# EDIS: A chimera? An analysis of its implementation and financing problems.

Seminar Paper

Submitted to Prof. Dr. Andreas Barth Faculty of Economics and Business Administration Goethe-Universität Frankfurt

> Supervisor: Prof. Dr. Andreas Barth

Submitted by Pedro Jesús Medina Alfaro

Field of study: Economics

ABSTRACT1			
1	INT	RODUCTION 2	
2		DERSTANDING THE NEED TO ESTABLISH A EUROPEAN BANKING ON	
	2.1	European political-economic system and Eurozone debt crise	
	2.2	A basic understanding of the perceived pernicious sovereign-bank nexus 4	
	2.3	How the establishment of an EDIS can contribute towards breaking the doom loop and thus to enhance the stability of the system?	
3		DBLEMS WITH IMPLEMENTING THE EUROPEAN DEPOSIT URANCE SCHEME	
	3.1	Risk reduction, market discipline and risk sharing: if at all, in that order, not vice versa	
	3.2	Moral hazard and adverse selection as general problems for the implementation of an EDIS	
	3.3	The problem of the NPLs7	
	3.4	The problem of the excessive sovereign exposure on banks' balance sheets	
4	HO	W SHOULD THE DEPOSIT INSURANCE FUND BE FUNDED? 10	
	4.1	Some basic premises	
	4.2	How should banks contribute to EDIS?10	
5	COI	NCLUSION	
LI	LIST OF REFERENCES		

### **ABSTRACT**

The paper begins by discussing the background and context that led to the need for a European Banking Union (EBU) and specifically its third pillar, the European deposit insurance scheme (EDIS). It is stated that the particularities of the European political-economic system created a breeding ground for Eurozone debt crises in the late 2000s, and that an understanding of the perceived pernicious sovereignbank nexus, or "doom loop," is necessary to understand the potential benefits of establishing an EDIS.

The paper goes on to examine the problems with implementing EDIS. Different academic views on these problems are analysed, as well as solutions that have been proposed. It is acknowledged that this is an eminently political affair and part of an ongoing discussion, and the reasons for the rejection of Paschal Donohoe's May 2022 proposal are briefly summarized. It is noted that special emphasis is placed on the incompatibility between the visions of Italy, Germany/France, the countries which have been mainly responsible for the negative outcome of the negotiations.

The final section of the paper delves into the question of alternatives for financing the European deposit insurance scheme. Since funding has been the most critical point in the negotiations and probably the one that has led them to failure so many times, the dogmatic analysis is carried out and the perspectives of representatives from the public and private sectors are included.

In conclusion, the paper provides a comprehensive analysis of the need for and challenges surrounding the implementation of the European deposit insurance scheme. It highlights the importance of understanding the background and context that led to the need for an EBU and EDIS, as well as the difficulties in implementing such a scheme. The paper also offers insights into possible alternatives for financing EDIS and emphasizes the ongoing nature of the political discussions surrounding its implementation.

# 1 INTRODUCTION

When asked about the new roadmap proposed at the beginning of May 2022 by Eurogroup president Paschal Donohoe, German EU diplomats have assessed the proposal to be "completely unsatisfactory, far beyond the ongoing issue of EDIS" (Greive, M., 2022). Accordingly, the motion to unblock the negotiations has not reached consensus at the meeting of the 19 eurozone finance ministers on Thursday 16<sup>th</sup> of June (Tamma, P. and Smith-Meyer, B., 2022). The European Deposit Insurance Scheme (EDIS) thus adds another setback in a long and unsuccessful journey (Howarth and Quaglia, 2018) that emerged in 2012 with the aim of strengthening the banking union and preventing new crises and formally began with the European Commission EDIS proposal 2015. But what has made the conception and implementation of this mechanism an impossible task until now?

