Proceedings of the 7th International Conference on Economic Management and Green Development
DOI: 10.54254/2754-1169/39/20231952

Returns on Investments and the Financial Situation of Households

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Abstract: One of the fundamental goals of each investor is to improve the return on investment of individuals, but there are many and complex factors that affect these returns. This paper studies how household financial factors affect individual investment returns. I have proved that the richer the family knowledge and investment experience of investors, the higher the return on investment. This is one of the subjects covered by behavioral finance, and I support my claims with data.

Keywords: behavior finance, personal investment, family environment

1. Introduction

In the new era, China's securities market is developing rapidly, and Shenzhen Stock Exchange has released the "Survey Report on Investment of Individual Investors in 2020" [1]. According to the report, the Chinese securities market is mainly participated by small and medium-sized investors, with those aged below 25 even accounting for nearly 30%, and new stockholders also tend to be younger.

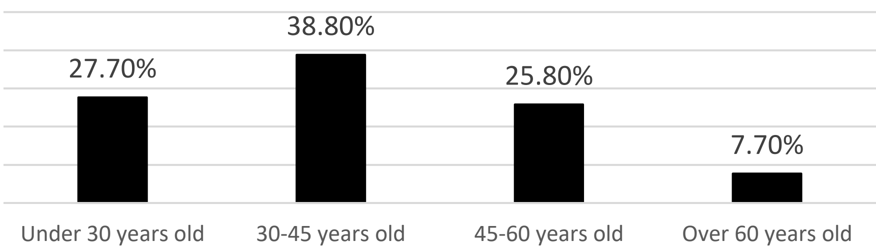

Figure 1: Age distribution of individual investors surveyed.

Although the securities market is developing rapidly, irrational investors with excessive fear and overconfidence still account for a relatively large proportion. Therefore, the impact of investors' personal traits on investment returns has become a concern.

Some traditional literature argues that investment returns under specific market conditions are usually closely related to investors' personalities, combining traditional economics with human behavior. Breaban and Noussair [2] found that investors' personal loss aversion, risk aversion and cognitive ability are related to their trading behavior and investment returns. In addition, Seasholes

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[3] suggested that the disposition effect, i.e., the return pursuit and unwillingness to lose money, is related to investor behavior. The formation of a person's personal traits is multifaceted, which involves sociological, psychological economics and other factors. This article explores the impact of family environment on a person's investment. In China, the family is the basic unit of social composition and has an important impact on the trait formation and development of individuals. Parents impact their children's economic status in many ways, whether intentionally or unintentionally, by teaching them financial literacy or modeling investments, so that their children inherit their parents' innate income ability and perceptions of risk.

From the past to the present, scholars have studied on the impact of family on children's investments. Filippin [4] studied the relationship between family environment, self-confidence and personal income. According to Yamada and Ken [5], there is a correlation between family environment factors and future economic rewards for children in Japan. Using micro survey data, Luo [6] found that parent literacy is related to individual access to investment information and investment returns. Hu [7], after studying social interactions, found that the impact of social interaction and family decision-making will also affect family financial activities.This shows that the family has an important impact on a person's development, which is also reflected in the investment returns and decisions of investors.

The importance of research on investors' personal characteristics and their investment behavior and returns is multifaceted. On the one hand, it is important to protect the interests of small and medium-sized investors in the securities market. Compared to institutional investors, small and medium-sized investors have lower risk tolerance, lack professional investment knowledge and abundant investment capital, and are more vulnerable to market shocks. Therefore, only after a comprehensive understanding of investor traits and environment can we educate and guide investors more effectively and take targeted protection investigates. As for the market, a sounder mechanism and regulatory investigates should be established only after understanding the factors affecting investment.

