PERSONAL FINANCIAL DECISION IN ROMANIA BEHAVIORAL AND EDUCATIONAL DETERMINANTS

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Abstract: According to classical economists, individuals should make perfectly rational choices, take into account all available information, make all mathematical calculations and choose the best option for their interest. Behavioral economists, beginning with early ’80, tried to emphasize and measure the influence of behavioral factors affecting financial decisions. Nowadays, especially after the financial crisis, researchers highlighted factors as financial literacy, financial capability, and financial inclusion which can influence decisions. In this paper I developed a theoretical approach to behavioral and educational factors affecting decisions, with specific reference to the Romanian market. Finally I analyzed frequent errors and proposed possible actions to correct them.

Keywords: financial decision, behavioral, financial literacy, Romania.

1. Individual financial decision

According to rational choice theory, people always take prudent and logical decisions that bring them the most benefit and satisfaction and that are in their full interest. According to this, each person must anticipate the results of possible actions and calculate what is best for him/her. Most classical economic theories are based on rational choice theory. According to conventional economic theory, people have the ability to process information, act guided by their self-interest, trying to maximize their personal wealth or income.

Multiple researches in behavioral economics have shown that people do not always have the ability to take fully rational decisions as assumed in classical economic theory. Most people do not take action to maximize their income, they do not rigorously calculate the cost versus benefits, operating with perfect information or accurately analyze the future effects of current decisions. According to behavioral economists people act to the point where they feel satisfied with their decisions - take the best decision possible with the best possible results in terms of psychological, social and environmental conditions in which they operate.

While conventional behavior is considered rational, behavioral economics refers to people behaving normally: with limited rationality. Often operating with limited rationality, people use certain models, patterns in decision making. Some economists consider these models as error-prone, others believe that they generate superior results given the limitations that a human has to face.

Decision-making patterns are often influenced by a series of psychological and social factors as: loss aversion, emotions, prejudices, social norms, culture and history.

Behavioral economists take into account research in psychology that demonstrates the interaction of rational decisions and personal beliefs. The list includes: excessive confidence, unfounded optimism, representativeness, conservatism, self-attribution bias, confirmation bias, anchors, availability bias, loss aversion, risk preferences, etc.

1.1. Financial decision in banking

Banking financial decision refers to the decision of saving, lending or using a banking service (current account, internet banking, mobile banking, etc.).

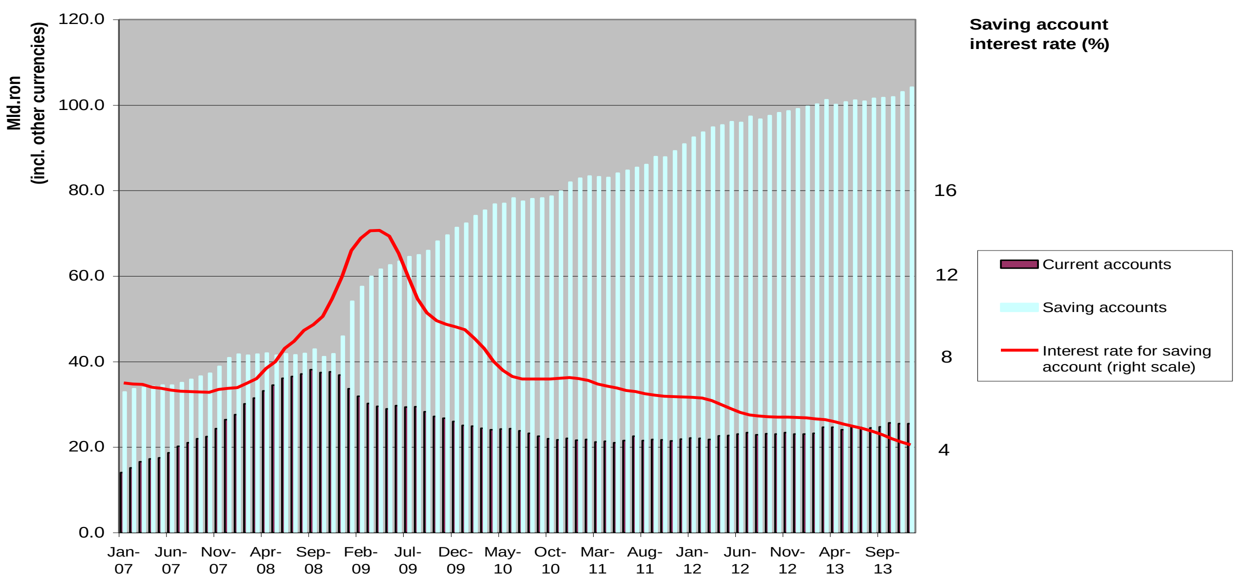
Decisions in this area fall under the influence of cultural, social and psychological factors. In the category of cultural factors we may include: the system of values of the person and the level of financial knowledge which is acquired in the family or in different social institutions. Referring to the social orientation, this may be given by a group which includes family, friends, community or professional organizations to which he/she belongs.