In this paper we will first explain how the need to establish a European Banking Union (EBU) - and specifically its third pillar, EDIS – emerged. We will do so by presenting how the particularities of the European political-economic system created a breeding ground for Eurozone debt crises in the late 2000s (Collignon, 2012), by providing a basic understanding of the perceived pernicious sovereign-bank nexus (or "doom loop"), and by explaining how the establishment of an EDIS can contribute towards breaking this nexus and thus to enhance the stability of the system.

Having explained this issue, we will examine the problems with implementing EDIS, by analysing the different academic views on these problems and by reviewing some of the solutions proposed in different contributions. Since this is an eminently political affair and part of an ongoing discussion, we will also briefly summarise the different reasons for the rejection of Paschal Donohoe's May 2022 proposal. In this context, special emphasis will be laid on the incompatibility between the visions of Italy, Germany/France<sup>1</sup>, the countries which have been mainly responsible for the negative outcome of the negotiations (Donnelly, 2018).

<sup>&</sup>lt;sup>1</sup> In 2018, a group of 7 leading German and French economists - Bénassy-Quéré et al. (2018) - known as the "7+7" group, published a paper in which they tried to bring the German and French positions on European Economic and Monetary Union closer together, completing the Banking Union

Finally, we will delve into the question of alternatives for financing the European deposit insurance scheme. Considering that funding has been the most critical point in the negotiations - and probably the one that has led them to failure so many times - we will not only carry out a dogmatic analysis, but also include the perspectives of representatives from the public and private sectors.

# 2 UNDERSTANDING THE NEED TO ESTABLISH A EUROPEAN BANKING UNION

### 2.1 European political-economic system and Eurozone debt crise

The particularities of the European system, where sovereign states and supranational authorities coexist, make it extremely difficult to coordinate efficiently<sup>2</sup> the monetary policy and fiscal policies of each of the members of the community (Uhlig, 2002). To prevent this problem, an Excessive Deficit Procedure (EDP) was established in conjunction with the establishment of the European Union through the Stability and Growth Pact (SGP). This regulation mandates member states to keep their fiscal deficit below 3% and their public debt below 60% of GDP. In addition, the article 125 of the Treaty on the Functioning of the European Union (TFEU) states that the union shall not be liable for the commitments made by the member states, thus restricting the possibility of financial rescue in case any country was not able to repay its public debt. However, neither of those mechanisms<sup>3</sup> were able to prevent the European sovereign debt crisis in the late 2000s. One of the reasons for this was precisely the dissonance between the common monetary policy and the divergent fiscal policies existing in the countries of the union (Collignon, 2012). Additionally, the implicit guarantee of a bailout – a key factor in market discipline, both in the Banking Industry (Barth and Schnabel, 2015) and in the public debt market

and establishing a credible system for enforcing budgetary discipline and reducing sovereign debtto-GDP ratios.

<sup>&</sup>lt;sup>2</sup> And maybe most important, to the satisfaction of all union members.

<sup>&</sup>lt;sup>3</sup> The SGP has been subject to numerous exceptions and postponements. An example of this is the Coronavirus crisis, which in March 2020 prompted the European Commission (EC) to decide to activate its General Escape Clause. This measure will remain in force until 2023, with the intention of mitigating the impact of the war in Ukraine.

(Bénassy-Quéré et al., 2018) – has led the market to overprice the value of sovereign debt in the period prior to the outbreak of the crisis (Beirne and Fratzscher, 2013). All these factors have set the stage for a perfect storm that threatened the very existence of the eurozone. To avoid repeating these episodes and to ensure the sustainability of the eurozone, the idea of creating a banking union emerged in 2012 (Bénassy-Quéré et al., 2018).

