

IMPACT OF FINANCIAL CRISIS ON LITHUANIAN HOUSEHOLDS' ABILITY TO MANAGE BUDGETS

Kamilė Taujanskaitė¹, Eugenijus Milčius²

¹*Vilnius Gediminas Technical University, Faculty of Business Management,
Saulėtekio ave. 11, LT-10223 Vilnius, Lithuania
Email: kamile.taujanskaite@gmail.com*

²*Kaunas University of Technology, K. Donelaicio str. 73, LT-44249 Kaunas, Lithuania
Email: eugenijus.milcius@ktu.lt*

Abstract. Households are important integral part of economic system of every country, therefore the processes related to households' budgets and their control are permanently in focus of numerous researchers. Majority of publications are based mainly on fundamental approach to personal finance management and do not specifically target decision making mechanisms in a specific household affected by current, permanently changing conditions on global financial markets or macroeconomic processes in a specific country. The paper presents results from two surveys on Lithuanian households conducted in two different phases of recent 2008–10 crisis in order to study the transformations of financial behaviour, first of all the ability and habits to control the household budgets. Both surveys were carried out using the same sociological tools and technology and specially drafted questionnaires. The results indicate that crisis had certain negative effect on households' income, but at the same time had positively influenced the ability of households to manage budget related issues and promoted less spontaneous according to Maslow's definition and much more rational behaviour. This result comes from both improved personal finance management skills and psychological factors whose character was very much affected by crisis.

Keywords: personal finance, personal finance management, income, expenditure, saving features.

Jel classification: D6, D10, D14, E21, H31

1. Introduction

Households are important integral part of economic system of every country. Therefore, the inside processes related to the household's budgets and their control are permanently in focus of many researchers:

– Various aspects related to households income and expenditure have been investigated in recent publications by C. Bigda, G. Mannes, W. Updegrave (2010), A. Underwood (2010), L. Altfest (2009), A. Hall (2006), E. Faerber (2005) and others. Investigations of mainly statistical data relevant to Lithuanian households have been carried out by SEB bank (2011), the Department of Statistics of Lithuania (2008).

– Aspects related to saving of households' financial resources have been paid attention in publications by E. Tyson (2010), M. G. Gordon (2008), L. J. Gitman, Ch. Mazer (2007), G. Helly (2007), B. Winger, R. R. Frasca (2006), D. Harrison (2005), as well as A. V. Rutkauskas (2010), D. Jurevičienė, E. Gausienė, K. Taujanskaitė (2010), O. G. Rakauskienė, E. Bikas (2007), A. Maldeikienė (2005) in Lithuania.

– Investment related issues of household savings are among most urgent and are permanently in focus of both researchers and practitioners in this sector. Publications on investment management by A. V. Rutkauskas, V. Stasytytė (2011), E. Ody (2010), C. Yacht, R. Siegel (2010) L. J. Gitman, M. D. Joehnk (2007), Z. Bodie, A. Kane, A. J. Marcus (2003) and many others cover all the aspects important for making decisions related to investment.

Majority of the above and numerous other publications are mainly based on fundamental approach to personal finance management and do not specifically target decision making mechanisms in a specific household affected by permanently changing conditions on global financial markets or macroeconomic processes in a specific country.

Specific financial conditions of Lithuanian households have been analyzed by A.V. Rutkauskas, D. Jurevičienė, E. Bikas and others, while relevant statistical data and related process analysis is permanently in focus of local banks (e.g. SEB bank) as well as institutions involved in financial activities and statistics. Statistics Department of the Republic of Lithuania used to carry out annual

research on household budgets until 2008 (LR Statistiscs Department 2008) with focus on statistical data, but without indept analysis of the processes.

Ministry of Finance on the other hand prepares generalized predictions related to financial state of households (2011), but does not analyse decision making process inside the household. The Securities Commission of the Republic of Lithuania until its liquidation in 2011 and transfer its functions over to the Bank of Lithuania has been performing annual research on households financial literacy (2010). Since 2010 the analysis of households' financial condition is being performed by the bank „Swedbank AB“ through its recently established Institute of Private Finances (2011).

