

Adult Financial Literacy Competencies in Macedonia



Results of the OECD/INFE Based Methodology Study

The report was prepared by GfK for the National Bank of the Republic of Macedonia

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Contents

Executive Summary	5
1. Introduction	8
2. Measuring Financial Literacy.....	9
2.1. Financial Knowledge	10
2.1.1. Knowledge of different concepts and terms	11
2.1.2. Minimum target scores on financial knowledge.....	12
2.1.3. Self-assessed levels of financial knowledge.....	12
2.1.4. Gender differences in financial knowledge	13
2.1.5. Age	14
2.1.6. Education	15
2.1.7. Income	15
2.2. Financial Behavior	16
2.2.1. Behavior Statements.....	17
2.2.2. Budgeting	18
2.2.3. Active saving	18
2.2.4. Choosing products	18
2.2.5. Making ends meet	19
2.2.6. Overall Financial Behavior Score.....	20
2.2.7. Gender differences in financial behavior.....	20
2.2.8. Age	21
2.2.9. Education	21
2.2.10. Income	22
2.3. Financial Attitudes	23
2.3.1. Demographic differences in financial attitudes score	24
3. Overall Level of Financial Literacy.....	26
4. Familiarity with financial products.....	27
5. Usage of financial products.....	30
6. Habits related to financial products.....	33
Annex 1: Demography	36

List of figures

Figure 1: Financial Literacy Score composition.....	9
Figure 2: Financial knowledge score.....	12
Figure 3: Self-reported financial knowledge compared to other adults in Republic of Macedonia	12
Figure 4: Self-reported assessment of financial knowledge in Macedonia and G20 countries	13
Figure 5: Adults achieved minimum score for financial knowledge by gender.....	13
Figure 6: Adults achieved minimum score for financial knowledge by age	14
Figure 7: Adults achieved minimum score for financial knowledge by education	15
Figure 8: Adults achieved minimum score for financial knowledge by income	15
Figure 9: Choosing financial products.....	19
Figure 10: Making ends meet	20
Figure 11: Overall financial behavior score.....	20
Figure 12: Financial behavior score by age.....	21
Figure 13: Financial behavior score by education	21
Figure 14: Financial behavior score by income.....	22
Figure 15: Distribution of negative responses on attitudes statements	23
Figure 16: Financial attitudes score and distribution	24
Figure 17: Attitudes score by age	24
Figure 18: Attitudes score by education.....	25
Figure 19: Financial literacy score – knowledge, behavior, attitudes (stacked points).....	26
Figure 20: <i>Stimulated awareness regarding financial products (%)</i>	27
Figure 21: Stimulated awareness regarding financial products by area of living (%).....	28
Figure 22: Profile of respondents familiar with microfinance loan (%).....	28
Figure 23: Profile of respondents familiar with mobile/cell phone payment account (%)	29
Figure 24: Usage of financial products, used versus recently chosen (%)	30
Figure 25: Number of used financial products (%)	31
Figure 26: Most recent product among respondents with two or more products (%)	32
Figure 27: Options taken into consideration for choosing financial products (%)	33
Figure 28: Service speed versus financial institution trust (%)	34
Figure 29: Sources of information for financial products (%).....	35

List of tables

Table 1: Financial knowledge questions	10
Table 2: Correct responses to knowledge questions	11
Table 3: Financial behavior questions.....	16
Table 4: Financial behavior statements	17
Table 5: Distribution of financial behavior.....	17
Table 6: Household financial decisions and budgeting.....	18
Table 7: Questions on making ends meet.....	19
Table 8: Financial attitudes statements	23
Table 9: Most recent products among respondents with two or more products (%).....	32

Executive Summary

Financial literacy is rapidly being recognised as a core skill, essential for consumers operating in an increasingly complex financial landscape. Republic of Macedonia is no exception this development and the National Bank of the Republic of Macedonia puts great emphasis on the financial literacy and financial education of consumers in the country. The financial literacy study was initiated by the National Bank of the Republic of Macedonia and its Coordinating Body for Financial Education with the support of the Development Facility of the European Fund for Southeast Europe (EFSE DF) and implemented by GfK.

