

An Analysis on The Socio-Economic and Demographic Factors That Have an Effect on The Risk Taking Preferences of Personal Investors

Fatih B. GUMUS

Sakarya University, Business Faculty, Sakarya, Turkey.
Email: fbgumus@sakarya.edu.tr

Yusuf DAYIOGLU

Sakarya University, Social Sciences Institutes, Sakarya, Turkey.
Email: yusuf.dayioglu@sakarya.edu.tr

ABSTRACT: Individual investors make portfolio investments along with various alternatives for the purpose of increasing their profit. Most of the time, these investments carry different risk levels and investors make portfolio investments by evaluating these risks of different levels. During risky investment decisions such as portfolio selection and diversification, individual investors make their decisions under the influence of various factors. Among these; there are demographic, social and economic factors like income level, age, gender, educational background, marital status and quantity and quality level of one's profession. This study is conducted for the purpose of examining the demographic, social and economic factors mentioned above that may have an effect on predispositions of individual investors operating in Borsa Istanbul (BIST) towards risk taking. In the analyses done within this scope, it has been demonstrated that the factors discussed above except marital status all have significant effect on the risk perception of individual investors during their portfolio investments.

Keywords: Risk perception; Individual investors; Socio-Economic and Demographic Factors

JEL Classifications: D81; G17; G32

1. Introduction

In the studies conducted in the field of finance, the concept of risk has been discussed from various perspectives. Modern finance calculates the expected return within the estimated margins and deals with the risk it uses while doing this calculation from a mechanical framework. On the other hand, behavioral finance adopts a different method other than the mechanical framework in dealing with the financial risk since by definition; it approaches financial transactions from psychological and sociological perspectives. Behavioral finance put the people and their psychology in the center of the debates to reach at a better understanding of financial markets (Ouarda et al.; 2013, 214). According to the behavioral finance theory, individual investor gets under the influence of various subjective processes while scaling the risk in the course of investment decision. This results in the consideration of the subjective perception aspect varying in the calculation of the risk through which the concept of perceived risk was developed. Perceived risk is under the influence of demographic and socio-economic factors such as age, gender, educational background; emotional factors such as timidity, coherence; and psychological factors such as prejudices, cognitive contradictions, and overconfidence. Independent investors are disposed to make their financial decisions under the influence of these factors and consequently, they perceive the same financial investment risk on different levels.

Psychologists demonstrated that in finance and related fields, men have more self-confidence than women (Barber and Odean; 2001;262). Odean (1998) stated that overconfident investors evaluate the information they have on the value of the assets more than the actual value of the asset and they perform more transactions than other rational investors. The presence of the self-confidence results in investors placing more importance to their own evaluations in estimating the value and price of the security than the evaluation of others. Research indicates that this situation eventuates as

disinvestment or less income for the overconfident investors. If this issue is approached with this framework, men usually don't get a recompense for their self-confidence.

It is a fact that as people get older, they lose their capacity for analytical thinking; especially retired people prefer to enjoy their retirement rather than making any effort to increase their financial income. These two situations have an influence on investment decisions of the elderly. Research on this issue demonstrates that as investors get older, their risk perception increases and they prefer investments with less risk.

Additionally, investors' professions have an effect on their investment decisions. People with a profession that requires expertise may be considered as having knowledge and ability above the average. Investors with a profession that requires expertise tend to use their knowledge in making investments in fields like stock market where they will provide added value. Expertise may result in behaviors which will increase the tendency to take financial risks and most of the time, risk perception of the experts are lower.

There are 3 different psychological processes that have an effect on the maturity (accuracy) of the decisions: Responsibility, continence and prudence (Steinberg and Cauffman; 1996, 249). Increasing burden of responsibility may have significant effect on the person's decisions. Additionally, it is an obvious fact that married people have a higher sense of responsibility than single men. This fact is observed in their investment decisions; research shows that married investors make investments in less risky financial assets. In other words, their risk perception is higher than that of single investors.

