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ASSESSING THE IMPACT OF THE FLOATING EXCHANGE RATE REGIME: DYNAMICS BETWEEN EXCHANGE RATES AND STOCK PRICES IN THE EGYPTIAN MARKET

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Abstract
The study aims to measure the effect of liberalizing the exchange rate and the transition from the fixed exchange rate to the flexible exchange rate on both the exchange rate stock prices and to measure the correlation between both the exchange rate and stock prices on the Egyptian stock, exchange before and after Floating of the exchange rate during the period 2019 and 2023, the variable under the study represent the exchange rate of the Egyptian pound against the us dollar and the EGX30 before and after the Floating of the exchange rate , 2 independent sample both the Mann Whitney test and the spearman's correlation coefficient were used before and the after Floating of the exchange rate. The analysis revealed a significant impact on both the exchange rate and stock prices subsequent to the floatation of the exchange rate. Additionally, noteworthy significant correlations were observed between the exchange rate and stock prices, both pre and post the exchange rate floatation. These findings emphasize the influential relationship between the exchange rate and stock prices, indicating a notable effect of the exchange rate changes on the stock market dynamics both before and after the exchange rate was floated.

Keywords: Exchange Rate Floating, Stock Market Index, Liberalization, Exchange Rate Dynamics, Market Volatility

1. Introduction

The liberalization of exchange rates and the transition from fixed to flexible exchange rate regimes have been pivotal events in the economic policies of many countries worldwide. These shifts often carry significant implications for various aspects of the economy, including exchange rates and stock market performance. Understanding the effects of such transitions is crucial for policymakers, investors, and researchers alike, particularly in emerging markets like Egypt.

In recent years, Egypt has undergone significant economic reforms, with one notable policy change being the floatation of its exchange rate. The decision to move away from a fixed exchange rate system towards a more flexible one has sparked considerable interest in understanding its impact on the Egyptian financial market, specifically on exchange rates and stock prices.

The aim of this study is to empirically measure the effect of liberalizing the exchange rate and transitioning from a fixed to a flexible exchange rate regime on both the exchange rate and stock prices in Egypt. This investigation focuses on the period between 2019 and 2023, encompassing the years immediately before and after the floatation of the exchange rate.

The primary variables under scrutiny are the exchange rate of the Egyptian pound against the US dollar and the performance of the EGX30 stock index, representing the Egyptian stock market. By analyzing these variables before and after the exchange rate floatation, the study aims to shed light on the relationship between exchange rate policy changes and financial market dynamics in Egypt.

To achieve its objectives, the study employs two independent samples: one before and one after the floatation of the exchange rate. Statistical methods including the Mann-Whitney test and Spearman's correlation coefficient are utilized to rigorously assess the significance of observed changes and correlations in exchange rates and stock prices.

The analysis reveals significant impacts on both the exchange rate and stock prices subsequent to the floatation of the exchange rate. Moreover, noteworthy correlations are observed between the exchange rate and stock prices, both pre and post the exchange rate floatation. These findings underscore the influential relationship between exchange rate changes and stock market dynamics, highlighting the importance of understanding the effects of exchange rate policy shifts on the broader economy.

Overall, this study contributes to the growing body of research on exchange rate liberalization and its implications for financial markets, providing valuable insights for policymakers, investors, and researchers navigating the complexities of economic reform in emerging markets like Egypt.

The primary objective is to assess and analyze the key implications of a floating exchange rate regime on exchange rate and stock price, study seeks to provide insights into how changes in exchange rates affect Egyptian stock market.

The purpose of this study is to investigate the impact of liberalizing the exchange rate and transitioning from a fixed exchange rate regime to a flexible one on both the exchange rate and stock prices in the Egyptian financial market. Specifically, the study aims to analyze the correlation between the exchange rate and stock prices before and after the floatation of the exchange rate during the period from 2019 to 2023. By examining these dynamics, the research seeks to provide insights into the effects of exchange rate policy changes on the financial market, particularly in the context of Egypt's economic environment.

The following chart shows the development of the exchange rate of the Egyptian pound against stock price (EGX30):

Figure 1: EGX30

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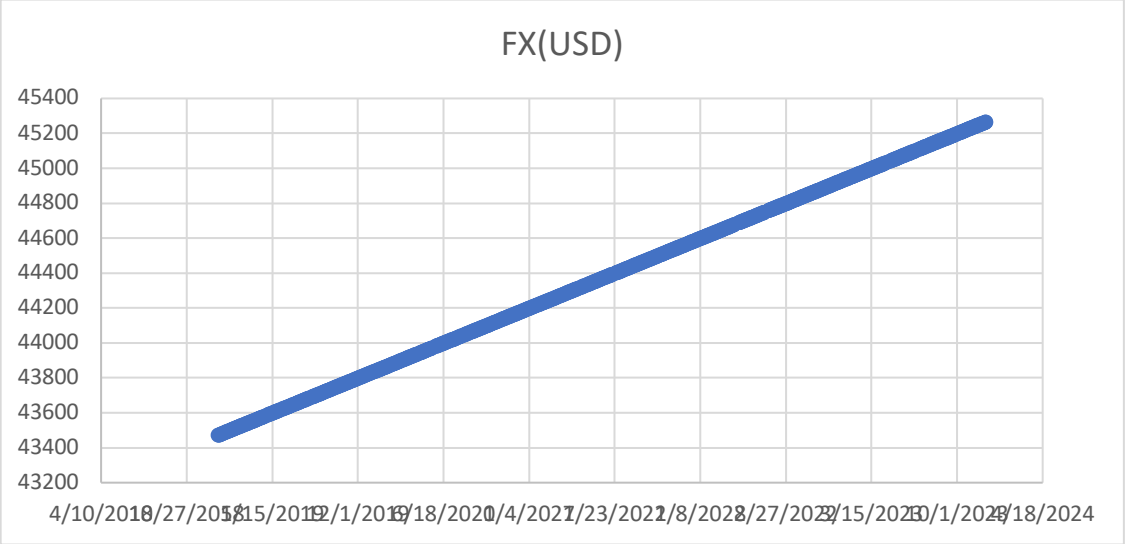