The study creates a valuable input to the Financial Education Project implemented by the National Bank of the Republic of Macedonia by assessing the existing levels of financial literacy among adults in the country, which could be used as a baseline to measure any progress achieved in the future within the frame of the Financial Education Project. The study methodology is based on the OECD/INFE Toolkit for Measuring Financial Literacy and Financial Inclusion (2017).

The objectives of the study were to analyze the levels of financial literacy and inclusion in the country by evaluating financial knowledge, behavior and attitudes of the population and deriving financial literacy scores, to measure product awareness and use and to research respondents' money management styles. The study was conducted on a representative sample of 1,100 respondents aged 18+ years.

Financial knowledge

A financially literate person will have some basic knowledge of key financial concepts and the ability to apply numeracy skills in financial situations. **A large proportion of adults in Macedonia does not have basic financial knowledge. Fewer than half (45%) could answer 70% of the financial knowledge questions correctly**, which is the minimum target score. Although majority of respondents can perform elementary calculations on simple interest (79%) or understand financial concept such as inflation (76%), far fewer respondents understand time value of money (50%) and the concept of diversification (61%). Of particular concern is the relatively large proportion of people who could not calculate simple interest on a savings account over one year and then identify the impact of compounding over 5 years. Only 14% were able to apply their knowledge to this two-part question.

Financial behavior

Consumers' actions and behaviour are what ultimately shape their financial situation and wellbeing, in both the short and longer-term. The overall financial behavior score counts positive behaviors exhibited by respondents. It takes a maximum value of 9, and a score of 6 or more is considered to be relatively high i.e. exhibiting at least 2/3 of the positive behaviors. The report shows that **only 42% of adults reached the target of exhibiting 6 of 9 behaviors**. Some of the positive behaviors are exhibited by large proportion of the population, such as paying bills on time (75%) or careful consideration of purchases (70%). However, only 41% of interviewed respondents sets long-term goals and strives to achieve them. One in three people (33%) had faced a situation where income did not quite cover living costs in the last 12 months, and 16% of all respondents had resorted to borrowing in such cases in the same period.

Financial attitudes

Attitudes and preferences are considered to be an important element of financial literacy. If people have a rather negative attitude towards saving for their future, for example, it is argued that they will be less inclined to undertake such behavior. Similarly, if they prefer to prioritize short-term wants then they are unlikely to provide themselves with emergency savings or to make longer term financial plans. The financial literacy survey includes three attitude statements to gauge respondents' attitudes towards money and planning for the future. According to OECD/INFE methodology, the average attitude indicator above 3 is considered to be a 'high' score. **One in five respondents (20%) received more than 3 points, which means one fifth had financially literate attitudes**, which is far less than the proportion in the G20 countries¹ who achieved the minimum target score for financial attitudes (48%). The analysis of financial attitudes showed that that only 25% of the population finds it more satisfying to save for the long term instead of spending it. Further, 57% of the respondents focus on satisfying short-term financial needs instead of long-term financial goals. Of particular concern is quite low proportion of adults (9%) who disagrees with the statement that money is there to be spent, a proportion which is far less than average G20 countries survey (29%)².

Overall financial literacy level

Financial literacy is considered to be a complex phenomenon, made up of a combination of knowledge, attitudes and behaviors, more specifically, the overall financial literacy score is a sum of the three components discussed in this report. Three components contribute differently to the overall financial score. The maximum financial literacy score is 21 points and the knowledge component contributes up to 7 points, whereas attitudes component contributes up to 5 points. The financial literacy score is primarily driven by financial behavior as it contributes up to 9 of the 21 possible points. This reflects the general understanding that financial well-being results primarily from positive behavior and that financial education therefore needs to ultimately change behavior to improve financial well-being. **The average financial literacy score for Macedonian population is 11.8 out of maximum 21 points.** Compared to the average financial literacy score in the G20 countries (12.7), the overall financial literacy score in Macedonia is lower by 0.9 points, the gap mainly derived from knowledge and attitudes scores, whereas in behavior adults in Macedonia scored averagely compared to other countries. When normalized to 100, the financial literacy score of the Macedonian population equals to 56.0 points, which is an intermediate result indicating the need to enhance financial literacy initiatives in the country.

