Analyzing the Impact of Quality of Public Governance on the Market Value of Companies Listed on the Amman Stock Exchange

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ABSTRACT

This study aimed to examine the impact of public governance quality on the market value of companies listed on the Amman Stock Exchange from 2002 to 2021. The study utilized the Autoregressive Distributed Lag (ARDL) model to analyze slow-moving distributed time series. The findings indicated a significant and positive correlation between various indicators of quality of public governance, such as voting and accountability, political stability and absence of violence, and organizational quality, with the market value of the listed companies. These results align with economic theory assumptions. However, in terms of monetary freedom, another important indicator of the quality of public governance, the study found no statistically significant relationship with the market value of the listed companies at a significant level. This observation may be attributed to the government's limited capacity to manage the country's public financial resources efficiently and effectively, particularly regarding transparent and responsible administration of taxation, debt, and government expenditure.

Keywords: Quality of Public Governance, Stock Exchange, Market Value of the Stock Exchange, ARDL
JEL Classifications: G3; O16

1. INTRODUCTION

The valuation of companies listed on the stock exchange is a vital indicator that reflects the overall strength and health of the national economy, as well as the level of investment and business activity within the country. It plays a crucial role in assessing the potential growth, expansion, and competitiveness of listed companies, thereby instilling confidence in the economy, and improving the financial performance of these companies.

The concept of public governance quality has long been recognized and applied in various fields, including finance and business. In simple terms, it refers to the quality of decisions and actions taken by officials in both corporate and government settings, which should be informed, knowledgeable, and aligned with the public interest.

The importance of public governance quality and its impact on the economy, particularly in financial markets, has been the subject of extensive discussion among academics and professionals in developed and developing countries. Some experts argue that high-quality public governance improves the economic environment, stimulates domestic and international investments, and fosters trust between the public, companies, and governments. They contend that it contributes to enhancing the performance of companies and governments. On the other hand, critics maintain that public governance quality falls short of achieving desired objectives and fails to ensure integrity and transparency in corporate and government management. They highlight the numerous challenges associated with its implementation and enforcement, suggesting the need for more stringent, rigorous measures and collaborative efforts between officials and society.

These contrasting perspectives present a challenge in achieving effective public governance quality. It requires endeavors to improve governance systems, enhance transparency and accountability, promote effective communication between officials and society, and foster a sense of shared responsibility among stakeholders in the economic and social sectors to work together towards common goals in advancing public governance quality.

1.1. Research Problem

Between 2003 and 2021, the market value of companies listed on the Amman Stock Exchange experienced a significant decrease, as depicted in (Figure 1). In 2003, these companies had a market value of approximately 777,275 million JD, which later declined to around 154,957 million JD in 2021. This decline presents a pressing economic challenge for Jordan, with potential adverse consequences such as reduced investments, diminished employment opportunities, decreased overall productivity, limited financial liquidity, and restricted access to credit and financing for both companies and individuals. Additionally, it can erode confidence in the country's financial and economic system.

Recognizing the pivotal role of enhancing the quality of public governance in promoting transparency and accountability at the national level, it is widely acknowledged that doing so fosters trust in the financial and economic system, creating an attractive environment for investors. Therefore, improving the quality of public governance may help mitigate the decline in the market value of companies listed on the stock exchange.

Based on the above context, the research problem aims to address the following main question:

- To what extent does the quality of public governance affect the market value of companies listed on the Amman Stock Exchange?

This main question leads to the following sub-questions:

- How do voting and accountability impact the market value of companies listed on the Amman Stock Exchange?
- What is the influence of political stability, absence of violence, and terrorism on the market value of companies listed on the Amman Stock Exchange?
- How does regulatory quality influence the market value of companies listed on the Amman Stock Exchange?

Figure 1: MC market capitalization (JD million)
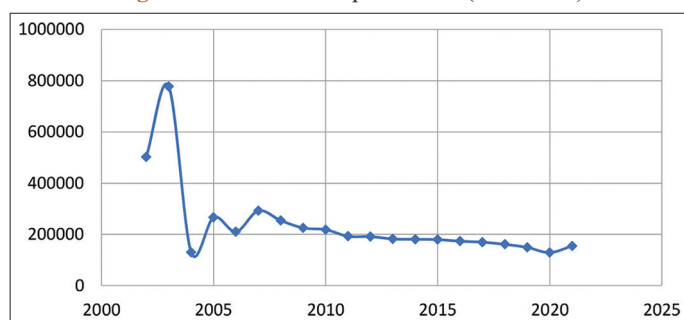
Source: Prepared by the researcher based on Amman Stock Exchange

- To what extent does monetary freedom affect the market value of companies listed on the Amman Stock Exchange?

1.2. Study Hypotheses

To address the sub-questions that contribute to the research problem, the following hypotheses have been formulated:

H_{01}: There is no statistically significant impact of voting and accountability on the market value of companies listed on the Amman Stock Exchange.

H_{02}: Political stability and the absence of violence and terrorism do not significantly impact the market value of companies listed on the Amman Stock Exchange.

H_{03}: Regulatory quality does not significantly impact the market value of companies listed on the Amman Stock Exchange.

H_{04}: Monetary freedom does not significantly impact the market value of companies listed on the Amman Stock Exchange.

