



Research Paper

## **Does Economic Freedom Affect Stock Returns? (Case Study: Selected Countries of the Organization of the Islamic Conference Member)**

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### ABSTRACT

Economic freedom or economic liberty is one of the instances of freedom that is a target intrinsically, and individuals and units make attempts to achieve it. The liberalization of financial markets can have a different effect on the economy. Several studies have indicated that economic liberalization has had a positive effect on developing economies through the reduction in capital expenditures, increase in profitability, and individual investment. The present study aimed to investigate the effect of economic freedom on stock returns. The statistical population of this study is the selected countries of the Organization of the Islamic Conference (OIC) for the years 2001 to 2019 and is used in the statistical section of the Fraser Institute website and the World Bank website. In this study, the regression model of panel data was employed for data analysis. The research results show that the effect of the economic freedom variable is positive and significant on the stock price index and cash-on-cash return. At best, economic freedom can lead to increasing demand for stocks and, subsequently, raising the stock price index and cash-on-cash return. The government should provide a legal and regulatory framework to protect the rights of owners of assets and fair implementation of contracts, and facilitate access to sound money. It should also provide stable money and refrain from activities and interventions interfering with personal choices, exchanges, and voluntary exchanges, and the freedom to enter the competition in product and labor markets.

## **1 Introduction**

The utility of investigating the volatility of stock returns by investors is that they consider stock market volatility as a criterion of risk, as well as the market makers of the capital market can use this criterion as a tool for measuring the vulnerability degree of the stock market. Moreover, the main purpose of financial reporting is to provide the right information for decision-makers of financial information. Financial reporting may take the form of financial statements or other information transfer tools. Most of

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the information provided by financial reporting involves predicting future operations. Information outside financial statements is mainly provided for this purpose. In addition to the information disclosed outside financial statements, the disclosures of financial statements reflected in the financial statement items are broadly based on managers' estimations. Therefore, it is expected that due to managers' incomplete estimations of the company's future business, disclosed information contains common mistakes through financial statements and outside it. Given that prediction of economic decision-making plays an important role, at the level of a firm, investors, creditors, managers, and other users of financial statements rely on their predictions or others' [15].

A stock market is an inseparable part of the financial sector, which in turn is associated with economic growth. In fact, a stock market can allocate savings to investment opportunities more efficiently via risk dispersion with a higher return rate. Although several factors affect the development of the stock market, economic freedom has had a significant effect on the stock price index and cash-on-cash returns as market share indicators. In fact, the weakness of the economic structure and the existence of closed space in these countries are considered the main factors in the underdevelopment of the stock market.

The capital market, as a subset of the financial sector, is a bridge transferring surplus economic units such as companies, households, and governments to the investment units that need it. It also plays an important role in the development of economic activities and the creation of favorable economic conditions in different countries. One of the most important capital markets is the stock market, which, through the sale and purchase of shares, can be used to finance the funds and strengthen the sense of participation of the general public by directing their small investments into productive and commercial activities. Therefore, paying attention to the stock market is a field for equipping people's savings and their direct participation in economic activities, financing and providing capital for companies and production units, controlling liquidity and thus creating anti-inflationary effects, helping to increase the saving growth track and investing in a country, and improving the health of the financial system [9].

A basket of assets that an investor holds with different combinations of diverse financial assets is called a portfolio. Some financial assets, such as bank deposits, have a fixed and risk-free rate of return, and some, such as stock bonds and exchanges, have an uncertain and risky rate of return. Since people in their asset portfolio keep various financial combinations such as cash, stocks, bank deposits, stock bonds, etc., stocks are the most important financial tools that help a person to achieve a productive basket of assets. The portfolio theory has concentrated on identifying its drivers in order to achieve its efficient portfolio of assets. The factors such as the index of economic freedom and its components are the most important factors affecting individuals' demands for maintaining each asset, including demand for stocks. Economic variables such as bank deposit rates, real exchange rates, liquidity, and so on are involved in this issue. By allocating funds among different stock portfolios, an investor in the stock market can reduce the risk of his investment. But this will be achieved when the index of economic freedom is maintained in the country. If a country has proper financial rules and regulations for the credit market; the labor and business market; proper criminal law; and property rights, the stock market less fluctuates and investors are less likely to be confused. Access to sound money by controlling inflation and the stability of money will provide the ground for assurance of shareholders in the fundamental rules of long-term contracts and future planning, and ultimately may reduce the cost of companies in stock markets. In fact, investors make their investments in the business sector with a thriving economic freedom and cost-benefit analysis because the index of economic freedom in a country leads to the development of the stock market and the conditions for saving, optimal allocation of resources, appropriate channels for information transfer, risk management, facilitation of the exchange of goods and

services, and competitiveness at the national and international levels [8]. According to Kim et al [17] freedom to trade internationally is one of the most important factors in determining the financial level worldwide, consisting of a combination of tariff and non-tariff barriers affecting exports and imports. Nowadays, if tariff and non-tariff restrictions were imposed on the entry and exit of factors of production, especially capital, investors and producers were not faced with the lack of raw materials and equipment. It also can reduce supply, increase prices, decrease demands for intended goods and services, reduce the profitability of the manufacturing sector, and ultimately reduce the supply of funds by reducing savings and investing in the stock market for investment. Therefore, increasing the restrictions and tariffs for raw materials results in a reduction in share prices and stock returns.

Setting the rules of the credit and labor market as well as the business environment, as a fiscal support entity and an investor, can boost effective financial institutions and take equity partners more confidently in business transactions, trigger effectiveness in contract implementation, and as a result of stock market development. In the labor and business market regulations, in order to gain more privileges and to create conditions for the improvement of the financial sector, market forces must be able to create, execute and terminate a profession without restricting rules for business entry in order that they can control the production cost of risk easily, and prevent uncertainty for savings and investment in the stock market [5]. Islamic countries have introduced great economic integrity by holding the Islamic Conference. Since the major Islamic countries of the Organization of the Islamic Conference (OIC) have been developing, the rapid growth of technology and the expansion of financial markets have created mutually beneficial economic cooperation for these countries in recent years. Economic integration is affected by the extent of economic dependence and the process of globalization of the economy and is obtained via joining a set of different countries with common features and specifications, and regional proximity. Those countries, in addition to mutual economic interaction and more willingness to economic and trade cooperation, experience trade liberalization. They also contribute to the regional and global levels in terms of a variety of fields such as trade, investment, capital transfers, international production, etc. The Member States of the OIC with common linguistic, regional, and cultural characteristics have the potential for economic integration.

