

“Relationship between macroeconomic variables and primary public offerings in Peru”

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RELATIONSHIP BETWEEN MACROECONOMIC VARIABLES AND PRIMARY PUBLIC OFFERINGS IN PERU

Abstract

Primary public offerings (PPOs) play an essential role in capital markets by providing financing for projects that contribute directly to a country's economic development. Macroeconomic conditions have a significant influence on the effectiveness of these offers since they affect the government's ability to issue sovereign bonds and manage its debt efficiently. Therefore, the present study seeks to determine the relationship between macroeconomic variables and PPOs in the capital market in Peru during the period 2019–2023, employing a quantitative methodology, non-experimental design, basic type, which uses SPSS software for Pearson correlation analysis. The results show that the impact of macroeconomic variables on PPOs is diverse. A weak inverse relationship was identified between public spending and PPOs (correlation of -0.140), suggesting that increases in public spending could discourage the issuance of PPOs. In addition, a moderately strong inverse relationship was found between fiscal deficit and PPOs (correlation of -0.620), indicating that higher fiscal deficits could have a significant negative effect on PPO issuance. A weak negative relationship was also observed between non-financial public sector debt and PPOs (correlation of -0.215), implying that high levels of debt may limit the ability of the capital market to develop new offerings. These findings suggest that, although macroeconomic variables impact PPOs, the magnitude of their influence varies. Furthermore, macroeconomic stability is key to capital market development, given its effect on sovereign bond issuance.

Keywords

capital markets, sovereign bonds, fiscal deficit, public spending, non-financial public debt, correlation analysis

JEL Classification

E29, A10, F41

INTRODUCTION

In the economic sphere, macroeconomic variables play a crucial role in shaping financial conditions and forming economic policies and investment decisions. Factors such as government spending, public debt, and fiscal deficits have a significant impact on financial markets, particularly the bond market. These indicators not only reflect a country's economic stability but also influence the profitability of financial instruments. In this context, sovereign bonds, as debt instruments issued by governments, are an essential source of financing, facilitating the participation of institutional and private investors. Their behavior is closely linked to macroeconomic indicators, reflecting the interaction between economic policies and market conditions.

Economic uncertainty is a recurrent manifestation of macroeconomic problems, generating volatility in various internal and external factors that affect the stability of investment markets. According to Muñoz Henríquez and Gálvez-Gamboa (2022), this uncertainty not only causes fluctuations in economic activity but also distorts prices in the financial market, contributing to sustained price increases and, thus, inflation (Lazo & Zavaleta, 2021). This phenomenon has a negative

impact on both consumers and businesses, reducing purchasing power and increasing production costs. In the absence of effective measures to control inflation, confidence in the economy is affected, which in turn affects private investment and consumption, essential factors for sustainable economic growth (Flores-Macha et al., 2024; Ramos, 2021). In the case of Peru, during 2022, inflation showed a year-on-year slowdown of 1.7%, attributed to the contraction of economic activity, the reduction of exports, and the lower dynamism of private spending (BCRP, 2022; Aggarwal et al., 2022; Paredes et al., 2024).

In addition, economic uncertainty can have significant social and political repercussions. Persistent price volatility undermines public confidence in institutions and in the state's ability to manage the economy, which can intensify conflicts in various spheres (Bohorquez-Isidro et al., 2024; Buguña-Seminario et al., 2024).

In this context, it is relevant to analyze the relationship between macroeconomic variables and primary public offers (PPOs) in Peru. PPOs represent a key mechanism for firms and governments to access financing, so understanding how macroeconomic fluctuations impact their behavior will generate valuable information for investors, regulators, and policymakers, thus facilitating strategic and informed decision-making.

1. LITERATURE REVIEW

This study is based on theoretical frameworks that allow for understanding the relationship between macroeconomic variables and primary public supply (POP). Among them, Keynesian theory is applied to the analysis of macroeconomic variables, emphasizing government intervention through fiscal and monetary policies as essential tools to stabilize the economy. Keynes postulates that fiscal stimulus and aggregate demand play a key role in economic recovery, given that uncertainty is an inherent element of the economy, making public spending and state interventions essential to counteract the effects of crises and maintain financial equilibrium (Chohan, 2022). Complementarily, the signaling theory helps explain the behavior of firms in PPOs, arguing that higher quality firms send signals to the market, such as innovations or patents, to reduce uncertainty and improve investor confidence, which is crucial for financial decision-making (Ngoc et al., 2023). Both theories provide a sound analytical framework for examining how macroeconomic conditions may affect the behavior of PPOs in the Peruvian context during the study period.