1.3. Study Objectives

The main objective of this study is to shed light on the importance of public governance quality and its influence on the market value of companies listed on the Amman Stock Exchange. The specific objectives of this study can be formulated as follows:

- To examine the progress of public governance quality in Jordan, focusing on indicators such as voting and accountability, political stability and absence of violence, monetary freedom, and regulatory quality.
- To analyze the performance of the Amman Stock Exchange by assessing the market value of the listed companies.
- To assess the impact of public governance quality, as measured by indicators such as voting and accountability, political stability and absence of violence, monetary freedom, and regulatory quality, on the market value of companies listed on the Amman Stock Exchange.
- To provide precise and current information to investors and government officials concerning the influence of the quality of public governance on the market value of companies listed on the exchange.

1.4. Importance of the Study

This study holds significant importance due to its focus on the stock exchange and its various performance indicators, particularly the market value of the exchange. The market value serves as a crucial indicator that reflects the overall strength and stability of the national economy, as well as the level of investment and commercial activities within the country. Furthermore, the study's significance lies in its aim to understand the impact of public governance quality on the market value of the exchange. By comprehending this relationship, deeper insights can be gained into the interplay between public governance quality and the market value of the exchange.

Consequently, the study has the potential to make valuable contributions by providing recommendations to enhance the connection between public governance quality and the market value of the exchange. This, in turn, can foster transparency and accountability in the financial and economic system of the Amman Stock Exchange, thereby instilling greater confidence in the system and attracting a larger number of investors and participants to the financial market.

1.5. Study Contributions

There remains a gap in comprehensive research specifically assessing the impact of public governance quality on the performance of the Amman Stock Exchange, represented by the market value of the Stock Exchange. Hence, this study holds significant importance as it aims to fulfill the objective of conducting a detailed and precise analysis of the relationship between public governance quality and the performance of the Amman Stock Exchange. This study specifically focuses on evaluating the indicators of public governance quality in Jordan and their role in enhancing stock market performance, recognizing the significance of public governance quality in developing countries and the ongoing need for continuous improvement.

2. THEORETICAL LITERATURE AND PREVIOUS STUDIES

2.1. Theoretical Literature

The stock market plays a critical role in the global economy, serving as an indicator of the economic well-being and financial performance of countries and the companies listed within it. Various factors, including the quality of public governance, influence the value of the stock market.

The relationship between governance quality and stock market performance has been a subject of interest among researchers for a significant period. Governance, as defined by the Worldwide Governance Indicators (WGI), encompasses the traditions and institutions that exercise power within a country. This includes processes such as the selection, monitoring, and replacement of governments, the government's ability to formulate and implement sound policies, as well as the respect shown by citizens and the state towards the institutions governing economic and social interactions.

Public governance, as described by Liu et al. (2018), encompasses a system in which governing bodies strive to achieve standards of transparency, accountability, fairness, freedom, equality, efficiency, and effectiveness in managing public affairs. The objective is to achieve the public interest sustainably and equitably across all segments of society.

Regarding theories that explain the relationship between the quality of public governance and the market value of the stock exchange, two significant theories are as follows:

1. "Agency Theory": The connection between governance quality and the market value of a company is explored in the financial theoretical literature based on the "Agency Theory." Jensen and Meckling's study (1976) laid the foundation for subsequent studies adopting this approach. According to the "Agency Theory," shareholders rely on management to oversee company affairs and generate desired profits. Challenges arise in the shareholder-management relationship due to conflicting interests. For example, management may prioritize personal interests over those of the company and shareholders, leading to decreased trust and a decline in the market value of the stock exchange. When governance is of high quality, shareholders can trust that management will act in the best interest of the company, resulting in increased trust and a rise in the market value of the stock exchange.

2. "Resource Dependence Theory": Salancik's study (1978) serves as a seminal work in establishing the "Resource Dependence Theory." This theory focuses on examining the relationships between companies and their operating environment. It suggests that companies are directly influenced by external factors in their environment, such as suppliers, customers, government entities, non-governmental organizations, and the local community. The ability of companies to acquire the necessary resources for success depends on the strength of their relationships with these external factors. When public governance is of high quality, it fosters enhanced trust and relationships with these stakeholders, thereby improving business operations and resulting in an increase in the market value of the stock exchange.

2.1.1. The relationship between public governance quality and stock exchange market value

Exploring the correlation between the quality of public governance and the market value of the stock exchange involves examining the relationship between indicators of public governance and the stock exchange's market value.

In terms of voting, accountability, and the market value of the stock exchange, multiple studies indicate a positive association between democracy, accountability, and the market value of publicly listed companies. This is because accountability and transparency play crucial roles in building trust between investors and the entities responsible for economic management. By enhancing transparency and public governance, it becomes possible to attract investments and instill confidence in the economy.

For example, studies conducted by Benson (2016) and Sokolov (2020) have found that countries with high levels of democracy and accountability tend to exhibit higher market values in their stock exchanges. These findings align with the research conducted by Bartholomew (2021) and Stevenson (2021), which suggest that countries characterized by transparency and accountability enjoy higher market values in global stock exchanges.