# 2.2 A basic understanding of the perceived pernicious sovereign-bank nexus

Be it for profitability (Gvozdják and Chovancová, 2016), to comply with liquidity regulations, to be used as collateral in repo transactions, or to obtain funds from the ECB, banks have incentives to hold sovereign debt on their balance sheets (Mai et al., 2021). The links between banks and their governments have been referred to as the "doom loop" or "diabolic loop" (Brunnermeier and Sannikov, 2012). These arise when banks hold an excessive level of their own country's public debt and spread essentially in two ways. The first way occurs when a shock affects the value of sovereign bonds, thus impacting the banks that hold these instruments as assets by decreasing their value. This in turn affects the value of banks' equity value, making them riskier and increasing their funding costs. Banks, trying to compensate for these effects, become more reluctant to lend to the real economy, and charge a higher interest rate. This, in turn, leads to lower economic growth, which reduces tax revenues, further straining the sovereign's already tight fiscal position (Shambaugh et al., 2012). The second way emerges when financially stressed banks must call on the government's deposit guarantee to meet their obligations. This deteriorates the fiscal position, as it increases the potential cost it faces in assisting banks. The worsened sovereign position of the government again affects the value of its sovereign bonds, once again triggering the cycle.

It is difficult to say whether it is bank risk that makes sovereigns riskier (as in the case of Ireland), or the other way around (as in the case of Greece), and evidence has been found for a "two-way feedback loop" between the two sectors (Acharya et al., 2014). It has also been found that in most cases the nexus starts in the sover-eigns and then spreads to the banks (Palmén, 2020).

# 2.3 How the establishment of an EDIS can contribute towards breaking the doom loop and thus to enhance the stability of the system?

As explained in section 2.1, the idea of establishing a European Deposit Insurance Scheme was born with the aim of providing more robust protection for the eurozone in the event of financial crises, ensuring its long-term sustainability and prosperity. But how exactly could an EDIS help this?

While there is no general consensus that establishing a deposit insurance system is the only way to safeguard the stability of the financial system (Wuermeling, 2019), it is known that such mechanisms, when credible, can effectively prevent bank runs by preventing large groups of savers from simultaneously withdrawing their money from banks, directly affecting bank liquidity (Carmassi et al., 2020). This, in turn, can ex post prevent or mitigate losses in the event of resolution or insolvency (Demirgüç-Kunt and Laeven, 2014).

The benefit of establishing an EDIS is to incentivise banks to invest outside their home countries (Schoenmaker, 2018), which would break the incentive they currently have to fall into the so-called "home bias" (discussed below).

# 3 <u>PROBLEMS WITH IMPLEMENTING THE EUROPEAN DEPOSIT</u> INSURANCE SCHEME

# 3.1 Risk reduction, market discipline and risk sharing: if at all, in that order, not vice versa.

"[...] Banking Union remains a very complex project, both technically and politically, a project that we are continuing to try to make progress on in very challenging times. **However, it is my firm belief that shared challenges can also foster a shared sense of responsibility.** [...]." (Council of the European Union, 2022).

With these words Paschal Donohoe presented on 3 May 2022 his proposal to unravel the negotiations for the establishment of EDIS. However, his laudable intentions to strengthen the banking union did not last long: at the Eurogroup meeting of 16 June 2022, no significant progress was made on this issue, and the positions of Germany-France and Italy seem more and more distant (Tamma, P. and Smith-Meyer, B., 2022). As Bénassy-Quéré et al. (2018) point out, to make progress on the risk sharing involved in EDIS, corresponding progress must also be made on the items of risk reduction and market discipline. This is the only way to achieve the objective of robust eurozone architecture, improving its protection against future economic crises.

It is precisely this dichotomy between the different actors' visions of risk reduction and risk sharing that makes it difficult to divide the issues of how to implement an EDIS and how to finance it. However, we can try to structure both problems in the following way: There are still concerns about moral hazard and adverse selection, which may undermine market discipline once an EDIS is in place, and that has made EDIS until now impossible to implement. These problems have two main concrete causes: the amount of non-performing loans (NPLs), and excessive sovereign exposure on banks' balance sheets (Dombret, A. and Kenadjian, P., 2020). Concerning the issue of NPLs, it is important to note that the lack of uniformity in insolvency regimes in the Eurozone exacerbates the problem. In relation to sovereign exposure, the seriousness of this problem is that it is one of the possible starting points for the "doom loop" (Brunnermeier and Sannikov, 2012), with the pernicious consequences that it entails.

