debt. The BRRD states that the SRB oversees the resolution procedure of Euro Area banks. The directive also establishes a fund, the Single Resolution Fund (SRF), financed by the Euro Area banks to support failing financial institutions. In a broader sense, the directive enhances the authority to tackle banking crises, firstly via an early intervention (when the bank fails to meet its capital requirements), and via a resolution procedure common to all

Euro Area banks when the first option is no longer viable. In the case of early interventions, the competent authority has the power to intervene before the bank's condition deteriorates (requiring, for example, the bank to draw up a recovery plan, change the bank's management, and appoint temporary administrators). If this does not work, the resolution of those banks should be implemented by the SRB by using one or a combination of the four different resolution tools provided by the BRRD. The four resolution tools are the sale of a business, the bridge institution, the asset separation, and the bail-in.

The most innovative tool is the bail-in, which prescribes a hierarchy (also known as bail-in hierarchy) of the types of securities converted into shares or written down in case of bank resolution, moving the burden of losses from taxpayers (bailout) to investors of the distressed financial institution: the costs of the bank failure will be borne first by bank equity holders, then by bondholders, and lastly by part of the depositors (according to the bail-in tool hierarchy); only at that point, might be financed from the resolution fund.

The BRRD establishes a hierarchy (Figure 2) of the liabilities that fall within the scope of the bail-in. In the case of bank resolution, the losses should be covered by using firstly, the Common Equity Tier 1, followed by Additional Tier 1 and Tier 2. If these instruments are not enough to cover the losses, subordinated bonds, and senior unsecured bonds will be called upon. Finally, the last category, at the bottom of the bail-in hierarchy, are customer deposits, only for the amount great than €100'000 (customer deposits smaller than €100'000 are fully protected by deposit insurance, whose harmonization becomes effective within the third pillar of the EBU).

The resolution fund can be used only after the bail-in of shareholders and creditors for a minimum amount of 8% of a bank's total liabilities. It can finance up to 5% of the bank's total liabilities. Only in exceptional cases, such as when a large bail-in would jeopardize financial stability, might the resolution authority seek funding from alternative sources, such as public support. This possibility must be approved by the European Commission and only after a bail-in of shareholders and creditors equal to 8% of the bank's total liabilities.

Following the hierarchy implied by the bail-in resolution framework, the cost of bank failure is covered mainly by banks' investors (rather than by taxpayers). However, the implications of the new framework for the financial sector's stability are multifaceted. On the one hand, bail-in establishes that public finances will no longer be used to resolve banks, reducing incentives for banks' moral hazard. On the other hand, the bail-in restricts the number of investors who bear the cost of failure, thus generating larger losses for fewer bank investors. This, in turn, can potentially hinder financial stability by generating cascade effects: if a bank default, it will affect its creditors in case of bail-in, and possibly their ability to repay loans owned by other banks, all in all increasing the likelihood of financial contagion (see Bernard et al., 2018) and therefore systemic risk.

4. Bail-in policy implications

We analyze in this section two important implications caused by the transition from a bailout to a bail-in resolution framework. First, it affected the liabilities composition of European banks (section 4.1); also, it induced a reallocation of bank bonds across different holding sectors (section 4.2). We aim to claim whether the regulators' goals were aligned with other implications generated by the regulatory change, providing support to amend, if necessary, the regulation to avoid the generation of additional financial risks.

The increase in funding costs documented in the literature has changed the bank liabilities composition following the introduction of the bail-in mechanism: bank bonds became riskier and more expensive relative to customer deposits (senior to senior and subordinated bonds according to the bail-in hierarchy).

Moreover, the second policy implication concerns the allocation of bank bonds. After several mis-selling scandals, the bail-in aims to enhance a greater market discipline and might cause a re-allocation of risky securities like bank bonds, from retail investors to more financially sophisticated investors.

3.1 Bank liabilities composition

There are three main categories of liabilities for a commercial bank: deposits, equity, and other liabilities such as bonds. Deposits represent the traditional funding source of banks. The bail-in makes bailinable liabilities more expensive according to the bail-in hierarchy and therefore created incentives for the banks to contain the increase in the cost of funding by increasing their reliance on deposits (they represent the cheapest sources of funding because they are at the bottom of the bail-in hierarchy and being partially insured by the Deposit Guarantee Scheme and the national insurances).

