

## FINANCIAL LITERACY OF YOUNG GENERATION IN CHANGING EUROPEAN ENVIRONMENT: EVIDENCE FROM GERMANY AND LATVIA

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### **Abstract:**

Financial services have become more and more comprehensive over the past decade. In the recent financial crisis of 2009-2011 showed that uninformed consumers become easy targets for financial products that were not appropriate for them, in addition, financial risk was transferred to households. A common tendency in the European Union is insufficient attention to financial education in secondary school programmes. Financial topics are taught in economics classes without linking them to other subjects and everyday situations. The aim of the research is to investigate financial literacy and financial education from theoretical perspective, as well as to evaluate the level of financial literacy of young generation by conducting surveys among secondary school students in Germany and Latvia, and to identify the main directions for financial literacy promotion. In Latvian school system financial literacy topics are included only in a subject „Economics”, and they are examined rather from a theoretical perspective. In Germany, directives regarding the interdisciplinary integration of financial themes in schools have existed for many years. Nevertheless, in general grammar schools, financial literacy is still not covered sufficiently and also not integrated in lessons. The research results confirmed that the knowledge of the secondary school students is missing in the area of financial literacy. Reasons for this can be found in the congested school curriculum, due to the short time allotment, on the one hand and the lack of financial knowledge of teachers on the other.

*Keywords: financial education, financial literacy, secondary school, economics, financial knowledge*

## **1. INTRODUCTION**

The topicality of financial literacy has increased due to the global economic crisis of 2009-2011, as well as due to solving of other matters related to improvement of standard of living. More often there are discussions on the necessity of starting financial education since childhood. A common tendency in Germany and Latvia is insufficient attention to financial education in secondary school programmes. Financial topics are taught in economics classes without linking them to other subjects and everyday situations, in which financial education might be of use.

In Germany financial education has not been integrated in the curricula of the federal states yet. Each federal state is aware of the importance of fostering financial literacy. There are existing guidelines introduced by each Minister of Education and Cultural Affairs to integrate financial topics cross-curricular, but it depends on every school and also teacher to implement this into the existing subjects. Other difficulties do arise from the knowledge of teachers about financial topics.

In the Latvian school system and secondary education programme particularly, financial literacy topics are included only in a single subject - "Economics", and they are examined rather from a theoretical perspective. Secondary school students base their financial decisions mainly on their personal knowledge and advices from their "financial counsellors", namely, their parents or other society members. Therefore there is a substantial need to thoroughly investigate the financial literacy of secondary school students in Latvia.

The aim of the research is to investigate financial literacy and financial education financial education from theoretical perspective, as well as to evaluate the level of financial literacy of young generation by conducting surveys among secondary school students in Germany and Latvia, and to identify the main directions for financial education promotion.

The research results confirmed the common tendencies observed in this area, as well as led to a deeper understanding of what is the knowledge the secondary school students are missing in the area of financial literacy. Furthermore, it allowed to identify the topics that the students are interested in and adequate teaching methods.

The authors suggest the development of education materials and their integration in school curricula. It also offers adapted and integrated practical tasks to be included in the curricula of financial education. Poor savings and investment decisions have led to financial crisis lasting for a long period, thus deteriorating financial security of society. The change of Pension system and uncertainty of Social security policy caused German and Latvian people to secure their own future life by applying for insurance policies and ensuring sound financial planning for their future retirement age.

The qualitative methods used were following: theoretical comparison analysis of financial literacy, surveys of secondary school students in Latvia, personal observations from work with secondary school graduates in institutions of higher education. As quantitative research method statistical data analysis was applied.

## **2. THE ESSENCE OF FINANCIAL LITERACY AND FINANCIAL EDUCATION DIRECTIONS**

Personal financial planning, correct evaluation of one's needs for a loan and the ability to repay it, the accumulation and diversification of savings are those abilities that define the quality of future life. Besides, there is a need for skills to attract private capital in order to initiate diverse business. Living in a rapidly changing environment requires fast decision making, so financial literacy is an important set of skills which allows to manage effectively resources, and to see various opportunities to improve the quality of life.