After conducting a lot of research, the author found that scholars have explored the factors influencing investment returns more extensively, many scholars focus on the cognitive ability of investors. There is evidence that education itself can improve the cognitive ability of the educated, and the influence of cognitive ability on financial decision-making has also been proved in empirical studies. Li et al. [8] found that with the improvement of education level, investors' portfolio diversification degree increases significantly. Wu et al. [9] found that Investors who have completed high school, bachelor's or higher education have a significantly positive probability of investing in stocks, funds, and insurance, but less research has been conducted on the relationship between household investment experience and household finance. However, Chinese financial markets, such as the stock market, are characterized by individual investors, strong speculation, and obvious herding effect, which puts forward higher requirements for Chinese individual investors. Therefore, only from a multi-angle and multi-level perspective can guidance and advice be given to investors, the article will focus on the study of family environment and explore the impact of family environment on investors' returns.Combining the factors affecting investment proposed by scholars based on Chinese securities market and empirical evidence, the family environment is chosen as the research of this article. Li et al [10].studied the impact of residents' investment in stocks and bonds on household income and found that, overall, when the head of the household has a high education, the family gets better returns from buying stocks. The head of the household education is low, investment stock losses and losses are relatively high. Based on the previous related literature and research, this article puts forward the corresponding hypothesis that the more knowledge and investment experience accumulated by investors' families, the higher the investment income of investors. The article further explores the impact of personal characteristics and environment on their investment income.

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China's financial market, such as the stock market, has the characteristics of retail [11] , strong speculation [12] , obvious herd effect [13][14] , etc., which puts forward higher requirements for the cognitive ability of individual investors in China. The author will take an empirical approach and use small and medium-sized investors as the research target, explore the interaction between sociology, psychology and finance, expand the content of behavioral finance and enrich the theory of finance; investors should have a more comprehensive understanding of their own profit and loss and their children's investment returns, promote family financial education; regulatory authority should provide them with effective information to establish a regulatory mechanism and regulatory role, and promote the high-speed development of the securities industry.

2. Methodology

2.1. Reasearch Data

The impact of family environment on investors is relatively fixed, including education, family income, family investment experience, etc., which cannot be investigated by explicit data. Therefore, the author chose other instrumental variables to better represent this variable. Using CHFS micro survey data, Luo [6] found that individuals' ability to obtain information is impacted by parents' education. From the data in the article, it can be concluded that investors' ability to obtain information is positively related to the quality of parents. Therefore, parental education and parental investment experience are selected to represent investors' home environment variables in this article.

To investigate parental education (Edu), studies have shown that education can improve cognitive performance [15] and the influence of cognitive ability on financial decision-making has also been confirmed in empirical studies [16-20]. This paper refers to the research data of Luo [6]. It can be clearly seen that the proportion of financial assets in family assets is increasing with the education level of the head of household from high school to master's degree, and the proportion of risk assets is also increasing, indicating the impact of parents' education level on family investment assets. In this paper, X1 is assigned separately by parents' education level. This mainly includes A. One or more parents have bachelor's degree or above B. One or more parents have high school education C. This article assigns A value of 3 to A, 2 to B, and 1 to C, as shown in Table 1:

Table 1: Edu variable survey questionnaire.

Measurement Index	Design issue	Option
Education level of parents	What are your parents' educational qualifications	A. One or more parents with a bachelor’s degree or above B. One or more parents have a high school education. C. Neither parent is

To investigate parent financial literacy (Liter): Christelis used interviews in his survey to obtain data on household investment participation. The article decided to use a questionnaire to show the household's investment experience and parents' financial knowledge. The questions include A. One or more parents work in the financial sector B. Both parents do not work in the financial sector, but one or more parents have the habit of trading stocks, bonds, etc. C. Only parents' bank deposits, this article assigns A value of 3 to A, 2 to B, and 1 to C, as shown in Table2:

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Table 2: Liter variable survey questionnaire.

Measurement Index	Design issue	Option
Parents' level of financial literacy	Do your parents know anything about finance	A. One or more parents are involved in the financial sector. B. Both parents do not work in the financial sector but one or more of them has the habit of speculating in stocks, buying and selling bonds, etc. C. The parents have only bank deposits.

