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Macroeconomic Determinants of Stock Market Development: A Systematic Literature Review

Akash Chaurasia[1*], Prashant Debnath[2], Mohammed Juraij N[3]
[1]Sikkim University
[2,3]Bharathiar University
Corresponding Author: Akash Chaurasia Akashchaurasia.grd@gmail.com

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ABSTRACT

The objective of this study is to examine the various macroeconomic factors that influence the growth of the stock market, as well as to explore the techniques employed to establish a correlation between them. For this research, literature was sourced from databases such as Ebsco host, Web of Science, and JSTOR using the search terms "Macroeconomic determinants" and "Stock market". The data obtained was then analyzed using the PRISMA statement and presented in the report accordingly.The study revealed that economic growth has a positive effect on the growth of the stock market, while an increase in the inflation rate has a negative impact. The impact of trade openness, foreign investment, exchange rate, interest rate, and banking sector development was found to be mixed. The correlation between these macroeconomic determinants and stock market development was established by utilizing econometric techniques, including GARCH and ARCH models. This research aims to provide an understanding of the relationship between macroeconomic factors and the development of the stock market, as well as the impact of these factors. However, more in-depth exploration of this topic is needed, including the examination of additional databases and analysis on a country and sectoral level. This research will assist scholars and educators within the fields of economics and finance to gain insight into the macroeconomic factors that influence the growth of the stock market. As far as the researcher is aware, no systematic review using the PRISMA framework has been conducted on the relationship between "macroeconomic determinants" and "stock market development

INTRODUCTION

The stock market is composed of a network of exchanges that connect buyers and sellers to exchange securities at a determined price that reflects claims of ownership in a business. Additionally, it is considered a fundamental element of a free-market economy, as it facilitates the allocation of capital for businesses and investors in exchange for ownership (Dewandaru et al., 2014; Yartey, 2010)

Macroeconomic determinants refer to the various factors that determine economic growth or decline in an economy (Ben Naceur et al., 2007). It is a complex concept that involves various indicators from the field of economics that assess the overall health of an economy. These determinants can be either controllable or uncontrollable (Engle et al., 2013; Rahman et al., 2009).

The stock market is a vital component in promoting economic growth by improving corporate governance, lowering the cost of mobilizing savings, providing better liquidity, and promoting international risk-sharing (Ho, 2019). Empirical studies have also shown the importance of the stock market in fostering economic progress. A growing number of studies are attempting to understand the factors that contribute to the growth of the stock market due to its significance in economic development. These factors can be broadly categorized as institutional and macroeconomic determinants (Billmeier & Massa, 2009; Tennant & Tracey, 2014; Yartey, 2010).

To the best of the researcher's knowledge, no systematic review using the PRISMA framework has been conducted on the "macroeconomic determinants" of "stock market development". Therefore, the researcher aims to provide a comprehensive literature review.

METHODS

As a methodological approach to review existing literature about macroeconomic determinants of the stock market, this study uses a "PRISMA 2020" systematic review to identify knowledge gaps for future research agendas. For the first step of the systematic literature review, articles focused on the macroeconomic determinants of the stock market were reviewed. In order to perform the search, three databases (Web of Science, Jstor, and Ebsco host) were selected. Only the articles with the words "Macroeconomic determinants" and "stock market" as keywords were taken into consideration. As the results were less than expected, no filter criteria were used

RESULTS AND DISCUSSION

Describe your research findings according to the research problem and purpose of the study. Discuss your findings according to the perspective of theory, concept or previous findings. Should describe this section in a comprehensive, simple and detailed manner. The author can make subchapters in this section.

Table 1. Database Search Protocol and Overview for the Study

Keyword	Dated	13-oct-22				
	Database	Result shown	Duplicate	Not included in study	Not found	selected for study
"Macroeconomic determinants" and "stock market"	Ebsco host	19	3	8		8
	Web of Science	21	1	12		8
	JSTOR	152	13	123	8	5
	Total	192	17	143	8	21

*This Table Provides an Overview of all the Database Search Protocols used in This Study

