The impacts of some political risk levels on the performance of the Iraqi stock exchange for the period (2009-2021)

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Abstract:

The international country risk guide referred to the possibility of analyzing a country's political risks using variables that included certain common or differentiated political characteristics that could become an identifiable characteristic of that country. The goal of analyzing such risks is to provide a method for quantifying and monitoring their consequences through multiple variables, including, but not limited to, the performance of financial markets. Such evaluation can be accomplished by assigning risk scores to a group of factors known as political risk elements, and despite the large size of the effects of these risks on market performance (sectors and companies), some parties avoid, ignore, or even include insufficient estimates that do not reflect their significance. As a result, the research problem focused on the idea that such levels of political risk might have a significant positive or negative impact on the general indicators performance of the Iraq Stock Exchange Which is represented by the market value and volume of trading as dependent variables, political stability, absence of violence, quality of bureaucracy, voting, accountability and control of corruption as explanatory variables. The ARDL model was used in the research to determine the direction and strength of the influence on the research sample. The research concluded several results, the most important of which was that the voting process and accountability connected to the army's intervention in politics, accountability, and democracy were among the most influential explanatory factors for the two models.

Keywords: Political Risks, Voting, accountability, the performance of the Iraqi stock exchange market.

Introduction:

Financial market performance indicators are noted for their sensitivity to environmental variables around them in particular, and to the environment of their financial systems in general. Such sensitivity draws attention to political risks, particularly after 2010, which was a turning point in studying and tracking the degrees of such risks and towards financial systems, rather than only direct foreign investment leaded by Transnational corporations. As a result, the notions connected to financial risks and the extent to which they develop, as well as their contents, evolved primarily from this change, which was also supported by many Literature reviews on this issue. Based on the significance of this topic, the research explored the linked notions of political risk, followed by its modern implications, before concluding with the methodological aspect and some of the most important conclusions and proposals.

Problem Statement:

Political risks are difficult to manage due to their nature and consequence since they arise when a sudden regime change or an unanticipated shift in government goals and aims occurs, or when political instability emerges as a result of terrorist attacks or internal disagreements. Regardless of the extent and magnitude of such risks, and consequences on businesses, many overlook or provide inadequate estimations that do not correspond to the accumulated or expected risk. As a result, the problem statement for this Research could likely be stated as follows: Does the level of political risk impact the performance indicators of the Iraqi Stock Exchange?

Research hypothesis

We can assume based on the research problem, that various elements of political risk vary in the severity and direction of their impact on the performance of the Iraqi Stock Exchange, as well as within the components of each part of these risks.

Research Objectives

Determine the variables that impact the performance indicators most.

Literature review

It was important to review and assess existing studies on the study's topic to identify the research gap. The table below (table 1) displays the research that covered the second decade of the twenty-first century and explored the impact of such risks on the components of financial systems.

Table (1) literature review

Author	Kanerva, K. U. A. (2015).
Title	The explanatory power of political risk in Central and Eastern European stock markets after the fall of communism.
Research objectives	The study aimed to analyze the relationship between political risks and returns of the stock markets in Eastern European countries that were previously part of the Soviet Union.
Research Methodology	The study utilized data from 1997 to 2014 and used regression analysis to test the relationship between political risk and equity returns, through ordinary least squares analysis.
Main findings	The study found that there is an impact of political risk on equity returns
Main recommendations	An indicator was proposed that measures the financial development through the stock market capitalization of the country in the sample to the GDP of the same country in the previous year. To further study the potential differences between the impact of political risks on equity returns and return on equity, through the formulation of diversified portfolios of Western European assets and assets from Eastern Europe and comparing the reactions of these portfolios to political risks.
Author	De Villa, Maria A., et.al (2018)
Title	To engage or not to engage with host governments: Corporate political activity and host country political risk.
Research objectives	To investigate the point of view of the company senior managers and according to their definition of political risks in the host countries resulting from the possibility of frequent policy changes or discriminatory policy-making that leads to business disruption or causes the confiscation of property by these countries
Main findings	Political risks mean potential changes in policy as well as the potential expropriation of corporate funds that lead companies and their management to delay the decision of entering the markets of the host country and to emphasize the timing and amount of capital.
Main recommendations	Insurance premiums are expected to be high in the selected sample of developed

	and emerging markets, indicating the possibility of their future impact and that developing countries perform better than developed countries.

Author	Goswami, G. G., & Panthamit, N. (2020)
Title	Does political risk lower bilateral trade flow? A gravity panel framework for Thailand vis-à-vis her trading partners.
Research objectives	The study investigated the impact of political risks with their various dimensions in reducing the flow of trade exchange in Thailand with its 132 partners.
Research Methodology	The study used data for the period 1984 to 2015 and was statistically analyzed using ordinary least squares and estimates of random influences along with internal and external conflicts nationally and internationally.
Main findings	The study found that trade flows decreased by 5-9% due to risks such as government instability in the country and across its borders and investment difficulties.
Main recommendations	The use of these political risk factors by banks, multinational corporations, exporters, and importers, may affect the business environment and current and projected investment levels and increase the risk of expropriation, nationalization, or policy change.

Author	dos Santos, M. B. C., Klotzle, M. C., & Pinto, A. C. F. (2021).
Title	The impact of political risk on the currencies of emerging markets
Research objectives	To discover the impact of political risks on the exchange rate returns of emerging market currencies.
Research Methodology	The study dealt with the effects of political risks on exchange rate returns in Brazil, Chile, Mexico, and Russia and the study relied in its analysis on monthly returns data and exchange rate, differences between domestic reference rates and the United States standard rate, and indicators of political risk and political uncertainty.
Main findings	It was found that these risks negatively affect Brazil's trade revenues as price volatility is associated with political risks, which suggests that the greater these risks globally and domestically, the greater the fluctuations in exchange rates and the greater the domestic political risks in these fluctuations.
Main recommendations	Increased restrictions on financial systems and as a result the role of financial intermediation has declined due to growing political uncertainty

Author	Choi, W., Chung, C. Y., & Wang, K. (2021).
Title	Firm-level political risk and corporate investment
Research objectives	Companies reduce their capital investments in response to political risks, and therefore the study aimed to investigate the relationship between the company level and future investment, as companies with higher political exposure and political risks spend less on capital investment, and therefore the negative relationship between political risks at the company level and investment was studied.
Research Methodology	The study relied on an analysis of correspondence among 7357 companies in the United States based on statements indicating political risks in their transactions and the impact such risks have on investment.
Main findings	The practice of companies in avoiding effective political pressure reduces the negative impact of political risks on their investments, and companies usually face these risks by reducing investment, and such relationships are affected by some of the company's activities and characteristics.
Main recommendations	It has become necessary to focus on the transmission channels of political risks, not just on the risks as a quantity and type.