In order to carry out the experiment, the article obtains the returns directly from the questionnaire and assign values to the variables by different return. A. The one-year return on investment exceeds 10%. B. One-year return on investment is 7.5% - 10%. C. 1-year return on investment is 5% - 7.5%. D. One-year return on investment is 2.5% - 5%. E. One-year return on investment: 1% - 2.5%. This article assigns A value of 5 to A, 4 to B, 3 to C, 2 to D, and 1 to E, and the variable symbol used is Y, as shown in Table3:

Table 3: Investment return survey questionnaire.

Measurement Index	Design issue	Option
Personal Rate of Return	What was your yield last year	A. The rate of return on investment for one year is 10% or more. B. The rate of return on investment for one year is 7.5% - 10% C. A one-year investment return of 5%-7.5% D. One-year investment return of 2.5%-5% E. A one-year investment return of 1%-2.5%

2.2. Control Variables

Gender: The impact of gender on investor returns appears in many documents as a control variable. Information on the gender of investors is collected and set to take the value of 0 for male and 1 for female and set them as control variables.

Major: The respondents' majors are counted in the questionnaire survey at the time of obtaining the variables, and they are divided into financial and non-financial majors. It is clear from the

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references that profession is also one of the factors that affects investors' returns. This paper takes it as a control variable. The value of non-financial major is 0, and the value of financial major is 1.

2.3. Model

To examine the effect of family environment on individual financial report, the following model is constructed in this paper.

$$Y = \alpha 1Edu + \alpha 2Liter + \alpha 3Gen + \alpha 4Maj + u \tag{1}$$

where Y represents the respondents' personal investment income in one year, Edu represents the education level of the respondents' parents, Liter represents the investment experience of the respondents' parents, Gen represents the gender of the investor, Maj represents the professional impact of the respondents, and u is the disturbance term, and the OLS model is utilized to estimate the model parameters.

To analyze the relationship between variables and y in an all-round and multi-level way, the variables are grouped several times in this paper. In this paper, the rate of return is 7.5% as the dividing line, and those above 7.5% are divided into high-yield groups, denoted by Y_1, and those below 7.5% are divided into low-yield groups, denoted by Y_2. OLS model is used to estimate the parameters of the two groups respectively.

For the variable of educational level of parents, this paper divides the survey samples into three corresponding groups according to three different answers. An answer is group 1, namely, Edu_1, B answer is group 2, namely, Edu_2, and C answer is group 3, namely, Edu_3. OLS model is used to estimate the parameters.

For the Liter variables of parents' financial literacy, the grouping method is as follows: A answers to group 1, namely $Liter_1$, B answers to group 2, namely $Liter_2$, and C answers to group 3, namely $Liter_3$. OLS model is used to estimate the parameters.

As for the gender variable Gen, this paper divides it into two groups according to men and women, with Gen_1 representing men and Gen_2 representing women. OLS model is used to estimate the parameters, and the influences of other variables on different genders are discussed respectively.

As for the major variable Maj, this paper represents the financial major as Maj_1, and the non-financial major as Maj_2. OLS model is used to estimate the parameters, and the influence of other variables under different majors is discussed.

2.4. Sample Descriptive Statistics

This article uses a questionnaire survey. The sample data came from several universities, involving two groups of undergraduate and graduate students, and the total number of participants was 200. Table 4 shows the descriptive statistics of the samples.

Table 4: Sample analysis.

Characteristics	Category	Number	Percentage
Gender	Male	107	53.5%
	Female	93	46.5%
Major	Finance major	105	52.5%
	Non-finance major	95	47.5%

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According to the sample analysis, the proportion of respondents, regardless of gender or educational background, is close to the average score. It basically conforms to the distribution law of students, and the proportion is relatively reasonable.

