

How Economic and Financial Indicators Shape Bond Market Performance in Asia?

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Abstract: The focus of this study is to examine the effects of macroeconomic and financial indicators on bond market performance in Asia countries. This study utilizes a regression analysis to measure the relationship between inflation, interest rate, stock market performance, and gold price in six selected nations: India, Indonesia, China, Vietnam, South Korea, and Turkey, from 2014 to 2024. The validity of the data was diagnostically checked by performing a VIF procedure, autocorrelation test, and normality test on residuals, and the data were analysed via EViews software. The analysis showed mixed findings; however, two major variables that negatively affect the performance of bond markets in Asia are “inflation and stock market,” which reflect global economic stability in the selected countries. An abrupt or sudden rise in the lending interest rate can trigger market volatility, leading to losses for bondholders and potentially discouraging corporate investment (Alam & Uddin, 2009). Moreover, the monetary policy stances adopted by central banks have systemically important ramifications for the valuation of both bond and equity markets on a global scale (Jang & Atukeren, 2019). For practical implications, this study suggests that policymakers pay extra attention to inflation to ensure a sustainable economic condition. To the best of the authors’ knowledge, this study is the first to examine the combination of both economic and financial shocks, along with gold price, both pre- and post-COVID-19 pandemic, focusing on Asia.

Keywords: *Macroeconomic, Lending Interest Rate, Inflation, Stock Market Performance, Gold Price, Asia*

1. Introduction and Background

The intricate relationship between macroeconomic variables, financial indicators, and bond market performance has garnered significant attention, especially within the context of emerging economies (Nair & Thenmozhi, 2012). Understanding the dynamics of this interplay is crucial for investors, policymakers, and researchers alike, as bond markets play a pivotal role in capital allocation, risk management, and overall economic stability (Zhou & Cui, 2019). Bond markets in Asia, particularly in countries like India, Indonesia, China, Vietnam, South Korea, and Turkey, have experienced substantial growth and transformation in recent decades, reflecting broader trends of financial deepening and integration with the global economy. Macroeconomic and financial factors are critical determinants of a country's economic well-being. The COVID-19 outbreak in 2020 significantly disrupted these factors globally, leading to GDP declines in many countries and adversely affecting bond market performance (Gherghina, 2023). Therefore, macroeconomic indicators must be monitored closely to ensure economic well-being to prepare for any unexpected events such as the COVID-19 pandemic, which is affecting economic performance globally, including the overall performance of bonds. We aim to explore any different effects of stock market trends, gold values, interest rates, and inflation rates on the performance of bond markets in different Asia continents: South Asia (India), Southeast Asia (Indonesia, Vietnam), East Asia (China, South Korea), and West Asia (Turkey).

The absence of vibrant bond markets in East Asia significantly contributed to the 1997–98 financial crisis, highlighting their importance in financial reforms. These nations have unique economic structures, regulatory environments, and market dynamics, making them ideal candidates for a comparative analysis of the factors influencing bond market performance (Hale, 2011). The expansion of domestic debt securities markets in numerous Asia economies during the 2000s underscores the growing importance of these markets in the region's financial landscape (Das, 2014).

In India, the bond market is demonstrating improved performance, evidenced by a total market capitalization of \$2.5 trillion, signalling positive market trends. Mishra and Nangru (2024) report that the Reserve Bank of India is actively fostering bond market development. Data from the National Securities Depository Ltd. reveals

a net investment of ₹121,059 crore from foreign portfolio investors in India's debt market in 2024, representing the highest inflow since 2015 (Dhuria, 2025). This indicates a robust growth trajectory driven by both government and corporate sectors (Das, 2014).

In early 2024, Indonesian government bond yields have slightly decreased, suggesting a stable lending environment where banks maintain their lending rates despite moderate inflationary pressures. This stability in the bond market often appeals to investors seeking less risky returns compared to the stock market, where growth is spurred by companies with strong earnings forecasts (Mead, 2024). Furthermore, the increase in gold prices indicates a move towards safer investments during times of global instability, which impacts investor attitudes in both the bond and stock markets. Overall, the bond market demonstrates stability but offers low yields; stock market performance and gold prices, along with well-managed inflation and consistent lending rates, collectively shape investor decisions across these various asset categories (Vanneaux & Plaque, 2025).

The current conditions in China's bond market present multiple operational challenges because of the combined forces of domestic financial indicators and international economic conditions. Market volatility has particularly affected government and corporate bond rates. To stimulate growth, the People's Bank of China has implemented accommodative monetary policies by lowering interest rates. Current challenges in China's bond market amplify the importance of policy timing. Due to decreased consumer demand and reduced industrial activities following the pandemic, market growth is showing signs of slowing down (Fu, 2024). The economic slowdown has increased yield volatility, prompting the PBoC to lower interest rates to stimulate economic growth, which affects bond market dynamics. These issues highlight the urgent need to understand how macroeconomic factors impact bond markets. The study's findings provide valuable insights for decision-makers and investors regarding China's evolving financial structure (Cui et al., 2025).

Moreover, global trends and macroeconomic policies significantly affect Vietnam's financial markets. The Ho Chi Minh Stock Index and the VN30 Equal Weight Index are two important measures of the nation's economic health. To combat inflation, which reached 4.1%, Vietnam's Central Bank has kept its real interest rate high in recent months (Can & Nguyen, 2021). This decision demonstrates the government's commitment to reducing inflation and stabilizing the gold price, especially the US gold price. However, the stock market has slowed, and business profitability has decreased because of high borrowing costs. The VN-Index and VN30 Index fluctuate because high interest rates discourage investment, showing how Vietnam must balance controlling inflation and supporting economic growth (Chowdhury et al., 2024).

