



THE IMPACT OF THE FEDERAL OPEN MARKET COMMITTEE RATE ACTIONS DURING 2022 ON THE POPULARITY OF DIVIDEND STOCKS AMONGST RETAIL INVESTORS

*Alexander, Godumov, Ph.D. Student, University of National and World Economy, Finance
Department, Sofia, Bulgaria*

Abstract: *The question of the investors' motivation in the investment decision making process is a topic that is always relevant and subject of research in the field of economics. The turbulence on the stock exchanges observed in the last few years makes this issue particularly relevant, and the introduction of new scientific knowledge in this direction equally useful.*

The question of the influence of dividend policy on the stock market performance of public companies is a question that has been examined repeatedly in the past, and to this day the companies' dividend policy is of serious scientific interest. The past few years have been marked by significant stock market uncertainty and substantial inflation in the United States and many of the World's leading economies. The observed upheavals in recent years have created fertile ground for the conduct of scientific research in the field of investing.

This report examines the impact of the Federal Open Market Committee's federal funds rate actions in 2022, and examines the extent to which these actions have had an impact on the popularity of dividend companies among individual investors

Keywords: *dividends, dividend policy, social networks, stock exchanges, individual investors, institutional investors*

JEL: *G01, G10, G11, G12, G15*



1. Introduction

The influence of companies' dividend policy on their stock market prices has been a subject of great scientific interest over the years. At the same time, although this is an issue that has been extensively researched in the past, the scientific community has not been able to arrive at a definitive and generally accepted model describing the impact of dividend policy. For example, according to the well-known dividend indifference theory of (Miller & Modigliani, 1961), all other things being equal, investors are indifferent to the dividend policy of companies and have no preference for dividend or capital gains. On the other hand, numerous empirical studies have shown that dividend policy affects the stock market performance of companies, fuelling an ongoing interest in the mechanisms through which dividend policy affects stock market prices. The ever-changing environment on the stock markets, especially in the dynamic investment environment observed in the last few years, determines the usefulness of further research examining dividend policy and how its impact on the stock market performance of public companies is influenced by other factors.

This report leverages the turbulent economic environment that has been observed in the last few years and examines the dividend policy of companies in a particularly relevant perspective, namely in the conditions of high inflation, as observed in the post-pandemic situation in the USA and other leading World economies. Specifically, the report examines the inflation-moderation actions taken by the Federal Open Market Committee in 2022 and the impact of those measures¹ on the popularity of dividend companies. Thus, the present report seeks to contribute to the clarification of the question to what extent the dividend policy of public companies' impacts their performance on the stock market in the modern post-pandemic environment.

1.1. Overview of prior research

The impact of FOMC operations has been the subject of scientific interest and previous research. For example, (Fama & French, 1989) connected the investors' desired rate of return to the cyclicity of the economy and prove that the required rate of return is lower in favourable economic conditions and higher in unfavourable conditions. Considering that FOMC adapts its policy to the state of the economy, it can be expected that its policy will have an impact on investors. (Bernanke & Blinder, 1992) examined the impact of interest rates set by the FOMC and conclude that the FOMC interest rate actions are a good indicator of monetary policy and an especially good indicator of real macroeconomic indicators and in addition exerts influence on the composition of bank assets so a monetary policy aimed at limiting the money supply leads to the tendency for

¹ Which, as outlined in this report, resulted in an increase in the federal interest rate.