Educational background of the investors may have an effect on their risk perception as well. People tend to believe that having more knowledge results in the increase of the accuracy of their estimations. This is called illusion of knowledge. Nonetheless, research did in this issue yields different results. Some of the research demonstrates that risk perception of the investors increase as their educational level rises while some research mention that there is a negative correlation between these two. Educated people have more self-confident compared to that of uneducated people. The determinant factor in this issue is a person's knowledge being considered as adequate in perceiving the incidents and knowledge resulting in self-confidence and egocentric thinking. Most of the research agrees on the fact that educated people have lower risk perception.

There have been various researches done on the effect of income level on risk perception and in most of them; it has been observed that people's tendency to take risks increase as the level of their income increases. Investors with high level of income tend to make risky investments more often and in a larger scale than the ones with lower levels of income since the ratio of the income they will risk to the sum of their income are below the level which may lower their living standards. This means that people with high levels of income have low risk perception.

There are various research in literature, especially in behavioral finance literature, on the factors having an effect on the risk perception of individual investor. Some of them consist of hypothetical studies while some of them are based on realistic empiric studies.

2. Literature on The Effects of Demographic and Socio-Economic Factors on Risk Perception

In this part of the study, academic research examining whether gender, age, level of income and education, profession and marital status which are considered as demographic and socioeconomic factors have an effect on financial perceptions of individual investors. Within this scope, literature examining the effects of first gender factor and then, other factors listed above on risk perception are discussed below.

In various empiric studies done after the great depression in 1929, it was demonstrated that age and gender, status of the previous profit and the weight of the decrease in income have an effect on risk taking behaviors in the market (Guerrero et al.; 2012,51). There is a wide consensus on the issue that amongst the general population, women have higher risk perception and less self-confidence than men (Byrnes and Miller; 1999).

Barber and Odean (2001) analyzed over 35.000 accounts between February 1991 and January 1997 which they acquired from an intermediary firm, in relation to excessive transactions that investors made. In their study, they focused on what percentage of shares in an account changed, in other words has been sold and replaced by other shares, in a year. At the end of the study, it has been demonstrated that men made 45% more transactions than women. They explored that the ratio of

change of the shares are 85% in the accounts of single men, 73% in that of married men, 53% in that of single women, 51% in that of married women. It has been indicated that the reason men making more transactions than women is their-overconfidence or their consideration of themselves as having more and accurate knowledge than women. These two situations result in men making more transactions than women.

In Emektar's study (2007), it has been stated that women have a higher level of risk perception than men, as well as marital status has a significant effect and investors with higher levels of education have a higher level of risk perception.

In the risk game which Eckel and Grossman (2002) prepared, it was demonstrated that women prefer risk-free games 4 times more than men. Arano et al. (2010) explored that gender leads to diversification in individual pension asset investment.

In their study, Bajtelsmit and Bernasek (1996) indicate that there are differences between men and women in the issue of investment. They emphasize that women approach with significant caution in asset and pension investments compared to men and their risk perception is high.

Bajtelsmita et al. (1999) demonstrated in their study, that women's risk perception on the money they spend to pension assets is higher than of men's. In a similar study, Embrey and Fox (1996) state, in furtherance of the literature, which women invest in less risky assets compared to men, women's risk perception is high and they considerably invest in the least risky assets.

In their study conducted with 280 participants, Fellner and Maciejovski (2007) demonstrated that women have a higher risk perception than men, exchange lower share or offer less exchange. Badinenko et al. (2011) stated in their analysis that women are disposed to acquire risky assets in their portfolio less often than men.

Watson and Mcnaughton (2007) conducted an analysis on the investment strategies of the members of Unifund Fund which provides pension salary to the personnel of Australian universities in 1997-2003 and explored that women take lower risks in their investment plans.

In their study consisting of the testosterone level tests conducted on over 500 MBA students, Sapienza et al. (2009) put forward that women have higher risk perception than men. According to the study, testosterone hormone that is lower in women compared to men, has an increasing effect on women's risk perception.

Wang et al. (2011) reported in their study, that women's risk perception is higher than that of men in asset investments amongst various categories and regarding prestigious, valuable security with fixed income such as bond and with high income like blue chip stock, differentiated risk perception wasn't detected in any of the 2 genders. Additionally, women classified alternative investment like art, antique and gold investments as less risky compared to men and this was presented as a result of women's passion towards these kinds of investments.

