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Financial Literacy, Risk Aversion and Financial Behaviours: What Shapes the Preference for Capital Market Participation?

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Abstract

This paper aims at examining the role played by financial literacy, risk aversion and financial behaviours in shaping young individuals' preference for making investments in traditional assets of the Romanian capital market. For this purpose, we conducted a survey among the students enrolled in the finance and banking oriented faculty at the largest university of economic studies in Romania. The questionnaire comprises 40 questions that assess respondents' general social and demographic background, financial behaviours, risk aversion, basic and advanced financial literacy. For this study, we used a sample of 416 Romanian nationality respondents. We employed an ordered logistic model in order to examine what drives young people's preference for capital market investments. The estimates indicate that financial literacy plays an important role in stimulating their propensity to invest in the capital market. Risk aversion prevails in the case of individuals with only basic financial literacy and reduces their preference for a more diversified portfolio. If young people face difficulties in satisfying their desires, they will not be inclined to invest in the capital market.

Keywords: financial literacy, risk aversion, financial behaviour, stock market, survey, logit model.

JEL Classification: D14, G4, G53

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1. Introduction

The experience of the recent financial crisis proves that poor financial decisions are a phenomenon that is surprisingly widespread throughout the world. Can individuals effectively manage their own finances? Do public policies play a role in helping consumers to improve the results of their financial decisions? Even simple decisions regarding saving and investing require individuals to forecast and collect certain variables such as interest rates, inflation, financial products and to understand concepts such as compounding interest and time value of money (Lusardi, 2008).

The responsibility of ensuring financial well-being falls to households. They have to acquire and manage financial expertise in order to be able to make informed saving and investment decisions. As, in order to drive a car on public roads, it is compulsory for the individual to hold a driving license, similarly, the adoption of investment decisions should be possible after acquiring a “financial license”, as the errors regarding the financial decisions can have serious consequences on individuals and society as a whole.

The fact of having a minimum level of financial knowledge and skills that are confined to the concept of *financial literacy*, acquired or not through the financial education process, supports the efficient management of individuals’ financial resources. Most studies in the literature suggest that individuals who have a low level of financial knowledge tend to make decisions that are not favourable to them. Generally, they avoid making investments that involve participation in financial markets and hold less diversified portfolios. In a changing world, financial products are becoming more and more complicated, which means that people should consider systematic financial training, be constantly informed about the latest news in the field of financial products so that they can be successful in the decisions they make.

2. Problem Statement

For the financial markets, the deep and broad participation of households represents an important determinant for the risk premium, market volatility and household expenses. Cole and Shastry (2009) consider the participation in the US stock market to be modest: 17.6% of households hold bonds and 20.7% of them hold shares. For comparison, in 2017, only 58% of Romanians had a bank account; in 2013, bank deposits were the most important financial instrument (although they represented only 31% of GDP compared to developed countries where they represented 84% of GDP), while an insignificant percentage of Romanians invested their money in shares, bonds or mutual funds (Demirguc-Kunt, Hu and Klapper, 2019; Beckmann, 2013). Recently, according to the 2018 Investor Compensation Fund in Romania Annual Report, the total number of investors was only 53,891 persons in December 2018, decreasing by 9.23% compared to December 2017 and by 27.6% compared to December 2014. The average portfolio of a fully compensable investor (with holdings of up to EUR 20,000) was EUR

3,458 (the equivalent of less than 4 average wages in Romania) in December 2018. The number of members such as authorized intermediaries to provide financial investment services has been steadily decreasing (from 104 in 2008 to 51 in 2014, 37 in 2017 and 31 in 2018), due to the poor performance or losses. This has negatively affected the number of investors, reflecting the unfavourable evolution of the Romanian capital market.

Griffins and Messy (2012) and Zou and Deng (2019) suggested that the increasing degree of financial literacy, both at the individual and at the country level, is essential for ensuring the increase in the participation rate of the individual investors in the capital market. Acquiring financial skills will allow individuals to make better decisions, which will ultimately have favourable effects on financial markets and on the economy as a whole.

3. Research Questions / Aims of the Research

In the light of the above, the aim of our study is to examine the impact of financial literacy on the young people's preference for the shares and bonds traded in the Romanian capital market. We also examine the extent to which risk aversion and financial behaviours influence their investment preference. One contribution of our paper is that the analysis takes into account the students enrolled in the finance and banking oriented faculty at the largest university of economic studies in Romania. As Shim et al. (2010) stated, students are going through an important transition period in their personal development. They are not yet completely financially independent, but they are actively learning the skills needed to become financially independent and enter the maturity phase of their lives, and the financial habits they acquire during this period are likely to influence greatly their future financial well-being. A second contribution is that our study is the first attempt in analysing what shapes young people's preference for capital market investments in a former communist economy. Our methodological and modelling approaches may serve as guidance for future related studies developed on post-communist economies.