Consumer behavior in financial services in general and banking in particular has been modeled in recent times by deregulation, the avalanche of information and the emergence of new technologies.

Bank customers have difficulty distinguishing bank offers due to rapid change, innovation in the banking system, and competition in the system (Boyd, 1994). Due to the complexity of the offer, people often use heuristic decisions, paying limited attention in their analysis, being vulnerable to other biases and behavioral influences.

Studies have shown how theories of mental accounts, the perception of value in time, limited attention and self control help to predict and explain developments of the savings rate, personal budget management and purchasing financial products (cards, consumer loans and housing).

Chart 1: Household savings and saving account interest rate in Romania (2007-2013)



Source data : www.bnr.ro , processing author

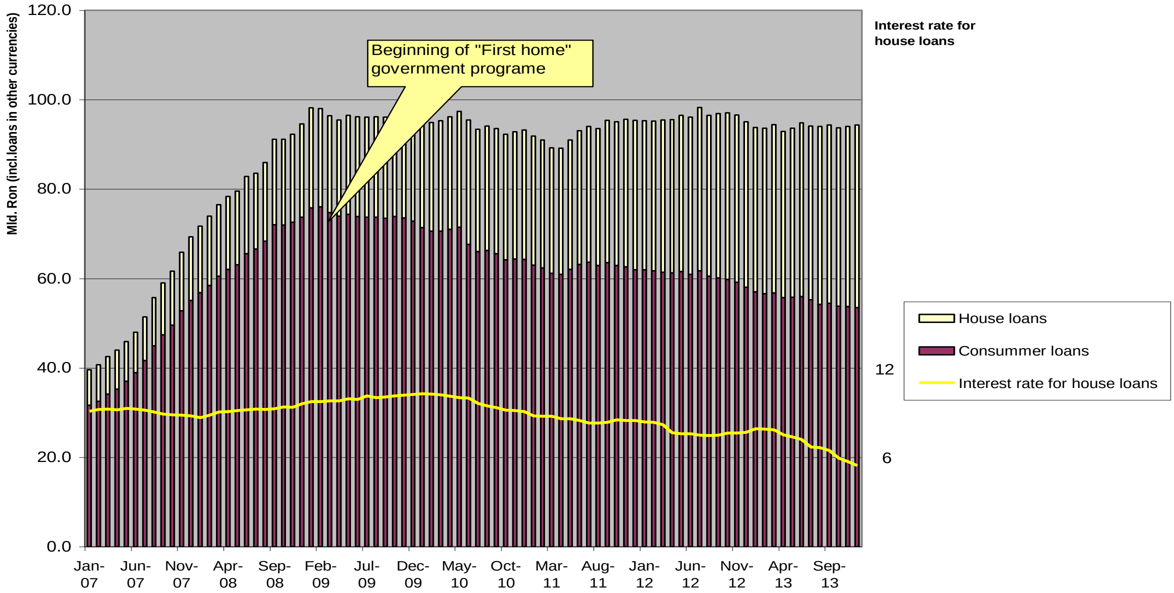
In chart 1 it is shown how the population's propensity to save is increasing under the auspices of the economic crisis, although we face a declining interest rate. It can be seen accelerated growth in the deposits level from 40 billion lei (equivalent in lei and foreign currency deposits) in 2009 to 100 billion at the end of 2013, although the rate of interest rate is decreasing since early 2009, from 12 % to 4% at the end of 2013.