Whilst it is illustrative to focus on each component of financial literacy (knowledge, behavior and attitudes) in turn, it is also valuable to consider how they combine. Analyzing the results, it can be noticed that larger proportions of the population achieved minimum target scores for knowledge and behavior, 45% and 42% respectively, in comparison with the proportion of the population, which achieved minimum target score for attitudes (20%).

¹ G20/OECD INFE Report on Adult Financial Literacy in G20 countries. Available at: <http://www.oecd.org/daf/fin/financial-education/G20-OECD-INFE-report-adult-financial-literacy-in-G20-countries.pdf>

² Ibid

High knowledge score	High behavior score	High attitudes score
45%	42%	20%

The data obtained through this research is highly useful for setting approximate baseline and benchmarks within the strategic documents and initiatives to the relevant institutions to adopt legislation that would support the idea of financial education of the population in the Republic of Macedonia. The results of the research reveal a significant gap between the literacy levels of different segments in the population, highlighting the need for diversified approaches to reach different target groups, but also to cover different aspects of financial literacy – knowledge, behavior or attitudes.

1. Introduction

Financial literacy is rapidly being recognised as a core skill, essential for consumers operating in an increasingly complex financial landscape. Financial literacy is crucial to ensure consumers save enough to provide adequate income in retirement while avoiding high levels of debt that might result in bankruptcy and foreclosures.

The OECD defines financial education as follows: *Financial education is the process by which individuals 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 and protection (OECD 2005).* Governments around the world are interested in finding effective approaches to improve the level of financial literacy amongst their population and many are in the process of creating or leading a national strategy for financial education to provide learning opportunities throughout a person's life.

The OECD INFE defines financial literacy as a 'combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial wellbeing.'

The National Bank of the Republic of Macedonia puts great emphasis on the financial literacy and financial education of consumers in the country. In general, financial education can be defined as the process through which consumers/investors improve their knowledge about financial products, concepts, risks, and through information, trainings and/or objective counseling, acquire skills, confidence about financial risks and possibilities. Financial education enables them to make choices with the informations they have, points them where to ask for help, and undertake other effective activities for improving their financial welfare. That way, financial education offers more than providing financial information and advices, which should be regulated, as it is often the case, especially for protection of financial clients (so-called consumers)³.

The Financial Education Project of the National Bank provides: organizing national and international events dedicated to financial education and literacy; making instructive educational materials (brochures, leaflets, manuals, books, comics) in which several aspects of the economic sphere are elaborated: the central bank, its role and functions, key financial institutions, economic terms, saving, financial products, as well as protection of the financial service users; cooperation with international institutions and organizations which are dedicated in building policies for financial inclusion and education and drafting strategic documents.

This report draws on the data collected in the Republic of Macedonia using the OECD/INFE Toolkit for Measuring Financial Literacy and Financial Inclusion (2017). The data presented in this report was collected countrywide by interviewing face-to-face 1,100 respondents of the age of 18 and above. Stratified cluster sampling was used as a sampling method and sampling was done by regions and settlement types (urban/rural). Sampling points were selected in proportion to the population; adults as respondents were selected randomly ('last birthday principle') in households. The fieldwork took place from January 17 to February 5, 2018.

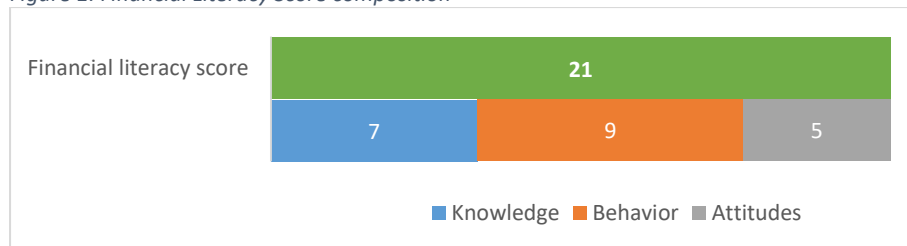
³ Source: <http://www.nbrm.mk/finansiska-edukacija-en.nspix>