Freedom of financial markets can have different aspects on the economy. Several studies have shown that liberalization has had positive effects by reducing capital costs and increasing the profitability and investment of individuals in developing economies. One of the controversial cases in the literature of economic development related to the desirability of stock market liberalization in the integration markets economy has been. Several experimental studies have shown that liberalization has had a positive effect on these economies by reducing asset costs, increasing efficiency, and increasing physical investment. However, liberalization can expose economic and foreign economic or political turmoil and expose domestic markets to more fluctuations. Also, since potential investors make up a wide range of securities in the community, providing an appropriate hospital for the widespread presence of this spectrum and attracting their trust, consolidating the capital market and the depth of this market, one of the most basic tools will bring economic development. One of the most effective factors influencing stock returns is economic freedom. Given the globalization of financial markets and the freedom of individual selection to enter each financial market in other countries, economic freedom in each country can affect the decision of investors in entering or leaving financial markets, including the capital market in countries. In this regard, conducting various research can play a significant role in attracting investors' trust. It is that the countries of the Islamic cooperation organization have similar cultural customs as all of the developing countries and in the majority of these countries The governments and policies are similar to

developed countries, and there are fundamental differences such as the type of culture, technology, history of foreign trade, and many issues with developed countries, and the experiences of those countries cannot be used for the Islamic cooperation organizations. And need new studies. Also, the study that has removed the sum of these countries has not been provided and cannot be used for the entire Islamic cooperation organizations. According to the aforementioned issues, the present paper seeks to address the following question: how effective is economic freedom on stock returns in the selected member states of the OIC during the period from 2001 to 2019?

## 2 Literature Review

Economic freedom is one of the important principles in assessing the economic development of a country. The Index of Economic Freedom has a positive outlook for economic liberalization in the world and the need for further movement towards a free economy. One of the most controversial aspects of financial markets is the liberalization of the capital market. It is not such a liberalization that is subject to strict government regulations. Nowadays, globalization occurs in a variety of ways in various fields. In the capital market, this phenomenon is also characterized by the formation of multinational corporations and the presence of foreign shareholders and investors. In this space, the very existence of structures, mechanisms, laws, and regulations that can organize the capital market is very important [11]. The high level of economic freedom improves the business environment by strengthening the rule of law and contract enforcement. As a result, removing unnecessary barriers (barriers that are usually associated with high levels of cumbersome regulations), eliminates any doubts about foreclosure through a more dynamic and efficient business. The criteria of economic freedom are a personal choice, voluntary exchange, freedom to enter markets and compete, and security of the person and privately owned property. They directly and indirectly affect stock market performance and makes stock markets more integrated, while growing without economic freedom. The development of the stock market also does not occur [25]. Economic liberalization includes a set of measures to remove government controls from financial markets, goods and services, work, and the external sector and transfer it to the market mechanism. These include: removing controls from financial markets, liberalization of controlled prices and assignment of prices to market forces, elimination of subsidies and adjustment of subsidized prices, the tendency to an independent or supervised floating exchange system, official change of the value of money, liberalization of international trade, removal of all kinds of tariffs and restrictions, use of investor participation and foreign debt, and liberalization of bank deposit rates [19]. One of the controversial issues in the economic development literature is related to the desirability of market liberalization in the market economy. Several empirical studies have shown that economic liberalization has had a positive effect on these economies by reducing asset costs, increasing returns, and increasing private physical investment [3] and [4]. However, liberalization can expose the economy to foreign economic or political turmoil, and cause more fluctuations in domestic markets [1].

The financial liberalization of equity markets over the past three decades led to a large and growing body of literature on the impact of these reforms on both financial markets and the rest of the economy. Academic interest in these markets is mainly due to the fact that the equity market liberalization allowed, for the first time, foreign investors to invest in domestic equity markets and domestic investors to invest in foreign security markets directly. These reforms also created an opportunity for investors to reduce the risk of their portfolio by diversifying investments in developing stock markets. This opportunity is a result of the stock markets of developing nations not being integrated with the world's developed capital markets [25]. Stock market characteristics change as nations move from being segregated

to being integrated into the world capital markets. Two types of integration that are closely linked are financial and economic integration. Equity and financial integration in general refers to the access of foreign investors to local capital markets and local investors to foreign capital markets. Economic integration, on the other hand, refers to the reduction in barriers to trading goods and services [13]. Economic institutions are important for economic growth since they determine how economic inputs human, physical, and natural resource capital are transformed into economic outputs, such as economic growth. Institutions in general can be either informal, such as customs and traditions, or formal, such as laws and regulations, all of which produce the “rules of the game”. These rules of the game provide the incentives structure in a nation and determine how different economic actors interact, and thus how economic inputs are used [12]. An accounting information system (AIS), as a source of providing information for users’ decision-making, is of particular importance. The use of accounting information in decision making, without analyzing it, is not very effective and may even mislead users, while analyzing them can provide valuable information to investors, and assist them in informed making decisions. Among the methods available for accounting information analysis, special emphasis has been put on predicting stock returns. Financial analysis has always been widely considered a tool for financial information analysis. One of the most important factors which financial analysts always seek to predict or identify by using financial statement analysis techniques is the stock return. The stock return is one of the most important factors in selecting the best investment.

For this reason, financial analysts always seek to identify the appropriate criteria for estimating it using financial analysis techniques [20]. The relationship between financial liberalization and economic growth has been a research subject for many years. This relationship is often a positive and significant effect of financial liberalization on economic growth [6]. Since foreign capital has been allowed to invest in a country’s asset market, it is a major factor affecting the strategies of investors. Investors created different investment portfolios in international markets. The multiple balances created by the contagion effect stimulate the purchase of capital by other companies, which could be due to the liberalization of a country's asset market. Increasing the liberalization of capital markets in developing countries has made remarkable studies on whether capital inflows of stock returns are increasing [18]. The OIC stock markets differ in terms of equity market liberalization. the differences in the OIC stock markets when it comes to foreign ownership. Saudi Arabia's stock market allows only its bank shares to be purchased by Gulf Cooperation Council (GCC) members but not by other foreigners. In contrast, Egypt, Lebanon, Morocco, Palestine, and Turkey allow 100 percent ownership by foreigners. The remaining OIC nations fall in the middle, allowing only partial ownership, ownership of certain firms, and/or ownership by GCC members only.

