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RESPONSE OF SHAREHOLDER VALUE VARIATION FOR INFLATION IN THE IRAQI ECONOMY MEDIATED BY STOCKS PRICING EFFICIENCY

(An applied of a number of institutions registered in the Iraq Stock Exchange)

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A B S T R A C T

The aims of research test the effect of Inflation as one of the macroeconomic factors affecting investment activities, on shareholder value that measured by of Economic value added as a primary goal that the company seeks to maximize through achieving a return on capital that exceeds its cost in the stock market, and the extent of the change that occurs when entering Efficiency of stock pricing as a mediating variable, so in order to test the relationship of influence, the researcher intended to identify (10) institutions works in the Iraqi market and shares are registered in the Iraq Stock Exchange for the period extending from (2011-2020) monthly, from different sectors (banking, industrial, service), so The data will be of the type (Panel Data) with number of observations (1200), to measurement of inflation variable was using the consumer price index, shareholder value variable by added market value, and the pricing efficiency variable by the Treynor model, so for testing the mediation hypotheses using dynamic models were adopted, specifically the generalized moments model (GMM), results showed that there is a direct positive effect of inflation on shareholder value, as well as an indirect positive effect of inflation on shareholder value through pricing efficiency.

K E Y W O R D S

Shareholder value, inflation, pricing efficiency, economic value added, generalized moments model.

Introduction

Traditionally, at the financial management level, the goal of companies is achieve and increase profits, but differ in agreeing on this goal as must be taken into account, such as survival, sustainability, avoiding financial distress , bankruptcy, increasing sales, and other goals that, do not reflect the nature of the primary goal (the intention)? And it is in whose interest?, and how to manage the conflict to balance the interests of the manager and shareholders, shareholders and debits, and the need for survival and social responsibility. But many experts believe that maximizing shareholder value is the fundamental goal of financial management and companies. Investors who have invested their money in the financial assets of companies in the financial markets expect that companies will work to maximize their wealth by creating Economic value added to their shares that exceeds their book value, so maximizing earnings per share. Therefore, it is necessary to study a group of factors that could generate an impact or create a variation in shareholder value, and One of them and foremost is inflation as a macroeconomic factor. Stock trading in the financial market depends, in terms of volume and values, on the stability of factors that generate systemic risks, which can be reflected in market performance and then in the values of traded companies' shares and the extent of their ability to achieve levels exceeding their nominal value according to inflation rates. Accordingly, the value depends on An investor who contributes to the capital of a number of companies with the aim of maximizing his wealth from his limited resources, based on a set of factors and higher growth possibilities if efficient pricing is achieved based on the closeness of the market values of shares to their real values, subject to the alignment between the cash flows expected from investing in them and the amount of compensation for the risks resulting from them. According to the above, the problem can be summarized: the extent of the effect of inflation on the in shareholder value variation with the presence of pricing efficiency as an intermediary variable. Thus, the research can aim to determine the causal relationship between inflation and the variation occurring in shareholder value, and estimating it through the role The mediator of pricing efficiency, as well as the possibility of revealing aspects of strength in the financial market by describing the economic and financial measures used and the mechanisms that help the shareholder to maximize his wealth. Therefore, the importance of research is focused in particular on the worsening phenomenon of inflation and the increase in price levels and then the decline in the purchasing power of money at a time when The ability of companies to achieve profitable returns on investment in their shares declines as a result of their prices falling or rising, but at rates less than the increase in inflation rates, and thus they lose their ability to achieve Economic value addedthat enables them to continue carrying out their activities without the need to increase their capital and avoid expanding the ownership base. It is hoped that the current research will serve as a serious scientific attempt to study the mechanism of avoiding the negative effects resulting from the rise in price levels and the erosion of the value of the currency, and then the decline in the performance levels of the entire financial market and the resulting negative effects on the decline in the ability of companies listed in the financial market itself in terms of their failure to Achieving added market value.

2. Literary Review

Investment activities in the market are affected by many factors that may enhance trading and thus maximize shareholder value, that is, maximize the value of assets traded in the market. According to (Thenmozhi ,2000), maximizing shareholder value has always been the ultimate goal of every

company, so investors must be very careful to evaluate The financial performance of companies is linked to the wealth of shareholders. It is clear that value-based measures that measure performance in terms of change in value receive great attention, and as a result (Omran et al., 2001), confirmed that the inflation rate has an impact on the performance of the stock market in general, emphasized (Konchitchki,2011) By studying the impact of inflation on financial statements, the results of inflation on companies may explore future cash flows, that is, gains and losses are transformed into cash flows and large returns that are unusual for trading strategies based on inflation. It is also clear that stock prices move as if investors do not They fully distinguish between cash and non-cash assets, which is key to determining the effects of inflation. Within the framework of determining the impact of inflation on liquidity in the stock market, (Jepkemei,2012) pointed out that there is a negative relationship between stock market liquidity and inflation, in contrast to Fisher's hypothesis, by highlighting the process of price discovery in the market that indicates that investors fail to determine The impact of inflation on stocks in the stock market. On the other hand, (Asri,2017) expanded the experimental test to include studying the importance of inflation, exchange rates, Economic value added, and capitalization, as they are important variables in determining the economic situation, and it becomes clear that inflation and Economic value have a negative impact on the performance of companies.

Inflation:

The concept of inflation was first used in the United States during the Civil War in 1861, which expressed the excessive issuance of money in order to cover the growing war expenses, but it changed after World War II to express the issuance of money without cover, and after that it continued to develop to indicate the continuous rise in the general level of prices over time. (Touati, 2020:15), or it is "the percentage of annual price increases" (Youssefat, 2021:68), "the continuous rise in the general level of prices that leads to a decline in the value of the currency, and a decline in purchasing power due to the imbalance between the demand for goods and services." And the supply of it, or an increase in the quantity of money in circulation without being matched by a real increase in production, which leads to a total imbalance" (Ben Zarrouk, 2021: 50). Inflation rates may vary significantly over time and depending on the country, when the inflation rate reaches a very high level With prices changing daily or hourly, the economy tends to function poorly, and high inflation quickly erodes the purchasing power of money, forcing people to spend their money as soon as they have it (Abel et al, 2011). Inflation may be generated due to an increase in aggregate demand as a result of any of the factors such as a decrease in the interest rate, an increase in the amount of money, an increase in government spending, a reduction in taxes, an increase in exports and an increase in investment (Parkin, 2016), thus consumer spending increases, which may not be matched by a real increase in production and thus decreases. Purchasing power and inflation occurs (Baranzini et al, 2005), and increases in production costs may lead to inflation as a result of the increase in cash directed to compensate for the decrease in the supply of energy and raw materials (Parkin, 2016). Inflation may also be attributed to the influence of structural factors (Totonchi, 2011).

Shareholder value:

Financial management is responsible for achieving optimal compatibility between the conflicting goals of stakeholders, ensuring that the value of the entity or shareholders is enhanced, according to

the cash flows generated by the financial markets (Schuster, 2000), and the change in the company's investment over time can be considered a reflection of the value of the company. Shareholders, i.e. stock values (Johnson, 2001), also represent the difference between the wealth held by shareholders at the end of a given year and the wealth they owned in the previous year (Fernández, 2001). Shareholders look at the company's prospects and their expectations for future performance along with market trends (stock price fluctuations), thus two directions are generated in determining the source of value, internally as a result of companies' performance or externally as a result of future expectations (Lafrenz, 2004). Creating shareholder value depends on the company's cash flows exceeding their expectations by making the optimal decision, especially the investment decision to ensure the ownership of successful current investments (Mishkin, 2015), and adding new promising investments that require continuous evaluation of the portfolio (Asaf, 2004). Managers may lack accuracy in finding a balance between different interests, so they do not focus more on maximizing shareholder value, which does not always mean maximizing share price, and thus failure to do so is a sign of administrative inefficiency in theory (Yan, 2019), but it may harm The company seeks this goal in the long term as a result of the procedures it follows to maximize shareholder value, which may be reflected in the erosion of consumer confidence (Stout, 2012).

Pricing efficiency:

(Samuelson, 1965) is the first to provide economic justifications for an efficient market, and (Fama, 1965) emphasized that, in light of the available information, the actual prices at each estimated point must reflect well, and thus efficient financial markets are able to absorb directly and instantly all new information (Hall, 2012). In general, stock prices respond primarily to fluctuations of supply and demand forces (Gusni, 2016), because of a wide range internal and external factors (Subing et al., 2017), and pricing efficiency is not only the extent to which the information is reflected, but also the sensitivity to the direction of the information (He& Fang, 2019), and since prices always accurately reflect information, they are good signals of value and encourage better allocation of capital, so pricing efficiency crucially depends on information (Zhao & Pu, 2014). From the above, pricing efficiency can be defined as the degree to which stock prices reflect all available information, in a timely and accurate manner (Saffi, 2008:8), and it is also known as the speed with which new information reaches market traders without a large time lag and without them incurring high costs. Stock prices reflect all available information, and all investors have the opportunity to obtain that information at the same level of returns, but a small number of investors can achieve extraordinary returns, as this depends on how the information is analyzed (Chhabra & Gupta, 2020).