banks to get rid of the securities they hold and limit lending. (Jensen, et al., 1996) built on the Fama and French model and proved that the FOMC monetary policy had a significant impact on the return sought by investors. (Thorbecke, 1997) also examined the impact of the FOMC monetary policy on the return that investors achieve on the stock markets and managed to confirm that an expansionary policy had a positive effect on the return realized after the FOMC action, and that the exposure of an asset to monetary policy has the potential to raise its future returns following expected potential actions by the FOMC. (Campbell & Cochrane, 1999) were able to build a model that linked consumer habits to the dynamic performance of stock markets. The derived model succeeded in achieving long-term predictability of excess return² of stocks and bonds relative to the ratio of dividends to stock price, the yield spread³ and short-term interest rates. (Rigobon & Sack, 2002) examined the effect of FOMC policy on the prices of various types of financial assets and proved that increases in short-term interest rates lead to a decrease in stock market prices and especially in the components of the Nasdaq index. On the other hand, (Bomfin, 2003) proved that unexpected FOMC actions lead to a strong increase in market volatility, with a higher-than-expected rate of interest leading to greater volatility than a lower-than-expected rate values. (D'Amico & Farka, 2003) also examined the impact of FOMC actions on interest rates and concluded that stock exchange participants reacted strongly and statistically significantly to FOMC monetary policy, and that quantitative tightening policy supply led to a fall in the prices of traded assets. (Goto & Valkanov, 2002) found that roughly a quarter of the negative correlation between excess returns and inflation can be explained by monetary policy shocks. According to their research, in the short term, the restrictive policy of the Fed, applied through an increase in the federal funds rate, lead to a decrease in the excess return due to the effect of the monetary policy on the variables of a real nature. (Bernanke & Kuttner, 2004) examined the impact of interest rate actions and found that a 0.25% rate decrease would cause stock indexes to jump by approximately 1%. This several times stronger reaction illustrates the strength of the interest rate influence. (Gurkaynak, et al., 2004) examined the impact not only of interest rate changes but also of the opinions that the FOMC published along with its actions and found that implemented opinions have a greater explanatory effect on stock market dynamics than the federal funds rate, on the basis of which it can be concluded that not only the change in the federal funds rate is important for investors, but also the circumstances that led to this change and the goals that FOMC seeks to achieve. The same conclusion was reached by (Rosa, 2013), who confirmed that the publication of the minutes of FOMC meetings was accompanied by a sharp increase in the volatility and trading volumes of the American stock exchanges. (Chatziantoniou, et al., 2013) noted that extant research had focused solely on monetary

² Excess return is the excess return above a specified return used for benchmarking purposes, such as the risk-free rate of return or the return of a specified index used as a benchmark (Chen, 2021)

³ This is the spread between bond yields and the risk-free rate of return (Chen, 2020).



policy in the United States and built on this by examining the combined impact of monetary and fiscal policy on a broader set of countries. They hypothesized that monetary policy can affect stock markets through five channels (interest rates, credit supply, wealth effect, exchange rate effect, and money supply) and were able to confirm that monetary and fiscal policy had an effect on the stock exchanges in the range of countries under consideration. In this way, they confirmed that the mechanism by which the interest rate affects the American stock exchanges was also representative for the rest of the developed stock exchanges globally.

2. Thesis

Looking at the impact of companies' dividend policy on their popularity among individual investors, the impact of actions taken by the Federal Open Market Committee (FOMC) is also of interest. The FOMC is a committee, part of the Federal Reserve System of the United States and has an oversight function over open market operations⁴. The FOMC is the primary body that governs US monetary policy, and setting federal funds rate falls under its mandate ((FED, 2023), (Segal, 2023)).

Considering the great importance that, as per the studies outlined in section 1.1 the federal funds rate has on equity investments, the FOMC actions in managing the federal funds rate can affect the popularity of companies among individual investors, depending on their dividend policy. A potential hypothesis regarding the impact of the FOMC actions is that in periods of low rates, the discount rate that investors apply in the investment decision process is correspondingly low, and this stimulates the popularity of companies that are focused on growth, rather than stability. Such type of companies usually has a low dividend yield or do not pay dividends. At the same time, in periods of high federal funds rate, investors' interest can be expected to shift to companies with a high value in the near timeframe. These are usually large and stable companies that return significant value to shareholders - either through dividends or stock buybacks. On the other hand, the increase in the federal funds rate may divert investment flows from shares in general to risk free treasury bills. Such observations were made by (Randall, 2023), who examined the currently observed upward trend in the federal funds rate. At the same time, the rate can also influence the popularity of dividend companies through other, more complex mechanisms. For example, often companies that offer a higher dividend yield are in industries where there is a high rate of debt, therefore a rise in the interest rate has a particularly bad effect on them (Picardo, 2022).