The macroeconomic analysis addresses phenomena of various scales, including aspects such as economic growth, investment, and income distribution (Abeles & Pérez Caldentey, 2022; Arce-Cruz et al., 2023; Salazar-Rebaza et al., 2022), also the

economic cycle and sustainable growth (Castro-Oliva, 2022). Among the key variables within this field, the fiscal deficit is one of the main indicators of a country's financial performance, as it arises when government expenditures exceed tax revenues. This phenomenon can be caused by multiple factors, such as a reduction in tax revenues, an increase in public spending, or the occurrence of unforeseen events that require an increase in government investment. The literature has shown that, if not properly controlled, fiscal deficits can generate financial imbalances, increasing inflationary pressure and accumulating public debt, negatively affecting economic stability (Rivas, 2020; Novelo Urdanivia & Muller Durán, 2020). In this sense, the sustainability of public debt is a central issue in macroeconomic analysis since a country can resort to this source of financing to meet its investment and operating needs. However, the government's ability to manage its debt efficiently depends not only on its revenues and expenditures but also on economic, political, and social variables. Factors such as Gross Domestic Product (GDP) growth, political stability, and the implementation of appropriate fiscal policies play a crucial role in the management of public debt and its impact on the national economy.

Public spending is another key component of macroeconomic analysis, as it is closely related to the expansion and contraction of economic activity. Its increase is associated with higher GDP

growth because government investments in infrastructure, education, health, and other public goods and services generate positive externalities in the economy. In this context, public spending can stimulate aggregate demand and boost economic growth, although its impact depends largely on the efficiency of resource allocation and the macroeconomic context in which these policies are implemented (Coronel Alarcón et al., 2021; Rodríguez Panduro et al., 2020). However, financing this spending through government borrowing can lead to an increase in the country's financial burden, highlighting the importance of finding the right balance between public investment and fiscal sustainability. In the securities market context, public spending has a direct impact on sovereign bond issuance, as increased government borrowing can increase the supply of these financial instruments and, consequently, influence their rates of return and investor confidence.

Primary public offerings (PPOs) are an essential mechanism for raising finance by both companies and the government. Through these offerings, issuers can access capital in the securities market by placing bonds, shares, and other financial instruments. This process allows channeling resources to strategic sectors of the economy, facilitating investment in productive projects and strengthening the liquidity of the financial market (Horna Zegarra, 2020). Within this scheme, the primary market plays a central role in the dynamics of financing, as it allows the issuance of new securities and their direct placement among investors. Investors participating in the primary market can earn long-term returns on their investments, which reinforces the importance of this segment within the financial system (García, 2023; Neffa, 2023). In the case of sovereign bonds, their issuance represents a key strategy for public debt management, as it allows governments to raise funds in the financial market to finance infrastructure projects, debt restructuring, and payment of fiscal obligations. Along these lines, Loza-Vega (2023) highlights the importance of sovereign bonds within PPOs, pointing out that their issuance is fundamental for the financial sustainability of countries and for attracting foreign investment.

The relationship between macroeconomic variables and primary public supply has been exten-

sively studied in various international contexts. Waszkiewicz (2021) examines the impact of economic policies on government bond markets in Europe. The results suggest that the lack of cohesion in economic governance has generated uncertainty among investors, reducing their interest in purchasing sovereign bonds and negatively affecting their future performance. In Latin America, Castro Jácome and Zambrano Santillán (2024) focused on the debt market in Ecuador, specifically on the relationship between public spending and GDP. Using a quantitative approach, they found a correlation of 0.369 between public debt and government spending, indicating that the financing of government spending has relied heavily on sovereign bond issuance.

In the Peruvian case, Chávarri Balladares and Neciosup Ramos (2022) conducted a quantitative and correlational study on the relationship between the fiscal deficit and sovereign bonds. Their findings revealed a negative correlation of -0.8 between these variables, implying that an increase in the fiscal deficit tends to reduce sovereign bond yields. This result highlights the importance of prudent fiscal management to ensure debt market stability. Likewise, Caveró Egúsqüiza Vargas et al. (2019) analyzed the issuance of Peruvian global bonds in the US stock market, finding that these instruments have been an effective source of financing for public debt, as they have allowed raising resources at lower interest rates and improving the country's financial sustainability. In the context of emerging markets, Gurrola-Ríos et al. (2022) studied the relationship between country risk and bond markets in Southeast Asia, concluding that there is an interdependence between the sovereign bond indices of countries such as China, the Philippines, Indonesia, and Sri Lanka, suggesting that macroeconomic conditions and risk perceptions can influence the dynamics of global financial markets.