The essence of financial literacy is ability to make informed and substantiated decisions regarding personal finance. Often they are related to such questions as how to spend the money, where and how to store it, where to invest it and how to multiply it. Investigators and investigation agencies have offered different definitions of financial literacy over the years. The term of financial literacy is explained by many institutions and state differently. Scientists and specialists agree that financial

literacy is one of the parts of economic and general literacy. Unfortunately there is no clear definition of financial literacy so far.

**Table 1:** Conceptual definitions of financial literacy

|  |  |
|--|--|
| Hilgert, Hogarth, & Beverley (2003)                  | Financial <i>knowledge</i>   |
| FINRA (2003)   | "The <i>understanding</i> ordinary investors have of market principles, instruments, organizations and regulations" (p. 2).  |
| Moore (2003)   | "Individuals are considered financially literate if they are competent and can demonstrate they <i>have used knowledge</i> they have learned. Financial literacy cannot be measured directly so proxies must be used. Literacy is obtained through practical <i>experience</i> and active <i>integration of knowledge</i> . As people become more literate they become increasingly more financially sophisticated and it is conjectured that this may also mean that an individual may be more competent" (p.29). |
| National Council on Economic Education (NCEE) (2005) | " <i>Familiarity</i> with basic economic principles, knowledge about the U.S. economy, and <i>understanding</i> of some key economic terms" (p. 3).  |
| Mandell (2007)                                       | "The <i>ability</i> to evaluate the new and complex financial instruments and <i>make informed judgments</i> in both choice of instruments and extent of use that would be in their own best long-run interests" (pp.163-164).   |
| Lusardi and Mitchell (2007c)                         | [ <i>Familiarity</i> ] with "the most basic economic concepts needed to make sensible saving and investment decisions" (p. 36).  |
| Lusardi and Tufano (2008)                            | Focus on debt literacy, a component of financial literacy, defining it as "the <i>ability to make simple decisions</i> regarding debt contracts, in particular how one <i>applies basic knowledge</i> about interest compounding, measured in the context of everyday financial choices" (p. 1).   |
| ANZ Bank (2008), drawn from Schagen (2007)           | "The <i>ability to make informed judgements</i> and to take effective decisions regarding the use and management of money" (p. 1).   |
| Lusardi (2008a, 2008b)                               | " <i>Knowledge</i> of basic financial concepts, such as the working of interest compounding, the difference between nominal and real values, and the basics of risk diversification" (p. 2).   |

Source: Hung, Parker & Yoong, 2009

There is no strict definition of financial literacy, because every person associates it with a different set of financial topics they are interested in and necessity of which they are convinced. Also, different international financial organisations in their definitions of the term emphasize the aspect of financial literacy, which they find most important to them. For example, OECD (*Organisation for Economic Co-operation and Development*) defines financial literacy as knowledge and understanding of financial terms and risks, as a skill, motivation and certitude that this knowledge and understanding will be used in such a way that allows to make beneficial decisions in relation to financial matters, thus improving well-being both individually and collectively and leading to valid participation in economic activities (OECD, 2013).

Table 1 illustrates the overview of financial literacy conceptual definitions. The most common basis for the definitions is knowledge, still others emphasize a judgment and decision-making aspects (Mandell, 2007); (Lusardi and Tufano, 2008)). Lusardi and Tufano (2008) also focus on a specific direction of financial literacy such as debt literacy. Moore (2003) includes such aspects of financial literacy as practical experience.

After acquainting oneself with different investigator definitions of financial literacy, it looks that the common conclusion of all the investigators is that financial literacy is a competence, ability and

understanding, which ensures critical approach to evaluation of financial matters and thus making the right decisions.