In their literature review on the effect of gender on investment decisions, Charles and Gneezy (2007), along with discussing various findings in this issue, emphasize that few literature studies comes to this conclusion in terms of portfolio preference analyses. In another study conducted by the same researchers (2012), it was demonstrated that women invest less in risky assets than men and consequently, they display higher risk perception compared to men.

Dwyer et al. (2002) analyzed 2000 investment fund investors and explored that female investors behaved in a less risky way than male investors in the most risky and fullest scale investment fund investment decisions. In a similar study conducted with 280 participants, Fellner and Maciejovsky (2007) observed that as risk perception increases, market activities decrease. In the study, it was also demonstrated that amongst the participants, women displayed higher risk perception. This result was generated from the fact that women give offers less often in the market and perform exchanges less often.

Powell and Ansic (1997) conducted 2 different experimental studies with over 100 college students regarding money market and insurance and demonstrated gender difference in risk tendency. They stated that this may be associated to the difference in decision making strategies.

Faff et al., (2011) explored in their studies that women have less risk tolerance than their counterparts, men, and this situation varies in relation to the demographic characteristics. Besides, they came to the conclusion that marital status, age, education and income level, number of people affiliated to the person and net asset level have an effect on risk tolerance.

In their study, Dohmen et al. (2011) indicated that age, education, gender, height and family history have economical effect on the willingness to take risk. In the study, it was emphasized specifically that tendency to take risk decreases as people get older, tall people take more risks, women's risk perception is higher compared to that of men's, people who have educated fathers tend to take more risks in all fields included in the study.

Donkers et al. (2001) demonstrated that risk perception is related to age, gender, level of education and income. It was stated that women and elderly display negative attitude towards risk and there is a positive correlation between education and income level and people's attitudes towards risk. In their study conducted with 253 participants, Harrison et al. explored the unstable correlation between age and education which are socioeconomic variables and risk perception. As the age increases, the avoidance of risk increases as well, especially after the age of 40. In the study, it was stated that people with higher education avoid risk more often than the ones with lower education.

Hartog et al., (2002) discovered in their study that the level of risk avoidance decreases together with increasing income and wealth. Moreover, it was measured in the study that employers avoid risks less than employees; public officers have higher risk perception than private sector employees while women have more risk perception than men.

Noussair et al. (2013) stated in their study that moderate and sparing people have higher risk perception.

Korniotis and Kumar (2011) claimed that, in their study they observed that despite the fact that older investors use their knowledge intensely in their portfolio selection, there is derogation in investors' investment decision in parallel with the increase in their ages with the effect of cognitive aging.

In their study conducted with 368 women, Malone et al. (2009) stated that women with higher level of education and income have higher positive perception regarding their own financial status.

Roussanov and Savor (2013) explored that marital status has an effect on financial decisions. In their study conducted with CEOs, they demonstrated that investment decisions of single CEOs are more aggressive and the share earnings that they manage are more unstable.

Love (2010) stated in his study that widows lower the optimal portion of the shares in their portfolio and this situation is statistically more stressed in women. Divorce was claimed to result in men making investments more on assets with higher risks in their portfolio while on the contrary, it increases the investment of women in safer assets. Moreover, it was discovered that the number of children at home lowers the tendency to make investments to risky assets.

In their study conducted on 7.000 pension accounts processed between 1994 and 19998, Agnew et al. (2003) demonstrated that men make investments in the shares which are considered more risky more often, married couples make more aggressive investments than singles, people with higher income invest in shares with a higher level while at the same time have dealings more often, older investors have dealings more frequently than young investors.

Heaton and Lucas (1999) demonstrated that landlords whose incomes are from private sector invest their assets less in security than other landlords.

In their study, Jianakoplos and Bernasek (1998) revealed that single women avoid risks more often than single men, the increase in the wealth of the household results in the decrease of risk avoidance, old women hold less risky assets than single men and married couples, single women lower the risky assets they own as the number of children in their household increases, single black women are willing to hold more risky assets than single white women, single men and married couple. Yao and Hanna (2005) discovered in their study that risk tolerance is at its highest in single men and this is followed by married men, single women and married women respectively.

