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in Reshaping Fiscal Sovereignty

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Abstract

The thesis builds on the premise that the European Union’s incomplete fiscal architecture remains one of the central tensions of European integration. For this study, the European Investment Bank is particularly relevant because it connects EU policy priorities with financial instruments that operate beyond ordinary national budgetary channels. On that basis, the study conceptualises the EIB as a para-fiscal actor because it carries out selected fiscal-like functions without becoming a treasury or central budgetary authority.

The central research question asks to what degree the para-fiscal activity of the EIB affects the fiscal policy choices and economic sovereignty of EU member states. The analysis covers Euro area member states from 2010 to 2024 and distinguishes between the pre-EFSI, EFSI and InvestEU periods. The empirical design uses a mixed-methods approach combining quantitative panel analysis with qualitative process tracing. The quantitative models test whether lagged guarantee-backed EIB exposure is associated with public investment, measured through general government gross fixed capital formation, and sovereign financing conditions, measured through spreads over the German Bund. The analysis further tests whether the relative value of EIB-backed support is higher in fiscally or financially constrained member states.

For the qualitative leg, Italy and Spain are used as higher-exposure and more constrained cases, while the Netherlands serves as a contrast case with stronger fiscal space. The findings show weak average effects for public investment and sovereign spreads, suggesting that EIB-backed exposure does not operate uniformly across all member states. However, the interaction models provide stronger evidence that EIB exposure is associated with lower sovereign spreads in more constrained member states. The qualitative findings support this conditional interpretation.

The thesis concludes that the EIB affects fiscal policy choices and sovereignty indirectly, by reshaping financing conditions and sectoral priorities. The study contributes to debates on EU fiscal governance by showing how para-fiscal capacity can develop through guarantee-backed and delegated mechanisms.

Zusammenfassung

Die Arbeit geht von der Prämisse aus, dass die unvollständige fiskalische Architektur der Europäischen Union weiterhin eine zentrale Spannung der europäischen Integration darstellt. Für diese Studie ist die Europäische Investitionsbank besonders relevant, da sie politische Prioritäten der EU mit Finanzinstrumenten verbindet, die außerhalb gewöhnlicher nationaler Haushaltskanäle wirken. Auf dieser Grundlage wird die EIB als para-fiskalischer Akteur verstanden, da sie ausgewählte fiskalähnliche Funktionen übernimmt, ohne eine Finanzverwaltung oder zentrale Haushaltsbehörde zu sein.

Die zentrale Forschungsfrage lautet, inwieweit die para-fiskalische Tätigkeit der EIB die fiskalpolitischen Entscheidungen und die wirtschaftliche Souveränität der EU-Mitgliedstaaten beeinflusst. Die Analyse umfasst die Mitgliedstaaten des Euro-Währungsgebiets im Zeitraum von 2010 bis 2024 und unterscheidet zwischen der Vor-EFSI-Phase, EFSI und InvestEU. Das empirische Design nutzt einen Mixed-Methods-Ansatz, der quantitative Panelanalysen mit qualitativer Prozessverfolgung kombiniert. Die quantitativen Modelle prüfen, ob verzögerte, garantiebasierte EIB-Exposition mit öffentlichen Investitionen, gemessen anhand der staatlichen Bruttoanlageinvestitionen, und staatlichen Finanzierungsbedingungen, gemessen anhand der Spreads gegenüber deutschen Bundesanleihen, zusammenhängt. Zusätzlich wird geprüft, ob der relative Wert EIB-gestützter Finanzierung in fiskalisch oder finanziell eingeschränkten Mitgliedstaaten höher ist.

Für den qualitativen Teil werden Italien und Spanien als Fälle mit höherer Exposition und stärkeren Einschränkungen untersucht, während die Niederlande als Kontrastfall mit größerem fiskalpolitischem Spielraum dienen. Die Ergebnisse zeigen schwache durchschnittliche Effekte auf öffentliche Investitionen und Spreads. Dies deutet darauf hin, dass EIB-gestützte Exposition nicht in allen Mitgliedstaaten einheitlich wirkt. Die Interaktionsmodelle liefern jedoch stärkere Hinweise darauf, dass EIB-Exposition in stärker eingeschränkten Mitgliedstaaten mit niedrigeren Spreads verbunden ist. Die qualitativen Ergebnisse stützen diese bedingte Interpretation.

Die Studie kommt zu dem Schluss, dass die EIB fiskalpolitische Entscheidungen und Souveränität indirekt beeinflusst, indem sie Finanzierungsbedingungen und sektorale Prioritäten verändert. Damit leistet die Studie einen Beitrag zur Debatte über fiskalische Governance in der EU und zeigt, wie para-fiskalische Kapazität durch garantiebasierte und delegierte Mechanismen entstehen kann.

Pledge of Honesty

On my honour as a student of the Diplomatische Akademie Wien, I submit this work in good faith and pledge that I have neither given nor received unauthorized assistance on it.

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1 Introduction

Since the official establishment of the European Union (EU) in 1993, the organisation has successfully deepened its integration while also more than doubling the number of its members. Despite these achievements, several barriers have continued to prevent deeper integration, with fiscal integration being especially relevant here. Deficits and debt have remained primarily under national control, which became especially important once monetary policy was centralised within the Economic and Monetary Union (EMU). Nonetheless, the introduction of the general escape clause allowed for exemption from the fiscal rules that EU members had to abide by. Starting from 2020, despite the framework remaining in place, members had greater flexibility. (European Commission 2020a) The policy was introduced in response to the COVID-19 pandemic and later extended in the context of the energy crisis triggered by Russia's war on Ukraine. The period on the emergency flexibility ended with the reintroduction of those fiscal rules at the end of April 2024, leading to the establishment of a more coordinated fiscal framework, reinstating the fiscal pressure on member states. (European Commission 2024; European Union 2024) These developments prompted the question of how a monetary union without a full fiscal union handles fiscal pressure and investment support. To explore this, it is necessary to investigate which mechanisms support investment and stabilisation when national fiscal room remains constrained.

However, deeper institutional obstacles remain. Since a fiscal union has not been realised, the EU's monetary union continues to produce structural vulnerabilities through asymmetric integration. This creates demand for fiscal-like substitutes, meaning mechanisms that perform selected fiscal functions without establishing a formal fiscal union. The main risks arising from this structural shortcoming include sovereign debt pressures and the absence of strong counter-cyclical stabilisation at the EU level. This increases the need for fiscal policy coordination among member states and for EU-level instruments that can support investment under constraint. In this context, the European Investment Bank (EIB) becomes central to the analysis because its role has expanded to include counter-cyclical lending, guarantee-backed support and large-scale investment mobilisation. This makes the EIB a useful case through which to examine how fiscal-like support can operate without the creation of a formal fiscal union.

This imbalance in EU integration, together with recurring crises and the changing role of EU institutions, points to a broader shift within the EU system. This leads to the central research question: to what degree does the para-fiscal activity of the European Investment Bank affect the fiscal policy choices and economic sovereignty of member states? In this study, economic sovereignty is examined through two observable dimensions: sovereign financing conditions, measured by the 10-year government bond yield spread over the German Bund, and public investment capacity, represented by general government gross fixed capital formation (GFCF) as a share of gross domestic product. The analysis examines the EIB from this angle and asks whether the effects of an emerging fiscal-like layer within the EU system can be observed. The assessment focuses on the Euro area to ensure a degree of comparability, and covers the period from 2010 to 2024, which captures the EIB’s evolving mandate across the post-crisis, European Fund for Strategic Investments (EFSI) and InvestEU periods. I argue that the EIB does not directly determine national fiscal policy, but can indirectly reshape the conditions under which fiscal choices are made by improving financing conditions, absorbing risk and steering investment composition, especially in fiscally or financially constrained member states.

The objective is to bridge fiscal federalism and delegation by quantifying the extent to which guarantee-backed EIB exposure is associated with changes in public investment and sovereign financing conditions using fixed-effects country-year panel regressions. The findings also inform a broader discussion of the trade-off between effective EU-level investment support and national control over fiscal priorities. (Schmidt 2020, 25–55) In this sense, the study links fiscal federalism, delegated governance and guarantee-based investment support within EMU to assess how fiscal cooperation operates through EU-level financial instruments.

1.1 Literature Review

To establish the literature gap addressed by the thesis, the review proceeds through three connected areas: fiscal federalism and fiscal capacity, EIB-backed additionality and substitution, and delegation, sovereignty and policy space. Since the primary topic of the analysis is para-fiscalism, the first step is to establish the fiscal federalism benchmark against which fiscal-like functions can be assessed. To determine this functional logic, I draw on Oates’ article *An Essay on Fiscal Federalism*, which adopts a broad view that is

useful for analysing guarantees and risk-sharing. (Oates 1999, 1120–1121, 1137–1138) An important element of the research is Musgrave’s three-objective framework of distribution, stabilisation and allocation, which is later adapted to fit the research focus of this study. (Musgrave 1959, 5) Through the IMF Discussion Note 18/03, I contextualise Musgrave’s triad, turning to fiscal capacity typologies to distinguish fuller shared designs from limited stabilisation instruments. (Arnold et al. 2018, 5–7) This literature establishes the functional benchmarks of fiscal capacity and clarifies why stabilisation and risk-sharing remain central even where a full fiscal union is absent.

Asdrubali, Sørensen and Yosha (1996) also provide a vital benchmark for understanding insurance as part of fiscal instruments. (Asdrubali, Sørensen and Yosha 1996) Furthermore, a later work from Sørensen and Yosha (1998) describes the situation of the EMU, providing the context that the stabilisation gap creates scope for EU non-transfer instruments to influence financing conditions and investment to some extent. (Sørensen and Yosha 1998) Taking into account these core features of fiscalism, the focus then shifts to para-fiscalism, where I draw on the IMF *Manual on Fiscal Transparency* and its discussion of activities such as loan guarantees and crisis-response operations. (International Monetary Fund 2001, 29–33) This step helps establish a more specific strand focused on supranational instruments that perform selected fiscal-like roles without amounting to a full fiscal union. Thus, para-fiscalism captures governance-embedded instruments that substitute for missing central fiscal capacity within EMU.

The research problem is rooted in the criticism of the European Court of Auditors, specifically regarding the evidence base used to claim additionality, which keeps the question of crowding out and reclassification politically relevant across institutions and recipient governments. This study contributes quantitative and process-tracing evidence to this dispute. (European Court of Auditors 2019, Executive summary, IV, VIII) This links the analysis to development finance literature on additionality, crowding-in and substitution as benchmarks for whether EIB support expands investment or displaces alternative financing. (European Commission 2018, 12, 80–86) The EIB operationalises this as additionality in its Additionality and Impact Measurement (AIM) framework, defined as the difference between the EIB contribution and market alternatives. (European Investment Bank 2020) Beyond that, public credit support tools can ease crisis-era credit supply constraints by reducing intermediary risk and incentive problems, implying stronger effects in stressed environments. (Fedele, Mantovani and Liucci 2010) A related channel is the

catalytic effect of official lending, whereby public support can improve perceived creditworthiness or reduce risk and thereby crowd in other finance, which motivates the later focus on sovereign financing conditions. (Bird and Rowlands 2004) Blending literature is closely related, since it also asks whether limited public backing combined with non-grant instruments is genuinely additional or partly substitutional. This is important for the present study because it frames EIB-backed activity as an empirical question rather than an assumed benefit: the analysis must assess whether guarantee-backed exposure is associated with public investment, financing conditions and possible substitution dynamics.

This also makes displacement effects within the EU an integral part of the assessment. As Picarelli et al. suggest, displacement can be connected to public investment compression. (Picarelli, Vanlaer and Marneffe 2019) This creates space to examine the role of other EU financial bodies, especially the EIB, in relation to national fiscal autonomy. The EIB is particularly relevant because it is positioned as an EU-owned financial institution. (European Investment Bank, n.d.) The EIB is also distinct as it combines policy support with financial sustainability, a characteristic that distinguishes it from purely commercial lenders. This gives the EIB a unique role that ranges from development finance to delegated EU governance. The question is therefore not only whether EIB-backed support is additional, but also whether it reshapes the conditions under which member states exercise fiscal discretion.

Within this scope, Clifton, Díaz-Fuentes and Gómez (2018) are also significant, alongside literature that positions the EIB as an integration and market-making actor and, in crisis periods, as a nucleus of an EU ‘investment state’. The analysis extends this line by shifting to the post-crisis, EU-guarantee-based toolkit and testing its delegation and macro effects. (Clifton, Díaz-Fuentes and Gómez 2018; Mertens and Thiemann 2019; Howarth and Kavvadia 2024) A further relevant strand of literature concerns delegation and governance. Principal-agent approaches help explain why member states may delegate complex investment-related functions to an institution such as the EIB, while also raising questions about control. (Pollack 2003) This suggests a shift in control that can reshape the policy space of some member states. At the same time, literature on sovereignty under interdependence and experimentalist governance is useful because it allows the study to interpret guarantee-based support not merely as financing, but as a delegated institutional channel through which EU priorities may shape national policy space. (Krasner 1999; Sabel and Zeitlin 2008)

Thus, three gaps emerge from the existing literature. First, it treats the EIB as a para-fiscal actor within the EMU financial infrastructure, creating a new lens through which to observe the EIB. Second, it addresses the ‘additionality vs crowding-out’ debate by examining whether guarantee-backed EIB activity expands investment capacity or partly substitutes national public effort. Third, it examines whether and how EIB-backed activity reshapes the fiscal autonomy of member states. Taken together, these strands clarify the functional, institutional and governance dimensions of the problem, which are necessary to explain how guarantee-backed EIB activity may reshape national fiscal policy space within EMU.

1.2 Methodology

The methodology establishes the analytical backbone of the study by outlining the purpose of each step necessary to conduct the study. The methodology follows from the three gaps identified in the literature review: the EIB’s para-fiscal role, the additionality vs crowding-out debate and the sovereignty implications of delegation.

These under-researched areas reveal the direction necessary to answer the research question and lead me to form three interconnected hypotheses. The claim made by H1 is that higher guarantee-backed EIB exposure is associated with higher public investment levels and, where feasible, changes in investment composition. Programme tagging such as climate or innovation is examined as qualitative evidence of steering, and the pipeline-selection channel is examined in the qualitative section. H2 shifts the emphasis from public investment to sovereign financing conditions and analyses whether higher EIB exposure is associated with lower spreads through risk-sharing and credibility channels. Finally, H3 explores whether these associations are stronger in fiscally or financially constrained member states, where the relative value of off-budget capacity is higher.

The broader framework of the thesis combines a fiscal-economic approach to para-fiscal functions with an international political economy perspective on delegation and fiscal policy space. These ideas structure the study by establishing a hybrid model that weaves together fiscal federalism with the principal-agent dynamics of delegation. (Pollack 2003) This is complemented by the EIB framework developed in the following chapter, which is necessary to position and ground the empirical design. Together, these elements make it possible to situate the three hypotheses, a crucial step in answering the research question.

