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Portugal and Beyond: Dissecting Credit Risk through Eurozone Bond Spreads

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Abstract

This study analyzes the determinants of sovereign bond spreads in the Eurozone, focusing on Portugal and Spain. Using a Weighted Least Squares (WLS) approach, the study examines macroeconomic factors – GDP growth, unemployment, debt-to-GDP, inflation – and political events. Portugal’s spreads remain consistently narrower than Spain’s, driven by fiscal discipline, market dynamics, and ECB interventions, such as the Pandemic Emergency Purchase Programme (PEPP). The scarcity of Portuguese bonds further compressed spreads. Political instability and economic recessions in Spain contributed to widening the spread differential. The findings offer critical insights for investors and policymakers on the role of fiscal stability and market constraints.

Keywords

- Credit Spreads
- Bond Markets
- Eurozone Financial Stability
- Sovereign Bonds
- Market Liquidity
- Risk Assessment
- Portugal
- Spain

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Section 1 - Introduction

In the realm of international finance, understanding the nuances of bond spreads is crucial for assessing country risk, economic stability, and market dynamics. In the context of bond markets, lower risk correlates with lower yields or returns. Investors perceive such bonds as safer investments and are therefore willing to accept lower returns in exchange for the reduced risk.

Credit spreads, defined as the yield difference between bonds of similar maturity but differing credit quality, serve as a measure of the risk premium investors require to hold riskier bonds over safer, often government issued, benchmark securities. In the Eurozone, where countries operate under a unified monetary policy but have distinct fiscal realities, these spreads offer a window into the credit risk and liquidity of securities, reflecting variations in economic health and fiscal discipline among member states.

While historical data shows that bond spreads within the Eurozone have been relatively narrow, significant divergence occurred during the 2007/2008 financial crisis, with spreads widening dramatically. This phenomenon has been extensively analyzed, with the prevailing view attributing fluctuations in bond spreads to both global risk pricing and specific national risks, such as liquidity and default concerns. Notably, the crisis underscored that the relationship between underlying risk factors and bond yields could vary over time, challenging the adequacy of static linear regression models commonly employed in earlier studies.

Contributing to the discourse, this study introduces a nuanced approach by employing time-varying models to capture the dynamic interplay of macroeconomic fundamentals and market reactions over time. By focusing on the 10-year bond spreads of Portugal and Spain relative to Germany – a benchmark of fiscal stability – this research seeks to delineate the specific factors

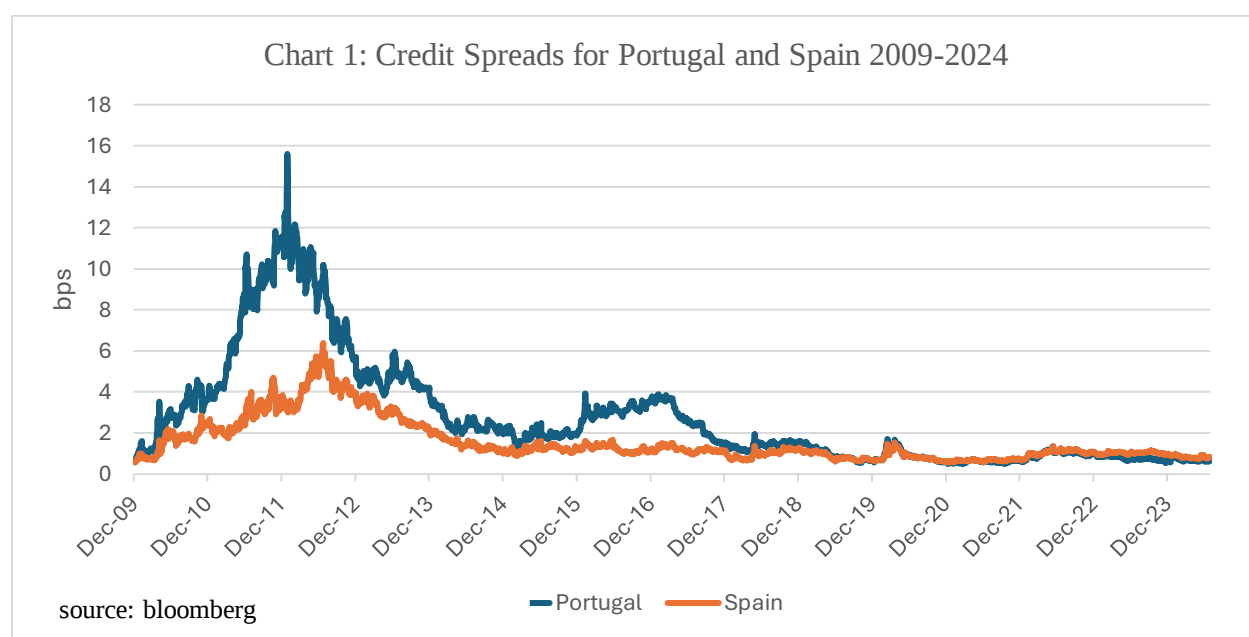
that have led to the persistent narrowness of Portugal's spreads compared to Spain's, despite similar macroeconomic profiles, since 2019.