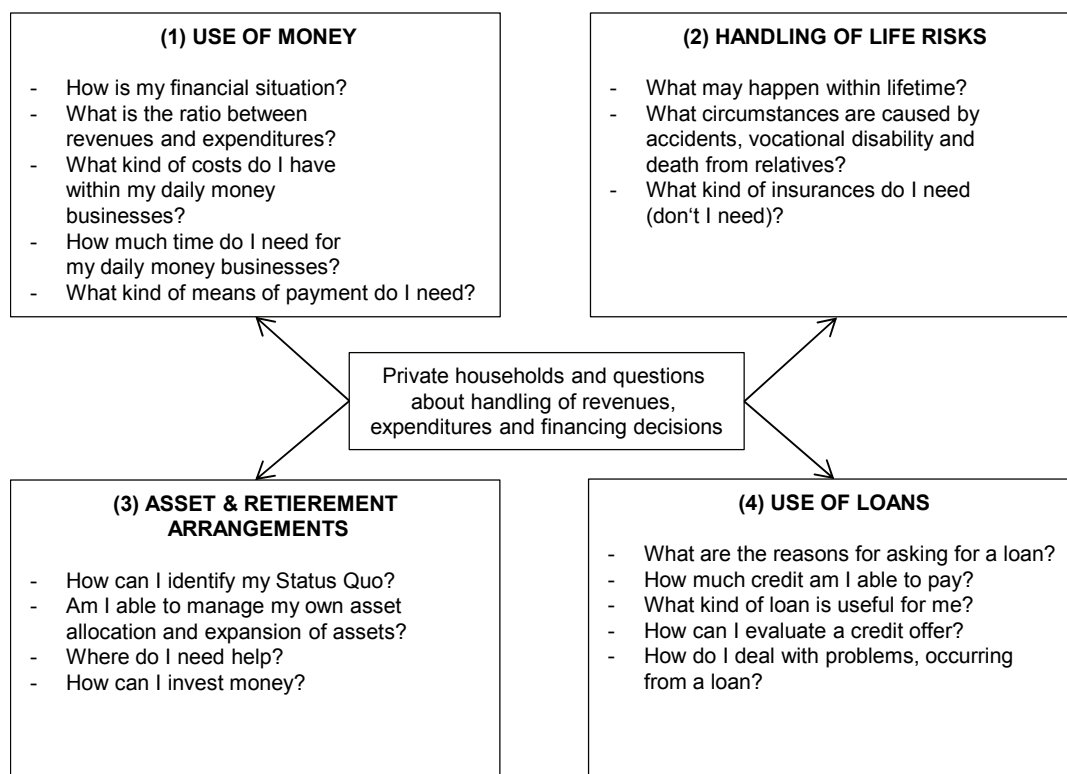
The President’s Advisory Council on Financial Literacy (PACFL, 2008) defines *financial literacy* as the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being; and *financial education* as the process by which people improve their understanding of financial products, services and concepts, so they are empowered to make informed choices, avoid pitfalls, know where to go for help and take other actions to improve their present and long-term financial well-being.

OECD (2005) defines financial education as “the process by which financial consumers/investors improve their understanding of financial products and concepts and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being”. Authors believe financial education is more from theoretical point of view. That is why training is the core method of practical financial skills improvement.

In Latvia *financial education* is defined as the set of knowledge and skills which allows a person to understand the principles of finance to make informed decisions, and finance products and services that affect or can affect one’s financial well-being. Financially skilful person is the one who has knowledge about economics and finance, and who can apply this knowledge in everyday life, planning one’s income and expenses.

German scientists Friebel and Kaminski ( 2012) identified main directions of financial education as follows:

**Figure1:** Specific areas within financial education for secondary schools



Source: Friebel and Kaminski, 2012

As Figure 1 shows, the identified areas *use of money*, *handling of life risks*, *asset and retirement arrangements* and *use of loans* should be part of educational considerations by teachers when implementing financial education in general secondary schools. As the questions in the boxes show, there is no specific in-depth knowledge assigned to be delivered to pupils, but the dealing with general

questions of those areas. On the contrary, teachers have to be well educated in this new working field. Thus, it is important that teachers, who integrate financial education in their instruction, have the opportunity to attend further education and training courses such as financial education workshops. The special focus on teachers of general secondary schools is important, since for normal they are not skilled in financial education within their academic career.

