جامعة مدينة السادات

The Impact of Foreign Currency Exchange Rate Changes on Firm Value
(An Applied Study on Companies Listed on the Egyptian Stock Exchange)

Prepared by

Ahmed Sayed Tokhy Abd El-Aziz
Teaching Assistant at Business and Finance Section Higher Institute of Cooperative and Management Studies- PHD degree in Business - Faculty of Commerce Ain Shams University
Email: - leader.as87@gmail.com
ORCID iD: 0009-0002-3368-718X

Monzer Mohamed Ali Mohamed
Teaching Assistant at Accounting and Audit Section Higher Institute of Cooperative and Management Studies- Doctoral researcher, Faculty of Commerce Ain Shams University
Email: - monzerali639@yahoo.com
ORCID iD:0009-0009-7198-6341

Mahmoud Mohamed Hassaneen Ahmed
Master degree in Accounting - Faculty of Commerce-Cairo University
Email: - nadermahmoud838@gmail.com
ORCID iD: 0009-0005-6646-7134

المجلة العلمية للدراسات والبحوث المالية والإدارية
كلية التجارة – جامعة مدينة السادات
المجلد السادس عشر – (عدد خاص – الجزء الثاني) – سبتمبر ٢٠٢٤م

التوثيق المقترح وفقاً لنظام APA:
Abd El-Aziz, Ahmed Sayed Tokhy; Mohamed, Monzer Mohamed Ali; Ahmed, Mahmoud Mohamed Hassaneen, (2024), "The Impact of Foreign Currency Exchange Rate Changes on Firm Value: An Applied Study on Companies Listed on the Egyptian Stock Exchange", المجلة العلمية للدراسات والبحوث المالية والإدارية، كلية التجارة، جامعة مدينة السادات، ١٦ (خاص)، ٤٠٩ – ٤٣٦.

رابط المجلة: https://masf.journals.ekb.eg

Abstract:

Purpose– This research aimed to identify the impact of foreign currency exchange rate changes on firm value, and the research addressed monitoring some of the potential effects of foreign currency exchange rate changes on firm value in the Egyptian Business Environment.

The study hypothesis states that: - The main hypothesis there is no statistically significant relationship between foreign currency exchange rate changes and firm value. This study depended on the (Tobin's Q) model to measure the firm value the data were statistically analyzed and the study hypotheses were tested using descriptive statistics, Pearson correlation coefficient, and simple linear regression.

Design/methodology/approach– The researchers will be relying on a combination of inductive and deductive approaches to carry out two types of study are as follows: An Analytical study: - through the analysis of books, periodicals, theses related to exchange rate changes and firm value - An applied study: - The study period is set for 2014-2023 to test hypotheses and the study sample was selected from the most active companies in the Egyptian Stock Exchange. A total of 82 companies were selected. Data was analyzed using (Eviews v.10)

The study results and statistical findings show that Foreign Currency exchange rate changes effect on the firm value of the firms. The study recommended that using new laws and legislation to overcome the consequences monetary policies changes on economy and conducting more academic research on Foreign Currency exchange rate and its effect on financial reports user’s decisions

Key Words: Foreign Currency Exchange Rate Changes, Firm Value.

1. Introduction

In an era of floating exchange rate regimes and independent central banks that focus on price stability, exchange rates have lost their priority in economic policy decisions. Meanwhile, the debate about the importance of considering exchange rate Type equation here.movements in an open economy continues to evolve. On the one hand, the impact of monetary policy on the value of the national currency is inexorable, since exchange rates continue to be a substantial component of the transmission mechanism and the factor that reflects the differences between countries in interest rates parity. of interest rates (Hashchyshyn, 2020)

Based on the theory of finance, the entity's cash flows are susceptible to unexpected changes in exchange rates (Hekman, 1983, 1985; Shapiro, 1975). Exchange rate exposure of a business is the degree to which unanticipated fluctuations in exchange rates impact the firm's value (Adler and Dumas, 1984). Analyzing currency exposure is crucial for both local and foreign businesses that engage in transactions (Aggarwal and Harper, 2010). Despite a great deal of study, empirical results are unable to identify a meaningful correlation between changes in exchange rates and business value.

Exchange Rate Changes is an essential component that influences the financial approaches of many countries (Akani, 2024). In order to establish economic policies generally and economic reform programs particular that help accelerate the achievement of defined macroeconomic goals, the exchange rate is a vital macroeconomic variable.

The only thing significant to a firm's stakeholders is its economic value. The company's share price reflects this amount. It arises out of the dynamics of supply and demand in the capital market. It is its stakeholders consider an expression of how the firm is worth. Since a firm's worth is a reflection of its financial stability, it is imperative that stakeholders pay attention to this key statistic. It establishes the firm's ability to generate money for stakeholders and its financial stability as a whole. In addition to, a firm generates a high value, stakeholders are able to put their faith in it and reward it by investing capital in the form of equity and debt. In the end, the best method of raising a company's share price may be the faith of its stakeholders. In addition, stakeholders would be reluctant to spend their cash in a firm with an ineffective value. Rather than a doubt, this situation would indicate a drop in share prices, which would lower the firm's worth.

As a result, it is critical to look at those variables, which influence business value (Musa & Yahaya, 2023).

Economic enterprises' main objective is to remain solvent and keep going, and so they constantly aim to maximize cash inflows and outflows in order to create value. This is because the idea of firm value has attracted a lot of attention at the level of economic enterprises, where the realized value is shared with all stakeholders who have an interest in the business, including shareholders (Ahmed, 2023).

Researchers suggest that the impact of foreign exchange rate changes on the value of Egyptian companies can be diverse for example, an appreciation of the local currency may reduce the cost of imports of raw materials and equipment, increasing the profitability and value of the company on the other hand, the appreciation of the local currency may increase the cost of local exporters and negatively affect the value of companies that rely heavily on exports, its effects depend on the type of industry and the company's international dealings.

2. Literature Review

Study of (Chrystell, 2014) aimed to examine the impact of exchange rate movements on the equity value of individual firms and identify the determinants of exposure. The study used a sample of publicly traded non-financial firms from Mexico (some with international activities and some without). The study found that significant levels of currency exposure by industrial sector. At the individual firm level, mid-size firms show less exchange rate exposure than small- or large-size firms do. In addition, results show a significant negative relationship between currency exposure and level of international sales. In a sub-period, currency exposure is negatively related to foreign-currency denominated liabilities. The results suggest that firms that engage in international activities and hold debt in foreign currency are significantly less sensitive to exchange rate movements than firms that rely primarily on domestic sales.