3. Methodology

3.1 Research sample

In order to test the experimental influence relationship between the research variables, the Iraqi market was chosen as a research community, which is characterized by being an emerging market and includes a number of companies and financial institutions. To test this relationship, a number of companies and banks operating in the Iraqi market and registered in the Iraqi Stock Exchange were selected to include the sample (10) institutions for the period 2011 - 2020. Accordingly, approximately (1,200) observations will be generated on a monthly for each company and for the period referred to. The availability of data, the establishment of the company, and the date of its

registration in the Iraq Stock Exchange were the basis for determining the form of the sample, which includes Table (1) Research sample:

Table (1) Research sample

Sector	Company	code
Banking sector	Trade Bank of Iraq	DOCI
	Bank of Baghdad	BBOB
	Al-Ahly bank	BNOI
	Kurdistan Bank	BKUL
Industrial sector	The Iraqi Company for Meat Production and Marketing	IBSD
	The Iraqi company for the production of carpets and furniture	IITC
	Baghdad Soft Drinks Company	SBPT
Service sector	Babylon Hotel	HBAY
	Baghdad Hotel	HMAM
	Al Mansour Hotel	AMEF

3.2 Measuring variables

Table (2) show a tools were measurement variables:

Table (2) Measures of research variables

variable	code	Measuring
Inflation	**X**	**Consumer Price Index = Cost of the index basket of the current period / Cost of the index basket of the previous period ..... (1)**
Shareholder Value	**Y**	**Economic value added= Net operating profit after taxes - cost of capital …(2)**
Pricing Efficiency	**Z**	**Treynor model : $T = \frac{(Ri-Rf)}{\beta i}$ ……. (3)** **So Ri is the average monthly stock return, and is calculated : $R_i = \frac{P_t - P_{t-1}}{P_{t-1}}$** **Rf: Risk-free rate of return** **βi :The systematic risk of a stock is calculated :$\beta = \frac{Cov_{i,m}}{\sigma_m^2}$**

Table (3) shows inflation rates at the monthly level and for the period from 2012 to 2021, and according to the consumer price index shown in Equation (1), which measures the prices of a number of market basket goods purchased by families, and the general rate of inflation during the research period was (1.86). With a standard deviation of (2.33) and a variance of (123%), which confirms the large variation in inflation values for the period covered by the research, the sample for the period under study recorded the highest inflation rate of (8.7) in the month of April 2012, and across years the year (2011) was recorded. The highest inflation rate was with an average of (5.61). These levels in that period can be attributed to the significant expansion in government operating spending and the rise in salaries of workers in the public sector. In contrast, the sample for the period under study recorded the lowest inflation in August of 2019 with a value of (-1.6) and an average of the same.

The year (-0.21), which reflects the reality of the effects of the pandemic that caused a recession in most global economies.

Table (3) Inflation rates for the period 2011-2020 in the Iraqi economy

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Jan	5.8	5.4	2.8	4	-0.4	-0.9	-0.9	0.4	0.6	0.5
Feb	5.9	5.7	2.2	3	0.3	1.5	-0.8	-0.1	0.4	1
Mar	5	8.3	1.3	2	0.2	1.8	0.3	-0.8	1.4	0.6
Apr	5.8	8.7	1.2	1.5	0.5	2.1	1	-1.3	0.7	0.2
May	6.6	7.2	1.1	1.4	1.7	2.5	0.1	0.7	-0.8	0.7
Jun	6.1	5.8	2.3	2.3	2.2	0.1	-0.1	1.7	-1	0.1
Jul	6.2	5.7	2.5	2.3	2.6	-0.4	0.7	1.5	-1.6	-0.1
Aug	5.2	7	0.1	2.7	2.6	0.2	0.2	0.2	-0.3	0
Sep	5.1	6.4	0.3	2.1	2.1	0.3	0.4	0.1	-0.9	0.5
Oct	4.8	4.8	3.1	0.9	1.6	0.2	0.1	1.1	-0.8	0.7
Nov	4.8	4.5	2.7	3	1	-1	0.7	0.8	-0.3	-0.3
Des	6	3.6	3.1	1.6	2.3	-0.7	0.8	-0.1	0.1	3.2
AV.	5.61	6.09	1.89	2.23	1.39	0.48	0.21	0.35	-0.21	0.59
STD.	0.60	1.51	1.05	0.85	1.04	1.21	0.59	0.88	0.87	0.91
CV.	0.11	0.25	0.56	0.38	0.74	2.55	2.85	2.52	-4.17	1.53

Table (4) in the appendices shows the shareholder value of the companies in the research sample, measured using the added market value, which is the value of the company's equity, which is calculated by finding the difference between the value of the enterprise and the capital invested in it. It is a measure of financial performance that is similar to any other traditional measures in achieving real economic profits for any business. A company, and the Economic value added derives its importance by measuring the economic value of the business after considering the cost of capital, including the cost of debt and the cost of equity. It is clear that it is a measure of performance most closely related to the creation of shareholders' wealth over time for the company's business. The results have shown that the Baghdad Company Soft drinks achieved the highest Economic value addedat the level of the research sample for the period (2011-2020) in the month of March, amounting to (56,200) million for the year 2018, with an average value of (46,100) at the company level, as well as an average value of (22,900) million at the level of the research sample and for the same companies, In contrast, the Iraqi Trade Bank recorded the lowest Economic value added across all observations of the research sample (-270) million dinars in October of 2016, with an average at the company level of (-230) million, and an overall average for the sample of (1600) thousand dinars. On the other hand, Table (5) in the appendices shows the results of calculating the Treynor model in evaluating investment portfolios and is considered a measure of pricing efficiency. It is clear that the Iraqi Company for Furniture and Carpet Production achieved the highest average evaluation factor of (5.22) in the year 2011, while the Bank of Baghdad recorded in the year 2013 had the lowest average evaluation factor of (0.0003), while at the level of the sample of institutions surveyed, the Iraqi Trade

Bank recorded the highest average evaluation factor for the period studied (2011-2020) by (0.57), while the bank recorded the lowest average evaluation factor for the period (2011-2020).) by (-6.3).

3.3 Testing research hypotheses

The nature of the research variables, as well as the number of institutions and the period it covers on a monthly level, extending from (2011-2020), was imposed, which led to the generation of an average of (1200) views for each variable of the type (Panel Data). This type of data provides many characteristics that are not available in Cross-sectional or longitudinal data (Baltagi &Baltagi, 2008:7). To ensure the validity of the hypothesis test, the data was tested and found that it was not normally distributed at a significance level higher than (0.05). Although transformations were performed according to Tukey's ladder, it was not normally distributed. On the other hand, the test results showed stability. The data is used using the Dickey Fuller model and it is stable at a significance level (0.000). Based on the above, dynamic estimation models can be used for Panel Data, which is characterized by being unbiased and consistent with static time series and bypassing the problems of autocorrelation. Depending on the structure of the data, the moments model will be adopted. Generalized (GMM) which includes:

$$Yit=\lambda Y_{i,t-1}+\beta X_{it}+\mu+\varepsilon_{it}\ldots\ldots\ldots\ldots\ldots\ldots..(4)$$

To test the research hypotheses according to the hypothetical model in Figure (1), STATA software will be adopted:

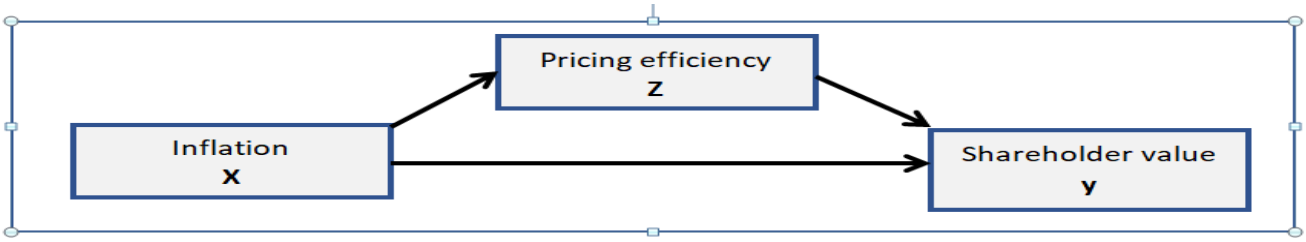

Figure (1) Hypothetical model

3.4 Results

The results of the hypothesis test are shown in Table (6). The first hypothesis H1-1 was recorded, which states: There is a statistically significant effect of inflation as an independent variable on shareholder value measured using Economic value added as a dependent variable at the level of the research sample for the period (2011-2020). The impact factor reached (0.459), which confirms the existence of a direct influence of inflation on the added market value, which is statistically significant at a level of significance (0.002). It means that the increase in steadily rising inflation rates at the level of the Iraqi economy will lead to enhancing shareholder value, with a coefficient of determination (R2) by (0.482), meaning that the effect of inflation explains the change in shareholder value by (48.2%), while the remaining (51.8%) is explained by other variables not observed in the research. Thus, the test results deny the null hypothesis and confirm the alternative hypothesis, which states: A statistically significant effect of inflation on shareholder value at the level of the research sample. The second hypothesis H1-2 was recorded, which states: There is a statistically significant effect of the inflation variable as an independent variable on the pricing efficiency variable as a dependent variable. The influence factor reached (1.90), which confirms the There is a relationship of direct influence of inflation on value and pricing efficiency, at a significant level (0.404), which is not statistically significant. This means that inflation does not explain the change in pricing efficiency.