Figure 2: FX(USD)

The phenomenon of floating exchange rates and its correlation with the simultaneous rise in both the exchange rate and the stock market index, such as the EGX30 in Egypt, presents a compelling area of study, particularly in light of recent decisions to liberalize exchange rates. As evidenced by empirical data and observed trends, there exists a notable pattern wherein fluctuations in the exchange rate, specifically the appreciation of the dollar against the local currency, coincide with increases in the EGX30 index.

This scenario prompts an investigation into the intricate relationship between floating exchange rates and stock market performance, seeking to uncover the underlying mechanisms and implications of such dynamics. Key questions arise regarding the causal links between these variables, potential economic drivers behind their movements, and the broader implications for financial markets and the economy as a whole.

Therefore, the nature of this research problem involves delving into the following aspects:

a) Causality and Correlation: Examining whether changes in the exchange rate directly influence movements in the stock market index or if other factors contribute to this apparent correlation. Establishing causality is crucial in understanding the dynamics between these variables.
b) Market Dynamics and Investor Behavior: Investigating how investors respond to fluctuations in exchange rates and how such responses translate into stock market activity. Understanding investor behavior in response to currency movements can shed light on the observed patterns.
c) Economic Implications: Assessing the broader economic implications of the relationship between floating exchange rates and stock market performance. This includes analyzing potential effects on trade competitiveness, foreign investment inflows, and overall market stability.
d) Policy Relevance: Considering the implications of findings for policymakers, especially in the context of recent decisions to liberalize exchange rates. Understanding how policy changes affect the relationship between exchange rates and stock prices is essential for formulating effective economic policies.

In the modern world the globalization has created numerous global links throughout the world resulted in a marked growth in interactions among international financial markets (Karunanayake, Valadkhani & O'Brien, 2009). As a result of this heavy interlinks among global financial markets economies are highly vulnerable for the changes occurred in the international financial markets (Subair, 2009). Therefore, it has become very much critical to investigate this financial market inter links. Furthermore, a boost in an economic growth can be expected through a well-functioning financial system where the stock market plays a vital role in achieving such economic growth (Muktadir-Al-Mukit, 2012). However, the empirical evidence on the influence of exchange rate volatility on the volatility of stock returns is inconsistent (Mishra, 2004; Solnik, 1987).

2. Theoretical Background

2.1 Random Walk Theory

This theory shows the market prices of stocks evolve and how new information about stock prices are distributed over a period of time. The stock price is randomly changed and has no connections to the previous price at a given time. This theory explains that if the stock prices are in a random pattern, the market can be considered efficient as all knowledge available are discounted. This theory has been extensively accepted and verified in capital markets all over the world. Different researches have disproved this hypothesis of patterns in stock prices others have supported the theory (Malkiel, 2003).

2.1.1 Exchange Rates and Their Fluctuations

Exchange rates play a pivotal role in global economics, influencing international trade, financial markets, and a nation's economic stability. An exchange rate signifies the value of one currency in terms of another, shaping the cost of imports and exports, foreign investment, and overall economic performance. These rates are subject to constant change due to various factors, including market demand, geopolitical events, government policies, and macroeconomic indicators. The fluctuations in exchange rates can have profound effects on businesses, investors, and governments worldwide. For businesses engaged in international trade, currency movements directly impact the cost of goods and services, affecting profit margins and competitiveness in foreign markets. Investors closely monitor exchange rate fluctuations as they significantly influence the value of international investments, impacting returns and portfolio diversification. National economies also experience the consequences of exchange rate fluctuations. A weaker domestic currency can boost export competitiveness but may lead to higher import costs, affecting inflation rates. Conversely, a stronger currency may lower inflation but hinder export competitiveness.

Understanding the reasons behind exchange rate fluctuations and their implications is crucial for policymakers, businesses, investors, and economists. This knowledge helps in crafting effective strategies to manage risks, enhance competitiveness, and ensure economic stability in an increasingly interconnected global marketplace there are also some theories about the effect of exchange rate on the prices of goods; The Purchasing Power Parity (PPP) theorem explains the relationship between relative prices of goods and exchange rates. The PPP theorem propounds that under a floating exchange regime, a relative change in purchasing power parity for any pair of currency calculated as a price ratio of traded goods would tend to be approximated by a change in the equilibrium rate of exchange between these two currencies (Shapiro and Rutenberg, 1976).

The interest rate parity condition was developed by Keynes (1923), as what is called interest rate parity nowadays, to link the exchange rate, interest rate and inflation. The theory also has two forms: covered interest rate parity (CIRP) and uncovered interest rate parity (UCIRP). CIRP describes the relationship of the spot market and forward market exchange rates with interest rates on bonds in two economies.

2.1.2 Fixed and Floating Exchange Rate Regime

Fixed exchange rate policies entail a system where a country's currency value is fixed against another major currency or a basket of currencies. Central bank intervention and pegged currency values backed by reserves, such as gold, ensure stability in valuations. Mechanisms like currency boards or direct intervention maintain these fixed rates. Advantages of fixed rates include reduced currency volatility, encouraging international trade, and fostering price stability for long-term business planning. However, drawbacks involve limited flexibility to respond to economic shocks and vulnerability to speculative attacks. Historical instances like the Gold Standard (19th-early 20th century) and the Bretton Woods System (1944-1971), where currencies were pegged, illustrate the practice of fixed exchange rates.