The empirical strategy combines quantitative and qualitative methods. The quantitative side uses a fixed-effects country-year panel design for Euro area member states from 2010 to 2024, with country and year fixed effects, estimated in two models aligned with H1 and H2, with H3 implemented as an interaction extension. Exposure is measured as country-attributed guarantee-backed EIB exposure under EFSI and InvestEU, scaled by nominal GDP, with variation coming from how much risk-bearing capacity and investment volume each country receives under EU guarantee regimes. I use lagged exposure to reduce reverse causality concerns, while standard errors are clustered at the country level. The qualitative side uses process tracing and comparative case analysis, focusing on Italy, Spain and the Netherlands, to document the causal sequence from EU guarantee priorities and screening procedures to EIB-backed sectoral exposure and national public investment composition. Italy and Spain are used as higher-exposure and more constrained cases, while the Netherlands provides a contrast case with stronger fiscal space. (Sabel and Zeitlin 2008) Evidence comes from programme documents, EFSI and InvestEU sectoral exposure data and general government gross fixed capital formation by Classification of Functions of Government (COFOG) function. The detailed operationalisation of the variables, data construction and qualitative evidence base is presented in the empirical methods chapter.

2 The EIB and the EU Guarantee-Based Investment Architecture

2.1 The EIB in the EU Policy Architecture

Situating the EIB as an institution within the EU structures is essential for the study. Its institutional identity is rooted in the Treaty on the Functioning of the European Union (TFEU), which grants its legal personality in Article 308. As the TFEU defines the EIB as a bank, the core task determined by the treaty-based status is long-term financing, marking its role as a public financial institution, which is vital for achieving EU policy goals. (European Union 2012, Art. 308)

The TFEU explains its real responsibilities in the following article. Article 309 defines the EIB's main functions, stating that it shall operate on a non-profit basis, grant loans and

give guarantees. The TFEU directs EIB support towards less-developed regions, modernisation and conversion projects, and schemes serving the interests of member states. The objective of the EIB is to help mobilise public and private investment within the EU, which is necessary to further EU policy priorities through project financing. These goals are concretely achieved via tasks such as providing advisory services or utilising equity-type instruments. There are many spheres where the EIB is active, including infrastructure, innovation, climate-related investment, cohesion and social investment. These initiatives follow a policy-driven financing logic focused on long-term project finance. (European Union 2012, Art. 309; European Investment Bank, n.d., 2025d)

As previously stated, the TFEU treats the EIB as a bank, yet, compared to a commercial bank, there are many differences. Rather than private shareholders, the EIB is owned by the 27 member states of the EU. It is closely tied to EU objectives, where project selection is strictly in line with the EU trajectory. The treaty task is strongly tied to balanced development throughout the EU. Unlike a commercial bank, the EIB operates under a public policy mandate defined by the EU. Its role is therefore not based on profit-maximisation alone, but on supporting projects that advance EU policy objectives. In addition, in terms of investment horizon, the EIB has the ability to take longer-term positions and it is bound by the TFEU to prioritise projects that "cannot be entirely financed by the various means available in the individual Member States" (Article 309). (European Union 2012, Art. 309; European Investment Bank, n.d.)

The EIB is highly relevant to this study due to its macro-level operations and support for EU priorities, which highlight its importance at the Union level as a financing channel. Its salience derives from its role as the EU's financial arm, bridging political priorities and economic execution. As it was given the role of a major multilateral lender, its task is to support the implementation of EU priorities where the central EU budget is limited. Ultimately, this means higher relevance in times when private finance and national budgets are too limited for necessary investment needs. (European Investment Bank, n.d., 2026e)

The body responsible for all projects is the EIB Group, which consists of both the EIB and European Investment Fund (EIF). The EIF is responsible for initiatives on SMEs, venture capital, portfolio guarantees and microfinance. The division of labour between the EIB and the EIF promotes transparency by separating the Group's different operational levels. This setup also provides flexibility and adaptability, since the support can be scaled as necessary when private finance tightens. (European Investment Bank, n.d.)

The structure of the EIB can be broken down into the following main bodies: the Board of Governors is the highest decision-making body, the Board of Directors oversees the direction of operations and the Management Committee handles day-to-day management. (European Investment Bank, n.d.) The formal decision-making structure elevates the EIB from just a simple private lender to a formally governed public institution, while the governance structure reinforces its status as a public-policy financial institution. The institutional governance reflects that all member states of the EU are its owners. (European Investment Bank, n.d.)

Its counter-cyclical support remains crucial in times of asymmetric economic shocks that threaten the Union, because it provides ready funds when commercial banks scale down their operations. (European Commission 2018, 46–47, 100–104, 135–137) This role is visible in strategic infrastructure financing, such as the EIB’s €1.6 billion financing for the Bay of Biscay electricity interconnection between Spain and France. (European Investment Bank 2025b) This example illustrates the scale of EIB operations, with the Bank’s 2024 lending signatures reaching €76.6 billion. (European Investment Bank 2025c) In 2025, the EIB Group reached a historic €100 billion in annual signatures, with plans to scale further in 2026. (European Investment Bank 2026e, 2025a) Its AAA-rated creditworthiness is the enabling condition behind the EIB Group’s low-cost borrowing, which makes it possible to finance European projects. (European Investment Bank, n.d.) Although the EIB engages in a wide range of lending and advisory activities, this study focuses on a specific and expanding subset of its operations: guarantee-backed activity under EFSI and InvestEU.

2.2 The Role of EU Guarantees

One of the EIB’s most essential instruments is the EU budgetary guarantee. The analysis focuses on the contemporary guarantee architecture operating through the EIB, as the guarantee-backed activity is a significant subset of EIB operations, which encompass the initiatives of EFSI and InvestEU operating through EU programme structures and implementing arrangements. (European Union 2015, 2021)

The relevant legal framework states that "The EU guarantee [...] is to be an unconditional, irrevocable, first demand guarantee in favour of the EIB." This means the guarantee must be honoured on first demand, which helps sustain the EIB’s market credibility and its

market-based funding model while functioning as a loss-absorbing public backstop. The guarantee provides a “supply of risk-bearing capacity to the EIB,” an indispensable risk buffer at the EU level. It also paves the way for any projects “with a higher risk profile that require risk-sharing through the EU budget, in order to unlock additional private and public finance.” (European Union 2015, 2021)

However, it differs from a grant. While grants provide direct spending, guarantees function as contingent liabilities that cover parts of potential losses. In this way, guarantees indirectly support the financing capacity of member states and allow for a larger number of operations, without creating an additional classic fiscal transfer mechanism. Guarantees are designed to “address market failures or sub-optimal investment situations [...] which could not have been carried out to the same extent by the EIB Group or private sources under ordinary market conditions.” (European Union 2021; European Investment Bank 2020)

From the EIB Group’s perspective, guarantees reflect a policy approach of shock absorption, shifting away from an earlier focus on capital preservation towards a greater willingness to absorb losses. This shows the dynamic shift towards becoming a gap-filler for the riskier and less bankable projects. The approach creates new opportunities for the EIB Group, funding innovative and "First-of-a-Kind" technologies that lack a historical track record, thereby widening the feasible range of supported projects. Because the EIB acts as a buffer against shocks, it can de-risk investments, make them more attractive to private capital and promote crowding-in. The Common Provisioning Fund plays a crucial role in protecting the EIB from the volatility of high-risk sectors. However, the guarantee is not in itself what constitutes the product of the bank; rather it is the enabling condition that allows the Bank to support riskier projects and influence investment markets. (European Investment Bank 2020; European Commission 2020b)

The European Commission presents this logic through the expected multiplier effect, where every euro of the EU guarantee is expected to trigger around €14 to €15 of total investment. (European Commission 2022) This is the logic behind leverage, where the amount of financing for potential recipients is maximised compared to the Union contribution’s amount. (European Commission 2022) This points towards the core aim of the policy, namely investment mobilisation, through which the guarantee architecture is intended to crowd in private financing where needed. (European Union 2025; European Commission 2022)

"The guarantee works through risk-sharing rather than direct budget expenditure," which showcases the necessity of the 'liquidity cushion' to compensate upon losses materialising. (European Commission 2020b) This creates the possibility "to support a wider breadth of policy objectives with the same amount of budgetary resources," which is what really initiated the inclusion of guarantees in the toolkit of the EIB. (European Union 2021, Recital 15) The primary argument for it was for efficiency reasons, where the new venture of guarantees is encouraged as the EIB should "contribute to improving the competitiveness and socio-economic convergence of the Union [...] by doing more with limited budgetary backing." (European Union 2021, Recital 11)

Guarantee-backed activity is foundational to the argument because it links EU budgetary backing to EIB risk-bearing capacity and national investment support. This makes it the clearest institutional setting in which the study's para-fiscal argument can be examined. Following this logic, the EIB can be treated as a de facto channel for EU-backed investment support. (European Union 2015, 2021, 2025)

2.3 Institutional Periodisation and Mandate Shifts

The guarantee-backed role of the EIB can be understood through institutional phases that reflect changes in its mandate and in the wider EU guarantee architecture. The goal of the periodisation is to support analytical precision and justify the later empirical and qualitative design, while narrowing the study to the years that matter most for the research. The shifts are intended to reflect the mandate changes and the evolving guarantee architecture, revealing major institutional shifts. (European Union 2015, 2021)

For the study, the first period encompasses the state of the EIB before it had any major architecture built on guarantees. This refers to a more unstructured and decentralised guarantee environment, which I denoted as the reference period for the thesis. I label this era as the pre-EFSI period, situating it based on the fact that it came before EFSI, the first major EU guarantee model centred on the EIB Group. This is the time period starting from 1958 until 2014, when the public-bank role was already present, but the guarantee-based toolkit was not yet centralised. Although this is a long historical period, it functions as the institutional baseline, while the empirically relevant pre-EFSI window for this study is 2010–2014. During this time, the traditional long-term project finance was dominant. (Publications Office of the European Union, n.d.; European Union 2015)

The introduction of guarantee architectures was the real breakpoint that is relevant to this study. As EFSI was launched, the transformation in the toolkit of the EIB materialised, becoming analytically central to the argument. This major EU budget guarantee model is at the heart of the study, serving as the second period of the analysis and as the basis for the later empirical methods chapter. It can be considered the leap towards more explicit guarantee-backed investment architecture. Launched in 2015, EFSI was the financial foundation of the Juncker Plan. Its significance is shown by the €21 billion provided through a combination of EU budget resources and EIB capital. The new phase of the toolkit facilitates higher risk and policy priority operations via the expanded risk-bearing capacity. The Juncker Plan institutionalised investment mobilisation as a central EU policy tool. (European Union 2015; European Investment Bank, n.d.)

As the Juncker Plan reached its legal conclusion in 2020, InvestEU replaced and expanded the existing framework. The new initiative was the InvestEU project, which launched in 2021 and operates through 2027. The Juncker Plan began as a post-crisis investment-mobilisation initiative, with EFSI serving as its guarantee-backed financial foundation. Yet, the introduction of InvestEU revealed that the initial guarantee-based response had evolved into a broader and more consolidated guarantee structure. InvestEU created a more unified framework, replacing the fragmented first attempt and consolidating the earlier instruments. Compared to EFSI, InvestEU operates within a broader post-2020 EU financing environment, which is one of the main reasons for treating this stage as a separate phase. However, the role of national implementing partners relative to the EIB was scaled up along with the increased budget, with one quarter of the budget given to the former. This shift points to more decentralised implementation, which matters for how EU guarantee priorities are translated into national investment pipelines. Under InvestEU, the operational scope was expanded: it broadened from a narrower set of priority sectors, such as infrastructure and energy, to a wider cross-sector architecture, showcasing a transition from initial guarantee innovation to a more embedded and routinised investment architecture. This has led to the normalisation of these guarantee structures within the EU investment support. These comparisons display that InvestEU is not just the continuation of EFSI, but its expansion. This has led me to treat it as its own phase. (European Union 2021; European Commission, n.d.; European Union, n.d.)

The periodisation provides the institutional structure for the empirical and qualitative analysis. The pre-EFSI period functions as the baseline, while EFSI marks the first major guarantee turn and InvestEU captures the more consolidated architecture. This makes the guarantee-based concept institutionally meaningful for the study. (European Union 2015, 2021; European Investment Bank 2024; European Union 2025)

2.4 Relevance for the Thesis

The technical differences between the periods identified above underline the politically consequential nature of the architecture, the central premise of the chapter. This is rooted in the nature of the programme design, which makes some projects more likely to receive support than others. This follows from the fact that eligibility rules and policy priorities shape the space of feasible investment. It becomes now observable that the architecture channels support through criteria along with neutral market allocation. The institutional conclusion of the chapter is that the EIB has become more than just a lender, but a structured allocator of support under EU priorities. This can be better understood as the guarantee-based architecture having consequences beyond financing volume alone. (European Union 2021; European Investment Bank 2020)

The mechanism here follows a simple scheme: the programme design shapes the access to support. The eligibility criteria determine which projects enter the investment pipeline. The areas most likely to receive support are aligned with the sectoral priorities of the EU, thereby reflecting the Union's priorities. In the case of guarantees, conditionality serves as the determining factor for the form and direction of supported investments. This implies that the national policies of member states are indirectly influenced by such guarantees in favour of certain projects. This can be described as a case of steering, which occurs via institutional filters rather than through direct command. The extent of steering depends on the priorities of the organisation, which are translated into supported investment decisions. (European Union 2021; Sabel and Zeitlin 2008)

The institutional basis established here is vital for the assessment, as it provides the foundation for the analysis of policy steering in the empirical methods chapter. The chapter's core takeaway is that guarantees may matter for public investment outcomes. Moreover, it helps to explain why the same architecture may matter for financing conditions. The section ties together EU-backing, risk-sharing and project selection, the interaction of

which is central to the argument. The institutional features shown in this chapter create the conditions under which H1, H2 and H3 become plausible. The architecture links the institutional chapter to the later empirical design, demonstrating its relevance to the later empirical analysis. (European Union 2021, 2015) This chapter has established the institutional foundation for the study. The following chapter develops the theoretical framework through which these institutional features are interpreted.