We will briefly go into the aspects of moral hazard and adverse selection, and then delve into the specific causes most often mentioned for this.

# **3.2 Moral hazard and adverse selection as general problems for the implementation of an EDIS**

#### 3.2.1 Moral Hazard

Moral hazard, as an economic concept, depicts situations in which an individual holds asymmetric information about the consequences of his own actions. According to the theory, individuals tend to take greater risks in their decisions when it is a third party who assumes the eventual negative consequences of their decisions (Krugman and Wells, 2008). Moral hazard is the main concern of opponents to the establishment of EDIS in the terms in which it is currently proposed. It is argued that the countries participating in this deposit insurance scheme could relax their banking policies, knowing that depositors will be protected at all events by the supranational system that EDIS aims to create (Schoenmaker, 2018). Some examples outlined by Pisani-Ferry and Zettelmeyer (2019) constitute insufficient protection of

creditors' rights, insolvency processes with excessive duration, or lax mortgage financing policies.

Among the most cited solutions to counter moral hazard issues is the establishment of a "country component" in the deposit insurance premium (Pisani and Zettelmeyer, 2019; Schnabel and Véron, 2018).

### 3.2.2 Adverse selection

Adverse selection describes situations prior to the signing of a contract, in which one of the contracting parties, who is less informed, is not able to distinguish the good or bad quality of what is offered by the other party (Akerlof, 1978). Following Stiglitz and Weiss (1981), adverse selection occurs in insurance when the "worst risks" get a guarantee, while the "best risks" do not. In the case of an EDIS, if deposit insurance premiums are not differentiated according to the riskiness of a given bank, adverse selection may arise as a problem. If, for example, smaller banks are riskier, they would need a deposit insurance system to a greater extent than larger banks. However, as both small and large banks benefit from greater stability of the banking system, large banks pay a premium similar to that of small banks. The effect is that the smaller banks are then being subsidised by the larger banks (Nikolaj et al., 2019).

Precisely this seems to be the position of German savings banks and cooperatives: they already have an insurance system, which works efficiently, so they have virtually no incentive to opt for an EDIS. (Howarth and Quaglia, 2018).

### 3.3 The problem of the NPLs

One of the most problematic legacies still putting a strain on the eurozone ten years after the outbreak of the debt crisis are the so-called "NPLs" (non-performing loans). The ECB considers exposures as "non-performing" if more than 90 days have passed since their maturity, or if it appears unlikely that their debtor will pay without the collateral needing to be called (ECB, 2017). While the total amount of NPLs has declined significantly in the period between 2014 and 2019 from around  $\in$ 1 trillion to approximately  $\in$ 580 billion (Enria, 2019), with the COVID-19 crisis, losses of between  $\notin$ 400 billion and  $\notin$ 800 billion are predicted, stemming from bad loans and declines in revenues (Wyman, 2020, cited in Łasak, 2021).

As Enria (2019) points out, the problem is not solving itself. The ECB has been active in trying to solve this problem, for example by establishing guidance for banks in relation to NPLs (2017). This guidance was supplemented in March 2018 by adding supervisory expectations for prudential provisioning of non-performing exposures.

The main problem with NPLs, besides their uncollectibility, is that they are assets which are difficult to value - "opaque", as Panetta (2019) noted. This makes them a constant source of uncertainty in banks' fundamental analysis. In addition, the loss of cash flow, coupled with the investment of time and human resources in managing their collection (or the loss of the nominal value of the asset in case it is sold to a third party for a highly discounted value), has a direct impact on the profitability of the bank (Kadioglu and Ocal, 2017). There is thus consensus, especially in the German and French-led block (Ossig, 2019; Wuermeling, 2019; Bénassy-Quéré et al., 2018), that without progress in this area, completing the banking union is practically impossible. However, some authors point out that although a very justified concern, this issue has also been used as a scapegoat by politicians who do not want to make progress in the definitive establishment of the banking union (Christie, 2020).