### **3. FINANCIAL EDUCATION IN GERMANY AND LATVIA : GAP ANALYSIS**

Latvia is the 91<sup>st</sup> biggest economics in the world, and starting from 2000 it was characterized by rapid Gross Domestic Product ( GDP) increase. However, at the end of 2008 when the financial crisis started due consumption increase it rapidly fell. In 2008 Latvia GDP on one inhabitant according to purchasing parity was only 56% from average level of all 27 European Union (EU) states what was the third lowest indicator among the EU states. By joining the EU Latvia had access to previously unprecedented financial means – the EU funds started to flow into national economy, households and businessmen had greater possibilities to take consumer and mortgage loans. The above mentioned is also proved by the statistical data – from 2003 till 2008 the total level of loans in Latvia increased per 80%. The mortgage loans reached 32% in 2008. So high household debts caused 18% GDP decline in 2009, it was one of the biggest fall in the whole world during the last crisis. In 2010 Latvia government debt was 45% of GDP and 75% of it was foreign debt. (Synthesis Report, 2013). The introduction of the euro in 2014 has facilitated a rapid increase of residents' deposits, there is a tendency of slight household consumption increase in last three years, however the household expenditure level is still lower than in 2008.

The president of The Bank of Latvia ( BL) confirmed that there is a low level of financial education in Latvia society and teaching of the questions of economics including financial education are topical for Latvian society. Nevertheless, since 2008 the basics of economics is an optional subject at secondary schools in Latvia, and many students do not choose it. The actualization of the financial education questions in Latvia, changes in curricula and other activities are done. The Ministry of Education and Science (MES) has to carry out coordination work to improve education content in order to provide higher understanding level of financial matters, as well as on the state level it should be achieved that economics is introduced as compulsory subject studied by every school student in Latvia. In 2012 the Financial and Capital Market Commission (FCMC) became a coordinator of issues relating to the financial education will furnish all the required information to the National Centre for Education (NCE) and facilitate the usage of teaching aids and interactive tools developed by the industry in school educational programs assessing their suitability for the teaching and learning processes.

At present in Latvia different activities are being carried out, which envisage work at various informative materials about the questions of financial education for school students, as well as different activities are being held. In order to improve financial education of students and adults, the Latvian financial and economic education promotion partners have come up with a strategic vision for the desirable development of Latvian society in the field of financial literacy and worked out the National Strategy for Financial Literacy in Latvia 2014-2020. Since 2013 the Financial and Capital Market Commission in cooperation with the Association of Commercial Banks of Latvia (ACBL), BL and BA School of Business and Finance has organized the *Financial Education Week*, when society with the active participation of mass media will be informed concerning the topicality of financial education questions.

Germany is the strongest economy in the EU. In Germany educational objectives presented in school legislation are given concrete shape in the curricula for which the Minister of Education and Cultural Affairs is responsible. Furthermore, the teaching material for all different types of school and various subjects must be defined and approved by the Minister of Education and Cultural Affairs. The Conference of the Ministers of Education and Cultural Affairs of the federal states decided about the types of schools and courses of education in lower secondary level. Ministers laid down a framework for grades 5-9/10, requiring certain subjects in every type of school and course of education: German, mathematics, the first foreign language, natural and social sciences.