4. Research Methods

For the purposes of this study, we firstly conducted a survey based on a questionnaire, which comprises 40 questions and is organized in six parts. We were interested in: collecting information on the respondents and respondents' parents financial behaviours; assessing respondents' financial literacy and risk aversion; finding out their preference for a number of financial products (cash, saving accounts, life insurance, mutual funds, stocks, pension funds, bonds and current accounts). In order to assess the financial literacy, we used a set of 16 standard questions proposed by Lusardi and Mitchell (2014) and van Rooij, Lusardi and Alessie (2011). Five questions addressed basic financial literacy skills, such as numerical skills, the ability to make interest rate calculations, the understanding of inflation and risk diversification. Eleven questions addressed advanced financial knowledge about the most popular financial assets, stocks, and bonds, mutual funds, the risk and return associated with financial assets, the functioning of the capital market in general. We employed an experimental method proposed by Hartog, Ferrer-i-Carbonell and Jonker (2000) to evaluate the risk aversion based on the absolute risk aversion coefficient (ARA) introduced by Arrow (1965) and Pratt (1964). Our sample included 416 under and post-graduate students aged between 18 and 23.

In order to examine what factors shape young educated people's preference for capital market investments, we employ an ordered logistic regression. The dependent variable is a dummy variable that takes 0, if the respondents selected neither shares nor bonds from the list of the financial products; 1, if the respondents selected at least one of the two assets; and 2, if the respondents selected both financial assets. Equation (1) describes the model:

$$\Pr\left(Y = 1 \; / Literacy, Risk, Z_i\right) = F(\beta_0 + \beta_1 \cdot Literacy + \beta_2 \cdot Risk + \textstyle\sum_{i=1}^{N} \varphi_i \cdot Z_i) \qquad (1)$$

where: Y is the dependent variable; *Literacy* is an explanatory variable and represents respondents' total financial literacy score. We also estimate logit models that include the basic (*Basic*) and the advanced (*Advanced*) financial literacy scores; *Risk* is an explanatory variable that measures the respondents' risk aversion; Z_i is a set of control variables that takes into account socio, demographic, and financial behaviours; β_0, β_1, β_2, φ_i are the coefficients to be estimated.

For the selection of the control variables, we calculated the correlation matrix and dropped out from the logistic models those factors that were strongly correlated with the financial literacy and risk aversion.

5. Findings

Examining the correlation coefficients (see Table 1), we found that the young people's preference for shares can be positively influenced by the extracurricular financial education training which they attended voluntarily before the university studies and by the financial literacy score. Also, respondents who have demonstrated fiscal literacy appear to be more prone to invest in shares. Having a job can also stimulate their preference for shares as well as the household income. We note that household income can be a proxy for the young people's future earnings. Parents' university education and father's professional status as employee in the private sector can positively influence children's preference for investing in shares. If they base their financial decisions on parents' similar past experiences, their preference for shares investment decreases. We noticed a great similarity between the parents' financial habits and those of children. Parents mostly passed on their financial behaviour to their children characterized by a preoccupation for the budgetary discipline, regularly tracking the expenses, meeting the budget constraint and less for saving and investments. If the respondents face difficulties in purchasing the desired goods, their preference towards shares will diminish.

Regarding the preference for bonds, the factors that can influence it are less numerous than those identified in the case of shares. This is because, on the one hand, the number of respondents who indicated the possibility to invest in bonds is about 20%, representing half of those who have expressed preferences for shares. On the other hand, as shown by the advanced financial literacy questions, the respondents proved a greater unfamiliarity of this financial product. Thus, having a job positively influences the preference for bonds. If parents discuss financial issues with their children, they will be more prone to invest in bonds. The father's university education might shape the children's preference for bonds, as well as the mother and father's professional status as entrepreneurs. In contrast, if the father is a civil servant, the preference for bonds will tend to decrease.

Table 1. Correlation matrix

Control variables	Stocks	Bonds	Literacy	Basic	Advanced	Risk
Extra financial education	0.1408*	0.0356	0.0948***	0.0621	0.0938***	0.0026
Employee	0.1491*	0.2172*	0.3168*	0.3183*	0.1985*	0.0763
Discussions on financial matters	0.0744	0.1459*	0.2410*	0.1965*	0.2333*	0.0376
Financial decisions based on parents' experiences	-0.0858***	-0.0572	-0.1219**	-0.0934***	-0.1131**	0.0742
Difficulties in purchasing desired goods	-0.0848***	-0.0754	0.0245	-0.0151	0.0414	0.0950***
Financial investments	0.0827***	0.0232	0.0792	0.0638	0.0717	0.0045
Family and peers	0.0955***	0.0516	0.1629*	0.1585*	0.1115**	-0.0791
Household income	0.1211**	0.0642	0.1022**	0.0944***	0.0790	-0.0704
Mother's education	0.0983**	0.0732	0.1260**	0.1030**	0.1215**	0.0490
Father's education	0.1110**	0.0862***	0.1541*	0.1622*	0.0832***	0.0458
Mother entrepreneur	-0.0136	0.0818***	0.0843***	0.0533	0.0844***	0.0320
Father civil servant	-0.0654	-0.2089*	-0.1663*	-0.1621*	-0.1131**	0.0872***
Father - private sector	0.0825***	-0.0221	0.0598	0.0290	0.0648	-0.1081**
Father - entrepreneur	-0.0153	0.0919***	0.0271	0.0258	0.0196	0.0579
Fiscal literacy	0.0873***	0.0536	0.2781*	0.1952*	0.2678*	-0.0647