2. Measuring Financial Literacy

Financial literacy is ‘a combination of awareness, knowledge, skill, attitude and behavior necessary to make sound financial decisions and ultimately achieve individual financial well-being.’⁴

The OECD/INFE toolkit used in this study is designed to collect comparable information on the behavior, attitudes and knowledge of the adult population, which can be used to derive financial literacy scores. The toolkit incorporates a questionnaire and methodological guidance on how to interview and how to prepare the interviewers for their task. It also includes additional questions that can be used to enrich national datasets. The questionnaire is designed to collect comparable information that can be used to create scores to indicate their levels of financial literacy. It covers topics such as keeping track of finances, making-ends meet, longer-term financial planning and choosing financial products. Based on the answers submitted by respondents, the report derives financial literacy scores, which is a combination of financial knowledge, financial behavior and financial attitudes. The financial literacy score is a sum of the scores achieved in each component – knowledge component contributes with maximum 7 points, behavior component with 9 points, whereas attitudes component contributes with maximum 5 point to overall financial literacy score of 21 points (Figure 1).

Figure 1: Financial Literacy Score composition



⁴ OECD/INFE High-level Principles on National Strategies for Financial Education (2012).

2.1. Financial Knowledge

A financially literate person will have some basic knowledge of key financial concepts and the ability to apply numeracy skills in financial situations. The literature indicates that higher levels of financial knowledge are associated with positive outcomes, such as stock market participation and planning for retirement, as well as a reduction in negative outcomes such as debt accumulation⁵.

The OECD core questionnaire includes 8 questions to test levels of knowledge. The questions cover a range of financial topics and to vary in difficulty, although none of them is excessively complex and none of them requires expert knowledge.

Table 1: Financial knowledge questions

Question code	Text	Possible responses	Purpose
QK2	Imagine that five brothers are given a gift of 10.000 MKD in total. If the brothers have to share money equally how much does each one get?	Open response [Correct response 2000 MKD]	To test the ability to undertake basic mental arithmetic in a financial context
QK3	Imagine that five brothers are given a gift of 10,000 MKD in total and brothers have to share the money equally. If they have to wait for one year to get their share of the 10,000 MKD and inflation stays at 1, 3% percent. In one year's time will they be able to buy?	Multiple choice [correct response 'less with their share of the money than they could buy today or 'It depends on the types of things that they want to buy']	To test the ability to understand how inflation impacts on purchasing power
QK4	You lend 1,000 MKD to a friend one evening and he gives you 1,000 MKD back the next day. How much interest has he paid on this loan?	Open response [correct response 'none'/0]	To test the understanding of interest without difficult arithmetic
QK5	Suppose you put 100 MKD into a no fee, tax free savings account with a guaranteed interest rate of 2% per year. You don't make any further payments into this account and you don't withdraw any money. How much would be in the account at the end of the first year, once the interest payment is made?	Open response [correct response 102 MKD]	To test ability to calculate simple interest on savings
QK6	And how much would be in the account at the end of five years [add if necessary: remembering there are no fees or tax deductions]? Would it be...?	Multiple choice [Correct response More than 110 MKD, but only taken into account if QK5 is correct]	To test whether respondent is aware of the additional benefit of compounding
QK7a	If someone offers you the chance to make a lot of money it is likely that there is also a chance that you will lose a lot of money.	True/False [correct response: True]	To test whether respondent understands the typical relationship between risk and return
QK7b	High inflation means that the cost of living is	True/False	To test the

⁵ Hastings, J. S., B. C. Madrian and W. L. Skimmyhorn (2013). Financial literacy, financial education and economic outcomes. *Annual Review of Economics*, 5, 347–373.

	increasing rapidly.	[correct response: True]	understanding of the meaning of the term inflation
QK7	It is less likely that you will lose all of your money if you save it in more than one place	True/False [correct response: True]	To test whether the respondent is aware of the benefit of diversification

2.1.1. Knowledge of different concepts and terms

Half of respondents (50%) knew what would happen to the purchasing power of money if inflation stayed at the same rate for one year, whereas more than 3/4 of the population (79%) showed an understanding of the concept of interest and correctly identified that none had been paid (QK4). The calculation of simple interest on savings (QK5) posed a problem to more than a half of population, as only 43% could calculate simple interest on savings correctly and 1 out of 3 respondents (31%) could identify the impact of compounding on a savings account (QK6). A mere 14% answered both these questions correctly (Table 2).