Study of (Šimáková, 2017) aimed to examine the impact of exchange rate movements on firm value in countries. The study used Jorion’s model and panel data regression for the sample period 2002–2016. Estimations for the whole period revealed negative relationship between exchange rate and value of stock companies. The highest exposure is observed in case of Hungary and Czechia. Positive tendency can be seen in comparison of pre-crisis and post-crisis period. Except the case of Hungary, all markets showed decreased exchange rate exposure in time. The study concluded that foreign revenues are positively correlated with the exchange rate exposure and in a short period, currency depreciation negatively affects the market value of listed companies.

Study of (Ihsan., et al., 2018) Examine the exchange rate impact on stock returns of 232 nonfinancial firms and Compares domestic and multinational firms' exchange rate exposure listed on the Pakistan Stock Exchange, for the period January 2000 to June 2014. To mitigate the problem of heteroscedasticity, the study used a generalized least squares estimator. The estimated regression models indicate that exchange rate variations have a significant effect on firm value and that firms are exposed significantly to one-period lagged variation in the exchange rate. The study found that exchange rate dynamics, increased exchange rate volatility appears to have significant and negative effects on firms' stock returns. Compared to domestic firms, multinational firms experience greater exchange rate exposure. Finally, the study found that exchange rate depreciation and appreciation have significant differential effects on firms' stock returns. These effects vary significantly across domestic and multinational firms.

Study of (Sikarwar., 2018) aimed to examine the presence of exchange rate exposure and its relationship with currency derivatives usage in the dynamic environment of the global financial crisis of 2008. The study used a sample of 624 Indian firms over the period of April 2001–March 2016; this paper investigates the linear and asymmetric exposure by dividing the full sample period into different sub-periods around the crisis. The study concluded that the firms are more exposed to the exchange rate changes since the onset of the financial crisis. However, there is a lack of evidence that the usage of currency derivatives is more effective in reducing exposure during the crisis/post-crisis period as opposed to the pre-crisis period. The results are important to investors and managers for a better understanding of firm behaviors in relation to their risk management policies during the period of external shocks like crisis.

Study of (Guney., et al., 2021) aimed to quantify the effect of exchange rate on the value of nonfinancial firms listed on Borsa Istanbul. In the first part of the analysis, the regression results using firm-level data show that currency fluctuations tend to influence the stock returns of 44 firms out of 177 firms in the sample in a significant way with negative average foreign exchange (FX) sensitivity coefficient. The sectoral-level analysis indicates that sectors with net FX short position are also subject to higher FX sensitivity with respect to firm value. In the second part, firm-level determinants of FX sensitivity are investigated using quantile regression method. The estimation results indicate that the market value of firms with net FX position surplus tends to respond positively to the depreciation of Turkish lira against the US dollar across all quantiles. It is also observed that the degree of internationalization, firm size, profitability, and growth opportunities are significant determinants of stock market pricing of FX risk.

Study of (Almas et al, 2021) investigate the effects of hedging on firm value using derivative instruments Different results for exchange rate, interest rate, and commodity price risks as well as examining different types of derivative instruments, including forward contract, future contract, option contract, and swap contract, used as hedging instruments to assess their various effects on firm value. The study depended on a proxy used for the Firmvalue variable is Tobin’s Q, and the ordinary least squares regression is employed for the research method. The study used 348 records from non-financial companies listed on the Indonesia Stock Exchange over the period 2015–2018. There are different results. The study concluded that, the use of hedging for exchange rate risk with derivative instruments has a positive and significant effect on firm value. Secondly, the use of hedging for interest rate risk with derivative instruments has a negative but not significant effect on firm value. In addition, the use of hedging for commodity price risk with derivative instruments has a positive but not significant effect on firm value. Moreover, the effects from hedging using derivative contracts in general on firm value does not give results that are different from the use of hedging risk for exchange rates, interest rates and commodity prices with derivative instruments.

Study of (Khan & Qureshi, 2023) aimed to examine the impact of exchange rate fluctuations on firm value. The Study used a system dynamics-based corporate planning model has been developed that incorporates the modules for financial and physical processes, firm valuation and exchange rate determination. The study concluded that Simulation results reveal that a stronger home currency leads to an increase in market price per share of the firm and vice versa. The results provide counter intuitive evidence on the impact of exchange rate on firm value and provide nonlinear feedback loop-based explanation. The study fills the gap in literature by incorporating a systemic approach in the strategic planning process to assess the composite impact of parameter changes on key variables.

After reviewing all previous studies, researchers have concluded that: -

-They are related to the research topic including foreign currency exchange rate changes and firm value. This study is one of the first studies that addressed the impact of foreign currency exchange rate changes on firm value.

-The scarcity of researches conducted in developing countries regarding the impact of foreign currency exchange rate changes on firm value (an applied study) in Arab Republic of Egypt.

- Most studies have focused on economic and financial effects of currency exchange rate in general without focusing on its effects on firm value in particular

3. Study Problem and Questions

The research problem can be summarized on the following question:

In what extend foreign currency exchange rate changes effect on the firm value?

4. Study Objective

The main objectives of this study are to measure the impact of foreign currency exchange rate changes on firm value.

5. Study Hypotheses

To achieve the goals of this study the following hypotheses will be tested:

The main hypothesis: **-** there is no statistically significant relationship between foreign currency exchange rate changes and firm value.

6. Study Methodology

The researcher will be relying on a combination of inductive and deductive approaches to carry out two types of study are as follows:

A- **An Analytical study**: - through the analysis of what was mentioned in books and periodicals, which deals with measures are analytical and that helps for obtaining information and evidence sufficient to enable us to carry out an analytical study for exchange rate and the firm value.

B- **An applied study**: - The study period is set for 2014-2023 to test hypotheses and the study sample was selected from the most active companies in the Egyptian Stock Exchange. A total of 82 companies were selected. Data was analyzed using (Eviews v.10)

7. Study Structure:

Introductory section: introduce introduction, the literature reviews the study problem, the study objectives, the hypotheses, methodology and the research structure.

The first section deals with the Theoretical background

The second section deals with the applied study.

The third section: findings, recommendations and future studies

The First Section: -Theoretical background

Regarding to, Foreign Currency Exchange Rate Changes: Adler and Dumas (1984) concluded that exchange rate exposure is the degree to which unforeseen fluctuations in exchange rates influence a firm's value. According to theory, there are three primary categories into which the exchange rate exposure comes (Eun and Resnick, 2014). First, there is "transaction exposure," which is the firm's contractual cash flows denominated in foreign currencies and its sensitivity to unanticipated exchange rates determined on the "realized" local currency values corresponding to those cash flows.