The study progresses by contextualizing bond spread dynamics within the broader financial architecture of the Eurozone, highlighting the critical role of credit risk and liquidity in shaping borrowing costs. Through an exploration of both theoretical constructs and empirical data, the research bridges the gap between academic theory and practical financial strategy, providing a deeper understanding of the factors that influence bond markets.

The rest of the paper is organized to progressively build upon the historical context and dive deeper into the analytical aspects of bond spread dynamics in the Eurozone. Following this introduction, Section 2 reviews the existing literature, highlighting key findings and gaps this study aims to address. Section 3 details the methodology employed to analyze the bond spreads, introducing the econometric models and the rationale behind their selection. Section 4 describes the data used in this analysis, including sources and the justification for the inclusion of specific variables relevant to the study of Portugal, Spain, and the broader Eurozone context. Section 5 presents the results of the empirical analysis, discussing the implications of the findings in the context of current economic theories and market behaviors. Section 6 provides a comparative case analysis, focusing on the bond market dynamics between Portugal and Spain, in the context of the Eurozone, that could be the subject of future studies. Finally, Section 7 concludes by summarizing the insights gained from this research, outlining implications for policymakers and financial market participants, and suggesting directions for future research in sovereign bond markets within the Eurozone.

Section 2 – Literature Review and Context

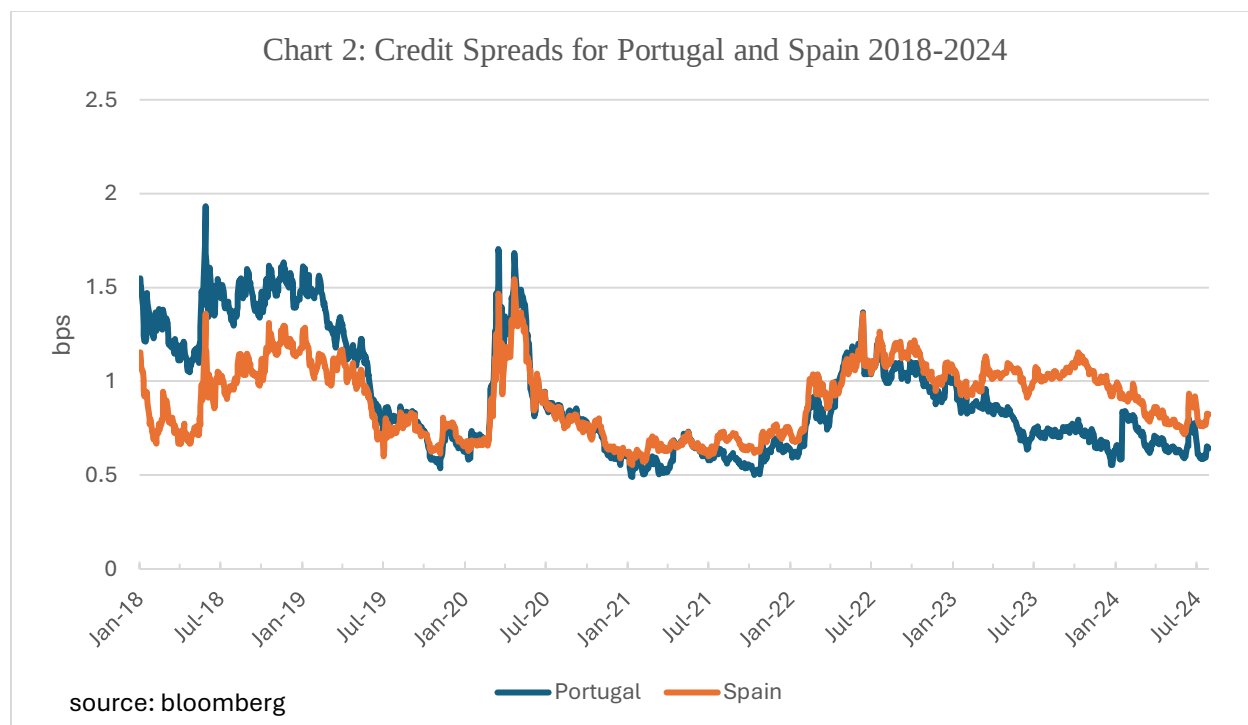
The Eurozone crisis of 2011-2012 had a significant impact on bond spreads, particularly as economic and political pressures escalated. De Santis (2012) noted the substantial widening of these spreads amidst rising global risk aversion and ineffective Eurozone policy measures to restore confidence. Alter and Schöler (2012) further elaborated on how sovereign debt risks were transmitted during the crisis, underscoring the deep interconnections within financial systems. Additionally, research from University College London (2011) and insights from Amadeo, K. (2021) provide a complementary perspective illustrating how these dynamics mirrored broader economic and financial stability concerns across the Eurozone, emphasizing the complex interplay of fiscal, monetary, and banking sector vulnerabilities. The crisis highlighted the critical gaps in the enforcement of EU fiscal rules, particularly the lack of stringent penalties for countries exceeding the debt-to-GDP limits, a situation further complicated by major economies like France and Germany also breaching these thresholds. This lax enforcement led to heightened borrowing costs for countries perceived as higher risk, notably those in Southern Europe.