3 Theoretical Framework

3.1 Conceptualising Para-Fiscalism

The EMU represents deep monetary integration, but fiscal policy remains far less integrated. The central institutional gap is the absence of a formal fiscal union. This creates institutional asymmetry, with limited central fiscal capacity remaining the main bottleneck. Despite fiscal policy remaining largely national, decentralised fiscal capacity limits the EU’s ability to respond collectively to large-scale economic shocks. In the absence of a formal fiscal union, the EU relies on substitute instruments, coordination rules and off-budget support mechanisms. Some fiscal-like functions are therefore performed by other EU bodies, which supplement the limited formal EU budget. (Arnold et al. 2018; Farhi and Werning 2017; Mundell 1961)

Since no universally accepted definition of para-fiscalism fits the present study, I construct its defining features using the functions of fiscalism as a benchmark. Para-fiscalism is used here as an operational concept developed for this study, drawing on fiscal federalism, fiscal-capacity literature and IMF discussions of fiscal and quasi-fiscal activities, but adapted to the supranational EU setting. For that reason, the analysis follows Musgrave’s triad logic, where a functional benchmark can be applied as the basis, because he defined what every healthy fiscal system must have. According to him, “the budget is ... is a primary instrument of social and economic policy by which the government may influence the level of economic activity.” (Musgrave 1959) This introduces the three pillars he proposes: first, “the allocation branch [of the budget] is needed to provide for the satisfaction of public wants... which cannot be satisfied through the market mechanism,” which implies the intentional role of fiscal policy. (Musgrave 1959) Second, it is argued that “the stabilisation branch... must ensure that total demand is maintained at a level which will provide

for full employment and a stable price level,” which again suggests the need for central coordination. (Musgrave 1959) The last pillar he names is redistribution, but it remains less central to the assessment because it deals with the supranational level instead of the individual. At the supranational level, the priority shifts from individual income redistribution to risk-sharing between member states. This matters because member states, like individuals in Musgrave’s social insurance logic, may face shocks they cannot absorb alone. The same logic is visible in Musgrave’s discussion of social insurance, where he states that “the case for the social insurance approach... rests on the proposition that certain risks are of a type which the individual cannot provide for on his own,” where I adapt the ‘individual’ benchmark into one that focuses on the state for the purposes of this analysis. (Musgrave 1959) This establishes fiscalism as a functional concept. This view allows institutions to be perceived and categorised based on their respective responsibilities instead of their labels, which provides partial substitutes to the absent central fiscal body. This makes it possible to locate fiscal-type effects outside a formal treasury structure. (Oates 1999; Asdrubali, Sørensen and Yosha 1996; Sørensen and Yosha 1998)

The key distinction is between a formal fiscal union and fiscal-like functions dispersed across bodies of a more complex organisation. I treat the former as a counterfactual benchmark: a treaty-based and permanent treasury funded through tax revenue and common debt, with centralised stimulus capacity. By contrast, I use the term para-fiscalism for the latter, which differs in many elements from any official type of fiscal union. Para-fiscalism therefore cannot mean any public intervention. The contrast is necessary here, as this provides the criteria to identify exactly where formal fiscal capacity ends and para-fiscal substitutes begin. (Arnold et al. 2018; Bénassy-Quéré, Ragot and Wolff 2016; Farhi and Werning 2017)

Para-fiscalism also differs from the related concept of quasi-fiscalism. The clearest points of difference lie in its intent, level, governance and nature. Quasi-fiscalism is usually discussed at the national level and often refers to unilateral, off-budget or less transparent forms of public support. Para-fiscalism, as used here, refers to supranational, governance-embedded mechanisms designed to compensate for missing central fiscal capacity. The differentiation narrows the analytical scope and creates a fitting definition for the research question. Thus, it is ensured that the concept remains focused on instruments engineered to compensate for the EMU’s missing central fiscal capacity, making it analytically useful in the EMU and relevant in this case. (International Monetary Fund 2001)

To accurately situate para-fiscalism in the existing literature and within the above discussion, I break down its characteristics into three categories: the institutional framework, the operational logic and the systemic purpose. From the institutional standpoint, para-fiscalism operates on the supranational level, being embedded in the rules and mandates of delegated authorities, while remaining fragmented due to the lack of centralisation. Its operational logic rests on off-budget support, guarantees, risk-sharing and co-financing, through which limited public backing can mobilise larger investment volumes. Its systemic purpose is to provide a substitute for the absence of a fiscal union, especially in the form of macroeconomic stabilisation and risk-sharing tools. (International Monetary Fund 2001; Arnold et al. 2018; Farhi and Werning 2017)

As established above, the limited formal fiscal integration of the EU makes substitute tools more valuable, meant to serve as a temporary alternative to the unfinished fiscal union. However, the need for stabilisation and insurance remains in the EU, which are necessary safety nets against the backdrop of crises. This illustrates the type of solution that balance-sheet-based tools can provide. These tools become politically attractive because they provide support without creating a full transfer union, even though recurring shocks continue to generate demand for stabilisation. Therefore, the EMU alone cannot supply tools that are institutionally blocked from being established on the basis of the EU legal framework. This is the reason why guarantee-based mechanisms have become so important over the past decade. (Farhi and Werning 2017; Mundell 1961; Arnold et al. 2018; Sørensen and Yosha 1998)

Based on this framework, I define para-fiscalism as follows. For the purposes of this study, para-fiscalism refers to supranational, governance-embedded instruments, specifically off-budget, risk-sharing, co-financing and guarantee-based mechanisms, that perform selected fiscal-like functions without amounting to a formal fiscal union. This conceptual framework provides the analytical basis for the rest of the analysis.

3.2 The EIB as a Para-Fiscal Actor

Having defined para-fiscalism, this section applies the concept to the EIB. The EIB is treated as a para-fiscal actor because its guarantee-backed activity under EFSI and InvestEU performs selected fiscal-like functions without creating a formal fiscal authority. It is Treaty-based and supranational, while its guarantee-backed operations allow it to sup-

port de-risking through delegated financial instruments. The section therefore assesses whether the EIB's legal position and operational role fit the concept developed above. (European Union 2012, 2015, 2021)

The EIB fits the legal-institutional side of the concept because it is situated at the supranational level and supported by the EU Treaties. Concerning the institutional framework, the EIB fits the criteria of being situated on the supranational level supported by the EU Treaties. Within this category, the EIB performs selected fiscal-like functions, but only partially and without the centralisation of a full fiscal union. It manages one fragment of fiscal-like activity rather than the full mandate that would belong to a formal fiscal authority. (European Union 2012)

The second aspect, the multi-layered operational logic, can also be observed in the case of the EIB. For the EIB, the foundation is its balance-sheet power, which relies on its AAA-rated creditworthiness, supporting low-cost borrowing and balance-sheet capacity. This input is used to provide services, such as guarantee-backed investments, indirectly to private actors. The EIB also performs a co-financing role, which is to help specific projects materialise. The outcome is the mobilisation of proportionally much larger investments with great leverage, as the EIB guarantee only covers a "first-loss" portion in case the investment fails, while the co-financing rate is capped at a smaller portion of the project's total cost, effectively unlocking private liquidity for EU policy goals. This demonstrates that limited public backing can be used to unlock a larger share of specific investments, which align with the EU's priorities. (European Investment Bank, n.d.; European Union 2015, 2021, n.d.; European Commission 2022)

The systemic origin of this role was rooted in economic crises. The absence of a stabilisation instrument became apparent when crises started unfolding, leading to a gradual evolution of an alternative stabiliser as crises became more severe, which contributed to the practice of counter-cyclical lending. This is the guarantee architecture developed under the EIB Group mentioned in the previous paragraph, specifically EFSI and later InvestEU. The established framework structurally materialised as risk-sharing and insurance mechanisms became increasingly embedded elements of EIB activity. These developments create an indirect stabilisation channel by lowering investment risk and supporting projects aligned with EU priorities. (Fedele, Mantovani and Liucci 2010; Howarth and Kavvadia 2024; European Union 2015, 2021; European Investment Bank, n.d.)

The EIB in its current state does not replace a fiscal union, which can be observed from both the contents of the Treaties of the EU on the EIB and the obligations that the EIB must fulfil. These indicate that the EIB performs selected fiscal-like functions as it channels support through off-budget, guarantee-backed, co-financed and risk-sharing mechanisms. This provides evidence that the EIB can be read as a para-fiscal actor, which also helps explain investment steering and indirect stabilisation effects. (European Union 2012, 2015, 2021)

This inference is crucial for the following sections. This classification has wider implications because it raises questions of delegation and control. The reason is that the EIB channels support through EU-level priorities and criteria, which cannot be considered politically neutral in their effects. That opens the discussion on sovereignty, which in turn drives the justification for the hypotheses. (Pollack 2003; Sabel and Zeitlin 2008)

3.3 Delegation and Fiscal Sovereignty

As the previous section showed that the EIB performs fiscal-like functions, the analytical scope widens from a solely economic analysis to one that also includes the political sphere. The focus therefore shifts to the allocation of authority, specifically to guarantee distribution, support, criteria, and discretion. This raises questions about control, discretion and the extent to which EIB delegation reshapes member-state sovereignty under interdependence.

To investigate the question of delegation, Pollack's principal-agent framework is the most suitable for this assessment. Due to the absence of any sort of formal treasury, the principal-agent framework is equipped to explain the current relationship between the EU and its members in the fiscal sense. It suggests that the alternative that replaces a real treasury is an adaptation built in place of an institutionally incomplete structure. Following the principal-agent logic, in this context the member states are principals, while the agent is the EIB. The principals delegate some tasks to the agent, from which five different efficiency gains can be conceptualised according to Pollack's rational choice logic. This is strongly applicable to this case: 1) principals delegate tasks due to their high complexity, which is supported by the EIB's specialised expertise; 2) because of continuity, it is more efficient to sacrifice direct control, as elections can drastically change the investment landscape, while the EIB consistently remains in place; 3) the credibility of

the agent is present, shown by the AAA creditworthiness as previously discussed; 4) the use of an agent increases efficiency, as the pipelines are already in place and there is no necessity to navigate between several principals on each occasion; 5) there is an additional insulation from short-term political consequences, which can ease the burden on governments that must make short-term concessions for longer-term stability. Under this tacit arrangement, it must be stated that members retain ultimate authority, but delegation gives the EIB meaningful discretion within the framework they construct. (Pollack 2003)

As earlier mentioned, the sovereignty of member states must be examined carefully to determine in what ways it could be affected. An integral part of that, influenced by the para-fiscality of the EIB, is the sphere of policy-making. The ability to manoeuvre, structure policy space, and decide one's own fiscal and investment choices falls under the individual responsibilities determined by the Treaty on European Union (TEU) and the TFEU. This is supported by the statement that "The Member States shall coordinate their economic policies within the Union... The Union may take initiatives to ensure coordination of the social policies of the Member States," suggesting that "coordination" is their most significant instrument, which acts more as a de facto non-binding suggestion. In addition, it is also stated that "the Union shall not be liable for or assume the commitments of central governments... A Member State shall not be liable for or assume the commitments of central governments [of another Member State]," which creates a mechanism that protects the individual fiscal spaces and policies of the member states. Yet, there are other articles of the TFEU, such as Article 309, that give the EIB some ability to influence that sphere: "The task of the European Investment Bank shall be to contribute... to the balanced and steady development of the internal market in the interest of the Union." Therefore, sovereignty in the present context should not be understood as absolute autonomy and within EMU, sovereignty is exercised under conditions of interdependence. In this context, member states retain formal authority over fiscal policy, but their practical choices are shaped by EU rules and market expectations, including through delegated institutions. The result is that the sovereignty of members remains intact, but it is exercised within a structured environment. This suggests that national governments remain the central actors, but it also gives space for EU-level institutions to shape sovereignty indirectly through incentives and programme design. The implication is that the EIB does not replace national fiscal authority, yet it can certainly influence the environment in which that authority is exercised. (European Union 2012; Krasner 1999)

Direct control refers to member states determining support allocation, eligibility criteria and discretionary decisions themselves. This leads to the main issue addressed here: how the trade-off between efficiency and direct control functions. This trade-off is central to delegation. As this trade-off was not directly codified by the EU, its dynamics become harder to predict without further assessment. However, this arrangement is not irrational, as it reflects a *de facto* trade-off. This idea explains the durability of this delegation: it does not force implementation in the way EMU did, and as a result it does not create a fiscal union within the EU institutional infrastructure, but rather provides an alternative that leads to some gains in exchange for giving up a small portion of control. It reveals a different form of integration: delegated institutions without the creation of a full federal fiscal authority. The EIB therefore reflects a trade-off of capacity-building that remains institutionally incomplete, yet politically durable. (Pollack 2003; Bickerton, Hodson and Puetter 2015)

The EIB's para-fiscal role matters politically because sovereignty within EMU is exercised under conditions of interdependence. This may alter the current status quo regarding the neutrality of the Union in the fiscal domain. This justifies examining conceptual domains such as investment steering and financing conditions. This is also where experimentalist governance becomes useful, because the EU-level framework criteria are carried into member-state implementation through project screening and selection. It helps explain how broad EU-level goals are translated into national implementation through eligibility and appraisal procedures. That makes it easier to understand how steering can occur without the direct replacement of national authority. This should be understood as incentive-based steering rather than coercive conditionality, since member states remain formally responsible for national fiscal choices. Therefore, its real relevance lies in showing why the EIB's para-fiscal role has implications not only for economic outcomes, but also for the distribution of discretion and policy space within the EU framework. This sovereignty-under-interdependence logic directly supports H3, because EIB-backed support should matter more where member states have less fiscal or market room for manoeuvre. The theoretical logic established here is used in the final subsection to provide the theoretical basis for the hypotheses that this thesis later assesses in the empirical chapter. (Pollack 2003; Krasner 1999; Sabel and Zeitlin 2008)

3.4 Theoretical Expectations and Hypotheses

Delegation, para-fiscal risk-sharing and sovereignty under interdependence together generate the three hypotheses tested below. With the established lenses, the theoretical basis is now complete. The principal-agent lens introduces delegation and control, while the fiscal-union and risk-sharing lens provides the foundation for H1 and H2, and the sovereignty lens provides the foundation for H3. (Pollack 2003; Farhi and Werning 2017; Krasner 1999)

The first hypothesis is rooted in the higher exposure created by the guarantee-based system. Higher levels of guarantee exposure in a given member state point to higher levels of public investment. The argument is that policy steering tied to the guarantee architecture should be visible in public investment patterns. A quantitative approach alone can only explain the association between exposure and public investment; henceforth, the qualitative side is also essential to examine whether steering and pipeline selection support this interpretation. The implication is that the guarantee architecture may affect not only investment levels, but also investment composition. This is an essential part of answering the research question from the angle of public investment, a crucial component of fiscal sovereignty. Hence, H1 expects higher guarantee-backed EIB exposure to be associated with higher public investment and, where feasible, changes in investment composition. (Farhi and Werning 2017; Sabel and Zeitlin 2008)

H2 begins from the same guarantee-backed exposure logic, but shifts the focus from public investment to sovereign financing conditions. The credibility of EIB-backed support can lower perceived risk, making supported investment conditions more favourable. This can improve financing conditions, represented in the thesis by lower sovereign yield spreads over the German Bund. Thus, the expected inference is not direct fiscal transfer, but the idea that the EIB is an indirect stabilisation and credibility channel. H2 therefore expects higher guarantee-backed EIB exposure to be associated with more favourable sovereign financing conditions, represented by lower spreads. (Bird and Rowlands 2004; Fedele, Mantovani and Liucci 2010)

H3 concerns variation across member states. This hypothesis assesses whether the effects found in H1 and H2 are different under certain conditions. H3 proposes that in more fiscally constrained states, we can deduce that delegated support from the EIB should become more consequential for both public investment and sovereign financing conditions.