Another problem generated by NPLs is the lack of uniformity in relation to their actual collectability. This is because it depends to a large extent on the legal system of the country in which it is found, even encouraging "strategic defaults" on the part of debtors who, knowing that legal proceedings are slow and ineffective, simply stop paying (Christie, 2020).

# 3.4 The problem of the excessive sovereign exposure on banks' balance sheets.

In section 2.2. we provided a basic understanding of what is meant by a doom loop, one of its main causes being excessive holdings of domestic public debt. But what is it that pressures banks to hold higher levels of domestic public debt on their balance sheets?

Farhi and Tirole (2016) mention theories that explain the domestic bias of banks when purchasing government debt. For instance, under a potential default, governments would tend to default first on their debt to foreign banks. This is known as "selective default". The logical result of this practice is that banks, knowing that they can earn a higher return on their home country bonds than foreign investors, have an incentive to purchase such instruments to a greater extent, which fuels the loop. Another reason is that governments would exert a kind of "moral suasion" on banks, whereby they would try to reduce their funding costs by incentivising banks to buy their government debt at above-market value.

Other authors (Acharya and Steffen, 2015; De Groen, 2015) point to the so-called "carry trade". This practice consists of the arbitrage of interest on public debt carried out by a bank, acting as an intermediary between its respective government and the European central bank. Therefore, banks have less incentive to lend to the real economy, increasing their home bias.

Recent economic history has taught us about the serious consequences that such sovereign exposures can have, which is why the issue has been and continues to be the subject of heated political debate at the European level (e.g., Basel Committee on Banking Supervision, 2017). Attempts have been made to address the issue by subjecting such sovereign exposures to a risk weight that is in turn a function of the country's risk rating, and/or by establishing additional risk weights when the level of sovereign debt held on the bank balance sheet exceeds a certain level (Verón, 2017; Bénassy-Quéré et al., 2018).

However, it is precisely this issue that has led countries such as Italy to strongly oppose an EDIS arrangement that would imply limitations on the sovereign exposure of their domestic banks. It has been argued that, instead of being conducive to achieving the objective of making the eurozone more stable, the proposals weaken the defences against financial shocks, raising the risks of instability (Messori and Micossi, 2018).

Ultimately, and considering that this has been one of the main reasons for Italy's refusal to accept Paschal Donohoe's proposal, this is an issue that will remain open to political debate in the eurozone, threatening to permanently block the establishment of an EDIS.

### 4 HOW SHOULD THE DEPOSIT INSURANCE FUND BE FUNDED?

### 4.1 Some basic premises

As we have seen in the previous sections, the very idea of setting up an EDIS has been the subject of much debate, without a clear prospect of whether or not it will become a reality. However, in addition to the problems involved in the establishment of such a system, there is another, perhaps even more complex problem: how to finance the deposit insurance fund (DIF) if an EDIS were to be implemented. Here we will review the various proposals that have been made for the DIF and analyse (where appropriate) the reasons why they have been discarded. As we shall see, in the absence of consensus on the structure of the EDIS, the question of its financing has evolved with the different proposals that bear its name.

There is a consensus that, if an EDIS is introduced, it must have clear funding rules in order to ensure its credibility in a crisis (Keuschnigg, 2017; Schoenmaker, 2018). This is of the utmost importance, since the very purpose of an EDIS is to avoid banking panics, a matter that can only be achieved by fostering the trust of depositors in the system. The depositors' trust fosters the preservation of stability of the financial system in cases of crisis (Carmassi et al., 2020), and will help to prevent a repetition of scenarios such as the debt crisis in the Eurozone in the late 2000s. For this reason, the funds to finance an EDIS cannot come from a government bail-out (Restoy, 2021). Instead, it must be financed by banks themselves through a mechanism that ensures solidarity among institutions operating in the same market (Cerrone, 2018).