Regarding political stability and the market value of the stock exchange, the connection can be understood through economic and financial theories. These theories suggest that political and security factors influence trust in the financial market and both local and foreign investments. Ultimately, this leads to improved financial performance and an increase in the market value of the stock exchange. Studies by Alqahtani and Rizvi (2013) and El-Masry and Noguera (2017) support this perspective, concluding that political stability plays a crucial role in the development of financial markets in emerging and developing countries. Researchers believe that political and economic disturbances have negative effects on financial markets, resulting in price volatility, reduced trading volume, and a decline in market value. Similarly, political and economic stability fosters confidence in financial markets, attracts more investors, and contributes to the growth of financial markets.

2.1.2. Organizational quality and the market value of the stock exchange

Studies indicate that organizational quality is a significant factor that affects the market value of companies. Organizational quality refers to the legal and regulatory framework aimed at enforcing strict rules and regulations on companies, promoting integrity, and transparency, and improving the overall business environment. This, in turn, attracts investments and enhances trust among investors and the entities involved in economic management. Consequently, it leads to an increase in the long-term market value of listed companies on the stock exchange.

A study by Al-Hajaya and Al-Hayari (2019) suggests that countries with a high level of organizational quality enjoy a 5.6% higher market value compared to countries with a low level of organizational quality. Similarly, studies by Al-Owaidi et al. (2018), Al-Johani and Al-Qahtani (2019), and Al-Otaibi and Al-Ahmadi (2020) indicate that countries with a high level of organizational quality achieve higher levels of financial performance and return on investment, thereby gaining a higher market value.

2.1.3. Monetary freedom and the market value of the stock exchange

Public Monetary freedom, defined as the ability to manage public finance, taxation, debt, and government expenditure in an efficient, transparent, and accountable manner, has a significant impact on the performance of the financial market. A study by Mohsin and Al-Malkawi (2021) suggests that Monetary freedom positively affects the financial market's performance in emerging economies by improving financial management and achieving financial and economic stability. Additionally, a study by Al-Shboul and Molyneux (2021) indicates that Monetary freedom has a positive impact on the performance of the financial market in the Middle East and North Africa region by enhancing investor confidence and improving financial management.

2.2. Previous Studies

Various studies have highlighted the significance of effective governance in attracting investors and improving the performance of stock markets. For instance, Cull et al. (2013) conducted a study to examine the relationship between governance and the liberalization of financial markets in developing countries. Their findings emphasized that sound governance plays a crucial role in fostering financial system development by instilling confidence, facilitating credit expansion, and enhancing overall efficiency and competitiveness.

Another study by Brahim and Rachdi (2014) aimed to analyze the connection between foreign direct investment (FDI) and economic growth in the Middle East and North Africa region. The researchers concluded that countries with robust institutional frameworks are better equipped to leverage FDI for positive economic growth outcomes.

Similarly, Alam and Uddin (2015) explored the correlation between governance quality and stock market performance in emerging economies. Their research revealed positive associations between governance quality and stock market performance, indicating that improving transparency, protecting shareholder rights, and implementing effective regulations can enhance stock market attractiveness in emerging economies.

Moosa and Al-Jarrah (2017) investigated the impact of public governance on the development of financial markets in Gulf Cooperation Council (GCC) countries. Their study demonstrated that public governance contributes to attracting foreign investments, improving the business environment, and enhancing transparency and accountability within governments, thereby fostering financial market growth.

Additionally, Boubakri et al. (2017) examined the role of political institutions in promoting corporate risk-taking in advanced countries. They found that political institutions enhance corporate risk-taking by facilitating communication, improving the business environment, and increasing transparency. The study also highlighted how companies operating in politically unstable environments tend to adopt riskier policies due to the link between political uncertainty and corporate risk-taking stimulation.

Ahmed and Shahzadi (2018) focused on the impact of public governance on the development of financial markets in South Asian countries. Their research indicated that public governance significantly influences financial market development by enhancing the business environment and attracting foreign investments.

Furthermore, Al-Malkawi and Swidan (2019) explored the relationship between governance quality and stock market performance in emerging markets. Their findings emphasized that good governance, including transparency, protection of shareholder rights, integrity, and effective regulation, fosters trust, economic stability, and efficiency in emerging stock markets.

Lastly, Raza et al. (2021) investigated the relationship between foreign direct investment, economic growth, and good governance systems in OECD countries. Their study concluded that countries with higher institutional quality experience better economic growth and attract greater foreign direct investment inflows.

On the flip side, several studies indicate a negative correlation between public governance and stock market performance. Among these studies, an influential one is Porta et al.'s (1998) research, which delves into the relationship between legal and regulatory systems and the stock market. This study presents compelling evidence highlighting the significance of safeguarding property rights and minimizing government intervention to foster economic development, investment, and innovation. It also reveals that countries with rigid and convoluted laws and regulations tend to experience reduced levels of investment and innovation within their companies.

Similarly, Hall (2005) points out certain adverse effects of regulatory policies on stock market performance, such as excessive restrictions and government interference in corporate regulatory activities, which can undermine incentives for innovation

and investment. Imposing constraints on mandatory reserves and capital requirements can lead to increased financing costs and limitations on investment and innovation opportunities. Moreover, excessive credit restrictions, along with stricter laws and regulations related to loans, can impede corporate financing, and dampen economic activity in the stock market. Additionally, Ayyagari et al. (2007) conducted an analysis of the relationship between laws, regulations, investment, and innovation in small and medium-sized enterprises across over 70 countries worldwide. Their findings indicate an unfavorable association between stringent and intricate laws and regulations and investment levels in these enterprises. The study also highlights that companies operating in more regulated countries face greater constraints on innovation.