This suggests that EIB exposure has a stronger effect in those fiscally constrained states where off-budget capacity is relatively more valuable than in states with greater fiscal space. That embodies the idea that the expectation is not solely linked to tighter fiscal constraint, but also to conditional implementation. This is due to EU-level programme criteria and screening procedures shaping the extent to which exposure translates into national outcomes. (Arnold et al. 2018; Sørensen and Yosha 1998; Fedele, Mantovani and Liucci 2010)

The theoretical framework produces three interconnected hypotheses. The aim of the following chapter is to investigate these claims through empirical analysis. Regarding the quantitative side of the research, H1 and H2 are addressed through the fixed-effects panel approach, while H3 is assessed through interaction-based or heterogeneity analysis. The qualitative component complements this by tracing the steering and implementation channel. The empirical chapter therefore operationalises and tests the expectations developed in this theoretical framework.

4 Empirical Analysis

Building on the theoretical framework, this chapter assesses the hypotheses through empirical analysis. Since guarantee-backed exposure can plausibly affect both public investment outcomes and sovereign financing conditions, the quantitative analysis estimates these links using a fixed-effects country-year panel. I then triangulate these patterns using comparative case evidence and process tracing to show how programme design and appraisal standards translate EU priorities into national pipelines. (Sabel and Zeitlin 2008) The chapter translates the theoretical expectations into an empirical design based on panel analysis and case evidence.

The objective is to combine a panel design with case analysis so that statistical patterns can be interpreted in light of institutional and implementation evidence. The quantitative leg identifies country-year patterns, while the qualitative leg examines the sequencing of implementation relative to guarantee-backed activity, which helps rule out coincidental correlations. The analysis follows three steps: first, it operationalises the working concepts into measurable country-year variables; second, it estimates the effects of EIB exposure across countries through the regression model; third, it evaluates the consistency of the

observed quantitative outcomes through process tracing and documentary evidence.

The quantitative component addresses all three hypotheses through two complementary fixed-effects empirical models and an interaction extension. For H1, I employ a public-investment model to estimate whether higher guarantee-backed EIB exposure is associated with higher public investment, while composition is assessed separately where feasible. Composition patterns are used to assess whether guarantee-backed support aligns with programme steering and EU priorities.

For H2, I use a financing-conditions model that tests the exposure-spread link as a plausible risk-sharing channel. Sovereign financing conditions are proxied by long-term yield spreads, consistently constructed using the European Central Bank (ECB)’s long-term interest rate statistics. Germany functions as the Bund benchmark and is therefore not treated as an ordinary spread observation in the spread specification. (European Central Bank 2026)

To test H3, I measure fiscal constraint using pre-treatment indicators, specifically debt dynamics and baseline sovereign spreads. I then estimate interaction effects to assess whether EIB exposure generates larger impacts in more constrained member states. I conduct robustness checks to assess the credibility of the quantitative results.

4.1 Data and Variable Construction

Operationalising the theory requires linking concepts to variables. The fixed-effects panel covers the period from 2010 to 2024, with the country-year as the unit of analysis. The pre-EFSI period is defined as 2010 until 2014, the EFSI era is marked 2015 through 2020 and 2021 is treated as a transition year before the InvestEU period becomes observable more clearly from 2022 until 2024. The analysis covers Euro area member states. The full macroeconomic panel contains 19 countries over 15 years, producing 285 country-year observations before model-specific reductions. (European Union 2015, 2021)

For the allocation channel, lagged country-level guarantee-backed EIB exposure is utilised, scaled by nominal GDP to make countries comparable. This country-year exposure measure is necessary to test the core claims. The independent variable, $\text{Exposure}_{i,t-1}$, comprises guarantee-backed EIB operations under EFSI and InvestEU. These guarantees are recorded by country of benefit, although actual amounts may differ from initial author-

isations. This makes the latest available project-level information necessary. (European Union 2015, 2021; European Investment Bank 2025d)

Mechanism-related evidence, such as co-financing, blending and leverage, is treated as supplementary evidence for interpreting the programme logic rather than as part of the baseline country-year panel. As for displacement effects, I examine whether guarantee-backed exposure is associated with changes in general government gross fixed capital formation as a share of GDP, while substitution concerns are assessed through the broader empirical and qualitative analysis. (European Commission 2018; European Union 2025)

The empirical dataset is built from publicly available European institutional databases and project-level sources. Among these, Eurostat is used for general government gross fixed capital formation, general government gross debt, nominal GDP, Harmonised Index of Consumer Prices (HICP) inflation, unemployment and real GDP growth. (Eurostat 2025) The ECB Data Portal is used for long-term interest rates, which are annualised and converted into spreads over the German Bund. Germany therefore serves as the benchmark and is excluded from the spread specification by construction. (European Central Bank 2026) EFSI and InvestEU exposure are based respectively on the EIB's public EFSI project list and its reported EFSI financing, and on the public InvestEU operation-level list. (European Investment Bank 2024; European Union, n.d.)

The final panel is organised at the annual country-year level. Long-term interest rates are first annualised from monthly observations and then converted into sovereign spreads over the German Bund. Nominal GDP is used as the denominator for scaling guarantee-backed EIB exposure across countries. For real GDP growth, the 2014–2024 values are taken from the annual growth-rate series, while the 2010–2013 values are derived from the 2009–2013 real GDP level series using year-on-year percentage changes, both inputs being taken from Eurostat national accounts data. The 2009 observation is necessary to calculate the 2010 growth rate, as the early-period values are derived from the real GDP level series. The exposure variable combines EFSI and InvestEU. EFSI is based on reported EFSI financing, while InvestEU is treated as an operation-level, country-attributed exposure proxy because the programme is newer and full disbursement information is more limited. Where InvestEU operations list multiple project locations, the amount is allocated equally across the listed countries. This is a simplifying assumption and may not capture the exact distribution of benefits across countries. The combined exposure measure is scaled by nominal GDP and lagged by one year in the empirical specifications.

Table 1: Data overview: variables and definitions

Symbol	Definition
$GFCF_{it}$	General government gross fixed capital formation (% of GDP, annual), used as the public-investment outcome.
$Spread_{it}$	10-year sovereign yield spread over the German Bund, constructed from long-term interest rate data.
$Exposure_{i,t-1}$	Country-attributed guarantee-backed EIB operation exposure under EFSI and InvestEU, scaled by nominal GDP and lagged one year.
$Debt_{it}$	General government gross debt (% of GDP, annual), used as the main fiscal-constraint indicator.
$GDPGrowth_{it}$	Real GDP growth rate, used as the macro-cycle control.
$HICP_{it}$	Harmonised Index of Consumer Prices inflation rate.
$Unemployment_{it}$	Unemployment rate.
$NominalGDP_{it}$	Nominal GDP, used as the scaling denominator for the exposure variable.

Notes: Author's compilation. The table summarises the main variables used in the quantitative analysis. Data sources and construction are described in the surrounding section.

The qualitative evidence follows the same analytical frame as the quantitative analysis. For the qualitative component, the data and variable construction section establishes the evidence base used to trace sectoral and policy alignment. The main additional data source is national public investment composition. The data are taken from Eurostat, specifically general government gross fixed capital formation by COFOG function, covering Italy, Spain and the Netherlands as the qualitative case studies. Similarly to the quantitative leg, it focuses on the same time period, stretching from 2010 to 2024. The EIB-backed sectoral exposure side is drawn from the EFSI project list and the InvestEU operations list already present in the construction of the exposure variable. (Eurostat, n.d.; European Investment Bank 2024; European Union, n.d.) National public investment composition is then compared with EIB-backed sectoral exposure to assess programme steering across the selected cases.

The variable should therefore be interpreted as an EIB operation-level exposure proxy, not as the full EU guarantee envelope or total mobilised investment. One reason for the low recorded InvestEU exposure in 2021 is the transitional period between EFSI and InvestEU.

4.2 Quantitative Analysis and Findings

4.2.1 Model Specification and Estimation Strategy

The unit of analysis is the country-year, which provides the basic structure for the panel analysis. The general dataset consists of defined institutional periods, specifically divided into the pre-EFSI period, the EFSI period and the InvestEU period, with 2021 treated as a transition year. These windows correspond to the EU guarantee-based regime breaks introduced with EFSI (Regulation (EU) 2015/1017) and consolidated under InvestEU (Regulation (EU) 2021/523). I treat these regulatory breaks as institutional periodisation for interpretation. (European Union 2015, 2021)

The EIB exposure measure is constant across all hypotheses. It captures the para-fiscal tools that expand financing capacity. In empirical terms, this refers to country-attributed guarantee-backed EIB operation exposure under EFSI and InvestEU, scaled by nominal GDP. This focuses the analysis on guarantee-backed EIB Group operations rather than general EIB lending. Cross-country and time variation in exposure comes from differences in allocated risk-bearing capacity and investment volumes under EU guarantee regimes.

Due to the reverse causality problem, concurrent exposure may be correlated with the error term because exposure may respond to the same shocks that move investment or spreads. This defines $\mathbb{E}[\varepsilon_{it} \mid \text{Exposure}_{it}] \neq 0$. To mitigate this concern, I replace Exposure_{it} with $\text{Exposure}_{i,t-1}$, so that the dependent variable in year t does not influence the regressor measured in year $t - 1$. Accordingly, β measures how changes in lagged exposure relate to current outcomes, conditional on α_i , λ_t and Z_{it} . This does not eliminate all endogeneity concerns, but it reduces the most direct simultaneity problem in the country-year specification. Remaining endogeneity concerns may still arise if fiscally stressed countries are more likely to seek EIB-backed support in the first place. The qualitative analysis therefore helps assess whether the timing and sequencing of support are consistent with the proposed mechanism.

The baseline fixed-effects specification is therefore estimated as follows:

$$y_{it} = \alpha_i + \lambda_t + \beta \text{Exposure}_{i,t-1} + \gamma^\top Z_{it} + \varepsilon_{it} \quad (1)$$

The indices denoted as i and t reflect the country and time respectively. More precisely, country fixed effects, represented by α_i , are meant to offset inherent differences between countries and help observe changes over time for each individual state relative to its own baseline. Similarly, λ_t denotes year fixed effects, which absorb common global or EU-wide shocks that would otherwise bias the exposure coefficient.

Through the formula above, I estimate two different forms of y_{it} , corresponding to the two main quantitative outcomes of the study. The investment specification captures public investment behaviour, operationalised as general government gross fixed capital formation as a share of GDP. The financing specification uses sovereign financing conditions as the dependent variable, approximated by the 10-year sovereign yield spread over the German Bund and constructed consistently using the ECB long-term interest rate statistics. (European Central Bank 2026) Within the spread specification, Germany is the benchmark in the spread construction and is therefore excluded from the spread regression by construction.

The two baseline specifications can therefore be written as:

$$\text{GFCF}_{it} = \alpha_i + \lambda_t + \beta \text{Exposure}_{i,t-1} + \gamma^\top Z_{it} + \varepsilon_{it} \quad (2)$$

$$\text{Spread}_{it} = \alpha_i + \lambda_t + \beta \text{Exposure}_{i,t-1} + \gamma^\top Z_{it} + \varepsilon_{it} \quad (3)$$

The control set is limited and concept-driven to address obvious confounding factors in outcome dynamics, including macroeconomic cycles, inflation, unemployment and debt dynamics. In the baseline specifications, Z_{it} includes a common set of time-varying controls: general government debt, real GDP growth, HICP inflation and unemployment. Debt captures fiscal fundamentals, real GDP growth captures macro-cycle dynamics, HICP inflation captures price pressures and unemployment captures labour-market and macroeconomic stress. The approach avoids control overload, which could absorb the channel of interest and obscure the mechanisms under investigation. Importantly, variables that plausibly sit on the causal pathway are excluded from the baseline specification. For instance, national co-financing choices could themselves be influenced by EIB-backed exposure, meaning that they may function as a mediator between exposure and public investment outcomes. Including such variables could therefore condition on an intermediate outcome and understate the total association between exposure and the dependent variables. At the same time, co-financing may also proxy for omitted institutional char-

acteristics, such as administrative capacity or political willingness to invest. Its exclusion should therefore be understood as a cautious modelling choice rather than as proof that co-financing operates only as a mediator. Such variables are discussed as part of the qualitative mechanism analysis rather than included in the baseline quantitative specification. The same baseline control set is kept across the investment and spread specifications to preserve comparability between the two outcome models.

H3 is implemented by interacting $\text{Exposure}_{i,t-1}$ with a pre-treatment fiscal-constraint measure, so the effect of exposure is allowed to vary across more and less constrained member states. The main constraint measure is based on baseline debt, while baseline sovereign spreads are used as an alternative market-based constraint proxy. Baseline debt and baseline spread are constructed as country-level pre-treatment averages over the 2010–2014 pre-EFSI period. They are therefore time-invariant within countries. Their separate main effects are absorbed by the country fixed effects, meaning that the model identifies the interaction between lagged exposure and baseline constraint rather than a separate level effect of baseline debt or baseline spread. This reflects the logic that guarantee-backed EIB exposure should matter more where fiscal space is tighter or where market financing conditions are less favourable.

$$\beta \text{Exposure}_{i,t-1} + \theta (\text{Exposure}_{i,t-1} \times \text{Constraint}_i^0) \quad (4)$$

In this expression, θ captures whether the association between exposure and the dependent variable changes with the level of pre-treatment fiscal constraint. A positive θ in the public-investment specification would indicate that exposure is more strongly associated with general government GFCF in constrained countries. A negative θ in the spread specification would indicate that exposure is more strongly associated with lower sovereign spreads in constrained countries.

The ε_{it} term captures shocks related to the country-year unit that affect investment and spreads and that are not absorbed by fixed effects, exposure measures or controls. Examples include sudden country-specific political shocks, banking-sector stress or other unobserved disturbances. As a result, inference is based on standard errors clustered at the country level to allow arbitrary serial correlation within countries over time. As robustness checks, I additionally report two-way clustered standard errors for key specifications and assess whether the H3 interaction results remain stable under alternative

fiscal-constraint measures. (Bertrand, Duflo and Mullainathan 2004; Cameron, Gelbach and Miller 2011) For the key H3 spread specifications, heteroskedasticity-robust standard errors are also used as an additional sensitivity check.

4.2.2 Descriptive Statistics and Exposure Patterns

Table 2 reports descriptive statistics for the main variables used in the quantitative analysis. A relevant detail is that the lagged exposure variable has fewer observations than the contemporaneous variables, as the first year of each country panel is lost when constructing the one-year lag. The spread variable also has fewer observations because Germany serves as the Bund benchmark and is not treated as an ordinary spread observation in the spread specification. This confirms that the main macroeconomic controls are available across the full country-year panel, while the reduced number of observations in the exposure and spread specifications follows from the model construction rather than from a broader data-coverage problem.

Table 2: Descriptive statistics

Variable	N	Mean	SD	Min	Median	Max
Government debt (% GDP)	285	77.054	40.509	7.600	69.900	209.400
Lagged exposure (% GDP)	266	0.074	0.153	0.000	0.000	1.330
Exposure (% GDP)	285	0.083	0.162	0.000	0.013	1.330
General government GFCF (% GDP)	285	3.528	1.052	1.551	3.411	6.519
HICP inflation	285	2.374	2.918	-1.600	1.700	19.400
Nominal GDP (EUR billion)	285	609.869	917.923	6.862	195.509	4328.970
Real GDP growth	285	2.105	3.875	-10.900	2.096	24.600
Spread over German Bund	275	1.409	2.129	-0.530	0.711	21.003
Unemployment	285	8.887	4.832	2.900	7.300	27.800

Notes: Author's calculations. Variables are annual country-year observations from the constructed panel.