Tag and Degirmen [28] investigated the relationship between Economic freedom and foreign direct investment. Drawing on the institutional economics perspective, several scholars have argued that economic institutions and policies that facilitate the efficient exercise of private property rights are instrumental in attracting higher levels of foreign direct investment. In this paper, they empirically examine this argument by exploiting country-level data on the institutions of economic freedom. Using the system-GMM estimation approach and a large sample of panel data that spans 19 years of observations from 127 countries, we find evidence suggesting that foreign direct investment increases in countries with institutions that ensure the rule of law, expand trade freedoms, and reduce regulatory barriers to investing and doing business. However, these effects appear to be weaker in the presence of controls

for alternative means of property rights protection. Hou and Gao [14] investigated the impact of economic freedom (EcF) on analysts' earnings forecast (AEF) accuracy. EcF is measured from five aspects: Government, Protection, Money, Trade, and Regulation. With a sample of 7,014 firms from 12 economies in the Asia-Pacific region over the 18-year period, this study finds an optimistic bias in AEFs. The optimistic bias is stronger for large firms, value firms, stocks with high analyst coverage, and low dispersion in AEFs. Also, the optimistic bias is stronger from analysts in economies with less EcF than in more freedom ones. Analysts are making more accurate earnings forecasts for firms in economies with more EcF. In addition, the study finds that optimism bias reduced earnings forecast accuracy. These findings may suggest that an increase in EcF would lead to more transparent financial statements, which further reduces the analysts' forecast bias. Batabyal and Killins [2] contribute to the literature on economic policy uncertainty (EPU) and asset prices by studying the impact that EPU has on the behavior of the stock market in Canada over the period 1985–2015.

Even though a previous study has assessed the impact of policy uncertainties on stock returns in Canada, no research has explained its country-specific associated implications for policy and market behavior in the short run and long run. Our results indicate that the exhibits significant negative impacts on Canadian stock market returns in both OLS and ARDL estimations. When we look at the possibilities of asymmetric effects of shocks through nonlinear adjustment of the policy uncertainty measure, we find both short-run and long-run impacts are asymmetric. In the long-run, increased policy uncertainty persuades investors to take a 'risk-off' approach to gravitate toward lower-risk investments, which tends to decrease asset prices, whereas, decreased uncertainty prompts investors to take on portfolio risk for the chance of higher returns. Over the long-run, higher inflation can have a dampening effect on investment returns and real savings. The Bank of Canada should always demonstrate its accountability through forward-looking monetary policy actions to maintain the value of assets in the long run. Our main conclusions are based on various robustness checks. Xu [31] investigated the relationship between Economic freedom and bilateral direct investment. Economic freedom (freedom from the intervention of government) is essential for doing business, so the economic freedom of both the home country and the host country is important for bilateral foreign direct investment. However, though some literature has investigated the role of the host country's economic freedom in bilateral direct investment, no literature has studied the role of the home country's economic freedom. This paper has studied this issue in a gravity model with a sample of 155 countries.

This paper has also employed some effective estimation techniques of the gravity model to incorporate zero observations and adopted the quantile regression method. The findings indicate that the economic freedom of both the home country and the host country is positively correlated with bilateral direct investment, and the economic freedom of the home country has even stronger explanatory power for foreign direct investment. Hence, promoting economic freedom may encourage more outward foreign direct investment than inward direct investment. Reboredo and Ugolini [23] examined the effects of oil price changes on stock return rates, by examining different equivalence hypotheses in multiple conditional and non-conditional distributed functions on stock returns. In this study, multiple dependencies under different stock market conditions have been investigated, while considering different types of oil price movements, and conditional and non-contingent stock returns have been calculated through marginal models for stock returns. For this purpose, stock return data of three developed economies (US, UK, and EU) and five BRICS countries including Brazil, Russia, India, China, and South Africa during the period 2000-2014 was analyzed. The main findings of this study showed that (1) the effects of drastic changes in oil prices, both upwards and downwards, on the high and low quintiles of stock prices

were much smaller in comparison with pre- and post-crisis; (2) the effects of downside overflows is bigger than the effects of upward overflows for most of the countries surveyed pre- and post-crisis; and (3) The small positive and negative oil price changes have no effect on the quintiles of stock prices, not during the pre- nor post-financial crisis. Using the panel data method, Brana and Prat [7] investigated the effects of surplus liquidity on asset prices of a set of 17 emerging economies for the 20-year period from 1995 to 2015. The main findings indicated that during the global risk levels of global investors, liquidity greater than the global level is one of the key determinants of asset prices in emerging markets. However, the relationship between these two variables changes when global risk aversion is strengthened. Maio and Philip [21] analyzed stock returns through information on 124 macroeconomic variables in the UK during the period from 1980 to 2012.

For this purpose, the factor analysis method, six common factors, the VAR regression method, and financial variables such as stock return and Treasury Bill Rate were employed. The main findings displayed that macroeconomic factors such as cash flows, discount rates, and interest rates, have no significant effect on the components of surplus stock returns. Also, the use of macroeconomic factors in the calculation of cash flows and discount rates has not led to significant improvements in stock returns. In a study titled "Can institutions and macroeconomic factors predict stock returns in emerging markets?", Narayan et al. [22] tested and investigated the forecast of surplus stock returns for 18 emerging markets. In this regard, this issue was addressed using a wide range of macroeconomic and organizational factors and through analysis of the main components. The research's main findings indicated that there is potential for forecasting for emerging markets. Using an average variance investment framework, it was shown that investors in most of these emerging markets can earn profits by adopting dynamic strategy policies. Finally, it has also been observed that in many countries, if borrowing and selling restrictions are removed in a short-term period, they can earn high profits. In a paper titled "economic freedom and the stability of stock prices: A cross-country analysis", Blau et al. [5] examined the relationship between economic freedom and the stability of stock prices in 41 countries during the period 2003-2007 using the GARCH method. The results show a negative correlation between economic freedom and stock price fluctuations. This negative correlation was primarily shown by the specific elements of economic freedom, such as security of property rights, sound money, and freedom of exchange with foreigners in a country, resulting in more stable prices. Stronger general regulations, credit market regulations, and more control of the government over the market have made stock prices less stable.

Dewandaru et al. [10] studied the effects of some macroeconomic variables such as GDP and some of the indicators of economic freedom on the stock market of 11 selected Islamic countries during the period from 1996 to 2011 using cross-sectional data. The results of the study indicate that all macroeconomic factors play a major role in developing countries, while the degree of financial openness has a smaller share in Islamic countries. The results indicated that all macroeconomic factors play major roles in developing countries, while the degree of financial openness has a smaller share in Islamic countries. In a study titled "on the relationship between economic freedom and equity returns in the emerging markets: Evidence from the Middle East and North Africa (MENA) stock markets", Smimou et al. [24] examined the effect of some indicators of economic freedom and macroeconomic variables on stock returns in the study countries during the period from 2000 to 2007 using the data panel method. The results showed that aspects of the components of economic freedom are most important in stock market performance. Moreover, when a number of macroeconomic variables enter the model as the control variable, the economic freedom coefficients are not significantly different in terms of statistics. Kedmey

[16] probed the effect of financial liberalization on stock market fluctuations in the economy of 9 merged markets over the period from 1985 to 2003. An empirical model was designed, consisting of a representative variable for liberalization. Regressions represented mixed results for the relationship between liberalization and volatility. In one case, liberalization led to a decrease in volatility and, in two cases, liberalization led to an increase in volatility. Stocker [26] examined the effect of economic freedom on return on equity in selected European and Asian countries. The results showed that the increase in economic freedom was directly related to the return on equity and also the investment strategy based on economic freedom in the return on investment. Tehrani et al. [29] expressed those results achieved by the research hypothesis indicate that there is a significant relationship between business group affiliation, cash holdings, and return on equity.