The next category is "economic exposure," which is the level to which unexpected variations in currency rates have a consequence on future cash flows. The third is "translation exposure," which is the possibility that fluctuations in exchange rates could have an influence on the firm's consolidated financial statements. Exchange rate risk theoretically influences all companies, local and foreign. Empirical research, however, yields contradictory findings. A wide number of research indicate that only a small number of enterprises are considerably affected by exchange rate fluctuations, despite some reporting high evidence suggesting exposure (Bacha et al., 2013; Choi and Prasad, 1995; Kiymaz, 2003; Chue and Cook, 2008; Jorion, 1990; Lin, 2011; Muller and Verschoor, 2007).

In addition to, an economy's exchange rate is highly significant because it directly affects all macroeconomic variables, which involves the economic viability of traded goods and services, the allocation of resources, and investment decisions. For the foregoing, reason both the private and monetary sectors strive for stability in these variables (Akani, 2024).

The extent that a business's financial net cash flow and market value fluctuate due to fluctuations in exchange rates are referred to as its foreign currency exposure. Measuring the impact of foreign exchange exposure and managing it to optimize the company's profitability, net cash flow, and market value is a key responsibility of the financial management. A firm's impact from changes in foreign currency rates can be quantified in a variety of ways (Arize et al., 2024).

Foreign exchange exposure occurs in three various Categories. Interpretation or accounting foreign exchange exposure occurs first. This exposure corresponds to the firm's equity and income effects. Changes in currency rates and their impact on financial statements are the cause of it

The exposure associated with transactions is the second category of exposure. Changes in exchange rates and the requirement to settle receivables and payables in foreign currencies are the causes of this. This opportunity cost causes changes in cash flow.

The change in forecasted cash flows resulting from an unforeseen change in foreign exchange rates can be evaluated by operating foreign exchange exposure. This is the third form of foreign exchange exposure; it is a long-term risk that impacts revenue, expenses, and the broader competitiveness of the firm (Arize et al., 2024).

The term "exchange rate volatility" indicates changes in the international currency exchange rate over a specific period. There are two categories of factors that influence to exchange rate changes: internal and external. Changes in the worldwide financial markets, changes to regulations governing finance, shifts in the international trade the environment, and shifts in the global economic climate are examples of external variables. Adjustments to domestic economic policy, shifts in the money supply and demand relationship, and shifts in domestic economic conditions are examples of internal causes. Exchange rate swings arise due to the combined effect of these variables (Han & Zhang, 2019; Liu, 2024).

Researchers believe that Changes in foreign exchange rates can significantly affect national economies such as **1- foreign trade**: Exchange rate changes affect the cost of imported and exported goods and services. An appreciation of the national currency can make domestic products more expensive for foreign consumers, reducing exports, while a decrease in the value of the national currency can increase the cost of imports.

2- Tourism: Exchange rate changes affect the cost of travel and tourism. A decline in the value of the national currency can attract tourists to the country, while an increase in its value can make travel outside it more expensive.**3-Inflation**: Changes in the value of a currency can cause inflation to increase or decrease, depending on how they affect the prices of goods and services. There are many factors that determine how exchange rate changes affect the economy, including government policies and monetary interventions.

Firm Value: the concept of value creation has been regarded as a major goal pursued by all enterprises in the current era because of its impact on increasing owners' wealth and attracting new investments, since the value of the enterprise is considered a key factor for investors when making investment decisions. In this context, a study by Mansour et al. (2023) indicated that the issue of enterprise value is of great importance in the accounting literature.

The study of Ibrahim (2020) also demonstrated that stakeholders, including as shareholders, consumers, investors, and suppliers, have a curiosity in the facility's value, as facility management strives to maximize the facilities of value by reliance on a variety of investment alternatives.

The significance of value has been investigated in Abdul Rahim's (2007) study. Value can be characterized as the monetary value of a feature, or as the amount that both the seller and the buyer are ready to accept in exchange for the right to earn future returns from how it is utilized.

Even though the concept of firm value has been studied from various perspectives, all of them rely on the use of a measure that is quantitative since it is measured in monetary terms (Obaid, 2021). The process of evaluating the financial significance of a firm's assets and related liabilities is what Mohammed's (2013) research identified as the value of an enterprise. The potential of an enterprise to create future profits through the exploitation of its assets is what induces it value, according to Nasr and Al-Serafi's (2015) study.

According to the Sabbagh research (2019), the establishments of value is additionally defined by the market value of the assets it produces, which is valued at the market price of its shares or the price they are worth at the conclusion of the fiscal year. Consequently, Hawkins (2018), it could additionally refer to the overall value of an organization, less financial assets like cash and investments, which include debt and equity. The main objective of the firm's value is to maximize its wealth, as per the Nouvel study (2020), which also defined it as the investor's evaluation of the entity's success, which continually appears in stock prices.

Expanding on previous terminology, that the researchers suggest that a firm's value could potentially be represented as the wealth it has amassed, which enables it to produce future cash flows and serves as an index of the firm's sustainability.

Investors consider a firm's worth, or the value of the company, while making decisions. Firm value presents an important basis for prospective investors to assess the company's performance. A highly attractive company will frequently strive to increase its worth and attract as many potential investors as it can. The company's share price will rise because of potential investors' interest in investing (Rivandi and Petra, 2022). The market value of the company's shares reflects firm worth. There are more investors interested in investing in a firm whose shares have a higher market value. Investor welfare increases with the company's valuation (Wijaya & Fitriani, 2022; Kurniawati et al., 2023).

It is essential to recognize that value relates to the anticipated cash flows in the future expressed in a particular currency. In other words, a firm's value is determined by the expected future cash flows it will produce as well as the rate of return at which investors are willing to lend money the firm in order to finance its future growth (Besley & Brigham, 2008).

Researchers see that the firm value can be determined through several factors such as assets, debt, income, future prospects, and others. Common value determination methods include**:1- Market value method**: Where the company’s value is determined based on its share price in the financial market, in addition to the value of debt and liquidity.**2-Book value method**: This is determining the company’s value using the value of its assets recorded in the financial books.**3-Income estimation method**: The value is determined based on future expectations of income and profits that the company will generate.**4-Free liquidity value method**: Where the company’s value is estimated based on the free liquidity available to it, that is, the money that can be used for investment or distributed to shareholders. These methods depend on many factors and details specific to each company, and the value can vary between methods depending on circumstances and estimates.