The descriptive statistics also show that the panel contains meaningful variation in both the outcome variables and the fiscal-constraint indicators. General government GFCF varies across the panel, which supports its use as a public-investment outcome rather than as a nearly fixed institutional constant. The wide range of government debt and sovereign spreads confirms that the sample contains both less constrained and more constrained member states. The low mean and median of the exposure variables reflect the fact that guarantee-backed EIB exposure is concentrated in specific country-years rather

than evenly distributed across the full panel. The macroeconomic controls also capture substantial variation over the period, especially because the sample covers the euro-area debt crisis, the pandemic period and the subsequent inflation shock.

The exposure variables show a strongly uneven distribution, with many zero or low-exposure observations. This is expected given that EFSI and InvestEU operations are concentrated in particular countries and years. In absolute terms, larger member states account for a substantial share of total exposure. To enable cross-country comparison, exposure is scaled by nominal GDP. This is why the regressions use exposure scaled by nominal GDP rather than the raw euro value of exposure.

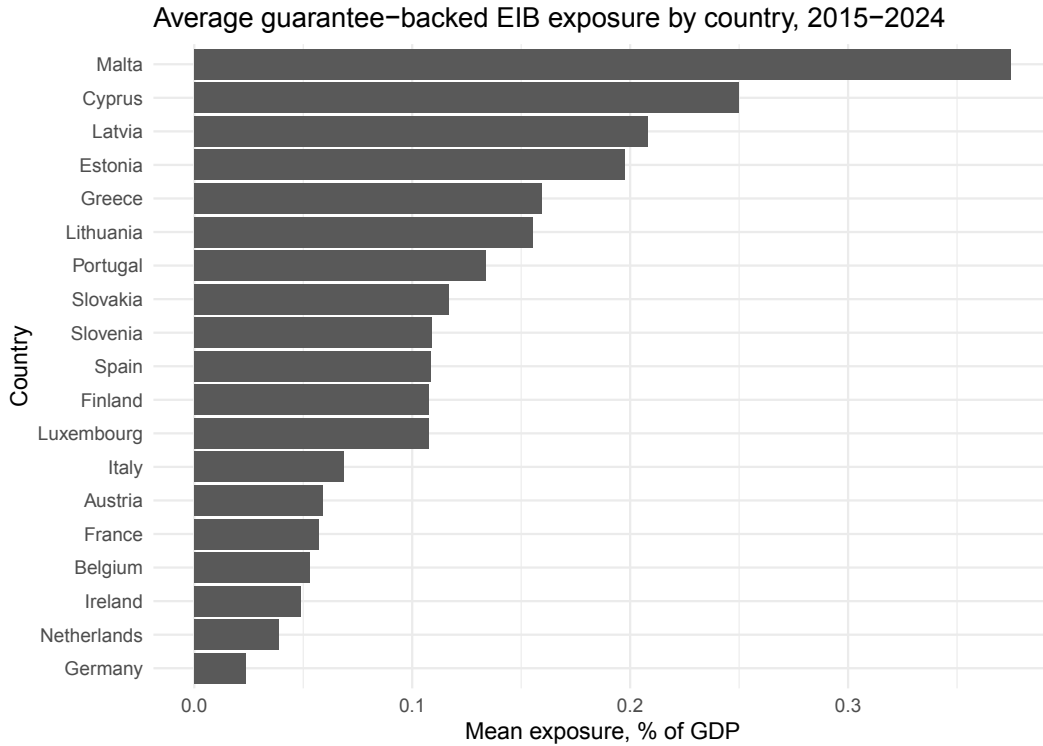


Figure 1: Average guarantee-backed EIB exposure by country, 2015–2024

Notes: Author's calculations based on the EFSI project list and InvestEU operations list. Exposure is measured as average annual country-level guarantee-backed EIB exposure scaled by nominal GDP.

Figure 1 complements the pooled descriptive statistics by showing how guarantee-backed EIB exposure varies across countries. More precisely, it demonstrates differences in exposure intensity across member states from 2015–2024. The figure reports exposure scaled by nominal GDP, which is consistent with the regression specification and allows smaller and larger economies to be compared more directly. The pattern confirms that EIB-backed

exposure is not distributed evenly across the Euro area, supporting the need to account for cross-country variation in the empirical analysis.

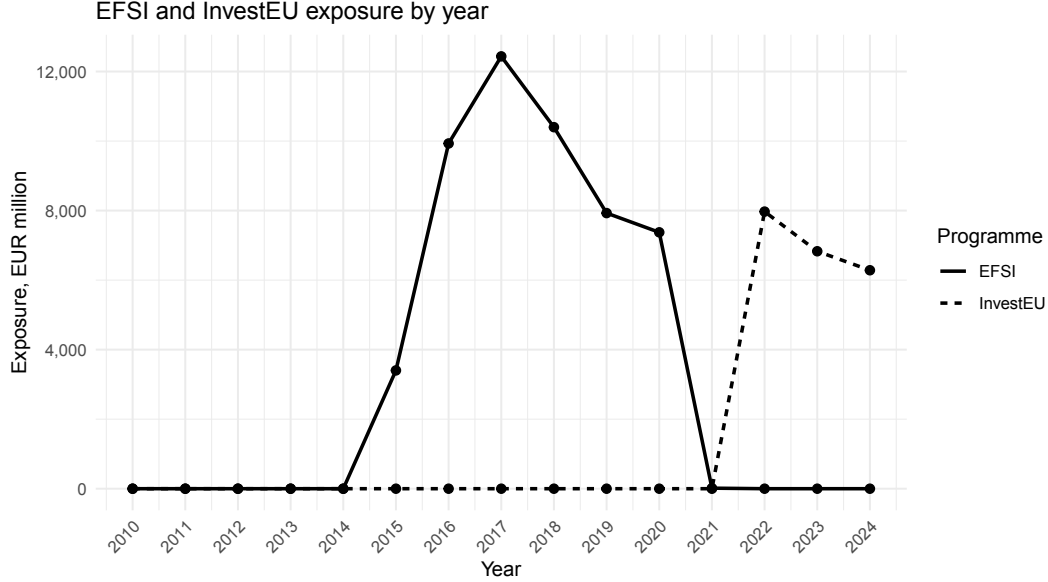


Figure 2: EFSI and InvestEU exposure by year

Notes: Author's calculations based on the EFSI project list and InvestEU operations list. Exposure is reported in EUR million.

Figure 2 shows the timing of EFSI and InvestEU exposure in the constructed panel. It reflects the institutional periodisation used in the analysis, with EFSI exposure becoming visible from 2015, 2021 appearing as a transition year and InvestEU exposure becoming observable from 2022 onward. It also shows the uneven distribution of exposure across years. The lower InvestEU values should therefore be read in light of the shorter observed implementation window and the fact that InvestEU is treated here as an observable operation-level exposure proxy.

4.2.3 Baseline Results for H1 and H2

Table 3 reports the baseline fixed-effects results for H1 and H2. The first column estimates the investment specification using general government GFCF as the dependent variable, while the second column estimates the spread specification using the 10-year sovereign yield spread over the German Bund. The central coefficient in both specifications is the coefficient on lagged exposure. This is the term that directly captures the relationship between previous-year guarantee-backed EIB exposure and the current outcome.

Table 3: Baseline models for H1 and H2

	H1: GFCF	H2: Spread
Lagged exposure (% GDP)	0.341 (0.292)	-0.427 (0.414)
Government debt (% GDP)	-0.004 (0.003)	-0.013 (0.021)
Real GDP growth	0.011 (0.017)	-0.161 (0.108)
HICP inflation	-0.024 (0.021)	-0.010 (0.059)
Unemployment	0.044* (0.016)	0.360** (0.095)
Observations	266	243
R2	0.838	0.755
Within R2	0.052	0.364
Country FE	Yes	Yes
Year FE	Yes	Yes

Notes: + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Standard errors clustered by country are reported in parentheses.

In the H1 specification, the coefficient on lagged exposure is positive, which is consistent with the expectation that guarantee-backed EIB exposure is associated with higher public investment. Substantively, this suggests a positive association between lagged exposure and general government GFCF once fixed effects and controls are included. Yet, the estimate is not statistically significant in the baseline model. The result provides some directional but not fully conclusive quantitative support for H1. Hence, the implication is that the baseline investment model does not alone confirm a direct public-investment effect across the whole panel.

The low within-country R^2 in the H1 model suggests that GFCF variation is driven largely by country-specific characteristics rather than year-to-year exposure fluctuations. This supports the need for the H3 analysis, since exposure may matter more conditionally than as a uniform full-panel effect.

In the H2 specification, the coefficient on lagged exposure is negative, which is consistent with the expected association between EIB exposure and more favourable sovereign financing conditions. However, similarly to H1, this estimate is also not statistically significant in the baseline model and therefore does not conclusively support H2.

The significance of unemployment in both baseline models also deserves note. In the spread specification, higher unemployment is consistent with broader fiscal and macroeconomic stress, while in the GFCF specification it may reflect counter-cyclical public investment responses during downturns.

Ultimately, the baseline results suggest that the average relationship moves in the expected direction, but that the full-panel average effect is not strongly identified. For the second model, the baseline spread specification therefore provides a theoretically consistent sign, but not enough statistical evidence to conclude that exposure reduces spreads uniformly across all member states. The uneven distribution of exposure, combined with the inconclusive baseline estimates, supports the need for a heterogeneity specification, since the same exposure amount may have different implications depending on the size and fiscal position of the recipient country. The H3 models therefore examine whether the exposure-outcome relationship becomes clearer once fiscal and market constraint are introduced directly into the specification.

4.2.4 Heterogeneity Results for H3

The H3 specifications test whether the relationship between EIB exposure and the dependent variables changes under fiscal or market constraint. This hypothesis differs because it treats member states as different based on their level of constraint. The table below reports interaction models using two constraint measures: baseline debt and baseline sovereign spreads. The purpose of these interaction models is to test whether the exposure-outcome relationship becomes stronger when constraint is introduced directly into the specification. This follows from the theoretical expectation that guarantee-backed EIB activity should matter more where national fiscal space is limited or market financing conditions are less favourable.

Table 4: Heterogeneity models for H3

	GFCF, debt constraint	Spread, debt constraint	GFCF, spread constraint	Spread, spread constraint
Lagged exposure (% GDP)	0.338 (0.287)	-0.827* (0.317)	0.252 (0.224)	-0.273 (0.401)
Government debt (% GDP)	-0.004 (0.003)	-0.013 (0.020)	-0.005 (0.003)	-0.011 (0.019)
Real GDP growth	0.011 (0.016)	-0.148 (0.098)	0.014 (0.018)	-0.152 (0.101)
HICP inflation	-0.024 (0.022)	0.001 (0.060)	-0.037 (0.023)	0.004 (0.067)
Unemployment	0.043* (0.016)	0.357** (0.096)	0.044* (0.017)	0.347** (0.097)
Lagged exposure $\times$ baseline debt	-0.013 (0.282)	-2.086*** (0.424)		
Lagged exposure $\times$ baseline spread			0.331** (0.102)	-2.131*** (0.216)
Num.Obs.	266	243	238	238
R2	0.838	0.769	0.800	0.771
R2 Adj.	0.812	0.728	0.765	0.732
R2 Within	0.052	0.399	0.064	0.407
R2 Within Adj.	0.027	0.382	0.036	0.390
FE: iso2	X	X	X	X
FE: year	X	X	X	X

Notes: + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Country and year fixed effects included. Standard errors clustered by country are reported in parentheses.

The central concept in these specifications is the interaction between lagged exposure and the relevant constraint measure. In the GFCF model, a positive interaction would indicate that exposure is more strongly associated with public investment under constraint. In the spread model, a negative interaction would indicate that exposure is more strongly associated with lower sovereign spreads under constraint. For this reason, the interpretation of H3 depends primarily on the interaction term.

Using baseline debt as the constraint measure, the interaction term does not show a clear conditional effect in the GFCF specification. This suggests that higher pre-period debt does not clearly strengthen the association between exposure and general government GFCF. In the spread specification, however, the interaction between lagged exposure and baseline debt is negative and statistically significant. This indicates that the spread-reducing association of EIB exposure becomes stronger as baseline debt increases. The debt-based H3 model therefore supports the claim that EIB exposure matters more for sovereign financing conditions in more fiscally constrained countries.

The alternative H3 specification utilises baseline sovereign spreads as a market-based constraint. This choice is useful because it captures constraint from another angle: market pressure. Fiscal pressure may appear not only through debt levels, but also through how markets price sovereign risk. For this reason, baseline spreads are used to measure pre-treatment financing conditions. Due to the spread construction, a smaller sample is available, as Germany is excluded by construction as the Bund benchmark and Estonia lacks sufficient usable baseline spread observations for 2010–2014. The GFCF interaction is positive in the country-clustered specification, but this result is more sensitive to alternative standard-error assumptions and is therefore less stable. This sensitivity indicates that the public-investment channel is less robust than the financing-condition channel and should be interpreted more cautiously. It provides only limited evidence for a conditional public-investment channel, so the investment-side result should be treated as suggestive.

By contrast, the spread interaction remains negative and statistically significant, reinforcing the interpretation that the strongest H3 evidence appears in the financing-condition specification, where EIB exposure is more strongly associated with lower sovereign spreads in more financially constrained member states. The result indicates that EIB exposure is more strongly associated with lower spreads in countries that entered the period with higher market pressure.

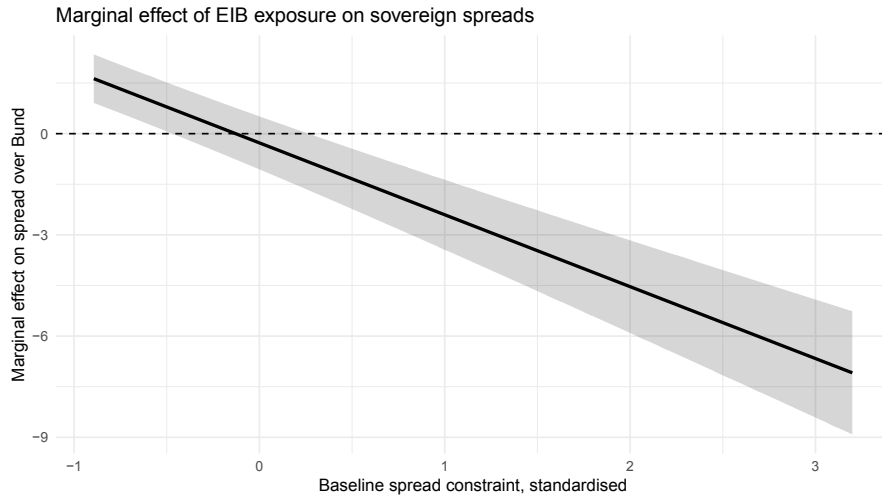


Figure 3: Marginal effect of EIB exposure on sovereign spreads

Notes: Author's calculations based on the H3 spread interaction model. The figure shows how the estimated marginal effect of EIB exposure changes across levels of baseline spread constraint.