After reviewing the previous studies, it becomes apparent that the lack of consensus necessitates further research to examine the precise and comprehensive impact of general governance quality on stock market performance. This investigation will also help identify the mechanisms that enhance the influence of general governance quality in improving stock market performance. Additionally, it is worth noting that the mentioned studies not only present inconsistent results but also rely on limited data for a short period due to the unavailability of global governance indicators for an extended period at that time. Therefore, with the availability of recent and comprehensive data on global governance indicators, modern studies should conduct standard analyses based on this data to obtain meaningful results.

2.2.1. Study contributions
Despite the abundance of existing studies that have explored stock market performance and the quality of public governance using WGI indicators, there remains a gap in comprehensive research specifically assessing the impact of public governance quality on the performance of the Amman Stock Exchange, represented by the market value of the Stock Exchange. Hence, this study holds significant importance as it aims to fulfill the objective of conducting a detailed and precise analysis of the relationship between public governance quality and the performance of the Amman Stock Exchange. This study specifically focuses on evaluating the indicators of public governance quality in Jordan and their role in enhancing stock market performance, recognizing the significance of public governance quality in developing countries and the ongoing need for continuous improvement.

2.3. The State of Public Governance in Jordan
The efforts made by the Jordanian government to improve the quality of public governance from 2002 to 2021 can be described as modest. These initiatives were geared towards enhancing governmental administration, advancing citizen services, promoting transparency and integrity in governance, protecting human rights, and fostering freedom. Some noteworthy initiatives undertaken during this period include:
- Implementation of the "Jordan Digital" initiative in 2014, which aimed to enhance governmental administration, improve government services, facilitate access to information, and promote transparency and integrity in operations.

- Establishment of the Jordanian Integrity and Anti-Corruption Commission in 2016, serving as the successor to the Ombudsman and Anti-Corruption Commission. This commission's primary objective is to combat corruption institutionally by investigating corruption cases and associated matters, including financial and administrative corruption.
- Creation of the Jordanian Military Center for Counterterrorism and Extremism in 2018, to strengthen international cooperation in the fight against terrorism and extremism.
- Launch of the Economic Reform Matrix during the "Jordan: Growth and Opportunity" conference held in London in 2019. The matrix aims to enhance the efficiency of the business and investment environment, reduce business costs, encourage exports and investments, and promote overall economic stability.
- Introduction of the "Jordan Source" initiative in 2021, which seeks to attract regional and international investments in the Kingdom's digital economy.

### 2.3.1. Public governance indicators and trends in Jordan
The Worldwide Governance Indicators (WGI), developed by the World Bank, encompass various metrics to evaluate the quality of public governance. These indicators include:

2.3.1.1. Voice and accountability
This metric assesses the degree of freedom of speech, protection of fundamental liberties, and engagement in political and social discussions. It is measured on a scale of 0 to 100, with higher values representing extensive freedom and active participation in political and social discourse. Conversely, lower values indicate significant constraints on freedom of expression and basic liberties.

Based on Figure 2, it is evident that the indicator measuring accountability and voting exhibited poor performance throughout the study period, with values ranging from approximately 25% to 32%. This can be attributed to the disillusionment of Jordanian citizens with the temporary electoral laws that governed parliamentary elections in 2016, 2013, 2010, 2007, 2003, and 2020. Additionally, it reflects the inadequate coordination and implementation of transparency, fairness, and integrity by relevant authorities in the Jordanian state.

Figure 2: VA voice and accountability
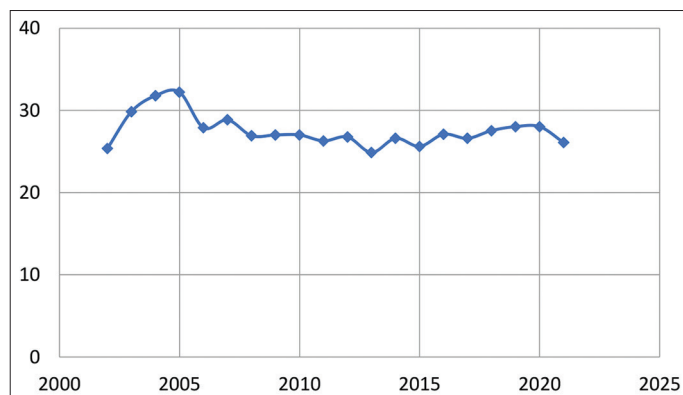
Source: Prepared by the researcher based on Worldwide Governance Indicators - WGI