In their study conducted with Danish landlords between 1993 and 1995, Donkers and Soest (1999) demonstrated that risk avoidance increases with age, women avoid risks more often than men, and landlords with higher risk perception reside in houses with lower prices.

Massa and Simanov (2003) (2004) stated in their study that, previous earnings have an increasing effect on risk taking while on the contrary, previous losses have a decreasing effect on risk taking behavior.

In his study conducted with 11.000 about the private pension portfolio selection, Södenberg (2003) demonstrated that married men make the most protective investments amongst other men, as well as there is a gender difference among risky investment alternatives and medium- range risky

investments. In another study done by the same researcher (2012), there was no difference detected between men and women amongst the investors that made low risk portfolio selections, however, it was discovered that men with high risk portfolio selection take significantly high risks compared to the women with high risk portfolio selection.

Samanez-Larkin et al. (2010) demonstrated that in risky asset selection, old people make more unstable selections compared to young investors. From this point of view, the result that neural mechanism affected by aging has negative effect on rational financial preferences was drawn. Bertaut and Starr-McCluer (2000) examined the assets that landlord acquired throughout 15 years and came to the conclusion that age has a significant effect on risky asset acquisition and the increase in wealth leads to the increase of the proportion of the acquirement of risky assets.

Rooij et al. (2011) explored that financial literacy has an effect on financial decisions. In the study conducted on 2000 people, it was demonstrated that investors belonging to low educational and income groups have weakly diversified portfolios. In another study conducted by the same researchers (2011), a positive correlation between financial knowledge and retirement plans was discovered. People with more financial knowledge were observed as having higher tendency towards making plans for their retirements. Jappelli and Padula (2011) demonstrated in their study that financial literacy and asset savings and national saving. Lusardi and Mitchell (2005) stated in their study that people over the age of 50 have more financial knowledge, financial knowledge and financial planning are strongly connected and people with more financial knowledge are tend to make financial plans more often and they have a higher possibility in being successful at it. Abreu and Mendes (2010) conducted a research on Portuguese individual investors and revealed that the level of education and financial knowledge of the investors have a significant effect on the number of different assets in their portfolios. Christiansen et al. demonstrated in their study (2005) based on 1.87 observations between the periods 1997-2001 that economists make more investment in stock markets than people with other professions by using their knowledge advantage.

Kempf et al. (2014) stated in their study that positive emotions result in higher income and lower risk estimation for security, while negative emotions lead to lower income and higher risk estimation. They emphasized that these cognitive prejudices increase with the self-confidence of the people and decrease with low financial knowledge.

Guiso and Jappelli (2005) discovered a strong correlation between a person's educational level and his share, investment fund and investment account awareness. Georgarakos and Inderst (2011) found in their study that landlords feel the need of different levels of financial knowledge depending on their different levels of financial knowledge capacities. Chaffai and Medhioub (2014) conclude that persons having a high level of education are subject to behavioral biases, and agents who invest amounts between 1,000 and 20,000 TND are most vulnerable to behavioral biases. Cooper et al. conducted a survey (2014) on 180 people and discovered that men have less risk perception than women and moreover, financial knowledge level of women is less than that of men's.

Neelakantan (2010) stated in his study that women has less risk tolerance than men, prefer risky assets less often when making investment and gender differences in risk perception can be explained for the wealthy group that forms the first 10% of the population. Vissing-Jorgensen (2004) demonstrated in his study that expected returns of wealthy investors are higher in times when market is at the top. In their study, Riley and Chow (1992) discovered that for people over the age of 65 risk perception increases, risk perception decreases as income increases and the risk perception of the wealthy group that forms the first 10% of the population is lower.

Han et al. (2009) explored in their study that experienced foreign institutional investors show better performance compared to individual investors. Grinblatt (2011) demonstrated in his study that, IQ level and being active in the market are correlated.