Yazdi et al. [30] stated that in this research, linear regression and correlation analysis were used to analyze the hypotheses of the research. To analyze the data and test the hypotheses, Eviews software was used. What can be said in the summing-up and conclusion of the general test of research hypotheses is that there is a speculative bubble in the Tehran Stock Exchange index. In addition, the speculative bubble has an impact on stock returns, and this effect has been confirmed in conditions of market boom and downswing. Zomorodian et al. [32] expressed that the results showed that variations in the Petroleum Bloomberg index, crude oil price, and Bloomberg energy index could explain changes in Tehran stock exchange index returns. Any rise in oil prices increases total Stock Exchange returns. On the other hand, the Stock Exchange index returns are aligned with the Petroleum Bloomberg index. at the same time changes in Tehran stock exchange index returns were reversely correlated with changes in energy index return among others. The reviewed studies that examine the impact of economic freedom on macroeconomic variables show that economic freedom has a significant effect on macroeconomic variables, leading to an increase in the economic growth. As the studies indicate, economic freedom is expected to have a positive and significant effect on stock returns in the study countries.

### 3 Research Methods and Statistical Population

The library and documentation methods are used to collect the required information. In this research, firstly using library resources that include books, journals, dissertations, articles, and the Internet, using forms and notes, preliminary studies are conducted in writing the sections of literature, research background, and theoretical research framework. The research statistical data were extracted from the websites of the World Bank and the Fraser Institute. The present study was aimed at investigating the existence or non-existence of the relationship between each of the independent variables and the dependent variable for forty-four selected member states of the OIC. For this purpose, the panel data was extracted and used via the estimation method. Stata software was used for data processing and summarization. The statistical population consists of the selected countries of the OIC during the period from 2001 to 2019. In the statistical section, the population was extracted from the Fraser Institute website and the World Bank website. Countries studied in this study include Albania, Algeria, Azerbaijan, Bahrain, Bangladesh, Benin, Burkina Faso, Cameroon, Chad, Egypt, Gabon, Guinea, Guinea-Bissau, Guyana, Indonesia, Iran, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Lebanon, Libya, Malaysia, Mali, Mauritania, Morocco, Mozambique, Niger, Nigeria, Oman, Pakistan, Qatar, Saudi Arabia, Senegal, Sierra Leone, Suriname, Syria, Tajikistan, Togo, Tunisia, Turkey, Uganda, UAE, Yemen. The reason for selecting these countries is that they are, firstly, among the developing countries, and secondly, are the member states of the OIC.



## 4 Research Hypotheses

Today, considering the importance and expansion of capital markets in equipping and collecting individual small capital towards productive activities, identifying the behavior of investors and influential variables on stock returns in these markets. Undoubtedly investing in stock, forms an important part of the country's economy, as far as the economic thermometer is called. And undoubtedly, the highest amount of capital is exchanged through stock markets around the world, and the national economy is heavily influenced by stock market performance. It is also available for professional investors and the general public as an investment tool in parallel with other markets. The stock market affects the macroeconomic and non-economic parameters and systematic and non-systematic variables, many factors affecting its capital markets and their unknown, causing uncertainty in the field of investment. Walker (director of the Fraser Institute) and Friedman set the index of economic freedom as a simple average of five indicators: 1. Size of government; 2.

Legal structure and property rights; 3. Access to sound money; 4. Freedom to trade internationally; and 5. regulation of credit, labor, and business. Accordingly, the five indicators listed in countries with high economic freedom above 7 are measured in countries with average economic freedom in the range of 5 to 7, and in countries with lower economic freedom below 5. By providing monetary stability and trade liberty, a proper legal system with protection of property rights, etc., this indicator in the stock market can provide the basis for increasing the investment and productivity of companies listed on the stock market by reducing transaction costs. It can also increase stock demand, enhance volumes of trade, and ultimately lead to higher stock values and returns. It should also be noted that statistics on economic freedom and its indicators are derived from the Fraser Institute. The size of the government (SG) plays a crucial role in the development of the stock market, decrease in the SG, and liberalization of some parts of the funds lead to increased investment in the private sector. It also provides the grounds for increasing the profitability of private companies listed on the stock market. Demand for shares of private companies rises relative to state-owned ones. Since most of the companies listed on the stock market make up the private sector; therefore, by decreasing the SG, the stock price index and cash-on-cash returns of the stock market increase. According to Stringham, et.al [27] and the Fraser Institute, a comprehensive and fair system of law provides for the possibility of listing assets on the stock market and the accumulation of small capital in large projects. Protecting property rights faces investors in the accomplishment of activities with less risk and the ability to anticipate the future, and creates an incentive for investment. In fact, the economy of each country needs government laws and regulations for market planning and regulation for facilitating exchanges, reducing costs and investment risk, allocating optimal resources, and eventually increasing the share price index and stock returns. In addition, money issued by the central bank, if it provides grounds for increasing inflation and economic instability, will change the basic rules of long-term contracts, the impossibility of planning for individuals and businesses, and ultimately will reduce investment, decrease the demand for stocks, stock price index, cash-on-cash returns, and lack of development of the stock market.

### The main hypothesis

Economic freedom affects stock returns in the selected member states of the OIC.

### Subsidiary Hypotheses

The indicator of GS affects stock returns in the selected member states of the OIC.

The indicator of the legal structure and property rights affects the selected member states of the OIC.

The indicator of access to sound money affects stock returns in the selected member states of the OIC.

The indicator of freedom to trade internationally has an impact on stock returns in the selected member states of the OIC.

The indicator of regulation of credit, labor, and business affects stock returns in the selected member states of the OIC.

## 5 Research Model

In regression analysis, the dependence of a variable (dependent variable) is studied essentially on one or more variables (independent variables). The regression models used in this research are single-equation models. So that a dependent variable is expressed as a function of one or more independent variables, assuming that the causal relationships are between dependent and independent one-way variables. In this section, two models have been used. In the first model, the index of total economic freedom, and in the second model, indicators of economic freedom are presented separately. The variables used in the model are as follows:

$$R_{it} = \beta_0 + \beta_1 \text{TEF}_{it} + \beta_2 \text{RER}_{it} + \beta_3 \text{GFCF}_{it} + \beta_4 \text{BDI}_{it} + \beta_5 \text{M}_{it} + \varepsilon_{it} \quad (1)$$

$$R_{it} = \beta_0 + \beta_1 \text{SG}_{it} + \beta_2 \text{LS}_{it} + \beta_3 \text{SM}_{it} + \beta_4 \text{FT}_{it} + \beta_5 \text{REG}_{it} + \beta_6 \text{RER}_{it} + \beta_7 \text{GFCF}_{it} + \beta_8 \text{BDI}_{it} + \beta_9 \text{M}_{it} + \varepsilon_{it} \quad (2)$$

In this research, the stock return index is considered a dependent variable. The stock price index, cash-on-cash flow, or the total return index (R) can be the result of the price movements and stock return on the stock exchange, which is the return on investment on the stock market in a given period. This index reflects the returns of the entire stock exchange and is affected by price changes and cash-on-cash returns covering all companies listed on the stock exchange.