The above institutions mainly focus on generalized information, representing condition of all the spectrum of households without analysing processes specific to a certain group of households with a certain income, wealth, etc. The way how households manage to control their budgets are out of scope as well as the influence of instable global financial markets or macro-economic environment inside the country.

The decision making process related to control of household budgets is very complex and has no single solution in general. M. A. H. Dempster and E. A. Medova stated in their article (2011) “Advances in behavioural finance have not yet delivered a practical solution”. They support this statement by citing Paul Samuelson’s keynote addressed at a conference on life-cycle investment ‘Is personal finance an exact science?’ with the immediate answer ‘flat no’. In his words, “It is a domain full of ordinary common sense. Alas, common sense is not the same thing as good sense. Good sense in these esoteric puzzles is hard to come by” (Barber, Odean 2005). This process is very much related to human psychology (Kenrick *et al.* 2010) and emotional trigger-factors might have strong influence. Analysis of households' behaviour and efforts taken to control their budgets under influence of instability of financial markets might provide with valuable information on the level and proportions of influence by environmental factors on the household's decisions.

The objective of this article is therefore to carry out a study on transformation of financial behaviour of Lithuanian households, first of all the ability and habits to control household budgets during the 2008–10 crises.

Research methods used: data collection on households by using sociological tools and specially drafted questionnaires, processing of data, systemizing of results and analysis by applying Maslow hierarchy of needs theory, etc.

2. Research of household budgets in Lithuania during 2008–10 crisis

In general every consumer/household seeks to achieve their goals through maximization of utility function to the constraint imposed by households income and market prices.

The above problem, which the Consumer is facing, is usually being described as follows:

$$\max U = f(X_1, X_2, X_3, \dots, X_N) - \text{the Objective Function}$$

s.t.

$$\sum_{i=1, \dots, N} P_i X_i \leq I - \text{the Constraint} \quad (1)$$

where:

U – "Utility"- the satisfaction from acquiring a particular bundle of goods,

X_i – quantity of the i th good consumed,

P_i – Price of the i th good.

I – Household Income.

Consumers allocate their income 'I' in such a manner as to maximize their satisfaction from consuming those goods and services purchased at existing market prices. The driving force for such a behavior is simply a common sense. Eventhough this is a simplified model and restricted mainly to current consumption (opposed to life-cycle targets), it represents quite well the motivation mechanism, which households usually follow when making decisions related to spending. We assume that involvement of principles of Maslow hierarchy of needs theory for the analysis of information retrieved from various households shall provide us with information on whether and how the financial behaviour of households has changed during the crisis period.

In order to collect the required data, 2 identical in terms of methodology sociological surveys have been conducted. First – in the beginning of the year 2009, when crisis in Lithuania had reached its apogee, another – by the end of 2010 when crisis was approaching its end.

The questionning technology was based on specially arranged questinnaires, containing specially drafted questions. In order to obtain the survey results, which are sufficiently reliable and adequately reflect information on all the 3,3 mln. citizens of Lithuania, a special confidence level was set to be at least 95 % and minimal amount of respondents calculated. To meet the set reliability indicator at least 200 respondents should submit their information, which should guarantee error

within 6,9 % limits. In both cases this requirement was met.

The study from May 2009 revealed the following problematic issues related to the management of household budgets:

- clearly displayed non-systemic and poorly motivated character of spending, which has resulted in unexpectedly large amount of non-balanced household budgets. Big part of households faced difficulties with the control of spendings even their income was well above statistical average;

- lack of skills related to investment of savings and very limited variety of investment tools used. Majority of household savings were kept in demand deposit accounts and partly in savings accounts while investment in securities was used on limited scale;

- lack of knowledge and skills within individual asset liability management.