Thus, the test results confirm the null hypothesis which states: There is no statistically significant effect of inflation on pricing efficiency. Pricing at the level of the research sample. The third hypothesis H1-3 was recorded, which states: There is a statistically significant effect of pricing efficiency as an independent variable on shareholder value measured using the Economic value added as a dependent variable and with the presence of the inflation variable as a control variable at the level of the research sample for the period (2011- 2020), and the impact factor reached (0.155), which confirms the existence of a direct impact relationship of pricing efficiency on added market value, which is statistically significant at a level of significance (0.009), which means that the increase in pricing efficiency will reflect positively on shareholders' value and lead to its decline, with a coefficient of determination (R2) by (0.33), meaning that the effect of pricing efficiency explains the change in shareholder value by (33%), while the remaining (67%) is explained by other variables not observed in the research. Thus, the test results negate the null hypothesis and confirm the alternative hypothesis, which states: : There is a statistically significant effect of pricing efficiency as an independent variable on shareholder value measured using the Economic value added as a dependent variable and with the inflation variable as a monitoring variable. Finally, the test of the fourth hypothesis H1-4 was recorded, which is the mediation hypothesis which states: There is a statistically significant effect of the variable. Inflation in shareholder value is mediated by stock pricing efficiency, using Structural Equation Modeling (SEM) at the level of the research sample for the period (2011-2020). The impact factor reached (0.561), which confirms the existence of a direct influence of inflation in shareholder value with the presence of pricing efficiency as a mediating variable. The function is statistically significant at a level of significance (0.000), which means that the increase in the volume of inflation will positively affect shareholder value to a lesser extent in the presence of pricing efficiency as a mediator than directly, and with a coefficient of determination (R2) of (0.275), meaning that the effect of pricing efficiency explains the change in value. Shareholders accounted for (27.5%), while the remaining (72.5%) was explained by other variables not observed in the research. Thus, the test results negate the null hypothesis and confirm the alternative hypothesis, which states: There is a statistically significant effect of the inflation variable on shareholders' value, mediated by pricing efficiency.

Table (6) Hypothesis test results

Model: Generalized moments model (GMM) **Number of views: 1200** **Cross section : 10** **Time: 1/2011 - 12/2020 (monthly)**					
Path	**Ceof.**	**Err.**	**Z**	**P>IZI**	**R^2**
Inflation → Shareholder value	0.459	0.838	1	0.002	0.482
Inflation → Pricing efficiency	1.90	2.272	3.7	0.404	0.274
Pricing efficiency → Shareholder value	0.155	0.010	3.95	0.009	0.330
Inflation → Pricing efficiency →Shareholder value (SEM)	0.561	0.743	3.64	0.000	0.275

4. Conclusions

It is clear from the results of measuring the research variables that there is a growth in the Economic value added in general for the companies in the research sample for the period under investigation, and it is certainly attributable to several macroeconomic reasons, most notably inflation as the main explanatory variable in this research. The test results showed the presence of a direct effect and therefore it will be directly reflected in The share price directly, which leads to the emergence of a gap between the real price and the nominal price of the share. It is clear that the accurate reflection of information in the market in share prices will enhance this effect, and thus the mediation of the efficiency of pricing shares in the market enhances the effect of inflation on shareholder value because it will maximize the The returns increase and the gap between the Economic value and the book value of capital assets, despite the fact that there is no significant effect of inflation on pricing efficiency, which means that the fluctuation of inflation rates will significantly affect pricing efficiency directly.

References

1. Chhabra, D., & Gupta, M. (2020). Market Efficiency And Calendar Anomalies In Commodity Futures Markets: A Review. Agricultural Economics Research Review, 33(2), 263-277
2. Abel, A, B,, Bernanke, B, S,, & Croushore, D, (2011), Macroeconomics, 7th.
3. Asaf, S. (2004). Executive Corporate Finance: The Business Of Enhancing Shareholders Value. Pearson Education.
4. Asri, M. (2017). The Influence Of Inflation, Exchange Rate, Economic value Added And Market Capitalization Value On Stock Price. The Influence Of Inflation, Exchange Rate, Economic value Added And Market Capitalization Value On Stock Price (May 1, 2017).
5. Baranzini, M,, & Cencini, A, (2005), *Inflation And Unemployment: Contributions To A New Macroeconomic Approach*, Routledge,
6. Ben Zarrouk, I. (2021) Inflation, its measurement and effects with application to the Algerian economy, doctoral thesis in economic sciences, University of Algiers.
7. Fernández, P. (2001). A Definition Of Shareholders Value Creation. Social Science Research Network.
8. Gusni, T. (2016). Factors That Affect Stock Pricing In Indonesia Stock Exchange. In 8th Widyatama International Seminar On Sustainability (WISS). Https://Www. Researchgate. Net/Publication/313036497.
9. Hall, J. H. (2012). Variables Determining Shareholder Value Of Industrial Companies Listed On The Johannesburg Stock Exchange (Doctoral Dissertation, University Of Pretoria).
10. He, Q., & Fang, C. (2019). Regulatory Sanctions And Stock Pricing Efficiency: Evidence From The Chinese Stock Market. Pacific-Basin Finance Journal, 58, 101241.
11. Jepkemei, B. (2012). The Impact Of Inflation On Stock Market Liquidity: The Case Of Nairobi Securities Exchange (Doctoral Dissertation, University Of Nairobi).
12. Johnson, R. (2001). Shareholders Value-A Business Experience. Elsevier.
13. Konchitchki, Y. (2011). Inflation And Nominal Financial Reporting: Implications For Performance And Stock Prices. The Accounting Review, 86(3), 1045-1085.
14. Lafrenz, K. (2004). Shareholders Value-Orientierte Sanierung: Ansatzpunkte Und Wertsteigerungspotenzial Beim Management Von Unternehmenskrisen. Springer-Verlag.

15. Omran, M., & Pointon, J. (2001). Does The Inflation Rate Affect The Performance Of The Stock Market? The Case Of Egypt. Emerging Markets Review, 2(3), 263-279.
16. Parkin, M, (2016), Microeconomics, Pearson Education,
17. Saffi, P. A., & Sigurdsson, K. (2011). Price Efficiency And Short Selling. The Review Of Financial Studies, 24(3), 821-852.
18. Schuster, L. (2000). Shareholders Value Management In Banks. Springer.
19. Stout, L. A. (2012). The Shareholders Value Myth: How Putting Shareholderss First Harms Investors, Corporations, And The Public. Berrett-Koehler Publishers.
20. Subing, H. J. T., & Kusumah, R. W. R. (2017). An Empirical Analysis Of Internal And External Factors Of Stock Pricing: Evidence From Indonesia. Problems And Perspectives In Management, 15(4), 178-87.
21. Thenmozhi, M. (2000). Economic value Added And Share Price Behavior. Delhi Business, 1(1), 35-42.
22. Totonchi, J, (2011, July), Macroeconomic Theories Of Inflation, In International Conference On Economics And Finance Research (Vol, 4, No, 1, Pp, 459-462),
23. Touati, S. (2022). Policies to combat inflation in Algeria. Doctoral thesis in economic sciences, University of Algiers.
24. Yan, M. (2019). Corporate Social Responsibility Versus Shareholders Value Maximization: Through The Lens Of Hard And Soft Law. Nw. J. Int'l L. & Bus., 40, 47.
25. Youssefat, A. (2021) The Threshold of Inflation and Economic Growth, Al-Bahith Magazine, No. 11 pages (67-73)
26. Zhao, Z., & Pu, Y. (2014, November). The Study Of Stock Pricing Efficiency In Shanghai Stock Market—An Empirical Research Based On Spring Oscillator Theory. In 2014 International Conference On Mechatronics, Electronic, Industrial And Control Engineering (MEIC-14) (Pp. 764-768). Atlantis Press.

Appendix(1)

Table (4) Economic value added by the companies in the study sample during the study period