⁴ Open market operations are the purchase and sale of securities in the open market by the Federal Reserve System. Open market operations are the main tool for implementing the Fed's money supply policy ((Hayes, 2022), (FED, 2023))



The thesis of the present study is that in the modern investment environment, the dividend policy of public companies continues to be a significant factor that affects their stock market representation, and the strength and direction of this influence depends on additional factors. From this point of view, it can be expected that the implementation of a restrictive policy resulting in an increase in interest rates will lead to an increase in the relative popularity of dividend companies based on the hypotheses described above.

2.1. The actions of the Federal Open Market Committee in regards to the federal funds rate as a factor impacting the popularity of dividend companies amongst individual investors

The question of the impact of the FOMC rate actions on investors' preferences for companies based on their dividend yield is particularly relevant, given the current quantitative tightening policy of the FOMC in the direction of increasing the federal funds rate, which began in 2022 and which is illustrated in table 1:

Table 1. Federal Open Market Committee Rate Actions – 2020 - 2022.

Date	Federal Funds Rate	Discount Rate	Increase / Decrease
14 December 2022	4,25% - 4,50%	4,50%	Increase
02 November 2022	3,75% - 4,00%	4,00%	Increase
21 September 2022	3,00% - 3,25%	3,25%	Increase
27 July 2022	2,25% - 2,50%	2,50%	Increase
15 June 2022	1,50% - 1,75%	1,75%	Increase
04 May 2022	0,75% - 1,00%	1,00%	Increase
16 March 2022	0,25% - 0,5%	0,5%	Increase
05 November 2020	0,00% - 0,25%	0,25%	No change
16 September 2020	0,00% - 0,25%	0,25%	No change
27 August 2020	0,00% - 0,25%	0,25%	No change
29 July 2020	0,00% - 0,25%	0,25%	No change
10 June 2020	0,00% - 0,25%	0,25%	No change
29 April 2020	0,00% - 0,25%	0,25%	No change
31 March 2020	0,00% - 0,25%	0,25%	No change
23 March 2020	0,00% - 0,25%	0,25%	No change
19 March 2020	0,00% - 0,25%	0,25%	No change
15 March 2020	0,00% - 0,25%	0,25%	Decrease
03 March 2020	1,00% - 1,25%	2,75%	Decrease

This heightened interest has made the question of the impact of the FOMC rate actions on the stock markets one of the leading topics in investment-oriented media publications (such as: (Seabury, 2023), (Waters, 2022), (Hur, et al., 2023), (Goldberg, 2023), (Karaian & Rennison, 2023)).



The above hypothesis regarding the impact of the FOMC federal funds rate policy on the popularity of dividend companies among individual investors has been tested in the current paper by conducting several statistical studies.

To begin with, a database containing statistical information on the number of citations of public companies on social networks has been created. The statistical information was collected by creating a program in Python⁵ which automatically downloads posts from the social network Reddit and automatically analyzes⁶ publications, searching for mentions of tickers of public companies. The collected information was then consolidated on a weekly basis for the period ranging from the beginning of 2020 to the end of 2022. The database tracks for each week the top ten most quoted companies, the number of quotes for each company, whether the company distributes a dividend and what dividend yield it offers.

Subsequently, the database was converted to the following format:

- The information for each of the weeks that fall within the period under review was aggregated to show the number of companies that distribute a dividend among the 10 most quoted companies. This information is stored in the DivStocks variable.
- Added a new variable, DivStocksQuotes, which tracks the total number of quotes for companies that distribute dividends for each of the weeks covered by the survey time frame.
- Added a new variable NonDivStocksQuotes, which tracks the total number of quotes for non-dividend companies for each of the weeks covered by the survey time frame.
- Added variables that track the policy of the FOMC regarding the federal funds rate by monitoring for a change in the rate within up to 3 weeks prior to the current week. The variables track changes in the base interest rate within the current week or the previous 1, 2 or 3 weeks respectively. The database monitors for changes in the base rate up to 3 weeks prior to the current week, as it is assumed that there may be some lag before investors reflect changes in the base rate in their investment preferences.

To examine the potential impact of a change in the federal funds rate on the popularity of dividend companies among individual investors, test of difference of means was performed. This test can show whether a statistically significant difference exists between two observed populations. In this case the following two populations were considered based on the grouping variable:

⁵ Python is a high-level object-oriented programming language. It is particularly suitable for the analysis of textual information and is one of the most widely used programming languages.