Surprisingly, the highest percentage (33 %) of households with budget deficit fell on those with high income, ranging between 3000 Lt and 5000 Lt., while even those on the very low-end, with income below 500 Lt. managed to balance their budgets more successfully maintaining the deficit rate within 28,5 %. The best performance has demonstrated households with income between 1500 Lt and 2000 Lt. Approximately 60 % of them had budget surplus and only 15 % deficit. Some high-income households had to borrow funds even for covering their basic needs. It shows that spontaneous spending, usually attributed to self-actualisation, was given priority over the physiological needs. This in a way contradicts to the logics of Maslow theory, which implies that when satisfying its needs one should move upwards successively through the levels of pyramid of needs. From this point of view such spending character could be considered as non-systemic and would be more in line with and support the modified pyramid presented in (Griškevičius *et al.* 2010) and the statement that "... a key point ... is the focus on the ongoing dynamic interaction between internal motives and their functional links to ongoing environmental threats and opportunities...". Indeed, it should not be difficult to explain such behaviour if we take into account very special emotional atmosphere in the Lithuanian society just after joining the EU in 2004 and the related excessive expectations. In later years consumptionism was even more fuelled by widely spread various pre-crisis „bubbles“, etc. Emotional motives have clearly prevailed over rational especially in wealthy households and it was difficult for them to withstand aggressive pressure from the market offering products outside the very basic

needs, like special entertainment products, travelling, luxury cars, dwellings and appliances, etc.

So, the study was repeated by the end of 2010 and the two results compared in order to find out the changes and trends caused by the crisis.

2.1. General information

General information cover the respondents age, gender, information about education, residence and monthly income.

The age of respondents was between 20 and 65 years. To maintain the right proportions between the citizens residing in big cities and countryside respondents were selected accordingly by using random sampling method (Waksberg 2011). The number of respondents was exactly the same in both surveys, therefore this should not cause any additional errors as well.

General characteristic of respondents in both studies were quite similar:

- percentage of respondents by gender: men – 48.25 %, women – 51.75 % (in 2009, men – 55.28 % , women 44.72 %);

- percentage of respondents by education: 81 % – university degree; 9.5 % – university degree in progress; 5.5 % – college; 3.5 % – secondary school (in 2009 79 % – university degree; 11 % – university degree in progress, 6.5 % – college; 3.5 % – secondary school);

- average age of respondents – 32 years (2009 survey – 30 years).

We placed both questionnaires on a special webpage www.apklausa.lt meaning that first of all people with good access to the Internet and having skills in using IT tools would dominate among respondents. One possible negative aspect from using this technology might be that the results are not bias-free due to non-uniform representation of all population, comprised of those using and not using IT tools.

Respondents represent highly educated part of the population, well above average, which means their behaviour could be considered as well motivated and reasonable. This also suggests that obtained results should be reasonably reliable and adequately reflect reaction of households induced by the crisis.

2.2. Trends within households budget management under crisis

The results were processed and analyzed to determine the changes within personal finance management during the years 2008–2010.

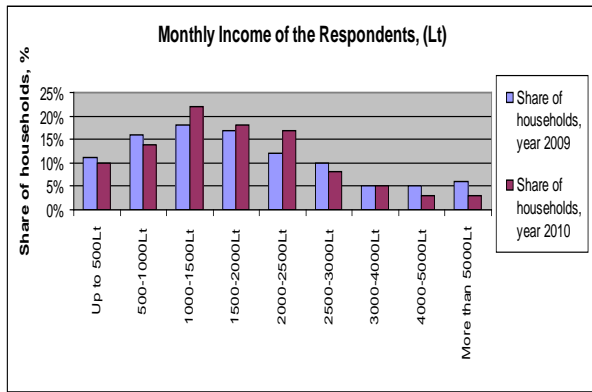


Fig.1. Monthly Income of the Respondents (Source: made by authors)

Respondent’s monthly income (Figure 1) range from 500 Lt to 5000 Lt and more, while majority receive from 1000 Lt to 1500 Lt per month and latterly this number has increased from 18 % to 22 %. In addition, there was a significant increase of 41.67 % in individuals with income between 2000 Lt and 2500 Lt, followed by 9 % decrease in people who get the lowest income. The number of respondents whose monthly income is between 3000 Lt and 4000 Lt is the same, but there was a decrease in high income respondents. For example, now 40 % fewer respondents get 4000 Lt – 5000 Lt and only half get more than 5000 Lt compared to 2009.