Author	JHUNIOR, Ronaldo De Oliveira Santos; ABIB, Gustavo; STOCKER,2022,
Title	Business across borders: perceptions of political risk in internationalized Brazilian companies
Research objectives	It is a study conducted to recognize the importance of political risks in Brazilian international companies and aimed to analyze this type of risk in foreign business environments by analyzing the decisions of the director of international Brazilian companies.
Research Methodology	The study adopted a descriptive approach through case studies.
Main findings	The study found that political risk factors are inherited in different environments faced by international companies and take the form of political or economic uncertainty and that these companies are affected by the internal environment, the external environment, and the environment of the organization itself.
Main recommendations	To focus on managing political risks and the tools used to mitigate them and the study proposed to use institutional theoretical perspectives to comprehensive potential differences and similarities in political risk factors in different national contexts

Empirical literature

Political decisions, regulations, taxes, spending, and law enforcement have a significant impact on the business environment, and even in more developed countries whose democratic performance is good, the outputs of these decisions are usually difficult to predict and lead to political risks. Researchers believe that the effects of these risks extend to family and corporate decisions and have social costs that may exceed the positives of some political decisions, even if their objectives are positive, such as reforms, and these risks are defined as the possibility of the impact of a particular procedure directly or indirectly on a regular or intermittent basis on firms and affecting the firms and their outputs negatively or positively at the macro and micro levels (Lawton & John, 2018, 5). Furthermore, such risks affect employment and investment levels in different situations Hassan & et.al (2019, 33).

Therefore, these risks are likely to stimulate political action or even political non-intervention to change returns and performance in general. In this regard we must distinguish between political risks and political uncertainty, although some researchers use the two terms as synonyms, Political risks differ from political uncertainty in that they can be measured and the ability to estimate the likelihood of their occurrence, while political uncertainty is difficult to estimate, manage, and avoid (Lawton & John, 2018, 5). There are two approaches to the definition of political risks, the first approach is related to the concept of government intervention and the consequences it has on investment in the private sector, and the second approach is related to the events that may result from government measures such as restrictions on businesses. Thus, such risks can impact executive, legislative, and judicial institutions and negatively affect the cash flow and liquidity of companies that invest internationally as well as the exchange rate risks that appear when the currencies have different values because of the differences in legal authorities in each country (dos Santos & et.al, 2021,2). The research also found that political risk varies at the company level and a large proportion of the variation in these risks has a role in the level of the company more than at the scoter's level or the economy as a whole. Political shocks seem to be an important source that affects the risks at the level of companies, and this pushes the companies to pay attention to their own attitude towards the political risks.

The impact of political risks is listed as follows:

1- Reduced productivity and distortion of resource allocation across companies in the same sector.
2- Wasted resources due to attempts by some companies to manage political risks at the level of different companies (Hassan&et.al, 2019, 33).

Most scholars believe that the concept of political risks includes several dimensions, including uncertainty towards government laws and policies, the extent of the government's ability to meet its external obligations, and the extent of its tendency to collect taxes from its citizens. The ICRG indicators can be used to evaluate such risks, as well as other measures such as political news and insurance premiums against the possibility of their realization, democratic weakness, for example, leads to the discouragement of investment and causes randomness in the imposition of laws, uncertainty in policies, stock price fluctuations and low investment and recruitment. Thus, changes in government policies affect stock prices, especially when the performance of the private sector is weak, as countries sometimes impose political decisions that affect exchange rates and are difficult to predict which affects market expectations, and therefore it can be said that political risks affect international stock prices and international exchange rates (DOS Santos & et.al, 2021, 2).

Therefore, the economic repercussions of political risks can be direct or indirect, total, or partial, the direct repercussions are those that have a direct and immediate effect on the profit of companies, while the indirect risk is the one that causes changes in administrative policies. Companies, for example, may respond to the risks of confiscation of funds through the participation and the formation of international coalitions to confront the practices and laws of confiscation, and if they succeed in that, they guarantee their profits and if they do not succeed, they undermine their profitability (Lawton & John, 2018،5)

Types and characteristics of political risks:

Multiple studies have employed financial liberalization, political institutions, banking laws, supervision of institutions, law, political institutions, corruption, exchange rate, and other macroeconomic factors in assessing political risks, but this research adopts a measure of political risk derived from ICRG,

which refer to a guide published by the Political Risk Services Group and provides a monthly indicator of political risks for 140 countries through which it shows the extent of political stability for each country, which is based on 12 dimensions covering political and social characteristics (Al-Shboul & et al, 2020 ,2-7)

1- Political risks are not an indicator of a political action only, but it also caused by the lack of political interference. Many concepts of political risks assume that such risks are activated by a political act, but some studies believe in the lack of intervention of the state, the government, or foreign companies as an indicator that might lead to such risks, as well as the unwillingness of governments to take an active position in their policies and this affects foreign direct investment and affects the overall performance, for an example, the government's reluctance to take action against the pollution of manufacturers from foreign companies may lead to the escalation of protests by activists and nationalist movements against these companies, which puts the activities of foreign manufacturers at risk, as well as the reluctance of companies to cooperate with governments in political matters may result in the adoption of policies and laws in the government that affect the performance of foreign direct investment (Lawton & John, 2018, 5).

2- There are other forms of such risks, which cause economic damage due to bilateral agreements signed by the host country with a third country that harm the company and lead to the company losing some of the advantages of its presence in the host country, or the cancellation of contracts and agreements concluded between foreign countries and companies or the non-fulfillment of them for no political reasons (Abu Safiya, 2004, 22-23).