2.3.1.2. Political stability and absence of violence and terrorism

This indicator evaluates the level of political stability and the absence of violence and terrorism in a country. It considers various factors. The indicator is measured on a scale of 0 to 100, where higher values indicate strong political stability and the absence of violence and terrorism. Conversely, lower values suggest political unrest and ongoing incidents of violence and terrorism.
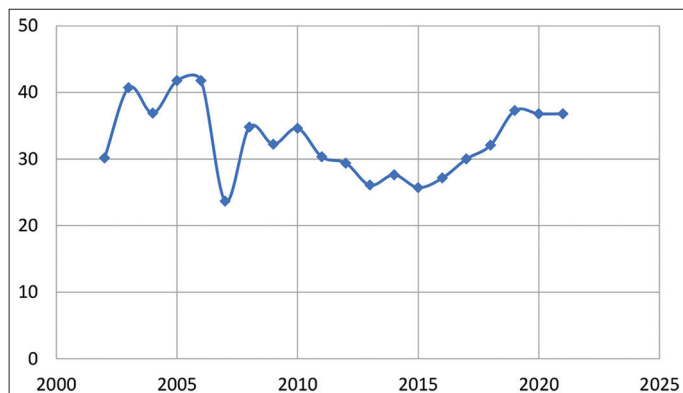
Based on Figure 3, it is evident that the indicator measuring political stability and absence of violence performed poorly throughout the study period, ranging between approximately 24% and 42%. Several factors contribute to this outcome, including Jordan's involvement with the Palestinian issue, instability in neighboring countries, particularly Iraq and Syria, foreign interventions, as well as the refugee crisis resulting from regional conflicts.

2.3.1.3. Regulatory quality

This indicator utilizes a range of factors to assess the quality of administrative and regulatory processes that affect business, investment, and innovation. The value of this indicator is measured on a scale from 0 to 100, where higher values signify well-implemented administrative and regulatory procedures that promote business, investment, and innovation. Conversely, lower values indicate ineffective administrative and regulatory procedures that impede business, investment, and innovation.

Based on Figure 4, the evaluation of the regulatory quality indicator was moderately satisfactory during the study period, ranging from approximately 55% to 63%.

2.3.1.4. Monetary freedom

The measurement of monetary freedom is used to evaluate the level of economic freedom in a particular country. This measurement heavily relies on market freedom, especially in terms of trading, investing, and cross-border financial transfers. The assessment of the monetary freedom index is typically based on multiple criteria, including the freedom of cross-border financial transfers, the ability to trade with foreign currencies, the freedom to own and invest in foreign assets, access to financial and banking services, as well as the freedom to engage in transactions involving digital currencies.

The monetary freedom index is generally represented on a scale of 0 to 100, where higher values are considered more favorable. Higher values indicate a higher degree of freedom and flexibility in financial transactions. Countries with a higher monetary freedom index tend to attract more foreign investors and often experience greater stability and economic prosperity.

According to the data presented in Figure 5, the assessment of the monetary freedom index consistently achieved relatively high scores throughout the study period, ranging from approximately 71% to 78%. This can be attributed to advancements in the capital market and the progress made in the development of the Jordanian banking system.
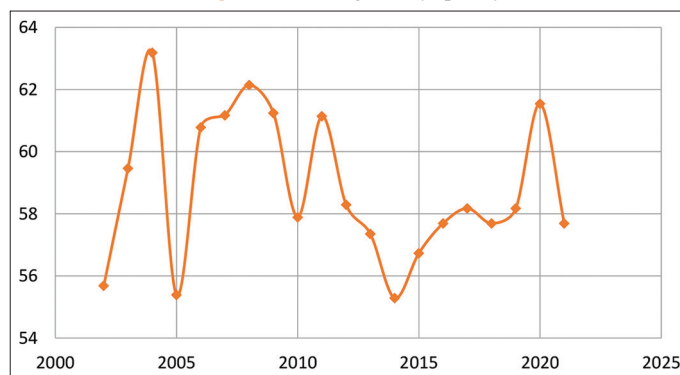
3. METHODOLOGY AND DATA

3.1. Methodology

To achieve the objectives of the study and examine its hypotheses, both the theoretical and practical aspects of the research were addressed. The theoretical aspect involved a comprehensive discussion of the concept of public governance, as well as the key theories that shed light on the relationship between public governance and the performance of the financial market. Additionally, an overview of relevant previous studies that aimed to explore this relationship was provided.

In the practical aspect, standard economic methods and statistical tests were employed and analyzed to fulfill the objectives of this

Figure 4: RQ regulatory quality

Source: Prepared by the researcher based on Worldwide Governance Indicators - WGI

Figure 3: PS Political Stability and Absence of Violence/Terrorism

Source: Prepared by the researcher based on Worldwide Governance Indicators - WGI

Figure 5: MF Monetary Freedom
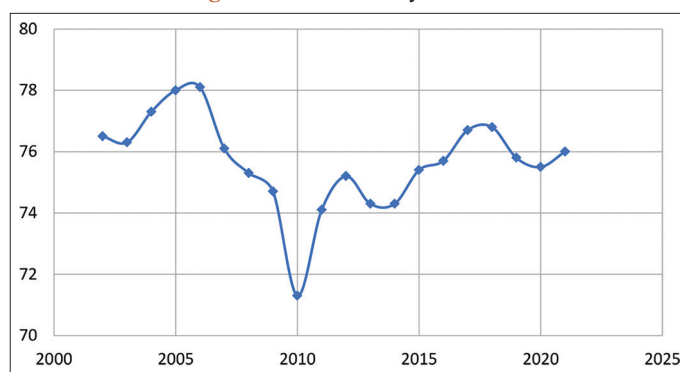
Source: Prepared by the researcher based on the Heritage Foundation

phase. After confirming the integration of the time series, the estimation was conducted using the Autoregressive Distributed Lag (ARDL) model for fractional cointegration. This model is well-known for its applicability to relatively small samples and its ability to be used regardless of the degree of time series integration (Abushawish and Awad-Warrad, 2021).