Whilst the concept of compounding is not well understood, large proportion of the population (74%) understands the basic relationship between risk and return (QK7a). The definition of inflation (QK7b) is also well known for 76% of the population, while the concept of diversification (QK7c) appears to be more challenging as only 61% could answer this question correctly.

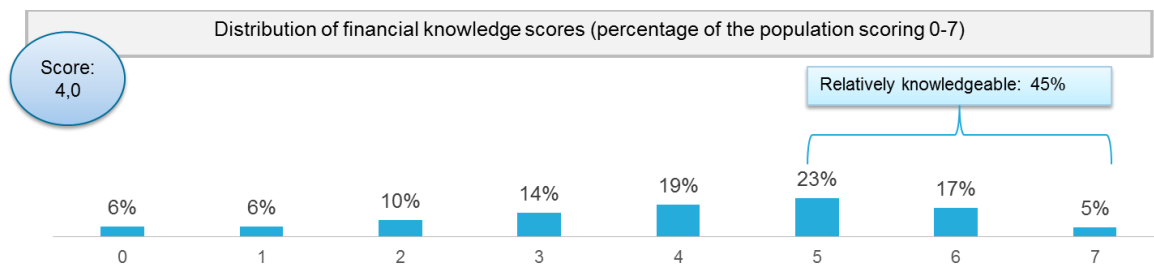
Table 2: Correct responses to knowledge questions

QK3	QK4	QK5	QK6	QK5&6	QK7a	QK7b	QK7c
Time value of money	Interest paid on loan	Simple interest on savings	Compounding over 5 years	Combined simple interest and compounding	Risk and return	Definition of inflation	diversification
50%	79%	43%	31%	14%	74%	76%	61%

2.1.2. Minimum target scores on financial knowledge

The financial knowledge score is created by counting the number of correct responses given by each respondent to 7 questions, which cover core financial concepts (Table 1). According to the OECD/INFE methodology, a high level of financial knowledge is defined as 5 or more correct responses to these 7 questions (i.e. answering at least 70% of the questions correctly). In Republic of Macedonia, fewer than half (45%) could answer at least 5 out of 7 of the financial knowledge questions correctly. The average financial knowledge score for the entire population is 4.0 out of maximum of 7.