(This chart illustrates the trajectory of credit spreads over time, showing Portugal's and Spain's bond spreads relative to the German Bund. A significant spike can be seen during the Eurozone crisis in 2010/2011, followed by a gradual narrowing of the spreads).

Following this period of heightened financial instability, the trajectories of Spain and Portugal diverged significantly. Historically, Spain benefited from narrower bond spreads relative to Germany than Portugal, reflecting its larger economy and perceived stability. This trend persisted until a significant shift occurred in October 2019, marking a new era in the comparative economic narratives of Spain and Portugal. Since then, the dynamics of these spreads have fluctuated reflecting a complex interplay of regional politics, economic policies, and global events, ultimately leading to a consistent widening of the Spanish spread since October 2020.

The initial reversal in October 2019 can be primarily attributed to heightened political tensions within Spain (FocusEconomics. 2017). The sentencing of Catalan independence leaders sparked considerable unrest (Deutsche Welle, 2019), significantly impacting investor confidence. The timing was critical, as it coincided with ongoing political challenges, including difficulties in forming a stable government. These events cast a shadow over Spain's political landscape, contrasting sharply with Portugal's relatively stable political scene at the time. As investors sought safer havens within the Eurozone, Portugal's bonds began to appear more attractive, leading to narrower spreads relative to Germany compared to Spain (Financial Times, 2019).



(This more recent period highlights the relative convergence of bond spreads between Portugal and Spain. The chart shows fluctuations due to political and economic events such as the COVID-19 pandemic and corresponding fiscal measures. It also demonstrates that since 2021 Portugal consistently maintained narrower spreads compared to Spain.)

As the dynamics of 2020 unfolded, the world was hit by the COVID-19 pandemic, which brought its own set of profound economic challenges and a significant public health crisis. Spain, due to its considerable dependence on tourism – a sector brutally hammered by the pandemic – suffered disproportionately in economic downturn (El País, 2021). This contrasted starkly with Portugal which, despite also experiencing the brunt of the pandemic, was initially commended for its effective early response (The Portugal News, 2022)(Cambridge, 2020). This competence in handling the crisis fostered a sense of relative economic resilience and political stability, which made Portuguese bonds increasingly appealing to risk-averse investors looking to diversify their portfolio in the Periphery (IMF, 2022). The term “Periphery” refers to the economically weaker and less stable nations within the Eurozone, typically including countries like Portugal, Greece, Spain, Ireland, etc., which contrast with the core countries such as Germany and France.

However, the attractiveness of Portuguese bonds was not consistent throughout the year. The credit spreads relative to Spain's fluctuated, notably widening between February and May 2020, and again from July until October 2020. These periods likely reflect the evolving nature of the pandemic, where initial perceptions of control and stability gave way to realities of economic damage and the challenges of sustained management of the crisis (Chart 2).

In addition to the factors outlined, the role of the European Central Bank's (ECB) Pandemic Emergency Purchase Programme (PEPP) was crucial in stabilizing bond markets during the height of the COVID-19 pandemic. This program provided significant liquidity, particularly benefiting countries with higher perceived risk, like Portugal and Spain. The ECB's aggressive bond-buying helped to compress spreads that might otherwise have widened further, especially in economies more reliant on external support. This intervention had a pronounced effect on Portuguese bonds, where the scarcity of supply combined with ECB purchases amplified the demand and helped narrow spreads even more dramatically. Spain also benefitted from these purchases, though the underlying political instability still weighed more heavily on its spreads (Suwalski et al, 2023).

Throughout the year, the credit spreads between the two countries oscillated as each government responded to the evolving crisis. However, by October 2020, a discernible pattern emerged where Spain's credit spreads began consistently widening relative to Portugal's. Several factors contributed to this development. The resurgence of COVID-19 cases in the fall, combined with ongoing political uncertainties and economic recovery concerns in Spain, fostered a cautious approach among investors. Moreover, Spain's economic recovery was complicated by its greater reliance on sectors most affected by the pandemic, such as tourism and hospitality, which were slower to bounce back compared to more diversified sectors in Portugal (Politico, 2021).

These shifts in bond spreads between Spain and Portugal from October 2019 onwards are reflective of broader trends in investor behavior and market dynamics, where political stability and effective economic management play critical roles. As Eurozone countries navigated the unprecedented waters of a global pandemic, the bonds of each country told a story of relative risk and investor confidence, influenced heavily by both domestic policies and external global events.

This ongoing narrative between Spain and Portugal's bond markets underscores the importance of robust political governance and economic policy in times of crisis. It highlights how swiftly investor sentiment can shift in response to changes in the political landscape and crisis management, impacting the financial positioning of nations within the global markets.