# 4.2 How should banks contribute to EDIS?

In its different proposals by the European Parliament and the European Commission, there is a development from a full-fledged EDIS (proposal of 2015) to a more hybrid form that retains national deposit guarantee schemes and complements them with a supranational reinsurance fund and mandatory lending among the deposit guarantee schemes (High-Level Working Group on EDIS, 2019, Council of the European Union, 2020). This funding should occur ex-ante such as that the financial institutions contribute to funding before a failure event and EDIS should cover all the deposits below 100,000 euros of all the banks affiliated (Tümmler, 2022). To this end, EU member states need to be able to present 0.8 percent of total covered deposits by 2024.

Importantly, the question remains how to calibrate the contributions the banks make to EDIS. As many authors conclude (e.g., Adam et al. 2019; Mascher 2019) banks should be paying a risk adjusted premium, so that banks that are considered particularly safe pay lower risk premiums and riskier banks pay higher premiums (Mascher 2019). This is due to moral hazard-related distortions if banks are not charged a premium equal to fair cost (Jokivuolle and Pennacchi, 2019). Jokivuolle and Pennachi (2019, p.25) argue that EDIS can be designed in a way that avoids moral hazard if design features include (in addition to a requirement for substantial bail-inable equity and debt and managing the risk of DIF funds using insurance derivatives) "a systematic risk charge paid by banks to the ESM for its line of credit."

On the operative side of calibrating risk premiums fairly, Mascher (2019) proposes CAMEL scoring such as used by the american FDIC (Capital adequacy, asset quality, management, earnings and liquidity) to reduce the risk of free riding and embed the right incentives for banks to operate in a less risky manner. The author also suggests to use EBA guidelines as a basis which also allow to reflect country specifities. All in all, the author calls for transparency through a clear methodology anchored in a delegated act in order to provide assurance to the fact that risk will be covered and priced in an adequate manner.

### 5 <u>CONCLUSION</u>

As we have seen, EDIS remains a highly controversial project, and it is unclear whether it will actually become a reality. This is basically for two reasons, both directly linked to banks' balance sheets: excessive holdings of domestic sovereign debt, and NPLs. All indications are that Italy will continue to defend its position, arguing that it needs its local banks to have a liquid government bond market. Germany, for its part, is unwilling to hand over its "golden credit card" (Atzler and Kröner, 2022), basing its position on the limited benefit it would derive from the introduction of such a system, in addition to its concerns about moral hazard and market discipline. All of the above suggests that it is very unlikely that an EDIS will be introduced in the short term.

# LIST OF REFERENCES

Acharya, V., Drechsler, I. and Schnabl, P., 2014. A pyrrhic victory? Bank bailouts and sovereign credit risk. *The Journal of Finance, 69*(6), pp.2689-2739.

Acharya, V.V. and Steffen, S., 2015. The "greatest" carry trade ever? Understanding eurozone bank risks. *Journal of Financial Economics, 115*(2), pp.215-236.

Adam, K., Büttner, T., Hennrichs, J., Krahnen, J.P. and Rocholl, J., 2020. Rethinking Europe's Deposit Guarantee Scheme. *EDIS, NPLs, Sovereign Debt and Safe Assets, 23,* p.337.

Akerlof, G.A., 1978. The market for "lemons": Quality uncertainty and the market mechanism. In *Uncertainty in economics* (pp. 235-251). Academic Press.

Atzler, E and Kröner, A 2022. 'Nicht bereit, Großbanken die goldene Kreditkarte zu geben" – Sparkassen und Genossen wettern gegen Brüssel', *Handelsblatt*, 30 May, viewed 5 June 2022, https://www.handelsblatt.com/finanzen/eu-einla-gensicherung-nicht-bereit-grossbanken-die-goldene-kreditkarte-zu-geben-spar-kassen-und-genossen-wettern-gegen-bruessel/28372128.html

Barth, A. and Schnabel, I., 2015. Implicit guarantees and market discipline: Has anything changed over the financial crisis?. *Johannes Gutenberg University Mainz. URL: https://acpr. banque-france. fr/sites/default/files/medias/20151202-d2. pdf.* 

Basel Committee on Banking Supervision, 2017. The Regulatory Treatment of Sovereign Exposures. *Discussion Paper.* 

Beirne, J. and Fratzscher, M., 2013. The pricing of sovereign risk and contagion during the European sovereign debt crisis. *Journal of International Money and Finance*, 34, pp.60-82.