TEF: Indicator of Total Economic Freedom given in model (1).

Walker (director of the Fraser Institute) and Friedman set the index of economic freedom as a simple average of five indicators: 1. Size of government; 2. Legal structure and property rights; 3. Access to sound money; 4. Freedom to trade internationally; and 5. regulation of credit, labor, and business. Accordingly, the five indicators listed in countries with high economic freedom above 7 are measured in countries with average economic freedom in the range of 5 to 7, and in countries with lower economic freedom below 5. By providing monetary stability, trade freedom, a proper legal system with protection of property rights, etc., this indicator in the stock market can provide the basis for increasing the investment and productivity of companies listed on the stock market by reducing transaction costs. It can increase stock demand and trading volumes and ultimately lead to higher stock values and returns. It should also be noted that statistics on economic freedom and its indicators are derived from the Fraser Institute.

SG: Indicator of the size of government

The higher the share of government expenditures, the share of government investment, transfers, and subsidies is, the better the grounds are provided for the increase in the government deficit. The government deficit results from rising costs leading to central bank credits. An increase in the volume of money and its liquidity, which is not used in the productive part of society, leads to an increase in inflation in society. The rise in the inflation rate also results in lower corporate profits, lower purchasing power, and the demand for shares of companies admitted to the stock market, which ultimately reduces stock prices and cash-on-cash returns.

LS: an indicator of legal structure and property rights

One of the key components of the index of economic freedom in a civil society is the indicator of legal structure and property rights, which is one of the most important tasks of the public sector. With the

independence of the judiciary, impartial tribunals, support of intellectual property, military intervention in the rule of law and the political process, and the integrity of the legal system, there are grounds for increasing the profitability of companies listed on the stock market. In addition, the volume of investment in the stock market sector will increase, leading to an increase in stock demand and an increase in its supply, which will eventually increase stock prices and cash-on-cash returns.

SM: an indicator of access to sound money

This indicator is subject to appropriate monetary policies that lead to stable inflation and the maintenance of the national currency value of the country. Indeed, the introduction of monetary policies leading to an increase in the value of the assets and inputs of companies and economic institutions results in higher stock prices and cash-on-cash returns.

FT: Freedom to Trade Internationally

Given the import or export-oriented nature of the companies admitted to the stock market, freedom to trade in the stock market has a different effect on the stock prices and its cash-on-cash returns. Via imports, it is expected that capital goods will enter the country with newly-developed technologies and will provide ground for the profitability of companies and increase their stock values. But in countries where their imports are mostly mediatory, the indicators of stock prices and cash-on-cash returns are less affected than the first one. In terms of export orientation to an import substitution strategy and the promotion of relative advantage, it is possible to increase national production and improve the competitiveness level of the companies listed on the stock market, which results in an increase in the supply and demand of shares and the ground for increasing the indicators of stock prices and cash-on-cash returns. Freedom to trade can also be achieved through lower tariffs, easier access to foreign currencies, limited capital controls, and extensive business segments.

REG: regulation of credit, labor, and business

Inappropriate government intervention in the pricing mechanism of the market, barriers to entry into the business, and discriminatory taxation of grants and subsidies to some businesses lead to a lack of willingness of companies to be listed on the stock market. The reduction in stock supply by companies also decreases incentives for individuals to purchase and sell shares in the stock markets, and after falling stock demand, companies face shortages of funds, which leads to lower prices and cash returns on stocks. Control variables on the dependent variable:

BDI: Bank Deposit Rates

Some financial assets, such as bank deposits with a stable; reliable; and risk-free return, and others, such as bonds and currencies, have uncertain risky returns. People in their portfolios hold different combinations of cash, stocks, bank deposits, bonds, gold, and currencies, influencing bank deposit rate changes of individuals' demands for preserving each of the components such as demand for stocks. This in turn affects stock prices. Thus, with the increase in bank deposit rates, the incentive for individuals to deposit in banks increases. It provides grounds for narrowing the scope for reduction in demand for stocks and stock value as well as stock returns caused by the reduction. The bank deposit rates have been extracted from the International Monetary Fund for the study countries, and are based on the deposit rates of commercial banks for each year.

GFCF: the ratio of Gross Fixed Capital Formation (GFCF) in Machinery and Building to GDP

Capital items such as buildings, machinery, and installations that are relatively long-lived and play a determinate and sustained role in the production process are called fixed capital. At the beginning of the twentieth century, capital working and fixed capital as the main elements of a company, which analyzed the relationship between the ratio of GFCF in machinery and buildings to GDP and the index

of price and cash-on-cash returns of the company's shares listed on the stock market. It can be argued that GFCF in machinery and buildings is a determining factor in the status of the production of companies listed on the stock market. It can affect the enterprise value-to-sales, as well as changes in stock returns of companies, and consequently, the stock price index and cash-on-cash returns. Therefore, the increase in this ratio indicates a reduction in companies' concerns about capital, thereby increasing the company's returns and profitability, and ultimately increasing their stock demand as well as increasing the stock price index and the stock market return.

**M: The ratio of liquidity to GDP**

According to the monetary theory of inflation, on the one hand, the continuous increase of liquidity at a rate exceeding the multiplication of the rate of growth of real income and income elasticity of demand for money is considered a necessary and sufficient condition for continuous inflation. On the other hand, rising liquidity can increase the demand for investments, including stocks; therefore, the liquidity ratio and the stock price index, and cash-on-cash return should be positive. This hypothesis can be arranged when the growth of liquidity leads to the expansion of investment and production activities. But in countries where liquidity is spent exclusively on trading activities in production affairs, the increase in liquidity mainly results in higher production costs. The relationship between the liquidity growth rate and stock market indices seems to be negative. In other words, the absolute amount of liquidity cannot give an accurate interpretation of the situation. What is important is the coordination between the increase in production volume and liquidity, otherwise, inflation will be necessary.