On the other hand, floating exchange rate policies allow currency values to fluctuate based on market forces. Characteristics include market-driven rate determination without direct government intervention. Market sentiment, interest rate differentials, and other factors influence floating rates. The advantages of floating rates include the flexibility to adapt to economic shocks and reduced susceptibility to speculative attacks. Nonetheless, challenges arise from higher volatility impacting international trade and the potential for currency crises during market uncertainty. Post-Bretton Woods (since 1971) and the European Exchange Rate Mechanism (ERM) are historical examples showcasing the transition to floating exchange rates.

For companies with foreign operations, managing foreign exchange risks varies. Under fixed regimes, there's reduced short-term volatility but potential for abrupt adjustments, while floating regimes require continuous monitoring and dynamic risk management. Financial reporting also differs: fixed regimes offer stability for consistent reporting, whereas floating regimes may impact reported revenues and expenses due to fluctuations. Hedging strategies tend to focus on long-term contracts under fixed regimes and dynamic hedging to manage ongoing volatility under floating regimes.

2.1.3 Stock Price

During the 2007 financial crisis around the world, the stock market of different countries suffered severe step backs in the prices of the shares. According a study by Rudd [1], the world total stock market lost almost US$32 trillion in value. Investment by many investors around the world has focused on the fluctuating price of the shares which yielded much profit to their investment before the financial collapse in 2007 This invariably indicates that the stock prices are affected by demand and supply forces. In the stock market, there are no guaranteed systems to determine the stock prices.

2.2 Previous studies

According to Sodestine (1998), the exchange rate signifies the value of one currency relative to another or the quantity of foreign currency that can be obtained with a single unit of domestic currency. In essence, the exchange rate often represents the expense of acquiring one unit of foreign currency using the domestic currency (Rogoff, 1999).

Paul Sarmas' (2005) research explored the interconnection between the stock markets of Hong Kong, Singapore, and the United States amid the East Asian financial crisis of 1997-1998. The study delved into how Hong Kong's fixed exchange rate system and Singapore's floating exchange rate system impacted their respective stock markets. The findings indicated that while the exchange rate didn't significantly influence the correlation between the US and Asian stock markets, post-crisis connections strengthened between the US market and both Hong Kong's and Singapore's markets. Moreover, the study highlighted a more robust relationship between the US market and Hong Kong, which operates under a fixed exchange rate system, compared to the link between the US market and Singapore, which operates under a floating exchange rate system.

The general agreement among researchers, as seen in Shapiro (1975), Hodder (1982), Levi (1994), and Marston (2001), highlights the significance of exchange rate fluctuations as a major factor contributing to macroeconomic uncertainty. This viewpoint emphasizes that these fluctuations significantly impact the worth of companies, regardless of whether they operate domestically or internationally. Following the end of the Bretton Woods fixed exchange rate system in 1971, fluctuations in exchange rates have emerged as a prominent concern for investors, analysts, managers, and shareholders. The transition to a floating rates system meant that currency values were determined by the market's interplay of supply and demand dynamics.

In general, several theories support the idea of a connection between a firm's value and movements in exchange rates. Economic theories propose that alterations in exchange rates can directly impact stock prices for multinational firms, exporters, importers, and companies relying on imported inputs. Indirectly, these fluctuations can affect other businesses as well. Exchange rate movements influence the prices of imported goods and the expenses related to imported inputs, thereby indirectly impacting companies competing with such firms (Grambovas and McLeay, 2006). However, more recent studies (Jongen et al., 2006; Gao, 2000; Bartov et al., 1996; Bodnar & Gentry, 1993) align with financial theory, indicating that exchange rate movements significantly influence firm value through their effects on sales and the values of net assets.

There's a study focused on the impact of exchange rate fluctuations on exports and global trade. Their goal is to comprehend how changes in exchange rates influence the export decisions and behaviors of individual companies. Numerous significant studies, including Fitzgerald and Haller (2010), Berman et al. (2009), Greenaway et al. (2007), Campa (2004), Bernard and Jensen (2004a, b), Bugamelli and Infante (2003), and Forbes (2002), have delved into this area, providing valuable insights into how firms react to shifts in exchange rates and how these reactions might impact their export activities.

Numerous researchers explore the influence of foreign exchange rate fluctuations on economic facets, particularly the impact on the balance of payments. Imbalances in the balance of payments can pose significant challenges, particularly in emerging economies (Destaings et al., 2013). Moreover, fluctuations in the foreign exchange rate can trigger various effects on economic aspects like inflation, interest rates, unemployment, and the monetary supply (Ahmad et al., 2014; Kruskovic and Maricic, 2015; Seraj and Coskuner, 2021). In the realm of literature focusing on the exchange rate's effects on the stock market, a substantial body of studies exists. These studies highlight critical factors, including macroeconomic variables, corporate actions, and risk assessment, all instrumental in predicting stock market returns (Khan, 2019; Khatri et al., 2017).

Numerous studies have examined the correlation between the dollar's exchange rate and fluctuations in stock price indices. Within these studies, two prevalent models—the

flow-oriented exchange rate model and the oriented exchange rate model—have been utilized to illustrate the relationship between exchange rates and stock indices (Bagh et al., 2017; Mitra, 2017; Sarrafi & Mehregan, 2018). The stock market reflects a country's economy, and its significance has surged in recent decades, creating a research gap regarding the intertwining growth of the economy and the stock market. Researchers have noted that macroeconomic factors, including interest rates, consumer price indices, inflation levels, along with stock indexes and exchange rates, form the basis for evaluation (Hai & Thuy, 2018; Huang, An, Gao, Wen, & Hao, 2017).