3.2. Data Source
The study utilized annual data spanning from 2002 to 2021. Information regarding the market value of companies listed on the Amman Stock Exchange was collected from the exchange's published statistical bulletins. In addition, data related to different dimensions of public governance, including voting and accountability, political stability and absence of violence and terrorism, and regulatory quality, was sourced from the Worldwide Governance Indicators (WGI) website. The Monetary Freedom Index, on the other hand, was obtained from The Heritage Foundation website.

3.3. Multivariate Time Series Model
This study employs yearly data spanning from 2002 to 2021, acquired from the statistical bulletins of the Amman Stock Exchange, World Bank (2023), International Monetary Fund (2021), the Worldwide Governance Indicators (WGI) website, provided by The Heritage Foundation.

The behavior and characteristics of the time series variables being examined were assessed using various methodologies, including the stationary test (unit root test), bounds test for long-term relationships, autoregressive distributed lag (ARDL), and diagnostic tests (Correlation Test, Heteroskedasticity Test: ARCH).

Within this study, a simplified model will be developed to depict the correlation between the quality of public governance and the market value of companies listed on the stock exchange. The quality of governance will be represented as a function of the market value of the listed companies, as indicated below:

$$MC = f(VA, PS, RQ, MF)$$

The stock exchange's market value can be affected by various factors, including specific control variables in addition to the public governance indicators mentioned in this study. To minimize random error, the researcher has identified and chosen certain control variables that may impact the market value of companies listed on the Amman Stock Exchange. The selected control variables are tax burden, economic growth, and interest rate. The model is presented in the following form:

$$MC = f(VA, PS, RQ, MF, TB, GDP, IR)$$

To examine how the quality of public governance affects the market value of companies listed on the stock exchange, it is possible to construct the following standard model, drawing on the research conducted by Ali Imran et al. (2020) and Rady and Shokr (2020), while also incorporating the control variables:

$$MC = \beta 0 + \beta 1\ VA + \beta 2\ PS + \beta 3\ RQ + \beta 4\ PS + \beta 5\ TB + \beta 6\ GDP + \beta 7\ IR + \varepsilon it$$

MC: Market Capitalization: It is an indicator that measures the value of companies listed on the stock exchange, which is determined based on the value of their stocks.
VA: Voice and accountability
MF: Monetary freedom
RQ; Regulatory quality
PS: Political stability and Absence of Violence/Terrorism.
TB: Tax burden
GDP: Economic growth rate based on current prices
IR: Interest rate
β0: The model's intercept
β1, β2, β3, β4, β5, β6, β7: Model coefficients
εit: The residual error term.

4. RESULTS

4.1. Statistical Tests for Model Validity
Time series analyses utilize a range of statistical tests to assess the validity of the model, enhance predictive accuracy and performance, and comprehend the relationships between variables in the time series. These tests are an integral part of the process and instill confidence in the results derived from the data. They encompass tests such as unit root test, bounds test, autoregressive distributed lag (ARDL), variance homogeneity test, and Correlation Test.

4.1.1. Unit root test
To ensure the validity of the results obtained from the statistical model used in the study, it is necessary to verify the stability of the time series for the study variables by conducting a Unit Root Test. The Augmented Dickey-Fuller test is widely used to assess the stability of the variables.

The standard software EViews was utilized to perform the Unit Root Test, revealing that (Table 1) the MC, RQ, and GDP variables exhibit stability at the level. However, the VA, PS, MF, TB, and IR variables achieved stability after taking the first difference. Consequently, the alternative hypothesis that the variables are stable at the first difference can be accepted, while rejecting the null hypothesis of the presence of a unit root in the time series of the variables.

4.1.2. Correlation coefficient test
(Table 2) reveals that the correlations among the variables studied are weak, indicating that there is no issue of linear correlation among the variables included in the study. This finding attests to the accuracy of the study's model.

4.1.3. Heteroskedasticity test (ARCH)
Based on the test results presented in (Table 3), it is observed that the value of (Prob. Chi-square [1] = 0.9182) is higher than the value of (Obs*R-squared = 0.010536). This indicates the acceptance of the alternative hypothesis, suggesting the presence of heteroskedasticity in the variances. Furthermore, the values of F-statistic and Prob. F(1,7) in the table also indicates no significant difference among the variables used in the test. Specifically, Prob. F(1,7) = 0.9238, indicating that the variables employed in the test do not have a significant effect on the variances.

4.2. Co-integration Test

In this study, the ARDL Long Run Form and Bounds Test are employed to examine the long-term relationship between variables. According to (Table 4), the co-integration test value (Value = 59.16) surpasses the upper limit I(1), indicating the existence of co-integration among the variables in the long run. As a result, it can be concluded that there is an influence of public governance quality on the market value of companies listed on the Amman Stock Exchange.