The rise of interest rates during June 2008- January 2009 can be attributed to the banks' interest for getting cheap resources to support lending, considering the balance of consumer credit growth in the same period (Chart 2).

A more rational evolution occurs regarding individual loans, destined for consumption and housing. Since 2009 there has been a decline in consumer credit which reinforces the image of predisposition to decrease consumption and increase savings. House loans positively evolve beginning with 2009, taking into account the launching of the "First House" government guarantee program, and lowering interest rates from a level of 10-11 % in 2009 to below 6 % at the end of 2013 - Chart 2.

Opposite trends of the consumer and the housing loans maintain a constant level of household loans since 2009 up to the present.

Chart 2: Household loans evolution in Romania (2007-2013)



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An explanation of less inspired decisions in banking is the lack of financial literacy. Population, especially people with low levels of financial literacy, is facing a large variety and complexity of banking products (Lusardi and Mitchell 2006, 2009). Lusardi and Tufano (2009) have shown in particular that people with lower levels of financial knowledge are more likely to use loans with higher interest rates.

Gros and Souleles (2002) showed in their study that many individuals with bank loans hold liquid assets placed with low yield rates instead of using them , at least in part , for repaying the bank loans with higher interest rates.

The "myopic" effect makes consumers underestimate the credit bank loans which they will use from the available credit limit on their credit cards. In recent years it has been observed a progressive increase in the credit limit granted by banks on credit cards in the conventions of wages payment (from one paycheck to 6 or even 12), many holders of such cards having the credit limit fully utilized, thus paying significant interest .

Over-optimism is another psychological factor that causes consumers to underestimate the possibility of future financial difficulties that affect their ability to repay the mortgage, credit cards loans or consumer loans for medium and long terms (NBR[1] meanwhile restricted consumer loan terms to a maximum of 5 years).

In recent years there has been an obvious trend observed on consumers of banking products, to study and understand the terms and clauses of banking contracts, especially in the analysis of the existing offer. This is also due to bank abuses including ambiguous or changeable clauses in credit contracts.

According to a Novel Research study[2] in the field of financial education of the Romanian banking consumer in 2011, 60.5 % of the respondents were interested in other banks offers, while in 2013 the percentage increased to 81.3 %. The same study reveals an increase in the level of financial knowledge, at least related to variable interest - in 2011, 53.7 % of respondents could give a correct answer, while in 2013 their share increases to 78.4%.

1.2. Insurance financial decision

[1] National Bank of Romania –the central bank
[2] http://www.novelresearch.ro/bancile-marketingul-si-consumatorul/

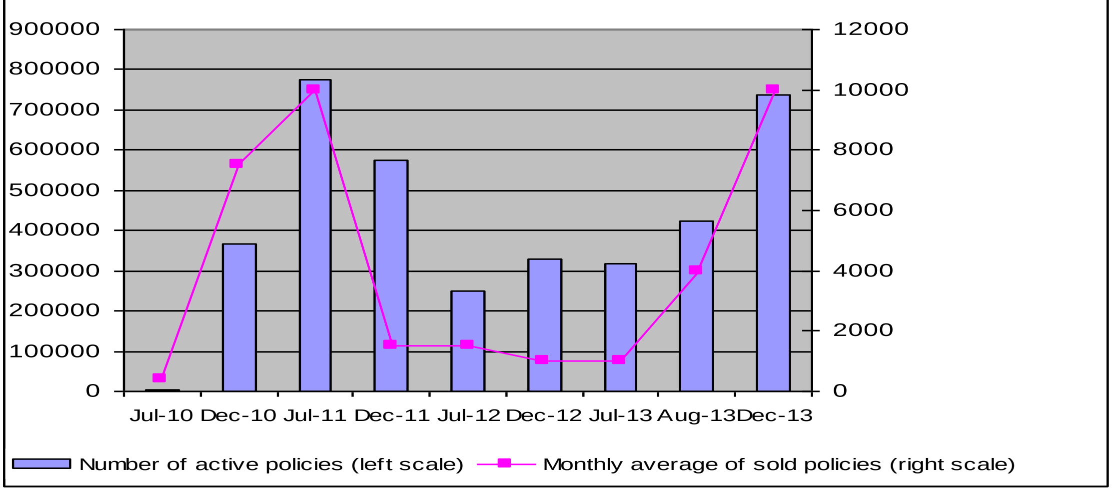
In a classical approach, an insurance decision is induced by the interest to ensure against an event and the financial affordability of the insurance.