A previous study emphasizes how exchange rate regimes affect how exposed firms are to foreign exchange fluctuations. Specifically, it reveals that firms operating under fixed exchange rate systems tend to have higher exposure, underlining the significance of the regulatory environment in influencing how susceptible firms are to currency movements. Moreover, the findings shed light on how changes in exchange rate policies can impact firms in emerging markets, offering insights into the implications of these shifts on firms' exposure levels. Agarwal, Srivastav, and Srivastav (2010) reported that, based on a firm's multinational characteristics, exchange rate movements directly influence its foreign operations, subsequently affecting its total profits and, in turn, the firm's stock price

According to empirical studies by Shapiro (1975), Levi (1994), and Marston (1998), there's a clear demonstration of how exchange rates directly impact both the competitiveness and market values of firms. Branson and Handerson (1988), along with Frankel (1983), illustrated through the portfolio balance model that there exists a negative relationship between exchange rate movements and the stock market. Sekmen (2011) utilized ARIMA models on US stock returns and found that exchange rate volatility has a negative impact on stock returns. Ajayi and Mougoue (1996) reported a short-term negative effect of share prices on domestic currency value, while Kim (2003) showed a negative correlation between S&P's common stock price and the exchange rate.

Kasun Perera's empirical findings indicate a generally weak connection between exchange rate volatility and stock market return volatility. However, the study reveals specific patterns: the Euro exchange rate volatility significantly and positively affects ASPI returns' volatility, whereas the volatilities of USD and GBP have a negative and insignificant impact. This outcome is particularly robust for emerging financial markets like Sri Lanka, lacking a well-developed derivative market to manage exposure to foreign exchange risks effectively.

In another study by Ghobashi (2015), focusing on the impact of Egypt's pound exchange rate liberalization from 1991 to 2012 on macroeconomic variables, several key conclusions were drawn:

a) A negative correlation between the real exchange rate and national product growth was observed.
b) A direct association between the real exchange rate and the budget deficit was found.
c) No significant relationship was established between the real exchange rate and foreign investment, direct exports, imports, or the trade balance.

In the study by Nain, Bandi Kamaiah, Naresh Kumar Sharma, Taufeeq Ajaz, and MD Zulquar (2017), the focus was on examining the dynamics and interactions between monetary policies and financial variables within the Indian context. The findings reveal a distinctive reaction of stock prices to fluctuations in both interest rates and exchange rates. Specifically, the study highlights that a tightening or contractionary monetary policy tends to have a more pronounced effect in reducing stock prices, whereas an expansionary policy shows limited capacity to significantly boost them.

This research stands out from previous studies in several aspects. Atika (2023) points out that evaluating the effects on the stock market provides valuable references for market participants, serving as a guide to making informed decisions regarding profitable securities portfolios.

Several studies suggest that fluctuations in exchange rates significantly contribute to volatility in emerging stock markets (Tule et al., 2018; Vo & Tran, 2020; Yip et al., 2020). Within Nigeria, evidence based on robust econometric methods (Evbayiro-Osagie & Emeni, 2015; Oyinpreye & Karimo, 2015; Nkoro & Uko, 2016) explores the correlation between naira volatility and stock prices, alongside other macroeconomic factors. Notably, Nkoro and Uko (2016) reveal a negative relationship between exchange rates and stock prices.

In Pakistan, Khan and Ali (2015) analyze monthly data from 1992 to 2013 and demonstrate a bidirectional relationship between rupee-dollar volatility and stock prices. Panel-GARCH analysis by Najafzadeh et al. (2016) using data from 2008 to 2015 across D8 countries identifies a significant positive impact of exchange rate volatility on stock returns in Bangladesh, Indonesia, Iran, and Pakistan. They find that inflation and oil prices have significant negative and positive effects, respectively, on stock returns, whereas interest rates and gold prices exhibit the opposite effects.

Moreover, Kennedy and Nourizad (2016) utilize GARCH models with weekly data from 1999 to 2010. Their findings suggest that exchange rate volatility, broad money, and lagged stock volatility significantly contribute to stock market volatility, indicating a complex interplay of various factors influencing market fluctuations.

Previous studies generally examined the link between exchange rates and stock prices across various contexts. However, this current study specifically aims to evaluate how the Egyptian Floating exchange rate influences this relationship. It seeks to determine the effects of liberalizing the exchange rate on stock prices. While some research focused on analyzing the exchange rate-stock price relationship under different exchange rate determination systems globally, this study uniquely investigates the effects of transitioning from a fixed exchange rate system to a flexible one within the same country, Egypt, on the connection between exchange rates and stock prices

2.3 Theoretical framework

On November 3, 2016 the central bank of Egypt issued a decision to float foreign exchange rates in the Egyptian market, or what is known as “floating the pound” for the second time in the history of the Egyptian economy. In an attempt to restore stability in the Egyptian exchange market and thus reduce the role played by the parallel market in accelerating the decline. the value of the Egyptian pound against the dollar which resulted in reduction in the value of the Egyptian pound by 48%. Floating the pound means that market forces are the ones controlling the determination of daily trading prices depending on the conditions of supply and demand from one bank to another. This step came with a package of decisions of an integrated reform program to provide financing that fills the dollar resources gap. Confronts price increase the disappearance of goods, the increase in imports and consumption, and thus the continuation of inflation, with the aim of this decision putting the economic path on the right path.