3. Regression Analysis

3.1. OLS Regression Analysis Is Conducted Based on Family Environment

Table 5: OLS analysis results.

dependent Variable:Y		dependent Variable:Y_1		dependent Variable:Y_2	
independent variables:		independent variables:		independent variables:	
Edu	0.490***	Edu	0.049	Edu	0.188*
	(0.132)		(0.111)		(0.105)
Liter	0.803***	Liter	0.050	Liter	0.334**
	(0.129)		(0.090)		(0.131)
Gen	-0.245**	Gen	-0.064	Gen	-0.120
	(0.153)		(0.137)		(0.123)
Maj	0.251**	Maj	0.016	Maj	0.105
	(0.157)		(0.145)		(0.125)
Constant	0.400	Constant	4.554	Constant	1.128
	(0.229)		(0.312)		(0.203)
n	200	n	62	n	138
R^2	0.4092	R^2	0.0109	R^2	0.1358

Note: Values in brackets are robust standard errors

* indicates significant at the 10% level of significance

** indicates significant at the 5% level of significance

*** indicates significant at 1% level of significance

Similarly Hereinafter

According to the OLS regression results, the coefficient of Edu in the model is 0.490, which is significant at the 1% level, and the coefficient of Liter is 0.803, which is significant at the 1% level. The regression results show that the more knowledge and investment experience accumulated by the investor's family, the higher the investor's investment return. The impact of this comprehensive factor of the investor's family environment has been confirmed, and the consistency of the regression results has verified the hypothesis proposed in this article. When comparing the coefficients of the high-yield group and the low-yield group, the model shows that the coefficients of the parents' education level and financial literacy in the low-yield group are much larger than those in the high-yield group, which shows that the family environment has a greater impact on investors when the individual investor's rate of return is low. However, if individual investors want to achieve high returns, they need to rely on their own market analysis and financial ability learning. For the investment in the securities market, the family environment is the helping factor, but the individual's financial investment ability is fundamental.

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3.2. The Grouping Model of Parental Educational Level Edu

Table 6: Edu OLS analysis results.

dependent Variable:Y		dependent Variable:Y		dependent Variable:Y	
independent variables: Edu_1		independent variables: Edu_2		independent variables: Edu_3	
Liter	0.801***	Liter	0.861***	Liter	0.492**
	(0.253)		(0.165)		(0.305)
Gen	-0.377	Gen	-0.186	Gen	-0.377*
	(0.357)		(0.249)		(0.207)
Maj	0.404	Maj	0.411	Maj	0.006
	(0.378)		(0.257)		(0.225)
Constant	1.675	Constant	1.177	Constant	1.424
	(0.667)		(0.384)		(0.408)
n	54	n	72	n	74
R^2	0.2226	R^2	0.3029	R^2	0.0604

For the grouping model of parents' education level Edu, when the influence of parents' education level is removed, the Liter coefficients of parents' financial literacy are all large, and the variables Liter in Edu1 and Edu2 groups are significant at 99% level, and the variables Liter in Edu3 group are significant at 95% level. This shows that parents' financial literacy is an important influence on individual investors' investment returns, and the influence of this factor on investment returns has been confirmed.

3.3. A Liter Grouping Model of Parental Financial Literacy

Table 7: Liter OLS analysis results.

dependent Variable:Y		dependent Variable:Y		dependent Variable:Y	
independent variables:		independent variables:		independent variables:	
Edu	0.661**	Edu	0.369**	Edu	0.639***
	(0.275)		(0.183)		(0.201)
$Liter_1$		$Liter_2$		$Liter_3$	
Gen	-0.346	Gen	-0.187	Gen	-0.231
	(0.298)		(0.273)		(0.214)
Maj	-0.214	Maj	0.562**	Maj	0.196
	(0.320)		(0.267)		(0.226)
Constant	3.046	Constant	1.760	Constant	1.113
	(0.696)		(0.486)		(0.328)
n	36	n	69	n	95
R^2	0.1717	R^2	0.1446	R^2	0.1728

For the Liter grouping model of parents' financial literacy, when the influence of parents' financial literacy is removed, the Edu coefficient of Liter1 group is 0.661, which is significant at the level of

DOI: 10.54254/2754-1169/39/20231952

5%, Liter2 group is 0.369, which is significant at the level of 5%, and Liter3 group is 0.639, which is significant at the level of 1%, indicating that the education level of parents has an important impact on the investment income of individual investors.