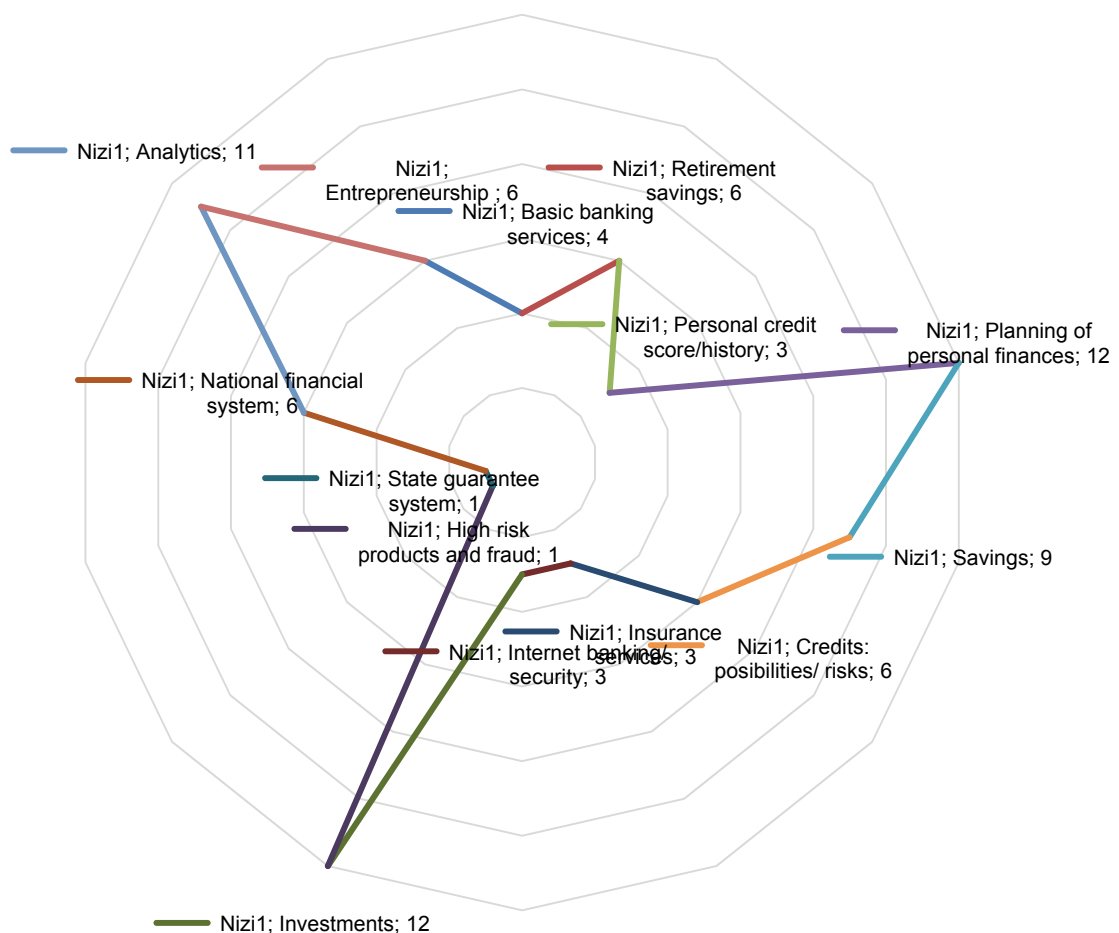
Cross-curricular topics concern questions of political and economic education the broadest sense. This includes:

- sustainable development education,
- democracy education,
- educating about Europe in schools,
- human rights education,
- National Socialism and the Holocaust,
- economic education.

Additionally in Germany various organizations, institutes, associations and business enterprises offer teaching models and training materials on economic and financial themes for teachers, pupils as well as for adult education on web pages especially created for this purpose. The subject area ranges from the circulation of money and wealth creation, to credits, debts, contracts and pension plans.

In Latvia, the Financial and Capital Market Commission analysed the most common topics of financial education (see Figure 2).

**Figure 2:** Financial education activities broken down in topics in Latvia



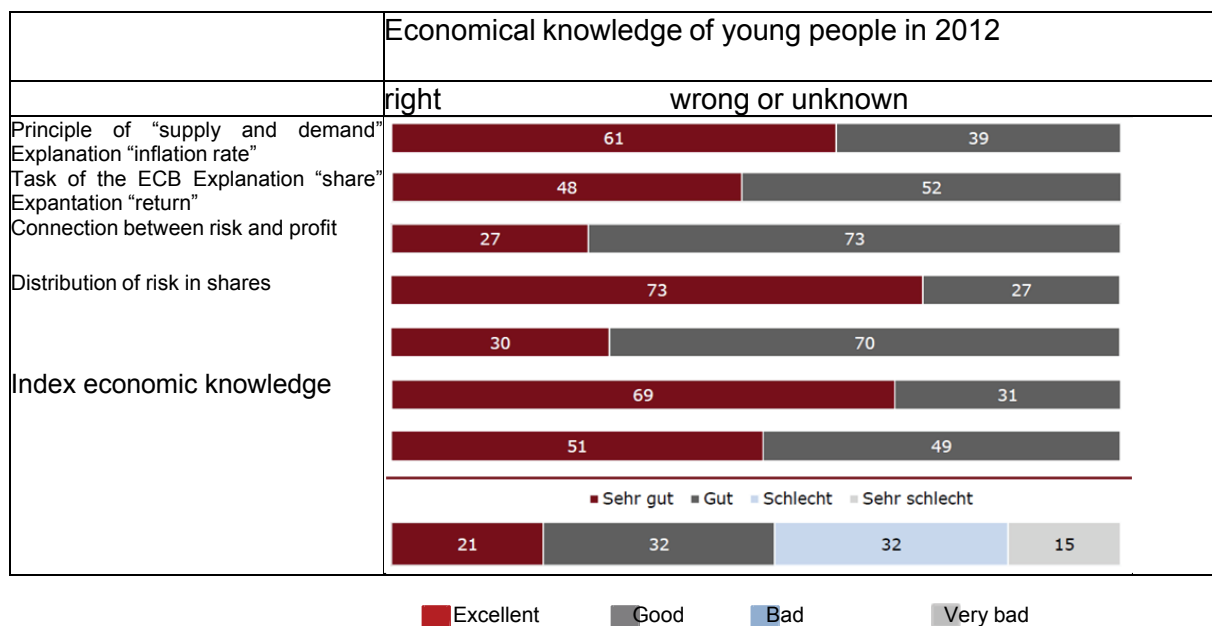
Source: National Strategy for Financial Literacy in Latvia 2014-2020, 2014, p.37