The elements of the companies’ financial statements were greatly affected as the business results changed for the German period within the exchange rate Floating date falls, whether by achieving hug losses of large profits according to the company’s currency position. The property rights of some establishment that recorded currency

differences losses during the period also changed. In addition to the difference in asset values significantly less than its current value due to low purchasing power. In confirmation of the above, the consolidation financial statements of Orascom hotels showed its conversion to losses due to currency differences amounting to 4995 million pounds in 2016.
And here it is the time frame for the floating policies in Egypt, The first float. November 2016 the pound fell from levels of 8.88 pounds per dollar to levels of 15,77pounds per dollar, decline of 78 percent. The second float. march 2022 the pound fell from levels of 15,77 pounds per dollars to levels of 19,7 pounds per dollar, decline of 25 percent.

2.3.1 Rational Expectations Hypothesis

This hypothesis shows individual behaviors of various people based on the information about the stock market at the given time. Individuals make decisions what will be the outcome of the stock market price before investing largely to avoid loss of capital investments. Previous mistakes made in investment can be avoided by using available information to predict future market values [10]. And for the correlation between stock price and exchange rate fluctuation we can see that, the impact of appreciation or depreciation of the real exchange rate on firms may not be the same on the real stock price. Ding (2021) reports that the stock prices of the USA are closely linked with the appreciation (depreciation) of the US dollar, and the US stock prices are sensitive to the change of exchange rate.

On the other hand, depreciation of the real exchange rate increases the costs of imported inputs for firms, which could increase selling prices and hence can reduce sales and profits. Thus, the real stock price of the firms would decrease (Bahmani-Oskooee and Saha, 2016). Through The Asian financial crisis (1997–1988) demonstrates that depreciation of the Thai baht causes depreciation of other currencies and leads to the downfall of stock markets in Asia (Dimitrova, 2005). The global financial crisis of 2008 also caused the downfall of stock markets in the world. The relationships between stock prices and exchange rates can affect economic growth and the success of government policies (Lin, 2012, p. 161; Sui and Sun, 2016).

Exchange rate and stock price are said to be closely linked (Wong, 2018). Multinational firms are involved in international transactions, and their profits are strongly influenced by real exchange rates. Moreover, the change of real exchange rates could have an asymmetric impact on the real stock price. Sui and Sun (2016) investigate the dynamic relationships among local stock returns, exchange rates, interest differentials and the US S&P 500 returns in Brazil, Russia, India, China and South Africa (BRICS).

3. Methods

The dataset under analysis comprises a comprehensive daily record of stock prices spanning from 2019 to 2023, documenting the financial performance of 39 companies actively listed in the Egyptian stock market. Notably, these companies hold a significant position within the Egypt 30 index, providing an intricate understanding of their market trajectories throughout this period. Alongside this stock data, the dataset also includes a detailed chronicle of exchange rates between the US dollar and the Egyptian pound, encompassing the same time frame.

This exchange rate information is particularly significant as it coincides with Egypt's floating exchange regime, offering a holistic view of currency fluctuations and their potential impacts on the Egyptian stock market. This combined dataset serves as a

valuable resource for researchers and analysts, facilitating a nuanced examination of the intricate relationship between stock market performances of select companies in Egypt and the corresponding influences of exchange rate dynamics during the specified period.

The research expanded its analysis by employing various statistical tests to explore further insights. However, these additional tests do not inherently confirm or refute the primary hypotheses under examination, namely:

a) Using One Sample Kolmogorov to detect and test the normality
b) Mann-Whitney Test - a method for evaluating the impact of the event, specifically focusing on the "MannWhitney" as the designated target variable affected by the event. This test involves two independent sample comparisons.
c) Spearman Correlation Model utilizing the Spearman rank correlation coefficient. This model aims to gauge the strength or weakness of the relationship between variables existing both before and after the price release event.
d) Null Hypothesis (H0): The distribution of the exchange rate follows a normal distribution.
e) Alternative Hypothesis (H1): The distribution of the exchange rate deviates from a normal distribution.
f) Null Hypothesis (H0): The distribution of EGY30 follows a normal distribution.
g) Alternative Hypothesis (H1): The distribution of EGY30 deviates from a normal distribution

3.1 Research Variables

Table 1. Research Variables

Variable	Type	Symbol	Measure
Exchange Rate	Independent	FX	Average of Buying and Selling from The Central Bank
Stock Price	Independent	EGX 30	Database
Floating Exchange Regime	Dummy	X	1 After 0 Before

3.2 Research hypotheses

The research is based on testing the validity of the following hypotheses:

a) There is no significant effect of exchange rate floating on stock prices.
b) There is no significant effect of exchange rate floating on exchange rate values.
c) There is no significant correlation between the exchange rate and stock prices before the Floating of the exchange rate.
d) There is no significant correlation between the exchange rate and stock prices after liberalizing the exchange rate.