Figure 3 illustrates this conditional spread effect. On the x-axis, the figure indicates baseline spread constraint, while the y-axis denotes the marginal effect of EIB exposure on spreads. Values to the right represent countries with higher pre-treatment market pressure. The zero line marks the point at which the estimated marginal effect equals zero. The downward-sloping marginal-effect line visualises the interaction term, showing that the estimated effect of EIB exposure on sovereign spreads becomes more negative as baseline spread constraint increases. This means that the association between exposure and lower spreads is weakest in less constrained countries and strongest in countries that entered the guarantee period with higher market pressure. The next section turns from aggregate panel patterns to the complementary qualitative analysis. Consequently, the estimation provides the strongest quantitative support for the conditional spread specification.

4.2.5 Robustness Checks and Interim Assessment

Table 5 reports robustness checks for the H3 spread interaction under alternative standard-error assumptions. Attention is directed to the H3 spread interactions because they represent the strongest quantitative result. The aim of the robustness checks is to assess whether the key conditional spread result is sensitive to alternative assumptions about the standard errors. This is particularly important in a small country-year panel where

inference can be affected by clustering choices. The interaction remains negative across the country-clustered, two-way clustered and heteroskedasticity-robust specifications, and remains statistically meaningful in the key spread specifications.

Table 5: Robustness checks for H3 spread interactions

Model	Estimate	Standard error	p-value
Debt constraint, country-clustered	-2.086	0.424	0.0001
Debt constraint, two-way clustered	-2.086	0.700	0.0106
Debt constraint, heteroskedasticity-robust	-2.086	0.905	0.0221
Spread constraint, country-clustered	-2.131	0.216	0.0000
Spread constraint, two-way clustered	-2.131	0.620	0.0044
Spread constraint, heteroskedasticity-robust	-2.131	0.969	0.0290

Notes: Author's calculations. The table reports H3 spread interaction coefficients under alternative standard-error assumptions.

These checks suggest that the strongest quantitative result is not limited to one standard-error specification. The spread interaction stays consistently negative across the alternative checks, while the public-investment results are weaker and more sensitive to specification choices. This means that the evidence remains most robust for the sovereign-financing channel and supports a conditional financing-channel interpretation rather than a universal effect of EIB exposure across all outcomes and member states.

The baseline models show directional but inconclusive average associations. The heterogeneity models show stronger evidence once fiscal or market constraint is introduced. This means that the quantitative evidence does not support a simple universal exposure effect, but instead suggests that exposure matters more under specific fiscal or market constraints. The next section therefore moves from aggregate panel patterns to the complementary qualitative analysis. This is necessary because the quantitative results point to a distinction between weak average effects and stronger conditional financing effects, but the panel alone cannot fully show whether the proposed mechanism is visible in country-level implementation, project pipelines and programme evidence.

4.3 Qualitative Analysis and Findings

4.3.1 Qualitative Strategy and Evidence Base

The quantitative section estimates investment and spread outcomes, while this qualitative section assesses policy alignment directly through documentary and sectoral evidence. The qualitative analysis addresses policy alignment through two evidence streams: programme design tracing and national public investment composition. In this thesis, sectoral alignment refers to the extent to which EIB-backed exposure and national public investment appear in comparable sectors, whether those sectors grow or become more important over time, and whether the overlap is meaningful enough to suggest correspondence rather than random co-occurrence. However, sectoral correspondence does not by itself prove EIB steering, since both EIB activity and national investment may respond to shared EU priorities, such as climate, energy or infrastructure objectives.

The section examines how the steering channel appears in practice. Comparative case analysis and process tracing are used to link EU-level design and screening procedures to EIB-backed sectoral exposure and national public investment patterns. (Bennett and Checkel 2015) This process is supported by documentary and dataset-based evidence at both national and European levels. At the national level, general government gross fixed capital formation by COFOG function is used to observe public investment composition over time. At the EU level, the analysis uses EFSI and InvestEU sectoral exposure, programme documents and EIB material on prioritisation, eligibility and co-financing. Together, these provide evidence of the implementation sequence that accounts for the sequence of implementation.

The qualitative component is anchored in evidence on the national investment composition to complement the section provided by the quantitative part. The primary task is to assess whether EIB-backed sectoral exposure aligns with broader patterns of national public investment composition in the selected cases. For this purpose, I employ process tracing to connect programme-level priorities and eligibility rules to the observable sectoral distribution of EIB-backed exposure and to the national public investment functions recorded in the COFOG data. As established in the data section, this comparison is used as a sectoral-alignment check rather than as a one-to-one accounting equivalence between EIB-backed exposure and general government investment.

4.3.2 Case Selection and Comparative Logic

Case selection is based on exposure, fiscal constraint and the ability to compare patterns across institutional periods. Italy, Spain and the Netherlands are not treated as random country examples, but as comparative cases for tracing the mechanism. Italy and Spain are selected as high-exposure cases where EIB-backed activity and national investment composition can be observed under fiscal constraint. These cases are useful for assessing whether the steering channel linked to H1 and the conditionality logic linked to H3 are visible in practice.

Italy is included as a high-exposure case where the relationship between EIB-backed sectors and public investment functions can be examined under a more fiscally constrained setting. In this context, fiscal constraint refers to cases where debt levels or market-based fiscal pressure are outside the more normal range of Euro area conditions, making off-budget and guarantee-backed support more analytically relevant. The second country chosen for the qualitative study is Spain, another high-exposure case with strong investment-pipeline relevance and similar constraint-related relevance. The Netherlands is selected as the contrast case because of its different fiscal position. The Netherlands is used to assess whether the same mechanism appears weaker or operates differently under lower fiscal constraint.

Despite the potential of being considered analytically relevant, Greece and Portugal are not selected as full cases in order to keep the qualitative design tight. Greece could dominate the analysis because its crisis trajectory would shift the focus from guarantee-backed mechanisms towards crisis-specific adjustment. Portugal is also analytically relevant, but would add less variation beyond Italy and Spain while expanding the case design more than necessary. The selected cases provide enough variation to assess whether the EIB-backed mechanism appears differently across more and less constrained settings.

The three cases are assessed through the same analytical sequence in order to make the comparison consistent. Each case first examines national public investment composition across the pre-EFSI, EFSI and InvestEU periods, with attention to the functions that changed most clearly relative to their own previous levels. The analysis then compares these national patterns with the sectoral distribution of EFSI and InvestEU-backed exposure. This comparison is not treated as a one-to-one accounting equivalence between EIB-backed exposure and general government investment, since the two datasets meas-

ure different objects. Instead, it is used as a sectoral-alignment check, showing whether the sectors supported through guarantee-backed EIB activity correspond to the public investment functions that became more or less relevant in each national case. Mobilised investment figures are used only as descriptive context for the leverage logic of EFSI and are not treated as the exposure variable itself.

4.3.3 Italy

Italy is used as one of the main qualitative cases because it combines high EIB-backed exposure with a public investment structure in which sectoral alignment can be observed clearly. The purpose of the Italian case is to assess whether the EIB-backed slice of investment overlaps with the public investment functions that were most relevant in the national investment structure. The case contributes to H1 through investment composition and with H3 through the conditional mechanism. Italy's national public investment is assessed against the same institutional periodisation used in the wider analysis.

Table 6: Italy: public investment growth and composition by institutional period

Function / proxy	Pre-EFSI annual avg.	Pre-EFSI to EFSI	EFSI annual avg.	EFSI to InvestEU	InvestEU annual avg.	InvestEU share
Economic affairs, broad	14,533.4	-3.5%	14,021.0	+74.9%	24,526.0	37.1%
Transport / mobility	11,201.6	+2.2%	11,444.5	+83.6%	21,009.0	31.8%
Energy	189.8	-16.4%	158.7	+101.1%	319.0	0.5%
RDI / industry / digital proxy	1,945.8	-7.1%	1,807.7	+28.4%	2,322.0	3.5%
Environment / water / waste proxy	3,167.0	-23.7%	2,416.3	+68.3%	4,066.0	6.1%
Health	4,030.4	-19.2%	3,255.0	+53.8%	5,006.3	7.6%
Social / education / housing proxy	3,230.6	-5.7%	3,046.8	+85.8%	5,662.3	8.6%

Notes: Values are annual averages in EUR million, nominal. Annual averages are used because the institutional periods have different lengths. Percentage changes compare the annual average of each period with the previous period. The InvestEU share reports each function's share of total Italian general government GFCF in 2022–2024. The year 2021 is excluded as a transition year.

The national public investment data show that Italy’s public investment composition remained centred on economic affairs across all three periods, while also showing how each function changed over time. As Table 6 demonstrates, average annual public investment in economic affairs slightly declined from over €14.5 billion before EFSI to €14 billion during EFSI, before increasing sharply to over €24.5 billion during the InvestEU period. This represents a -3.5 percent change from the pre-EFSI period to EFSI, followed by a 75 percent increase from EFSI to InvestEU.

This distinction matters because economic affairs is a broad COFOG function. The subsectoral data show that the Italian pattern is not a broad increase across economic affairs, but is mainly connected to transport. Transport spending increased from an annual average of €11.2 billion before EFSI to €11.4 billion during EFSI, then to €21 billion during the InvestEU period. This means that transport already grew slightly during EFSI by 2.2 percent, and then expanded significantly under InvestEU by almost 84 percent. By the InvestEU-period window, transport alone accounted for 31.8 percent of Italy’s total public investment composition in the dataset, making it the most important specific public investment function for the Italian case. The EIB-backed side of the comparison is shown in Table 7, which reports the sectoral distribution of Italy’s EFSI and InvestEU-backed exposure. This timing is consistent with a steering mechanism, since transport-related EIB exposure became visible before the strongest increase in transport-related public investment during the InvestEU period. However, this sequence should be interpreted as mechanism evidence rather than as proof of causation.

Table 7: Italy: EFSI and InvestEU-backed exposure by sector

EIB-backed sector/theme	EFSI financing	EFSI mobilised	EFSI share	InvestEU amount	InvestEU share	Total backed amount	Total share
Transport / mobility	1,188.5	3,535.0	14.1%	2,115.7	55.6%	3,304.2	27.0%
Energy	1,876.2	7,063.9	22.2%	1,195.1	31.4%	3,071.4	25.1%
RDI / industry / digital	2,825.0	10,761.7	33.5%	109.1	2.9%	2,934.1	24.0%
Environment / water / waste	979.7	3,152.5	11.6%	308.7	8.1%	1,288.4	10.5%
SMEs / services	1,194.4	10,045.7	14.2%	2.6	0.1%	1,197.1	9.8%
Regional development	166.7	210.6	2.0%	0.0	0.0%	166.7	1.4%
Agriculture / bioeconomy	131.7	284.9	1.6%	11.7	0.3%	143.4	1.2%
Social / education / housing	76.7	538.1	0.9%	7.3	0.2%	83.9	0.7%
Health	0.0	0.0	0.0%	51.5	1.4%	51.5	0.4%

Notes: Values are EUR million, nominal. EFSI financing is used as the exposure measure. EFSI mobilised investment is reported only as descriptive leverage context and is not added to the total backed amount. InvestEU amounts refer to operation-level amounts in the constructed exposure data. Source: author's calculations based on the EFSI project list and InvestEU operations list. (European Investment Bank 2024; European Union, n.d.)

Table 7 shows that Italy's EIB-backed exposure was not evenly distributed across sectors. During EFSI, the Italian exposure pattern was broader and included RDI, industry and digital activity, energy, SMEs, transport and environmental sectors. Meanwhile, for the InvestEU period, the exposure pattern shifted more strongly towards transport and energy, with transport/mobility becoming the dominant InvestEU-backed sector.

The comparison between the national public investment development of Italy and the EIB-backed exposure pattern suggests a clear but limited sectoral alignment. The strongest overlap appears in economic affairs, and more specifically in transport. This is not only because transport had a large share of public investment, but also because it grew relative to itself across the institutional periods. The transport function grew slightly from the pre-EFSI period to EFSI and then expanded strongly from EFSI to InvestEU, while InvestEU-backed exposure also became strongly concentrated in transport and mobility. This makes transport the clearest specific subfunction match in the Italian case.

The EFSI period is more mixed. During EFSI, the supported sectors were broader, including RDI, energy, SMEs, transport and environmental infrastructure. However, not all of these sectors show the same direct movement in the national public investment data. For example, the RDI, industry and digital proxy declined by 7 percent from the pre-EFSI period to EFSI, before growing by 28.4 percent during the InvestEU period. This means that the EFSI pattern should be read more as broad economic-modernisation exposure than as a direct match with one single growing public investment function.

In other areas, such as health, education, defence and public order, that same alignment was not present in the same way. Some functions grew strongly in the national public investment data without receiving similarly large EIB-backed exposure. Health, for instance, increased by almost 54 percent from the EFSI period to InvestEU, while the social, education and housing proxy increased by just shy of 86 percent. These movements show that not every growing public investment function corresponds to the guarantee-backed exposure pattern.

Italy also shows why energy has to be interpreted carefully. Energy received significant EIB-backed exposure, especially in the InvestEU period, but it remained relatively small in the general government GFCF data. As the public investment data suggests, average annual energy-related public investment rose from €158.7 million during EFSI to €319 million during InvestEU, but its InvestEU-period share remained only 0.5 percent. This leaves open the possibility that the energy-related EIB channel operates more through financed projects and mobilised investment than through direct general government GFCF.

The Italian case provides evidence of sectoral alignment between the EIB-backed exposure pattern and Italy's dominant public investment function, especially through the transport-centred economic-affairs channel. This does not show that EIB-backed exposure directly caused Italy's public investment composition to change, but it indicates that the clearest overlap appears in the function that became central in both relative and volume terms.

4.3.4 Spain

As the second high-exposure case, Spain allows an assessment of whether the sectoral-alignment mechanism visible in Italy also appears in another large recipient country. Spain's national public investment development is examined through the same periodisation.

Table 8: Spain: public investment growth and composition by institutional period

Function / proxy	Pre-EFSI annual avg.	Pre-EFSI to EFSI	EFSI annual avg.	EFSI to InvestEU	InvestEU annual avg.	InvestEU share
Economic affairs, broad	16,300.8	-33.6%	10,818.3	+37.9%	14,915.3	35.6%
Transport / mobility	10,840.6	-36.3%	6,900.7	+43.6%	9,907.7	23.7%
Energy	61.4	-57.1%	26.3	+687.3%	207.3	0.5%
RDI / industry / digital proxy	2,103.0	-5.6%	1,985.0	+37.3%	2,726.3	6.5%
Environment / water / waste proxy	2,097.4	-31.5%	1,437.5	+107.7%	2,986.3	7.1%
Health	2,763.8	-3.9%	2,657.3	+81.9%	4,833.0	11.6%
Hospital services	998.6	-0.6%	992.5	+128.3%	2,266.0	5.4%
Social / education / housing proxy	2,594.2	-16.1%	2,177.7	+82.9%	3,983.7	9.5%

Notes: Values are annual averages in EUR million, nominal. Annual averages are used because the institutional periods have different lengths. Percentage changes compare the annual average of each period with the previous period. The InvestEU share reports each function's share of total Spanish general government GFCF in 2022–2024. Selected proxy rows are used for analytical comparison and do not necessarily sum to the total, because some rows are broad functions while others are subfunctions. The year 2021 is excluded as a transition year. Source: author's calculations based on Eurostat general government GFCF by COFOG function. (Eurostat, n.d.)