⁶ The analysis was performed by Spacy - Human Spoken Language Processing API.



- The group of weeks that fall within the survey time frame for which there was no change in the federal funds rate either for the current week or for the previous 3 weeks.
- The group of weeks that fall within the time frame of the survey for which there was a change in the base rate either in the current week or in any of the previous three weeks.

When conducting a statistical analysis, the presence of a statistically significant difference of means between the two examined variables would be a strong indication that the FOMC policy regarding the federal funds rate has an impact on individual investors in their preferences for the companies they invest in based on dividend yield.

The described test can be conducted using the parametric t-Test or a non-parametric Mann-Whitney test.

The requirements for using the t-Test are:

- Random sample selection
- Homogeneity of variation
- Suitable sample size (less than 30 cases)
- Normal distribution

In this case, the considered sample does not meet the sample size requirement, as it contains more than 30 records. In addition, a check for normality of the distribution of the records in the sample was made using the non-parametric Kolmogorov-Smirnoff test. The non-parametric Kolmogorov-Smirnoff test was conducted with the following parameters:

- Null hypothesis H_0 - the observed distribution does not differ from the normal distribution.
- Alternative hypothesis H_a - the observed distribution is significantly different from the normal distribution.
- Target significance level $\alpha = 0,05$ - if the test returns significance level less than α , the null hypothesis H_0 is rejected in favour of the alternative hypothesis.
- The test for normality of distribution was conducted on the following variables:
 - DivStocks - the variable shows the number of companies that pay a dividend and are among the ten most quoted companies in the considered social networks on a weekly basis. Values range between 0 - 10 and 156 entries are tracked in the database, that reflect each of the weeks between the beginning of 2020 and the end of 2022.
 - DivStocksQuotes - aggregate number of citations of companies that distribute dividends among the ten most quoted companies in the social networks considered on a weekly basis. There are 156 entries that cover each of the weeks between the beginning of 2020 and the end of 2022.



- NonDivStocksQuotes - aggregated number of citations of non-dividend companies among the ten most cited companies in the social networks considered on a weekly basis. There are 156 entries that cover each of the weeks between the beginning of 2020 and the end of 2022.

Table 2. Test for normality of the distribution of the following variables: number of dividend-paying companies among the top 10 most quoted companies on a weekly basis during the period under review (DivStocks), number of weekly quotes for dividend-paying companies (DivStocskQuotes), number of quotes on a weekly basis for companies that distribute dividends. (NonDivStocskQuotes).

		DivStocks	DivStocksQuotes	NonDivStocksQuotes
N		156	156	156
Normal parameters	Mean	2,47	423,95	1754,36
	Std. Dev	1,47	423,95	1754,36
Kolmogorov-Smirnoff Z		2,57	4,22	3,33
Asymp. Sig.		,000	,000	,000

The results described in table 2 show that for each of the considered variables a level of significance was obtained, close to 0, which is below the target level of significance $\alpha = 0.05$. Therefore, the null hypothesis H_0 is rejected in favour of the alternative hypothesis H_a , according to which the observed distribution is significantly different from normal.

Considering the characteristics of the sample, the analysis of difference of means of the examined populations was carried out by the non-parametric Mann-Whitney test.

The Mann-Whitney test was conducted under the following conditions:

- Null hypothesis H_0 - no statistically significant difference is observed in the means of the examined populations. Confirmation of the null hypothesis H_0 would be an indication that the FOMC policy regarding the base interest rate does not influence the preferences of individual investors regarding the dividend yield of the companies in which they invest.
- Alternative hypothesis H_a - a statistically significant difference is observed in the average values of the considered populations. Rejecting the null hypothesis in favor of the alternative hypothesis H_a would be an indication that the FOMC federal funds rate policy has a statistically significant effect on the preferences of individual investors regarding the dividend yield of the companies in which they invest.
- Tested variables - the variables DivStocks, DivStocksQuotes and NonDivStocksQuotes described above are considered, which describe,



respectively, the number of dividend companies falling among the ten most quoted companies, the number of quotes on a weekly basis for companies that distribute dividends and the number of quotes on a weekly basis for companies, which do not distribute a dividend.