	DCOI	BBOB	BNOI	BKUL	SBPT	IITC	IBSD	AMEF	HBAY	HMAN
1-2011	7.12E+09	-4.7E+08	8.9E+09	5.4E+09	0	0	0	1.08E+11	5.23E+10	3.65E+10
Feb-11	7.4E+09	-4.7E+08	8.25E+09	6.03E+09	6.63E+10	1.87E+09	2.4E+10	1.05E+11	5.47E+10	3.75E+10
Mar-11	8E+09	-4.7E+08	8.25E+09	6.18E+09	1.01E+11	1.76E+09	2.27E+10	1.11E+11	5.6E+10	3.5E+10
Apr-11	8E+09	-4.7E+08	7.5E+09	6.6E+09	1.06E+11	1.9E+09	2.27E+10	1.21E+11	5.27E+10	3.51E+10
May-11	8E+09	-4.7E+08	6.95E+09	5.46E+09	8.25E+10	1.89E+09	2.27E+10	1.2E+11	5.27E+10	3.32E+10
Jun-11	8E+09	-4.7E+08	6.95E+09	5.46E+09	8.25E+10	1.89E+09	2.27E+10	1.2E+11	5.27E+10	3.32E+10
Jul-11	8E+09	-4.7E+08	6.5E+09	7.2E+09	9E+10	1.73E+09	2.34E+10	1.2E+11	5.27E+10	3.27E+10
Aug-11	8E+09	-4.7E+08	5.55E+09	7.2E+09	1.31E+11	1.72E+09	2.49E+10	1.14E+11	5.72E+10	3.46E+10
Sep-11	8E+09	-4.7E+08	5.55E+09	7.2E+09	1.25E+11	1.78E+09	2.56E+10	1.04E+11	5.12E+10	3.46E+10
Oct-11	5.89E+09	-4.7E+08	5.55E+09	7.2E+09	8.38E+10	1.83E+09	2.63E+10	1.04E+11	4.86E+10	3.85E+10
Nov-11	5.37E+09	-4.7E+08	4.85E+09	7.2E+09	6.25E+10	2E+09	2.55E+10	1.05E+11	4.68E+10	3.85E+10
Des-11	5.89E+09	-4.7E+08	4.45E+09	7.35E+09	6.75E+10	2E+09	2.66E+10	9.72E+10	4.46E+10	3.85E+10
AV	6.64E+09	-4.3E+08	6.03E+09	6.09E+09	7.64E+10	1.54E+09	2.04E+10	1.01E+11	4.74E+10	3.29E+10
Jan-12	4.62E+09	-4.7E+08	2.25E+09	7.2E+09	3.63E+10	1.85E+09	2.63E+10	8.48E+10	4.08E+10	3.85E+10
Feb-12	5.27E+09	6.48E+08	5.2E+09	7.2E+09	3.75E+10	1.94E+09	3.06E+10	9E+10	4.25E+10	3.85E+10
Mar-12	4.37E+09	1.44E+09	5.25E+09	7.2E+09	3.75E+10	1.93E+09	2.58E+10	8.77E+10	3.92E+10	3.85E+10
Apr-12	3.4E+09	1.39E+09	4.6E+09	7.2E+09	3E+10	1.85E+09	2.58E+10	7.31E+10	3.65E+10	3.09E+10
May-12	2.81E+09	9.9E+08	5E+09	6.6E+09	1.38E+10	1.83E+09	2.88E+10	7.89E+10	3.73E+10	2.96E+10
Jun-12	1.78E+09	6.75E+08	3.45E+09	6.45E+09	-2.5E+09	1.8E+09	2.71E+10	7.34E+10	3.62E+10	3.08E+10
Jul-12	1.71E+09	7.92E+08	3.85E+09	5.58E+09	3.75E+09	1.73E+09	2.9E+10	9.5E+10	4.39E+10	2.96E+10
Aug-12	1.78E+09	3.79E+09	4.4E+09	5.58E+09	1.5E+10	1.73E+09	3.06E+10	1.07E+11	4.25E+10	3.15E+10
Sep-12	1.94E+09	2.67E+09	4.4E+09	5.4E+09	2.38E+10	1.75E+09	2.91E+10	9.32E+10	3.95E+10	3.08E+10
Oct-12	6.79E+08	2.12E+09	4.4E+09	4.5E+09	3.63E+10	1.78E+09	2.91E+10	8.77E+10	3.95E+10	3.04E+10
Nov-12	8.41E+08	2.16E+09	3.1E+09	4.71E+09	4.38E+10	1.76E+09	2.64E+10	9.06E+10	3.95E+10	2.93E+10
Des-12	6.79E+08	2.31E+09	1.5E+09	4.5E+09	6.52E+10	1.8E+09	3.06E+10	9.94E+10	3.58E+10	2.9E+10
AV	2.49E+09	1.54E+09	3.95E+09	6.01E+09	2.83E+10	1.81E+09	2.83E+10	8.84E+10	3.94E+10	3.23E+10
Jan-13	3.23E+08	2.43E+09	0	4.2E+09	6.38E+10	1.76E+09	3.13E+10	8.46E+10	3.44E+10	2.84E+10
Feb-13	5.82E+08	3.26E+09	-6E+08	4.5E+09	1.13E+11	1.78E+09	3.26E+10	8.77E+10	3.48E+10	2.88E+10
Mar-13	2.59E+08	2.48E+09	-5E+08	3.72E+09	1.24E+11	1.83E+09	3.59E+10	8.33E+10	3.46E+10	2.88E+10
Apr-13	1.29E+08	2.48E+09	-7.5E+08	3.3E+09	1.21E+11	1.96E+09	4.64E+10	7.61E+10	3.42E+10	2.96E+10
May-13	1.29E+08	2.61E+09	-5.5E+08	3.15E+09	1.97E+11	1.75E+09	4.46E+10	7.89E+10	3.55E+10	3.17E+10
Jun-13	-1.3E+08	3.29E+09	-5.5E+08	2.4E+09	2.43E+11	1.85E+09	4.43E+10	7.89E+10	3.64E+10	3.23E+10
Jul-13	-4.5E+08	3.06E+09	-4.5E+08	3.17E+09	2.17E+11	1.79E+09	3.84E+10	7.89E+10	3.71E+10	3.19E+10