According to Trading Economics data from January 2024, the South Korea 10-Year Government Bond Yield reflects the bond market's performance. It indicates South Korea's economic health and the stability of its financial market relative to inflation expectations. This yield fluctuates due to domestic and global factors, with past volatility ranging from 7.91% in April 2001 to 1.13% on August 12, 2019. These changes highlight the bond market's sensitivity to economic conditions, policy actions, and external events. The Bank of Korea influences bond market performance by setting lending interest rates, affecting the prices of lower-yielding bonds. In October 2024, the Bank of Korea lowered the key interest rate by 0.25% to 3.25%, influencing bond yields and investor strategies. South Korea's bond market is highly responsive to macroeconomic and financial variables (Min, 2025).

Turkey's main stock market index, Borsa Istanbul 100, reflects the nation's corporate and economic growth. It tracks the performance of the top 100 companies on the Istanbul Stock Exchange. The Turkish Central Bank maintained its policy rate at 50% to control the 48.58% inflation rate. This aims to stabilize the currency market and increase investor confidence. However, it raises borrowing costs for companies, reducing profitability and slowing economic growth. The BIST 100 is significantly affected by these measures, as high borrowing rates can hinder investment and cause short-term stock market fluctuations. Stabilizing Turkey's economy while promoting growth amid inflation presents a fragile balance (Ibrahimov et al., 2025). The impact of interest rate hikes on businesses in Turkey has been particularly severe; many small businesses have faced bankruptcy due to cash flow shortages and difficulties in short-term payments (Zhang et al., 2021).

Government bonds are crucial investment tools for maintaining financial stability and facilitating economic

growth. They also provide low-risk investment opportunities for individuals and institutions looking to diversify their portfolios. Analysing bond market performance against macroeconomic fluctuations and financial factors can therefore provide investors with important insights. This study aims to address existing gaps in knowledge by being the first to incorporate gold prices and stock market performance into a model that identifies specific trends in the bond market. It uses a time-series approach with data collected monthly from January 2014 to December 2024. Future investigations should consider the interaction of domestic and international factors in bond markets (Yun, 2019).

The central question is: “Which *economic and financial shocks* significantly affect *bond market performance* in selected *Asia* countries?” The fascinating aspect emerges when comparing the bond market’s performance with other macroeconomic and financial components. Our primary goal is to determine how the bond indices of these six Asia countries respond to economic shocks, including fluctuations in macroeconomic indicators, gold prices, and stock market performance. Historically, bond indices have reacted to economic and financial indicators during events like the 2008 GFC and the COVID-19 pandemic, illustrating how external factors influence the bond market.

In India, for instance, heightened inflation and decreased gold prices might dampen the appeal of bonds (Kumar & Singh, 2023), whereas in Turkey, elevated interest rates diminish the attractiveness of bonds relative to alternative investments (Duran & Demirkale, 2021). Vietnam’s inflationary pressures and underperforming stock market erode investor confidence in bonds (Rose, 2014), while Indonesia’s struggling bond market mirrors broader economic challenges (Dwi & Nelmida, 2019). Conversely, in China and South Korea, lacklustre stock market results could steer some investors toward bonds (Shroders, 2025); however, constrained economic growth tempers their allure. Consequently, addressing these issues is crucial to bolstering investor assurance and revitalizing bond markets.

We first look at **India**, where falling gold prices and rising inflation are creating economic challenges. Additionally, a Finimize Newsroom article from November 2024 noted that rising costs of food, energy, and commodities are causing inflation, which reduces purchasing power and affects the consumer price index. Inflation also diminishes the value of bonds, making them less attractive to investors. Higher interest rates, implemented as a policy response to inflationary pressures, negatively affect bond prices and can undermine investor confidence. These factors—declining gold prices, high inflation, and rising interest rates—collectively challenge India’s bond market (IndiaBonds, 2024).

While in **Indonesia**, the stock market faces challenges, including a 2.96% drop in stock fund investments in the first half of 2024, as foreign investors moved to developed markets like the U.S. Higher returns in these economies make Indonesian stock funds less appealing. Additionally, many Indonesian investors prefer short-term profits from high bank deposit interest rates over long-term investments, which limits industry growth and its economic contribution (Schaar, 2025). With regulatory support, these measures could improve bond market performance.

Additionally, the Shanghai Composite Index fell by 2.3% the previous week because Beijing’s stimulus plans did not meet market expectations (Fung et al., 2019). However, the **Chinese** bond market remained stable. Economic data indicate increased investment in bonds due to a desire for safety amid stock market volatility. Financial Times analysts suggest this divide between equities and bonds is because investors are choosing safer assets over potentially higher gains. This trend shows a systematic shift of resources, which may change China’s capital market structure in the long term.

On the other hand, the **Vietnamese** bond market is highly sensitive to macroeconomic factors, including stock market declines, rising inflation, and changes in foreign investment (Can & Nguyen, 2021). Rising inflation reduces the attractiveness of bond returns because it lowers spending power, increases business costs, and decreases bond value. When central banks raise interest rates to combat inflation, bond prices fall, increasing economic stress for businesses and consumers. These issues prevent Vietnam’s bond market from becoming a reliable financing source for public and private entities.

Similarly, the **South Korean** stock market significantly affects investor sentiment. Rising stock prices may

make equities more attractive than bonds, leading to lower bond prices and higher yields. Furthermore, bond prices are sensitive to inflation, and concerns about higher interest rates worsen inflation expectations by negatively affecting purchasing power. Focus Economics reported in 2024 that fears of monetary tightening in South Korea were fuelled by inflation rates exceeding 5% in April 2024 (Bauer & Rudebusch, 2013). Consequently, bond markets reacted negatively, and yields rose sharply as investors anticipated further interest rate hikes by the Bank of Korea.