Even the average income of respondents fell by 6.63 %, from 1860.88 Lt in 2009 to 1737.46 Lt in 2010; it is still above average in Lithuania, which during the same period has increased to 1601.80 Lt from 1583.90 Lt in 2009. Comparison of these figures may look contradicting, which nevertheless can be explained quite easily. Majority of respondents are young, highly educated and economically active people whose average age is 32 years. Likely, this has led to higher income compared to the statistics. The observed decline in average income can be explained by the fact that significant decrease was registered in number of those with the highest (4000 Lt and more) income. The main conclusion about changes in income during the crisis could be that it became more „compact“ with significantly reduced number of those with very low and very high earnings.

A special block of questions was designed to find out how crisis has changed the household's ability to balance their budgets (Fig. 2).

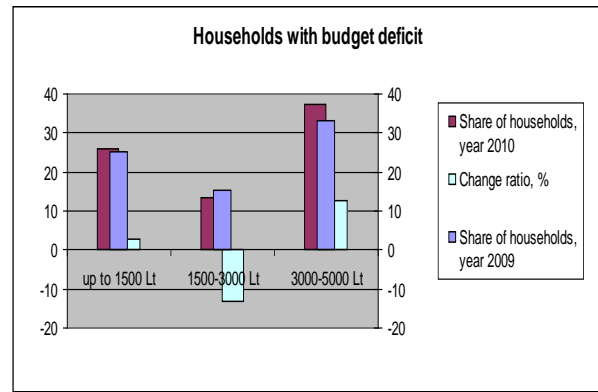


Fig.2. Changes in household’s budget balance (Source: made by authors)

Figure 2 indicates huge diversity and quite contradicting results belonging to households with different income level. As mentioned earlier the previous survey of 2009 discovered that contrary to expectations the biggest share of households suffering from budget deficit (33 %) was found among those with highest income, while even those on the very low-end were more successful from this point of view. The best performance was demonstrated by households with middle income between 1500 Lt and 3000 Lt. By the end of crisis in 2010 situation has changed very little in low-income households even it would be not surprising to see it much worse because of increased prices. Middle-income households demonstrated even better performance compared to previous survey reducing the share of deficit budgets by 13 %, while high-income households suffered from deficit more than in 2009. The share of deficit budgets within this category has increased by 12.5 % reaching 37.5 %, which is 1.45 times more than corresponding share of low-income (25.8 %) and 2.8 times more than middle-income (13.4 %) households. More accurate analysis shows that the zone, where rational behaviour dominates has become wider covering not only middle-income but also some part of households with income equal or exceeding 3000 Lt, while performance of those with income around 5000 Lt was really poor. According to survey situation within households having income more than 5000 Lt seems to be much better, but due to limited number of respondents it’s risky to make firm generalized conclusions.

Distribution of household expenditure by needs can be seen on Figure 3. Similarly to previous survey, the biggest spending is for nutrition, municipal services and transportation costs. Comparing with the 2009 we see 6.9 % increase in expenditure on food, 11.76 % on utilities and 6.67 % on transport. These changes might have direct connection to the rise of corresponding

prices, which was significant during this period within the sectors. However, in the end of 2010, the other household expenses have declined. 14.29 % decline in the cost of clothing and footwear, 20 % in cosmetics and hygiene products, and even a 23.08 % in the cost of entertainment was registered. There is a good correlation with the results from survey by Swedbank Private Finance Institute of October 2010, which found that the main structure of household expenditure mainly consists of food products and non-alcoholic beverages (34 %), costs of household maintenance (17 %) and expenses of transportation and fuel (8 %) (Swedbank Personal Finance Institute).