Finally, the literature reviewed shows that macroeconomic variables have a significant impact on the behavior of PPOs and sovereign bond issuance. Factors such as fiscal deficits, public debt, and government spending influence investor confidence and financial market stability. Empirical evidence suggests that efficient management of these variables is key to ensure the development of

securities markets and the sustainability of public finances. In this sense, understanding the interaction between these variables is essential for the formulation of more effective economic policies and for informed decision-making by financial market agents.

This study on the relationship between macroeconomic variables and primary public offerings (PPOs) in Peru during the period 2019–2023 is justified by the need to understand the impact of economic changes on government financing decisions. This period was characterized by significant economic and political events, such as political instability and volatility in economic growth, factors that have directly affected financial markets. Analyzing these relationships will generate relevant information for formulating more effective economic policies and for investors' decision-making, thus contributing to strengthening the Peruvian stock market and optimizing financing strategies for both the public and private sectors.

The objective of this study is to determine the relationship between macroeconomic variables and primary public offerings (PPOs) in Peru during the period 2019–2023. The hypothesis is

H1: There is a significant relationship between macroeconomic variables and primary public offerings (PPOs) in Peru, specifically between public spending, fiscal deficit, and non-financial public sector debt with the issuance of PPOs in the Peruvian economic context.

2. METHODOLOGY

This is a correlational study aimed at measuring the degree of relationship between two or more variables without intervening in their results by means of a non-experimental research design. This approach makes it possible to observe phenomena as they occur in the context without altering them, thus contributing new knowledge to economic science. The study is based on an analysis of data from Peru, which was selected as a sample due to its status as an emerging economy with sustained growth in the region and a financing system based on sovereign bonds. Likewise, the availability of

reliable and accessible data from Peruvian institutions, such as the Lima Stock Exchange (BVL), the Ministry of Economy and Finance (MEF), and the Central Reserve Bank of Peru (BCRP), allows an exhaustive and feasible study to evaluate the relationship between macroeconomic variables and the behavior of primary public offerings (PPO).

Data collection was carried out through an exhaustive documentary review covering reports, records, archives, and relevant articles. BCRP annual reports were key sources to obtain data on macroeconomic variables, while the official website of the MEF provided detailed information on the number of sovereign bonds issued during the study period (2019–2023). Data analysis is fundamental to this process (López & Trujillo, 2020) because it involves collecting, organizing, storing, analyzing, and visualizing data from reliable sources. For this purpose, statistical analysis techniques were applied to evaluate the relationship between macroeconomic variables and PPOs, determining the association between them and the magnitude of their influence.

After data collection, the data were processed and organized in tables, allowing their analysis in the SPSS (Statistical Package for the Social Sciences) statistical software. Pearson correlation coefficient, a measure that indicates the strength and direction of the relationship between two variables, was used. This coefficient has values ranging from +1 to -1, where +1 represents a perfect positive linear relationship (i.e., when one variable increases, the other also increases by the same amount), while -1 indicates a perfect negative linear relationship (where an increase in one variable leads to a proportional decrease in the other). A value of 0, on the other hand, implies that there is no linear correlation between the variables (Apaza Zúñiga et al., 2022). This approach offers a quantitative and precise view of the relationships between the variables of interest, facilitating the interpretation of their effects on the behavior of the PPOs in the Peruvian economic context.

The study was conducted under strict ethical considerations and focused on ensuring the reliability and reproducibility of the results, avoiding inappropriate practices such as fabrication or falsification of data (Inguillay Gagnay

et al., 2020). Adherence to ethical standards of citation and referencing is essential to ensure the credibility of the study (Miyahira, 2023). The selection of articles and papers was based on their reliability, meeting the necessary standards to contribute meaningful information. In addition, data collection was conducted accurately and ethically based on five BCRP annual reports and MEF data on PPOs in Peru in the period 2019–2023. In total, 139 documents were reviewed to gather the information set out in Table 1, which details the annual amount of sovereign bonds issued. The ethical and methodological integrity of the study ensures that the findings can be reliably used in the analysis of the relationship between macroeconomic variables and PPOs in Peru.