Empirical evidences suggest that many people who could benefit from an insurance are not covered. For example, even if the risk is obvious, flood insurance is not bought by homeowners until they suffer damages from a disaster. In Romania, insurance policies against disaster (PAD) began being signed as a result of their regulation by law 260/2008 republished in 2011 that establishes a legal obligation, both for individuals and firms, to conclude such a policy. After the rise of mandatory household insurance in 2011, in 2012 they declined significantly. Thus, at the end of July 2012, there were approximately 248,000 valid insurance policies PAD, more than three times less than the maximum of August 2011 (about 820,000).

Regarding the behavioral aspect highlighted by the saying: "Where's the law, do not bargain," it can be observed a decrease after passing the tip of compulsoriness - July 2011, the month in which was recorded the highest number of policies sold in a single day (28,771 policies sold in July 14)[3] – Chart 3.

According to new regulations adopted in July 2013, all homeowners are required to buy a PAD policy and all owners who do not have such an insurance policy will be fined by local authorities up to 500 RON[4]. In July 2011 and December 2013 it can be seen in Chart 3 the results: a peak of over 700,000 active policies and monthly sales of about 10,000 policies PAD.

Chart 3: Evolution of active PAD policies number between 2010-2013 and the monthly average sold policies



Source data : http://www.paidromania.ro/statistici

It is difficult to know also how these policies are presented by the insurances agents. Some people who apparently do not need protection against a specified risk still buy insurance that covers that risk.

There are situations when some uninsured property owners may not have a high risk aversion while some buyers of electrical products and appliances, concerned with the protection of these devices can choose insurance with a high price (premium), in fact many people make unexpected choices, other than acting rationally or being better informed. One or both of the efficient market conditions may be absent.

According to classical economic theory and principles of efficient market, consumers have unrestricted access to information, have processing capacity, the risk is clearly perceived and each individual chooses "the amount of insurance" that maximizes his/her expected utility. As long as people are risk averse, they are willing to pay a premium greater than or

[3] Source : http://www.paidromania.ro/statistici
[4] about 110 euro

equal to the expected value of losses caused by certain events which are covered by insurance. The maximum amount that an individual is willing to pay to cover an insured event depends on its level of risk aversion.

People for which insurance is an attractive financial investment may be undecided or unable to collect the information required for the decision due to lack of time, effort and cost associated with this process. In addition people might not be able to process information in a classical assumed way. Some examples of wrong information processing due to behavior would be: risk misperception (underestimation of risk), the use of simplified rules for decision making and hesitation in choosing alternatives (e.g. bias).

People can also have financial constraints or other constraints which may affect them leading to a different behavior than in the classical theory.

Another behavioral aspect not accounted for in the classical theory are the preferences which may occur due to emotions, regrets or disapprovals regarding specific characteristics of an insurance.

1.3. Financial decision in the capital market

Positive developments but also market failures in recent years have led to extensive discussions about investor behavior, influencing decision-making analysis with psychological and emotional variables. Behavioral assessment helps to a better understanding of the capital market complex mechanism and the way in which participants base their decisions.