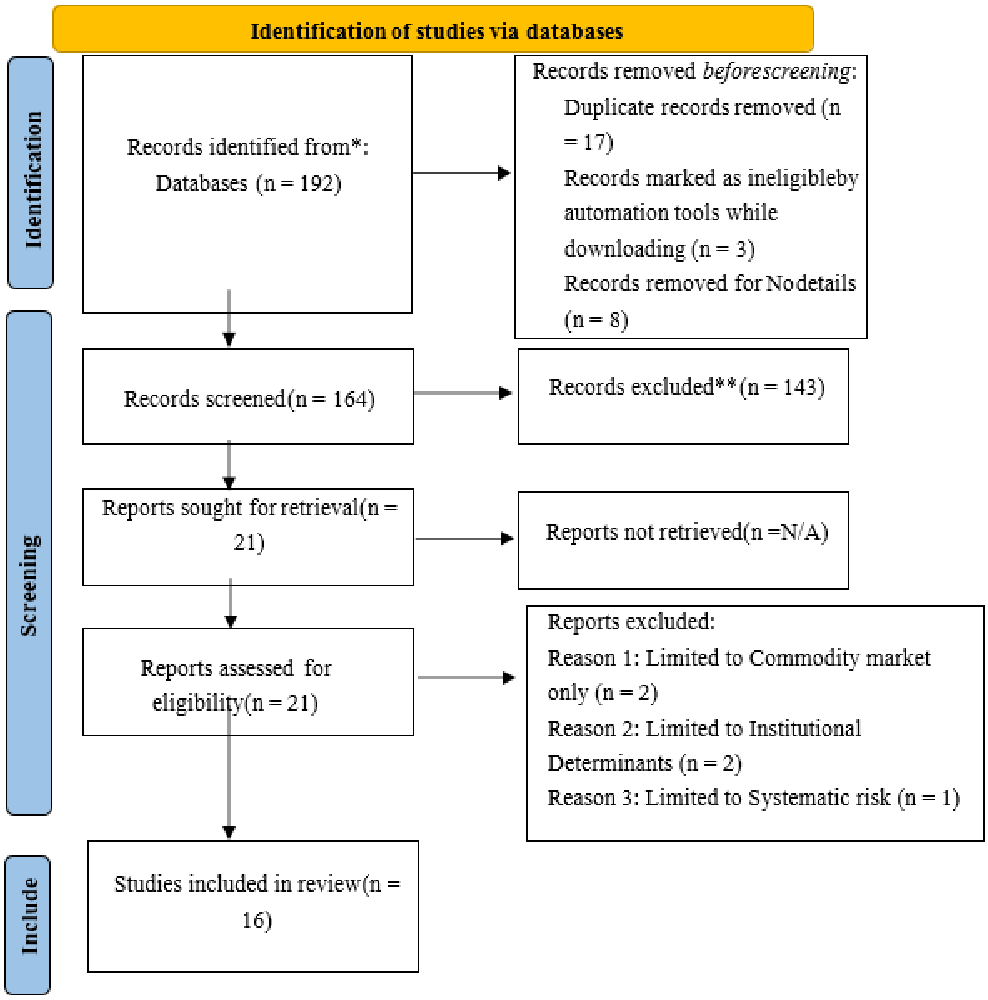

Figure 1. PRISMA Flow Diagram (Page et al., 2021)

Inclusion and exclusion criteria

Inclusion	Exclusion
Focus on macroeconomic determinants	Focus on Institutional determinants
Directly contribution to stock market	Focus on other market
Journal articles, research articles	No abstract available
	Books, conferences, case studies

1. Macroeconomic Determinants of the Stock Market Development

The researcher discovered that trade openness, foreign investment, exchange rate, inflation rate, interest rate, banking sector development, and economic development are the main macroeconomic factors that affect stock market development, according to studies by Dewandaru et al. (2014), Engle et al. (2013), Flannery et al. (2002), Ho (2019), Rahman et al. (2009), and Yartey (2010).

A. Trade Openness:

Trade openness in economics refers to the degree to which a country engages in international trade, specifically imports and exports, and how it affects the size and growth of the economy. It can benefit stock market development in two ways. Firstly, by increasing the supply of stocks through foreign and domestic investment. Secondly, it can also increase the demand for financial goods and services (Billmeier & Massa, 2009). Furthermore, the demand for external finance can be positively or negatively affected by a country's comparative advantage in trade, which in turn can impact its level of financial development (Ho, 2019).