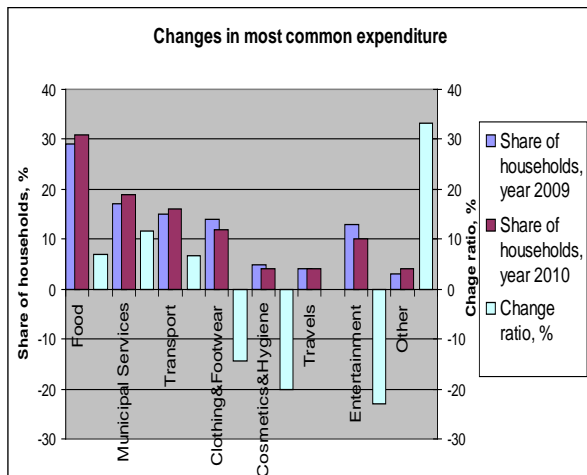


Fig.3. Distribution of expenditure by needs (Source: made by authors)

When analyzing the proportions of these two studies, it can be noted that the costs for necessary needs comparing with all household expenditure have risen relatively, and makes it possible to draw conclusions about more rational and conservative household behaviour.

Another block of questions concentrates on households' attitude to saving. Respondents were asked whether they have saving plans.

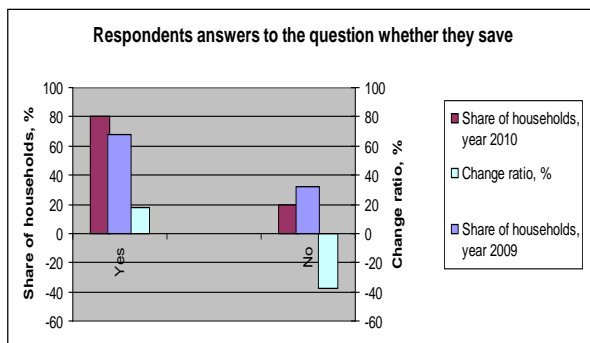


Fig.4 . Answers regarding saving plans (Source: made by authors)

Figure 4 shows an increase of households who have set their saving plans from 68 % to 80 % in 2010 or by 17.65 %. In addition, there was a 37.5 % decrease in respondents who do not save at all, which is quite remarkable taking into account that average income over the period has decreased by 6.63 %.

The question about used saving instruments was answered by the respondents as follows (Figure 5):

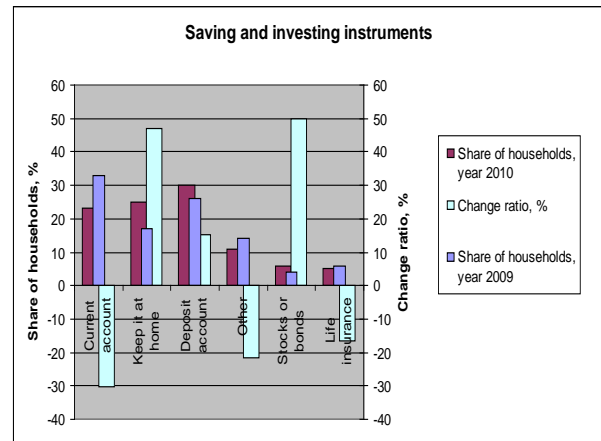


Fig.5. Changes in investment instruments applied (Source: made by authors)

Figure 5 shows that situation in saving sphere has significantly changed. Comparing the number of respondents who save by transferring cash into a current bank account, we see a 30.3 % decline (2009–33 %, 2010–23 %). Up to 50 % increase was registered in people who used to buy stocks or bonds despite very negative overall environment. This could be explained by better awareness of people on investment mechanisms. At the same time a number of those who chose other alternative investments, such as collectables (art, wines), horses, etc has declined by 21.43 %. Additionally, in 2009 the percentage was higher in the number of people who preferred life insurance for investing their money. Currently this number has declined by 16.67 %. Also, there was an even 47.06 % increase in those who choose to keep their savings at home and increase of 15.38 % in the number of respondents who keep their free cash in fixed bank deposits.

This indicates that the variety of popular saving options in Lithuania is becoming wider, but still limited and the way households distribute the accumulated free cash is rather conservative. It's obvious that sharp drop in stock values did not encourage a large portion of those who could potentially invest in financial markets. This percentage still remains low. Consequently, distrust has increased in any riskier investment alternatives.