3.4. Grouping Model of Gender Gen

Table 8: Gen OLS analysis results.

dependent Variable:Y		dependent Variable:Y	
independent variables:		independent variables:	
Edu	0.544**	Edu	0.622***
	(0.186)		(0.184)
Liter	0.878***	Liter	0.745***
	(0.177)		(0.185)
Gen_1		Gen_2	
Maj	0.404*	Maj	0.103
	(0.230)		(0.216)
Constant	0.474	Constant	0.085
	(0.296)		(0.262)
n	107	n	93
R^2	0.3935	R^2	0.4347

For the grouping model of investor gender Gen, the Edu coefficient of Gen1 group, that is, male, is 0.544, which is significant at the level of 5%, and the Liter coefficient is 0.878, which is significant at the level of 1%. In Gen2 group, the Edu coefficient of female was 0.622, which was significant at the level of 1%, and the Liter coefficient was 0.745, which was significant at the level of 1%. This shows that the influence of family environment on investors has nothing to do with gender, reflecting the characteristics of equality between men and women.

3.5. A Grouping Model for Specialized Maj

Table 9: Maj OLS analysis results.

dependent Variable:Y		dependent Variable:Y	
independent variables:		independent variables:	
Edu	0.605***	Edu	0.362*
	(0.184)		(0.194)
Liter	0.740***	Liter	0.563***
	(0.185)		(0.183)
Gen	-0.354*	Gen	-0.106
	(0.215)		(0.220)
Maj_1		Maj_2	
Constant	0.585	Constant	0.465
	(0.329)		(0.303)
n	105	n	95
R^2	0.4257	R^2	0.3512

DOI: 10.54254/2754-1169/39/20231952

For the grouping model of professional Maj, the investors are the financial professional Maj1 group, the Edu coefficient is 0.605, which is significant at the level of 1%, and the Liter coefficient is 0.740, which is significant at the level of 1%. The investors are non-financial majors in the Maj2 group, and the Edu coefficient is 0.362, which is significant at the level of 10%, and the Liter coefficient is 0.563, which is significant at the level of 1%. Through the comparison of the coefficients, the article concludes that the family environment has a stronger influence on financial professional investors, while non-financial professional factors weaken the influence of the family environment, indicating that the study of personal financial knowledge and the improvement of financial ability are complementary to the family environment, and the efforts made the day after tomorrow are very important.

4. Conclusion

Undergraduate and graduate students from several universities in Tianjin are used as the research subjects, and the investor returns of the respondents are used as the dependent variable by questionnaires. Based on the research basis of domestic and foreign scholars and the practical experience of behavioral finance, this article explores the impact factors of family environment on investment income from the perspective of family environment and uses OLS estimation combined with robust standard error statistical method to deeply explore family factors on individual investment income.

From the experiment and data analysis, the following conclusions can be drawn: Family environment has a greater impact on investors' investment returns, i.e., the more knowledge and investment experience an investor's family has accumulated, the higher the investor's investment returns. Family impact on investors is mainly reflected in the parents' education level and parents' investment experience. The higher the parents' education level, the better their children's comprehensive quality, risk attitude, cognitive ability, etc., and their investment returns are higher than those of investors with lower parents' education level; The more experience parents have in financial management, the more likely their children are to be influenced by financial investment, and their own financial quality will be higher. When their financial literacy reaches a certain level, their role in earning income will be greatly increased, which can also explain why professional financial professionals earn several times more than ordinary investors. This article calculates the comprehensive factor of the investor's family, and studies the investor's environment more comprehensively. Through data analysis, the impact of the family environment on investors is more intuitive and objective. Theory and practice have verified the impact of the family environment on investors' returns. It should still be noted that although family factors will affect the investment return of financial investors, investors' own learning of financial knowledge and improvement of financial ability are still the top priority, and the learning the day after tomorrow will affect the positive role of family factors for investors. Secondly, the gender of investors has no significant influence on the return of financial investment. The difference of investment income of different investors is mainly due to family environment and personal financial investment ability, and the gender difference will not affect the investment income of investors. Therefore, we should call for equality between men and women and take financial investment ability as the benchmark.