Relationship between Foreign Currency Exchange Rate Changes and Firm Value: foreign currency exchange rate changes influences a firm's value based on its exposure to exchange rate risk, it is an urgent issue in global financial markets (Choi, 1986). The relationship of the several related components is what causes the complexity. The degree to which a firm's cash flows are susceptible to unanticipated variations in exchange rates is known as its exchange rate exposure.

Foreign currency exchange rate risk can arise when firms participate in foreign operations through the selling and/or purchasing of goods, materials, or services, purchasing and/or dealing of assets, the financing of debt and/or equity, and the receipt and making of payments related thereto. Foreign currency exchange rate risk could influence the business value, as illustrated by the sensitivity of corporate cash flows to changes in exchange rates (Khan & Qureshi, 2023).

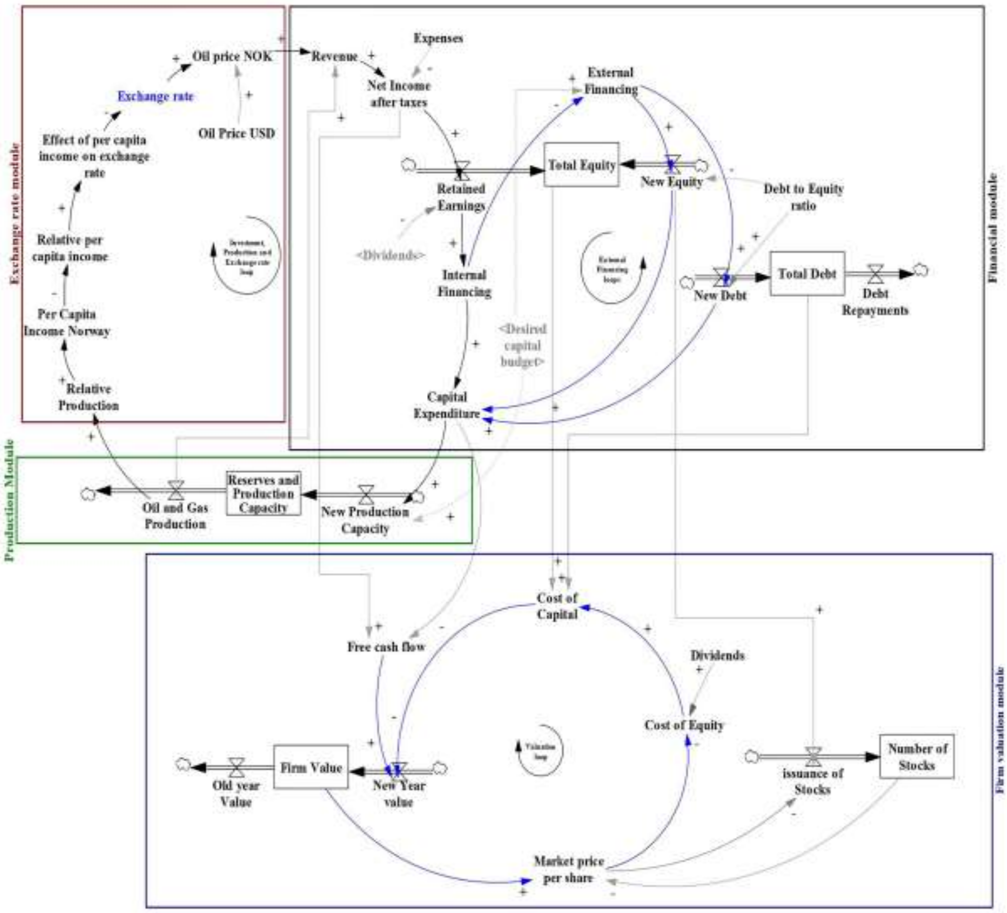
Researchers found contrasting empirical data about the relationships between firm value and foreign currency exchange rate risk (Agyei-Ampomah et al., 2013; Dominguez & Tesar, 2006; Hutson & O'Driscoll, 2010; Mozumder et al., 2015).

Foreign currency exchange rate changes have been demonstrated in several empirical research to have a detrimental effect on cash flows and corporate value (Fraser & Pantzalis, 2004; Muller & Verschoor, 2006; Šimáková, 2017). According to certain research, currency rate risk has little effect on a company's value (Bartov & Bodnar, 1994; Marston, 2001).

We need to investigate The Impact of the dynamics of firm valuation: An assessment of impact of exchange rate fluctuations on firm value using system dynamics (Khan & Qureshi, 2023).

Figure (1) illustrates Foreign Currency Exchange Rate Changes on Firm Value during the research period, as follows:

Figure (1)



Source: (Khan & Qureshi, 2023).

Researchers concluded that the relationship between changes in foreign exchange rates and company value is complex and multifaceted, and often varies depending on the company's particular circumstances and the broader economic environment. Here are some key points to consider as follows:-

1-Exposure to Exchange Rate Fluctuations: Companies that engage in international trade or have foreign subsidiaries are directly exposed to exchange rate fluctuations. For example, if a company exports goods to a country whose currency is devaluing, its revenues in that currency may decrease when converted to the local currency.

2-Translation Exposure: Multinational companies face translation exposure when they compile financial statements from operating subsidiaries in different currencies. Changes in exchange rates can affect the value of assets and liabilities denominated in foreign currencies when converted into the reporting currency, affecting the financial condition and overall performance of the company.

3-Transaction Exposure: Transaction exposure arises from contractual obligations denominated in foreign currencies. Changes in exchange rates can affect the cost of imports and exports, affecting profit margins and cash flows.

4-Market Competitiveness: Exchange rate movements can affect a company's competitive position in international markets. A diminished local currency can make exporting more competitive, which may boost sales volume and revenue. On the other hand, a strengthening local currency could make imports cheaper, posing a challenge for local producers.

5- Market Value: Exchange rate movements can directly affect a company's market valuation, especially for companies with large international operations. Investors may adjust their expectations about future cash flows and discount rates in response to changes in exchange rates, resulting in fluctuations in the stock price of the company.

The Second Section: -An Applied Study

The previous sections dealt with the theoretical background of the study by referring to the various literatures. This section covers the applied study, which includes a description of the study methodology and the study population and sample, as well as the study used the methods of preparation and the validity and reliability tool. This section includes a description of the procedures carried out by researchers at the codifying of the study, implementing, and finally statistical treatments adopted by the researchers in analysis the applied study and showing the results.

3.1 study objective

This study aims to examine the impact of foreign currency exchange rate changes on firm value on companies listed on the Egyptian Stock Exchange.

3.2 Study Hypotheses

Research hypothesis is based on the theoretical part of the study as follows:
The null hypothesis: there is no statistically significant relationship between foreign currency exchange rate changes and firm value.