Finally, in **Turkey**, where the economy is often unstable, interest rate changes significantly affect bond market performance. Turkish companies face high borrowing costs compared to international markets, making issuing bonds less appealing (Aksoy, 2023). In this context, high interest rates increase the opportunity cost of holding bonds, making other investments more attractive.

Government bonds can support investors, economic growth, and financial stability by understanding and managing these factors. However, regional issues like slowing inflation in India and gold prices, rising interest rates in Turkey, and weak stock markets in China and Vietnam reduce investor confidence. Given the varied responses of selected Asia countries to the recent performance of the bond market, this study seeks to identify the relationships between macroeconomic indicators (i.e. inflation and interest rates), financial elements (i.e. stock market performance), and gold price, offering insights into the distinct characteristics and common trends across these Asia nations. By performing Multiple Regression analysis for each country, the study intends to identify patterns and measure the impact of macroeconomic variables, as well as stock market performance and gold price on bond market performance. The results will address knowledge gaps and promote diverse investment strategies and informed decision-making. Additionally, this study will propose regulatory policies to enhance bond market stability. Stronger regulatory frameworks can lower systemic risks, rebuild investor confidence, and strengthen the role of mutual funds in economic growth and financial security. The study's accuracy and reliability depend on the data sources used, necessitating a narrowed scope and restriction of the investigation period to 2024 due to data limitations.

The first significant contribution of this study is for market participants. By revealing how inflation, interest rates, performance of stock markets, and gold prices regulate bond market performance, this study informs investment managers and their investors. It offers investors the opportunity to make informed decisions based on existing market and economic realities, maximizing portfolio strategies for greater benefit. The data presented in this study will help financial institutions and investors gain a better understanding of the macroeconomic and financial variables affecting bond market performance in Asia-6 countries.

The second contribution of this study is for policymakers, as they can utilise the findings, particularly regarding the relationship between interest and inflation rates, and bond market performance. Evidence suggests that interest rates and inflation significantly impact bond yields in Vietnam and India, highlighting the importance of these macroeconomic factors in shaping bond market dynamics. In *Vietnam*, the bond market cannot be relied upon as a funding source for public and private entities because of inflation and stock market downturns (Duong, 2023). Similarly in *India*, inflation control improved the bond market's stability and attractiveness to investors (Jape & Ambhore, 2019). Consequently, policymakers should prioritize the implementation of well-coordinated fiscal and monetary policies that specifically target the macroeconomic variables identified in this study; such policies are crucial for creating a stable, efficient, and attractive bond market capable of fostering long-term investments and bolstering economic resilience.

Thirdly, understanding the link between financial indicators like stock and bond market performance helps financial analysts improve their client recommendations based on financial situations and risk tolerance. Analysts can suggest strategies that take advantage of rising stock prices. For example, when the stock market rises, analysts should advise clients to invest more in bonds to benefit from potential bond price increases in the future. This strategy diversifies the portfolio and secures capital gains during market uptrends, maximizing potential returns. Because of this correlation, analysts can provide practical advice, and bondholders can monitor market trends to make informed asset allocation decisions.

Finally, this study will benefit future researchers by serving as a reference for consistent proof and exceptional outcomes, enhancing present knowledge. It will improve comprehension of how inflationary pressures,

interest rate fluctuations, stock market volatility, and gold price releases influence bond market performance. Such studies can provide important new insights into the dynamics of Asia bond markets, laying the basis for risk management plans, investment guidelines, and prediction models specific to investors in this market sector. By defining the primary causes of bond market volatility in Asia, scholars may improve discussions on financial markets and macroeconomic stability, increasing our understanding of the correlation between economic and financial factors and asset values in the area.

We explore how gold prices, macroeconomic indicators, financial variables, and stock market indexes influence bond market prices in six Asia countries. Our goal is to determine which economic and financial factors most significantly affect bond market performance in these countries. This research benefits fund managers, investment analysts, stockbrokers, and investors by providing a framework for better decision-making. The paper includes a literature review, methodology, results, and conclusions with recommendations.

2. Literature Review

Quantitative easing tapering's negative consequences on Asian economies highlight the close ties between the US and Asian bond markets (Villafuerte & Yap, 2015). The goal is to give a comprehensive overview of macroeconomic and financial variables impacting bond market performance, leading to research methodologies and empirical analysis (Dhanaraj et al., 2015; Tainer, 2012). East Asian corporate bond markets have grown significantly because of strong economic growth and regulatory initiatives (Hack & Close, 2013).

In Asia, the gap between developed and developing countries is especially evident in the financial sector (Yudaruddin, 2022). Financial crises can arise from macroeconomic conditions affecting the firm's industry sectors (Abdelkader & Wahba, 2024). Asia must adjust to volatile external conditions and rising risk premiums. Increased cross-border capital flows and global integration pose new risks, so Asia must learn from pre-crisis experiences (Jesakul et al., 2014; Villafuerte & Yap, 2015).

Bond markets are essential to modern economies and act as a link between investors and entities seeking capital. These markets' operational dynamics include bond yields and prices which are influenced by several factors. Macroeconomic indicators, inflation expectations, and monetary policy play key roles. Bond performance is affected by interest rates, issuer credit ratings, inflation, and economic conditions. Rising interest rates typically cause bond prices to drop because newer bonds with higher yields become more appealing. Conversely, falling interest rates can increase bond prices. Duration measures a bond's price sensitivity to interest rate changes. Credit ratings reflect an issuer's ability to meet its debt obligations; higher ratings suggest lower risk and better bond performance (Yulia et al., 2019).

Understanding macroeconomic linkages and financial variables affecting bond markets requires theoretical frameworks. A previous study used the approach to assess the market value of three Asian countries between 1990 and 2004 and to estimate the macroeconomic financial risk premium from 1990 to 2004 (Asteriou, 2008). Bond ratings are used as dependent variables to identify their factors (Wahyuningsih et al., 2025).