B. Foreign Investment:

Foreign investment, which refers to investments made by foreign entities in domestic businesses, has been studied in relation to stock market development with differing perspectives. Some studies suggest that foreign investment is a replacement for the development of domestic stock markets, while others argue that it promotes stock market development. Additionally, research suggests that foreign investment can have both positive and negative impacts on stock market development (ben Naceur et al., 2007; Billmeier & Massa, 2009; Dewandaru et al., 2014; Garg & Dua, 2014; Hajilee & Al, 2017; Yartey, 2010).

C. Exchange Rate:

An exchange rate refers to the rate at which one currency can be exchanged for another. Studies have shown that there is a correlation between stock market performance and exchange rate fluctuations. Appreciation or depreciation of a currency can have a positive or negative impact on stock prices. However, it is also suggested that depending on the context, the relationship between exchange rate and stock prices can be either positive or negative (Dewandaru et al., 2014; Ehrmann & Fratzscher, 2009; Garg & Dua, 2014; Hajilee & Al, 2017; Kia, 2003; Rahman et al., 2009).

D. Interest Rate:

An interest rate is the fee charged by a lender to a borrower in addition to the principal amount. Studies have presented differing perspectives on the relationship between interest rates and the stock market. Some articles suggest that there is a positive correlation while others suggest a negative correlation (Cheung & Lai, 1999; Corradi et al., 2013; Engle et al., 2013; Garg & Dua, 2014; Hajilee & Al, 2017; Kia, 2003; Yartey, 2010).)

E. Inflation Rate:

An inflation rate is the percentage of increase in prices over a certain period of time, which causes a decrease in the purchasing power of money. Studies have shown that inflation can have a negative impact on the stock market, with higher rates of inflation being linked to less liquid and smaller stock markets (Flannery et al., 2002)

F. Banking Sector Development:

Research indicates that the banking sector is more effective than the stock market in providing services to the economy (Ho, 2019). However, some studies have argued that the focus should be on the overall financial sector. A growth in the banking sector is associated with a growth in the stock market. But, a highly developed banking sector may have a negative impact on stock market growth as stock markets and banks tend to compete with each other (Tennant & Tracey, 2014; Yartey, 2010).

G. Economic Development:

Research suggests that economic development has a positive impact on the stock market (Yartey, 2010). Theoretically, an increase in real income level and real income growth are beneficial for the development of the stock market as part of economic development. Developing the financial system, specifically the stock market, incurs significant fixed costs. However, as the economy grows, the importance of these fixed costs decreases, leading to an increase in the number of stock market participants (ben Naceur et al., 2007; Ho, 2019; Yartey, 2010).

2. Research Methodology is Used in Various Articles

Many of the articles utilize financial econometrics methodologies, which are important tools for establishing relationships, making predictions, and testing hypotheses. Some commonly used econometric methods include single equation multiple regression, simultaneous regression, panel data analysis, time-series analysis, spectral analysis, nonparametric analysis, semiparametric analysis, GMM analysis, and other methods. The articles often use panel or time series data in their studies.

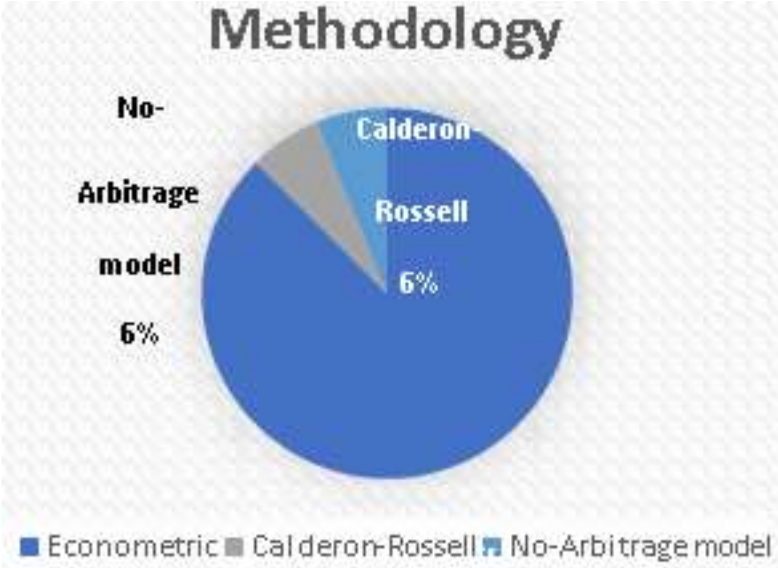

Figure 2. Research Methodology

Table 2. No-Arbitrage Model is Also a Kind of Econometric Model Which Was Developed by the Researcher