4. Results and Discussion

4.1 Descriptive Statistics Analyze

Tables 2. Descriptive Statistics of Exchange Rate and EGX30 Stock Index

	X			Statistic	Std. Error
EGX30	.00	Mean		121210.4146	603.22609
		95% Confidence Interval for Mean	Lower Bound	120026.2421	
			Upper Bound	122394.5871	
		5% Trimmed Mean		120867.2608	
		Median		114492.0000	
		Variance		279097273.930	
		Std. Deviation		16706.20465	
		Minimum		86597.00	
		Maximum		152599.00	
		Range		66002.00	
		Interquartile Range		30558.00	
		Skewness		.448	.088
		Kurtosis		-1.304	.176
	1.00	Mean		149554.8628	2262.57428
		95% Confidence Interval for Mean	Lower Bound	145107.7524	
			Upper Bound	154001.9732	
		5% Trimmed Mean		146737.3527	
		Median		154970.0000	
		Variance		2201274223.312	
		Std. Deviation		46917.73890	
		Minimum		86541.00	
		Maximum		487666.00	
		Range		401125.00	
		Interquartile Range		71320.50	
		Skewness		1.190	.118
		Kurtosis		5.137	.235
FXUS	.00	Mean		160837.0874	216.62397
		95% Confidence Interval for Mean	Lower Bound	160411.8403	
			Upper Bound	161262.3344	
		5% Trimmed Mean		160180.2242	
		Median		157486.0000	
		Variance		35992197.853	
		Std. Deviation		5999.34979	
		Minimum		155464.00	
		Maximum		179162.00	
		Range		23698.00	
		Interquartile Range		5189.00	
		Skewness		1.581	.088
		Kurtosis		1.391	.176
	1.00	Mean		255103.3837	2750.37547
		95% Confidence Interval for Mean	Lower Bound	249697.4956	
			Upper Bound	260509.2718	
		5% Trimmed Mean		257197.2235	
		Median		295995.0000	
		Variance		3252763052.563	
		Std. Deviation		57032.99968	
		Minimum		157100.00	
		Maximum		308919.00	
		Range		151819.00	
		Interquartile Range		117511.00	
		Skewness		-.313	.118
		Kurtosis		-1.686	.235

The descriptive statistics table provides a comprehensive overview of the central tendencies, variability, and distribution shapes for both EGX30, the stock market index, and FXUS, representing foreign exchange rates. EGX30 shows an average value around 121,210.41 with a moderately spread distribution (standard deviation of 16,706.20) and a range spanning from 86,597 to 152,599. Its distribution slightly skews positively (0.448) and exhibits a moderately platykurtic shape (-1.304). Conversely, FXUS displays a higher mean of approximately 160,837.09 and notably lower variability, with a smaller standard deviation of 5,999.35 and a range from 155,464 to 179,162. Its distribution is moderately positively skewed (1.581) and slightly leptokurtic (1.391). These statistics offer a comparative understanding of the behavior and spread of these variables within their respective markets, showcasing differences in their means, variability, and distribution shapes that could be pivotal for further in-depth analysis and market insights whether the exchange rate data and EGX30 stock prices follow a normal distribution, a normality test was conducted. The results of the test aimed to determine the distribution pattern of both datasets.

4.2 Normality Test

For the exchange rate data and EGX30 stock prices, a normality test, such as the Kolmogorov-Smirnov test, was employed. The outcome of this test provides insight into whether these datasets adhere to a normal distribution or exhibit departure from normality. The results of this test serve to validate or refute the assumption of normality, influencing subsequent analyses and interpretations based on the distributional characteristics of the data.

Table 3. Results of the Kolmogorov-Smirnov test One-Sample Kolmogorov Smirnov

X		Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
EGX30	.00	767	100.0%	0	0.0%	767	100.0%
	1.00	430	100.0%	0	0.0%	430	100.0%
FXUS	.00	767	100.0%	0	0.0%	767	100.0%
	1.00	430	100.0%	0	0.0%	430	100.0%

Table 4. Tests of Normality

X		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
EGX30	.00	.206	767	.000	.883	767	.000
	1.00	.149	430	.000	.882	430	.000
FXUS	.00	.265	767	.000	.724	767	.000
	1.00	.270	430	.000	.763	430	.000

a. Lilliefors Significance Correction

It is clear from the results: 1) Reject the null hypothesis that the exchange rate data follows a normal distribution and accept the alternative hypothesis, “The data does not follow a normal distribution”, at the level Significant (0.05) because the value of (Sig.) corresponding to the exchange rate is equal to (0.000), which is less than the aforementioned level of significance (0.05). 2) Reject the null hypothesis that the data is an indicatorEGX30 Distribution Tracking Normal and accepting the alternative hypothesis “The data do not follow a normal distribution” at a significance level (0.05)

because the value of (Sig.) corresponding to the exchange rate is equal to (0.000) and it is less than the aforementioned significance level (0.05).

Based on the previous results, the researcher used several tests and non-parametric statistical results to verify the validity or invalidity of the main hypotheses under study, which are: • a test Man - Whitneyites aim was to estimate the impact of the event “Mann Whitney” 2 Independent sample test the dummy variable on the independent variables. As for the results of the study hypotheses tests using the Mann-Whitney test It was indicated using the independent sample test "Mann Whitney 2 The ready-made SPSS program is as follows: Table (3): Mann-Whitney test results “Mann Whitney 2 Independent sample test.

Table 5. Statistical ranks for the Mann-Whitney test 2 independent sample test "Mann Whitney

	X	N	Mean Rank	Sum of Ranks
EGX30	0	767	535.94	411069.00
	1	430	711.47	305934.00
	Total	1197		
FXUS	0	767	393.55	301856.00
	1	430	965.46	415147.00
	Total	1197		

The symbolic representation of an event, denoting a pivotal change in the exchange rate, carries significant implications, particularly evident in the corresponding number of views. Preceding this event, the viewership count stood at an initial value denoted as N, representing a consistent and stable engagement level, quantified by 767 views related to the exchange rate.

However, the occurrence of the exchange rate floating event marked a profound shift in viewer behavior and engagement. Post this event, the viewership metric experienced a stark alteration, dwindling to a recorded count of 430 views. This substantial decline in viewership subsequent to the exchange rate floating signifies a notable transformation in the audience's attention and interest toward monitoring the exchange rate dynamics.