Figure 2 shows that financial education activities focused sufficiently mostly on such topics as the planning of personal finance and investments. Another conclusion is that financial education activities were not sufficient in Latvia in 2012. There is a need for the development of a new unified, complex and systematic approach to the promotion of financial literacy in Latvia's society.

In 2012 the survey conducted by the German banking association asked young people some multiple choice questions regarding economic and financial topics. The answers are represented in the

following chart (Figure 3). The result shows that e.g. only 27% of the young people know the task of the ECB and only 30% are able to give a definition of “return”.

**Figure 3:** Economical knowledge of German young people in 2012



Source: Jugendstudie, Bankenverband, 2012

Financial education has not been integrated in the curricula of the federal states in Germany yet. The curricula of a few federal states like Bavaria (Bayern) or Baden-Württemberg contain the independent subject *Economics*. Each federal state is aware of the importance of fostering financial literacy. There are existing guidelines introduced by each Minister of Education and Cultural Affairs to integrate financial topics cross-curricular, but it depends on every school and also teacher to implement this into the existing subjects. Other difficulties do arise from the knowledge of teachers about financial topics. Although a few subjects include some basic knowledge on financial and economic topics, it is usually not part of the teacher training in Germany.

#### 4. RESEARCH METHODOLOGY AND SURVEYS RESULTS

Comenius project "Financial Education - Levering the Implementation Efficiency in Schools" has been running since 2012. Project participants are higher education institutions and gymnasiums from Austria, Germany, Belgium and Latvia. This project is undertaken to envisage the main “converter” in financial education at school: teachers. Additionally, the project wanted to support school managers in their ability to enhance financial education at schools. The specific need of this project concerns financial literacy of student, attending secondary schools in the participating countries. In 2013- 2014, studies on secondary school students' financial literacy were conducted within the framework of this project.

In order to achieve study goals quantitative and qualitative approaches are used. In qualitative studies, quality is characterized with words and/or figures. In quantitative studies, analysis is based on statistics, the main purpose of which is to measure some kind of quantitative variable, frequency, group distribution or other statistic characteristics. A quantitative study usually involves experimental or quasi-experimental study schedule, data gathering, numerical data and statistic analysis. Quantitative research methods were used in the study on financial literacy of secondary school students. One of the main features of a quantitative study is unchanging study design during all the study. Thus, at the initial phase of this study a plan was made on which variables and how often and in which sample should be measured.

To get an overview about the financial knowledge at Helmholtz-Gymnasium for german secondary school students , there was done a short and simple survey, with 15 multiple choice questions. In

total, 120 students from grade 9 to 11 were asked. Therefrom 110 questionnaires (56 male and 54 female) were analyzed.