- Grouping variables - the test is performed based on the following grouping variables:
 - FOMC_Rate_Action_Week0 - the variable monitors whether a change in the federal funds rate is observed during the current week and has two values 0 (no change observed) and 1 (change observed).
 - FOMC_Rate_Action_Week3 - the variable monitors whether a change in the federal funds rate has been observed in the current or the previous three weeks and has two values 0 (no change observed) and 1 (change observed). Examining this additional variable is necessary because of the assumption that it may take some time for individual investors to reflect interest rate policy changes in investment preferences and for these changes to be reflected in social media posts.

The conducted Mann-Whitney test gives the following results for the grouping variable FOMC_Rate_Action_Week0, which reflects the presence of changes in the base interest rate in the current week only:

Table 3. Nonparametric Mann-Whitney Test for Difference of Means on Grouping Variable FOMC_Rate_Action_Week0 – Statistics.

	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (two-sided)
DivStocks	641,50	686,50	-,16	,876
DivStocksQuotes	455,00	11333,00	-1,57	,116
NonDivStocksQuotes	602,50	11480,50	-,45	,654

Table 4. Nonparametric Mann-Whitney Test for Difference of Means on Grouping Variable FOMC_Rate_Action_Week0 - Descriptive Statistics.

	Count	Mean	Std. Dev.	Minimal	Maximum
DivStocks	156	2,47	1,53	0	7
DivStocksQuotes	156	423,95	706,95	0	3203
NonDivStocksQuotes	156	1754,36	2814,85	0	28330

The results described in table 3 show that for all three examined variables the level of significance obtained is above the target $\alpha = 0.05$, therefore, the null hypothesis H_0 cannot be rejected. This means that if the analysis is restricted to only the presence of a change in the federal funds rate in the current week, no statistically significant difference in the popularity of dividend companies among individual investors is observed between the subsets of weeks in which there is a change in the federal funds rate and the weeks it doesn't happen.



On the other hand, when conducting the Mann-Whitney non-parametric test using the grouping variable FOMC_Rate_Action_Week3, which reflects the presence of changes in the federal funds rate in the current or previous three weeks, the following results are observed:

Table 5. Nonparametric Mann-Whitney Test for Difference of Means on Grouping Variable FOMC_Rate_Action_Week3 - Statistics.

	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (two-sided)
DivStocks	1424,50	9809,50	-1,53	,127
DivStocksQuotes	435,50	8820,50	-6,12	,000
NonDivStocksQuotes	642,00	9027,00	-5,15	,000

Table 6. Nonparametric Mann-Whitney Test for Difference in Means on Grouping Variable FOMC_Rate_Action_Week3 - Descriptive Statistics.

	Count	Mean	Std. Dev.	Minimal	Maximum
DivStocks	156	2,47	1,53	0	7
DivStocksQuotes	156	423,95	706,95	0	3203
NonDivStocksQuotes	156	1754,36	2814,85	0	28330

The test statistics outlined in table 5 show that with respect to the variable DivStocks, which tracks the total number of dividend companies that fall among the ten most cited companies in social networks on a weekly basis, a significance level of 0.127 was obtained, which is above the target $\alpha = 0.05$. Therefore, the null hypothesis H_0 cannot be rejected, for the variable DivStocks, and no statistically significant difference is observed between the examined subsets of weeks for which a change in the federal funds rate was observed in the current or the previous three weeks and weeks, for which this is not fulfilled.

On the other hand, for the variables DivStocksQuotes and NonDivStocksQuotes, which reflect the number of quotes of dividend companies on a weekly basis and the number of quotes of non-dividend companies on a weekly basis, respectively, a significance level of nearly 0 was obtained, which was less than the target significance level of $\alpha = 0.05$. Therefore, for these two variables, the null hypothesis H_0 is rejected in favour of the alternative hypothesis H_a . This means that a statistically significant difference is observed in the populations of these two variables for the weeks for which there is a change in the interest rate in the current or one of the previous three weeks, compared to the populations of these two variables for the weeks when this condition is not met. This means that there is a statistically significant relationship between the presence of a change in the federal funds rate during the current or one of the previous three weeks and the number of quotes of dividend and non-dividend companies.