The concepts and frameworks used in this study align with previous models. Firstly, the Arbitrage Pricing Theory (APT) developed by Stephen Ross in 1976, explains how macroeconomic factors impact investment returns negatively. It suggests that an asset's price is based on its sensitivity to these factors. APT affects bond and stock market performance by helping investors understand and manage risks, leading to better decisions. If an asset is temporarily mispriced, investors can profit until the price aligns with its true value. Unlike the Capital Asset Pricing Model (CAPM), which focuses only on market risk, APT is more detailed, considering multiple risks that affect an asset's return. In addition, APT explains the negative connection between bond market prices and interest rates by looking at systematic risks. During inflationary pressures, interest rates are a key economic factor that immediately affects how bonds perform. Attractive bonds with higher yields become more valuable even after interest rates decline due to market forces. A bond's duration affects its sensitivity to interest rates, determining how much its price changes with rate movements. When the yield curve changes, bond prices also change accordingly, creating arbitrage opportunities that investors can exploit (McKay & Peters, 2019). Therefore, three alternative hypotheses have been built.

H1: There is a negative relationship between stock market performance and bond market performance.

H2: There is a negative relationship between interest rate and bond market performance.

H3: There is a negative relationship between the inflation rate and bond market performance.

The performance of the bond market is highly interrelated with that of the *stock market*. Although distinct, bond and stock investors invest in a variety of stocks and other financial assets, leveraging their wealth to manage expenses. A study examining the relationship between stock and bond markets in Indonesia, utilizing a bivariate stochastic volatility model, captures volatility spillover effects and dynamic correlation patterns over time (Sia, 2023). The analysis reveals a unidirectional volatility spillover from the stock market to the bond market, demonstrating how changes in stock market volatility influence bond market behaviour. This study builds on theoretical frameworks such as the present value model, which suggests that stocks and bonds can be positively correlated due to shared sensitivity to discount rates, and the flight-to-quality hypothesis, which explains shifts in investment behaviour during periods of heightened risk. These findings are critical for portfolio managers and policymakers in Indonesia, highlighting the need to adapt strategies based on evolving market conditions and asset interdependencies. When equity market volatility rises, the demand for fixed-income securities increases, thereby increasing returns on bonds (Sharma & Kumar, 2020). Government bonds tend to align more closely with bond-like stocks, which are typically stocks of large, mature, low-volatility, profitable, dividend-paying firms that are neither high growth nor distressed (Baker & Wurgler, 2012). It is essential to consider the risk-return profiles of each asset class and tailor investment strategies to specific financial goals and risk tolerance levels.

Additionally, the performance of bonds is significantly influenced by *interest rates*, especially for funds that invest in fixed-income securities. Market interest rates and bond prices generally move in opposite directions, a phenomenon known as interest rate risk. When interest rates increase, the value of existing bonds usually decreases because new bonds offer a more attractive return, making older bonds less appealing to investors (Dixit & Gupta, 2020). Conversely, when interest rates decline, existing bonds with higher yields become more valuable, improving fund performance. Common proxies for interest rates include the real interest rate or the borrowing rate (McKay & Peters, 2019). Bond yields reflect the rate of return an investor will receive if they purchase a bond at a particular time (Usman et al., 2021). Another study concludes that bond prices and yields are inversely related to interest rate movements (Santosa, 2021).

Moreover, a thorough understanding of market changes requires analysing bond market performance in relation to rising *inflation*. Over time, inflation reduces the buying power of cash, thus directly influencing the earnings bond investors receive (Kang, 2012). An increase in inflation diminishes the purchasing power of bond dividends, so investors increasingly seek other investment opportunities. Market attractiveness diminishes along with bond prices. When inflation rises, central banks raise interest rates to preserve economic equilibrium. Bond market prices decline when interest rates increase because newly issued bonds promise elevated yields to maintain their market competitiveness (Dwi & Nelmida, 2019). The bond market operates under a universal principle where interest rates and bond market prices move in opposite directions. Central banks may lower interest rates as part of their deflation or low inflation economic strategies to stimulate growth. Under these circumstances, bond prices increase because investors recognize that the fixed payments from existing bonds demonstrate higher value than fresh bonds carrying lower interest rates.

On the other hand, Portfolio Theory suggests that adding gold to a portfolio can lower risk and increase stability during economic downturns. Gold often acts as an inflation hedge and haven during economic instability, making it a good portfolio diversifier (Díaz et al., 2022; Hassan et al., 2022). An increase in the price of gold usually indicates economic risk. Fund managers adjust their asset allocation based on these economic changes. A decrease in the price of gold when the economy is stable may encourage a shift to high-yielding mutual funds like bonds and equity stocks. These dynamics show how gold prices negatively influence bond market performance. Institutions are increasingly including gold as a major asset in global investments because of its stability (Khan et al., 2021). Therefore, another alternative hypothesis has been built.

H4: There is a negative relationship between the gold price and bond market performance.

Within bond market performance, the price of gold is an indicator used by nearly all mutual funds, especially those linked to commodities and precious metals or involved in closely associated sectors. Consequently,

individuals observe this relationship through personal gold holdings and how gold prices directly impact bond returns, particularly concerning exposure through gold-related assets or associated industries. Gold prices significantly influence bond and equity markets (Xu et al., 2017). Gold prices generally run high while bond performance behaves poorly when investments are in gold or gold stocks. For instance, during periods of inflation or immediately after a geopolitical disaster, the demand for gold generally increases. A 10-year government bond will have significant investments in commodities. However, when gold prices fall, performance suffers in such funds because demand decreases, and price drops lead to lost returns (Bai & Ho, 2022).