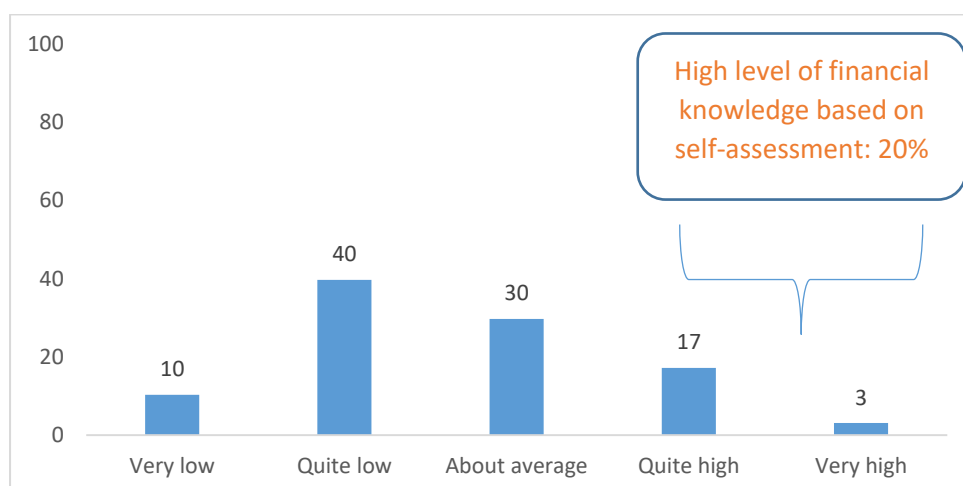
Figure 2: Financial knowledge score



2.1.3. Self-assessed levels of financial knowledge

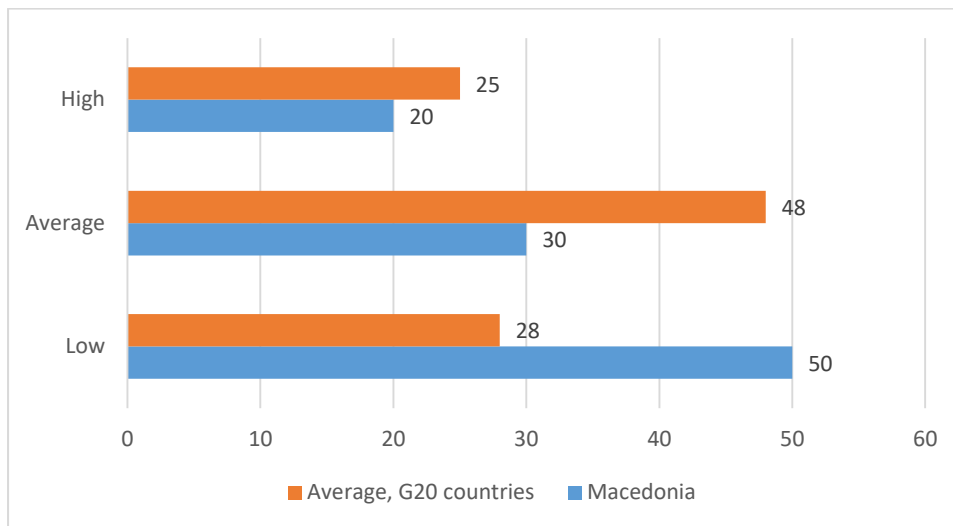
It is interesting to consider whether people know the extent to which they have relevant knowledge and information in a financial context. Figure 3 reports responses to a self-assessment question of how the respondent felt their financial knowledge compares with that of other adults in the country. There is a tendency for respondents to say that their financial knowledge is lower than average – 20% of respondents considered themselves to have quite high or very high levels of financial knowledge although 45% of them are relatively knowledgeable according to OECD/INFE methodology.

Figure 3: Self-reported financial knowledge compared to other adults in Republic of Macedonia



Compared to average from the financial literacy survey among G20 countries⁶, adults in Macedonia tend to evaluate their knowledge as rather low – 50% compared to only 28% in G20 countries (Figure 4).

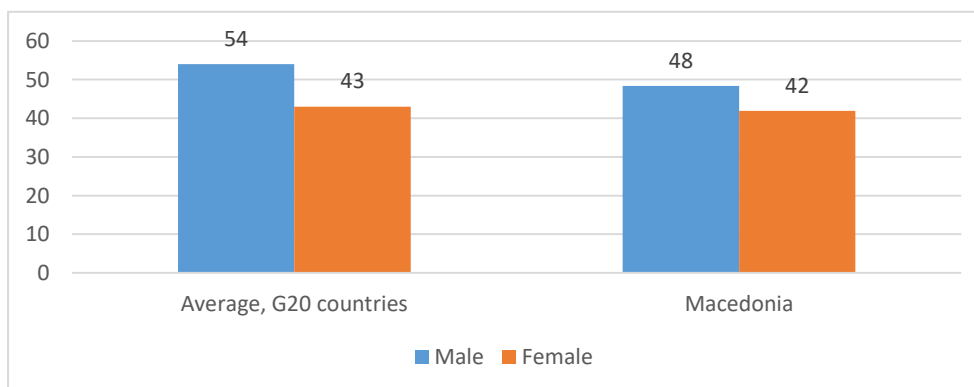
Figure 4: Self-reported assessment of financial knowledge in Macedonia and G20 countries



2.1.4. Gender differences in financial knowledge

Assessing the differences in levels of financial knowledge between men and women could be a first step in understanding the reasons of eventual gender gap in access the financial services and financial education and developing action plan to address this gap. The results from the survey show that there is a gender difference in financial knowledge in Republic of Macedonia, as 6% more men than women achieved the minimum score for financial knowledge. However, the comparative analysis with the results among G20 countries showed that the gender gap in Macedonia is lower than the gap that exist in G20 countries (Figure 5).