Studies have shown deviations from the principles of investors' behavior classical theory. The rate of participation in financial markets, and especially in the capital market, is smaller than that predicted by normative portfolio theory and cannot be motivated nor by the individual aversion to risk, socio-economic factors (income, transaction costs) or macroeconomic factors such as financial crises.

The portfolio allocation in stocks, bonds and monetary assets can be subject to behavioral factors (Canner et al, 1997). According to research, individual risk aversion should affect only less risky assets from portfolio while risky assets structure should be the same for all investors.

Another deviation from the classical assumptions is poor portfolio diversification. Research has shown that poor diversification is due to equal allocation of available funds to more options, increasing the number of shares held instead of an allocation to very different shares and therefore less correlated. This phenomenon has been preserved over time even if the average correlation between stocks declined and the transaction costs decreased (Rigoni 2006).

Excessive trading: investors are tempted to sell too quickly the shares with a good performance and to keep too much those with negative results (Barber and Odean, 2000). This attitude has been called "disposition effect" by Shefrin and Statman 1995.

Representativeness heuristic show investors` temptation to predict the probability of an event based on stereotype or familiar situations. Overconfidence and optimism can lead to an overestimation of the variability of the stock price, to increasing trust in an asset considering it better than average, and also to the illusion of control.

Emotional factors play an important role in influencing investor's behavior. The feeling of regret due to wrong choices can lead to inactivity. The assumed risk depends on the tolerance to risk and the perceived risk.

While classical theories consider risk as a quantitative unit, which can be determined by analyzing the indicators, behavioral finance believes that risk and uncertainty are not only mathematical and statistical values but they also depend on the specific psychological construction. Risk perception is influenced by emotions and feelings, over-trust, the illusion of control , the financial literacy, positive or negative memories related to certain financial products , trust in financial advisors, etc.(Mertz, Slovich and Purchase, 1998; Slovich 2000). When feelings become "positive" for an asset investors tend to rationalize their impressions considering the asset as having high efficiency and reduced risk; vice versa, a negative attitude towards an asset drives investors to find arguments that demonstrate it is more risky and less profitable.

Experimental studies have shown that perceived risk shows a poor correlation with the yield variation obtained, but a strong negative correlation with the level of understanding of the financial products. For example, in a study conducted by Wang et al. in 2009, participants considered buying a house as being less risky than investing in a real estate investment fund.

As shown above, behavioral factors lead to systematic errors in risk assessment, behavioral sciences emphasizing the need for strengthening regulatory interventions including perceptions of phenomena, psychological and irrational components manifested in the individual behavior. Behavioral studies may provide a basis for improving investor education, transparent and customer orientated brokers and other financial advisors.

1.4. Household financial decision

Household financial decisions are related with:

- managing income and current expenditures;
- long term financial planning ;
- choice of financial products, services and institutions .

To manage income and current expenditures, the personal budget, one has to take control of his/her personal resources (income monitoring, keeping expenses record), awareness of financial commitments and their fulfillment, resisting the temptation to spend or to borrow unnecessarily.

In 2010, The Romanian Research Institute for Quality of Life, member of The Romanian Academy, conducted a study on financial literacy in Romania regarding managing daily finance. They questioned a representative sample of 2048 people. The resulting conclusions were:

• Almost 65 % of the population is struggling to manage their daily needs and current commitments with a monthly income of less than 150 euros per family member;

• Less than a quarter of the population (23%) keep a record of expenses but 66 % of them know the amounts available for future expenses;

• Over half of the population (61 %) spends all the money earned in a month before next payment, 26 % of them run out of money before salary payment date "always" or "often" and 35 % "sometimes" .

Only 11% of those who go broke before next salary uses financial products (consumer loans, credit cards), to prevent this situation. The most used methods are: cutting costs (75 %), interest-free loans from relatives and friends (62 %), informal credit "on the book" by convenience stores (42%).

The study concluded that in terms of current money management, except the income level, the following factors are of great importance: the level of financial literacy of the people, education, age and area of residence. The correlation between these factors is positive: the more people have a higher income, higher financial literacy and education levels, older age and residence in urban areas, the better they manage household budget.