Section 3 - Methodology

This empirical analysis examines the main determinants of sovereign bond spreads in Portugal and Spain, as well as the difference between their spreads (Diff Spread). For the purpose of this study, economic factors including GDP growth, unemployment rate, debt-to-GDP, inflation rate, and political variables (e.g. Political Stability Index, election results) were considered for each country, along with technical recession indicators, to assess if GDP growth would have a greater impact if the economies were in technical recession.

Initially, the analysis was conducted using Ordinary Least Squares (OLS). However, the model encountered issues with heteroscedasticity, which was addressed by transforming the dependent variables into percentage changes rather than absolute values, calculated as:

$$\Delta Spread_{it} = \frac{Spread_{it} - Spread_{it-1}}{Spread_{it-1}} \times 100$$

This transformation was crucial in stabilizing variance across the observations and improved the model's performance but did not fully resolve all concerns. As a result, the analysis progressed to a Weighted Least Squares (WLS) approach using the software SPSS, which provided more robust results.

For the WLS model, the weights were calculated by saving the residuals from an OLS regression, squaring the residuals, and using the inverse as the weighting factor. This transformation allowed for a better fit, particularly in the case of the Diff Spread regression, where multiple variables exhibited multicollinearity issues. In the Portuguese regression, the model still presented some multicollinearity that did not disappear with this transformation. To address this, non-significant variables were removed, and alternative specifications were tested.

The final models estimate the determinants of sovereign bond spreads using the following regression equation:

$$\Delta Spread_{it} = \alpha_i + \beta_i X_{it} + \epsilon_{it}$$

Where:

- $spread_{it}$ represents the sovereign bond yield spread relative to the German Bund, or in the case of Diff Spread, the percentage change between Portuguese and Spanish spreads.
- X_{it} is a vector of economic factors, including GDP growth, unemployment rate, debt-to-GDP, and inflation rate.
- β_i captures the sensitivity of sovereign spreads to these factors.
- α_i represents country-specific effects.
- ϵ_{it} is the error term with standard assumptions of zero mean and constant variance.

The model was then expanded to consider the impact of political variables and economic events. Political events, such as election outcomes were represented by dummy variables. These were assigned a value of 1 for right-wing election results, -1 for left-wing results, while non-election periods were coded as 0.

In the robustness analysis, the final models were adjusted by removing not significant variables and re-estimating the regression using only statistically significant variables. This resulted in more stable models, which reduced multicollinearity in the Portugal regression. The inflation rate, unemployment rate, and debt-to-GDP were retained as significant drivers of spreads.

Section 4 - Data

This analysis relies on a panel dataset for Portugal and Spain, using quarterly data from December 2019 to July 2024. The focus is on 10-year bond yield spreads relative to the German Bund for both countries. Additionally, the difference between Portuguese and Spanish spreads (Diff Spread) is analyzed (Bloomberg).

Several economic indicators have been collected to serve as independent variables in the analysis:

- GDP growth rate: measured as the quarterly percentage change in GDP.
- Unemployment rate: the percentage of the labor force that is unemployed.
- Inflation rate: measured by the consumer price index (CPI).
- Debt-to-GDP ratio: calculated as the government debt divided by GDP.
- Political Stability Index: calculated as Political stability measures from Bloomberg.
- Political Indicators: Dummy variables for political elections.

Section 5 - Results and discussion

This section presents the results of the regression models for Portugal, Spain, and the Difference in Spreads, with each model evaluated based on percentage changes in the dependent and independent variables.

Portugal Spread Results

The results for the Portugal Regression model, which uses the percentage change in economic variables, are summarized in Table 1. The model has an R^2 value of 0.944, indicating a strong fit. Despite having a very high R^2 value, it is not uncommon in this area (Elton et al, 2001). The coefficients of GDP Growth, Inflation Rate, Unemployment Rate and Debt-to-GDP ratio are statistically significant, with the latter showing the largest impact on the credit spread.

Table 1: Portugal Regression Results (Model Summary and Coefficients)

R	R^2	Adjusted R^2	Std. Error	Durbin-Watson
.972	.944	.940	.99867	1.419

Portugal	Unstandardized β	Standard Error	Standardized Coefficients β	p -value
Constant	.671	.365		.072
GDP Growth	.017	.002	.455	<.001*
Inflation Rate	.040	.006	.331	<.001*
Unemployment Rate	-.039	.078	-.036	.615
Debt-to-GDP	2.925	.176	.711	<.001*

- GDP Growth: the percentage in GDP growth has a very small positive and significant impact on spreads ($\beta = 0.017$, $p < 0.001$). A higher growth rate leads to a slight widening spreads, potentially reflecting market concerns over sustainability.
- Debt-to-GDP Ratio: Debt-to-GDP has a particularly strong and statistically significant impact on spreads ($\beta = 2.925$, $p < 0.001$), indicating that increasing debt levels raise concerns about Portugal's credit risk.
- Unemployment Rate: The impact of unemployment is not statistically significant ($\beta = -0.039$, $p = 0.615$).
- Inflation Rate: Inflation also shows a small but significant influence on spreads ($\beta = 0.040$, $p < 0.001$), where higher inflation results result in a slight increase in sovereign spreads.