Bénassy-Quéré, A., Brunnermeier, M., Enderlein, H., Farhi, E., Fuest, C., Gourinchas, P.O., Martin, P., Pisani-Ferry, J., Rey, H., Schnabel, I. and Véron, N., 2018. Reconciling risk sharing with market discipline: A constructive approach to euro area reform. Brunnermeier, M.K. and Sannikov, Y., 2012, August. Redistributive monetary policy. In *Jackson hole symposium* (Vol. 1, pp. 331-384). Federal Reserve Bank of Kansas City Kansas City, KS.

Brunnermeier, M.K. and Sannikov, Y., 2016. *The I theory of money* (No. w22533). National Bureau of Economic Research.

Brunnermeier, M.K., Garicano, L., Lane, P.R., Pagano, M., Reis, R., Santos, T., Thesmar, D., Van Nieuwerburgh, S. and Vayanos, D., 2016. The sovereign-bank diabolic loop and ESBies. *American Economic Review, 106*(5), pp.508-12.

Brunnermeier, M.K., Langfield, S., Pagano, M., Reis, R., Van Nieuwerburgh, S. and Vayanos, D., 2017. ESBies: Safety in the tranches. *Economic Policy*, 32(90), pp.175-219.

Carletti, E., 1999. *Bank moral hazard and market discipline* (No. dp326). Financial Markets Group.

Carmassi, J., Dobkowitz, S., Evrard, J., Parisi, L., Silva, A.F. and Wedow, M., 2020. Completing the Banking Union with a European deposit insurance scheme: who is afraid of cross-subsidization?. *Economic Policy*, 35(101), pp.41-95.

Cerrone, R., 2018. Deposit guarantee reform in Europe: does European deposit insurance scheme increase banking stability?. *Journal of Economic Policy Reform, 21*(3), pp.224-239.

Christie, R., 2020. Non-Performing Loans: Stumbling Block or Scapegoat?. *EDIS, NPLs, Sovereign Debt and Safe Assets, 23,* p.178.

Collignon, S., 2012. Europe's debt crisis, coordination failure, and international effects.

Council of the European Union 2022, Remarks by Paschal Donohoe following the video conference of the European of 3 May 2022, Council of the European Union, Brussels, viewed 05 June 2022, <a href="https://www.consilium.europa.eu/de/press/press-releases/2022/05/03/remarks-by-paschal-donohoe-fol-lowing-the-video-conference-of-the-eurogroup-of-3-may-2022/>">https://www.consilium.eu-ropa.eu/de/press/press-releases/2022/05/03/remarks-by-paschal-donohoe-fol-lowing-the-video-conference-of-the-eurogroup-of-3-may-2022/>">https://www.consilium.eu-ropa.eu/de/press/press-releases/2022/05/03/remarks-by-paschal-donohoe-fol-lowing-the-video-conference-of-the-eurogroup-of-3-may-2022/>">https://www.consilium.eu-ropa.eu/de/press/press-releases/2022/05/03/remarks-by-paschal-donohoe-fol-lowing-the-video-conference-of-the-eurogroup-of-3-may-2022/>">https://www.consilium.eu-ropa.eu/de/press/press-releases/2022/05/03/remarks-by-paschal-donohoe-fol-lowing-the-video-conference-of-the-eurogroup-of-3-may-2022/>">https://www.consilium.eu-ropa.eu/de/press/press-releases/2022/05/03/remarks-by-paschal-donohoe-fol-lowing-the-video-conference-of-the-eurogroup-of-3-may-2022/>">https://www.consilium.eu-ropa.eu/de/press/press-releases/2022/05/03/remarks-by-paschal-donohoe-fol-lowing-the-video-conference-of-the-eurogroup-of-3-may-2022/>">https://www.consilium.eu-ropa.eu/de/press/press-releases/2022/05/03/remarks-by-paschal-donohoe-fol-lowing-the-video-conference-of-the-eurogroup-of-3-may-2022/>">https://www.consilium.eu-ropa.eu/de/press/press-releases/2022/05/03/remarks-by-paschal-donohoe-fol-lowing-the-video-conference-of-the-eurogroup-of-3-may-2022/>">https://www.consilium.eu-ropa.eu/de/press/press-releases/2022/05/03/remarks-by-paschal-donohoe-fol-lowing-the-video-conference-of-the-eurogroup-of-3-may-2022/>">https://www.consilium.eu-ropa.eu/de/press/press-releases/2022/05/03/remarks-by-paschal-donohoe-fol-lowing-the-video-conference-of-the-eurogroup-of-3-may-2022/>">https://www.consilium-by-paschal-donohoe-fol-lowing-the-video-conference-of-the-