Authors	**Database**	**Title**	**Cited**	**Methodology**	**Country**	**Published year**
Yin-Wong Cheung; Lai, Kon S.	Ebsco Host	Macroeconomic determinants of long-term stock market comovements among major EMS countries.	92	Multivariate time series, Econometric	Europe	1999
Flannery MJ,Protopapadakis AA	Jstor	Macroeconomic Factors Do Influence Aggregate Stock Returns	1319	GARCH model, Econometric	Florida	2002
Kia, Amir	Ebsco Host	Forward-looking agents and macroeconomic determinants of the equity price in a small open economy.	30	Econometric	Canadian and US	2003
Ben Naceur, Samy; Ghazouani, Samir; Omran, Mohamed	Web of Science	The determinants of stock market development in the Middle-Eastern and North African region	299	Econometric	Middle-Eastern and North African region	2007
Ehrmann, Michael; Fratzscher, Marcel	Ebsco Host	Global Financial Transmission of Monetary Policy Shocks.	313	Heterogeneity, Econometric	US	2009
Billmeier, Andreas; Massa, Isabella	Web of Science	What drives stock market development in emerging markets-institutions, remittances, or	198	A fixed-effect panel regression, Econometric	Middle East and Central Asia	2009

		natural resources?				
Rahman, Aisyah Abdul; Sidek, Noor Zahirah Mohd; Tafri, Fauziah Hanim	Web of Science	Macroeconomic determinants of Malaysian stock market	312	Vector Autoregressive (VAR), Econometric	Malaysia	2009
Yartey, Charles Amo	Ebsco Host	The institutional and macroeconomic determinants of stock market development in emerging economies.	165	Calderon-Rossell	42 emerging economies	2010
Engle RF,Ghysels E,Sohn B	Jstor	Stock market volatility and macroeconomic fundamentals	794	ARCH models, Econometric	50 countries	2013
Corradi, Valentina; Distaso, Walter; Mele, Antonio	Web of Science	Macroeconomic determinants of stock volatility and volatility premiums	152	No-arbitrage model	S&P 500 Compounded index, and the VIX index	2013
Garg, Reetika; Dua, Pami	Ebsco Host	Foreign Portfolio Investment Flows to India: Determinants and Analysis.	34	Econometric	India	2014
Tennant DF,Tracey MR	Jstor	Financial intermediation and stock market volatility in a small bank-dominated economy	9	GARCH, Econometric	Jamaica	2014
Dewandaru, Ginanjar; Rizvi, Syed Aun R.; Bacha, Obiyathulla I.; Masih, Mansur	Web of Science	What factors explain stock market retardation in Islamic Countries	49	Regression, Econometric	11 islamic nation	2014
Hajilee M,Nasser OM	Jstor	The impact of interest rate volatility on stock market development	12	Econometric	12 emerging economies	2017
Gonzalez, Mariano; Nave, Juan; Rubio, Gonzalo	Web of Science	Macroeconomic determinants of stock market betas	38	Econometric	Spain	2018
Ho, Sin-Yu	Web of Science	Macroeconomic determinants of stock market development in South Africa	39	ARDL	South Africa	2019

CONCLUSION

Several studies have investigated the relationship between macroeconomic determinants and the development of the stock market. The most commonly studied macroeconomic determinants include inflation, interest rates, economic growth, foreign investment, and the exchange rate. Other determinants that have been studied in relation to stock market development include saving rate, investment rate (ben Naceur et al., 2007), financial sector development (Billmeier & Massa, 2009), money growth (Rahman et al., 2009), industrial growth, M3 and many more. However, this paper is limited to three databases and the use of the keywords "Macroeconomic Determinants" and "Stock Market". Further research can be conducted by focusing on each determinant individually.

Potential areas for future research include:

- A comparative study among two or more countries with similar economic status to understand the impact of macroeconomic determinants on their respective stock markets.
- An examination of the impact of microeconomic determinants on different sectors in India.
- Analysis of the effect of macroeconomic determinants on financial derivatives in the Indian stock market

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