4.3. Model Estimation

The results of the ARDL (Autoregressive Distributed Lag) analysis for estimating the relationship between independent variables and the dependent variable in both the long and short terms are presented in (Tables 5 and 6). This analysis allows us to investigate the dynamic relationships between the variables.

The ARDL analysis was used to estimate the relationship between independent variables and the dependent variable in both the long and short terms. The value of (Prob[F-statistic] = 0.000) indicates the model's validity in both the short and long terms during the studied period. The low probability value suggests that the model is statistically significant throughout the examined period. The Adjusted R-squared value indicates that 97% of the variance in the dependent variable can be explained by the independent variables in the model. Thus, this measure can be utilized to assess the model's predictive ability regarding the dependent variable's values.

Regarding the long-term and short-term estimation results, it can be concluded that all independent variables, except for Monetary freedom (MF), exhibit statistical significance at a significant level. This may be attributed to the government's limited capacity to manage the country's public financial resources efficiently and

Table 1: Unit root test (PP)

At level								
Variable	MC	VA	PS	RQ	MF	GDP	TB	IR
With intercept								
t-statistic	−2.812	−1.820	−2.713	−4.046	−1.965	−1.061	−1.745	−1.836
Prob	0.080	0.359	0.10	0.006	0.298	0.707	0.394	0.353
	***	No	No	*	No	No	No	No
With trend and intercept								
t-statistic	−1.655	−2.151	−2.788	−4.391	−1.870	−3.834	−0.462	−2.083
Prob	0.720	0.486	0.218	0.013	0.630	0.037	0.976	0.522
	No	No	No	**	No	**	No	No
Non								
t-statistic	−4.150	−1.282	−0.274	−0.026	−0.123	−0.825	0.476	−1.238
Prob	0.0004	0.176	0.573	0.679	0.628	0.344	0.808	0.190
	*	No	No	No	No	No	No	No
At first difference								
Variable	MC	VA	PS	RQ	MF	GDP	TB	IR
With intercept								
t-statistic	−8.764	−5.290	−6.960	−6.660	−4.271	−8.359	−3.417	−3.519
Prob	0.000	0.0005	0.000	0.000	0.004	0.000	0.024	0.02
	*	*	*	*	*	*	**	**
With trend and intercept								
t-statistic	−9.825	−5.085	−6.988	−6.464	−4.162	−8.446	−3.817	−3.493
Prob	0.000	0.004	0.0001	0.0003	0.021	0.000	0.040	0.077
	*	*	*	*	**	*	**	***
Non								
t-statistic	−1.151	−5.469	−7.190	−6.901	−4.403	−8.590	−3.545	−3.554
Prob	0.215	0.000	0.000	0.000	0.0002	0.000	0.001	0.001
	No	*	*	*	*	*	*	*

(*) Significant at the 1%; (**) Significant at the 5%; (***) Significant at the 10%. and (no) Not Significant. Source: Prepared by the researcher based on the EViews 9 program.

Table 2: Correlation matrix

Variable	MC	VA	PS	RQ	MF	GDP	TB	IR
MC	1							
VA	0.171	1						
PS	0.220	0.590	1					
RQ	−0.082	0.282	0.211	1				
MF	0.133	0.505	0.384	0.063	1			
GDP	0.081	0.118	0.160	0.411	0.054	1		
TB	−0.541	−0.500	−0.563	−0.224	−0.371	−0.431	1	
IR	0.443	−0.317	−0.286	−0.127	−0.257	−0.439	−0.148	1

Source: Prepared by the researcher based on the EViews 9 program

Table 3: Heteroskedasticity test: ARCH

F-statistic	0.009432	Prob. F (1,7)	0.9238
Obs*R-squared	0.010536	Prob. Chi-square (1)	0.9182

Source: Prepared by the researcher based on the EViews 9 program.

Table 4: ARDL bounds test

Sample: 2004, 2021		
Included observations: 18		
Null hypothesis: No long-run relationships exist		
k	**Value**	**Test statistic**
7	59.160	F-statistic
95		
Critical value bounds		
I1 bound	**I0 bound**	**Significance**
3.13	2.03	10%
3.5	2.32	5%
3.84	2.6	2.5%
4.26	2.96	1%

Source: Prepared by the researcher based on the EViews 9 program

Table 5: ARDL Co-integrating and Short-term Form

ARDL Cointegrating and long run form				
Dependent variable: MC				
Selected model: ARDL (2, 0, 0, 0, 0, 0, 0, 0)				
Sample: 2002 2021				
Included observations: 18				
Cointegrating form				
Variable	**Coefficient**	**Std. error**	**t-statistic**	**Prob.**
0.0083	−3.481702	0.024619	−0.085714	D (MC[−1])
0.0600	2.189052	2512.695108	5500.420350	D (VA)
0.0000	9.893971	477.902270	4728.351137	D (PS)
0.0288	2.660310	1148.550321	3055.500145	D (RQ)
0.2514	−1.236228	1522.439474	−1882.081804	D (MF)
0.0000	−8.036502	586.236142	−4711.288180	D (TB)
0.0007	5.358307	447.675867	2398.784568	D (GDP)
0.0119	3.238279	4230.775784	13700.431033	D (IR)
0.0000	−38.777492	0.029791	−1.155218	CointEq(−1)
R-squared	0.98	F-statistic	71.6	
Adjusted R-squared	0.97	Prob (F-statistic)	0.000	
Durbin-Watson stat	1.83			