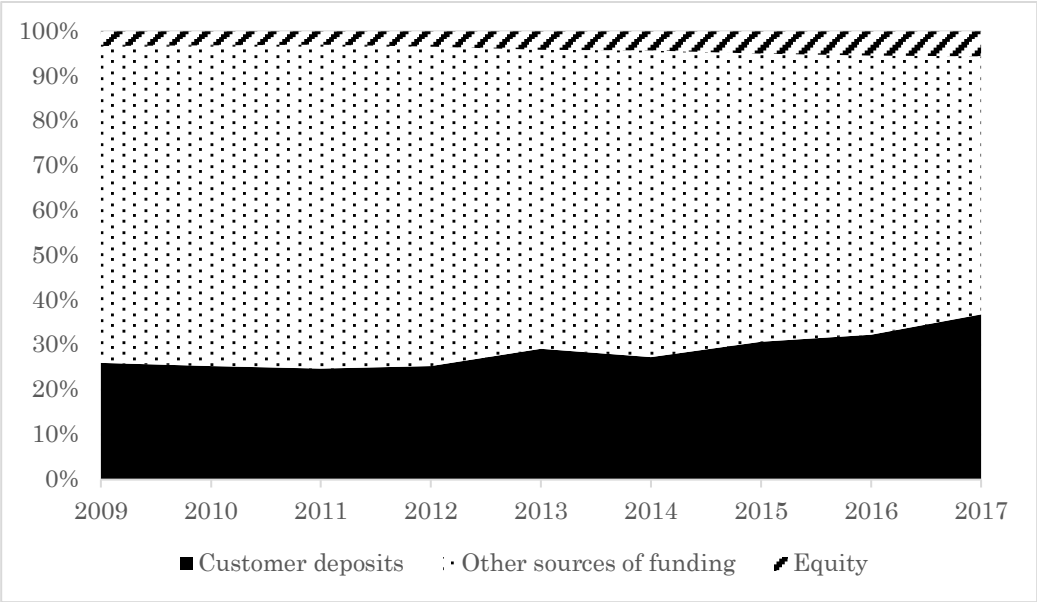
However, higher reliance on deposits increases banks' asset-liability mismatching, and exposes banks to higher liquidity risk, threatening their financial soundness during periods of financial stress. The greater reliance on deposits by banks is a threat to financial stability especially when large shocks realize – like in the case of the COVID-19 pandemic. Enterprises facing liquidity shortages, because of the impossibility to operate in the context of a health emergency, might withdraw the money deposited in the banks. A massive withdrawal could constitute a significant liquidity risk for banks as they may not be able to repay all the depositors and eventually result in a bank run.

The bail-in hierarchy leads to a different increase in risk for bonds and deposits since bondholders are subordinated to depositors in bearing bank losses. We represent the Euro Area liability composition reporting the main results of Maddaloni and Scardozzi (2021) by

means of financial statement data collected using Fitch Connect database from 2009 to 2017. Figure 1 shows the liability composition before and after the launch of the bail-in.

Figure 1 Euro Area banks' liability composition

The figure shows the Euro Area banks' liabilities mix from 2009 to 2017. The figure shows the trend of customer deposits, other sources of funding (such as bonds), and Equity as a fraction of the Euro Area bank's total assets. Source: Maddaloni and Scardozzi (2021).



The figure shows trends in the liability composition of Euro Area banks. We can observe the change in the Euro Area liability composition during the period of the BRRD transition. Euro Area banks increased the share of the less expensive sources of funding (customer deposits) that benefit from stronger legal protection according to the bail-in hierarchy while decreasing the share of those sources of funding that became riskier under the bail-in provisions. Such change has been proved empirically by Fiordelisi and Scardozzi (2022). They show that Euro Area banks reduced the other sources of funding relative to the US banks increasing their funding sources by customer deposits which increased for Euro Area banks after the change in EU resolution policy (relative to US banks).