Financial planning refers to establishment of long-term reserves for certain specific events (contribution to pension funds) or unexpected (a decrease in income, health-related undesirable events, etc.).

The same study mentioned above showed that about 51 % of the population fails to save any of its monthly income. Most respondents mentioned the cause being the low level of income. As shown in chapter 1.1, in recent years the level of household savings has improved due to a decrease in consumption. The vast majority of savers (78 %) are thinking about the unexpected while only 48 % are saving for a long-term plan: improving living conditions, retirement plans, leaving a legacy to children or gaining financial independence.

Many people take wrong decisions regarding long-term financial plans due to lack of knowledge, lack of will of actions, and sometimes even due to overconfidence. The lack of information available can be another cause of sub-optimal decisions regarding long-term investment.

Choosing a bank product or service as well as a suitable financial institution depends on the offer, the existence of the information and the level of financial education and culture.

Referring to banking products and services, as it was seen in Chapter 1.1., although there is a decreasing tendency of consumer credit loans, their absolute value is higher than the home loans value also because of higher accessibility.

The decision quality in choosing a financial product can be measured indirectly by the complaints related to it. Returning to the study of The Romanian Academy, about 12 % of the people who use financial products have experienced dissatisfaction with their characteristics and half of these were related to bank loans. Less than 2% of customers who encountered problems informed the legal authorities, 66 % did not take any action, and 26 % discontinued the use of the product before the end of the contract term.

Romania's population still has little knowledge about consumer rights regarding financial products, bank deposit guarantees, contractual conditions, even if lately it has increased the number of complains to the National Authority for Consumer Protection.

The level of confidence in the ability of Romanian institutions to solve problems is low, a quarter of the population not knowing about their existence and only 12-13% are confident that they will resolve their problems (according to the study of The Romanian Academy).

Confidence in financial institutions along with financial knowledge and level of income are conditions of household activity in the financial markets.

2. Behavioral determinants

Behavioral determinants of individual financial decision are grouped in bias and heuristic decisions. An heuristic decision is a quick decision which shortens the classical circuit based on logic and rigorous calculation. A bias is a predisposition to particular errors in judgment.

In the following I will present an inventory of the most used heuristics and biases:

a) overconfidence - people tend to be very confident in their skills and knowledge . Confidence in their knowledge gives them the feeling that they possess more information than they know in reality, being surprised by their mistakes more often than anticipated.

b) over-optimism - reflects overestimation of favorable evens and underestimation of negative ones;

c) representativeness - involves using stereotypes when making the decision - for example, a person who relies on representation can be confident that the evolution of a stock profitability will be positive due to positive evolutions in the past; he/she forms his/her judgment assuming that the favorable past evolution is representative for a good stock .

d) conservatism - the tendency to limit the actions giving greater importance to the information they are accustomed with, than to a new or singular one;

e) personal attribution bias - people tend to emphasize their personal contribution , and assign merits when something goes well and backwards, to blame something or somebody else, including bad luck when the result of an action is not the one expected . Hirshleifer (2001) highlights the link between personal attribution bias and overconfidence;

f) confirmation bias - people prefer information that confirms their beliefs or expectations , without questioning the credibility of the source or the truth ; this can lead to incorrect investment decisions . Mental processes can alter key information so you validate a biased decision.

g) anchors – represent values around which people formulate, estimate some results or answers, and around which they make adjustments . The anchor may be an induced information or a familiar information to the decision maker. Anchoring provides a mental shortcut that may overlook the market price and lead to errors in choices;

h) availability bias - people tend to make decisions based on heuristic ideas and data that come most quickly into their minds, to give more importance to recent information, changing decisions around them;

i) loss aversion - people show a higher sensitivity to losses than to gains;

j) risk preferences - individual preferences are highly unstable and dependent on context, for example, even if in most cases people are reluctant to take risks , promises of higher earnings may increase the propensity to accept a higher risk.