3.3 Study Population

Index of the EGX 100 (Egyptian Stock Exchange) was used it includes EGX 30 and EGX 70 contains 100 companies in terms of liquidity and activity.

The study population consists of the companies listed on the Egyptian Stock Exchange. The study population includes 82 Companies on EGX 100 for the period under study represented in 11 sectors of various activities and to provide a good representation of the various sectors and industries operating within the Egyptian economy. This indicator is considered accurate for the Egyptian market. The following table show the study population divided into different sectors: -

Table (1): Percentage of Population representation in economic sectors listed on the Egyptian Stock Exchange (EGX100).

No.	Sectors	Number of companies	Percentage
1	Banking sector	8	8%
2	Basic Resources Sector	9	9%
3	Healthcare and medicine	6	6%
4	Automotive and industrial products and services	4	4%
5	real estates	18	18%
6	Tourism and Leisure	3	3%
7	Infrastructures	1	1%
8	Communications, media and information technology	6	6%
9	Food, drinks and tobacco	7	7%
10	Energy and support services	2	6%
11	Trade and distributors	1	1%
12	Transportation and shipping services	3	3%
13	Educational services	3	3%
14	Non-banking financial services	13	13%
15	Contracting and engineering construction	5	5%
16	Textiles and durable goods	3	3%
17	building materials	6	6%
18	Paper and packaging materials	2	2%
Totals		100	100%

Source:-by researchers using the Egyptian Stock Exchange website https://www.egx.com.eg/ar/MarketWatchSectors.aspx

3.4 Sample Size:

The researchers excluded the sectors of banks and insurance companies due to their different nature in the preparation of the financial statements. The researchers have set the following criteria, which should be available in the companies included in the sample:

1. They are listed on the Egyptian Stock Exchange during the study period.
2. They should not be liquidated or suspended during the study period.
3. The financial statements and all data for these companies should be available throughout the period study.
4. Availability of study variables in these sectors represented in firm value items.

5. The financial year of all companies under study ends on a consolidated date (full year) and the objective is to have accounting information of one lifetime.

If one of these criteria is not met in any company, this company should be excluded from the field of study, for any company to be part of the applied study; all these criteria must be met.

The following table shown number of companies subject to study within each sector and percentage per sector:-

Table (2): Percentage representation of companies subject to study

No.	Sectors	Number of Companies	Number of Observation	Percentage
1	Materials	16	160	19.51%
2	Consumer Discretionary	12	120	14.63%
3	Industrials	10	100	12.30%
4	Real Estate	20	200	24.39%
5	Consumer Staples	8	80	9.77%
6	Health Care & Pharmaceuticals	5	50	6.09%
7	Contracting & Construction Engineering	2	20	2.44%
8	IT, Media & Communication Services	5	50	6.09%
9	Trade & Distributors	2	20	2.44%
10	Basic Resources	1	10	1.22%
11	Utilities	1	10	1.22%
Total		**82**	**820**	**100%**

Source: - by researchers depending on specific conditions

3.5 Sources of Data Acquisition Data Sources:

The researchers relied on secondary data, where the necessary data were obtained to measure the study variables through the financial statements and board of directors reports published available on the websites of companies, and the Egyptian Stock Exchange website (www.egx.com.eg), and a direct information site Egypt (www.mubasher.info), the location of the investment (https://sa.investing.com), and the Thomson Reuters database (https://www.thomsonreuters.com/en.html), and for the period from 2014 to 2023.

3.6 Testing and Analyzing Of Data Related To the Study Hypothesis

This section deals with the analysis and testing of the hypotheses of the study, where the researchers presented the results of the statistical analysis using the statistical program (Eviews v.10) and also the Excel program was used to know the results of the equations for each variable, where the researcher studied: **the effect of Exchange Rate on the Firm Value of the Firms during the period from 2014 to 2023, based on annual data**. Researchers use statistical analysis procedures and methods to answer the study questions and study hypotheses as follows: **Descriptive Statistics:** Mean, Standard Deviation… Etc., **- Pearson Correlation:** **"to measure the relationship between Exchange Rate and Firm Value"and** **Simple Regression:** to measure the "The effect of the **Exchange Rate** X, (independent variables) on **Firm Value**" Y. (dependent variable).

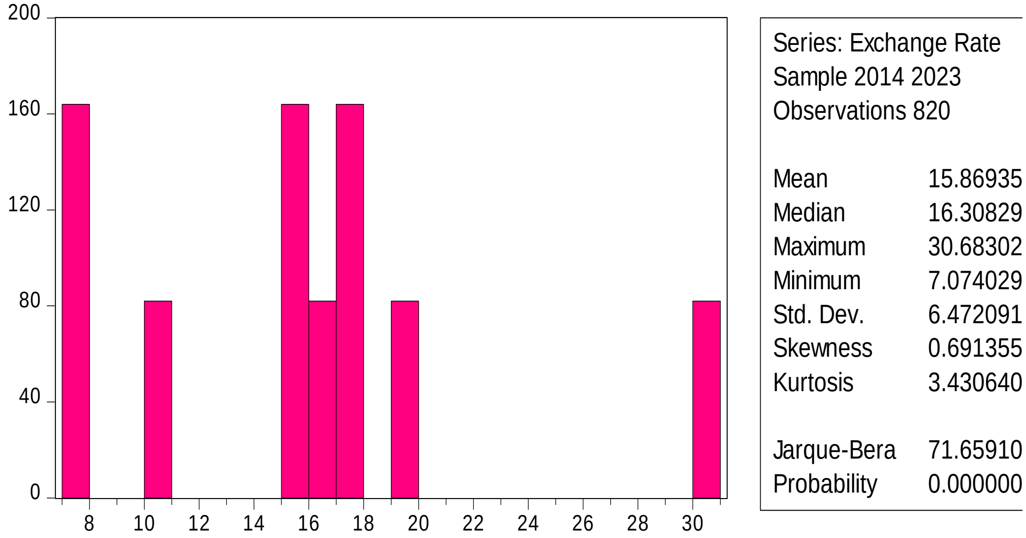
3.7 Study Hypotheses

H0: there is no statistically significant relationship between foreign currency exchange rate changes and firm value.

(A)The Descriptive Statistics for the Study Sample

Researchers will show the descriptive statistics that provide information on the characteristics of data used in the analysis in order to determine the attributes and trends of the research sample towards the study hypotheses, thus the below table will offer mean and Std. Dev.