Aug-13	-1.9E+08	2.88E+09	-4E+08	2.7E+09	2.29E+11	1.68E+09	3.84E+10	7.89E+10	3.65E+10	3.27E+10
Sep-13	-3.2E+08	2.7E+09	-7.5E+08	2.57E+09	1.74E+11	1.58E+09	3.92E+10	7.89E+10	4.35E+10	3.27E+10
Oct-13	-2.6E+08	2.25E+09	-7E+08	3.6E+09	2.18E+11	1.6E+09	3.34E+10	7.75E+10	4.89E+10	3.27E+10
Nov-13	-4.5E+08	1.89E+09	-7E+08	3.3E+09	2.22E+11	1.6E+09	3.18E+10	8.1E+10	5.66E+10	3.84E+10
Des-13	-6.5E+08	1.62E+09	-5E+08	3.45E+09	2.65E+11	1.58E+09	3.05E+10	7.85E+10	5.94E+10	4.04E+10
AV	-8.6E+07	2.58E+09	-5.4E+08	3.34E+09	1.82E+11	1.73E+09	3.72E+10	8.03E+10	4.1E+10	3.24E+10
Jan-14	-7.1E+08	1.4E+09	-6.5E+08	2.61E+09	3.05E+11	1.75E+09	3.05E+10	7.31E+10	6.62E+10	3.96E+10
Feb-14	-1.1E+09	1.4E+09	-8E+08	3.45E+09	2.57E+11	1.65E+09	2.35E+10	7.89E+10	7.97E+10	3.88E+10
Mar-14	-1.2E+09	1.4E+09	-6E+08	3.3E+09	2.7E+11	1.63E+09	2.56E+10	7.82E+10	8.64E+10	4.23E+10
Apr-14	-1.1E+09	1.4E+09	-9E+08	3.3E+09	2.65E+11	1.68E+09	2.48E+10	7.6E+10	9.38E+10	4E+10
May-14	-1.6E+09	2.34E+09	-3E+08	2.7E+09	2.66E+11	1.68E+09	2.66E+10	7.97E+10	1.07E+11	4.75E+10
Jun-14	-1.9E+09	2.25E+09	-7.5E+08	2.7E+09	2.62E+11	1.63E+09	2.22E+10	7.25E+10	1.07E+11	3.77E+10
Jul-14	-2.3E+09	1.98E+09	-5E+08	2.4E+09	1.64E+11	1.63E+09	1.94E+10	7.59E+10	9.48E+10	4E+10
Aug-14	-2.3E+09	1.98E+09	-6.5E+08	1.8E+09	1.82E+11	1.2E+09	1.99E+10	7.53E+10	9.32E+10	4.04E+10
Sep-14	-1.7E+09	1.86E+09	-1.3E+09	2.4E+09	1.78E+11	1.28E+09	2.17E+10	7.82E+10	1.22E+11	3.75E+10
Oct-14	-2.1E+09	1.71E+09	-1.3E+09	2.27E+09	1.86E+11	1.28E+09	2.02E+10	7.31E+10	9.71E+10	3.82E+10
Nov-14	-1.8E+09	1.58E+09	-1.3E+09	2.4E+09	1.73E+11	1.23E+09	2E+10	7.02E+10	9.72E+10	3.56E+10
Des-14	-1E+09	2.25E+09	-1.9E+09	2.03E+09	1.68E+11	1.63E+09	2.84E+10	6.97E+10	1.07E+11	3.79E+10
AV	-1.6E+09	1.79E+09	-9E+08	2.61E+09	2.23E+11	1.52E+09	2.36E+10	7.5E+10	9.58E+10	3.96E+10
Jan-15	-1.3E+09	1.8E+09	-2E+09	1.9E+09	1.33E+11	1.55E+09	2.06E+10	6.72E+10	1.11E+11	3.49E+10
Feb-15	-1.7E+09	1.69E+09	-2.2E+09	2.03E+09	7.98E+10	1.4E+09	1.44E+10	4.96E+10	1.07E+11	3.54E+10
Mar-15	-1.6E+09	1.94E+09	-1.9E+09	1.8E+09	9.98E+10	1.48E+09	1.65E+10	6.07E+10	1.05E+11	3.21E+10
Apr-15	-1.7E+09	2.06E+09	-1.5E+09	1.91E+09	9.58E+10	1.48E+09	1.66E+10	5.82E+10	1.01E+11	3.08E+10
May-15	-1.7E+09	1.89E+09	-1.8E+09	1.83E+09	1.34E+11	1.5E+09	1.55E+10	6.42E+10	1.01E+11	3.11E+10
Jun-15	-5.2E+08	1.98E+09	-1.7E+09	1.86E+09	2.95E+11	1.33E+09	1.55E+10	6.28E+10	9.45E+10	2.69E+10
Jul-15	-4.5E+08	1.89E+09	-1.4E+09	1.91E+09	2.07E+11	1.2E+09	1.46E+10	6.23E+10	7.16E+10	2.66E+10
Aug-15	-7.8E+08	1.71E+09	-1.9E+09	1.83E+09	1.89E+11	1.25E+09	1.4E+10	6.23E+10	6.24E+10	2.58E+10
Sep-15	-4.5E+08	1.4E+09	-2.2E+09	1.73E+09	1.78E+11	1.5E+09	1.4E+10	6.23E+10	7.02E+10	2.56E+10
Oct-15	-7.1E+08	1.6E+09	-2.1E+09	1.7E+09	1.09E+11	1.45E+09	1.53E+10	5.58E+10	8.15E+10	2.4E+10
Nov-15	-1.6E+09	1.8E+09	-1.6E+09	1.8E+09	2.58E+11	1.64E+09	1.83E+10	4.12E+10	7E+10	2.29E+10
Des-15	-1.6E+09	1.8E+09	-1.6E+09	1.8E+09	2.58E+11	1.64E+09	1.83E+10	4.12E+10	7E+10	2.29E+10
AV	-1.2E+09	1.8E+09	-1.8E+09	1.84E+09	1.7E+11	1.45E+09	1.61E+10	5.73E+10	8.7E+10	2.82E+10
Jan-16	-1.7E+09	1.9E+09	-2E+09	1.8E+09	2.27E+11	1.36E+09	1.25E+10	3.95E+10	6.1E+10	2.02E+10
Feb-16	-2.2E+09	1.57E+09	-2.1E+09	1.83E+09	2.15E+11	1.53E+09	1E+10	4.22E+10	6.03E+10	2.54E+10
Mar-16	-2E+09	1.5E+09	-2.1E+09	1.82E+09	2.06E+11	1.58E+09	7.5E+09	4.21E+10	6E+10	2.46E+10
Apr-16	-2.3E+09	1.35E+09	-2.3E+09	1.89E+09	1.58E+11	1.78E+09	8.15E+09	3.8E+10	5.32E+10	2.56E+10
May-16	-2.3E+09	1.25E+09	-2.3E+09	1.89E+09	1.36E+11	1.65E+09	7.75E+09	3.2E+10	4.61E+10	2.25E+10
Jun-16	-2.5E+09	2.4E+09	-2.3E+09	1.89E+09	1.29E+11	1.7E+09	6.8E+09	3.71E+10	4.48E+10	3.11E+10
Jul-16	-2.5E+09	2.21E+09	-2.3E+09	1.83E+09	1.29E+11	1.85E+09	8.25E+09	3.8E+10	4.5E+10	3.11E+10
Aug-16	-2.5E+09	1.72E+09	-2.5E+09	1.83E+09	1.29E+11	1.75E+09	8.25E+09	3.92E+10	4.72E+10	3.08E+10
Sep-16	-2.5E+09	2.03E+09	-2.5E+09	1.74E+09	1.29E+11	1.78E+09	8.55E+09	3.92E+10	4.72E+10	3.08E+10
Oct-16	-2.7E+09	2.1E+09	-2.5E+09	1.74E+09	1.73E+11	2.05E+09	9.5E+09	3.92E+10	6.78E+10	3.08E+10
Nov-16	-2.1E+09	3.05E+09	-2.5E+09	1.8E+09	2E+11	2E+09	1.16E+10	5.26E+10	6.65E+10	3.57E+10
Des-16	-2.1E+09	3.14E+09	-2.5E+09	1.98E+09	2E+11	2.08E+09	1.34E+10	5.85E+10	6.3E+10	3.46E+10
AV	-2.3E+09	2.02E+09	-2.3E+09	1.84E+09	1.69E+11	1.76E+09	9.35E+09	4.15E+10	5.52E+10	2.86E+10
Jan-17	-2.1E+09	3.4E+09	-2.5E+09	2.1E+09	3E+11	2.5E+09	1.05E+10	5.85E+10	6.4E+10	3.13E+10
Feb-17	-2.1E+09	3.22E+09	-2.5E+09	2.12E+09	2.93E+11	3.48E+09	1.05E+10	4.75E+10	6.2E+10	3.17E+10
Mar-17	-2.3E+09	3.2E+09	-2.5E+09	2.12E+09	2.41E+11	3.33E+09	1E+10	4.55E+10	5.6E+10	2.96E+10
Apr-17	-2.3E+09	3.2E+09	-2.5E+09	2.12E+09	2.41E+11	3.33E+09	1E+10	4.55E+10	5.6E+10	2.96E+10
May-17	-2.5E+09	3E+09	-1.9E+09	2.12E+09	2.75E+11	3.53E+09	9.7E+09	3.54E+10	5E+10	2.58E+10