3. Findings on the Effect of Demographic and Socio- Economic Factors on Financial Risk Perception

3.1. Analysis of Demographic and Socio- Economic Factors That Affect Risk Perception

In this part of the study, whether there are differences in risk perception amongst groups that have various socio-economic and demographic characteristics are analyzes. The hypotheses used within this scope are given below:

H₁= There is a significant difference in terms of the perceived risk level amongst individual investors of different age groups.

H₂= There is a significant difference in terms of the perceived risk level amongst individual investors of different professional groups.

H₃= There is a significant difference in terms of the perceived risk level amongst married and single individual investors.

H₄= There is a significant difference in terms of the perceived risk level amongst individual investors with different levels of education.

H₅= There is a significant difference in terms of the perceived risk level amongst individual investors of different income groups.

H₆= There is a significant difference in terms of the perceived risk level amongst male and female investors of different age groups.

3.1.1. Research Method and Data

Within the scope of the study, actual data in relation to the transactions of exchange of shares and fixed yield security made by 100 individual investors in BİST between 2 January 2009 and 3 December 2011 was used. Data that is acquired from the intermediary firm of a bank includes the gender, age, profession, marital status, level of education and monthly income of the investor as well as date and time, price, interest, day, amount and session contents related to the transactions of exchange of shares and fixed yield security. The number of transactions made by these 100 investors in the research period exceeds 110.000. While establishing the investors whose data would be included in the scope of the study, random sampling method has been used. The investors whose data was included in the scope of the study reside in different regions of Turkey. Information about the assets and financial knowledge levels of the investors couldn't be included in the study since they weren't demanded by the intermediary firm from which the data was acquired, and hence, it constituted a limitation for the study.

3.1.2. Determining the Variables Used within the Scope of the Research

Part of the information relating to the variables used within the scope of the study was acquired from the intermediary firm of a bank. These are gender, age, profession, marital status, level of education and monthly income of the investor as well as date and time, price, interest, day, amount and session information related to the transactions of exchange of shares and fixed yield security done between 2 January 2009- 30 December 2011. Perceived risk variable which is the other variable used within the scope of the study was derived from the data acquired from the intermediary firm and calculated on transaction basis.

Perceived risk variable (PR) displays the ratio of the fixed yield security in investor's portfolio as a consequence of the risks perceived by the investor and is stated as below

$$PR_{it} = \frac{FYS_{it}}{FYS_{it} + S_{it}} \quad (1)$$

PR_{it} = Risk level perceived by i^{th} investor on t time

FYS_{it} = Sum of fixed yield security that i^{th} investor owns on t time

S_{it} = Sum of shared that i^{th} investor owns on t time

Sum of shared yield security (FYS_{it}) and shares (S_{it}) that the investor owns are calculated as below:

$$FYS_{it} = \sum_{h=1}^n FYSS_{th} \quad (2)$$

$FYSS_{th}$

= Sum of the amount whose h fixed earnings on t time was invested in security by i^{th} investor

$$S_{it} = \sum_{h=1}^n UM_{iht} * WAP_{iht} \quad (3)$$

UM_{iht} = Amount I Unit acquired by i^{th} investor in t time from h shares

WAP_{iht} = Weighted average price of h shares of i^{th} investor on t time

For the fact that investors buy same share with different prices on different times, Weighted Average Price (WAP) was used in calculating the value of the mentioned share. For example; an investor buys

5 A shares on t time from 4 TL. Then, the investor buys 5 more A shares on t+1 time from 8 TL. In this case, weighted average price is calculated as $\left(\frac{5}{10} * 4\right) + \left(\frac{5}{10} * 8\right) = 6 TL$.

3.2. Findings and Discussion

In determining the investors whose data was used within the scope of the study, random sampling method was used. If analyzed generally, the frequency of the samples of the study are close to the frequency of the samples used in other studies related to the issue, however, some differences were observed as well. Frequency and percentage distributions related to the samples of the study are given en masse in the table 1.

