



Fear of Missing Out Reality in Financial Investments

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Abstract

Behavioral predispositions are responsible for numerous irregularities in stock markets. Although many studies have been conducted on the effects of these predispositions on investment decisions, there are few studies that consider the FoMo factor in investment in the context of behavioral biases. Theoretically, FoMo has been associated with herding behavior, loss aversion and the desire to gain more, and these studies have often been conducted through questionnaires. Even analyzes with data from respondents who tend to give socially desirable answers show that individual investors in particular are under the influence of FoMo. In the questionnaire used in this study, photographs were used, not text. This study is unique in this respect. The results show that participants stimulated by photographs are frequently exposed to the FoMo effect. On the other hand, the fact that participants get rid of this effect as soon as they encounter financial data shows that the effect of FoMo can be reduced through financial data and facts.

Keywords

Behavioral Finance, Fear of Missing out, Investor Behavior, Investor Psychology

JEL Codes

G41, H31, L20

INTRODUCTION

The regret avoidance bias is a behavioral mistake that explains why people want to prevent them from regretting their decision in the future. In particular, investors may make or avoid some investment decisions to minimize possible future regrets.

Another manifestation of this prejudice is trying to avoid regret by imitating what others do. At this point, the person imitates the investments made by the people around him and tries not to be deprived of this gain by relying on their potential future earnings. In another way, it imitates their withdrawal behavior and tries to avoid their predicted future losses. In both cases, decisions are made without rational analysis. At this point, the relationship between the prejudice of avoiding regret and the term Fear of Missing out, known as the fear of missing out, is seen.

Although the fear of missing out, referred to as "Fear of Missing out", seems to be related to management, marketing, psychology and social life, it can also be the cause of irrational behaviors in financial investment decisions. The fear of missing out, which is compatible with the regret-avoidance bias, also manifests itself when it comes to investments. Investments made due to kidnapping concerns generally do not result in positive results. Just because a stock performs well does not mean that it will continue to do so in the future. The same is true for a trend that is going badly. The longer a stock experiences significant positive price action, the more likely a market reversal or flattening is, trades that are completed due to fear of missing out are often unwise trades that can be avoided with discipline and a strict trading strategy.

In this study, it is discussed whether the visuals of the company buildings and the advertisements of the existing investors of the companies have an effect on the potential investors, and therefore whether there will be a fear of missing out in their investment decisions or not. For this purpose, potential investors participating in the study were shown the images of the company building and the images said to belong to the current investor, and were asked which of the two sample companies they would prefer to invest in. These questions with images are the first questions that participants will answer. This is because potential investors are stimulated and manipulated by

visuals. In the following questions, some financial data of both companies are given. While the questions supported by numerical data such as asset totals and debt totals of companies were prepared, the financial situation of the company that was predicted to be selected by the researchers in the questions supported by visuals was designed as worse and the other company as better. Finally, gender and age questions were asked to the participants. The questionnaire was thus completed. In addition, the questions are explained in more detail in the methodology section.

LITERATURE REVIEW

One of the first examples of investor behavior that cannot be explained by classical theories and the crises caused by it is the Tulip Madness in the Netherlands in the 16th century. Europeans met this flower, which they did not know until the 16th century, both through a chest of tulip bulbs that Suleiman the Magnificent gifted to the Dutch king in 1562, and through the Dutch who came to Istanbul to visit and returned to their country with tulip bulbs, impressed by the tulips they saw. These tulips, which were difficult to obtain, attracted great attention and the possession of tulips soon became a symbol of great prestige and status among the Dutch elite. After a while, the interest and the demand that exceeded the elites also spread to the middle class, and people bought tulip bulbs by selling everything they owned. This increasing demand has caused the prices of tulip bulbs to increase considerably. In 1623, a tulip bulb cost 1000 guineas, while the average annual income in the Netherlands in those days was around 150 guineas.

According to the classical theory, it is possible to explain this event with the supply and demand for tulips, but it is clear that the classical theory will not be sufficient to explain this behavior of the human being who is the subject of the event (Mazgit, 2007). So what happened that the prices of tulip bulbs rose so high and the first bubble in history burst? It is possible to explain this situation with the term "Fear of Missing out", which we can also call the fear of missing out.