**RER: Rate of Exchange Real**

The rate of exchange is one of the components associated with portfolio risk. Based on the Markovitz model, asset risk changes can affect demand and cause a change in stock prices because, with regard to export-import-centric companies, their degree of dependence on the rate of exchange, the increase and decrease of rates of exchange can have different effects on the sources listed on stock exchanges and companies. As rates of exchange fall, the cost of finished products will decrease, resulting in the increase in the profit margin and interest of each share, and consequently, the stock price of the company also rises. With the company's stock price rising, the total stock price also changes. The real exchange rate extracted from the International Monetary Fund for the study countries is calculated based on the value of exchange versus the weighted average of the number of foreign exchanges divided by a price tariff or cost index. In this study, the effect of each indicator on stock market returns is to be examined separately.

## 6 Research Findings

Table 1 presents the results of descriptive research variables. According to table 1, the average variables of the Stock price index and cash-on-cash returns and The Index of Total Economic Freedom in the studied countries during the tested years were equal to 0.194110 and 6.322468.

### 6.1 Results of Pesaran's Diagnostic Tests of Cross-Section Independence

The null hypothesis of this test is that the residues are not correlated, and therefore there is no cross-sectional dependence. According to the results of the test, the existence of cross-sectional dependence in both models is confirmed.

If the computational statistics of the Test of Cross-Sectional Dependence is higher at a certain significant level than the critical value of the standard normal distribution, then the null hypothesis is rejected, and cross-sectional dependence will be confirmed. Whenever cross-sectional dependence is confirmed

in panel data, the use of conventional panel root methods such as the LLC test and the IPS test increases the possibility of false unit root results. To solve this problem, several panel unit root tests have been suggested despite the existence of cross-sectional dependence. The most well-known tests are the root test of the cross-sectionally augmented IPS (CIPS) test, and the Hadri panel unit root test. In the following, the durability of the research variables is examined using the Hadri panel unit root test.

**Table 1:** Descriptive Statistics by Country

Variables	Obs	Mean	Std. Dev.	Min	Max
R	389	0.194110	1.040189	-0.998981	12.93046
TEF	389	6.322468	0.707085	4.680000	7.930000
SG	389	6.492569	1.349206	2.362745	9.220374
LS	389	4.750972	1.255440	2.194517	8.031401
SM	389	8.031401	1.124587	4.843934	9.775260
FT	389	6.452313	0.960707	2.584036	8.754359
REG	389	6.500553	1.012773	3.462068	9.316147
BDI	389	7.127153	4.058588	0.981667	24.25917
GFCF	389	23.99856	24.12074	4.155218	70.66011
M	389	50.53690	38.91171	7.218083	256.9269
RER	389	105.5763	12.66428	70.44021	171.4527

**Table 2:** Results of Pesaran's Diagnostic Tests of Cross Section Independence

Model	Test	Statistics	Probability of statistics	Results
First	Pesaran's Diagnostic Tests of Cross Section Independence	17.093	0.0000	The existence of cross-sectional dependence
Second	Pesaran's Diagnostic Tests of Cross Section Independence	18.165	0.0000	The existence of cross-sectional dependence

## 6.2 UNIT ROOT TEST

Each time series is a stochastic or random process. One of the random processes considered in the time series is the durable random process. When a random process is durable that the mean and variance are constant over time, and the covariance value between two periods of time depends only on the distance or interruption between two-time series and does not correlate with the actual time of calculating the covariance. Research has always assumed that time series are durable. If this is not the case, the conventional statistical tests based on the tests of F, t, and  $\chi$ , and similar tests are questionable. Furthermore, if the time series variables are not stationary, a problem may be called pseudo-regression. In this type of regression, though there may be no relation or concept between variables, the coefficient of determination is high. In this case, the researcher is drawn to the inference that the relationship between variables is false. In this study, the static variables have been examined using the Hadri panel unit root test. The results are presented in Table 3. Now, with regard to the proof of cross-sectional dependence in research models, the Hadri statistics were used for examining the existence or loss of the unit root. From the perspective of the computational basis, The Hadri test differs from other tests and is not based on the autoregressive parameter. This test, unlike other tests, which test the assumption of the unit root, tests the null hypothesis of the stationary of a variable. Based on the results of this test, and given that all variables have a significance level higher than 5%, the null hypothesis is confirmed, and all the research variables are stationary, enjoying an I(0) stationary degree.

**Table 3:** Results of Durability Test of The Model Variables

Variable	Symbol	Hardi statistics	Probability
Stock price index and cash-on-cash returns	r	0.9096	0.1815
The Index of Total Economic Freedom	tef	-0.2821	0.4111
Size of government	sg	-0.2665	0.4051
Legal structure and property rights	ls	1.2701	0.1020
Access to sound money	sm	-0.5987	0.7253
Freedom to trade internationally	ft	0.8792	0.2405
regulation of credit, labor, and business	reg	-0.3616	0.5042
Bank deposit rates	bdi	-0.6481	0.7831
Ratio of GFCF to GDP	gfcf	1.1174	0.1283
Liquidity ratio to gross domestic product	m	-0.4793	0.6057
Real exchange rate	rer	0.5791	0.3141

### 6.3 Results of the Chaw test

To estimate the above model, the Chaw test was employed to choose between the panel data method, which is described below. First, statistical tests are needed to explain the type of data. The results of the Chaw test are illustrated in Table 4 for each of the research models. To estimate the model, the panel data method was employed. The probability value of this statistic for the research model is smaller than 0.05, so the null hypothesis claiming that the data are panel for research models is rejected.

**Table 4:** Results of The Chaw Test

Model	Test	Statistic	Probability of statistic	Results
First	Chaw test	2.38	0.0266	Panel data method
Second	Chaw test	11.38	0.0000	Panel data method

### 6.4 Hausman Test

The F-Limer test, it is required that the Hausman test be used for determining the type of panel data. As shown in Table 5, the result of the Hausman test for the research model shows that the estimation method of the model is the random effects model because the probability value of this statistic is bigger than 5%. Therefore, the research models are estimated on the variables based on the panel data method with the random effects model.

**Table 5:** Results of The Hausman Test

Model	Test	Statistic	Probability of statistic	Results
First	Hausman test	2.98	0.7204	The panel data method with the random effects model.
Second	Hausman test	9.56	0.4800	The panel data method with the random effects model

**Table 6:** Results of The Breusch–Pagan Test

Model	Test	Statistic	Probability of statistic
First	The Breusch–Pagan test	3.40	0.0241
Second	The Breusch–Pagan test	7.98	0.0084

After it is determined that the model has to be derived by the random effects method, the Breusch–Pagan test is employed to determine if the Hausman test correctly recognizes the random effect pattern.

The null hypothesis of this test indicates that the data is the panel to the random effects model. According to the result presented in Table 6, the zero hypotheses is rejected. Therefore, the Hausman test correctly recognized the pattern of random effects in both models.