The variables for PSI and Technical recession were excluded from the Portuguese regression as they presented high collinearity, which degraded the strength of the model.

These findings are consistent with expectations, where higher debt and inflation signal increased credit risk, while strong GDP growth positively correlates with confidence in sovereign debt repayment capacity.

Spain Spread Results

The model explains 53.1% of the variation in Spanish spreads, with key predictors including the percentage change in GDP growth, unemployment rate, and technical recession indicator.

Table 2: Spain Regression Results (Model Summary and Coefficients)

R	R^2	Adjusted R^2	Std. Error	Durbin-Watson
.729	.531	.474	1.226	1.422

Spain	Unstandardized β	Standard Error	Standardized Coefficients β	p -value
Constant	4.658	1.138		<.001*
GDP Growth	-.004	.004	-.099	.326
Inflation Rate	0.021	.007	.338	.006
Unemployment Rate	.452	.079	.647	<.001*
Political Stability Index	-.006	.002	-.36	.002
Technical Recession	-2.936	.981	-.259	.013
Elections	3.33	.981	.389	.001*

- GDP Growth: The impact of GDP growth on Spanish spreads is negative but not statistically significant ($\beta = -0.004$, $p = 0.326$), suggesting no robust relationship between economic growth and bond spreads.
- Inflation Rate: Inflation is significant and positive ($\beta = 0.021$, $p = 0.006$), confirming that inflationary pressures contribute to higher sovereign spreads, like the result observed in Portugal.
- Unemployment Rate: The lagged unemployment rate shows a positive and highly significant impact ($\beta = 0.452$, $p < 0.001$) on sovereign spreads (opposite to the regular variable which showed a negative coefficient), consistent with the notion that higher

unemployment in the prior period leads to a perceived economic downturn, prompting investors to demand higher yields due to increased default risk.

- PSI: The Political Stability Index for Spain has a significant negative coefficient ($\beta = -0.006$, $p = 0.002$). This suggests that a higher level of political stability is associated with narrower spreads, reflecting the role of stable governance in reducing the perceived risk of sovereign default.
- Technical Recession: The technical recession dummy is negative and highly significant ($\beta = -2.936$, $p = 0.013$), suggesting that the onset of a recession drives sovereign spreads significantly higher, reflecting market concerns over the economic downturn's impact on fiscal sustainability.
- Election in Spain: Election periods in Spain show statistical significance ($\beta = 3.33$, $p = 0.001$), suggesting whenever a right wing party wins an election, the spreads tend to increase reflecting a higher perceived risk from investors.

Differential Spread Results

The regression for the Diff Spread, which measures the spread differential between Portugal and Spain, is presented in table 3. The R^2 of 0.875 demonstrates a strong fit. Variables that are significant in the Portugal and Spain models are similarly important here.

Table 3: Diff Spread between Portugal and Spain Regression Results (Model Summary and Coefficients)

R	R^2	Adjusted R^2	Std. Error	Durbin-Watson
.935	.875	.837	.98412	1.599

Diff Spread	Country	Unstandardized β	Standard Error	Standardized Coefficients β	<i>p-value</i>
Variables	Constant	-.5149	6.473		.431
GDP Growth	Portugal	-.072	.019	-.870	<.001*
	Spain	.085	.044	.143	.056
Inflation Rate	Portugal	.114	.026	.462	<.001*
	Spain	-.054	.038	-.215	.164
Unemployment Rate	Portugal	-.2148	.866	-.385	.017
	Spain	-1.328	.724	-.208	.073
Debt-to-GDP	Portugal	6.654	1.682	.397	<.001*
	Spain	-2.756	1.13	-.331	.019
Political Stability Index	Spain	.042	.008	1.487	<.001*
Technical Recession	Portugal	3.248	8.431	.077	.702
	Spain	-24.117	8.083	-.602	.005
Elections	Portugal	-26.765	19.072	-.182	.168
	Spain	-95.462	15.007	-.602	.005

- GDP Growth Portugal: The negative and significant coefficient ($\beta = -0.072$, $p < 0.001$) indicates that higher GDP growth in Portugal narrows the spread difference, meaning Portugal's spreads might decrease relative to Spain's as the country's economy grows stronger.
- GDP Growth Spain: has a marginally statistically significant positive result ($\beta = 0.085$, $p = 0.056$), suggesting that, as GDP growth in Spain increases, the spread difference between Portugal and Spain widens, indicating that Spain's spreads are likely to fall slightly faster than Portugal's as Spain's economy strengthens.