3. RESULTS

Table 1 presents data provided by the Peruvian Ministry of Economy and Finance (MEF) on sovereign bond issuance between 2019 and 2023. In 2019, sovereign bonds were issued with the purpose of optimizing the public debt structure by financing and refinancing debt management, ensuring favorable conditions for state financing. However, in 2020, the situation changed drastically due to the COVID-19 health emergency, prompting the MEF to issue additional bonds to cover the extraordinary expenses necessary to mitigate the economic impact of the pandemic and maintain the continuity of public services.

Table 1. Issuance of Peruvian sovereign bonds in 2019–2023

Years	2019	2020	2021	2022	2023	Total
Peruvian sovereign bonds	42	15	13	35	34	105

During 2021 and 2022, the bond issuance was framed within a Comprehensive Asset and Liability Management Strategy to improve the country's financial sustainability through the issuance of new bonds and the restructuring of existing debt. In 2023, the issuance of debt in local currency continued in order to reduce foreign exchange risk and improve the liquidity of these instruments in the market, thus strengthening the financial position of the Peruvian government.

Table 2. Non-financial expenditures of the general government of Peru, 2019–2023

Non-financial expenditures	2019	2020	2021	2022	2023
National government	96,882	114,221	122,246	126,213	124,137
Regional governments	33,211	36,518	40,209	42,983	49,670
Local governments	24,292	26,645	31,745	37,326	35,782
Total non-financial expenditures (I + II)	154,385	177,384	194,200	206,522	209,589

Table 2 presents data from the Central Reserve Bank of Peru on non-financial government spending between 2019 and 2023. In 2019, non-financial spending totaled S/154,385 million, a figure explained by the reduction in gross capital formation and the financial results of state-owned enterprises, which limited investments and the government's spending capacity. In 2020, this expenditure increased to S/177,384 million, driven by the need to finance subsidies for the population in response to the COVID-19 pandemic, in addition to allocating significant resources to reactivate the health and education sectors, fundamental in response to the health crisis.

In 2021, there was an additional increase in non-financial spending, higher than the previous year, driven by spending on gross capital formation and the reactivation of projects that had been put on hold in 2020. Increased resources were also allocated to the reconstruction sector, with a budget earmarked for medical supplies, recruitment of health personnel, and other essential pandemic management expenditures.

In 2022, spending focused on current transfers, such as subsidies to households, procurement of goods and services, and educational materials for virtual education. In addition, capital expenditures focused on the development of infrastructure and basic services. Finally, in 2023, the government continued to allocate funds to the purchase of goods and services, including medical supplies and payments to Administrative Service Contracts (CAS) personnel. This approach aimed to strengthen the health system and ensure the well-being of the population in the context of post-pandemic recovery.

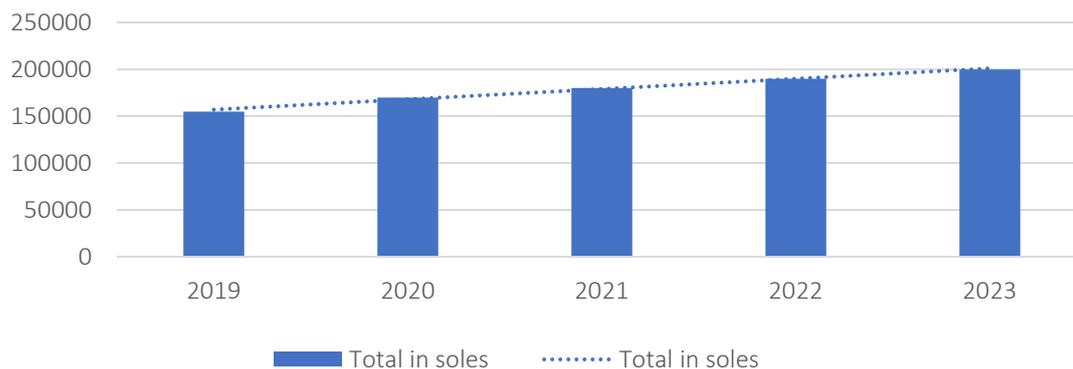


Figure 1. Non-financial expenditures of the general government of Peru in millions of soles, 2019–2023

Table 3. Fiscal deficit in the last five study periods (2019–2023)

Source: Information provided by the Central Reserve Bank of Peru (BCRP) database.