3- Political actions or non-interference is not limited to governments and their interventions but includes other elements in the political environment: Other elements

can influence the political environment, including revolutionary groups, non-governmental markets, and individuals, therefore a wide range of political risks must be included in their analysis, such as expropriation of funds, corruption, non-compliance with contracts, discriminatory taxes, the extent to which profits can be transferred abroad, and currency controls, not only that, they are risks associated with government policies, as well as other risks. Including terrorism, violence, revolutions, civil wars, international conflict, economic embargoes, nationalization of factories, social instability, strikes, and demonstrations, which result from other elements in the political environment (Lawton & John, 2018, 5), or customs barriers and taxes that are practiced on the establishment and force it to pay additional amounts, and extend to include confiscation or nationalization and expropriation with or without compensation (Abu Safiya, 2004,22 -23).

4- May be regular or intermittent: It may be continuous or non-continuous, continuous is associated with political uncertainty and corruption, while intermittent or non-continuous is associated with terrorist attacks and violence and it affects the political environment but is difficult to anticipate and predict (Lawton& John 2018, 5).

5- It may generate positive and negative economic changes: It does not necessarily produce negative outputs, it may sometimes create political opportunities that may improve the performance of companies, in countries where corruption is rampant, for example, foreign companies may be put in a difficult position when they do not know how to deal with corrupt governments, but experienced companies can benefit from the policies of such countries.

6- It has total or partial effects on economic outputs: it is likely to include and affect all companies, but there are partial effects that may affect certain companies or certain industries or companies that adopt certain approaches towards making their brands, or carry brands associated with countries that have positions and initiatives towards terrorism and fighting it expose themselves to terrorist attacks (Lawton & John 2018,5) and political and diplomatic problems between the government of the host country and other governments that have an impact on the facility (Abu Safiya, 2004, 22).

7- Some indicators are not considered political risks such as economic risks which include inflation, exchange rate fluctuations, interest, and information risks such as cyber-attacks intellectual property, environmental risks, and natural disasters, but the boundaries between them and other risks may sometimes be a thin thread, as the failure of governments to pay their liabilities is not always the result of economic factors, but might be caused by political motives, and therefore when distinguishing these risks from other risks, the motive behind the acts must be taken into account and the non-interference in the political environment as well (Lawton & John, 2018, 5).

Description of the experimental model and methods of estimation

Based on literature reviews, and in the light of the theoretical frameworks and the experimental studies they contained, and to confirm the main research hypotheses and reach its basic objectives, to explore a quantitative model that estimates and analyzes the impact and direction of the relationship between political risk and the performance of the Iraq Stock Exchange, an autoregressive distributed lag (ARDL) was applied to data related to research variables and for a quarterly time series for the period (2009-2021), and a total number of (50) observations.

Model variables:

The research variables and their expected effects were classified according to Table (2) into:

Table (2) Research variables and expected effects

	depended variables	indicator	Code	
1	Market Cap	The total value of shares traded in the market	MV	
2	Trading volume	Number of Traded Shares * Average Prices of Traded Shares	TV	
	Independent variables	indicator	Code	Expected impact
1	Political stability and the absence of violence	Government stability and internal, external, and ethnic conflicts.	PV	-
2	Quality of bureaucracy	Investment Profile	RQ	+/-
3	Voting and accountability	Military Interference in Politics and Democratic Issues	VAIN	+/-
4	corruption	Corruption Indicators	CC	+

Source: Prepared by the researcher based on the theoretical framework and previous studies

Model Estimation Methodology

In order to obtain accurate and realistic results, that enable a sound and logical analysis of the impact of the political risk on the growth and the performance of the Iraq Stock Exchange, the research relied on: Autoregressive Distributed Lag Estimate (ARDL) which is developed by Pesaran et al. (2001) and considered as one of the most important models used in the co-integration and error correction methodology and used to test the existence of a long-term equilibrium relationship between the dependent and the independent variable, as it does not require that the time series be stationary at the same degree (rank), which makes it more flexible and convenient to use compared to other models that require the stability of all variables at the same degree. this methodology is used when all the variables studied are stable at level I (0), or stable when taking the first difference I (1), or a mixture of the two ranks, but the only condition for it is not to extrapolate the time series at the second difference (Pesaran, et. al, 2001, 313). To apply the joint integration test, using the (ARDL) methodology requires the following steps:

Step One: Testing the optimal deceleration duration for first-order differences of research variables in the unrestricted error correction model, applying the tests of Schuman and Hassan (2013), which includes the Akaike information criterion representing the best of the tests as it determines 20 lag periods

Step Two: Estimation of the Auto regression Model of Autoregressive Distributed Lag Estimate ARDL (Primary model) in the UECM Framework which takes the following formula:

$$\Delta \gamma t = \alpha_0 + \sum_{i=1}^{m} \beta i \Delta \gamma_{t-1} + \sum_{i=0}^{n} \vartheta_i \Delta \times_{t-1} + \Lambda_1 y_{t-1} + \Lambda_2 x_{t-1} + n_t$$

Whereas $\Lambda_1 \Lambda_2$: Long-term coefficients
$\vartheta \beta$: Short-term parameters
Δ : the initial differences of variables, keeping in mind that they do not need to equal the number of slowing periods of the variables
n: Random error limit, with arithmetic, mean equal to zero and with constant variance and free of sequential autocorrelation (Hassan, 2021, 22).

Step Three: Verify the existence of the long-term relationship between the variables using the Bounds Test, which is based on the F test (Wald test), to determine the existence of a hypothesis that indicates the absence of common integration between the variables studied versus its existence, to detect the

presence or absence of the equilibrium relationship between those variables in the long term, by comparing the value of F calculated with its two tabular values assuming that the lower limit: provides for the stability of all changes at the level, and the upper limit: provides for the stability of variables at their first difference, and the conclusion is made according to the following:

1. When the calculated F value > the upper limit of its tabular value, we reject the null hypothesis and accept the alternative hypothesis, which asserts the existence of co-integration between the changes.
2. When the calculated F value is < the minimum tabular value, the alternative hypothesis is rejected, and the null hypothesis which states that there is no cointegration between the variables is accepted.
3. If the calculated F value falls between the two limits of its tabular value (highest and lowest), this means a state of uncertainty in which it is not possible to detect the existence of a common integration between the variables or not (Batal and Matar 106, 2017).