Like Italy, Spain's largest public investment function is economic affairs. However, its trajectory differs from the Italian case. As presented in Table 8, average annual public investment in economic affairs declined from €16.3 billion before EFSI to less than €11 billion during EFSI, before increasing again to almost €15 billion during the InvestEU period. This represents a -33.6 percent change from the pre-EFSI period to EFSI, followed by almost 38 percent increase from EFSI to InvestEU.

The subsectoral breakdown reveals the distinct Spanish public investment pattern. Transport, being one of the primary subsectors under economic affairs, fluctuated throughout this period. It declined from the initial annual average of €10.8 billion before EFSI to just below €7 billion during EFSI, before rising again to almost €10 billion in the InvestEU period. In percentage terms, this marked a decrease of more than 36 percent initially, followed by a 43.6 percent recovery from EFSI to InvestEU. In spite of this turnaround, transport accounted for 23.7 percent of total Spanish public investment in the

InvestEU-period window.

Other sectors show a stronger recovery from the EFSI period to InvestEU. Environmental and water-related investment increased by 107.7 percent, health increased by almost 82 percent, hospital services increased by 128.3 percent and the social, education and housing proxy increased by 83 percent. This shows that the Spanish national public investment movement after EFSI was broader than the economic-affairs and transport channel alone. The EIB-backed side of the Spanish case is shown in Table 9, which identifies the sectoral distribution of EFSI and InvestEU-backed exposure.

Table 9: Spain: EFSI and InvestEU-backed exposure by sector

EIB-backed sector/theme	EFSI financing	EFSI mobilised	EFSI share	InvestEU amount	InvestEU share	Total backed amount	Total share
SMEs / services	3,106.3	15,811.2	31.8%	13.5	0.4%	3,119.8	24.3%
Energy	1,162.8	4,121.7	11.9%	1,879.0	60.7%	3,041.8	23.7%
Transport / mobility	2,866.6	6,736.5	29.4%	75.7	2.4%	2,942.3	22.9%
RDI / industry / digital	2,088.2	6,268.0	21.4%	544.6	17.6%	2,632.7	20.5%
Social / education / housing	193.5	879.4	2.0%	424.3	13.7%	617.8	4.8%
Environment / water / waste	221.4	945.1	2.3%	13.7	0.4%	235.1	1.8%
Other / unclear	0.0	0.0	0.0%	111.1	3.6%	111.1	0.9%
Regional development	71.5	170.1	0.7%	0.0	0.0%	71.5	0.6%
Agriculture / bioeconomy	51.7	104.7	0.5%	11.7	0.4%	63.4	0.5%
Health	0.0	0.0	0.0%	16.5	0.5%	16.5	0.1%
General public services	0.0	0.0	0.0%	7.3	0.2%	7.3	0.1%

Notes: Values are EUR million, nominal. EFSI financing is used as the exposure measure. EFSI mobilised investment is reported only as descriptive leverage context and is not added to the total backed amount. InvestEU amounts refer to operation-level amounts in the constructed exposure data. Source: author's calculations based on the EFSI project list and InvestEU operations list. (European Investment Bank 2024; European Union, n.d.)

As the table suggests, Spain's EIB-backed exposure can be best described as unevenly distributed across sectors. The EFSI period marked the broadening of sectors supported

by the exposure, with SMEs and services, transport, RDI, industry and digital activity and energy being the primary ones. Later, with the InvestEU period came the narrowing of that scope, becoming much more energy-centred, as energy represented the largest InvestEU-backed category.

The comparison points to a mixed form of sectoral alignment. At the national level, economic affairs and transport both declined from the pre-EFSI period to EFSI, but then recovered during the InvestEU-period window. On the EIB-backed side, EFSI exposure was strongly connected to economic-modernisation sectors, especially SMEs and services, transport, RDI, industry and digital activity and energy. This creates some broad alignment with the economic-affairs channel, but it is weaker than in Italy because the Spanish transport function does not become more dominant across the full period.

The InvestEU period gives a different picture. Spain's national public investment shows strong growth from the EFSI period to InvestEU in several functions, including environment, health, hospital services and the social, education and housing proxy. At the same time, InvestEU-backed exposure shifted strongly towards energy. Energy also grew in the national public investment data, but its final-period share remained only 0.5 per cent. The energy-related alignment should therefore be interpreted cautiously, as part of the mechanism may operate through financed projects, utilities or mobilised investment rather than through direct general government GFCF.

Spain therefore supports the broad sectoral-alignment interpretation in a more cautious way than Italy. EFSI and InvestEU-backed exposure remained concentrated in economically relevant sectors, but the strongest national public investment growth from EFSI to InvestEU was not limited to the sectors receiving the largest EIB-backed exposure. For H1, Spain is useful as a mixed case of investment-composition alignment, while for H3, it remains relevant because it shows that even among high-exposure cases, the observable sectoral mechanism can differ across national public investment structures.

4.3.5 Netherlands

Having discussed the two higher-constraint cases, the Netherlands serves as the contrast case. The main aim is to assess whether the sectoral-alignment mechanism appears differently where fiscal constraint is weaker. The Dutch case therefore helps assess whether the mechanism is less direct or differently shaped under distinct scope conditions.

Table 10: Netherlands: public investment growth and composition by institutional period

Function / proxy	Pre-EFSI annual avg.	Pre-EFSI to EFSI	EFSI annual avg.	EFSI to InvestEU	InvestEU annual avg.	InvestEU share
Economic affairs, broad	10,909.2	-7.0%	10,143.8	+17.3%	11,900.7	34.6%
Transport / mobility	7,786.8	-5.1%	7,392.2	+12.5%	8,318.3	24.2%
Energy	782.4	-61.5%	301.5	-3.3%	291.7	0.8%
RDI / industry / digital proxy	1,145.8	-2.7%	1,115.3	+33.1%	1,484.7	4.3%
Environment / water / waste proxy	2,743.4	-8.5%	2,511.0	+40.1%	3,517.3	10.2%
Health	707.4	+36.3%	964.2	+27.0%	1,224.7	3.6%
Social / education / housing proxy	4,613.2	+5.6%	4,871.3	+31.8%	6,419.7	18.7%

Notes: Values are annual averages in EUR million, nominal. Annual averages are used because the institutional periods have different lengths. Percentage changes compare the annual average of each period with the previous period. The InvestEU share reports each function's share of total Dutch general government GFCF in 2022–2024. Selected proxy rows are used for analytical comparison and do not necessarily sum to the total, because some rows are broad functions while others are subfunctions. The year 2021 is excluded as a transition year. Source: author's calculations based on Eurostat general government GFCF by COFOG function. (Eurostat, n.d.)

As the Dutch national public investment data presents, economic affairs remained the largest public investment function, but its development differs from a simple growth story. As Table 10 shows, average annual public investment in economic affairs temporarily declined from almost €11 billion before EFSI to just over €10 billion during EFSI, representing an initial 7 percent drop. Later, during the InvestEU period, economic affairs increased by 17.3 percent to almost €12 billion. Transport followed a similar pattern. It declined from €7.7 billion before EFSI to €7.3 billion during EFSI, before recovering to €8.3 billion in the final period. The result was that the transport subsector first declined

by 5 percent, but later recovered by more than 12 percent. This suggests that the Dutch case does not show a strongly expanding transport-centred public investment pattern.

Other functions show more relevant growth from EFSI to InvestEU. The RDI, industry and digital proxy increased by 33.1 percent, environmental and water-related investment increased by 40.1 percent, health increased by 27.0 percent and the social, education and housing proxy increased by 31.8 percent. Energy, on the other hand, declined sharply from the pre-EFSI period to EFSI and remained small in the InvestEU-period window. The EIB-backed side of the Dutch case is shown in Table 11, which identifies the sectoral distribution of EFSI and InvestEU-backed exposure.

Table 11: Netherlands: EFSI and InvestEU-backed exposure by sector

EIB-backed sector/theme	EFSI financing	EFSI mobilised	EFSI share	InvestEU amount	InvestEU share	Total backed amount	Total share
Transport / mobility	1,029.9	3,422.5	44.1%	15.7	2.7%	1,045.6	35.9%
Social / education / housing	357.5	1,286.4	15.3%	77.3	13.4%	434.8	14.9%
RDI / industry / digital	283.6	1,353.2	12.1%	94.6	16.3%	378.2	13.0%
SMEs / services	337.3	3,393.2	14.4%	9.9	1.7%	347.2	11.9%
Environment / water / waste	230.0	674.1	9.8%	13.7	2.4%	243.7	8.4%
Health	0.0	0.0	0.0%	216.5	37.4%	216.5	7.4%
Energy	99.0	750.4	4.2%	117.4	20.3%	216.4	7.4%
Agriculture / bioeconomy	0.0	0.0	0.0%	11.7	2.0%	11.7	0.4%
General public services	0.0	0.0	0.0%	7.3	1.3%	7.3	0.3%
Other / unclear	0.0	0.0	0.0%	14.7	2.5%	14.7	0.5%

Notes: Values are EUR million, nominal. EFSI financing is used as the exposure measure. EFSI mobilised investment is reported only as descriptive leverage context and is not added to the total backed amount. InvestEU amounts refer to operation-level amounts in the constructed exposure data. Source: author's calculations based on the EFSI project list and InvestEU operations list. (European Investment Bank 2024; European Union, n.d.)

Table 11 shows a clear distinction between the distribution of exposure under EFSI and InvestEU. Under EFSI, the Netherlands had a strongly transport-focused exposure pattern, with transport and mobility accounting for the largest share of EFSI financing. Social, education and housing, SMEs and services, RDI and environmental sectors also appear as relevant categories. InvestEU brought a significant shift: health becomes the largest InvestEU-backed category, followed by energy, RDI and social, education and housing.

When taken together, the two tables suggest a more diffuse form of sectoral alignment. Transport was central to Dutch EFSI-backed exposure, but it declined from the pre-EFSI period to EFSI in the national public investment data and only recovered moderately during the InvestEU-period window. Meanwhile, the strongest national public investment growth from EFSI to InvestEU appeared in environmental and water-related investment, RDI, health and the social, education and housing proxy. These functions correspond only partly to the EIB-backed exposure pattern.

The InvestEU period also explains why the Dutch case works as a contrast case. Health became the largest InvestEU-backed category, and health also grew in the national public investment data, increasing from just shy of €1 billion during EFSI to €1.2 billion during InvestEU. However, health still accounted for only 3.6 percent of Dutch public investment in the InvestEU-period window. Energy also received significant InvestEU-backed exposure, but it remained small in the general government GFCF data, with an InvestEU-period share of only 0.8 percent. This again suggests that energy-related exposure is only partly visible in direct general government GFCF.

The Dutch case indicates that some EIB-backed sectors correspond to relevant public investment functions, especially transport during EFSI and health during InvestEU. Yet, the correspondence is weaker and more fragmented than in the high-exposure cases. This weaker alignment likely reflects a combination of lower total EIB exposure, stronger fiscal space and more diffuse investment priorities. The available data do not allow these factors to be separated fully, but the contrast supports the conditional logic of the thesis. This makes the Netherlands a useful contrast case, as EIB-backed activity appears in several relevant sectors, but the relationship between exposure and national public investment development remains more diffuse.

4.3.6 Cross-Case Findings

The cross-case comparison assesses whether the sectoral-alignment channel appears consistently across the selected national settings. The purpose is not to repeat the country-level findings, but to evaluate what the three cases jointly suggest about the relationship between national public investment development and EIB-backed sectoral exposure. The comparison follows the same logic used in the case studies by linking changes in national public investment functions to the sectors receiving EFSI and InvestEU-backed exposure.

Table 12 shows that the qualitative evidence does not point to a uniform pattern across all three cases. Italy provides the clearest case of sectoral alignment, as transport grows strongly from the EFSI period to the InvestEU period and also becomes the dominant InvestEU-backed sector. Spain provides a more mixed case, as economic affairs and transport recover after the EFSI period, but the strongest national public-investment growth appears more broadly across environmental, health and social functions, while InvestEU-backed exposure shifts mainly towards energy. The Netherlands functions as the contrast case, as EIB-backed exposure is present in several relevant sectors, but the relationship with national public investment development is more diffuse.

Table 12: Cross-case comparison of sectoral growth and EIB-backed exposure

Dimension	Italy	Spain	Netherlands
Main national public-investment movement	Transport-centred growth after EFSI	Broader recovery beyond transport	More diffuse growth across functions
Economic affairs	Slight decline into EFSI, strong growth into InvestEU	Strong decline into EFSI, partial recovery into InvestEU	Mild decline into EFSI, moderate recovery into InvestEU
Transport	Clearest growth match, especially into InvestEU	Declines into EFSI, then recovers, but less dominant	Declines into EFSI, then modest recovery
Other growing functions	Health and social/education/housing also grow into InvestEU	Environment, health, hospital services and social functions grow strongly	Environment, RDI, health and social functions grow into InvestEU
EFSI-backed pattern	Broad economic-modernisation exposure	Broad economic-modernisation exposure	Strong transport exposure
InvestEU-backed pattern	Transport and energy concentration	Energy concentration	Health and energy concentration
Overall alignment	Strongest, especially transport/economic affairs	Mixed, broader than one sector	Weaker and more diffuse
H1 relevance	Strongest sectoral-growth alignment	Qualified and mixed alignment	Contrast case, limited direct alignment
H3 relevance	Mechanism clearly visible	Mechanism visible, but less direct	Mechanism appears weaker or different

Notes: The table summarises the qualitative comparison across the selected cases. It does not treat EIB-backed exposure as identical to government investment, but compares national public-investment growth patterns with EFSI and InvestEU-backed sectoral exposure.

For H1, the qualitative evidence is therefore strongest when read through sectoral growth and investment composition rather than through a direct aggregate public-investment effect. The cases do not show that EIB-backed exposure automatically increases general government GFCF. Instead, they show whether the sectors receiving EIB-backed exposure correspond to public investment functions that grew or became more relevant across the periods. Italy provides the strongest support for this interpretation through transport and economic affairs. Spain provides qualified support, because EIB-backed exposure remains concentrated in economically relevant sectors, but national public investment growth is broader. The Netherlands provides weaker direct support, as the sectoral correspondence is more fragmented.