3. Research Methodology

This research investigates how changes in macroeconomic and financial factors—stock market performance, gold prices, inflation, and interest rates—affect bond market performance. It uses monthly data from 2014 to 2024. Hypotheses are tested to see if changes in these factors significantly impact bond market performance in six Asia countries. A quantitative approach is used to confirm relationships and develop generalizations that add to the theory (Jansen, 2021).

Multiple Linear Regression (MLR) analysis examines the relationship between several independent or predictor variables and a single dependent or criterion variable. MLR expresses the linear correlation between these independent and dependent variables. A theoretical framework is established to classify the variables and enhance understanding of their relationships. Our research design uses MLR analysis to quantify each variable's impact on bond market performance. The study details data collection methods from reliable financial databases such as Federal Reserve Economic Data, Trading Economics, and Stooq, as well as rigorous data analysis procedures to ensure the accuracy and robustness of the results. By controlling for potential confounding variables, the research aims to isolate the specific impact of each macroeconomic and financial factor by performing a multivariate analysis (MVA) via a regression analysis. The findings of this study are intended to provide valuable insights for market participants, policymakers, and financial analysts, assisting them in making informed decisions and developing strategies to stabilize the bond market in response to macroeconomic and financial changes.

The quantitative research method involves changing independent variables to see how they affect bond market performance. Quantitative research systematically investigates and quantifies macroeconomic and financial data and phenomena. It collects numerical data, analyzes it statistically, and the main goal is to establish relationships or causal connections amongst the variables in the model. This approach ensures a strong investigation, which makes the research findings more valid and reliable (Chetty, 2020). A model equation that has been created is shown below.

Model Equation:

$$\text{LNBI} = \alpha + \beta_1 \text{LNSI} + \beta_2 \text{LNIR} + \beta_3 \text{LNIN} + \beta_4 \text{LNGP} + \varepsilon_t \quad (1)$$

Where:

DV = Logarithm Bond Indices (**LNBI**)

Alpha = α

Beta Coefficient for $IV_1 - IV_4 = \beta_{1-4}$

IV_1 = Logarithm Stock Indices (**LNSI**)

IV_2 = Logarithm Interest Rate (**LNIR**)

IV_3 = Logarithm Inflation Rate (**LNIN**)

IV_4 = Logarithm Gold Price (**LNGP**)

Error term at time $t = \varepsilon_t$

All variables are expressed in logarithmic form. The dependent variable in **Equation 1** is **LNBI**, representing *Bond Market Performance*. The independent variables include: *Stock Market Performance*, proxied by the log of stock indices, **LNSI** (Asgharian et al., 2015); *Interest Rate*, proxied by the log of the lending interest rate, **LNIR** (Dwi & Nelmda, 2019); *Inflation*, proxied by the log of the consumer price index, **LNIF** (Sia, 2023); and gold

price, proxied by the log of the US gold price, *LNGP* (Abdullah & Abu Bakar, 2015). The theoretical framework is based on the cited literature.

Figure 1: Theoretical Framework for a Bond Market Performance

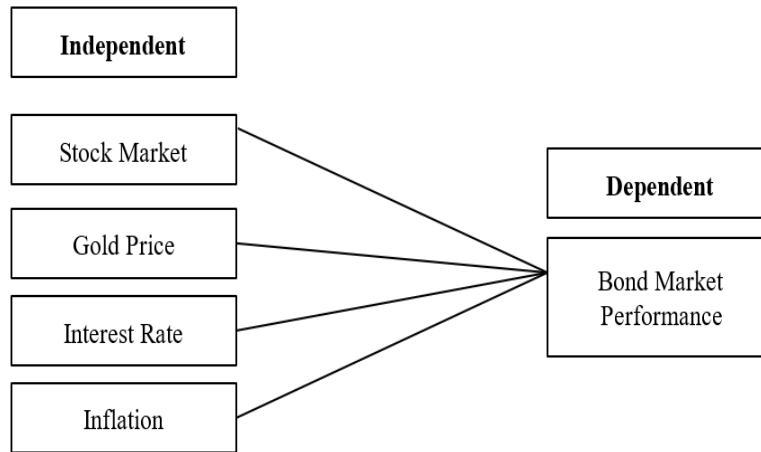


Figure 1 illustrates a theoretical framework linking potential determinants of selected macroeconomic and financial factors to bond market performance. The study's scope encompasses six Asia countries: India, Indonesia, China, Vietnam, South Korea, and Turkey. This research investigates how the dependent variable responds to external factors. Furthermore, a statistical method will be employed to analyse numerical and publishable data collected. Initially, outliers will be removed to reveal the underlying signal by conducting the research using Time Series Regression and EViews software. Monthly data from 2014 to 2024, representing the six Asia countries, will be analysed accordingly.

Before proceeding with time-series modelling, a diagnostic check should be performed to detect outliers, which helps in eliminating ambiguities in research processes. Three general checks need to be performed for time-series data when using a regression or ordinary least squares method. The first check is the *Variance Inflation Factor* procedure, which measures multicollinearity. Multicollinearity occurs in OLS regression when independent variables are linearly related, potentially leading to perfect multicollinearity. This affects the reliability of regression coefficients due to inflated standard errors. The VIF quantifies the inflation in regression coefficient variance due to collinearity. A VIF or tolerance equal to 1 suggests no multicollinearity in the model. Tolerances less than 0.1 or VIFs higher than 5 indicate severe multicollinearity, which requires remedial action and raises concerns (Akinwande et al., 2015).