Table 1. Sample Frequency and Percentage Distribution

Age	Frequency	Percentage Distribution	Gender	Frequency	Percentage Distribution
18-25	1	0,01	Female	16	0,16
26-39	27	0,27	Male	84	0,84
40-55	55	0,55	Total	100	100
55-	17	0,17	Marital Status	Frequency	Percentage Distribution
Total	100	100	Married	73	0,73
Education	Frequency	Percentage Distribution	Single	15	0,15
Primary School	9	0,09	Not Specified	12	0,12
High School	21	0,21	Total	100	100
Undergraduate	43	0,43	Profession	Frequency	Percentage Distribution
Graduate	3	0,03	Unemployed	2	0,02
Not specified	24	0,24	Worker	5	0,05
Total	100	100	Public Officer	7	0,07
Monthly Income Level	Frequency	Percentage Distribution	Self-employed	16	0,16
0-999 TL	28	0,28	Specialist	47	0,47
1.000 TL-2.499 TL	30	0,3	Housewife	3	0,03
2.500 TL-3999 TL	26	0,26	Retired	19	0,19
4.000 TL-	16	0,16	Student	1	0,01
Total	100	100	Total	100	100

Determining whether there is difference in risk perception amongst investors from different age groups was analyzed by One-way ANOVA test. According to the results of the analysis, H₁ hypothesis that claims there is a difference in risk perception amongst individual investors from different age groups was verified (F=18.433, Sig. 0,000). Scheffe Test results are shown in Table 2. According to this, it is observed that there are significant differences between individual investors from 26-39 age group and 55 and above age group and investors from 26-39 age group take less risk than investors from 55 and above age group. Likewise, investors from 40-55 age group take less risk than the ones from 55 and above age group, in other words, their fixed yield security proportion in their portfolios are higher.

Table 2. Risk Perception Differences In Terms Of Age Groups

(I) Age	(J) Age	Average Differences (I-J)	Standard Error	Significance	%95 Confidence Interval	
					Low	High
26-39	55-	0,0028747	0,0004191	0,000	0,001703	0,004046
40-55	55-	0,0020903	0,0003459	0,000	0,001123	0,003057

Determining whether there is difference in risk perception amongst investors from different professions was analyzed by One-way ANOVA test. According to the results of the analysis, H₂ hypothesis that claims there is a difference in risk perception amongst individual investors from different professions was verified (F=22.051, Sig. 0,000). Scheffe Test results are shown in Table 3.

Table 3. Risk Perception Differences In Terms Of Professions

(I) Profession	(J) Profession	Average Differences (I-J)	Standard Error	Significance	%95 Confidence Interval	
					Low	High
Specialist	Public Officer	0,0041322	0,0004147	0,000	0,002661	0,005604
Specialist	Housewife	0,0029738	0,0005768	0,000	0,000927	0,005020
Self-employed	Public Officer	0,0043388	0,0004851	0,000	0,002617	0,006060
Self-employed	Housewife	0,0031804	0,0006293	0,000	0,000947	0,005413
Worker	Public Officer	0,0033349	0,0007302	0,002	0,000744	0,005926
Public Officer	Retired	-0,0039145	0,0004799	0,000	-0,005617	-0,002212
Retired	Housewife	0,0027562	0,0006253	0,003	0,000537	0,004975

In Table 3, it is observed that investors that are specialists have higher risk perception than public officers and housewives, in other words, they include higher proportions of fixed yield security in their portfolios. The fact that data set includes 2008 financial crisis and a significant proportion of the investors included in the specialist section in our sampling work at the bank may be claimed to lead to this result. On the other hand, self-employed people include higher proportions of fixed yield security in their portfolios than public officers and housewives. Proportions of fixed yield security in the portfolio of retired investors are lower than that of public officers and higher than housewives. Finally, proportions of fixed yield security in the portfolio of public officers are lower than that of workers.

Determining whether there is difference in risk perception amongst married and single investors was analyzed by T-test. According to the results of the analysis, H₃ hypothesis that claims there is a difference in risk perception amongst married and single investors wasn't verified (Sig. 0,116; Sig. 2-tailed. 0,287).