This may explain sudden and widespread tendency in keeping free cash just at home.

Attempt was made to find reasons behind non-saving behavior of households.

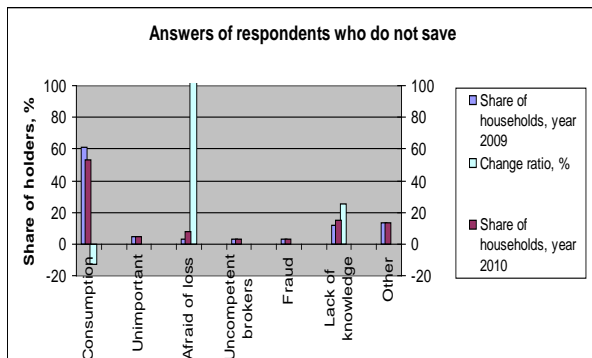


Fig.6. Reasons for refusal of saving (Source: made by authors)

It appears (Fig. 6) that even 53 % of respondents who otherwise would prefer saving do not do this because all income is being spent on consumption. However, this number has decreased by 13 % compared with the previous survey. Dramatic, even 2.7 times (from 3 % to 8 %) increase was registered in people who are afraid of full or partial loss of their savings and that was the reason why they have decided not to save at all. By the way, there are 25 % more people now who do not save because they feel lack of financial knowledge, which also means they do realise the importance of adequate knowledge and skills within finance management.

A special block of questions was designed to investigate the respondents' opinion on how they evaluate their knowledge within personal finance management (Fig. 7).

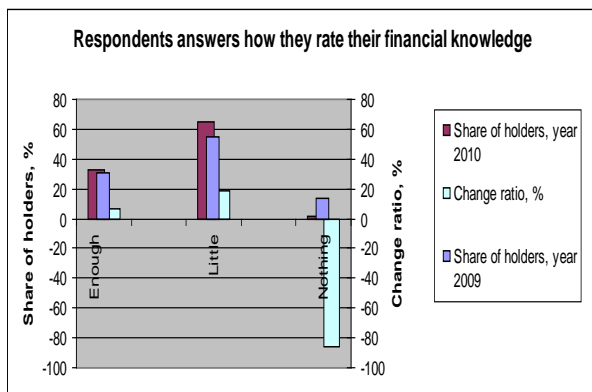


Fig.7. Knowledge within personal finance management as estimated by respondents themselves (Source: made by authors)

The answers show that there was 6.45 % increase in the number of people who think that their knowledge about personal finance manage-

ment is sufficient. Most significant, even 85.71 % (from 14 % to 2 %) was decrease in the number of respondents who know nothing about it, while amount of those who lack adequate financial knowledge has increased by 18.18 %. Most likely this could be at the expense of respondents who had no knowledge at all during the previous survey. This indicates obvious progress and positive changes nevertheless the need for education to improve financial management skills still remains high.

3. Conclusions

Results from study carried out with the aim to investigate the influence of 2008–10 crises on Lithuanian households' ability to manage their budgets and financial behavior in general are presented in the paper. The study included two surveys on households conducted in two different phases of the crisis, first in the beginning of 2009, during its apogee, another by the end of 2010 when it was approaching its end. Both surveys were carried out using the same sociological tools and technology and were identical in terms of applied methodology. The results were interpreted using Maslow's hierarchical approach to human motivation:

1. Financial behavior of households belonging to different income levels was quite different during the crisis. Low and middle income households seemed to follow quite well the logics of Maslow hierarchy principles and demonstrated adequate behavior and good ability to withstand the related challenges. They were focused on satisfying basic needs first of all. As a result the percentage of households suffering from budget deficit did not increase during the crisis in the low-income segment, while middle-income households have even reduced this indicator by 13 %. Contrary, the high-income households had serious problems controlling their budgets. The percentage of deficit budgets during the period has increased by 12.5 % and reached level of 37.5 %, which is 1.45 times higher than the corresponding share of low-income (25.8 %) and 2.8 times than middle-income (13.4 %) households. Necessity to borrow funds for satisfying their basic needs shows that spontaneous spending, usually attributed to self-actualisation in this case is given priority over the physiological needs, which contradicts to the hierarchical logics of Maslow theory. From this point of view such spending character could be considered as non-systemic and triggered by other than purely rational motives. Despite this the average figures covering all the households spectrum show that the recession prompted households to manage

their expenses more responsibly and at the same time revealed significant saving reserves.