Fourth Step: In the case of a long-term relationship between the variables, the long-term equation is estimated by the following formula:

$$\gamma t = \alpha_0 + \sum_{i=1}^{p} \vartheta_i \gamma_{t-i} + \sum_{i=0}^{q} \delta_i \times_{t-i} + \mathcal{E}_t$$

Whereas ϑ δ: Variable's coefficients

q, p: lag

$\mathcal{E}$: Random error limit

Fifth Step: Derive the Autoregressive Distributed Lag Estimate of short-term kinematics in building an ECM (Error Correction Model), which takes the following formula:

$$\Delta \gamma t = c + \sum_{i=1}^{p} \vartheta_i \Delta \gamma_{t-1} + \sum_{i=0}^{q} \delta_i \Delta \times_{t-i} + \biguplus ECT_{t-1} + v_t$$

Whereas EC_{t-1}: the limit of error correction

$\biguplus$: The error correction coefficient, which expresses the speed of adaptation by which the imbalance is adjusted in the short term towards equilibrium in the long term after the occurrence of any disturbance or imbalance as a result of an emergency, and it is required that $\biguplus$ is negative and significant value to accept the model's estimates in the short term (Hassan, 2021, 23).

Estimating the Models and the Discussion of Results

To estimate and analyze the nature, size, and direction of the impact that political risk can exert on the performance of the Iraq Stock Exchange for the period (2009-2021), and in order to prove or deny the research hypotheses, the models were estimated by adopting the estimation methodology that was presented previously, as follows:

Tests of Stationarity of a Time Series for research variables

To find out whether the series is stationary or not, the Phillips-Perron test (p.p.) has been selected as an alternative to the augmented Dickey-Fuller (ADF), Dickey-Fulle (DF), as it outperforms them based on the correctness of the autocorrelation of the residuals in the unit root test equation, differing from them by using non-parametric statistical methods of model variation, without the need to add limits for deceleration (Iraqi and Omari, 2019, 199).

The time series data of the research variables in their linear form listed in Figure (1) and the results of the test of (PP) Phellip-Perron (1988) to examine the stationary of the time series of the variables concerned and its results table (3) reflected the instability of all-time series of the research variables at the level, and

by re-testing by taking the first difference for them it became stable according to the significance of the results of the calculated values of (pp), where the probability values (Prob.) did not exceed the 0.05 barrier.
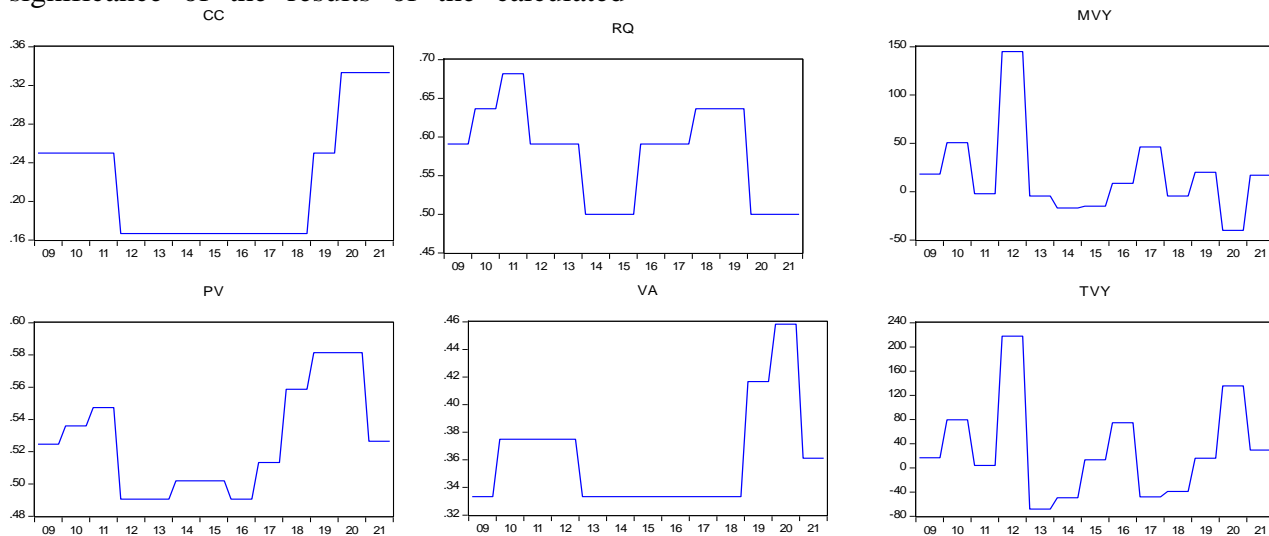

Figure (1) Time series data graphs for research variables

Table (3) Phillips-Perron test results for the dormancy test of research data

Variables	Level Trend and Intercept	First Difference Trend and Intercept
MV	-3.341693	-6.855667
(Prob.)	(0.0711)	(0.0000)
PV	-1.779651	-6.855873
(Prob.)	(0.7000)	(0.0000)
TV	-3.139520	-6.856173
(Prob.)	(0.1084)	(0.0000)
RQ	-2.132497	-6.921148
(Prob.)	(0.5158)	(0.0000)
VA	-2.157851	-6.877150
(Prob.)	(0.5021)	(0.0000)
CC	-0.932185	-7.447918
(Prob.)	(0.9441)	(0.0000)

- **The numbers in parentheses represent p-values levels at 5% or less for the PP test.**
- **The table is prepared by the researcher based on the results of the program (E views 10)**

Based on the table above, and since the stability of the time series of the variables studied does not exceed the barrier of the second difference and remains within the first difference, so it meets the conditions of the joint integration test using the methodology of (ARDL).