Figure (2) Illustrates Descriptive Statistics For Independent Variables (Exchange Rate) (X):

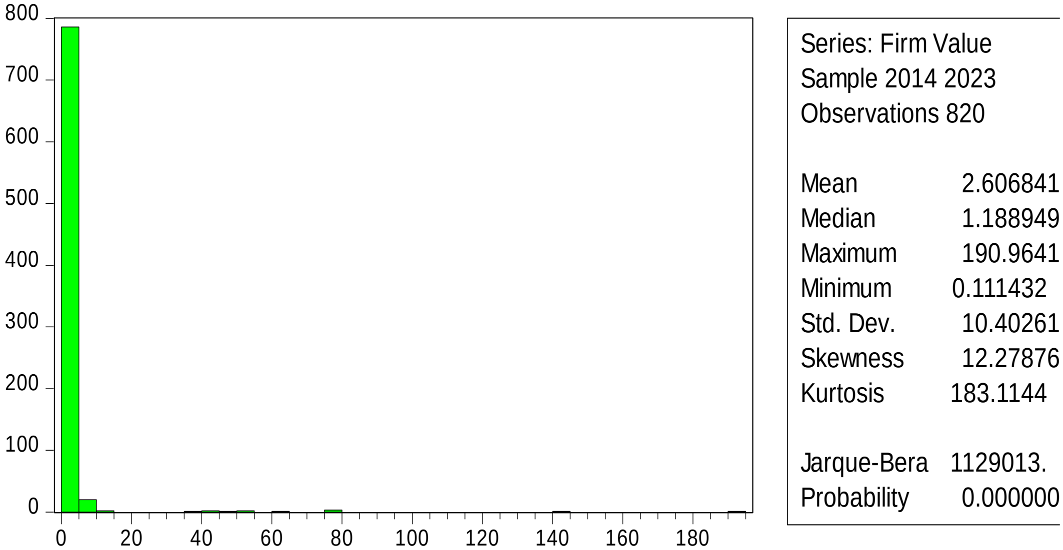


Source: Data processing output using Eviews v.10

It is clear that the average number of **Exchange Rate** in the period from 2014 to 2023 is **(15.87)** with a median of **(16.31)**, as the highest value reached during the period is **(30.68)** and the lowest value reached during the period is

(7.07) with a standard deviation of **(6.47)** (Standard deviation (abbreviated as "Std. Dev" or" SD") provides an indication of how far the values vary or deviate from its means. SD can be used as an indicator that determine how spread out the values this will help to identify whether they are concentrated around the mean) and the skew coefficient is positive **(0.69)** it indicates that the frequency distribution curve is skewed to the right with Kurtosis coefficient of **(3.430640), As the value of the Jarque-Bera Test: P 0.00 is less than 5%, therefore the variable does not follow the normal distribution**, Observations (**820**), Cross sections (**83**) (That is, the number of Firms is **820** Firms).

Figure (3) Illustrates Descriptive Statistics for Dependent Variables (Firm Value) (Y):



Source: Data processing output using Eviews v.10

It is clear that the average number of **The Firm Value** in the period from 2014 to 2023 is **(2.61)** with a median of **(1.19)**, as the highest value reached during the period is **(190.96)** and the lowest value reached during the period is **(0.11)** with a standard deviation of **(10.40)** (Standard deviation (abbreviated as "Std. Dev" or" SD") provides an indication of how far the values vary or deviate from its means. SD can be used as an indicator that determine how spread out the values this will help to identify whether they are concentrated around the mean) and the skew coefficient is positive **(12.28)** it indicates that the frequency distribution curve is skewed to the right with Kurtosis coefficient of **(183.11), As the value of the Jarque-Bera Test: P 0.00 is less than 5%,**

therefore the variable does not follow the normal distribution, Observations (**820**), Cross sections (**83**) (That is, the number of Firms is **820** Firms).

(B) Testing the Study Hypothesis Using Pearson Correlation

The correlation coefficient (Pearson Correlation) was used to measure the correlation between the variables of the study, and the table represents the results of the analysis of the correlation between the variables the independent variable (the Exchange Rate) and the dependent variable (The Firm Value) as follows:

Table (3): Results of Pearson Correlation analysis between dependent variable (The Firm Value) and independent variables (the Exchange Rate)

Covariance Analysis: Ordinary		
Date: 05/18/24 Time: 17:57		
Sample: 2014 2023		
Included observations: 820		
Correlation		
	Exchange Rate	**Firm Value**
Exchange Rate	**1.000000**	

Firm Value	**-0. 580101**	**1.000000**
Probability	**0.0157**	**-----**

Source: Data processing output using Eviews v.10

Looking at the previous table to determine the extent of the correlation between the variables, we can conclude the following:-There is an inverse correlation between dependent variable (The Firm Value) and independent variables (the Exchange Rate); the correlation coefficient between the two variables was (-0.58) at a significant level (.0157), which is less than (.05) this lead to The higher the independent variables (the Exchange Rate), the lower dependent variable (The Firm Value).It is clear from the previous table: that there is inverse and moderate correlation between the Exchange Rate and Firm Value of the Firms.

(c) Testing the Study Hypothesis Using Simple Linear Regression

Table (4): Results of regression analysis between dependent variable (The Firm Value) and independent variables (the Exchange Rate)

Dependent Variable: Firm Value					
Method: Least Squares					
Date: 05/18/24 Time: 17:58					
Sample: 2014 2023					
Included observations: 820					
Variable	**Coefficient**	**Prob.**	**F-statistic**	**Prob. (F-statistic)**	**R-squared**
Exchange Rate	-0.016328	0. 0157	0.084421	0.014776	0.336517
C	2.865950	0.0030			

Source: Data processing output using Eviews v.10

From the above table it is clear that:

Coefficient of determination (R^2): Explanatory power of the model or the value of coefficient of determination (**R-squared 0.336517**) means that the independent variables included in the model **(Exchange Rate)** explain almost (**33.65%)** from the variance in the dependent variable **(Firm Value)**.

Test the total quality of the regression model (F. Test): **F-Test** results indicates that the effect of the independent variable on the dependent variable is significant, because the level of significance= **0.014776** is less than **(.05 level of significance).**

The regression equation is as follows:

Firm Value = 2.865950+ -0.016328 Exchange Rate

According to the previously mentioned results, the researchers accept the alternative hypothesis "There is a significant effect of the Foreign Currency Exchange Rate changes on the Firm Value of the Firms"

The third section: Findings, recommendations and future studies

After presenting the theoretical side of the study and according to the data collected through the previously analyzed financial statements and after testing the hypotheses of the study, the researchers will present this section through the following point's findings, recommendations and future studies.