Overall, 10 of 15 questions have been answered correctly by approximately 80% of the students. At first question was whether they knew some general finance definitions, and whether they were able to describe these terms. The results show that starting from 82% to 95% may explain the terms: "Saving book, Loan and Stock". Due to the financial crisis it does not amaze that 54% to 73% of the young people are able to describe: "Stock exchange, Euro rescue fund, German Central Bank and Current account" and only up to 9% have never heard the terms before. Low financial knowledge is shown in regard to the term: "current account". 9% of students do not know what it is and 37% could not explain what a current account is. Only 54% of the young people can define a current account. Looking at the result of the last four terms: "Lombard rate, Discount rate, German Banking Act, and overdraft credit" the gap of the finance knowledge is shown. To check the accuracy of the answers, one of the next questions was: "What is a stock?" The result shows that only 36% of them gave the right answer. This result contradicts the fact that 82% of the young people said they knew and were able to explain the essence of a stock. The analysis of survey also illustrates that 72% of the girls have given the right answer to the question about stock, whereas only 11% of the boys knew the correct answer. The answers of the question "How old are you, when you become absolute contractually capable?" was correct only for 62% of the students. know that they have to be 18 years old to become absolute contractually capable. In general, this survey shows that the secondary school students at Helmholtz Gymnasium indeed have a better financial knowledge in comparison to the results of the earlier German surveys.

In Latvia, for the purpose of Financial Education project's empirical study a population sample was chosen - five schools in Riga and Riga region. There were 500 students together in these schools at the moment of survey. From this general population a sample was created - at least 40% of secondary school students, who became the participants. 199 students aged 16 to 20 were asked. The main part of students was from Agenskalns State Gymnasium - 33, 7% of all respondents. From grades the largest was 10 grade - 43,2% of students. 59% of them were female and 41% were male.

Within the research framework, in order to evaluate the financial literacy level among secondary school students, questionnaire and survey were conducted from January to May, 2014. Special activities for promotion of financial literacy were implemented in these schools in the beginning of 2014. In total 20 questions were created and split into five categories – general financial questions, bank services and loans, insurance, taxes and investments.

Questionnaire was based on the questionnaire created and approved by project partners in Germany. Survey results analysis of initial level of financial literacy among secondary school students demonstrates that from all the questions regarding money transactions, financial planning, risks and profitability of different financial products, the secondary school students show best knowledge regarding currency transactions particularly. 73% of respondents gave correct answers to almost all questions regarding currency transactions. The young people have a relatively good knowledge regarding on-line shopping, also majority of all secondary school students (79%) can easily apply exchange rate between Latvian lats (LVL) and euro (EUR). Other questions (related to financial planning, risks and profitability of different financial products) were difficult to half of the respondents.

The most complicated questions in the first questionnaire for secondary school students were those regarding insurance. Only 21% of the respondents knew in which cases life insurance is paid out, and only 23% could precisely name what kind of expenses are covered by a health card. As to money investment, 77% of secondary school students think that the best way how to make interest from pocket money is by opening a bank account. Majority of the respondents (72%) are well informed about usage of stock exchange. Half of the study participants - secondary school students haven't demonstrated ability to calculate interest rates for different life situations, which are related to finance; although 60% of respondents knew that fast credit rates are not favourable.

When students were asked about financial terms, the most recognisable terms among secondary school students were following: bank transactional account, savings account, stock, Bank of Latvia, leasing, loan, pawnshop service. 70% of the respondents knew these terms. The terms most difficult to explain to secondary school students were: discount rate, euro stability mechanism, trust services, Financial and Capital Market Commission, overdraft interest rate etc. 57% of respondents precisely



knew that it is possible to take a loan from 18 years of age, but only 33% knew that one has right to sign agreements from 16 years of age (employment contracts, property agreements and any agreement that has obvious benefit to the person). Survey results show that secondary school students have an average understanding of study and student's loans. Several mutually related statistical variables and finally as financial literacy (FL) index were calculated (see Table 2).