C. Estimation of models and analysis of results
1. Estimating the market value model and discussing its results

Using the Akaike information criterion being one of the remarkable tests, as it determines 20 lag periods for the ARDL model, to determine the number of lags and choose the optimal duration to detect the relationship between the independent variables (**PV CC RQ VA)** and the expressed dependent variable (MV) after excluding the non-significant variables from the model, As shown in Figure 2, the results of which confirm that a 4-year time lag was adopted (t- 4).
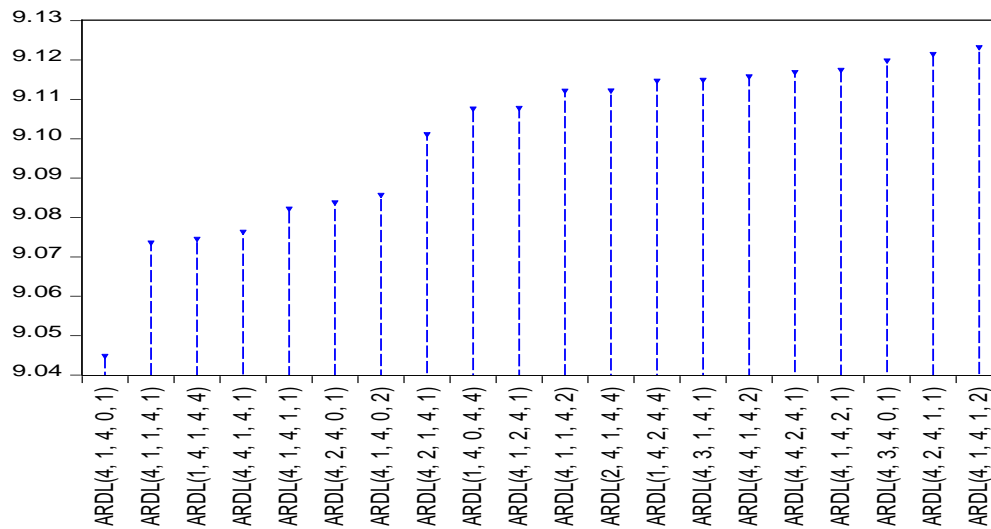
Figure (2) AIC Test of the Number of Time lag Periods

Based on the results of the tests of the slowing intervals which show that the ARDL model was built on the basis of a time lag between (4 and 1), and what this reflects in determining the duration of the time lag with (1) for the dependent variable and (1401) for the independent variables, the prototype was estimated and the results of which are included in Table (4).

Table (4) Results of the initial ARDL Prototype

Dependent Variable: MV
Method: ARD
Sample (adjusted): 2009Q1 2020Q4
Included observations: 48 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (4 lags, automatic): PV CC RQ VA
Fixed regressors:
Number of models evaluated: 2500
Selected Model: ARDL (4, 1, 4, 0, 1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MV (-1)	0.492782	0.130596	3.773335	0.0006
MV (-2)	5.76E-14	0.125610	4.58E-13	1.0000
MV (-3)	-3.87E-14	0.125610	-3.08E-13	1.0000
MV (-4)	-0.270066	0.103383	-2.612279	0.0134
PV	-962.0159	317.0094	-3.034661	0.0047
PV (-1)	847.2615	321.1448	2.638254	0.0126
CC	-825.9734	204.1956	-4.045010	0.0003
CC (-1)	332.5133	237.1047	1.402390	0.1701
CC (-2)	2.29E-10	213.3816	1.07E-12	1.0000
CC (-3)	-1.55E-10	213.3816	-7.24E-13	1.0000
CC (-4)	430.5686	198.0925	2.173573	0.0370
RQ	166.2678	71.63088	2.321176	0.0266
VA	828.4598	185.1122	4.475446	0.0001

R-squared	0.873580	Mean dependent var	17.03514
Adjusted R-squared	0.819947	S.D. dependent var	46.31888
S.E. of regression	19.65434	Akaike info criterion	9.044780
F-statistic	16.28814	Schwarz criterion	9.629530
Prob(F-statistic)	0.000000	Hannan-Quinn criter.	9.265758

● **Table prepared by the researcher based on the results of the (E views 10) program**

The statistical data in Table (4) on the results of the preliminary estimation of the (ARDL) model of the relationship between (**PV CC RQ VA**) and (MV) indicate the significance and quality of the estimated model, as it reached **a** value of ($0.873580 = R^2$), which indicates a high explanatory value of the model, and the F-statistic value of (16.28814) reflected **Table (5) Bound Test for Joint Integration**.

the significance of the model as a whole, as the value of Prob. F-statistic) fell below 0.05, which requires moving to the next step of verifying the existence of the equilibrium relationship in the long term between the variables of the research according to the ARDL model and based on the bound test

ARDL Bounds Test
Sample (adjusted): 2010Q1 2021Q4
Included observations: 48 after adjustments
Null Hypothesis: No levels relationship

F-statistic	5.952716	Critical Value Bounds		
			I0 Bound	I1 Bound
K	4	10%	2.2	3.09
		5%	2.56	3.49
		2.5%	2.88	3.87
		1%	3.29	4.37

● **The table is prepared by the researcher based on the results of the (E views 10) program**

Table (5) presents the results of the bound test for the co-integration between the model variables, which confirmed the existence of the relationship of co-integration between (**PV CC RQ VA**) and the market value (MV) at a significant level of 0.05, as the calculated F value exceeded the upper critical limits at this significant level, which reflects the acceptance of the alternative hypothesis, and we reject null hypothesis, and therefore there is a co-

integration relationship between the research variables, which indicates the existence of a long-term equilibrium relationship between the model variables and market value (MV), which According with the economic theory.
Based on the results of the boundary test of the existence of the co-integration relationship between the model variables, the short-term and long-term coefficients were estimated, the results are presented in Table (6) and (7).