- Debt-to-GDP Portugal: The positive coefficient ($\beta = 6.654$, $p < 0.001$) suggests that higher Debt-to-GDP in Portugal may cause its spreads to widen more than Spain's.
- Debt-to-GDP Spain: The negative coefficient ($\beta = -2.756$, $p = 0.019$) suggests that an increase in Spain's debt-to-GDP ratio may lead to a narrowing of the spread difference between Portugal and Spain, meaning Spain's spreads widen more or decrease less relative to Portugal's.
- Unemployment Rate Portugal: Statistically significant and with a negative coefficient ($\beta = -2.148$, $p = 0.017$). This suggests that an increase in the percentage change of Portugal's unemployment rate leads to a decrease in the spread difference between Portugal and Spain. In other words, as unemployment in Portugal rises, the bond spreads in Portugal may decrease relative to Spain's, narrowing the spread differential. Not in line with what was expected, this suggests that investors might view Spain's situation as worsening relatively more or perceive Portugal's risks to be less elevated than expected despite unemployment increase. This could be due to other stabilizing factors in Portugal or heightened risk factors in Spain.
- Unemployment Rate Spain: the negative and not statistically significant coefficient ($\beta = -1.328$, $p = 0.073$) indicates that higher unemployment in Spain leads to a reduction in the spread difference (Portugal – Spain). In other words, Spain's spreads increase more than Portugal's when unemployment rises, leading to a narrowing of the spread difference.
- Inflation Rate Portugal: The lagged inflation rate for Portugal has a positive and significant coefficient ($\beta = 0.114$, $p < 0.001$), suggesting that higher inflation in Portugal widens the spread difference as Portugal's spreads increase more relative to Spain's spreads when inflation rises.

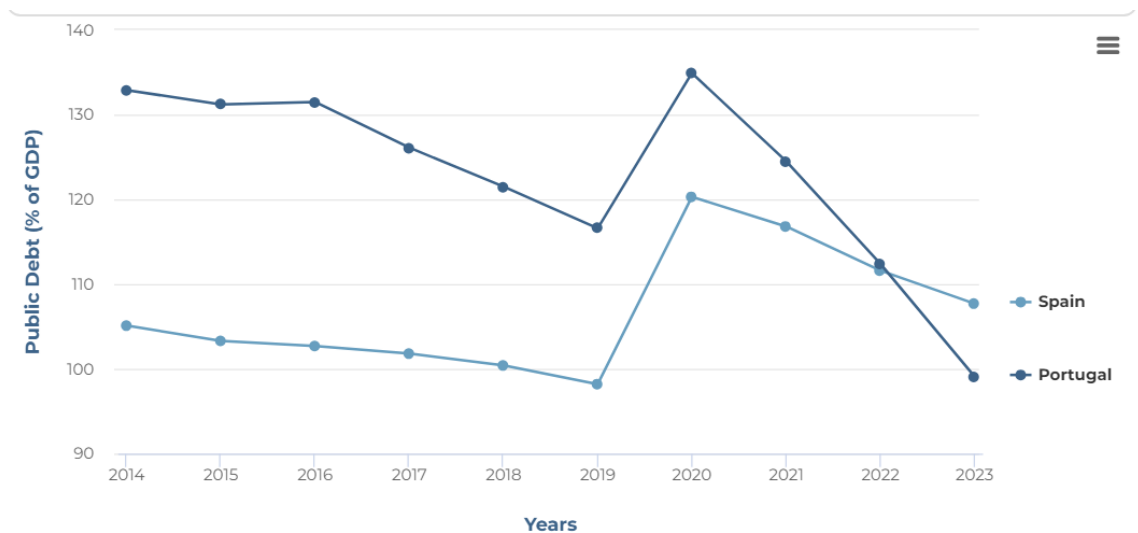
- Inflation Rate Spain: A negative and not statistically significant coefficient ($\beta = -0.054$, $p = 0.164$) suggests that higher inflation in Spain might lead to a narrowing of the spread difference, as Spain's spreads could widen more than Portugal's during inflationary periods, but the result is not statistically significant.
- Technical Recession Portugal: The positive but not statistically significant coefficient ($\beta = 3.248$, $p = 0.702$) suggests that during technical recessions in Portugal, Portugal's spreads widen more than Spain's, leading to a widening of the spread difference, but lacks significance.
- Technical Recession in Spain: with no surprises, the technical recession in Spain has a relatively significant and negative coefficient ($\beta = -24.117$, $p = 0.005$), indicating that when Spain enters a recession, the difference in sovereign spreads between Portugal and Spain narrows significantly.
- PSI Spain: A positive and significant coefficient ($\beta = 0.042$, $p < 0.001$) indicates that greater political stability in Spain increases the spread difference. This suggests that when political stability improves in Spain, the spread on Portugal's bonds widens relative to Spain, which aligns with expectations.
- Election Portugal: Not statistically significant, the negative coefficient ($\beta = -26.765$, $p = 0.168$) implies that election periods in Portugal cause Spain's spreads to widen more than Portugal's.
- Election in Spain: a negative and significant coefficient ($\beta = -95.462$, $p < 0.001$) suggests that left-wing political outcomes are associated with decreased sovereign risk or market perception of stability, which increases the differential in spreads from Portugal. This variable is way more relevant than Election in Portugal, since there have been 6 elections in Spain from 2019 to 2024, strengthening its significance.