Years	2019	2020	2021	2022	2023
Fiscal deficit in percentages	1.6	8.9	2.5	1.7	2.8

Table 3 presents data from the Central Reserve Bank of Peru (BCRP) on the fiscal deficit in 2019–2023. In 2019, the fiscal deficit was 1.6%, a reduction from the 2.3% recorded in 2018, reflecting a gradual decline in the deficit, mainly attributed to the increase in current revenues of the General Government. However, in 2020, the fiscal deficit registered a significant rise, reaching 8.9%, due to the contraction in tax revenues caused by the COVID-19 pandemic and the decline in local economic activity.

By 2021, the fiscal deficit narrowed to 2.5%, an improvement of 6.4 percentage points from the previous year, driven by extraordinary revenues and economic reactivation, especially in sectors such as mining, which benefited from an increase in mineral prices. In 2022, the fiscal deficit continued to decline, reaching 1.7%, down 0.8 percentage points compared to 2021. This decrease was mainly due to an increase in demand for export minerals and hydrocarbons, as well as a reduction in other government expenditures.

Finally, in 2023, the fiscal deficit increased to 2.8%, an increase of 1.1 points over the previous year, due to a decrease in certain economic activities, a drop in imports, and a reduction in general government revenues.

Table 4. Peru's non-financial public sector total debt

	2019	2020	2021	2022	2023
I. External public debt	65,659	106,995	170,438	164,527	158,336
II. Domestic public debt	140,642	142,201	144,452	152,778	170,898
Public Debt (I + II)	206,301	249,197	314,890	317,305	329,234

Table 4 shows the evolution of non-financial public sector debt in Peru, according to data from the Central Reserve Bank of Peru (BCRP), in the period 2019–2023. In 2019, debt amounted to S/206,301 million, influenced by expenses derived from the issuance of sovereign bonds under the Market Maker Program, debt management operations (OAD), and other related items.

In 2020, debt increased significantly to S/249,197 million, reflecting an increase of S/42,896 million over the previous year. This increase is mainly due to the growth of long-term external debt, driven by the placement of global bonds and disbursements of contingent credits from international organizations. These resources were used to finance the government's measures in response to the health and economic crisis caused by the COVID-19 pandemic.

In 2021, debt continued to increase, reaching S/314,890 million, which represented an increase of S/65,693 million over the previous year. This growth is attributed to higher domestic indebtedness and the issuance of sovereign bonds, in line with the government's strategy to finance operations and mitigate the economic effects of the crisis.

Table 5. Macroeconomic variables, 2019–2023

Macroeconomic variables	2019	2020	2021	2022	2023
Non-financial expenditures of the Peruvian government (millions of soles)	154,385.00	177,384.00	194,200.00	206,522.00	209,589.00
Fiscal deficit	1.6	8.9	2.5	1.7	2.8
Non-financial public sector debt Peru (in millions of soles)	206,301.00	249,197.00	314,890.00	317,305.00	329,234.00

Table 6. Pearson's correlation for the sovereign bonds and non-financial expenditures of the general government of Peru (millions of soles)

Variables	Correlation	Number of Sovereign Bonds	Non-financial expenditures of the General Government (millions of soles)
Number of sovereign bonds	Pearson's correlation	1	-.140
	Sig. (bilateral)	–	.823
	N	5	5
Non-financial expenditures of the general government (millions of soles)	Pearson's correlation	-.140	1
	Sig. (bilateral)	.823	–
	N	5	5

By 2022, the gross debt of the non-financial public sector remained high, reaching S/317.4 million, evidencing the persistent financial pressure on the state. Finally, in 2023, debt reached S/329,234 million, driven by the increase in the fiscal deficit, underscoring the need for more rigorous fiscal management and sustainable sources of financing.

Table 6 shows a value of -0.140 , indicating a weak negative correlation between the amount of bonds issued between 2019–2023 and general government non-interest spending. This weak correla-

tion suggests that both variables are inversely related, albeit with a statistically limited association. As it approaches -1 , the strength of this inverse relationship would be greater, reflecting that an increase in one variable would lead to a decrease in the other. However, with a value of -0.140 , an increase in public debt is only slightly associated with a reduction in health spending, although this relationship is weak (Fiallos, 2021).