Jun-17	-2.4E+09	1.99E+09	-1.4E+09	2.12E+09	2.66E+11	3.48E+09	9.5E+09	3.8E+10	4.65E+10	2.61E+10
Jul-17	-2.1E+09	1.8E+09	-1.4E+09	2.12E+09	2.54E+11	3.35E+09	9.1E+09	3.89E+10	4.6E+10	3.08E+10
Aug-17	-2.1E+09	3E+09	-1.7E+09	2.12E+09	2.82E+11	3E+09	1E+10	3.65E+10	6E+10	3.21E+10
Sep-17	-2.1E+09	2.3E+09	-2E+09	2.12E+09	2.62E+11	3.05E+09	9E+09	3.51E+10	6.65E+10	2.73E+10
Oct-17	-2E+09	4.15E+09	-1.8E+09	2.13E+09	2.71E+11	3.62E+09	1.08E+10	3.51E+10	7.2E+10	2.77E+10
Nov-17	-2E+09	3.9E+09	-1.9E+09	2.18E+09	2.75E+11	3.62E+09	1.13E+10	3.22E+10	6.6E+10	2.81E+10
Des-17	-2E+09	3.9E+09	-1.5E+09	2.12E+09	2.98E+11	3.55E+09	3.47E+10	3.18E+10	7.3E+10	2.86E+10
AV	1.4E+08	5.59E+08	3.75E+08	10625000	1.55E+10	2.34E+08	3.77E+09	6.16E+09	7.44E+09	1.79E+09
Jan-18	-2E+09	4.9E+09	-1.5E+09	2.12E+09	3.99E+11	3.5E+09	2.28E+10	2.98E+10	8.16E+10	2.73E+10
Feb-18	-2E+09	5.23E+09	4.65E+09	2.12E+09	5.27E+11	3.53E+09	2.2E+10	3.81E+10	1.16E+11	2.89E+10
Mar-18	-2E+09	4.75E+09	6.95E+09	2.12E+09	5.62E+11	3.56E+09	2.45E+10	4.03E+10	1.18E+11	2.88E+10
Apr-18	-2E+09	4.8E+09	4.65E+09	2.12E+09	5.32E+11	3.5E+09	2.45E+10	3.48E+10	1.15E+11	2.92E+10
May-18	-2E+09	4.3E+09	6.65E+09	2.28E+09	5.52E+11	3.43E+09	1.84E+10	3.22E+10	1.24E+11	3E+10
Jun-18	-2E+09	4.45E+09	5E+09	3E+09	5.44E+11	3.35E+09	1.6E+10	3.22E+10	9.4E+10	2.92E+10
Jul-18	-1.2E+09	4E+09	4.9E+09	3.15E+09	5.28E+11	3.25E+09	1.65E+10	3.07E+10	9.2E+10	2.83E+10
Aug-18	-2E+09	4.45E+09	5E+09	3E+09	5.44E+11	3.35E+09	1.6E+10	3.22E+10	9.4E+10	2.92E+10
Sep-18	-2.2E+09	3.27E+09	3.75E+09	3.3E+09	5.02E+11	3.2E+09	1.9E+10	3.23E+10	9.32E+10	2.85E+10
Oct-18	-2.4E+09	2.89E+09	3.75E+09	2.63E+09	4.7E+11	3.05E+09	1.68E+10	3.07E+10	9.32E+10	3.08E+10
Nov-18	-2.4E+09	2.98E+09	3.75E+09	2.63E+09	4.56E+11	3.13E+09	1.65E+10	3.07E+10	8.72E+10	2.88E+10
Des-18	-2.3E+09	2.99E+09	3.75E+09	2.45E+09	4.59E+11	3.49E+09	2E+10	3.22E+10	8.7E+10	2.9E+10
AV	-1.9E+09	3.71E+09	3.86E+09	2.32E+09	4.61E+11	3.08E+09	1.81E+10	3.03E+10	9.18E+10	2.66E+10
Jan-19	-2.3E+09	3.17E+09	3.75E+09	2.52E+09	4.26E+11	3.65E+09	1.57E+10	3.19E+10	9.8E+10	2.79E+10
Feb-19	-2.4E+09	2.85E+09	3.75E+09	2.52E+09	3.1E+11	3.45E+09	1.43E+10	3.51E+10	1.2E+11	2.71E+10
Mar-19	-2.3E+09	4.3E+09	4.3E+09	2.4E+09	3.37E+11	3.48E+09	1.52E+10	3.36E+10	1.2E+11	2.81E+10
Apr-19	-2.2E+09	4.75E+09	3.5E+09	2.55E+09	3.79E+11	3.56E+09	1.55E+10	3.51E+10	1.17E+11	2.73E+10
May-19	-1.8E+09	4.85E+09	3.15E+09	2.4E+09	4.52E+11	3.35E+09	1.58E+10	3.2E+10	1.21E+11	2.92E+10
Jun-19	-1.8E+09	4.85E+09	3.15E+09	2.4E+09	4.52E+11	3.35E+09	1.58E+10	3.2E+10	1.21E+11	2.92E+10
Jul-19	-1.7E+09	4.6E+09	2.25E+09	2.4E+09	4.22E+11	3.5E+09	1.73E+10	3.22E+10	1.18E+11	3.04E+10
Aug-19	-1.5E+09	4.6E+09	3.55E+09	2.33E+09	4.01E+11	3.55E+09	1.7E+10	3.22E+10	1.17E+11	2.84E+10
Sep-19	-7.1E+08	4.4E+09	6E+09	2.33E+09	4.19E+11	3.75E+09	1.75E+10	3.22E+10	1.18E+11	2.76E+10
Oct-19	-5.2E+08	4.5E+09	6.6E+09	2.33E+09	4.26E+11	3.6E+09	1.7E+10	3.22E+10	1.32E+11	2.81E+10
Nov-19	7.76E+08	5.5E+09	6.75E+09	2.33E+09	4.15E+11	3.8E+09	1.9E+10	3.22E+10	1.38E+11	2.81E+10
Des-19	-3.2E+08	5.5E+09	9.15E+09	2.33E+09	4.06E+11	3.93E+09	1.88E+10	3.51E+10	1.48E+11	2.85E+10
AV	-1.4E+09	4.49E+09	4.66E+09	2.4E+09	4.04E+11	3.58E+09	1.66E+10	3.3E+10	1.22E+11	2.83E+10
Jan-20	1.68E+09	5.45E+09	1E+10	2.33E+09	3.46E+11	4E+09	1.81E+10	3.58E+10	1.36E+11	2.77E+10
Feb-20	1.62E+09	5.5E+09	9.5E+09	2.34E+09	2.84E+11	4.25E+09	2E+10	3.14E+10	1.42E+11	2.69E+10
Mar-20	1.29E+09	5.35E+09	9E+09	2.36E+09	2.36E+11	4.55E+09	1.8E+10	2.92E+10	1.22E+11	2.71E+10
Apr-20	2.59E+08	5.35E+09	9E+09	2.36E+09	1.79E+11	4.06E+09	1.59E+10	2.61E+10	1.12E+11	2.56E+10
May-20	1.75E+09	5.3E+09	8.5E+09	2.23E+09	2.11E+11	4.3E+09	1.7E+10	2.85E+10	1.23E+11	2.54E+10
Jun-20	1.75E+09	4.9E+09	8.5E+09	2.23E+09	2.7E+11	4.05E+09	1.65E+10	2.85E+10	1.22E+11	2.5E+10
Jul-20	1.42E+09	5.3E+09	8E+09	2.23E+09	2.93E+11	4.13E+09	1.63E+10	2.7E+10	1.28E+11	2.56E+10
Aug-20	1.23E+09	7.72E+09	8E+09	2.25E+09	3.46E+11	4.2E+09	1.73E+10	2.65E+10	1.42E+11	2.73E+10
Sep-20	9.7E+08	9.25E+09	7.75E+09	2.25E+09	4.24E+11	4.45E+09	1.7E+10	2.41E+10	1.74E+11	2.54E+10
Oct-20	3.88E+08	5.71E+09	8E+09	2.51E+09	4.26E+11	4.18E+09	1.95E+10	2.34E+10	1.68E+11	2.63E+10
Nov-20	2.98E+09	5.65E+09	7.85E+09	2.51E+09	4.47E+11	4.38E+09	1.83E+10	2.34E+10	1.56E+11	2.67E+10
Des-20	2.98E+09	5.65E+09	7.85E+09	2.51E+09	4.47E+11	4.38E+09	1.83E+10	2.34E+10	1.56E+11	2.67E+10
AV	1.39E+09	5.46E+09	7.84E+09	2.13E+09	2.88E+11	3.88E+09	1.61E+10	2.53E+10	1.27E+11	2.41E+10
TOTAL AV.	-1.6E+07	2.63E+09	1.9E+09	3.1E+09	2.29E+11	2.39E+09	1.99E+10	5.77E+10	7.73E+10	3.05E+10
STD.	2.87E+09	1.86E+09	3.89E+09	1.75E+09	1.47E+11	1.08E+09	9.25E+09	2.84E+10	3.68E+10	6.85E+09
CV.	-182.225	0.706756	2.045274	0.566132	0.64163	0.451654	0.463716	0.492896	0.475583	0.225025