Council of the European Union 2022, *Remarks by Paschal Donohoe following the video conference of the Eurogroup of 3 May 2022*, Council of the European Union, Brussels, viewed 05 June 2022, <a href="https://www.consilium.europa.eu/de/press/press-releases/2022/05/03/remarks-by-paschal-donohoe-fol-lowing-the-video-conference-of-the-eurogroup-of-3-may-2022/>">https://www.consilium.eu-ropa.eu/de/press/press-releases/2022/05/03/remarks-by-paschal-donohoe-fol-lowing-the-video-conference-of-the-eurogroup-of-3-may-2022/></a>

De Groen, W.P., 2015. The ECB's QE: Time to break the doom loop between banks and their governments. CEPS Policy Brief No. 328, March 2015.

de La Porte, C. and Heins, E. eds., 2016. *The sovereign debt crisis, the EU and welfare state reform* (pp. 15-41). London: Palgrave Macmillan.

De Nicolo, G., 2001. Size, charter value and risk in banking: An international perspective. *Available at SSRN 255465.* 

Demirgüç-Kunt, A., Kane, E.J. and Laeven, L., 2014. *Deposit insurance database* (No. w20278). National Bureau of Economic Research.

Dombret, A. and Kenadjian, P.S. eds., 2020. *EDIS, NPLs, Sovereign Debt and Safe Assets* (Vol. 23). Walter de Gruyter GmbH & Co KG.

Donnelly, S., 2018. Advocacy coalitions and the lack of deposit insurance in Banking Union. *Journal of Economic Policy Reform*, 21(3), pp.210-223.

ECB, S., 2017. Guidance to banks on non-performing loans.

Enria A., 2019. *Non-performing loans in the euro area – where do we stand?*. EDIS, NPLs, Sovereign Debt and Safe Assets Conference, 14 June, Frankfurt.

Enria A., 2019. *Non-performing loans in the euro area – where do we stand?*. EDIS, NPLs, Sovereign Debt and Safe Assets Conference, 14 June, Frankfurt.

Farhi, E. and Tirole, J., 2018. Deadly embrace: Sovereign and financial balance sheets doom loops. *The Review of Economic Studies*, 85(3), pp.1781-1823.

Grandia, R., Hänling, P., Lo Russo, M. and Åberg, P., 2019. Availability of highquality liquid assets and monetary policy operations: an analysis for the euro area. *ECB Occasional Paper*, (218). Greive, M 2022. 'European Deposit Insurance Scheme fails due to German resistance', *Handelsblatt*, 13 June, viewed 15 June 2022, https://www.handelsblatt.com/finanzen/banken-versicherungen/banken/euro-gruppe-europaeische-einlagensicherung-scheitert-an-deutschem-widerstand/28421568.html

Gvozdják, V. and Chovancová, B., 2016. Holdings of Government Bonds by Commercial Banks during the Financial and Debt Crisis in Europe. *European Financial Systems* 2016, p.207.