The term "FoMo" is defined as "a state of mental or emotional tension resulting from the fear of missing something". It is also a form of social anxiety. FoMo is the anxiety that an individual experiences when he sees, reads or learns about the actions of others and feels that he is missing it (Abel et al., 2016). FoMo has also been studied in the context of consumer behavior and how it influences consumers' decision making (Kang et al., 2020). It can be said that the same is true for investors who are under the influence of the desire to earn higher profits and feel that they may miss potential opportunities if they do not take urgent measures (Dennison, 2018; Kang et al., 2020). These actions can be biased, as investors tend to ignore the facts when acting out of this fear.

There have been many studies in the past that have evaluated the impact of two important behavioral biases: the impact of loss aversion and herd behavior on investment decision. In herd behavior, investors base their decisions on the stock buying and selling preferences of the masses, rather than relying on their own rational decisions based on statistics (Caparrelli et al., 2004). In loss aversion behavior, people do not hurry to sell their losing investments, but they act hastily to sell their winning investments (Shefrin & Statman, 1985). However, in general, it has been observed that consumers' decision making is affected by fear of missing out (FoMo) and therefore they tend to follow herd behavior (Kang et al., 2019). Some consumers also follow herd behavior because of their longing to reduce losses and increase profits (Puaschunder, 2018).

One of the main reasons for being exposed to FOMO is the desire to constantly connect and be on the same level with others (Doğan, 2019). According to Denison (2018), FoMo often leads consumers to irrational decisions. Consumers displaying FoMo always strive to ensure that they are economically and socially equal with others around them.

Looking at FoMo in finance holistically, the reason for the increase in the number of individual investors in the market can be determined. Hershfield (2020) cites FoMo as the main reason behind this increase, even if the market movement is uncertain. A crazy market has been developed, characterized by individuals who are afraid of missing out on potential opportunities by not investing in the market (Morris, 2019).

The prevalence of FoMo among investors leads to a speculative bubble in the market. Also, the emergence of FoMo is not limited to stocks, real estate, bitcoin, etc. This trend is also seen in investment instruments (Pichet, 2017). This phenomenon is not only limited to individual stocks, but also to investors who use mutual funds to invest in the stock market rather than directly investing in stocks that are prone to these biases (Bailey et al., 2011). Studies in this sense have generally associated FoMo with loss aversion, regret avoidance and ultimately investment decision (Chen et al. 2007; Montier, 2010; Dar and Hakeem, 2015; Banerji et al. 2020; Chauhan et al. 2019; Shukla et al. 2020; Dennison 2018; Kang et al. 2020; Shiva et al. 2020; Gupta and Shrivastava, 2021).

Investments made in technology companies that are of special interest to investors in recent years can be an ideal example of FoMo. While economic data and company earnings reports for the S&P 500 index's 7.4% growth justify the rise in valuations, many believe that much of the market increase was due to the appreciation of a small handful of FANG stocks (Facebook, Amazon, Netflix and Google). is considered. Examples such as Pets.com, which has received more than \$130 million in funding, Theranos with over \$9 billion valuation (Feeney, <https://s3.amazonaws.com>), and even the bitcoin craze are prime examples for FoMo.

RESEARCH METHODOLOGY AND RESULTS

Within the scope of the study, the participants who participated in the survey were given information about two companies with fictitious and unreal names. The names "Big" for the first company and "Persistence" for the second company were preferred. In the first question of the survey, a rather large company building, almost entirely of glass and symbolizing the richness visually, was preferred for the Big Company, while a more modest building image was chosen for the Persistence Company.

In the questions that followed, the photographs of the people who were said to belong to the people who invested in these two companies were used. In the second and third questions, the photos of happy people investing in the Big Company were preferred, while the photos of people with a sign of concern were preferred for the Persistence Company. The participants were told that the photographs in the second question show the situation of the investors one month later, while the photographs in the third question show the situation of the investors two months later. In the fourth and fifth questions, the photographs of hopeless, devastated, angry and worried people were used for the Big Company, and the photographs of people reflecting success and happiness were used for the Persistence Company. Respondents were told that the photographs in the fourth question show the situation of the investors one year later, while the photographs in the fifth question show the situation of the investors two years later.

The second part of the questionnaire consists of a total of five questions. In the first question, the total assets belonging to both companies are presented. In the second question, total debts were specified, while the sales revenues were given in the third question. The investments planned by the companies and the values of these investments were given in the fourth question, and the last dividends distributed by the companies are reported in the fifth question. All the questions in this section are structured so that the financial situation of the Persistence Company is better than the financial situation of the Big Company.