In order to describe the dependence shown in table 5 an analysis of the descriptive statistics of the variables DivStocksQuotes and NonDivStocksQuotes for the weeks for which is fulfilled the condition to observe a change in the interest rate during the current or one of the previous three weeks and for the weeks for which this condition is not met.

The results of the analysis are described in tables 7 and 8:

Table 7. Descriptive statistics for the DivStocksQuotes and NonDivStocksQuotes variables for the weeks that met the condition of observing a change in the base rate during the current or one of the previous three weeks.

	Count	Mean	Std. Dev
DivStocksQuotes	27	1179,07	636,05
NonDivStocksQuotes	27	3347,26	1225,42

Table 7. Descriptive statistics for the variables DivStocksQuotes and NonDivStocksQuotes for the weeks that did not meet the condition of observing a change in the base rate during the current or one of the previous three weeks.

	Count	Mean	Std. Dev
DivStocksQuotes	129	265,90	614,47
NonDivStocksQuotes	129	1420,96	2939,81

Based on the obtained results, the following conclusions can be made:

- Both in the weeks for which the condition of the existence of a change in the base interest rate in the current or one of the previous three weeks is met, and for the weeks for which the condition is not met, the quotations of non-dividend companies exceed the quotations of companies, which distribute a dividend.
- For the weeks for which the condition of having a change in the base interest rate during the current or one of the previous three weeks is met, there is a relatively higher number of citations of companies that distribute dividends compared to companies that do not. As can be seen from table 7, for the weeks for which the condition is met, the average value of the number of quotes of companies that distribute dividends is 1179.07, while for the number of companies that do not distribute dividend it is 3347.26. Therefore, based on the average values, it can be concluded that companies that do not distribute dividends are quoted approximately 2.84 times more on average. On the other hand, for the subset of weeks for which the condition is not met⁷, the average value of dividend company quotes is 265.90, and of non-dividend companies it is 1420.96. Or based on the

⁷ Therefore, no change in the base rate has been observed in the current or one of the previous three weeks



averages, it can be concluded that companies that do not distribute dividends on average are quoted approximately 5.35 times more.

- Comparing these values, it can be concluded that with a change in the base interest rate, the popularity of dividend companies among individual investors increases approximately twice.

On the other hand, as can be seen from table 1, the policy of the FOMC during the considered period is predominantly in the direction of increasing the federal funds rate, therefore, taking into account the conclusions made above, the conclusion is that the policy of raising the interest rate leads to a statistically significant increase in the popularity of dividend companies among individual investors.

3. Conclusion

The conducted investigation manages to establish new scientific knowledge by examining the question of the impact of the dividend policy on the stock market performance of public companies from the particularly relevant point of view of inflation and the measures that the institutions (in this case the Federal Open Market Operations Committee) take to keep inflation within certain range.

In order to fulfil the objectives of the study, the influence of the dividend policy of companies on their popularity among retail investors was examined as well as the extent to which the restrictive measures of the Federal Open Market Operations Committee during 2022 affected the popularity of public companies among individual investors depending on their dividend politics.

The hypothesis under consideration is that in the conditions of a restrictive policy aimed at managing rising inflation, as observed in 2022, an increase in the relative popularity of dividend companies should be expected. The reason is that an increase in the federal interest rate would have the effect of raising the discount rate that investors use in building their investment strategies, which would make growth-oriented companies relatively less profitable in the long run and at the same time, would make companies that are oriented towards returning value to investors in a relatively near time frame more attractive. Since one of the main approaches to return value to shareholders is through dividends, this would make companies that pay dividends relatively more popular among retail investors

The stated hypothesis was confirmed and the statistical analyses carried out within the investigation showed that there was a statistically significant relationship between the policy of increasing the federal funds rate by the Federal Open Market Operations Committee in 2022 and the relative popularity of dividend companies among individual investors. The analysis of the open relationship showed that the relative popularity of



dividend companies significantly increased in the conditions of an increase in the federal funds rate.