This observed shift in viewer behavior following the exchange rate floatation prompts an intriguing avenue for investigation. Further analysis and exploration into the factors driving this considerable decline in viewership post-event may unravel insights into altered perceptions, changing audience interests, or a shift in the perceived relevance of the exchange rate among the audience. Understanding these dynamics could illuminate the nuanced impact and implications of the exchange rate fluctuation on audience engagement and interest

The following table indicates the statistical data for the Mann-Whitney test. Independent sample test "Mann Whitney 2

Table 6. Statistical data for the Mann-Whitney test. Sample test "Mann Whitney 2 Independent

	EGX30	FXUS
Mann-Whitney U	116541.000	7328.000
Wilcoxon W	411069.000	301856.000
Z	-8.429	-27.468
Asymp. Sig. (2-tailed)	.000	.000

a. Grouping Variable: X

It is clear from the results presented in the previous table that: 1) There is a significant effect of liberalizing the exchange rate on the values of exchange rates, where the value of ((less than) sig0.05) If we reject the null hypothesis and accept the alternative hypothesis, which is that there is a statistically significant difference between the exchange rate before the exchange rate was liberalized and the exchange rate after the exchange rate was liberalized. 2) There is a significant impact of the Floating of the exchange rate on the values of stock prices, where is the value (less than (sig)) 0.05) Then we reject the null hypothesis and accept the alternative hypothesis, which is that there is a statistically significant difference between stock prices before the Floating of the exchange rate and stock prices after the Floating of the exchange rate.

With regard to measuring the strength of the relationship between stock prices and the exchange rate, the researcher began by examining the simple correlation between each of the two variables using the Spearman correlation model. For the purpose of verifying Spearman's rank correlation coefficient the validity or incorrectness of the research hypothesis, as "there is no significant relationship between the exchange rate and stock prices before and after the Floating of the exchange rate," by identifying the strength or weakness of the relationship between each of the stock prices and the exchange rate before and after.

Editing the exchange rate, as well as determining the direction of the relationship (direct or inverse), then examining the fundamentality of those relationships. The data and results of the analysis were as shown in the following tables:

Table 7. Descriptive statistical data for the Spearman correlation model before editing the exchange rate Spearman's rank correlation coefficient

	Mean	Std. Deviation	N
EGX30	121210.4146	16706.20465	767
FX	160837.0874	5999.34979	767

During the period preceding the Floating of the exchange rate, a comprehensive analysis of the financial landscape showcases distinct traits in both the exchange rate and stock prices. The average exchange rate over this period stood at 121,210.41, signifying a stable central tendency in the currency's valuation against the US dollar. This average was accompanied by a moderate degree of variability, encapsulated by a standard deviation of 16,706.20, emphasizing fluctuations around this mean. This variability, drawn from a substantial sample size of 767 observations, reflects the inherent dynamism within the exchange rate metrics during the pre-Floating phase.

Simultaneously, the stock market, mirrored through the EGX30 index, portrayed a different profile in its behavior. The average value of the EGX30 index during this pre-Floating period notably surpassed that of the exchange rate, standing at 160,837.09. Intriguingly, this higher average was coupled with significantly lesser variability, denoted by a smaller standard deviation of 5,999.35 across the same 767 observations. This diminished variability hints at a more stabilized and consistent trend in stock prices compared to the exchange rate dynamics during this specific timeframe.

These descriptive statistics unravel distinct patterns in both the exchange rate and stock prices, underscoring the contrasting natures of their central tendencies and variability. They lay a foundational understanding of the market behaviors before the significant event of exchange rate liberalization, paving the way for deeper analyses into how these dynamics evolved post the Floating of the exchange rate.

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Table 8. Results of Spearman's correlation model Spearman's rank correlation before liberalizing the exchange rate coefficient

			EGX30	FX
Spearman's rho	EGX30	Correlation Coefficient	1.000	.651**
		Sig. (2-tailed)	.	.000
		N	767	767
	FX	Correlation Coefficient	.651**	1.000
		Sig. (2-tailed)	.000	.
		N	767	767

**Correlation is significant at the 0.01 level (2-tailed).

The comprehensive analysis delineated in the preceding table unequivocally illuminates a robust and direct correlation between two pivotal variables—EGX30 and FX—prior to the Floating of the exchange rate. The recorded correlation coefficient of 0.651 signifies a strong positive relationship between these variables, denoting a tendency for synchronous movements before the transformative event. This correlation's statistical significance, verified by a markedly low p-value (0.000), further strengthens the findings, decisively leading to the rejection of the null hypothesis.

The null hypothesis, positing no substantial correlation between the exchange rate and stock prices before the exchange rate's liberalization, succumbs to the weight of evidence. The alternative hypothesis, asserting a significant correlation between these key financial indicators, emerges victorious, affirming the pronounced interdependence between the exchange rate and stock prices within the pre-Floating phase. This robust correlation underlines the intertwined nature of these variables, suggesting that fluctuations or movements in the exchange rate distinctly influence or align with changes in stock prices.

The validation of this correlation holds paramount implications, shedding light on the intricate dynamics shaping the financial landscape before the significant market-altering event of exchange rate liberalization. Understanding the profound relationship between these crucial metrics not only enriches the comprehension of pre-Floating market behaviors but also lays a foundation for comprehending the potential shifts or dynamics post the exchange rate's transformative shift.

Table 9. Descriptive statistical data for the Spearman correlation model. After Floating the exchange rate Spearman's rank correlation coefficient

	Mean	Std. Deviation	N
EGX30	149554.8628	46917.73890	430
FX	255103.3837	57032.99968	430

Subsequent to the pivotal event of the Floating of the exchange rate, a profound shift in the financial landscape emerges, evident in the compelling statistical analysis. The average exchange rate during this post-Floating phase surged significantly, escalating to approximately 255,103.38. This substantial rise signifies a noteworthy alteration in the currency's valuation against the US dollar, exemplifying the transformative impact of the exchange rate Floating. However, alongside this surge, there exists a considerable variability in these exchange rate values, encapsulated by a standard deviation of 57,032.99. This variance around the mean illustrates the heightened fluctuations characterizing the post-Floating period, derived from a sample size of 430 observations.