**Table 2:** Summary of the correct answers in the students' survey in Latvia

|                            |                               | Maximum number of correct answers | Minimum number of correct answers | Average number of correct answers | Mode | Median | FL index | Number of surveys |
|----------------------------|-------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|------|--------|----------|-------------------|
| <i>Form distribution</i>   | Form 10                       | 16                                | 5                                 | 11.08                             | 11   | 11     | 0.5839   | 86                |
|                            | Form 11                       | 16                                | 3                                 | 11.96                             | 13   | 12     | 0.6294   | 49                |
|                            | Form 12                       | 16                                | 5                                 | 11.45                             | 12   | 12     | 0.6028   | 64                |
| <i>School distribution</i> | Agenskalns State Gymnasium    | 16                                | 6                                 | 11.85                             | 11   | 12     | 0.6247   | 67                |
|                            | Riga State Gymnasium Number 3 | 16                                | 3                                 | 11.08                             | 10   | 11     | 0.5865   | 63                |
|                            | Riga State Gymnasium Number 2 | 14                                | 10                                | 12.23                             | 13   | 12     | 0.6437   | 13                |
|                            | Jugla Secondary School        | 15                                | 8                                 | 11.50                             | 12   | 11.5   | 0.6053   | 28                |
|                            | Adazi Free Waldorf School     | 15                                | 5                                 | 10.54                             | 13   | 11     | 0.5853   | 28                |
| <i>Gender distribution</i> | Female                        | 16                                | 5                                 | 11.72                             | 11   | 12     | 0.6166   | 116               |
|                            | Male                          | 15                                | 3                                 | 10.94                             | 12   | 11     | 0.5761   | 81                |
|                            | Gender unspecified            | 16                                | 11                                | 13.50                             | -    | 13.5   | 0.6757   | 2                 |
| <i>In total</i>            |                               | 16                                | 3                                 | 11.42                             | 11   | 12     | 0.6012   | 199               |

Source: compiled by the authors

Table 2 shows that none of the students gave more than 16 correct answers. One person gave the minimum of 3 correct answers. In total, the students had 11.42 correct answers in average. Riga State Gymnasium Number 2 were the most successful with the survey, the students of this school gave 12.23 correct answer in average. It helped to achieve the highest index among schools — 0.6437. Less successful were the pupils of the Adazi Free Waldorf School — they gave 10.54 correct answers in average, which gives the lowest FL index of 0.5853. Based on form distribution, the form 11 was the most successful. It may be due to the fact that the economics subject is completed in form 11, and one may assume that the students have strengthened their knowledge. Based on gender distribution, females had more correct answers than males, the average number of correct answers is 11.72 and 10.94 respectively, whereas financial literacy index is 0.6166 and 0.5761. In general, one may consider that the students' level of financial literacy is average. There is a need to develop more the students' practical skills in financial calculations, as well as to provide more comprehensive knowledge about the necessity of competence about financial matters and availability of financial information.

Analysis of studies conducted by project partners in Germany and Latvia shows that the need for financial literacy promotion is also topical in both countries. Belgium survey results demonstrate that only 44,5% of the young people aged 18 to 24 are able to complete financial literacy tests with relatively good results. In Austria situation is very similar (Synthesis Report, 2013).

## 5. CONCLUSION

After examining the situation in Germany and Latvia, authors came to the following conclusions:

1. Although lifelong education programmes are available to teachers and other adult groups, there is a lack of understanding about the questions of financial education; it is necessary to facilitate common understanding of the term 'financial education' in Germany and Latvia (students and teachers);
2. In Germany, directives regarding the interdisciplinary integration of financial themes in schools have existed for many years, teaching materials on financial literacy already exist and that

they are of high quality and free of advertising. Adding to that, the available teaching materials may be downloaded on the internet free of charge, for almost all themes. Nevertheless, in general grammar schools, financial literacy is still not covered sufficiently and also not integrated in lessons. Reasons for this can be found in the congested school curricula, due to the short time allotment, on the one hand and the lack of financial knowledge of teachers on the other.

3. In Germany and Latvia it would be necessary to work out diagnostic instruments of financial education knowledge level that would allow measure school student knowledge before and after acquiring of integrated subjects and adapt flexibly study process to offset gap (using a developed test and OECD questionnaires) ;
4. It is recommended to continue to provide all subject teachers' lifelong education and professional training; to explain how to use existing and work out new modern study materials directed towards the acquiring of the financial education competences, to organize special training courses for teachers in field of finance.
5. It would be necessary to inform schools managers and teachers in Latvia ( especially in regions) more widely about social partner (the Bank of Latvia, FCMC, LCA, commercial banks and BA School of Business and Finance ) activities held and encourage schools to join them.
6. In Germany and Latvia it is recommended to provide revision of subject content and flexible approach to student's needs; to prepare specially adapted and integrated practical examples in the questions of financial education in the education curricula.

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