The second test is for *Serial Correlation*, which happens when regression residuals are correlated, meaning errors aren't independent. This is common in time-series data where prices tend to move together. The autocorrelation coefficient measures the relationship between data points. The Durbin-Watson test is used to check for regression residual autocorrelation. Autocorrelation occurs when a timeline is similar across periods, potentially overestimating the standard error and making predictors seem important. The DW test statistic is compared to critical values to test for positive autocorrelation at significance level α . The test is inconclusive if 4-DW falls between the critical levels (Lee, 2025).

The final test is the *Normality Test on Residuals*. In regression analysis, it's assumed that the residuals have a normal distribution. If the test produces a p -value below the significance level, the null hypothesis is rejected, indicating non-normality in the residuals. However, a p -value above the significance threshold suggests the residuals are normally distributed because the null hypothesis can't be rejected. A breach of the normalcy assumption only becomes problematic when sample sizes are small. The assumption is less significant for large sample sizes because the F and t-tests, used to test hypotheses and create confidence intervals, are resistant to small departures from normality due to the central limit theorem (Frost, 2024).

4. Results

Initially, a diagnostic check was conducted for each country. Given that the Centered VIF values for all independent variables in Indonesia, China, and Turkey were below 5, all four independent variables—stock market performance, gold price, interest rate, and inflation—were retained in the time-series model. However, for India, Vietnam and South Korea, only three independent variables were maintained, with inflation excluded due to violation of the specified rule of thumb. The Durbin-Watson statistic for all countries was lower than the lower Durbin value at the first order, suggesting a significant serial correlation in the error term. Nevertheless, there was sufficient evidence to reject the null hypothesis (H0) at the second order, indicating that the error terms did not exhibit severe serial correlation at this level. Overall, the residuals of all six countries under investigation were normally distributed.

Regression analysis for India: Table 1 displays a summary of the regression results of the study.

Table 1: Summary of the regression results for India

India	SI (X ₁)	GP (X ₂)	IR (X ₃)	IF (X ₄)
<i>t</i> -statistic (<i>p</i> -value)	-6.812056***	-0.916583	7.247018***	-
Beta Coefficient	Negative	-	Positive	-
Adj. R ²	58.9% (Moderate model)			

Based on the *t*-test results, we have sufficient evidence to reject the first and third null hypotheses, as both *p*-values are significant at the 1% level. In the case of India, the conclusion that there is a negative relationship between stock market performance and bond market performance aligns with theoretical findings by Sharma et al. (2020). In addition, the observed positive relationship between lending interest rates and bond market performance contradicts the established theory but aligns with the study by Santosa (2021). Furthermore, the adjusted R-squared value of 0.589 suggests that 58.9% of the variation in India's bond market performance is significantly influenced by fluctuations in stock market performance and interest rates.

Regression analysis for Indonesia: Table 2 displays a summary of the regression results of the study.

Table 2: Summary of the regression results for Indonesia

Indonesia	SI (X ₁)	GP (X ₂)	IR (X ₃)	IF (X ₄)
<i>t</i> -statistic (<i>p</i> -value)	0.029178	-7.111480***	6.045078***	-2.402776**
Beta Coefficient	-	Negative	Positive	Negative
Adj. R ²	67.4% (Moderate model)			

The second, third, and fourth null hypotheses are rejected based on the *t*-test results, as the *p*-values are significant at the 1%, 1%, and 5% levels, respectively. The conclusion that there are negative relationships between gold price and inflation with bond market performance in Indonesia aligns with theoretical findings and is supported by studies from Bai and Ho (2022), Kang and Pflueger (2015), Dwi and Nelmida (2019), and Berry (2021). Furthermore, the adjusted R-squared value of 0.674 indicates that 67.4% of the variance in Indonesia's bond market performance is significantly explained by fluctuations in gold price, interest rates, and inflation.

Regression analysis for China: Table 3 displays a summary of the regression results of the study.

Table 3: Summary of the regression results for China

China	SI (X ₁)	GP (X ₂)	IR (X ₃)	IF (X ₄)
<i>t</i> -statistic (<i>p</i> -value)	-1.709528*	-2.263051**	0.482669	-1.743020*
Beta Coefficient	Negative	Negative	-	Negative
Adj. R ²	53.4% (Moderate model)			

Based on the *t*-test results, there is enough evidence to reject the first, second, and fourth null hypotheses, given the *p*-values are significant at the 10%, 5%, and 10% levels, respectively. In the case of China, the conclusion that "there is a negative relationship between stock market performance, gold price, inflation, and bond market performance" aligns with theoretical findings. This is consistent with the findings by Sharma et al. (2020) on stock market performance, Bai and Ho (2022) on the gold price, and Dwi and Nelmida (2019) on inflation. Furthermore, the adjusted R-squared value of 0.534 suggests that 53.4% of the variation in China's bond market performance is highly influenced by fluctuations in stock market performance, gold price, and inflation.

Regression analysis for Vietnam: Table 4 displays a summary of the regression results of the study.

Table 4: Summary of the regression results for Vietnam

Vietnam	SI (X ₁)	GP (X ₂)	IR (X ₃)	IF (X ₄)
<i>t</i> -statistic (<i>p</i> -value)	0.733505	-	-0.933200	-0.980328***
Beta Coefficient	-	-	-	Negative
Adj. R ²	72.4% (Strong model)			

According to the *t*-test results, there is enough evidence to reject the fourth null hypothesis, given that the *p*-value is significant at the 1% level. In the case of Vietnam, the conclusion that there is a negative correlation between inflation and bond market performance is consistent with both theoretical findings and the study conducted by Kang and Pflueger (2015). Additionally, the adjusted R-squared value of 0.724 indicates that 72.4% of the fluctuation in Vietnam's bond market performance can be attributed to changes in inflation.

Regression analysis for South Korea: Table 5 displays a summary of the regression results of the study.