### 6.5 The results of the homogeneity of variance test and serial autocorrelation among error terms

In studies based on panel data, there is a probability of emerging the problem of homogeneity of variance and autocorrelation. Therefore, before model estimation, it is necessary to examine the existence or non-existence of homogeneity of variance. To test the equation of variance for panel data, the Likelihood Ratio (LR) test is employed, and for the serial autocorrelation test, the Wooldridge test is used. In the LR test, the null hypothesis shows the equality of variances in the model. As illustrated in Table 7, the null hypothesis is rejected, and therefore there is a problem of homogeneity of variance in models. It should be ensured that there is no serial autocorrelation among the variables and that the null hypothesis in the Wooldridge test is based on the existence of no serial correlation among the variables. According to the results of Table 8, the null hypothesis is not rejected and the results indicate no serial autocorrelation among the variables in both models.

**Table 7:** LR Test

Model	Test	Statistic	Probability of statistic	Results
First	LR test	1460.18	0.0000	Heterogeneity of variance
Second	LR test	732.00	0.0000	Heterogeneity of variance

**Table 8:** Autocorrelation Test

Model	Test	Statistic	Probability of statistic	Results
First	Wooldridge test	1.938	0.1603	Non autocorrelation
Second	Wooldridge test	1.332	0.2782	Non autocorrelation

**Table 9:** Results of Estimation Via The GLS Method for The First Model

Variable	Variable symbol	Estimated coefficient	Standard error	Z-statistic	P-value
Intercept	C	0.2589352	0.1238924	2.09	0.041
Index of Total Economic Freedom	TEF	0.2710553	0.0755028	3.59	0.000
Bank deposit rates	BDI	-0.0230073	0.0046199	-4.98	0.000
Ratio of GFCF to GDP	GFCF	0.4057903	0.1656286	2.45	0.018
Ratio of liquidity to GDP	M	-0.1041773	0.0381601	-2.73	0.006
Real exchange rate	RER	0.0026046	0.0012643	2.06	0.043
Number of obs = 696 Number of groups = 44			Wald Chi2 (5) = 152.34 Prob>chi2 = 0.0000		

## 7 Findings of estimating the research models

After conducting the necessary statistical tests, the final results from the estimation of the research models are presented below to determine the application of the data and to ensure the validity of the fitted model. According to the results of the proposed models, there is a heterogeneity of variance at the error level of 5%. Hence, heterogeneity of variance must be eliminated. In order to solve the problems mentioned in the panel data, the generalized least squares method (GLS) is used, taking into account

the heterogeneity of variance. The results of estimating these models are presented in Tables 9 and 10, which test the effects of economic freedom variables and their indicators on the stock price index and cash-on-cash returns in the selected countries of the OIC and for 2001 to 2019. The results of estimating the parameters of the first model are presented in Table 9. As observed, the significance of the Chi-square test (152.369) indicates that the hypothesis is well-fitted.

**Table 10:** Results of Estimation Via The GLS Method for The Second Model

Variable	Variable symbol	Estimated coefficient	Standard error	Z-statistic	P-value
Intercept	C	-0.4503245	0.1941053	-2.32	0/021
Size of government	SG	-0.1080693	0.0134749	-8.02	0.000
Legal structure and property rights	LS	0.0924866	0.016938	5.46	0.000
Access to sound money	SM	0.0994334	0.0181779	5.47	0.000
Freedom to trade internationally	FT	0.012216	0.005959	2.05	0.045
regulation of credit, labor, and business	REG	0.1095539	0.0205157	5.34	0.000
Bank deposit rates	BDI	-0.0123868	0.0049153	-2.52	0.012
Ratio of GFCF to GDP	GFCF	0.0054982	0.0023005	2.39	0.017
Liquidity ratio to gross domestic product	M	-0.070160	0.0274063	-2.56	0.011
Real exchange rate	RER	0.001908	0.000769	2.48	0.013
Number of obs = 696 Number of groups = 44			Wald Chi2 (5) = 190.76 Prob>chi2 = 0.0000		

The results of estimating the parameters of the second model are presented in Table 10. As observed, the significance of the Wald Chi<sup>2</sup> test (190.76) indicates that the hypothesis is well-fitted.

## 8 Results and Discussion

### 8.1 Results of the first model

In the case of the effect of the total economic freedom variable on the price index and cash-on-cash returns of stocks as shown in Table 9, 1% variations in the total economic freedom index results in a 0.27% increase in the stock returns. The effect of this variable on the price index and cash-on-cash returns is positive. Table 9 confirms the negative and significant relation between the bank deposit rate and the stock return index. Investors keep their assets in various forms, such as cash, stocks, bank deposits, etc. In fact, investors are looking for a basket of assets that maximizes returns on their assets. According to the experience gained from the results of the ROI in the stock market and its riskiness, investors do not consider the ROI in the market to be sufficient for its risk. In addition, the risk-free bank deposit rate also acts as a competitor for investment in the stock market. The higher the bank deposit rate, the lower the demand and the stock price. This provides the grounds for reducing stock returns in the stock market.

The ratio of GFCF in machinery and buildings to GDP as a determinant factor in the production status of companies admitted to the stock market has a significant impact on stock prices and cash-on-cash returns of the stock market. As shown in Table 8, the estimated coefficient of the variable has a positive and significant effect on the stock price index and cash-on-cash returns. Therefore, increasing the ratio of gross fixed capital formation to GDP will lead to higher returns and profitability of companies in the stock market and ultimately lead to an increase in their demands for stocks and the stock price index.



Another variable in this study, which has an effect on the ROE, is the ratio of liquidity to GDP. As shown in Table 9, this variable has a negative and significant effect on the ROE of 0.104. Although it is expected that with the increase in the ROE, the interest rate, the general level of prices, the stock price index, and cash-on-cash returns increase, the result of the negative effect of this effect is not expected. The growth of liquidity and its mismatch with GDP growth leads to continuous inflation and ultimately reduces investment in companies listed on the stock market, providing grounds for lowering demand for stocks, stock prices, and stock returns.

The results of Table 9 also confirm the positive and significant relationship between the real exchange rate and the stock return index. Although the stock price index and cash returns are expected to decrease by increasing real exchange rates. But this index affects both the stock price index and cash-on-cash returns from the perspectives of supply and demand indices. From the demand perspective, rising real exchange rates lead to an increase in the revenue of the companies exporting the goods and, as a result, will increase their stock prices. From the supply perspective, considering that companies and institutions mainly supply their needs in the form of imports from developed countries, an increase in the real exchange rates will lead to a reduction in the profitability of the companies that import intermediary institutions and reduce their stock prices. Considering the substitution effects of two currency assets and stocks in the portfolios, it is expected that, if the real exchange rate increases, demand for the currency will decrease. As a result, demand for stocks and, consequently, stock prices will increase. But with regard to the actions of the stock price index relative to changes in the real exchange rates, the effect of the real exchange rates on the stock price index is positive and significant.