Table (6) Short-term Estimators and Error Correction

ARDL Error Correction Regression
Dependent Variable: D(MV)
Selected Model: ARDL (4, 1, 4, 0, 1)
Case 2: Restricted Constant and No Trend
Sample: 2009Q1 2021Q4

Included observations: 48				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
D (MV (-1))	0.270066	0.092867	2.908093	0.0065
D (MV (-2))	0.270066	0.092867	2.908093	0.0065
D (MV (-3))	0.270066	0.092867	2.908093	0.0065
D(PV)	-962.0159	248.2013	-3.875950	0.0005
D(CC)	-825.9734	152.5150	-5.415686	0.0000
D (CC (-1))	-430.5686	155.8140	-2.763351	0.0093
D (CC (-2))	-430.5686	155.8140	-2.763351	0.0093
D (CC (-3))	-430.5686	155.8140	-2.763351	0.0093
D(VA)	828.4598	157.4409	5.262037	0.0000
CointEq (-1) *	-0.777285	0.121203	-6.413100	0.0000

- **The table was prepared by the researcher based on the results of the (E views 10) program**

Table (7) Long-term Estimates

ARDL Long Run Form Dependent Variable: D(MV) Selected Model: ARDL (4, 1, 4, 0, 1) Case 2: Restricted Constant and No Trend Sample: 2009Q1 2020Q4 Included observations: 48				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
PV	-147.6350	269.5835	-0.547641	0.5876
CC	-80.91183	103.9089	-0.778681	0.4417
RQ	213.9085	77.78604	2.749960	0.0096
VA	444.3913	200.7447	2.213714	0.0339
C	-168.9737	101.4378	-1.665787	0.1052
EC = MV - (-147.6350*PV - 80.9118*CC + 213.9085*RQ + 444.3913*VA-168.9737)				

The table prepared by the researcher based on the results of the (E views 10) program

In order to detect the structural dormancy of the parameters of the population and the estimated model in the duration of the study, the CUSUM CUSUMSQ test whose results are listed in Figure (3) were adopted, which indicates that the estimated coefficients of the model are structurally stable throughout the duration of the study, which supports and proves the existence of structural stability between the research variables as well as the consistency of the model, which is confirmed by the occurrence of the graph of the CUSUM and CUSUMSQ tests falling within critical limits and at the level of 5%, which mean that the long-term estimators of the model are stable and consistent with short-term parameters, making them suitable for analysis
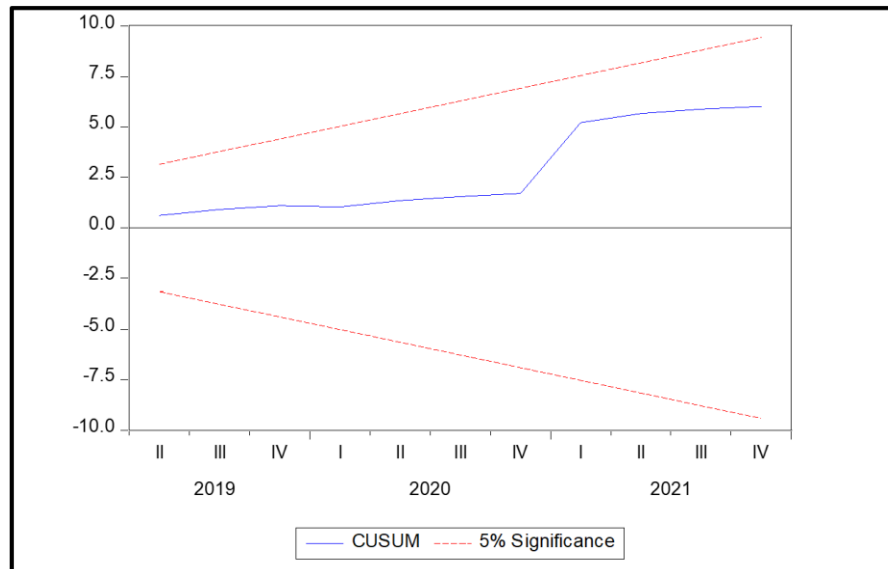
Figure 3 Test the stability of the structural model
● **Figure prepared by the researcher based on the results of the (E views 10) program**

The previous results showed the following:

● According to the long-term estimation results given in Table (6), the variables (RQ) and (VA) have succeeded in proving their significant and positive effect on MV, which indicates that the increase of RQ and VA raises MV levels by a factor of (213.9085) (444.3913), respectively, which is in accordance with the theoretical frameworks and empirical studies that framed these relationships.

● The PVs, CCs, variables have failed to prove their long-term impact on the MV, failing to pass the significance test and falling below the barrier of 0.05 and which recorded an amount of (0.5876) & (0.4417) respectively, and this may be due to the effectiveness of the government in reaching some financial and economic goals such as the stability of exchange rates and reducing the level of the deficit in the public budget, as well as the low levels of internal and external conflicts, except for the period from 2014-2017 when ISIS terrorism groups occupied some cities, which constituted less than 30% of the research period.

● The short-term estimation results in Table (5) confirmed the effect of the illustrative variables (PV), (CC), and (VA) on the market value index (MV) in the short term.

● The error correction limit (CET_{t-1}) was (-0.777285), which fulfilled the necessary and sufficient condition (negative and moral), which indicates that the process of adjusting the short-term imbalances and returning to the state of equilibrium requires a period of time (0.7 of the year).