Determining whether there is difference in risk perception amongst investors from different educational levels was analyzed by One-way ANOVA test and H₄ hypothesis was verified (F=10.721; Sig.0,000). Scheffe Test results are shown in Table 4. According to this, it is observed that risk perception of the investors with masters or PhD degree is lower than the ones with primary school, high school and undergraduate degree. Assuming that the income levels of masters or PhD graduates are higher than the other groups, this result may be considered as normal. The risk perception of investors with undergraduate degree is demonstrated as lower than the ones with a high school degree. According to these results, it may be argued that the correlation between educational level and risk perception is indirectly constituted in terms of income level.

Table 4. Risk Perception Differences In Terms Of Educational Levels

(I) Education	(J) Education	Average Differences (I-J)	Standard Error	Significance	%95 Confidence Interval	
					Low	High
Primary School	Graduate	-0,0035636	0,0010638	0,011	-0,006537	-0,000590
High School	Undergraduate	-0,0012892	0,0003415	0,003	-0,002244	-0,000334
High School	Graduate	-0,0047791	0,0009734	0,000	-0,007500	-0,002058
Undergraduate	Graduate	-0,0034899	0,0009596	0,004	-0,006172	-0,000807

Determining whether there is difference in risk perception amongst investors from different income groups was analyzed by One-way ANOVA test and H_5 hypothesis was verified ($F=14.890$; $Sig.0,000$). Scheffe Test results are shown in Table 5. According to this, it is observed that in low income groups (between 0-999 and 1000-2499), risk perception decreases as the level of income increases. In the relation amongst higher income groups, it is demonstrated that risk perception increases as the income level increases. Assuming that investors from higher income groups make investments in a significant amount than the ones from low income groups, this situation may be considered as normal.

Table 5. Risk Perception Differences In Terms Of Income Groups

(I) Income Group (TL)	(J) Income Group (TL)	Average Differences (I-J)	Standard Error	Significance	%95 Confidence Interval	
					Low	High
0-999	1000-2499	0,0044423	0,0010191	0,000	0,001593	0,007291
1000-2499	2500-3999	-0,0019876	0,0003840	0,000	-0,003061	-0,000914
1000-2499	4000-	-0,0018320	0,0004328	0,000	-0,003062	-0,000622

Finally, determining whether there is difference in risk perception amongst female and male investors was analyzed by T- test and H_6 hypothesis was verified ($Sig.0,000$; $Sig. 2-tailed.0,005$). The results of the analysis are shown in Table 6. According to this, the proportions of fixed yield security in the portfolios of female investors are higher than that of males.

Table 6. Risk Perception Differences In Terms Of Gender

Gender	N	Average	Standard Error	Av. Standard Error
Male	80246	0,005043	0,0411216	0,0001452
Female	13883	0,006188	0,0443660	0,0003765

4. Conclusion

In this study, whether the factors such as gender, age, profession, marital status, level of education and monthly income of 100 security investors have an effect on the transactions of exchange of shares and fixed yield security that these investors made in BİST between 2 January 2009- 10 December 2011. Perceived risk variable which is the other variable used within the scope of the study was derived from the data acquired from formulation and calculated on transaction basis. The number of transactions of exchange made by 100 investors in BİST between 2 January 2009 and 10 December 2011 is expressed in 110.000 Excel lines. In this study, age, level of income and education, gender and profession of the individual investors are demonstrated as having an effect on their perceived risks. Marital status of the investors is observed as not having an effect on the perceived risk. Other characteristics of the investors except marital status having an effect on the risk perceived in the investors' decisions result in the diversification in the mentioned research period.

The analyses in the study was conducted not under laboratory conditions or not by asking experimental survey questions, but through scanning over 110.000 transactions of exchange of security of 100 investors in a period of almost 3 years. Therefore, actual, scientific results that reflect the actual world of finance were obtained instead of fictional ones. Increase in the media influence, communication channels becoming significantly widespread, placing more importance to others' thoughts in order to take the opportunities that could be missed due to the delay in the quick interpretation of knowledge or using cognitive shortcuts instead of analytic research attempts increase both the number and value of the research done in behavioral finance nowadays. This study brings interpretations to the investment decisions from finance philosophy perspective. If we could have studied a longer period and observe the differentiation in the investment decisions made before, during and after the 2007 financial crisis, this study would be more valuable. However, the findings obtained at the end of the analysis have a potential to contribute to behavioral finance literature.

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