## 8.2 Results of the second model

According to the results of Table 10, a 1% increase in the SG results in a decrease of 0.108% in the stock price index. In other words, this variable has a negative and significant effect on the stock price index and cash-on-cash returns. One of the essential components of the Index of Economic Freedom is the indicator of access to sound money which plays a significant role in controlling inflation, maintaining the value of the national currency, and reducing transaction costs. The results of Table 10 confirm the positive and significant correlation between access to sound money and the stock price index and cash-on-cash returns. With a 1% increase in the index, the price index and cash-on-cash returns are increased by 0.099%. According to the estimated results, the 1% increase in the indicator of freedom to trade internationally also leads to an increase of 0.012% in the stock price index and cash-on-cash returns. The results indicate that freedom to trade internationally has a positive and significant effect on the stock price index and cash-on-cash returns. According to Table 10, a 1% increase in the indicators of the legal structure and property rights as well as labor market and business regulations resulted in an increase of 0.092% and 0.109 % in the stock price index and cash-on-cash returns. The results also show that these indicators have a positive and significant effect on the development of the stock market. The results of Table 10 confirm the negative and significant correlation of the bank deposit rate with stock price and cash-on-cash returns. The results also show that the ratio of GFCF in machinery and building to GDP is based on the dependent variable of the stock price index and the cash-on-cash returns of the stock market are positive and significant as 0.0054. Another variable in this study, which has an effect on the stock price index and cash-on-cash returns, is the ratio of liquidity to GDP. As illustrated in Table 10, this variable has a negative and significant effect on the stock price index and cash-on-cash returns of 0.07. In addition, the results of Table 10 also confirm the positive and significant correlation between the real exchange rate and the stock price index and cash-on-cash returns.

## 9 Conclusion and Suggestions

According to the results of the model, there is a significant and positive correlation between the Index of Economic Freedom with the stock price index and cash returns. In fact, the theoretical and experimental frameworks are completely transparent. Given the importance of the Index of Economic Freedom for countries, it is necessary for countries to develop specific programs and policies to govern the growth strategies of economic freedom, in particular, in the proposed economic programs of the country's political parties (in general) and the ruling governments in particular. It seems that the main objective of these strategies is to provide, with the privatization, the necessary premises for economic operators, especially producers, to enjoy freedom, transparency, and economic security. This approach must be a dynamic and continuous process in countries' economic policies, with the intention of institutionalizing the conditions of freedom of action, and economic transparency and security for the production of enterprises from economic conditions.

According to the economists' recommendation for economic liberalization, the money market and the internal financial system must first be reformed, and, by boosting the domestic market, they will reopen these markets to foreign investors. Because the sudden reopening of these markets by foreigners may lead to sharp fluctuations in the entry and exit of capital into a country and the likelihood of a financial crisis. For liberalization of the capital market, it was better to first establish a national fund or issue deposit receipts to prepare the presence of foreign investors in this market, and then, by imposing restrictions such as the minimum investment period or the maximum amount of foreign ownership in each company, they are given direct stock trading (DST). Of course, it should be noted that just the announcement of the reopening of the capital market to foreigners does not lead to their entry into this market and its positive impact on the capital market. To encourage foreign investors to appear in this market, grounds should be provided for transparency of information, observance of international standards, protection laws for depositors, and stable economic and political conditions. The variable of SG results in a decrease in the stock return index. In other words, this variable has a negative and significant effect on the stock return index. Hence, it is suggested that incentives be provided to the private sector to strengthen the private sector and reduce the size of the public sector. By doing so, the market is strengthened and, as a result, increases the stock returns. The indicator of legal structure and property rights led to an increase in the stock return index. The results indicate that this index has a positive and significant effect on the development of the stock market. Hence, government executives are advised to strengthen the legal structure and protect property rights in order to reduce the risk of capital in the market and develop the stock market.

One of the essential components of the Index of Economic Freedom is the indicator of access to sound money, which plays a significant role in controlling inflation, maintaining the value of the national currency, and reducing transaction costs. The results confirm the positive and significant correlation of access to sound money with the market index and the stock return index. Hence, it is suggested that the government take measures to make it easier to access sound money in order to reduce the risk of capital markets. According to the results of the increase in the indicator of freedom to trade internationally led to an increase in the stock return index. This indicates that freedom to trade internationally has a positive and significant effect on the ROE. It is therefore proposed to reduce customs tariffs and facilitate access to foreign currencies so that trade can flourish and, as a result, strengthen the stock market. The indicator regulation of credit, labor, and business resulted in an increase in the stock price index and cash-on-cash returns. The results indicate that this index has a positive and significant effect on the development of the stock market. Therefore, it is suggested that the complex and ambiguous regulations be eliminated

on the path to new business start-ups, laws to protect property rights be codified and enforced, contracts and the resolution of acceptable and mutually supportive disruptions be implemented, and the macro-economic policies to reduce investment risk and Increasing incentives for companies to invest in the stock market be adopted and promoted.

Finally, in order to develop the stock market, the following suggestions are presented:

- Preserving a balance of backing up money and printing money by reducing customs tariffs and trade restrictions for the importation of capital goods with modern technology and enhancing the relative advantage of increasing national production and improving the level of competitiveness by reducing the costs of the manufacturing sector for companies listed on the stock market for its development;
- Increasing accreditation of institutions and enterprises in order to set up the business and increase their profitability and improve labor market rules to facilitate the listing, withdrawal, and transfer of labor force in order to achieve the development of the stock market;
- In pursuit of sound money for economic stability and confidence in economic actors, developing countries should pursue policies and adopt institutions that create low and stable rates of inflation, and avoid regulations that restrict the use of alternate currencies.
- Trade liberalization, if combined with the production of knowledge-driven and high-tech products, can increase the competitiveness of countries. To this end, three main factors are suggested: firstly, economic policymakers in developing countries should take this seriously, in addition to paying attention to the innovative activities of implementing the liberalization policies and actually demanding them. Secondly, there should be precise and long-term planning. Thirdly, government bodies from developing countries involved in exporting and importing should have a close relationship.
- Creating quality and transparent laws and regulations, in such a way that this regulation and economic policy is aimed at eliminating the defects of the market mechanism.
- It is recommended that policymakers be encouraged to support foreign investors, seek to achieve a desirable capital market, create stability and economic security, and deserve a favorable business environment for attracting foreign investment in developing countries.
- Purposive and meaningful wills for reducing tariff and non-tariff barriers to trade in goods and services are recommended to policymakers and economic decision-makers to impose milder trade restrictions on imports of high technology, capital, and intermediate goods, as well as the development of non-resource exports. In addition, they should not ignore exports of non-natural resources.

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