2. An average income of respondents fell by 6.63 % to 1737 Lt in 2010 mainly because of reduced number of those on the very high end. Still it is slightly above average statistical in Lithuania (1601 Lt), which contrary has increased by approximately 1 %. The main conclusion about changes in income during the crisis could be that it became more „compact“ with significantly reduced number of those with very low and very high earnings.

3. Situation with using various saving tools has changed significantly. The number of respondents who used to simply transfer cash into a current bank account has declined by 30 %, but the number of respondents keeping funds in fixed bank deposits has increased by 15.38 %. Despite negative overall environment up to 50 % increase was registered in people who buy stocks or bonds. This could be due to raised awareness about investment mechanisms. Other alternative investments, such as collectables (art, wines), horses, etc became less popular and declined by 21.43 %. A number of people who choose life insurance as investment tool have declined by 16.67 %. All this indicates that the variety of saving options in Lithuania is becoming wider and more evenly spread, but still is rather limited and conservative. It's obvious that sharp drop in stock values did not encourage a large portion of those who could potentially invest in financial markets. This percentage still remains low. Consequently, distrust has increased in any riskier investment alternatives. This may also explain sudden and widespread tendency in keeping free cash at home (47 % increase). Besides, the number of recipients who fear for partial or total loss of savings and have decided not to save at all increased 2.7 times.

4. Awareness about personal finance management has increased during the recession as the number of people who claim to have no knowledge in this area has fallen 7 times and the number of those who have sufficient knowledge increased by 6.46 %. However, despite of positive developments, still many people lack sufficient knowledge needed to guarantee rational management of their financial resources.

References

- Altfest, L. 2009. Personal Financial Planning: Origins, Developments and A Plan for Future Direction, *The American Economist*. New York 48(2): 53–60.
- Barber, B. M.; Odean, T. 2005. Advance in Behaviour Finance, *Individual Investors: Princeton University* 2: 543–569.
- Bigda, C.; Mannes, G., Updegrave, W. 2010. Ask the Experts, *Money* 39(6): 43–48.
- Bodie, Z.; Kane, A.; Marcus, A. J. 2003. *Essentials of Investments*. Singapore: The McGraw Hill Companies. 312 p.
- Demster, M. A. H.; Medova, E. A. 2011. Asset Liability for individual households, *British Actuarial Journal*, Cambridge Systems 16(2): 405–439. <http://dx.doi.org/10.1002/9781118266984>
- Faerber, E. 2005. *The Personal Finance Calculator: How to Calculate the Most Important Financial Decisions in your Life*. United States of America: McGraw Hill. 578 p.
- Gitman, L. J.; Joehnk, M. D. 2005. *Fundamentals of Investment*. San Diego State University. 754 p.
- Gitman, L. J.; Mazer, Ch. 2007. *Basic Managerial Finance*. New York: Harper & Row Publisher. 453 p.
- Gordon, M. G. 2008. *The Life Cycle of Financial Planning*. University of Wyoming Cooperative Extension Service. 420 p.
- Griškevičius, V.; Kenrick, D. T.; Neuberg, S. L.; Schaller, M. 2010. Renovating the Pyramid of Needs: Contemporary Extensions Built upon Ancient Foundations, *Perspectives of Psychological Science* 5(3): 292–314. ISBN 9986057671. <http://dx.doi.org/10.1177/1745691610369469>
- Hall, A. 2006. *Your Money on Your Life*. London: Hodder & Stoughton. 390 p.
- Harrison, D. 2005. *Personal Financial Planning: Theory and Practice*. Edinburg: Financial Times, Prentice Hall. 555 p.
- Helly, G. 2007. Financial literacy is everyone's job, *Credit World* 84(6): 118–122.
- Jurevičienė, D.; Klimavičienė, A. 2008. Life-cycle approach to personal financial management, *Verklas: teorija ir praktika* [Business: Theory and Practice] 9(1): 22–32. <http://dx.doi.org/10.3846/1648-0627.2008.9.22-32>
- Jurevičienė, D.; Gausienė, E. 2010. Peculiarities of individuals' financial behaviour, *Verklas: teorija ir praktika* [Business: Theory and Practice] 11: 54–60. <http://dx.doi.org/10.3846/btp.2010.25>
- Lietuvos Respublikos Finansų ministerija. 2011. *Lietuvos ekonominių rodiklių projekcijos* [online] [accessed 15 December 2011] Available from Internet: <http://www.finmin.lt/web/finmin/aktualus_duomenys/makroekonomika>.
- Lietuvos Respublikos Statistikos departamentas. 2008. *Namų ūkių biudžetų tyrimas* [online] [accessed 15 December 2011]. Available from Internet: <<http://www.stat.gov.lt/lt/pages/view/?id=1335>>.
- Lietuvos Respublikos Vertybinių popierių komisija. 2010. *Lietuvos gyventojų finansinės žinios nepakanamos* [online] [accessed 15 December 2011]. Available from Internet: <<http://www.vpk.lt/lt/vpkpranesimai/investuotoju-svietimas/14113/>>.
- Maldeikienė, A. 2005. *Išmokite skaičiuoti savo pinigų* [Learn to calculate your money]. Vilnius: Tyto Alba, 190 p.