In stark contrast, the stock market's performance, mirrored by the EGX30 index, delineates a divergent trajectory in the same post-Floating timeframe. The average value of the EGX30 index during this period stood at around 149,554.86, notably diverging from the heightened trajectory observed in the exchange rates. However, amidst this

average, the variability within stock prices displayed a slightly lower magnitude compared to the exchange rates. The standard deviation of 46,917.74 across the same 430 observations suggests a comparatively more contained fluctuation pattern within the stock prices during this post-Floating phase.

These comprehensive descriptive statistics unveil contrasting trends in both the exchange rate and stock prices subsequent to the exchange rate Floating. The notable surge in exchange rates, coupled with heightened variability, stands juxtaposed against a comparatively restrained trajectory in stock prices with a slightly lesser degree of variability. This characterization of fluctuations and central tendencies post the Floating event lays the groundwork for further exploration into the transformative impact and ensuing dynamics within the financial sphere.

Table 10. Results of the Spearman correlation model Spearman's rank correlation After Floating the exchange rate coefficient

			EGX30	FX
Kendall's tau_b	EGX30	Correlation Coefficient	1.000	.654**
		Sig. (2-tailed)	.	.000
		N	430	430
	FX	Correlation Coefficient	.654**	1.000
		Sig. (2-tailed)	.000	.
		N	430	430
Spearman's rho	EGX30	Correlation Coefficient	1.000	.862**
		Sig. (2-tailed)	.	.000
		N	430	430
	FX	Correlation Coefficient	.862**	1.000
		Sig. (2-tailed)	.000	.
		N	430	430

**Correlation is significant at the 0.01 level (2-tailed).

The data analysis conducted in the preceding table indicates a discernible positive correlation between the EGX30 stock prices and the exchange rate following the event of floatation. The computed correlation coefficient between these pivotal variables stands notably high at 0.862, underscoring a strong tendency for these metrics to move in tandem within the post-floatation phase. However, despite this substantial coefficient, the statistical analysis reveals a critical aspect: the absence of significance under the conventional threshold level of 0.05.

The associated significance value (Sig.) of the correlation coefficient is documented as 0.00, indicating an extremely low probability of obtaining this correlation coefficient by chance alone. Although this seemingly suggests a robust relationship between the EGX30 stock prices and the exchange rate post-floatation, this correlation falls below the specified level of significance. Consequently, adhering to the predetermined significance threshold, we are unable to assert statistical significance regarding this correlation.

The outcome leads to the retention of the null hypothesis, originally posited as "There is no significant correlation between the exchange rate and stock prices after the floatation." Despite the conspicuous positive correlation coefficient, the absence of significance implies a potential inconclusiveness or uncertainty regarding the strength of this relationship within the post-floatation period. This nuanced interpretation emphasizes the intricacies inherent in financial dynamics and warrants further exploration or refinement in understanding the underlying relationship between these variables subsequent to the exchange rate floatation.

5. Conclusion

The analysis revealed a significant impact on both the exchange rate and stock prices subsequent to the floatation of the exchange rate. Additionally, noteworthy significant correlations were observed between the exchange rate and stock prices, both pre and post the exchange rate floatation. These findings emphasize the influential relationship between the exchange rate and stock prices, indicating a notable effect of the exchange rate changes on the stock market dynamics both before and after the exchange rate was floated.

Floating the pound means that market forces are the ones controlling the determination of daily trading prices depending on the conditions of supply and demand from one bank to another The elements of the companies' financial statements were greatly affected as the business .Exchange rates play a pivotal role in global economics, influencing international trade, financial markets shaping the cost of imports and exports, foreign investment, and overall economic performance Investors closely monitor exchange rate fluctuations as they significantly influence the value of international investments, impacting returns and portfolio diversification. A weaker domestic currency can boost export competitiveness but may lead to higher import costs, affecting inflation rates. Central bank intervention and pegged currency values backed by reserves, such as gold,

The advantages of floating rates include the flexibility to adapt to economic shocks and reduced susceptibility to speculative attacks. The stock price is randomly changed and has no connections to the previous price at a given time. This hypothesis shows individual behaviors of various people based on the information about the stock market at the given time.

On the other hand, depreciation of the real exchange rate increases the costs of imported inputs for firms, which could increase selling prices and hence can reduce sales and profits. Exchange rate and stock price are said to be closely linked (Wong, 2018). Multinational firms are involved in international transactions, and their profits are strongly influenced by real exchange rates. Moreover, the change of real exchange rates could have an asymmetric impact on the real stock price supports the notion that fluctuations in exchange rates constitute a crucial source of macroeconomic uncertainty.

This study's scope is limited to Egypt, not extending its analysis to other countries, which might restrict the generalizability of findings beyond the Egyptian economic landscape. Additionally, the Egyptian economy's inherent instability introduces a multifaceted environment where various factors could potentially influence stock prices. Acknowledging these limitations is crucial as the study focuses primarily on the impact of the floating exchange regime, albeit recognizing the possible interplay of numerous other economic, political, and global factors on stock price dynamics. Consequently, while the study endeavors to explore the relationship between the floating exchange regime and stock prices, the broader complexities within the Egyptian economic context warrant cautious interpretation and consideration of other potential influential variables shaping stock market behaviors.

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