215 people participated in the study (145 women, 70 men; age 31.30 std. 13.05). Since it was determined that the data were not suitable for normal distribution, non-parametric analyzes were performed in the study. The correlations of the questions used in this study with each other are given in Table 1.

		Item 1	Item 2	Item 3	Item 4	Item 5	Item_6	Item 7	Item 8	Item 9	Item 10
Item 1	Corr. p	1	,581** ,000	,538** ,000	,355** ,000	,163* ,017	,297** ,000	,273** ,000	,297** ,000	,432** ,000	,432** ,000
Item 2	Corr. p		1	,675** ,000	,222** ,001	0,009 ,891	,144* ,035	0,131 ,056	,144* ,035	,144* ,035	,144* ,035
Item 3	Corr. p			1	,297** ,000	,259** ,000	0,125 ,068	0,108 ,113	0,125 ,068	0,125 ,068	0,125 ,068
Item 4	Corr. p				1	,348** ,000	,198** ,003	,235** ,000	,198** ,003	,348** ,000	,348** ,000
Item 5	Corr. p					1	,419** ,000	,497** ,000	,419** ,000	,419** ,000	,419** ,000
Item 6	Corr. p						1	,670** ,000	1,000** ,000	,806** ,000	,613** ,000
Item 7	Corr. p							1	,670** ,000	,670** ,000	,670** ,000
Item 8	Corr. p								1	,806** ,000	,613** ,000
Item 9	Corr. p									1	,806** ,000
Item 10	Corr. p										1

Table 1. Correlation analysis results of the questions

Table 2 presents the descriptive statistics of the data.

	Item 1		Item 2		Item 3		Item 4		Item 5		Item 6		Item 7		Item 8		Item 9		Item 10		Gender		
	Big	Persistence	Big	Persistence	Big	Persistence	Big	Persistence	Big	Persistence	Big	Persistence	Big	Persistence	Big	Persistence	Big	Persistence	Big	Persistence	Female	Male	Total
Frequencies	100	115	105	110	110	105	60	155	30	185	30	185	40	175	30	185	30	185	30	185	145	70	100,0215
Per	46,5	53,5	48,8	51,2	51,2	48,8	27,9	72,1	14,0	86,0	14,0	86,0	18,6	81,4	14,0	86,0	14,0	86,0	14,0	86,0	67,4	32,6	100,0215

Table 2. Frequency Analysis Results

According to the descriptive statistics results, it is seen that the participants made approximately equal choices in the first three questions. In the first three questions, in which the images of the company building and the photographs reflecting the situation of the current investors in the first and second months were used, the number of participants who chose the Big Company and the Persistence Company were found to be almost equal. In the first question, 46.5% of the participants chose the Big Company, while the group that chose the Persistence Company was 53.5%. In the second question, in which the photos of the current investors are present one month later, 48.8% of the people who chose the Big Company were at the level of 51.2% who chose the Persistence Company. In these two questions, it is seen that the Persistence Company is preferred at a relatively higher level. However, in the third question, where the photographs representing the current investors' situation two months later were shown, the Big Company was preferred at 51.2% and the Persistence Company at 48.8% level. When these three questions are examined, it is seen that there is no significant difference in terms of elections.

When it comes to the questions about the representative photos of current investors one and two years later, it is seen that the preferences differ greatly. In the fourth question, it was determined that the Persistence Company was preferred at the level of 72.1%, while the rate of those who preferred the Big Company was 27.9%. When it comes to the fifth question, the rate of those who prefer to invest in the Persistence Company has grown even more and reached 86%. In the same question, the rate of those who chose the Big Company remained at the level of 14%.

When it comes to the second group of questions in which financial data are presented, a similar structure draws attention. It is observed that the most preferred company in these questions is the Persistence. The financial data given for the Persistence Company are designed as higher total assets, lower total debts, higher sales revenues, higher investment budgets and higher dividends distributed. In the light of these data, it can be said that the participants showed rational behavior.

Chi-square analysis revealed whether the answers received in the study were related to gender. Considering the results in Table 3, significant relationships were found between gender and preference in the other questions, except for the first and fourth questions.