This change in liability composition has great relevance for the banking system's financial stability. The greater reliance on short-term sources of funding, such as deposits, increases maturity mismatching in banks' liability and consequently increases liquidity risk. Vazquez and Federico (2015) pointed out that banks with high liquidity risk and leverage have a greater probability of failing during a crisis. At the same time, banks' greater reliance on deposits is costly due to higher asset-liability mismatching and the

pricing of possible bank runs, yet this risk does not seem to be priced. Also, higher levels of deposits cause banks to hold "unproductive" reserves (Diamond and Dybvig, 1983).

Policymakers, in developing the new resolution framework, aimed to improve market discipline. To enforce market discipline, market participants should have adequate incentives to monitor the bank's behaviors. These incentives may not be very high if bank bailouts remain an option since depositors and bondholders will continue relying on the implicit government guarantee on their investments. The introduction of the bail-in aimed at ruling out such implicit guarantees, enhancing incentives for market participants to monitor banks' risk-taking. Maddaloni and Scardozzi (2021) show that the liability composition for Euro Area banks changed for both risky and safe banks[1] starting in 2014. This suggests that the introduction of the bail-in provision has induced a significant change in the liability composition for Euro Area banks, leading to a preference for customer deposits as a financing source.

An important factor to consider is that the bail-in tool sparked significant concern among market participants, owing to uncertainty about whether the tool would be used in cases of TBTF banks. The sovereign debt crises that affected Europe have provided an undeniable example of the harm caused by State aid provided to large banks to restore their financial conditions and operability: Maddoloni and Scardozzi (2021) show that the TBTF issue moves into a Too Big To Be Saved one. High levels of sovereign debt in several European countries limit national governments' ability to implement additional domestic bailouts of banks on the verge of bankruptcy

3.2 Bank bond holdings in Euro Area

The bail-in introduction aims also to improve the bank bond allocation among investors categories. Mis-selling refers to those cases in which complex and/or risky securities - like bank bonds - are sold to investors lacking adequate levels of financial sophistication and, therefore, unable to price the risk inherent to these investments correctly. Financially unsophisticated investors typically belong to the retail sector, mainly composed of households. They typically have low financial literacy levels and are generally looking for a safe investment for their savings.

Over the past two decades, there have been several cases in Europe in which complex securities were sold to households not fully aware of the risks involved, notwithstanding measures to increase consumer protection, like the most recent implementation of the Markets in Financial Instruments Directive (MiFID) directive [2014]. In many of these cases, there is evidence that banks misguided their investors (Colaert and

[1] categorized using their loan impairment ratio

Incalza, 2018). For example, in 2013 the Italian bank Banca Etruria advertised its subordinated bonds as a safe investment to its customers. The case of Banca Etruria is well known because when the bank fell into trouble several retail investors lost their life savings.

Simultaneously, many investors – with different degrees of sophistication - relied on the implicit guarantee of the State in case of a bank failure. They did not account for the possibility to lose their money in case of bank default, since they assumed that in that case there would be a public bailout. The transition from a bailout resolution regime to the bail-in resolution mechanism meant that the resolution of failing banks would be managed without using taxpayers' money, but rather by enforcing the write-down of banks' liabilities to restore the bank's capital. Therefore, the BRRD clarified that securities issued by banks carry a higher risk than previously thought. The bail-in should have improved the market discipline requiring investors to be alert and operate carefully monitoring banks' risk-taking behavior. Improving the market discipline is one of the main objectives of the new resolution framework. Inadequate levels of financial literacy and sophistication could, however, hinder the achievement of such a result.

Policymakers expected a reduction in retail investors' holdings of subordinated bank debt once investors realized the removal of the implicit guarantee – no bailouts policy. On the contrary, professional and institutional investors are an ideal target for those securities, having the capability to evaluate the riskiness of the products, and therefore it is expected they would increase their holdings of subordinated bank debt.