1- Estimate the trading volume model and discuss its results

Using the Akaike information criterion, to determine the number of lags and choose the optimal duration to detect the relationship between the independent variables (CC PV RQ VA) and the expressed dependent variable (TV) after excluding the non-significant variables from the model, as proven in Figure (4), whose results are confirmed the adoption of a 4-year time default. (4-t)
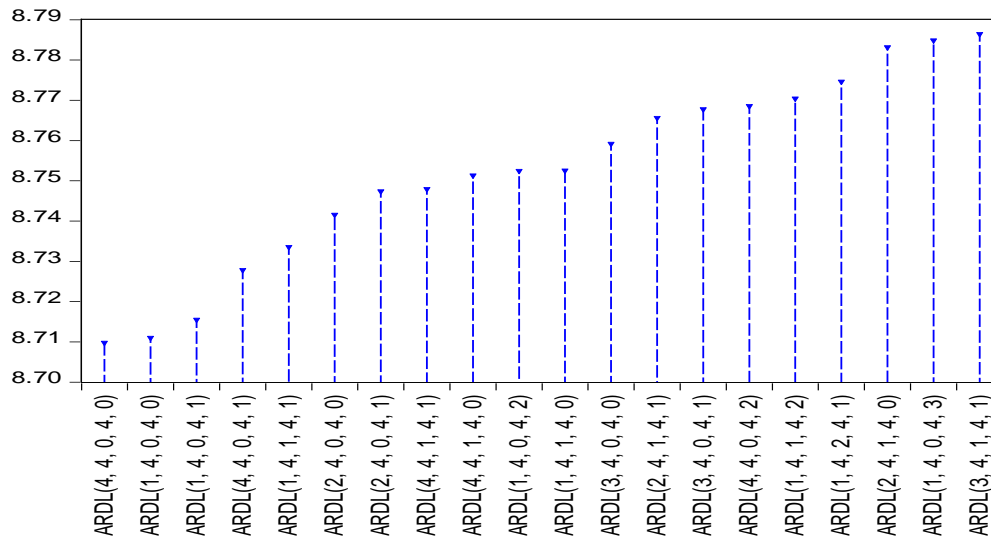
Akaike Information Criteria (top 20 models)

Figure (4) Testing the number of time deceleration periods according to the (AIC) standard
  ● **Figure prepared by the researcher based on the results of the (E views 10) program**

Based on the results of the lagging intervals tests, the ARDL model was built on the basis of a time lag between (4 and 4), and this reflects in determining the duration of the time lag with (4) for the dependent variable and (4, 0, 4, 0) for the independent variables, the prototype was estimated, the results of which are included in Table (8).

Table (8) ARDL Prototype Estimation Results

Dependent Variable: TV
Method: ARDL
Sample (adjusted): 2009Q1 2020Q4
Included observations: 48 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (4 lags, automatic): CC PV RQ VA
Fixed regressors: C
Number of models evaluated: 2500
Selected Model: ARDL (4, 4, 0, 4, 0))

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TV (-1)	0.050310	0.056251	0.894384	0.3780
TV (-2)	-2.11E-16	0.056972	-3.70E-15	1.0000
TV (-3)	6.50E-14	0.056972	1.14E-12	1.0000
TV (-4)	-0.104774	0.060937	-1.719380	0.0955
CC	-2698.187	280.6301	-9.614745	0.0000
CC (-1)	14.04630	163.0677	0.086138	0.9319
CC (-2)	1.97E-10	163.0872	1.21E-12	1.0000
CC (-3)	3.52E-11	163.0872	2.16E-13	1.0000
CC (-4)	2031.220	188.7412	10.76193	0.0000
PV	-264.4448	249.8210	-1.058537	0.2980
RQ	111.8571	92.09260	1.214616	0.2337

RQ (-1)	33.61654	111.7186	0.300904	0.7655
RQ (-2)	-2.92E-11	111.8816	-2.61E-13	1.0000
RQ (-3)	3.86E-10	111.8816	3.45E-12	1.0000
RQ (-4)	-1048.506	123.7727	-8.471218	0.0000
VA	4211.065	258.3604	16.29918	0.0000
C	-673.2661	98.33633	-6.846565	0.0000
R-squared	0.973395	**Mean dependent var**		30.39380
Adjusted R-squared	0.959664	**S.D. dependent var**		81.90784
S.E. of regression	16.45022	**Akaike info criterion**		8.709674
F-statistic	70.88837	**Schwarz criterion**		9.372391
Prob(F-statistic)	0.000000	**Hannan-Quinn criter.**		8.960115

- The table is prepared by the researcher based on the results of the (E views 10) program

The statistical data contained in Table (8) on the results of the preliminary estimation of the (ARDL) model of the relationship between (CC PV RQ VA) and (TV) indicate the significance and quality of the estimated model, as the value of (R^2=0.973395) which indicates a high explanatory ability of the model, and the F-statistic value of 0.000000 reflected the significance of the model as a whole, as the value of Prob.(F-statistic) is below 0.05, which requires moving on to the next step of verifying the existence of a long-term equilibrium relationship between the research variables according to the ARDL model and based on the Bound Test.

Table (9) Bound Test for Co-integration

ARDL Bounds Test				
Sample: 2009Q1 2021Q4				
Included observations: 48				
Null Hypothesis: No levels relationship				
F-statistic	97.53052	**Critical Value Bounds**		
		Sign.	**I0 Bound**	**I1 Bound**
K	4	10%	2.2	3.09
		5%	2.56	3.49
		2.5%	2.88	3.87
		1%	3.29	4.37

- The table prepared by the researcher based on the results of the (E views 10) program

Table (9) presents the results of the bound test for the co-integration between the model variables, which confirmed the existence of the relationship of co-integration between (CC PV RQ VA) and the trading volume (TV) at a significant level of 0.05, as the calculated F value exceeded the upper critical limits at this level of morality, which reflects the acceptance of the alternative hypothesis, and we reject the null hypothesis, and therefore there is a relationship of co-integration between the variables of the study, which indicates the

existence of a long-term equilibrium relationship between the variables of the model. Based on the results of the bound test of the existence of a co-integration relationship between the model variables, the short-term and long-term coefficients were estimated, the results of which are included in Table (10) and (11).