5. Suggestions

5.1. Suggestions for Investors

For middle-aged investors, after learning the positive impact of family environment on future generations' financial investment, we should pay attention to the role of family environment on future generations' financial investment. By improving their own ability, we can teach and impart related

DOI: 10.54254/2754-1169/39/20231952

financial knowledge to future generations, improve family financial literacy, help future generations establish a correct and positive investment concept, and improve their attention to financial investment.

For young investors in the ever-changing and developing financial market, younger investors should pay more attention to entering the market cautiously and investing rationally, comprehensively measure their investment behavior from their own perspective, learn experiences and lessons from their parents, and avoid investment decision-making mistakes caused by overconfidence in their own abilities and judgments. They should think more about citations and collect effective information before making decisions. Young investors should not only have a deeper understanding of their comprehensive ability and risk attitude, but also need to constantly strengthen their cognitive ability. Moreover, young investors should not exaggerate the influence of family environment on the return on investment. Young investors should improve their initiative in learning financial knowledge. They can consolidate industry-related knowledge and strengthen their understanding and understanding of financial disciplines from the aspects of financial knowledge and risk knowledge.

5.2. Suggestions for Financial Institutions

It is important for financial institutions such as brokerage firms, funds, and trusts to conduct a more effective test on investors. Not only do we test investors for risk when they open a stock account, but we can also apply a more comprehensive framework test to pre-screen investors accordingly. The research also provides some ideas for test. Financial institutions can collect data on the investor's family environment and provide the appropriate financial services to them by combining both their own and family factors. When conducting analysis, investment and financial advice and other financial services, we should reasonably distinguish their customer groups.

Financial institutions should play a guiding role in the financial market, disseminate relevant financial knowledge and information to market investors, and actively explain to investors the important role of family environment in investment, to help improve the financial literacy of the whole society. When financial institutions choose relevant employees, they should not take gender as a measuring factor, but should take investment income ability as a benchmark for career measurement, call for equality between men and women, and create a harmonious employment environment.

5.3. Suggestions for Regulatory Authority

The education and guidance of the government and regulatory authority for investors can further promote the stable development and continuous maturity of the market. Based on the findings, this article makes the following policy suggestions to the government and regulatory authority.

We should urge financial institutions to implement a better access mechanism and investigate the family environment factors before investors enter the market, and judge the types of investments they are suitable, etc. Then, financial institutions should test the supervision system before investors enter the market and implement it comprehensively and carefully.

Due to the short development of the market, many aspects still need to be improved for the market to develop. Therefore, the regulatory authority should pay more attention to the education of investors. Regulatory authority will combine investment education activities for investors with theoretical knowledge popularization, so that more investors master the basic investment knowledge and have the appropriate professional ability. Education and activities should be carried out simultaneously, and while educating investors, regulatory authority should ensure that the number education guidance activities for investors can be tailored to the characteristics of different groups of people and carry out effective number education for them according to the local system, so that they can establish the correct investment values, investment philosophy and investment methods. According to the findings, the regulatory authority can also strengthen the family financial awareness education for older investors.

Regulatory authority should monitor the behavior of middle and small investors. During the rapid development of financial markets, small and medium investors have always been one of the most important participants in the securities market. The regulatory authority should strengthen the analysis and feedback on the family environment of middle and small investors, and more comprehensively establish and improve the mechanisms and regulations for them in the securities market, to promote the rapid development of China's securities marke.

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