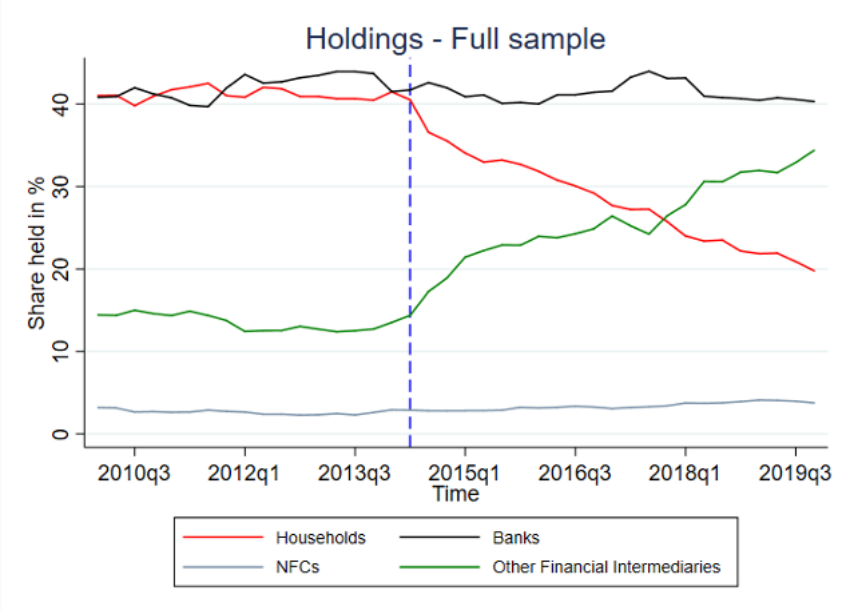
We analyze the allocation of bonds held in the Euro Area by means of Maddoloni and Scardozzi (2021) analysis, which uses the Securities Holdings Statistics (SHS) – a proprietary database of the Eurosystem. This database records quarterly data on holdings of securities held by different types of Euro Area resident investors.

Maddaloni and Scardozzi (2021) consider holdings of the main categories of investors clustered according to their level of financial sophistication: Non-financial corporations (NFCs), Banks (as deposit-taking institutions except for Central Banks), Households (as households and Non-profit institutions serving households), Other Financial Intermediaries (as Money Market Funds, Insurance Corporations, Pension funds, Non-Money Market Funds Investment funds, and financial vehicle corporations). Banks and Other Financial Intermediaries are the most financially sophisticated investors. We agree about the better financial sophistication of the latter category of holders (they are better equipped to fully assess the risk implicit in subordinated bank securities). In contrast, banks are more oriented toward retail investors, being deposit-taking corporations. Moreover, their holdings of bank bonds (e.g., cross-holdings) might hinder financial stability via contagion risk once bail-in procedures are implemented.

Figure 2 displays the allocation of bonds (excluding covered bonds, being not bail-inable) across the main investor groups over time, namely the quota of instruments held by each sector, calculated as the nominal amount of given security held by each category of holder sector over the total amount held by all holders sectors. It is evident that from 2014 Households decreased the share held of bank bonds (red line in Figure 2). The BRRD and, specifically, the bail-in provision was approved in April 2014. The household sector drastically reduced its holdings of bonds issued by banks, from the previous 40% to around 20% by the end of 2019. The figure shows that households sold the bank bonds to the Other Financial Intermediaries (green line in Figure 2) bought bank bonds, increasing their holdings from 15% to 35%. The remaining holders, NFCs and banks maintain a stable pattern during the period analyzed. This descriptive evidence suggests a reduction of mis-selling after the BRRD and the bail-in framework came into force. By the end of the sample (last quarter of 2019), bank bonds were held for the largest part by the most financially sophisticated investors (banks and Other Financial Intermediaries), the ones with better capacity to understand the risk and the complexity of these securities.

Figure 2 Holdings of bank bonds.

The figure shows the shares held by each investor group. The share is calculated as the nominal amount held by households for all bonds in a given quarter over the total amount held by all types of investors in the same quarter. Source: Maddaloni and Scardozzi (2021).



However, the massive holdings of bank bonds from other banks is also a reason for concern since it may increase contagion risks. Cross-selling, namely banks holding bonds issued by other banks, is a serious concern within the new resolution framework.