Table 5: Summary of the regression results for South Korea

South Korea	SI (X ₁)	GP (X ₂)	IR (X ₃)	IF (X ₄)
<i>t</i> -statistic (<i>p</i> -value)	-6.218898***	4.953680***	20.34752***	-
Beta Coefficient	Negative	Positive	Positive	-
Adj. R ²	80.6% (Strong model)			

Based on the *t*-test results, there is sufficient evidence to reject the first, second, and third null hypotheses, as their *p*-values are all significant at the 1% level. Specifically, in the case of South Korea, the finding of a negative relationship between stock market performance (Sharma et al., 2020) and bond market performance aligns with theoretical expectations. Furthermore, the adjusted R-squared value of 0.806 indicates that 80.6% of the variation in South Korea's bond market performance is significantly influenced by fluctuations in stock market performance, gold prices, and interest rates.

Regression analysis for Turkey: Table 6 displays a summary of the regression results of the study.

Table 6: Summary of the regression results for Turkey

Turkey	SI (X ₁)	GP (X ₂)	IR (X ₃)	IF (X ₄)
<i>t-statistic</i> (<i>p-value</i>)	1.805353*	1.098545	8.084480***	2.295856**
<i>Beta Coefficient</i>	Positive	-	Positive	Positive
<i>Adj. R²</i>	84.4% (Strong model)			

Based on a *t*-test, there is enough evidence to reject the first, third, and fourth null hypotheses (H₀), as the *p*-values are significant at the 10%, 1%, and 5% levels, respectively. In Turkey's case, the conclusion that there are positive relationships between stock market performance, interest rate, and inflation with stock market performance contradicts established theory. While the adjusted R-squared value of 0.844 implies that 84.4% of the variation in Turkey's bond market performance is significantly influenced by the movement of stock market performance, interest rate, and inflation.

Discussion

Based on findings for India, Indonesia, South Korea and Turkey which have a positive relationship with lending interest rates truly contradict the theory. The fact that the direction is supposed to be inversely related to interest rates and bond market performance, and the indicators could not be moved together. In addition, lower borrowing rates can attract foreign investment into the bond market, which can help to draw increased demand resulting in higher returns. It is relevant in emerging markets, where higher returns attract international investors. Furthermore, when lending rates are low, borrowing becomes cheaper and thus investment in bond markets increases. Consequently, reducing interest rates will increase bond yields while increasing demand for bonds as investors start to hold on to safer assets. This relationship is closely monitored by financial analysts as well as policymakers to ensure the best investment strategies and economic stability in the market. Moreover, only Turkey shows that there is a positive relationship between inflation and bond market performance, as indicated by the positive coefficient. A positive relationship between inflation and bond market performance suggests that the two move in the same direction. For instance, in Turkey, when inflation rises, the bond market tends to rise. Conversely, in Indonesia, China, and Vietnam, the negative relationship implies that inflation and bond market performance do not move together because when inflation rises, the bond market tends to fall.

In Turkey, a positive correlation exists between the stock market and bond market performance, indicating that both markets generally move in the same direction. Conversely, India, China, and South Korea exhibit negative correlations, where a rising stock market often corresponds to a declining bond market. This insight is valuable for policymakers, investors, and financial analysts, enabling them to make well-informed decisions. For instance, governments might adjust interest rates to foster growth in both markets, while financial analysts could advise investors to hold bonds when the stock market is strong, given their inverse relationship in certain countries. Governments should consider raising interest rates to maintain the attractiveness of the bond market during stock market booms, whereas financial professionals might recommend that investors in India, China, and South Korea hold onto their bonds to safeguard profits amidst a thriving stock market. This approach encourages portfolio diversification for enhanced profitability and risk reduction. Recognizing these relationships empowers governments, financial analysts, and investors to leverage both stock and bond markets effectively within their respective economies.

Finally, only South Korea exhibits a positive relationship with bond market performance, indicated by its positive coefficient sign. In contrast, Indonesia and China show a negative relationship due to their negative coefficient signs. The positive relationship between the gold price and bond market performance suggests that both markets generally move in tandem. For example, in South Korea, as the gold price rises, the bond market tends to follow suit. Conversely, in Indonesia and China, the negative relationship between gold price and bond market performance implies that these markets move in opposite directions; for instance, when the gold price decreases, the bond market tends to increase. Consequently, governments may implement diverse strategies

to bolster bond market expansion, depending on their specific economic situations and strategic objectives (Moon et al., 2015; Neemey & Sahay, 2019).

This study has accepted both inflation and the stock market performance as the crucial indicators amongst other economic and shocks since those variables have the strongest and significant impacts on the performance of a bond market in each of the countries. The strong correlation between both variables and bond market performance in those four Asia countries is largely due to a stability of economic growth that is paramount in the accused strategy; both are significant parameters that are associated with it. The findings are consistent with a study by Kumamoto and Zhuo (2020). Therefore, if any given country's economy is good, that is why the bond price as an intermediate will be done and offered in the market at a lower cost. Hence, it can reduce inflation for a country, thanks to its capacity to regulate prices in the bond market. Additionally, APT theory explains the negative relationship between bond market prices, stock market performance, and inflation rates through the lens of systematic risks. Both variables are critical economic factors that immediately influence bond performance, particularly during inflationary periods. Bonds with attractive, higher yields tend to maintain their prices even as interest rates rise due to market dynamics. A bond's duration is a key determinant of its sensitivity to interest rates, dictating the extent to which its price fluctuates with rate changes. Symmetrical shifts in the yield curve also cause bond prices to change, creating arbitrage opportunities that investors can capitalize on (McKay & Peters, 2019).