Figure 5: Adults achieved minimum score for financial knowledge by gender

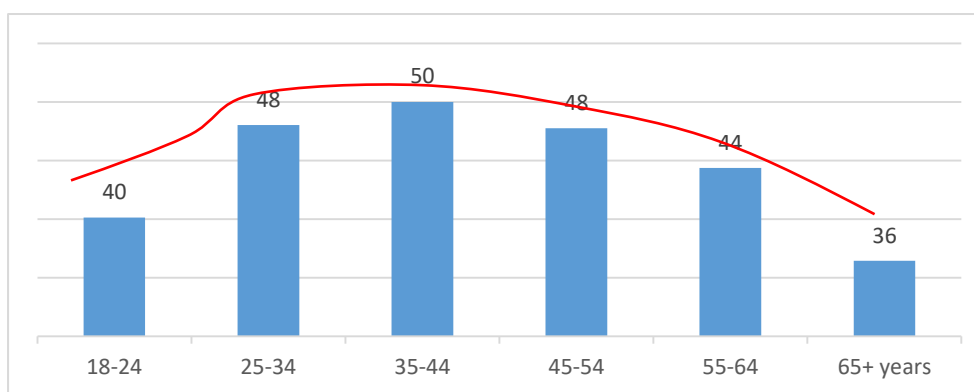


⁶ G20/OECD INFE Report on Adult Financial Literacy in G20 countries.

2.1.5. Age

We might expect financial literacy to increase with age, as people become more knowledgeable, and their attitudes and behavior change accordingly. Of course there are some mediating factors that may reduce the financial literacy of the eldest respondents such is finding it difficult to keep up with the fast pace of change in the financial market place, including new technologies and reduction of cognitive abilities due to ageing. Figure 6 shows that highest percentage of respondents in Macedonia who get the minimum score for financial knowledge is among the age groups 25-54 years old and starts declining after this age cohort.

Figure 6: Adults achieved minimum score for financial knowledge by age



2.1.6. Education

It can be seen that there is a relationship between higher level of education and higher scores for financial knowledge. The percentage of adults who achieved the minimum score for financial knowledge is increasing as the education level increases (Figure 7). However, it should also be noted that some people have achieved high scores despite low levels of education i.e. 10% out of those with no formal education achieved high scores and 20% out of those with primary education. This indicates that high levels of financial knowledge levels are possible even amongst those who have not completed formal education.