Findings

After discussion of the theoretical and applied aspects in this study, researchers reached to important findings for both theoretical and practical fields as follows: -

- The applied study and its conclusions are consistent with the theoretical study that the Foreign Currency Exchange Rate Changes effect on the firm value in in Arab Republic of Egypt
- Accepting the alternative hypothesis of the study hypotheses there is statistically significant relationship between Foreign Currency exchange rate and the firm value.
- Rejecting the null hypothesis of the study hypotheses there is no statistically significant relationship between Foreign Currency exchange rate and the firm value.

Recommendations

Based on the results of the study, the researcher suggests the following recommendations:-

1- **Training programs should be design and implemented to qualify accountants on knowing the effect of Foreign Exchange Rate Changes and to keep up to deal with new developments.**

1- Using new laws and legislation to overcome the consequences monetary policies changes
2- Continuous revision of the firm value during the era of digital transformation
3- Developing different digital transformation and stock market courses to include all items studied and discussed in this study.
4- Conducting more academic research on Foreign Currency exchange rate and its effect on financial reports user's decisions.

2- **Research Orientations and Future Studies**

Based on the results and recommendations of this study, the researchers suggest the following future studies: -

1- The Effect of Foreign Currency Exchange Rate Changes on Remote Audit in the Era of Epidemics.
2- The Impact of Big Data Analytics on Firm Value.
3- A Comparative Study between External Audit Activities and Internal Audit Activities in The Light of Firm Value.
4- The Effect of Artificial Intelligence on External Audit Activities and its Impact on firm Value.

5- The effect of Digital Transformation on Foreign Currency Exchange Rate Changes and its impact on firm value.
6- The effect of Investor Sentiment on Foreign Currency Exchange Rate Changes and its impact on firm value.
7- Studying the relationship between the inflation rate and the exchange rate.
8- The effect of digital transformation on stock market activities.
9- The effect of interest rate changes on the quality of disclosure in financial reports.
10- The effect of interest rate changes on small and medium-sized companies.

References

– Abdul R., M., I. (2007). Accounting measurement and enterprise value, the forum of the roles of accountants and auditors in maximizing the value of institutions, **the Arab Organization for administrative development**, 68-71.
– Adler, M., & Dumas, B. (1984). Exposure to currency risk: definition and measurement**. Financial management**, 41-50.
– Aggarwal, R. and Harper, J.T. (2010). Journal of international money foreign exchange exposure of ‘domestic’ corporations, **Journal of International Money and Finance**, 29 (8), 1619-1636.
– Agyei-Ampomah, S., Mazouz, K., & Yin, S. (2013). The foreign exchange exposure of UK non-financial firms: A comparison of market-based methodologies. **International Review of Financial Analysis**, 29(September), 251–260. https://doi.org/10.1016/j.irfa. 2012.05.006
– Ahmed, M., M., H. (2023). Measuring the Impact of Investor Sentiment on Stocks Liquidity and its Reflection on the Value of the Enterprise, **Master Degree in Accounting**, Faculty of Commerce, Cairo University, 1-128.
– Akani, H. W. (2024). Exchange Rate Fluctuations and The Performance of Small and Medium Scale Enterprises in Rivers State, Nigeria. **British International Journal of Applied Economics, Finance and Accounting**, 8(1), 1-25.
– Almas, N., Wijaya, C., Indriati, F., & Anindyaswari, S. (2021). The effect of hedging exchange rate risk, interest rate risk and commodity price risk with derivative instruments on firm value. **Management Science Letters**, 11(5), 1707-1714.

– Al-Sabbagh, A., A. (2019). The impact of the quality of accounting information on the risks of collapse of the stock prices of companies listed on the Egyptian Stock Exchange, **Journal of Accounting Thought**, Faculty of Commerce, Alexandria University, 23(4), 354-398.
– Arize, A. C., Campanelli Andreopoulos, G., Malindretos, J., Panayides, A., & Tsanacas, D. (2024). Navigating global finances: an in-depth analysis of foreign exchange exposure in multinational companies: insights from industry practitioners, 28(1), 3-10.
– Bacha, O.I., Mohamad, A., Raihan, S. and Mohd, S. (2013). Foreign exchange exposure and impact of policy switch – the case of Malaysian listed firms, **Applied Economics**, 45 (20), 2974-2984.
– Bartov, E., & Bodnar, G. M. (1994). Firm valuation, earnings expectations, and the exchange-rate exposure effect. **The journal of Finance**, 49(5), 1755–1785. https://doi.org/10.1111/j.1540-62611994.tb04780.x
– Besley, S., & Brigham, E. F. (2008). Essentials of managerial finance, 14e**. Thomson Higher Education**.
– Choi, J. J. (1986). A model of firm valuation with exchange exposure. **Journal of International Business Studies**, 17(2), 153–160. https://doi.org/10.1057/palgrave.jibs.8490430
– Choi, J.J. and Prasad, A.I. (1995). Exchange risk sensitivity and its determinants: a firm and industry analysis of US multinationals, **Financial Management**, 24 (3), 77-88.
– Chrystell, Flota. (2014). The Impact of Exchange Rate Movements on Firm Value in Emerging Markets: The Case of Mexico. **American Journal of Economics**, 4:51-72.
– Chue, T.K. and Cook, D. (2008). Emerging market exchange rate exposure, **Journal of Banking and Finance**, 32(7), 1349-1362.
– Dominguez, K. M. E., & Tesar, L. L. (2006). Exchange rate exposure. **Journal of International Economics**, 68(1), 188–218. https://doi.org/10.1016/j.jinteco.2005.01.002
– Eun, C.S. and Resnick, B.G. (2014), International Financial Management, 7th ed., **McGraw-Hill/Irwin**, New York, NY.
– Fraser, S. P., & Pantzalis, C. (2004). Foreign exchange rate exposure of US multinational corporations: a firm-specific approach. **Journal of**

Multinational Financial Management, 14(3), 261–281. https://doi.org/10.1016/j.mulfin.2003.07.008