Bibliography

Bernanke, B. S. & Blinder, A. S., 1992. The Federal Funds Rate and the Channels of Monetary Transmission. *The American Economic Review*, pp. 901-921.

Bernanke, B. S. & Kuttner, K. N., 2004. What Explains the Stock Market's Reaction to Federal Reserve Policy?. *The Journal of Finance*, p. 39.

Bomfin, A. M., 2003. Pre-announcement effects, news effects, and volatility: Monetary policy and the stock market. *Journal of Banking and Finance*, pp. 133-151.

Campbell, J. Y. & Cochrane, J. H., 1999. The Force of Habit: a Consumption-Based Explanation of the Stock Market Behavior. *Journal of Political Economy*, pp. 205-251.

Chatziantoniou, I., Duffy, D. & Filis, G., 2013. Stock market response to monetary and fiscal policy shocks: Multi-country evidence. *Economic Modelling*, pp. 754-769.

Chen, J., 2020. *Yield Spread: Definition, How It Works, and Types of Spreads*. [Онлайн]
Available at: <https://www.investopedia.com/terms/y/yieldspread.asp>

Chen, J., 2021. *Excess Returns Meaning, Risk, and Formulas*. [Онлайн]
Available at: <https://www.investopedia.com/terms/e/excessreturn.asp>

D'Amico, S. & Farka, M., 2003. The Fed and Stock Market: A Proxy and Instrumental Variable Identification. p. 26.

Fama, E. F. & French, K. R., 1989. Business Conditions and Expected Returns on Stocks and Bonds. *Journal of Financial Economics*, pp. 23-49.

FED, 2023. *Federal Open Market Committee: About the FOMC*. [Онлайн]
Available at: <https://www.federalreserve.gov/monetarypolicy/fomc.htm>
[Отваряно на July 2023].

FED, 2023. *Policy Tools: Open Market Operations*. [Онлайн]
Available at: <https://www.federalreserve.gov/monetarypolicy/fomc.htm>
[Отваряно на July 2023].

Goto, S. & Valkanov, R., 2002. The Fed's Effect on Excess Returns and Inflation is Bigger Than You Think. p. 26.



Gurkaynak, R., Sack, B. & Swanson, E., 2004. Do Actions Speak Louder than Words? The Response of Asset Prices to Monetary Policy Actions and Statements. p. 18.

Hayes, A., 2022. *What Are Open Market Operations (OMOs), and How Do They Work?*. [Онлайн]
Available at: <https://www.investopedia.com/articles/investing/072115/do-interest-rate-changes-affect-dividend-payers.asp>
[Отваряно на July 2023].

Jensen, G. R., Mercer, J. M. & Johnson, R. R., 1996. Business conditions, monetary policy, and expected security returns. *Journal of Financial Economics*, pp. 1951-1972.

Miller, M. H. & Modigliani, F., 1961. Dividend Policy, Growth, and the Valuation. *The Journal of Business*, pp. 411-433.

Picardo, E., 2022. *Do Interest Rate Changes Affect Dividend Payers?*. [Онлайн]
Available at: [://www.investopedia.com/articles/investing/072115/do-interest-rate-changes-affect-dividend-payers.asp](https://www.investopedia.com/articles/investing/072115/do-interest-rate-changes-affect-dividend-payers.asp)
[Отваряно на May 2023].

Randall, D., 2023. *Sensing end of Fed hikes, some investors return to dividend stocks*. [Онлайн]
Available at: <https://www.reuters.com/markets/rates-bonds/sensing-end-fed-hikes-some-investors-return-dividend-stocks-2023-07-25/>
[Отваряно на July 2023].

Rigobon, R. & Sack, B. P., 2002. The Impact of Monetary Policy on Asset Prices. *Journal of Monetary Economics*, pp. 754-769.

Rosa, C., 2013. The Financial Market Effect of FOMC Minutes. p. 8.

Segal, T., 2023. *Fundamental Analysis: Principles, Types, and How to Use It*. [Онлайн]
Available at: <https://www.investopedia.com/terms/f/fundamentalanalysis.asp>
[Отваряно на March 2023].

Thorbecke, W., 1997. On Stock Market Returns and Monetary Policy. *The Journal of Finance*, pp. 635-654.