To detect autocorrelation in the residuals of the regression models, the Durbin-Watson (DW) statistic was employed. This test evaluates whether there is a correlation between the residuals from different time periods, which is a critical assumption in time-series analysis. A DW value close to two indicates no autocorrelation, while values significantly below suggest positive autocorrelation, and values above 2 indicate negative autocorrelation. For the Portugal model, the DW statistic is 1.419, for Spain it is 1.545, and for the Diff Spread it is 1.599, all of which fall slightly below 2, suggesting a low to moderate presence of positive autocorrelation. While not overly problematic, this result was acknowledged in the interpretation of the model outcomes.

Section 6 - Eurozone Context: Reflections for Future Studies

The seemingly counterintuitive narrower credit spreads of Portugal, in contrast to Spain's wider figures, invite an exploration beyond conventional economic analyses. This chapter delves into the relations of fiscal consolidation (i), market dynamics (ii), and economic scale that collectively influence these spreads (iii).

(i) Portugal's journey toward fiscal health has been marked by rigorous financial discipline, achieving a notable reduction in its debt-to-GDP ratio to below 100% (chart 3). This significant fiscal consolidation has not only improved Portugal's economic outlook but also enhanced investor confidence, contributing to the compression of its credit spreads. The forward-looking trajectory of Portugal's fiscal policies continues to signal stability and resilience, factors that are highly valued in bond markets.



Note: This chart displays Public Debt (% of GDP) for Portugal from 2014 to 2023.
Source: Macrobond.

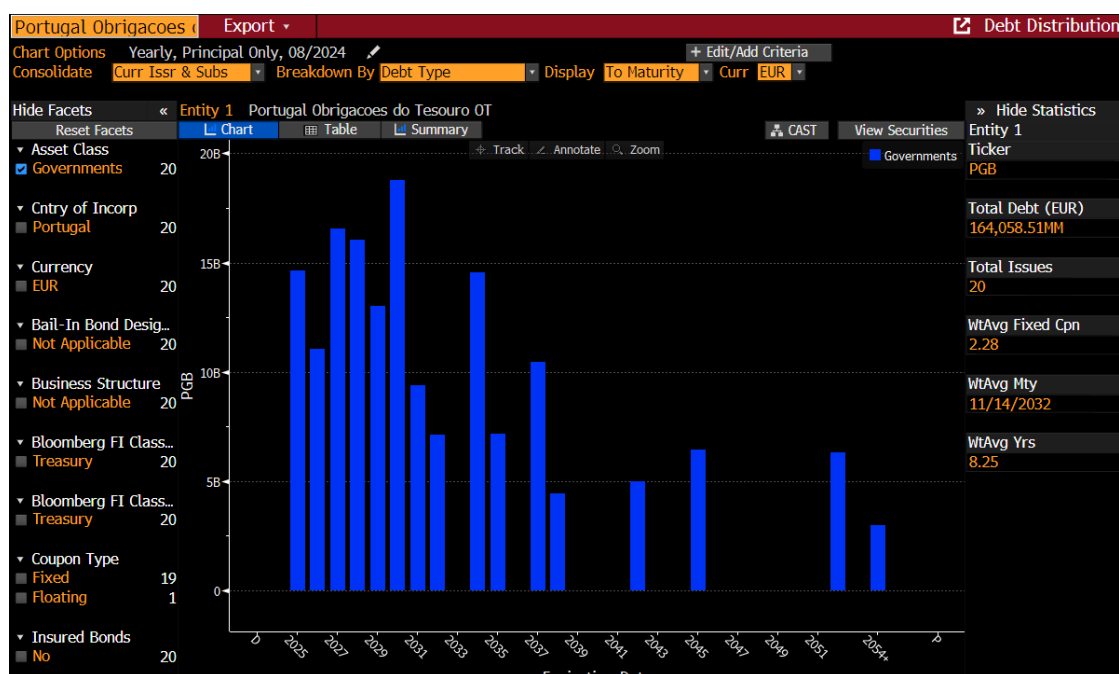
Chart 3 – Portugal and Spain debt-to-GDP from 2014 to 2024

(ii) The supply-side dynamics of government bonds are a critical factor in shaping the credit spreads of Portugal and Spain. A key distinction between the two countries is their debt maturity

structure and total debt issuance, which has implications for market liquidity and the pricing of sovereign risk. The debt distribution charts (Figures 1 and 2) below illustrate the maturity profiles of government bonds for Portugal and Spain as of August 2024.

(iii) Spain, with its larger economic structure, highlights a robust capacity to manage and service higher levels of debt. This inherent strength allows Spain to maintain a higher debt-to-GDP without invoking the same level of risk aversion as might be expected of smaller economies. The comparative analysis of these two neighboring countries underscores a pivotal aspect: economic scale profoundly impacts risk perception and credit spread dynamics.