- Ody, E. 2010. Make Money Work for You, *Kiplinger's Personal Finance* 64(8): 201–209.
- Rakauskienė, O. G.; Bikas E. 2007. Saving of Lithuania's people: the models of men and women saving behaviour, *Ekonomika* [Economics] 79: 125–140. ISBN 9788370119805.
- Rutkauskas, A. V. 1999. Personal finance as a subsystem of country's financial system, *Inžinerinė ekonomika* [Engineering Economics] 4(15): 50–55.
- Rutkauskas, A. V.; Stasytytė V. 2011. Optimal portfolio search using efficient surface and three-dimensional utility function, *Technological and Economic Development of Economy* 17(2): 291–312. ISSN 2029-4913. <http://dx.doi.org/10.3846/20294913.2011.580589>
- Rutkauskas, A. V.; Žilinskij G. 2010. The use of Financial lever for managing investment portfolio, *Verslas: teorija ir praktika* [Business: Theory and Practise] 11(3) 194–203. ISSN 1648-0627. <http://dx.doi.org/10.3846/btp.2010.22>
- SEB bankas. 2011. *Basic macroeconomic indexes of Lithuania and its analysis* [online] [accessed 10 December 2011] Available from Internet: <http://www.seb.lt/pow/wcp/seblt.asp>.
- Swedbank Personal Finance Institute. 2010. *Investigation about personal finance* [online] [accessed 20 December 2011]. Available from Internet: <https://www.manofinansai.lt/lt/articles/view/13>
- Taujanskaitė, K.; Jurevičienė D. 2010. Challenges of personal finance management under instable economic in Lithuania, *Mokslas – Lietuvos ateitis* [Science – Future of Lithuania] 2(2): 104–111. ISSN 2029-2341. <http://dx.doi.org/10.3846/mla.2010.042>
- Tyson, E. 2010. *Personal Finance for Everybody*. Canada: Wiley Publishing. 320 p.
- Underwood, A. 2010. Are Your Bills Making You Fat, *Prevention* 62(10): 45–49.
- Waksberg, J. 2011. Sampling Methods for Random Digit Dialing, *Journal of the American Statistical Association* 73(361): 40–46. ISBN: 0-13-104156-8.
- Winger, B.; Frasca, R. R. 2006. *Personal Finance*. University of Dayton: Pearson. 421 p.
- Yacht, C.; Siegel, R. 2010. *Personal Finance*. University of Yale: McBook. 300 p.