Table(5) Treynor ratio for the companies in the study sample during the study period

	DCOI	BBOB	BNOI	BKUL	SBPT	IITC	IBSD	AMEF	HBAY	HMAN
1-2011	0.05558	0.0690995	0.0187703	0.136197	-0.0197153	-1.8308624	0.0265326	-0.0379031	0.01551504	-0.0440633
Feb-11	0.0770706	0.0499927	0.0313732	0.069668	-0.0876765	1.0810235	0.6198973	-0.021743	-0.0350537	-0.3973868
Mar-11	0.0399864	1.7030482	-0.0293496	0.0499974	-0.2146873	12.504	0.2064304	-0.3993745	-0.3993745	-0.1597915
Apr-11	0.083443	0.0938878	0.1036075	0.0704509	-0.1036076	12.504	0.3634722	-0.1772152	-0.1772152	-0.0857384
May-11	-0.0391462	0.2106317	0.0764924	0.0231965	0.20286563	0.65405417	0.1642332	-0.0387166	0.43573125	0.11857709
Jun-11	0.0892183	-0.2132435	0.1180458	0.0441133	-0.1180458	12.504	0.1921098	-0.2060917	-0.2060917	-0.0953639
Jul-11	0.048	0.0685714	0.015	0.060256	-0.015	12.504	0.1794444	0	0	-0.0266667
Aug-11	-0.054776	0.0803437	0.0562031	0.0636581	-0.0562031	5.89024339	0.1189516	-0.0824062	-0.0176569	-0.0110548
Sep-11	0.0251869	0.0449938	-0.0069952	0.0297789	0.07066313	-2.1616238	0.1750371	0.17132626	-0.0295705	-0.0606266
Oct-11	0.0346654	0.0648946	0.0057824	0.041184	0.03644788	-2.7771736	0.173728	0.10289576	-0.0390645	0.00598645
Nov-11	-0.0661435	0.02014207	-0.0089705	-0.0055649	0.17669471	-0.6975691	0.1732314	0.38338942	-0.1585246	0.06936826
Des-11	0.0850071	0.122433	0.2018997	0.084542	-0.0215054	12.504	0.1759096	-0.1572521	0.03058399	0.00630807
AV	0.031507667	0.19289958	0.04848826	0.0556231	-0.0124808	5.22317435	0.21408147	-0.0385909	-0.0483934	-0.0567043
Jan-12	0.2140053	0.0567909	0.0503447	0.1665229	0.03749515	0.12843668	0.0433774	-0.2607278	0.11509929	0.06162174
Feb-12	0.1797231	0.0248341	-0.0289077	0.12755269	-0.0159961	-0.0621718	-0.2406724	-0.0843919	0.14039697	-0.0226351
Mar-12	0.0299186	-0.0196215	-0.694654	0.0587076	0.00602921	0.05192481	-1.3923081	0.01644361	0.11292461	-0.0296308
Apr-12	-0.138216	-0.0527597	0.0460619	0.03241607	-0.0391001	-0.2058718	-0.0942146	0.11965791	0.09594784	-0.0162113
May-12	-0.2868731	-0.0413293	-0.3562341	-0.0397857	-0.1294463	-7.7352141	-0.0455896	-0.1286198	0.06997549	0.08368143
Jun-12	-0.1310681	0.1173915	-0.0190469	0.05556741	-0.0755476	-3.0618879	-0.0184478	0.24807242	0.10447599	-0.0195043
Jul-12	0.3695433	0.0149977	-0.301506	-0.2623513	0.08254118	0.14214227	-0.0677666	0.00478387	0.07954961	-0.0025756
Aug-12	-0.2773163	0.0080264	-0.0156984	0.08295455	0.01083164	-0.2160476	-0.022854	-0.0986825	0.13375019	-0.0076312
Sep-12	0.0721005	0.0429799	0.032393	0.07855986	-0.0381992	-0.0970512	-0.0290587	2.98940527	0.12976911	0.02334964
Oct-12	0.000324	0.0067544	0.030538	0.08178796	-0.0082222	-0.0127037	0.0003126	-0.0295537	0.12047564	0.01084246
Nov-12	0.164205	0.0088694	-0.0050958	0.08165946	-0.0116669	-0.1450155	-0.002586	-0.032213	0.12136005	0.00266758
Des-12	-0.9510497	0.0360752	0.0445207	0.07035328	0.00348397	0.02178197	0.0102698	-0.1098956	0.11548597	0.02136776
AV	-0.06289195	0.01691742	-0.1014404	0.0444954	-0.0148164	-0.9326398	-0.1549615	0.21952323	0.11160089	0.00877853
Jan-13	-0.107374377	0.55302232	-0.2665158	-0.0963937	-0.0016707	-0.5818707	-0.0252778	-0.1364179	-0.0473282	-0.060877
Feb-13	-0.142351384	-0.350771	0.32196243	-0.0665479	0.11293923	-0.2298921	0.04298294	-0.0652409	0.17685217	-0.1269591
Mar-13	-0.004794242	-0.0519474	-2.5955207	0.06059397	-0.0055822	0.0856127	-0.0480989	-0.0270264	-0.0169319	-0.0182844
Apr-13	-0.089809454	0.07839526	-0.0308878	0.02038473	0.046346	0.00481785	0.05527173	-0.0186713	0.02341569	-0.0516648
May-13	-0.213161454	-0.0644273	0.41526112	0.06240937	0.03170964	0.06693833	0.0416568	0.16867598	1.47355977	-0.1418744
Jun-13	-0.13378207	0.12614522	-0.0110821	-0.0014048	-0.0593594	-0.0520734	0.0352342	0.00114514	0.19696854	-0.123114
Jul-13	-0.069010449	-0.012777	-0.0266415	-0.1100271	-0.0963729	-0.2512998	0.0310024	0.00662105	-0.1796209	-0.0521683
Aug-13	-0.050427411	-0.131636	0.07853584	-0.0496707	0.49376015	-0.1386197	-0.0899894	-0.0511614	-0.0461475	-0.1055081
Sep-13	0.04337047	-0.0530479	-0.0197839	0.00253677	0.06500629	-0.0337595	0.06122629	0.09346323	0.04701446	-0.0896537
Oct-13	-0.124727488	-0.0158662	-0.0765439	-0.0718897	0.1167257	-0.1033084	0.04113881	-0.0161637	0.01620495	-0.1191076
Nov-13	-0.105751577	0.00524476	-0.0490137	0.049372	0.06633648	-0.0798947	0.07652701	-0.0014057	0.03491102	-0.1040043
Des-13	-0.12989569	-0.0864966	-0.6301707	-0.2161388	4.04070717	-0.032478	-0.0669812	-0.1486012	-0.8864083	-0.1947108
AV	-0.093976261	-0.0003468	-0.2408667	-0.0347313	0.40087879	-0.1121523	0.01289108	-0.0162319	0.06604082	-0.0989939
Jan-14	-0.479290004	0.00736419	0.09041556	0.04900126	-0.0495969	0.22550625	-0.1633279	-0.0714731	0.17330311	-0.0847596
Feb-14	0.048723164	-0.2536931	0.00435766	-0.3998064	0.09094025	0.06720222	-0.2106663	-0.0127482	0.11394162	0.1027944
Mar-14	-0.173528009	0.00057546	0.03375189	0.04824735	0.79087807	0.0136101	-0.1067398	0.16021952	0.40323346	-0.7308296
Apr-14	-0.339909213	0.01142303	0.00771679	-0.0861211	-0.2435845	0.04313597	-0.3332501	0.15550008	0.37768762	-0.2674042
May-14	-2.45242342	0.07459176	-0.1581895	0.07625351	-0.0298439	0.24121664	0.09110013	-0.06252	0.16594422	0.18078511
Jun-14	-0.100220872	-0.1774325	-0.0050295	-0.0365782	0.43232528	-0.0881588	-0.1570461	0.32576898	-0.183846	-0.1628988
Jul-14	3.30786797	0.08498832	-0.3135847	-0.2743259	6.79625009	-0.4525544	0.10330508	1.30000135	-0.0397059	0.39867003
Aug-14	-0.552349742	-0.3518822	0.45255436	-0.306992	-0.0816708	-0.0261743	1.68149462	-0.7094701	0.40533753	2.84441355
Sep-14	0.043449118	-0.0230772	-0.0014469	0.05323179	0.06629076	-0.521017	0.26364935	0.08503209	0.08083868	0.14334636
Oct-14	0.867939762	-0.1980931	0.62057928	0.21749854	-3.1671192	-0.6401642	0.51991643	-0.8292798	0.18194306	-4.5023731
Nov-14	2.514119065	-0.1344609	0.48479187	0.96708127	0.08829937	-0.0448579	-0.6362633	-0.6362633	0.4668095	-0.705431
Des-14	0.359500706	-0.0914968	0.25462197	0.07320568	-0.4223914	-0.032478	0.00378854	0.09981605	0.27147749	-0.2060439
AV	0.253656544	-0.0875994	0.1225449	0.03172465	0.3558981	-0.1012278	0.08799672	-0.0162847	0.2014137	-0.2491442
Jan-15	-0.0184488	0.02607545	-0.0793087	-0.2767446	0.22288525	0.0993083	0.065572	-0.0470595	0.08621073	0.01200716
Feb-15	-0.0075223	0.04291324	-0.019044	-0.0114512	-0.0814488	-0.0109656	-0.053697	0.01213717	-0.0513978	0.02307985
Mar-15	0.00273397	0.04203267	-0.014647	0.03799935	0.1031746	-0.026908	-0.059754	0.00673742	0.08180401	0.02395148
Apr-15	0.010445701	0.05300367	0.00791602	-0.019755	-0.0473022	0.10036307	-0.074172	-0.0101763	0.00744735	0.03422825
May-15	-0.0348931	0.01392743	-0.2889953	-0.3673796	-0.0567293	-0.6436634	-0.085956	0.20094885	-1.1098234	-0.0617312
Jun-15	0.062652757	0.11900294	-0.0701611	0.01753269	-0.0444485	-0.0103946	-0.0549993	0.05851821	-0.0171498	0.00556407
Jul-15	-0.04104136	0.03064167	0.40615751	-0.0152319	-0.0837229	-0.0448135	-0.012359	0.12057163	-0.0132172	-0.0579001
Aug-15	-0.2267902	0.27106177	-0.0603151	-0.122021	0.54682255	0.43362128	-0.082229	-0.3800391	-0.0884766	0.0189578
Sep-15	-0.0029925	0.04277038	-0.003167	-0.0701012	-0.024508	0.00626481	-0.063477	-0.0153081	0.00473903	0.01477976
Oct-15	-0.0125243	0.03635797	-0.0175366	-0.0243086	-0.1020067	-0.0733304	-0.0551873	-0.4029709	-0.0090216	-0.0412417
Nov-15	-0.0095026	0.03534851	-0.022471	0.08540042	-0.6016053	0.07252317	-0.200385	0.05844906	-0.0772158	0.01565382
Des-15	-0.0539115	0.02447084	-0.0289044	-0.0573044	0.56735677	-0.4764589	-0.1655265	-3.9272076	-0.0304279	0.01665916
AV	-0.027649519	0.06146721	-0.0158731	-0.0686138	0.03320562	-0.0478711	-0.0701808	-0.3604499	-0.1013774	0.00033402
Jan-16	0	0	0	0	-0.1026737	-0.0064616	-0.0743789	-0.8056654	-0.1700739	-0.0093607
Feb-16	-0.0043675	0.00291609	-0.1664387	-0.0144196	0.01000696	0.01998996	-0.1400067	0.00492256	-0.0800104	-0.0900046
Mar-16	0.020014805	0.03000916	-0.1100054	0.04000645	0.00398441	0.14596418	-0.1347834	-0.0440725	-0.0721401	-0.0831891
Apr-16	0.026051827	0.03065026	-0.0843553	0.03717564	-0.0406422	0.06940281	-3.347611	0.128885	-0.2085533	-4.241026
May-16	-0.018138	0.0241085	-0.1348422	-0.0543415	-0.0806526	0.00790412	-0.1254664	-0.1763052	-0.0985237	-0.106065
Jun-16	0.029614672	0.01714886	-0.1017588	0.03205318	0.04573011	-1.2250096	-0.1751722	0.81570392	-0.1565205	-0.1072046
Jul-16	-0.0512104	-0.0190289	-0.1468501	-0.0410703	0.04635488	0.11402671	-0.1452678	-0.1348383	-0.026242	-0.0497816
Aug-16	-0.0834107	0.09357013	-0.1150903	0.11436915	0.01648247	0.03508801	-0.1467414	0	-0.0817915	-0.0979598
Sep-16	-0.1949774	0.03707243	-0.11858	0.05155678	-0.5956001	-0.6613002	-0.0967428	-0.1231598	-0.0865826	-0.0966549
Oct-16	0.239269017	-0.0788405	-0.0340121	-0.1114	-0.4224522	-0.0211872	-0.169678	0	-0.1319367	-0.1361659
Nov-16	-1.5034752	-0.0169903	-0.1340865	0.17272701	0.54545354	0.15518876	-0.1635928	1.07590707	-0.1672424	-0.1494948
Des-16	-2.3895409	0.20848451	-0.126951	-0.0758817	-0.0057452	-0.7212367	-0.1929454	-0.0868346	-0.136542	-0.1194681
AV	-0.327514148	0.02742502	-0.1060809	0.01256459	-0.0483128	-0.1739692	-0.4093656	0.05454523	-0.1180133	-0.4405313
Jan-17	-0.0101453	-0.0220919	0.00645837	0.57742733	-0.0615524	0.00067931	0.09597384	2.27970931	1.24942588	0.04009084
Feb-17	-0.034221797	0.02407307	0.02382564	0.00682024	-0.054502	0.04902035	-0.0008982	0.03411211	0.02538808	0.01535861
Mar-17	-0.019627204	-0.0232253	-0.0528441	-0.0318585	-0.0735652	0.00437102	0.04398076	-0.3958457	-0.0156787	-0.3958457
Apr-17	-0.018975034	-0.0114491	-0.8867869	-0.0082794	-0.0231322	0.02313224	0.14433879	-0.1243388	-0.0471694	0.00385062
May-17	-0.014759092	-0.0137087	-0.0965991	-0.1156775	-0.0679009	1.28845572	-0.0531409	-0.5823689	-0.0160634	0.08583972
Jun-17	-0.021400802	-0.0066483	0.12220775	-0.0225612	-0.0335033	0.02264129	0.0688127	-0.1295475	5.54E-05	0.16236525
Jul-17	-0.120516629	0.04290435	0.03417596	-0.0042634	-0.0173856	0.07212952	-0.0374309	0.19023725	0.07946603	0.02786135
Aug-17	0.032864871	0.02082414	-7.45E+13	-0.0017466	-0.0379085	0.05916996	0.03313838	0.13921311	0.01752307	-0.0353992
Sep-17	0.03443642	0.04051041	0.04121737	0.02838319	-0.055054	0.0433152	-0.0153384	0.23180375	0.02461333	0.02786623
Oct-17	-0.131543761	0.19014661	-0.0507719	0.01644466	-0.0345589	0.04244304	0.03857987	0.17616007	0.03668387	-0.0062838
Nov-17	-0.014328517	-0.0668157	0.07778023	0.03151771	-0.0587215	0.00765268	0.12737175	0.47224183	0.18932388	0.00193764
Des-17	0.023197954	0.01030721	0.01285111	0.00645243	-0.0501505	0.04782695	0.00651107	0	0.02172385	-0.0657339
AV	-0.024584908	0.01540224	-6.207E+12	0.04022158	-0.0473279	0.13840311	0.03765824	0.19094805	0.13044099	-0.0115077
Jan-18	25.002	-0.8030864	-2.3720996	-8.8788889	2.52	4.40596409	0.01694446	-1.2551678	-0.508169	0.75491285
Feb-18	-2.591818985	-0.3292793	-0.2400306	5.01	1.23134021	-6.8975517	0.00517159	2.52	-0.1077194	-0.1946956
Mar-18	0.5879375	0.72777778	250.0002	5.01	-0.7267532	-5.9157686	-0.0368313	2.68556291	16.4088889	-1.1176137
Apr-18	25.002	0.7448718	-0.5811487	5.01	2.52	3.97878212	0.01557394	2.68534392	1.13111111	0.37295829
May-18	2.024058824	0.2472973	0.3148036	2.83608696	2.52	2.81590141	-0.58678	2.52	-0.8583784	0.64378004
Jun-18	-2.350297593	-1.9195652	0.2649194	0.63682216	-2.48	2.76016778	0.012846	-0.1729982	0.21372694	5.56455556
Jul-18	-0.560372188	-0.7274194	1.07059729	-1.0244828	-1.3065306	2.00108008	0.04028155	-1.9442857	1.2444898	5.56455556
Aug-18	0.5879375	-14.383333	0.22777044	1.95189602	1.32952381	4.05305405	0.00380677	2.52	0.72359281	-1.278794
Sep-18	25.002	-1.05	0.26658253	5.01	33.77	8.68444601	-0.0178106	0.42268456	-1.4587798	-3.1363928
Oct-18	0.714435233	0.20786164	0.25992988	5.01	1.32952381	1.5135271	-0.3997368	2.52	2.52	0.65145955
Nov-18	-1.066821689	3.39444444	-0.0654422	-0.0747458	0.89662338	-2.2607072	0.11450552	2.52	0.62222672	5.56455556
Des-18	-0.547310169	-1.05	0.6153493	0.11869565	-1.3065306	-0.4926921	0.01981984	0.63320755	2.26798387	-1.4411892
AV	5.983645703	-1.2450359	20.8134526	1.71794861	3.35809973	1.22051692	-0.0676841	1.30452894	1.84991446	0.99567434
Jan-19	0.0130382	0.013319	0.0550362	-0.0053163	0.05786627	0.03821775	1.0179767	0.0212602	0.05016037	0.02030316
Feb-19	-0.01200807	0.00245005	0.0484603	-0.0439339	0.05992181	-0.008095	0.2631275	0.01745375	0.04581766	-0.0117285