Our analysis shows that the new resolution regime might have determined a reallocation of the bonds issued by Euro Area banks across sectors. The rebalancing primarily entailed moving bank bonds from the household sector to the most financially sophisticated investors. This may have resulted in improved market discipline and fewer instances of mis-selling.

5. Conclusion

The global financial crisis showed that even the failure of a single bank could have enormous global implications. In Europe, the implementation of the European Banking Union (EBU) played a pivotal role in preserving the stability of the banking sector and the financial sector at large.

The EBU is composed of three pillars. The first created a common system for supervision, the second pillar harmonized the resolution of European banks, and the third pillar aims to improve and harmonize the deposit guarantees at the European level. Among these three pillars, the second pillar is the focus of this paper. The second pillar was formalized with the BRRD. It aims to enhance orderly bank crisis management once banks have been declared as failing or likely to fail by the European Central Bank. The new resolution framework for banks prescribes four resolution tools. Among them, the bail-in tool represented the most important innovation compared to past frameworks. The bail-in establishes a hierarchy among the liability instruments for bearing the losses of insolvent banks. These instruments must be exhausted before the Government can inject liquidity (e.g., bailout), hence using taxpayers' money.

In this paper, we reviewed some of the "unintended" consequences of the changes in banking resolution policy in the EU. The transition from a bailout to a bail-in resolution implied that bank losses must be covered using investors' rather than taxpayers' money. This should have led investors to ask for a higher risk premium on their investments, thus increasing the cost of funding for banks. This increase is indeed well documented in the literature. At the same time, we show that the new framework also induced a change in the bank liability mix, since the increase in the cost of funding for banks was not equal for all banks' funding sources.

Investors generally asked for a higher risk premium for bank liabilities less protected by the new resolution directive. Bank deposits remain at the bottom of the bail-in hierarchy and are in part also insured by national Deposit Guarantee Schemes (DGS). We show that after the BRRD announcement, banks changed their liability mix toward cheaper sources of funding. They increased the portion of customer deposits relative to other interest-bearing liabilities – mainly bonds. While bank deposits represent a relatively stable source of funding during noncrisis times, excessive reliance on bank deposits increases asset-liability

mismatch and may enhance liquidity risk, especially when shocks occur. The occurrence of an exogenous shock like the COVID-19 pandemic represents a stress scenario for the banking system. The economic downturn induced by the restrictive measures due to the pandemic induced an increase in the liquidity need of both households and corporations. In the case of large shocks, banks may face significant liquidity shortages since deposits can be withdrawn without limits and with almost no notice.

The second dimension of analysis that we addressed in the paper relates to the reallocation of banks' bond holdings across different sectors due to the bail-in. After several mis-selling scandals happening in the EU during 2012–2013, it has been recognized that the pursuit of financial stability should also imply a coherent allocation of risk across holders' sectors. Bank bonds should generally not be targeted at retail investors because they are mainly interested in investing their life savings - especially after the introduction of the bail-in regime. Further, they lack the financial literacy needed to evaluate these instruments correctly. It would be advisable that banks limit their holdings of these securities as well to avoid a cascade effect in case of a bank failure. Financial Intermediaries have the financial sophistication suitable for such investments, and other financial intermediaries (rather than banks) have a more speculative behavior. We show that after the new bail-in mechanism, there was a reallocation in the holdings of bank bonds from households to more sophisticated financial intermediaries. At the end of 2019, before the COVID-19 pandemic, bank bonds in Euro Areas were mainly held by the banking sector and by non-bank financial intermediaries. In terms of consumer protection, this allocation may be seen as an improvement compared to the situation before the new resolution regime. However, policymakers may want to consider limitations in the holdings of banks' bonds by the banking sector to avoid contagion risk and systemic crises in case of a bank failure. The cross-selling (banks holding other banks' bonds) is a potential threat to financial stability under the new bail-in regulation.

Overall, the change in resolution policy generated some "unintended" consequences on the financial system with both positive and negative connotations. The new European banking resolution regime fosters financial stability by increasing the banking sector's resilience, particularly when strong exogenous shocks like the COVID-19 pandemic hit the system.

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