		Gender		Total	Chi-Square	df	p			Gender		Total	Chi-Square	df	p
		Female	Male							Female	Male				
ITEM 1	Female	70	30	100	0,557	1	0,455	ITEM 6	Female	15	15	30	4,83	1	0,028
	Male	75	40	115					Male	130	55	185			
ITEM 2	Female	80	25	105	7,154	1	0,007	ITEM 7	Female	20	20	40	6,809	1	0,009
	Male	65	45	110					Male	125	50	175			
ITEM 3	Female	85	25	110	9,914	1	0,002	ITEM 8	Female	15	15	30	4,83	1	0,028
	Male	60	45	105					Male	130	55	185			
ITEM 4	Female	45	15	60	2,165	1	0,141	ITEM 9	Female	10	20	30	18,472	1	0,000
	Male	100	55	155					Male	135	50	185			
ITEM 5	Female	25	5	30	4,01	1	0,045	ITEM 10	Female	10	20	30	18,472	1	0,000
	Male	120	65	185					Male	135	50	185			

Table 3. Relationships between gender and items

The main research question of the study is "Will the public image of companies and investor profiles of publicly traded companies prevent investors from acting rationally and financial data return the investor to rational behavior?" To reveal the answer to this question, Wilcoxon Signed Ranks test was conducted. In the analysis, the previous values were taken as the first three questions using visuals, and the following values as the last two questions using visuals and the last five questions using financial data. Table 4 reflects the results of this test. According to the results, significant differences were found between the first values and the final values explained. Accordingly, the participants significantly changed their choices according to the company building and early-term investor profile.

55 people, who preferred to invest in a large company by looking at the company building in the first question, changed their minds when they looked at the photos showing the situation of the current investors in the fourth question, and they preferred to invest in the Persistence Company. Likewise, the number of participants who moved to the Persistence Company increased to 80 by looking at the photos, which are stated to reflect the current investors' situation two years later. Similar results are observed when it comes to questions showing the financial status of companies. 75 participants by looking at total income, 70 participants by looking at total debt, 75 participants by looking at sales revenue, 70 participants by looking at their budgets, and 70 participants by looking at the dividends distributed, stated that they would like to invest in the Persistence Company by giving up the Big Company. This result shows that the participants, who make irrational investment decisions just by looking at the company building visuals, start to act rationally when the current investor profile and financial data come into play. It was seen that the investors who made irrational decisions by looking at the photographs reflecting the situation of the existing investors one month and two months later in the second and third questions of the questionnaire also changed their minds in the next questions, and this change was statistically significant. According to the images

reflecting the situation of the current investors one month later, 65 of the participants who declared that they would invest in Big Company, looking at the situation of the current participants one year later and 90 of the participants by looking at the situation of the current investors two years later switched to the Persistence Company. In addition, 85 of the participants by looking at total assets, 80 participants by looking at total liabilities, 85 ones by looking at sales revenue, 85 participants by looking at investment budgets, and 85 of the participants by looking at dividends distributed switched to the Persistence Company.

Finally, 65 of the participants, who irrationally chose the Big Company by looking at the situation of the current investors two months later, stated that they would return to the Persistence Company, which is rational, based on the situation of the current investors one year later. In addition, 85 of the participants by looking at the current investors' situation two years later, 90 participants by looking at total assets, 85 participants by looking at total debts, 90 ones by looking at sales revenue figures, 90 of the participants by looking at their investment budgets and programs, and 90 participants by looking at the dividends distributed, stated that they would return to the Persistence Company as well.