- Güney, İ. E., Kazdal, A., Küçüksaraç, D., & Yılmaz, M. H. (2021). Exchange Rate Sensitivity of Firm Value: Evidence from Nonfinancial Firms Listed on Borsa Istanbul. **Handbook of Research on Emerging Theories, Models, and Applications of Financial Econometrics**, 141-165.
- Hajra, Ihsan., Abdul, Rashid., Anam, Naz. (2018). Exchange Rate Exposure and Firm Value: An Assessment of Domestic versus Multinational Firms. Lahore **Journal of Economics**, 23(1):51-77. doi: 10.35536/LJE.2018.V23.I1.A3.
- Han, D., Zhang, H., & Zhang, Z. (2019). Exchange rate fluctuations, firm dynamics, and exporting behavior: Evidence from Japanese manufacturing firms. **Journal of the Japanese and International Economies**, 51, 65-79.
- Hawkins, G. B. (2018). Professional Practice Guide. **Business Valuation Manual**, 8-150.
- Hashchyshyn, A. (2020). How does the interest rate influence the exchange rate?. 626052572.
- Hekman, C.R. (1983). Measuring foreign exchange exposure: a practical theory and its application, **Financial Analysts Journal**, 39 (5), 59-65.
- Hekman, C.R. (1985). A financial model of foreign exchange exposure, **Journal of International Business Studies**, 16 (2), 83-99.
- Hutson, E., & O'Driscoll, A. (2010). Firm-level exchange rate exposure in the Eurozone. **International Business Review**, 19(5), 468–478. https://doi.org/10.1016/j.ibusrev.2009.02.007
- Ibrahim, T., W. (2020). Assessing the impact of the relationship between the application of enterprise resource planning systems " ERP "and the value of the organization: a field study, **Journal of Accounting Thought**, Faculty of Commerce, Ain Shams University, 24(3), 1-62.
- Jorion, P. (1990). The exchange-rate exposure of US multinationals, **The Journal of Business**, 63(3), 331-345.
- Khan, A., & Qureshi, M. A. (2023). Modelling the dynamics of firm valuation: An assessment of impact of exchange rate fluctuations on firm value using system dynamics. **Systems Research and Behavioral Science**, 40(6), 890-900.

- Kiymaz, H. (2003). Estimation of foreign exchange exposure: an emerging market application, **Journal of Multinational Financial Management**, 13(1), 71-84.
- Kurniawati, A. W., Samrotun, Y. C., & Wijayanti, A. (2023). Determinan Firm Value pada Perusahaan Property dan Real Estate Tahun 2017-2021. **Ekonomis: Journal of Economics and Business**, *7*(1), 508-514.
- Lin, C. (2011). Exchange rate exposure in the Asian emerging markets, **Journal of Multinational Financial Management**, 21 (4), 224-238.
- Liu, S. (2024). Impact of Exchange Rate Fluctuation on Import and Export Enterprises in China and Japan and Countermeasures. **Highlights in Business, Economics and Management**, 24, 322-330.
- Mansour, S., M., A., Fares, Z., S., & Walley, N. (2023). Assessing the role of applying International Financial Reporting Standards (IFRS) in reducing information asymmetry in order to maximize the value of the Enterprise, **Journal of Financial and Commercial Research**, Faculty of Commerce, Port Said University, 24(1), 384-406.
- Marston, R. C. (2001). The effects of industry structure on economic exposure. **Journal of International Money and Finance**, 20(2), 149–164. https://doi.org/10.1016/S0261-5606(00)00052-8
- Mohammed, A., N. (2013). The extent to which financial analysis tools harmonize with the information content of the cash flow list: an analytical study based on the data of a number of international companies, **Journal of Economic Sciences**, Faculty of management and Economics, University of Baghdad, 34, 327-358.
- Mozumder, N., de Vita, G., Larkin, C., & Kyaw, K. S. (2015). Exchange rate movements and firm value. **Journal of Economics Studies**, 42, 561–577. https://doi.org/10.1108/JES-02-2014-0029
- Muller, A. and Verschoor, W.F.C. (2007). Asian foreign exchange risk exposure, **Journal of Japanese International Economics**, 21(1), 16-37.
- Muller, A., & Verschoor, W. F. (2006). Asymmetric foreign exchange risk exposure: Evidence from US multinational firms. **Journal of Empirical Finance**, 13(4–5), 495–518. https://doi.org/10.1016/j.jempfin.2006.01.003

- Musa, Z., and Yahaya, O., A. (2023). Corporate Governance and Firm Value, Budapest International Research and Critics Institute (BIRCI-Journal) **Humanities and Social Sciences**, 6(4):204-220, DOI:10.33258/birci.v5i3.605x
- Nasr, Abd El-Wahab & Al-Serafi, A., A. (2015). The impact of the level of ethical commitment of Financial Accountants on the quality of financial reports applied to companies listed on the Egyptian Stock Exchange, **Journal of accounting and auditing**, AUJAA-Beni Suef University, 3(2), 1-53.
- Nouvel, H., N., S., E. (2020). The relationship between operational sectoral reports and approaches to determining the value of an enterprise: a field study, **Journal of Business Studies and Research**, Faculty of Commerce, Benha University, 40(3), 293-320.
- Obaid, S., T., Qandil, A., & Abdo, H. (2021). Financial management is the entrance to making and making decisions to maximize the value of the enterprise, **Faculty of Commerce**, Ain Shams University, 381-424.
- Rivandi, M., & Petra, B. A. 2022. Pengaruh ukuran perusahaan, leverage, dan profitabilitas terhadap nilai perusahaan pada perusahaan sub sektor makanan dan minuman. **Jurnal Inovasi Penelitian**, 2(8), 2571–2580.
- Shapiro, A.C. (1975). Exchange rate changes, inflation, and the value of the multinational corporation, **The Journal of Finance**, 30 (2), 485-502.
- Sikarwar, E. (2018). Exchange rate fluctuations and firm value: Impact of global financial crisis. **Journal of economic studies**, *45*(6), 1145-1158.
- Simaˇkova, J. (2017). The impact of exchange rate movements on firm value in Visegrad countries. **Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis**, 65(6), 2105–2111.https://doi.org/10.11118/actaun201765062105
- Šimáková, J. (2017). The Impact of Exchange Rate Movements on Firm Value in Visegrad Countries. **Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis**, 65(6), 2105-2111.
- Wijaya, N. S., & Fitriati, I. R. 2022. Pengaruh likuiditas, ukuran perusahaan, profitabilitas, dan struktur modal terhadap nilai perusahaan. Fair Value**: Jurnal Ilmiah Akuntansi Dan Keuangan**, 4(12), 5606–5616.

- http://www.egx.com.eg/Arabic/MarketWatchSectors.aspx
- http://www.egx.com.eg/Arabic/Services_Reports.aspx
- https://sa.investing.com
- https://www.investor.gov/introduction-investing/investing-basics/glossary/liquidity-or-marketability
- https://www.mubasher.info/markets/EGX/indices/EGX100
- https://www.thomsonreuters.com/en.html
- www.egx.com.eg