For H2, the qualitative evidence remains indirect. The case studies cannot show that EIB-backed exposure reduced sovereign spreads, because that is the task of the quantitative spread models. However, the sectoral evidence is still useful for interpreting the financing logic of the guarantee architecture. In all three cases, parts of EIB-backed exposure appear in sectors where the channel may operate through project finance, utilities, public corporations, financial intermediaries or mobilised investment, rather than direct general government GFCF. This is especially relevant for energy and some infrastructure-related categories. The qualitative evidence supports the plausibility of the financing and leverage channel, but it does not independently prove the spread effect.

A methodological implication also emerges from the cases. Transport-related exposure is more visible in general government GFCF, while energy and some health-related exposure may operate more through project finance, utilities, public corporations, financial intermediaries or mobilised investment. This helps explain why the aggregate GFCF channel is weaker than the financing-channel evidence.

For H3, the comparison is more useful because it shows that the mechanism does not appear identically across the selected countries. Italy shows the clearest sectoral-growth alignment, Spain shows a mixed but still relevant form of alignment and the Netherlands shows a more diffuse relationship between exposure and public investment development. This supports the conditional interpretation of the thesis: EIB-backed exposure should not be expected to operate as a uniform mechanism across all member states. Its visibility depends on how guarantee-backed exposure interacts with national public investment structures and the broader scope conditions of each case.

The qualitative findings should be read as evidence of the proposed channel rather than as a separate causal test. The comparison does not show that EIB-backed exposure directly caused sectoral public investment to change. It shows that EIB-backed exposure can be meaningfully compared with national public investment development, and that the degree of alignment differs across cases. This helps explain why the quantitative public-investment channel is weaker on average, while the conditional financing result is stronger. The next chapter brings these findings together and assesses what they imply for the EIB’s para-fiscal role, investment steering and member-state fiscal sovereignty.

5 Discussion

5.1 Interpretation of the Findings by Hypothesis

The empirical findings point to an indirect para-fiscal channel rather than a direct or uniform effect of EIB-backed exposure across member states. This relationship becomes clearer once fiscal and market constraints are introduced. It is also more visible through financing conditions than through aggregate public investment. Weak average effects in the baseline models do not mean that EIB exposure is broadly ineffective; they show variation across member states that the full-panel average obscures. This suggests that the main mechanism is not captured fully by the aggregate investment outcome alone. The qualitative evidence supports the plausibility of the steering channel, although it does not independently establish causation. Taken together, the two methods suggest that the EIB’s para-fiscal role operates mainly through risk-sharing and investment steering, with effects most visible where national fiscal or market room is more limited.

The hypotheses are assessed separately because the evidence is uneven across H1, H2 and H3. The first hypothesis revolves around whether guarantee-backed EIB exposure is associated with public investment behaviour, especially investment composition or alignment with EU-prioritised sectors. The findings support the interpretation that there is weak direct evidence for an aggregate public-investment effect. In terms of composition, the claim is stronger, as shown by sectoral alignment in Italy and a more qualified version of the same logic in Spain. Yet the Netherlands case shows that the mechanism is not uniform across the analysed member states. H1 should be treated as partially supported: the aggregate GFCF coefficient is statistically insignificant, yet the qualitative evidence

suggests that EIB-backed exposure may matter through composition, alignment, pipeline effects and project selection. This suggests that aggregate public investment may be too broad to capture the full process.

The second hypothesis focuses on financing conditions, testing whether EIB-backed exposure is associated with lower sovereign spreads. The quantitative results were directionally consistent with the proposition but inconclusive at the average level. The H2 spread model therefore does not give strong evidence for the financing-condition channel on its own. As a result, the stronger financing evidence does not appear in the average H2 model, but in the conditional logic tested under H3. Overall, H2 receives weak average support and cannot, on its own, establish a general financing-condition effect across the full sample.

H3 claims that EIB-backed exposure should matter more in fiscally or financially constrained member states, where off-budget support is more valuable. Of the three hypotheses, H3 is considered to be the most empirically supported by the evidence presented here. The relationship between exposure and the outcomes becomes clearer in more fiscally or financially pressured settings, which supports the idea that the EIB's para-fiscal role is conditional. The interaction results are more convincing than the baseline models, especially in the spread specification. This is visible in the spread interaction, where EIB-backed exposure is more strongly associated with lower spreads under higher market constraint. In this sense, the marginal value of EIB-backed support is higher for constrained countries, since risk-sharing and credibility are more valuable when normal fiscal space is limited. The qualitative evidence supports this interpretation indirectly, as Italy and Spain show clearer mechanism visibility under constraint, while the Netherlands acts as a contrast case where the same channel is weaker or less visible. H3 captures the most convincing part of the study, as it shows a constraint-sensitive mechanism rather than a universal effect across all member states.

5.2 Implications for Para-Fiscalism and Sovereignty

The findings indicate that para-fiscalism operates through risk-sharing, guarantees, financing conditions and investment steering, implying the presence of an indirect fiscal capacity within the EU architecture. This is reflected in the partial visibility of para-fiscalism through investment composition, and in the financing effect that becomes stronger under

constraint.

The EIB does not serve as a central fiscal authority because it lacks such powers, and no formal fiscal union has been realised. Therefore, EIB exposure should not be interpreted as a direct replacement for public expenditure. Instead, its expanded role through the guarantee architecture has developed through carrying risk, mobilising finance and steering investment choices indirectly. As a result, the EIB can be considered a delegated risk-bearing and policy steering channel, which has gained influence over member states through its role within eligibility and appraisal frameworks. The implication is that the EIB occupies an intermediate position: more than an ordinary lender, but still less than a fiscal authority.

The role of the EIB is directly linked to the question of legitimacy. The guarantee architecture may strengthen output legitimacy by supporting investment, stabilisation and policy delivery, especially in constrained member states, while it raises questions of input legitimacy because sectoral priorities can be shaped through eligibility criteria, appraisal standards and programme design instead of ordinary national budgetary debate. (Schmidt 2020, 25–55) This suggests a wider feature of the current EU architecture: the growing importance of indirect instruments shows that the EIB can generate fiscal-like effects without turning the EU into a fiscal union.

Shaping one's own fiscal policy is a core dimension of state sovereignty, yet each state also has the choice to pool or delegate parts of decision-making capacity by integrating into an organisation. In the case of the EU, member states currently retain formal fiscal sovereignty, since national governments remain responsible for budgetary decisions. Meanwhile, the findings suggest that practical fiscal space can still be reshaped through EIB-backed instruments. This is done indirectly through the EIB by influencing the conditions of fiscal choice and making certain projects easier to finance than others, which indicates that the EIB does not remove sovereignty; it simply changes the environment in which sovereignty is exercised.

The EIB's delegated role creates a capacity-control trade-off. As a result, certain parts of policy-making are mediated through delegated procedures, while long-term investment capacity may improve. This is best described as part of the steering process shifting from ordinary national budget politics into the more technical appraisal and eligibility processes of the EIB. Yet, this does not fit all member states equally: higher levels of market or fiscal

constraint lead to the sovereignty effect becoming constraint-sensitive. The phenomenon is also reflected in reliance on off-budget capacity becoming more important, which has an asymmetric effect on member states where national fiscal space is tighter.

The central implication is that fiscal sovereignty is reshaped rather than removed. Member states remain the formal decision-makers over national budgets, but their choices become partly mediated through EU financial architecture. Constrained countries may gain access to de-risked and potentially cheaper financing, but this comes with less discretion over which sectoral priorities become easier to finance. In this sense, constrained member states may benefit materially while exercising fiscal sovereignty under more mediated conditions. This interpretation also clarifies why the EIB's role matters politically, even though it remains below the level of a formal fiscal authority.

5.3 Limitations and Future Research

The analysis has several limitations. The main measure used in the analysis is EIB-backed exposure, which cannot capture the full process, such as intermediaries, project structures, risk-sharing arrangements and indirect mobilisation. In addition, the InvestEU period only covers a rather short window, which directly limits how much can be concluded about its long-term effect. The InvestEU-period findings must also be interpreted within the wider post-pandemic EU investment environment, since the 2022–2024 period overlaps with Recovery and Resilience Facility and NextGenerationEU disbursements. This is especially relevant for Italy and Spain, where public investment dynamics and market expectations may have been shaped by RRF flows as well as by EIB-backed exposure. This highlights that EIB-backed exposure can only be used as a proxy for para-fiscal activity, and that the thesis cannot fully isolate pure EIB effects during the InvestEU period.

Causal inference from the quantitative models remains limited. This means that EIB-backed exposure may itself respond to national economic conditions. Reverse causality also remains possible, as countries facing fiscal or market pressure may be more likely to receive or seek EIB-backed support. This alternative explanation is plausible because constrained countries may seek EIB support precisely when investment needs are already rising. However, EFSI and InvestEU operate through broad eligibility frameworks rather than direct country-by-country assignment, which reduces but does not eliminate this

concern. These shortcomings suggest that the evidence provided here should be interpreted as associative and mechanism-based rather than as definitive causal proof. Under this same category, a further limitation is that the spread specifications do not include a separate sovereign financial-stress indicator such as SovCISS. Such a control would be useful because debt, inflation, unemployment and GDP growth do not fully capture market-perceived sovereign stress. Future research could include such an indicator as an additional robustness check for the financing-condition models.

The qualitative analysis also has limitations. The qualitative evidence is selective and cannot represent all member-state experiences. The case studies are strongest as evidence of mechanism visibility, not as proof of general effects. The findings from Italy, Spain and the Netherlands cannot be generalised mechanically to the entire Euro area, as the case studies cover only a limited number of member states. The study identifies a conditional para-fiscal pattern rather than proving a complete transformation of EU fiscal governance. The aggregate GFCE variable used as an outcome measure may also be too broad to fully capture changes in investment composition, timing or project selection. These limitations define the boundaries of the assessment and point to the need for longer time horizons and more detailed project-level data.

The limitations outlined above suggest several directions for future research. A first direction is to strengthen causal identification using longer observation windows to assess long-term fiscal and investment effects. Alongside this, more detailed project-level and financing-level evidence could help distinguish between direct investment and broader financing dynamics. The mechanism-level findings could also be refined further, especially by examining whether EU-backed financing replaces or complements domestic investment. More attention could also be given to the role of institutional constraints in shaping the effectiveness of guarantee-backed instruments, as well as to how delegated financial channels reshape fiscal choice within multi-level EU governance.

A final direction concerns the evolving role of the EIB as an indirect stabilisation channel within the EU architecture. This could reveal different forms of incremental institutional integration that develop without the formal realisation of fiscal union. This indicates that guarantee-based mechanisms remain important for understanding how EU fiscal governance evolves under conditions of incomplete fiscal integration.

6 Conclusion

This thesis has examined the consequences of the EU's incomplete fiscal integration, specifically the absence of a fiscal union alongside a monetary union. Building on this problem, the study investigated to what degree the para-fiscal activity of the EIB affects the fiscal policy choices and sovereignty of member states. The EIB was chosen as the subject for the analysis because its guarantee-backed instruments perform fiscal-like tasks without creating a fiscal union. The analysis finds that its para-fiscal role becomes most visible under fiscal or market constraint. It can be concluded that the EIB affects fiscal policy choices and sovereignty to a limited but meaningful degree. It highlights the EIB's ability to reshape financing conditions and investment composition, especially in fiscally or financially constrained member states.

The evidence for H1 remains weak at the aggregate public-investment level, although the qualitative cases show sectoral alignment, especially in Italy. The average H2 financing effect is also weak, while the strongest evidence appears in the conditional H3 results, where the spread-reducing effect of EIB exposure is stronger in member states with higher baseline debt or baseline spreads. The EIB therefore operates as a delegated para-fiscal actor, but its effects are most visible where national fiscal room is most constrained.

This mechanism operates through sectoral steering. EU programme design and eligibility criteria influence which sectors qualify for EIB-backed support. In fiscally constrained countries, where external financing is more valuable, EIB-eligible sectors become more attractive within national investment planning. In less constrained countries, governments have more room to pursue investment priorities independently of EIB criteria. This explains why average effects are weaker, while conditional effects become stronger once fiscal or market constraint is taken into account.

The study confirms existing insights that EU governance often operates through delegation and interdependence, but its contribution lies in applying this logic systematically to the EIB's guarantee-backed activity. The novel element is the finding that the EIB's para-fiscal effects are not uniform, but vary sharply with fiscal and market constraint. This conditional mechanism is the main empirical and conceptual contribution of the study.

The significance of the thesis lies in showing how EU fiscal governance can develop indirectly through guarantee-backed and delegated mechanisms. This matters because it

demonstrates how the EU can generate fiscal-like capacity within its existing institutional constraints. The EIB does not resolve the absence of fiscal union, but it illustrates how para-fiscal institutions can provide limited fiscal-like capacity within the EU's incomplete fiscal architecture. This distinction helps clarify what such institutions can achieve, as well as where their limits remain.

The policy implication is that para-fiscal mechanisms should not be treated as a full substitute for fiscal capacity. They can provide useful risk-sharing and investment support, but they should be accompanied by safeguards that recognise differences in member-state fiscal space. Future guarantee-backed instruments should therefore be designed with more attention to country-level constraints, transparency in eligibility criteria and the risk that constrained countries may become more dependent on external support.

The conditional mechanism has distributional implications. Constrained countries benefit from access to de-risked and potentially cheaper financing, but this benefit comes with a more mediated form of discretion over investment priorities. They gain materially, but they exercise sovereignty under narrower practical conditions than less constrained member states. This does not necessarily mean that the mechanism is harmful, but it shows that the benefits of para-fiscal support are tied to a trade-off between capacity and discretion. This also raises a democratic question. If investment steering occurs through eligibility criteria, appraisal standards and project pipelines, part of the steering process becomes less visible in ordinary national budget politics. This does not mean that national authority disappears, but it does mean that some fiscal choices are shaped through technocratic financial channels rather than direct budgetary debate.

This is important because future EU crises are unlikely to wait for the creation of a formal fiscal union. If political agreement on central fiscal capacity remains limited, guarantee-backed and delegated instruments are likely to remain central to how the EU responds to investment gaps and asymmetric shocks. Understanding these para-fiscal mechanisms is therefore essential for understanding how the EU manages fiscal incompleteness: not through formal fiscal union, but through delegated institutions that provide real benefits while reshaping the conditions of national fiscal choice.

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DECLARATION OF AI ASSISTANCE

I hereby declare that I have independently completed this master's thesis titled "*Para-Fiscalism in the European Union: The Role of the European Investment Bank in Reshaping Fiscal Sovereignty*".

In the course of my work, I made use of artificial intelligence (AI) tools, specifically ChatGPT, to:

- Support my literature review through summarisation and clarification of academic content;
- Assist with research-related inquiries and technical explanations;
- Provide language and style suggestions, including improvements in grammar, sentence structure and coherence;
- Assist in formatting and the refinement of academic writing style;
- Streamline and generate R code to run regressions and produce graphs, and assist with $\text{\LaTeX}$ code.

All decisions regarding content, structure, analysis and interpretation were made by me.

The AI was used strictly as a supportive tool and did not generate original research content or conclusions.

This declaration is made in the interest of transparency and academic integrity.