*p<0.01; **p<0.05; ***p<0.1

The preference for the capital market is measured by the respondents' preference for both main financial assets of this market, shares and bonds. The statistics indicate that 12% of the respondents selected both financial instruments. Table 2 reports the estimates of the ordered logistic regression that shows what shapes young people's preference for capital market investments.

Table 2. Estimates of the ordered logistic regression

Factors	**(1)**	**(2)**	**(3)**
Extra financial education		0.491^{**}	
		(0.196)	
Difficulties in purchasing goods they desire	-0.177^{**}	-0.150^{**}	-0.164^{**}
	(0.0755)	(0.0731)	(0.0758)
Household income			0.127
			(0.0833)
Literacy	0.181^{*}		
	(0.0318)		
Basic		0.240^{*}	
		(0.0737)	
Advanced			0.244^{*}
			(0.0409)
Risk aversion	-0.370	-0.408^{***}	-0.358
	(0.233)	(0.234)	(0.230)
Constant cut1	0.734^{**}	0.238	0.805^{**}
	(0.353)	(0.334)	(0.379)
Constant cut2	2.931^{*}	2.362^{*}	3.023^{**}
	(0.372)	(0.347)	(0.412)
McFadden R^2	0.537	0.0330	0.0589

$^{*}p<0.01$; $^{**}p<0.05$; $^{***}p<0.1$

We notice that financial literacy positively influences the preference of young people for capital market investments. The effect is greater in the case of advanced financial literacy. The more financial knowledge and specific skills they acquire, the more young people will be inclined to invest in both instruments. In the case of the model (2), the participation in extracurricular financial education activities before the university studies becomes statistically significant and has a positive influence on the preference for the capital market investments. This result suggests that in order to become a more sophisticated investor with a more diversified portfolio, the skills limited to basic financial literacy are not sufficient, requiring additional financial knowledge. Risk aversion also becomes statistically significant in the case of the model with basic financial literacy. The coefficient shows that the inclination to invest in more capital market assets is diminished by it. People, in general, are risk averse. A high-risk aversion combined with a low level of basic financial literacy will determine individuals not to invest in the capital market. If young people face difficulties in satisfying their desires, the probability of investing in the capital market decreases significantly.

6. Conclusions

This paper aimed at examining the role played by financial literacy in shaping young people's preference for two main assets of the capital market: shares and bonds. We also investigated how risk aversion can influence their proneness towards these financial products. Besides financial literacy and risk aversion, we analysed how financial behaviours can affect the preference for capital market investments. For these purposes, we conducted a survey among the students enrolled in the finance-banking oriented faculty at the largest university of economics in Romania. The survey was based on a questionnaire comprising 40 questions that assessed general social and demographic features of the respondents, financial behaviours, risk aversion, basic and advanced financial literacy. For this study, we used a sample of 416 respondents of Romanian nationality. Using the information collected from the survey, we employed an ordered logistic regression in order to investigate what factors can shape young people's preference for capital market investments. The investigation led us to several findings.

We noticed an improvement for both basic and advanced financial literacy as the students have progressed through their finance intensive university studies. The risk appetite also seems to increase as the level of financial literacy increases, but we cannot decide on the intensity of this correlation.

There is a quite strong connection between the parents' financial behaviour and that of their children, which suggests that parents have largely passed on this behaviour to their children. Among the financial behaviours that we examined, both parents and children seem to be more concerned with budget discipline. They are also concerned with a regular tracking of their expenses. The results of the survey showed that the percentage of parents who save is quite low, and that of parents who make long-term investments regularly is even lower. We noticed this financial behaviour in children as well. Young people prefer the media (social media, TV, radio, newspapers, etc.) as a source of financial information, followed by their parents and peers and financial consultants are only last. Regarding the young people's preferences, the results of the survey indicated similar percentages for shares and savings accounts. The results also showed that young people are not aware of the latest tax regulations applied to investment income.

Regarding the factors that influence young people's preference for capital market investments, estimates have shown that financial literacy stimulates their propensity for a more diversified portfolio that includes both instruments, namely shares and bonds. If individuals are characterized only by basic financial literacy (numerical skills, etc.), then their participation in financial education activities may enhance their preferences for a more diversified portfolio. Finally, if young people face difficulties in satisfying their desires, the proneness to invest in the capital market will be diminished.

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