Mar-19	0.008217466	-0.0284635	0.0522157	0.0303234	0.07169199	-0.3930123	-0.8580372	0.00423678	0.01625444	0.04230901
Apr-19	-0.0473753	0.01645358	0.05142948	0.2245584	0.07746573	-0.2325974	-0.5803116	-0.0424006	0.07321845	0.08340159
May-19	0.04285415	0.03253651	0.09096626	0.004746	0.09654251	0.04068252	-0.3755448	0.09354487	0.33091989	0.03554091
Jun-19	0.12611567	0.00690603	0.01712368	0.00070152	0.03324887	0.04518448	-12.504	-0.0180452	-0.000988	-0.4323356
Jul-19	-0.04961792	-0.1194205	0.04544511	0.04950792	0.0631296	0.05315554	1.135281	0.1295447	0.09409726	0.27290727
Aug-19	-0.0323915	-0.0257752	0.05799897	-0.0135965	0.07509963	-0.2551806	1.5831525	0.03387573	0.05296	0.07629515
Sep-19	0.03103437	-0.0297213	0.06267859	0.0762951	0.07947074	-0.0068336	-1.4459674	0.05314757	0.06349601	0.07629515
Oct-19	-0.0140223	0.01286336	0.06397402	-0.0272946	0.06234563	0.00176611	-3.1477125	0.00135266	0.04498534	-0.0272947
Nov-19	0.30277673	0.05007767	0.073882	0.07015535	0.05906266	-0.0055118	3.6597931	0.05007767	-0.0859503	0.00159029
Des-19	0.32926065	0.05272607	-0.2294553	0.07545213	0.0793503	-0.0243225	4.5538602	0.05272607	0.05636303	0.07545213
AV	0.058156846	-0.0013374	0.03247958	0.03679988	0.06793298	-0.0622122	-0.5581985	0.03306451	0.06177785	0.01772799
Jan-20	-0.2369755	0.1266667	-0.0239708	-0.2133425	-0.0411431	-0.091009	0.5049195	0.06913487	0.05509633	-0.1250415
Feb-20	1.1475777	0.0714286	-0.0742376	-0.191084	-0.0542426	0.08576976	-0.077659	-0.2418556	0.16701827	0.38817185
Mar-20	-0.2368938	0.06	0.00011365	-0.189128	-0.0201071	-0.0776593	-0.0463444	-0.1991483	-0.0075851	-0.0419699
Apr-20	-0.0304778	0.16	-0.0431192	-0.1955061	-0.0424584	0.065359	-0.1472628	-0.0980021	-0.0034491	-0.0161582
May-20	-0.0604983	0.1481481	-0.1037296	-0.2062312	-0.1144323	0.05795638	-0.0200053	0.16886458	-0.0189233	-0.134697
Jun-20	-0.1407516	0.1290323	-0.0446749	-0.2119678	-0.0134336	-0.0537393	-0.700087	0.04066275	0.03475911	-0.1234438
Jul-20	0.0070986	0.2857143	0	-0.207619	-0.0316118	-0.0090722	0.13793651	-0.0276244	0.03761364	-0.1131962
Aug-20	-0.1179368	0.06	-0.0851964	-0.2238045	-0.0769476	-0.1162228	-0.0417563	0.16494812	-0.0130583	-0.1488489
Sep-20	0.025002	0.2377778	-0.0415383	-0.2096	-0.0415973	0.01194497	3.57594175	0.02105008	0.02041542	-0.1179205
Oct-20	-0.1049303	0.0540541	0.214933	-0.2009043	-0.0163651	-0.0191369	-0.0054043	-0.0755043	-0.0153125	-0.0994555
Nov-20	0.0154757	0.034359	-0.0420841	-0.2095504	-0.0429987	-0.000834	-0.0072672	0.03775728	0.02392044	-0.1195964
Des-20	-0.8134222	0.035	0.3731343	-0.2215774	-0.071838	-0.1454416	-0.1231889	-0.7907815	0.09166794	-0.1402606
AV	-0.045561025	0.11684841	0.01080251	-0.2066929	-0.0472646	-0.0243404	0.25415188	-0.0775415	0.03101356	-0.0660347
TOTAL AV.	0.5792854	-0.09194	-6.3E+11	0.165799	0.408084	0.516932	-0.06784	0.130955	0.219895	0.010549
STD.	3.8772618	1.345111	6.58E+12	1.310931	3.114578	2.98784	1.372018	0.839812	1.512447	1.116521
CV.	0.1494058	-0.06835	-0.09511	0.126474	0.131024	0.173012	-0.04944	0.155934	0.14539	0.009448