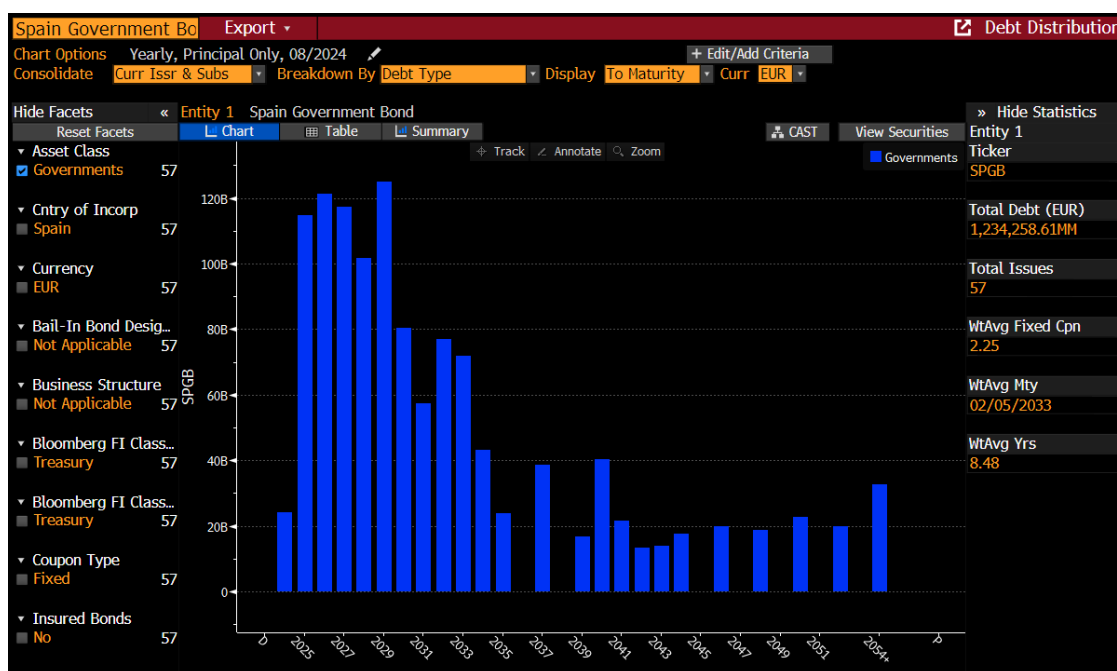
Portugal's Debt Distribution (Figure 1) source Bloomberg:



Portugal's relatively small bond market is characterized by lower issuance compared to Spain. The total outstanding debt stands at EUR 164 billion, with a weighted average maturity of 11.14 years. The limited issuance across several maturity buckets creates a scarcity premium in the market, where the supply-demand imbalance leads to heightened demand for Portuguese bonds.

This supply squeeze, coupled with the country's fiscal outlook, can help explain the narrowing of credit spreads relative to Spain.

Spain's Debt Distribution (Figure 2) source Bloomberg:



Spain, with a larger economic structure and higher borrowing needs, has a more spread-out debt maturity profile. Spain's total debt volume is significantly higher than Portugal's, which provides the market with greater liquidity. However, the higher debt levels in Spain, despite its larger capacity to manage the debt, introduce a higher perception of risk among investors, especially during periods of political uncertainty or economic downturn. This can result in wider credit spreads compared to Portugal.

This scarcity in Portugal's bond market makes its bonds more attractive to investors seeking diversification. During periods of quantitative easing, heightened demand for these limited-issue bonds further narrows spreads, illustrating how supply constraints, combined with stable fiscal policies, can lead to more favorable market conditions for Portugal.

Although France was not included in the final empirical model due to the scope of the analysis, recent political developments in France following the right-wing Rassemblement National's electoral gains in the European Parliament serve as a pertinent case study of how political factors influence bond spreads in major Eurozone economies, since the bond spreads widened relative to Portugal and are now around 20bps wider.

Section 7 - Conclusion

This study contributes to the literature on sovereign bond spreads in the Eurozone by analyzing the determinants of bond spreads in Portugal and Spain. Using a Weighted Least Squares approach, it identifies macroeconomic factors like GDP growth, inflation, unemployment, and debt-to-GDP as key drivers of spreads. The analysis also highlights the role of political stability and technical recessions in explaining spread differences. The research shows that since 2019 Portugal's spreads remain consistently narrower than Spain's, largely due to fiscal discipline and market dynamics, while political instability and economic downturns in Spain drive a widening differential.

The study reveals that inflation and debt-to-GDP are significant for both countries, but Spain's political stability and unemployment are more influential than in Portugal, with the Portuguese returning an unexpected negative coefficient. The difference in spreads is shaped by these factors, with political events in Spain, such as elections, having a marked effect on the differential. This study suggests that future research could explore the impact of global liquidity conditions and market risk perceptions on spread dynamics across countries, especially during periods of economic volatility.

The findings emphasize the importance of sound fiscal policies and political stability in shaping sovereign bond markets. The interaction of macroeconomic and political variables underscores the need for careful consideration of both domestic and external factors when assessing credit risks in Eurozone economies.

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