3. Educational determinants

There are many definitions in the literature related to financial literacy, but most of it relates to knowledge and understanding of financial concepts leading to the ability of making informed decisions about money. The notion of financial literacy may be separated into three parts: financial knowledge, skills to apply them and real opportunities for applying them and learning from experiences.

Since the 90's, financial education has been subject to international concerns of teachers, community groups, government agencies and policy makers. The increasing complexity of financial markets and products and the easy access of "ordinary" people to them, increase the need of a better financial education. A higher level of financial knowledge leads to better financial decisions and thus to a better financial situation and greater safety of the family. Families with a better financial situation can sustain a developing society, making financial education a necessary condition of modern communities.

Referring to Romania after 1990, it can be identified several situations that show the need for increasing the level of financial literacy:

- the gradual transition from the state pension system to the private pension system requires financial knowledge in order to choose the right stock option plan according to risk profile, the level of amounts invested , and the right use of the funds after retirement ;

- the complexity of the household loans supply has shown the need to perform comparative analyzes of interest, fees, contract terms in order to choose the most suitable product . If these analyzes were done knowingly, it would have reduced the number of complains related with unfair contract terms, and limited the high-cost or false offers;

- low participation in the stock market - in December 2013 , 88.5 % of all investors (a total of 85 381 investors) were represented by those with portfolios under 20,000 EUR (average portfolio value being 2,018 EUR).

A recent comparative study conducted by A.Lusardi and O. Mitchell shows that only 3.8% of Romanians answered correctly to 3 questions about interest rates, inflation and risk diversification. In Germany and Switzerland the percent was 50 %, in France 30 % and in Italy 25 %.

The Romanian data come from a study conducted in 2013 by the Austrian National Bank entitled EuroSurvey, conducted by E.Beckmann. The survey included a sample of 1150 people, randomly selected, based on age, sex and region of residence.

Regarding the question of compound interest 41.3 % of total respondents gave the right answer, related to the inflation 31.8%, while on the diversifying risk question only 13.5% answered correctly.

Considering the first two questions about interest and inflation, 20.5 % of respondents answered correctly. The level of correct responses to risk question was at the same level with Russia (13 %), Albania (21 %) and Serbia (24%) and well below the U.S. (51%).

In rural areas there is an even greater lack of financial literacy, the percentage of those who answered correctly to all questions was only 2%, while those who did not know the answer was about 80.6%.

A good percentage of correct answers was observed in age groups 36-50 years (5.3 %) and under 35 (4.5%).

Together, these results show the need to improve the educational level in terms of financial knowledge in order to improve individual financial decision.

Conclusions

We can conclude that the individual financial decisions are influenced by various factors: risk perception, lack of information or false information, biases and behavior patterns.

Also a lack of financial education leads to a behavior that is not always rational.

Each actor involved in the financial system can contribute to his/her healthy development: state regulatory institutions, banks, insurance companies, brokers, financial advisors.

The state could act by :

a) influencing social norms so that certain financial products (eg insurance) become a habit in the community. Example household insurance against natural disasters is relevant. Creating insurance habit, even with social incentives, could save more money than removing the effects of disasters . Although the first steps have been made by establishing PAD policies, the control must be keeped until the acceptance of the social norm .

b) setting the default options of choice, particularly in the area of private pensions and health insurance - a lack of a decision from the population have to be interpreted as a choice in the positive direction in terms of social and individual long-term benefits ;

c) increasing the level of financial education from school years, including mandatory courses.

Regulatory institutions are perhaps in the best position to observe certain trends of market players which benefit from misperception of risk induced by financial products whose prices or contract terms may mislead consumers .

Another mission of regulatory bodies is the increase of educational level of the population and the observation of its evolution through financial agents (advisors , brokers, etc.). We assume that the first steps were made by setting a higher level of training requested from insurance agents. Financial product consumers have to show a greater openness to knowledge, to obtain information from authorized sources and to be aware of the risk perception for a better management of personal budgets and greater satisfaction with the products purchased.

Later on studies can analyze whether financial education is a sufficient condition for financial rational behavior and the ways to increase financial literacy of the Romanian population.

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