Cointeq=MC − (4761.3685*VA + 4093.0367*PS + 2644.9546 *RQ−1629.2000*MF−4078.2663*TB + 2076.4772 *GDP + 11859.6028*IR + 403858.8665)

Source: Prepared by the researcher based on the EViews 9 program

Table 6: Long-term coefficients

Long run coefficients				
Variable	**Coefficient**	**Std. error**	**t-statistic**	**Prob.**
VA	4761.368503	2082.072852	2.286840	`
PS	4093.036667	398.113931	10.281069	0.0000
RQ	2644.954608	1004.603746	2.632834	0.0300
MF	−1629.200034	1305.328552	−1.248115	0.2473
TB	−4078.266337	504.391046	−8.085525	0.0000
GDP	2076.477171	381.239275	5.446651	0.0006
IR	11859.602839	3699.672796	3.205582	0.0125
C	403858.866459	126671.983925	3.188226	0.0128

Source: Prepared by the researcher based on the EViews 9 program

effectively through transparent and accountable tax administration, debt management, and government spending. In summary, the

long-term estimation results can be summarized by the following mathematical equation:

$$MC = 4761.3685VA + 4093.0367PS + 2644.9546RQ - 1629.2000MF - 4078.2663TB + 2076.4772GDP + 11859.6028*IR + 403858.8665$$

By examining the equation, it can be concluded that the tax burden variable (TB) is negatively linked to the market value of companies listed on the Amman Stock Exchange. This finding aligns with the assumptions of economic theory. Regarding the following variables: (VA GDP, RQ, PS), they exhibit a positive relationship with the market value of listed companies, which also corresponds to economic theory. However, the interest rate variable (IR) demonstrates a positive association with the market value of listed companies, contradicting economic theory. This discrepancy may be attributed to the fact that an increase in interest rates curbs inflation, leading to enhanced confidence in the country's economy and financial system. In such circumstances, increased confidence in the economy could drive higher investments in stocks, thereby boosting the market value of the exchange.

5. CONCLUSION AND RECOMMENDATIONS

The study findings indicate that the accountability and voting index in Jordan exhibited a weak performance during the study period, ranging from approximately 25% to 32%. Similarly, the political stability index and absence of violence showed a weak performance as well, ranging from around 24% to 42%. On the other hand, the quality of administrative and regulatory procedures index achieved somewhat satisfactory results during the study period, ranging from approximately 55% to 63%. In contrast, the Monetary Freedom Index achieved relatively high scores during the study period, ranging from around 71% to 78%.

Furthermore, the study results demonstrated a positive and statistically significant association between several indicators of quality of public governance, such as voting and accountability, political stability and absence of violence, and regulatory quality, with the market value of companies listed on the stock exchange. This finding aligns with the principles of economic theory. However, the monetary freedom indicator, which is also an important measure of the quality of public governance, did not exhibit statistical significance at a significant level about the market value of listed companies. This could be attributed to the government's limited capacity to manage the country's public financial resources efficiently and effectively, including tax management, debt management, and government expenditure, transparently and responsibly.

Regarding the control variables, the study findings revealed a statistically significant positive relationship between economic growth and the market value of listed companies, which is in line with economic theory. In contrast, the tax burden variable displayed a statistically significant negative association with the market value of companies listed on the Amman Stock Exchange, consistent with economic theory. However, the interest rate variable (IR) exhibited

a statistically significant positive relationship with the market value of listed companies, contradicting economic theory. This may be attributed to the impact of higher interest rates in controlling inflation, which enhances confidence in the country's economy and financial system. In such circumstances, increased confidence in the economy can lead to greater investments in stocks, consequently boosting the market value of the stock exchange.

Based on the study findings, several recommendations can be proposed:

- The Jordanian government should exert more effort to strengthen the accountability and voting index. This can be achieved by incentivizing political and legal education among citizens and encouraging active participation in political life.
- Continuous efforts should be made to enhance the foundations of political stability and maintain a peaceful and stable environment in Jordan. These efforts may include promoting human rights, fostering justice, encouraging dialogue and freedom of expression, and fostering tolerance across all sectors of Jordanian society.
- Emphasis should be placed on improving efficiency and transparency in administrative and regulatory processes. This can be accomplished by reducing bureaucracy, promoting transparency in work procedures, and providing increased awareness and training for government officials.
- The Jordanian government should prioritize enhancing Monetary freedom within the country by efficiently and transparently managing public financial resources, strengthening financial and accounting oversight measures, and improving tax management, public debt, and government expenditure.
- Encouraging research studies in the field of public governance and its impact on various economic activities is crucial. This serves as a vital step towards improving governance quality and fostering sustainable economic development.

6. FUNDING

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7. TRANSPARENCY

The author asserts that the manuscript accurately, honestly, and transparently represents the study, without omitting any crucial aspects of the investigation. Any deviations from the original study plan have been clarified. The study adhered to all ethical writing guidelines.

8. DATA AVAILABILITY STATEMENT

Data Availability Statement: The corresponding author can provide the supporting data for this study upon a reasonable request.

9. COMPETING INTERESTS

The author affirms that there are no conflicts of interest concerning the publication of this paper.

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