Table (10) Short-term Estimators and Error Correction

ARDL Error Correction Regression				
Dependent Variable: D(TV)				
Selected Model: ARDL (4, 4, 0, 4, 0)				
Case 2: Restricted Constant and No Trend				
Sample: 2009Q1 2020Q4				
Included observations: 48				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
D (TV (-1))	0.104774	0.037598	2.786652	0.0090
D (TV (-2))	0.104774	0.037598	2.786652	0.0090
D (TV (-3))	0.104774	0.037598	2.786652	0.0090
D(CC)	-2698.187	141.2564	-19.10134	0.0000
D (CC (-1))	-2031.220	132.3743	-15.34451	0.0000
D (CC (-2))	-2031.220	132.3743	-15.34451	0.0000
D (CC (-3))	-2031.220	132.3743	-15.34451	0.0000
D(RQ)	111.8571	75.23903	1.486690	0.1472
D (RQ (-1))	1048.506	83.70913	12.52558	0.0000
D (RQ (-2))	1048.506	83.70913	12.52558	0.0000
D (RQ (-3))	1048.506	83.70913	12.52558	0.0000
CointEq (-1) *	-1.054464	0.040450	-26.06851	0.0000

- **The table is prepared by the researcher based on the results of the (E views 10) program**

Table (11): Long-term Estimators

ARDL Long Run Form				
Dependent Variable: D(TV)				
Selected Model: ARDL (4, 4, 0, 4, 0)				
Case 2: Restricted Constant and No Trend				
Sample: 2009Q1 2020Q4				
Included observations: 48				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
CC	-619.1967	148.1802	-4.178674	0.0002
PV	-250.7860	228.1428	-1.099250	0.2801
RQ	-856.3895	144.8938	-5.910464	0.0000
VA	3993.559	344.6046	11.58881	0.0000
C	-638.4912	114.3412	-5.584088	0.0000
EC = TV - (-619.1967*CC -250.7860*PV -856.3895*RQ + 3993.5586*VA- 638.4912)				

- **The table is prepared by the researcher based on the results of the program (E views 10)**

In order to detect the structural dormancy of the parameters of the estimated model in the duration of the study, the CUSUM CUSUMSQ test was adopted, the results of which are listed in Figure (5), which indicate that the estimated coefficients of the model are structurally stable throughout the duration of the study, which supports and proves the existence of the structural stability between the research periods, as well as the harmony of the model, which is confirmed by the occurrence of the CSUM CUSUMSQ test within the critical limits and at 5%, demonstrating that the long-term capabilities of the model are stable and consistent with short-term parameters, making them suitable for analysis.
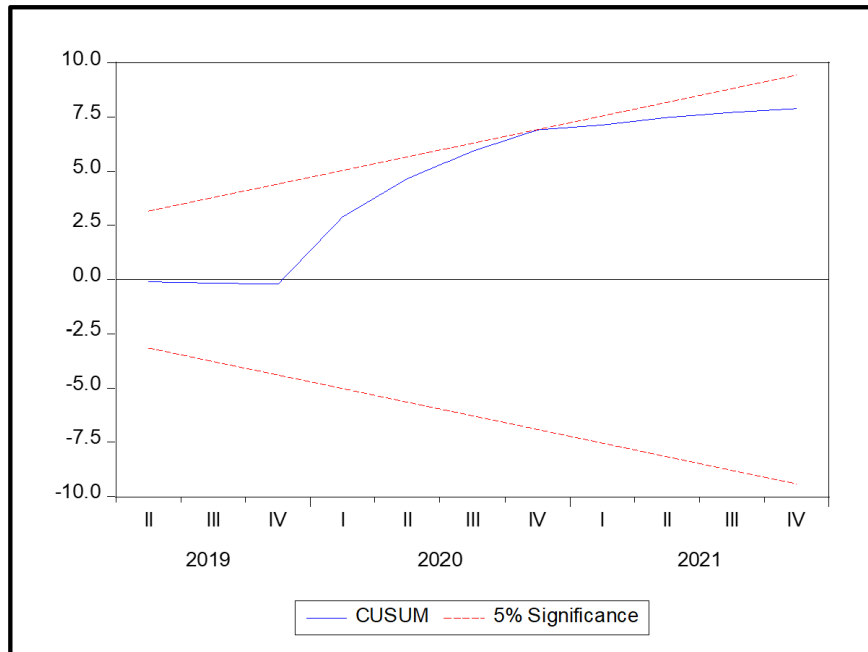

Figure 5: Structural Model Stability Test
● **Figure prepared by the researcher based on the results of the (E views 10) program**

The previous results illustrated the following:

● According to the results of the long-term estimate listed in Table (11), the variable (VA) has succeeded in proving its significant and positive impact on the volume of trading **(TV),** which indicates that its increase raises the trading volume by a factor of (3993.559), which came in accordance with the theoretical frameworks and experimental studies that framed these relationships.

● The negative impact of the variable (CC) on the volume of trading (TV) was contrary to the norms of the economy, which indicates that increasing the financial environment enjoys high levels of corruption which works to raise the volume of trading (**TV**) by a factor of (-619.1967), perhaps due to the market's adaptation to these levels and rates during the research period.

● The results of the short-term estimate given in Table (10) confirmed the effect of (CC) on the trading volume (**TV**) in the short term, with the exception of the variable (RQ) which failed to exceed the significance of the effect as the value of the Prob. (0.1472) **was reached**.

● The error correction limit (CET t-1) reached a value of (-1.0544 64), which met the necessary and sufficient condition (negative and significant), which mean that the process of adjusting the short-term imbalances and returning to equilibrium needs a period of time (1 year).

Conclusions:

The research concluded the following points:

1. Political stability and the absence of violence had little impact on all models.
2. Despite differences in the significant positive and negative correlation levels and the impact of voting and accountability variables, such as military intervention in politics, accountability, and democracy, it was one of the most influential variables that explained the impact among the two models.
3. Roughly speaking the two models all had the same influence on corruption supervision and bureaucratic quality According to the estimators.
4. The return of the models to stability does not imply that the short or long-term models are final, as they had the character of a temporary impact during the research period, in the sense that other variables of political risks are expected to give a different result due to the overlap of these indicators with the financial and political environments.

Recommendations

Based on the conclusions reached, it is possible to propose some recommendations, the most important of which are:

1. The necessity for follow-up with official and semi-official bulletins and reports on indicators of national risk in general and political risk in particular, as well as the relative or weighted weight of such risks and the degree to which market performance indicators are sensitive to them.
2. Although some results showed that some of the interpreted variables, such as political stability and the absence of violence, had no significant impact, this does not mean that such variables do not have an expected effect in different time periods or in samples from other countries and financial markets.
3. It is critical to do future studies on various types of risk while making political risk a controllable variable for the models, in practice with the rest of the financial system components.

Data Availability:

The data used to support the results of this study has been included in the article

Conflict of Interest:

The authors declare that they have no conflicts of interest

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