Table 7 shows a Pearson correlation of -0.620 , indicating a moderately strong inverse relationship

Table 7. Pearson's correlation for the sovereign bonds and Peru's fiscal deficit (2019–2023)

Variables	Correlation	Number of Sovereign Bonds	Fiscal Deficit
Number of sovereign bonds	Pearson's correlation	1	-.620
	Sig. (bilateral)	–	.265
	N	5	5
Fiscal deficit	Pearson's correlation	-.620	1
	Sig. (bilateral)	.265	–
	N	5	5

Table 8. Pearson's correlation for the sovereign bonds and non-financial public sector debt (millions of soles) of Peru

Variables	Correlation	Number of Sovereign Bonds	Debt of the non-financial public sector (millions of soles)
Number of sovereign bonds	Pearson's correlation	1	-.215
	Sig. (bilateral)	–	.729
	N	5	5
Debt of the non-financial public sector (millions of soles)	Pearson's correlation	-.215	1
	Sig. (bilateral)	.729	–
	N	5	5

between the two study variables. This suggests that as one variable increases, the other tends to decrease markedly, representing a relevant association in the context of the analysis (Fiallos, 2021).

Table 8 shows a Pearson correlation of -0.215 , indicating a weak inverse relationship between the study variables. This suggests a slight trend in which, as one variable decreases, the other tends to increase. However, this relationship is weak and may not be significant in practical or statistical terms within the context of analysis (Fiallos, 2021).

4. DISCUSSION

The present study provides empirical evidence supporting the hypothesis of a significant relationship between macroeconomic variables (namely, general government non-financial expenditures, fiscal deficit, and non-financial public sector debt) and primary public offerings (PPOs) in Peru. The findings obtained through Pearson's correlation analysis reveal relationships ranging from moderately strong to weak, yet still statistically significant. These results align with previous studies that emphasize the role of macroeconomic indicators in shaping sovereign bond issuance trends.

A key result of this study is the weak inverse correlation of -0.215 between sovereign bonds and non-financial public sector debt (in millions of soles). This suggests that as public debt increases, the issuance of sovereign bonds tends to decrease slightly. However, the strength of this relationship is limited, which indicates that other factors may be at play in determining bond market dynamics. This result is consistent with the findings of Castro Jácome and Zambrano Santillán (2024) in Ecuador, who observed that bond issuance plays a critical role in public debt financing, particularly when foreign direct investment is scarce. The weak correlation observed in Peru may reflect a more diversified approach to debt management, where the government employs alternative financial instruments alongside sovereign bonds.

Additionally, a moderately strong inverse correlation of -0.620 was found between sovereign bonds and fiscal deficit. This result is consistent with the findings of Garcia (2023), who identified that vari-

ous macroeconomic factors, such as inflation and total investment as a percentage of Gross Domestic Product (GDP), significantly affect sovereign bond spreads in Peru. Although the fiscal deficit is not directly addressed in their study, these macroeconomic variables are closely linked to fiscal policies, suggesting an indirect relationship between the fiscal deficit and sovereign bond issuance, in line with the results observed in our research. Similarly, Chávarri Balladares and Neciosup Ramos (2022) found a strong negative correlation (-0.8) between the fiscal deficit and sovereign bond yields in Peru, reinforcing the argument that fiscal imbalances can undermine investor confidence and reduce the state's capacity to issue new bonds.

From a comparative perspective, the correlation results align with international evidence on the relationship between fiscal policies and sovereign bond markets. For example, Waszkiewicz (2021) analyzed the Eurozone's public debt markets and found that inconsistent fiscal policies contributed to reduced investor interest in sovereign bonds. This finding suggests that economic governance and fiscal discipline play a crucial role in maintaining bond market stability. The present study supports this argument, as the inverse relationship between the fiscal deficit and PPOs suggests that rising fiscal imbalances may deter bond issuance.

The weak inverse correlation (-0.215) between sovereign bonds and non-financial public sector debt also raises important questions regarding Peru's debt management strategy. While a higher public debt burden could theoretically increase bond issuance as a means of refinancing obligations, the results suggest that other financial mechanisms might be employed instead. This trend could indicate a preference for alternative debt instruments or external borrowing options that mitigate the need for new bond issuances. Similar findings have been reported in Latin America, where sovereign bond issuance is often adjusted in response to economic uncertainties and investor sentiment (Gurrola-Ríos et al., 2022).