		N	Mean Rank	Sum of Ranks	Z	p			N	Mean Rank	Sum of Ranks	Z	p		
ITEM_4	ITEM_1	Negative	15	35,5	-4,781	0,000	ITEM_8	ITEM_2	Negative	10	48	-7,695	0,000		
		Positive	55	35,5				1952,5		Positive	85			48	4080
		None	145							None	120				
ITEM_5	ITEM_1	Negative	10	45,5	-7,379	0,000	ITEM_9	ITEM_2	Negative	10	48	-7,695	0,000		
		Positive	80	45,5				3640		Positive	85			48	4080
		None	125							None	120				
ITEM_6	ITEM_1	Negative	5	40,5	-7,826	0,000	ITEM_10	ITEM_2	Negative	10	48	-7,695	0,000		
		Positive	75	40,5				3037,5		Positive	85			48	4080
		None	135							None	120				
ITEM_7	ITEM_1	Negative	10	40,5	-6,708	0,000	ITEM_4	ITEM_3	Negative	15	40,5	-5,59	0,000		
		Positive	70	40,5				2835		Positive	65			40,5	2632,5
		None	135							None	135				
ITEM_8	ITEM_1	Negative	5	40,5	-7,826	0,000	ITEM_5	ITEM_3	Negative	5	45,5	-8,433	0,000		
		Positive	75	40,5				3037,5		Positive	85			45,5	3867,5
		None	135							None	125				
ITEM_9	ITEM_1	Negative	0	0	-8,367	0,000	ITEM_6	ITEM_3	Negative	10	50,5	-8	0,000		
		Positive	70	35,5				2485		Positive	90			50,5	4545
		None	145							None	115				
ITEM_10	ITEM_1	Negative	0	0	-8,367	0,000	ITEM_7	ITEM_3	Negative	15	50,5	-7	0,000		
		Positive	70	35,5				2485		Positive	85			50,5	4292,5
		None	145							None	115				
ITEM_4	ITEM_2	Negative	20	43	-4,881	0,000	ITEM_8	ITEM_3	Negative	10	50,5	-8	0,000		
		Positive	65	43				2795		Positive	90			50,5	4545
		None	130							None	115				
ITEM_5	ITEM_2	Negative	15	53	-7,319	0,000	ITEM_9	ITEM_3	Negative	10	50,5	-8	0,000		
		Positive	90	53				4770		Positive	90			50,5	4545
		None	110							None	115				
ITEM_6	ITEM_2	Negative	10	48	-7,695	0,000	ITEM_11	ITEM_3	Negative	10	50,5	-8	0,000		
		Positive	85	48				4080		Positive	90			50,5	4545
		None	120							None	115				
ITEM_7	ITEM_2	Negative	15	48	-6,669	0,000									
		Positive	80	48			3840								
		None	120												

Table 4. Wilcoxon Signed Ranks Results

CONCLUSION

The ever-increasing trade volume of small investors has been increasing rapidly in recent times. Platforms have simplified the trading process and many brokerages have reduced their trading commissions to zero or almost zero, making it much easier and cheaper for new traders to invest. It is necessary to examine in more detail because so many individual investors throw their hard-earned money into the market. Many variables may be involved in this review. Psychological factors are the first to come to mind.

There are many studies on investor psychology (Akerlof & Shiller, 2009; Altman, 2014; Baker & Ricciardi, 2014; Barak, 2006; Barnewall, 1987; Daniel & Hirshleifer, 1998; Kahneman & Riepe 1998; Kahneman

& Tversky, 1973; Lin, 2011; Loewenstein et al. 2001; Lopes, 1987; Nofsinger, 2012; Tversky and Kahneman, 1981; Tversky and Kahneman, 1974; Yalçın, 2009). The analyzes seen in similar studies are generally about the way investors make decisions in various psychological situations. Heuristics and biases are among the most important factors affecting these decision-making styles. However, the relationship between the FoMo tendency and investor behavior, which is generally encountered in the literature in social life and marketing, appears as a new study subject. However, there are also studies that deal with investor behavior, decision making under risk and uncertainty, or the factors affecting investor psychology, as well as the FoMo trend (Kang et al. 2019; Denison, 2018; Hershfield, 2020; Morris, 2019; Hodgkinson, 2019; Dogan, 2019; Pichet, 2017).

Although it is an oversimplified example, the bubble inflated by a group of investors who thought that tech stocks would continue to rise because they had risen in the past can explain the impact of FoMo on financial markets. These investors acted out of fear of missing out on potential gains they could easily imagine. Because to these investors, many other people seem to be winning, and it is a complete FoMo example of them feeling afraid of missing out on potential gains while they are winning. If this FOMO spreads quickly, it could continue to drive up the prices of the same stocks and industries, resulting in herding behavior.

Considering the findings obtained in this study, results consistent with FoMo stand out. In particular, the answers obtained from the first three questions of the survey show that potential investors may succumb to FoMo. However, the most important finding of the study was revealed after that. Although it was possible to succumb to the influence of FoMo, the answers of the participants were closer to rationality in the later questions. The vote rate of the case named as the Persistence company has gradually increased and even the answers of the participants who stated that they would prefer to invest in the company that was previously named as the Big Company changed in favor of rationality. This result, which is the most obvious result of the study, is important in terms of showing that potential investors may fear missing out and act irrationally with little data, but their decisions can be rational when more data is presented to them and they are given the opportunity to examine this data. Therefore, it is thought that this study can form a basis for subsequent studies and be useful in explaining the relationship between FoMo tendency and investor behavior.

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