5. Managerial Implications and Recommendations

Most people know that interest rates increase living costs and reduce their money. Interest rates affect all parts of the economy and significantly impact investment profits, especially for investors. Therefore, this research helps investors create better investment strategies. Basically, when interest rates rise, the price of any bond will increase, as bond investors demand higher returns to compensate for the increased opportunity cost. Our findings indicate that interest rates in India, Indonesia, South Korea, and Turkey are *positively* related, while there is no impact on China and Vietnam. Lending interest rates significantly correlate with bond market performance across these four countries. Therefore, domestic investors in these four countries will see a "hold strategy" for bonds when market interest rates rise.

Market participants could examine how bond prices relate to the performance of other major assets like stocks, gold, and other commodities. Knowing these correlations is key to understanding how bonds behave in different markets. Bond's correlation with other assets can change, showing a negative correlation with riskier assets during economic uncertainty and a weaker or positive correlation in stable times. By measuring these correlations, market participants can understand the bond's role as a portfolio diversifier and hedge against market risks, informing investment strategies and risk management. The sudden rise in inflation can trigger chaos and panic amongst the market participants. Such global market events may cause investors to move funds into the bond market and other safer investments. Commodity price changes respond to current market conditions and signal fundamental economic problems, including recessions, currency devaluation, or financial crises.

The study's findings are relevant to Central Banks as *policymakers* because they reveal the relationships among economic shocks. Central banks can proactively adjust monetary policy by reducing interest rates or easing monetary policy, which in turn will boost demand in bond markets. In addition, fluctuations in share prices can also affect market confidence and the stability of a country's currency, hence increasing demand for bond investments. A significant decrease in stock market performance is a signal for investors to purchase more bonds because of the negative relationship between the two financial assets. Evaluating these price changes is especially important for economic policymakers, as they may indicate the need for intervention. For example, a central bank may raise interest rates to combat high inflation or lower them to address slow economic growth.

Understanding the interaction between the bond market with inflation and lending interest rates helps policymakers prepare for and counter economic shocks, aligning with strategic policies to enhance economic growth. This connection alerts the key indicator of global economic trends, influencing monetary policy decisions nationally and internationally.

Understanding the intricate relationship between financial indicators, such as stock and bond market performance, empowers financial analysts to refine their client recommendations, tailoring them to specific financial circumstances and risk tolerance. For instance, *financial analysts* might advocate strategies that capitalize on rising stock prices by diversifying the portfolio and securing capital gains during market uptrends to maximize potential returns. This correlation enables analysts to offer practical advice, guiding bondholders to monitor market trends vigilantly and make well-informed asset allocation decisions. Ultimately, the aim is to maximize potential returns while managing risk effectively.

These findings also serve as a valuable reference for *future researchers*. Understanding the relationships evaluated can simplify the analysis of theoretical implications and literature reviews. Future studies can apply the same model to investigate the relationship between economic and financial variables in other regions, such as MENA, Europe, and the Middle East, to highlight differences among countries. Moreover, the connection between bond market performance and economic indicators, as well as the gold price in Asia countries, is notable. This research can aid upcoming researchers in comprehending the relationship between the selected indicators, fostering their analytical skills and serving as a valuable reference for subsequent studies. Understanding relationships can inform investment strategies, especially during economic expansions when bonds can be considered for portfolio diversification.

As a summary, analyzing how these correlations change with macroeconomic conditions, monetary policies, and geopolitical events will give insights into market participants, central banks and policymakers, financial analysts, and researchers. Future studies may explore the impact of monetary policy changes on bond price movements, helping policymakers fine-tune monetary policies and achieve economic stability.

Conclusion

In conclusion, a study reveals that the relationship between inflation, stock market performance, and bond market performance is important, reflecting economic stability in Asia countries. Bond market performance is generally consistent with broader economic trends. Such global market events may lead investors to shift funds to bonds and other safer financial assets. Bond market performance reflects current market conditions and signals potential economic issues like recessions, currency devaluation, or financial crises.

Assessing these price fluctuations is particularly crucial for economic policymakers, as they may signal the necessity for intervention. For example, a central bank might raise interest rates to combat high inflation or lower them to stimulate a sluggish economy. Understanding the interplay between lending interest rates, inflation, and bond market performance enables policymakers to prepare for and counteract economic shocks, aligning with strategic policies aimed at enhancing economic growth. This interconnectedness enhances the relevance of these factors as indicators of global economic trends, influencing fiscal and monetary policy decisions at both national and international levels.

Furthermore, lending interest rates and bond market performance serve as multifaceted indicators of inflation and economic stability. It is especially important to monitor this bond market performance for those responsible for creating economic policies because they may indicate that interference is necessary. For example, a central bank will increase the interest rate if there is high inflation but will decrease interest rates if the economy grows slowly. Understanding how bond market performance and lending interest rate interact helps policymakers prepare for and counter economic shocks, which aligns with strategic policies meant to improve economic growth. This connection makes the lending interest rate an indicator of economic trends around the world, which affects fiscal and monetary policy decisions at the national and international levels.

The strong connection observed between stock market performance, and gold price can serve as a forecast for inflation. This suggests that increasing lending interest rates during inflationary pressures may lead to an increase in bond market performance as investors anticipate potential economic instability. Moreover, this study reveals that stock market performance, gold price, and bond market performance serve as indicators of both inflation and economic stability.

Overall, this research indicates that the interplay between market interest rates, inflation, stock market performance, and bond market performance is vital, mirroring global economic stability within Asia countries. Significant stock market volatility often aligns with broader economic factors. For instance, abrupt declines in

share prices can instigate market disruptions, potentially prompting investors to shift resources into safer assets like bonds. Fluctuations in commodity prices not only reflect current market dynamics but also signal underlying economic challenges, such as impending recessions, currency devaluations, or financial crises. Given these intricate relationships, investors must maintain vigilance over market dynamics and macroeconomic indicators to inform strategic asset allocation and risk management decisions.

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