Beyond the correlation analysis, this study highlights the complexity of the interactions between macroeconomic variables and PPOs. While fiscal deficit and public debt exhibit an inverse relationship with bond issuance, the magnitude of these

relationships varies, suggesting that other contextual factors may be influencing the market. Investor confidence, global economic conditions, and monetary policies are potential determinants that warrant further investigation. The impact of global economic shocks, such as the COVID-19 pandemic, may also explain some of the fluctuations observed in bond issuance trends during the study period.

Furthermore, this study underscores the importance of macroeconomic stability in ensuring a sustainable and efficient bond market. The findings suggest that prudent fiscal management is essential for maintaining investor confidence and promoting liquidity in the sovereign bond market. Public policies should aim to balance debt sustainability with the need for capital market development, ensuring that fiscal imbalances do not excessively constrain bond issuance.

Despite its valuable insights, this study presents some limitations. The use of a quantitative approach with a non-experimental design restricts the ability to establish causal relationships between variables. Additionally, the study is limited to the Peruvian context between 2019 and 2023, which may affect the generalizability of the findings to other economies or periods. While useful, the reliance on Pearson's correlation does not capture potential non-linear relationships between macroeconomic indicators and sovereign bond issuance. Future research could address these limitations by incorporating time series analysis, structural equation modeling, or alternative econometric techniques to better understand the long-term interactions between macroeconomic variables and bond markets.

The findings provide both theoretical and practical contributions to the study of the relationship be-

tween macroeconomic variables and primary public offerings. From a theoretical perspective, the results reinforce the validity of economic models that highlight the impact of fiscal policies on sovereign debt markets. The observed inverse correlation between fiscal deficit and bond issuance aligns with Keynesian economic theory, which emphasizes the role of government spending and fiscal balance in influencing financial markets. Additionally, the study expands on empirical literature by providing quantitative evidence from an emerging economy like Peru, offering a comparative perspective that contributes to global discussions on sovereign bond market behavior. On a practical level, the paper has significant implications for policymakers, investors, and financial institutions. The identification of key macroeconomic variables that correlate with bond issuance can assist governments in designing more effective fiscal policies that promote market stability. Investors can also use these insights to assess risk levels associated with sovereign bonds, allowing for more informed decision-making. Furthermore, financial regulators may leverage these findings to enhance strategies for debt management and capital market development, ensuring that fiscal policies align with sustainable economic growth objectives.

Finally, the findings of this study reinforce the hypothesis that macroeconomic variables, particularly the fiscal deficit and non-financial public sector debt, have a significant relationship with primary public offerings in Peru. While the correlations observed vary in magnitude, they align with broader patterns identified in both national and international literature. These results highlight the crucial role of fiscal policies in shaping sovereign bond market dynamics and emphasize the need for further research to explore additional factors influencing bond issuance trends.

CONCLUSION

The general objective of this study was to determine the relationship between macroeconomic variables and primary public offerings (PPOs) in Peru during the period 2019–2023. The results obtained through Pearson's correlation analysis provided relevant information on the nature and magnitude of these relationships. In particular, a weak negative correlation of -0.140 was found between sovereign bonds and general government non-financial expenditures, suggesting an inverse association but of low magnitude. Although this statistically weak relationship indicates that as government spending increases, bond issuance tends to decrease, the association is not strong enough to draw clear conclusions.

On the other hand, the link between sovereign bonds and fiscal deficit showed a Pearson correlation of -0.620 , denoting a moderately strong inverse relationship. This association suggests that the fiscal deficit has a significant impact on bond issuance, indicating that increases in the deficit tend to decrease the state's ability to issue debt. Additionally, a correlation of -0.215 was found between sovereign bonds and non-financial public sector debt, reflecting a weak inverse relationship. Although these relationships indicate some interdependence between the variables, their weakness in some cases limits the practical applicability of these results for decision-making. In summary, the results confirm the existence of relationships between macroeconomic variables and PPOs in Peru, highlighting the influence of the fiscal deficit on sovereign bond issuance. However, some of these associations are weak, suggesting that there could be other relevant factors not considered in this analysis.

AUTHOR CONTRIBUTIONS

Conceptualization: Celeste Lucero Barzola-Castro, Arthur Giuseppe Serrato-Cherres.

Data curation: Franklin Cordova-Buiza.

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