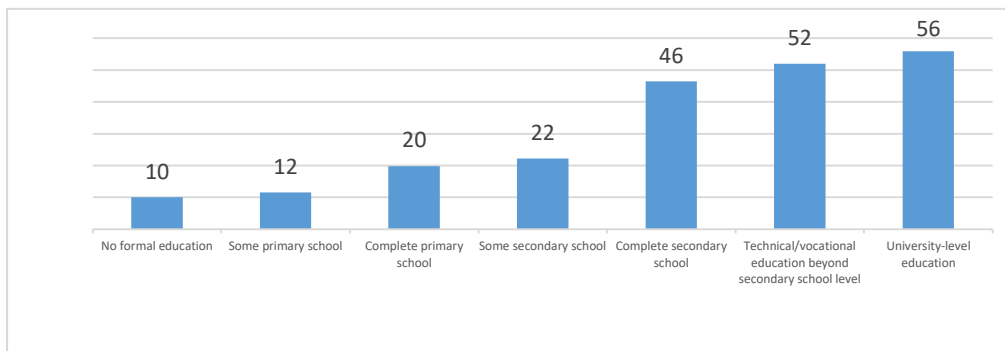


Figure 7: Adults achieved minimum score for financial knowledge by education

2.1.7. Income

The financial literacy questionnaire includes a single question to give general impression of the household income of respondents. The median average of household income in the country is 22.000 MKD a month. The split of income bands reflects up to 75% of median household income for low income group i.e. up to 16.500 MKD and more than 125% of median household income for high income group i.e. 27.500+ MKD. The average income group ranges between 75% and 125% of the median income, that is, between 16.501 MKD and 27.500 MKD. The proportion of adults who get minimum target score for financial knowledge is significantly lower among lowest income group and rises as the household income increases (Figure 8).

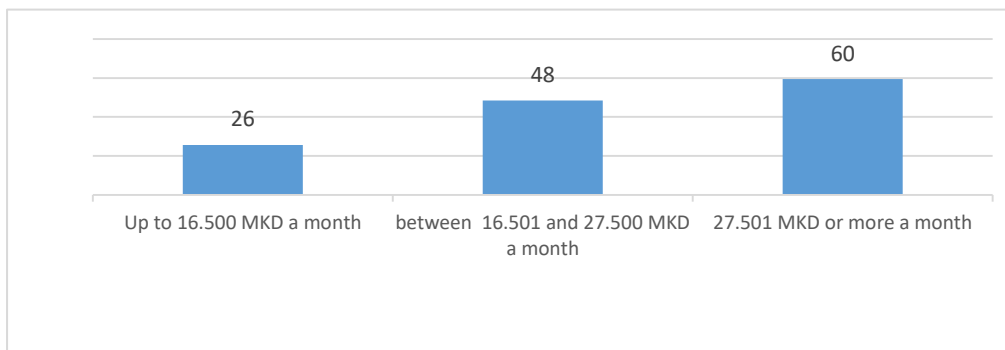


Figure 8: Adults achieved minimum score for financial knowledge by income

Probably this difference is interrelated with other demographic variables such as education level and age as income varies by these variables. However, improving financial knowledge among the poorest would be welfare enhancing, helping them to make better financial related decisions.

2.2. Financial Behavior

Consumers' actions and behaviour are what ultimately shape their financial situation and well-being, in both the short and longer-term. Some types of behaviour, such as putting off bill payment, failing to plan future expenditures or choosing financial products without shopping around, may impact negatively on an individual's financial situation and well-being.

The OECD/INFE financial literacy questionnaire asks the respondents about their behaviour using different question styles, in order to capture the maximum amount of information. From the responses to these questions, we can derive information about the ways in which people manage their money, including whether they consider carefully whether they can afford something, whether they typically pay bills on time, if they report that they keep a close watch over their finances

Table 3: Financial behavior questions

Behavior	Discussion	Value towards final score
Carefully considers purchases	Scaled question	1 point for respondents who completely agree and agree (code 1 or 2). 0 point in all other cases
Pays bills on time	Scaled question	1 point for respondents who completely agree and agree (code 1 or 2). 0 point in all other cases
Keep close watch on personal financial affairs	Scaled question	1 point for respondents who completely agree and agree (code 1 or 2). 0 point in all other cases
Set long terms goals and strives to achieve them	Scaled question	
Responsible for making day-to-day decisions in household		1 point if personally or jointly responsible for money management. 0 in all other cases
Having a household budget		1 point if there is a household budget. 0 in all other cases
Active saving	This question identifies a range of different ways in which the respondent may save. People who refused to answer score 0.	1 point for any type of active saving (excluding letting money build up in a current account as this is not active). 0 in all other cases
Choosing products	This is a derived variable drawing information from 2 questions. It is only possible to score points on this measure if the respondent had chosen a product: those with no score on this measure have either refused to answer, not chosen a product, or not made any attempt to make	1 point for people who had tried to shop around or gather any information. 2 points for those who had shopped around and gathered independent information. 0 in all other cases.

	an informed decision.	
Borrowing to make ends Meet	This is a derived variable that combines a question about running short of money and one that identifies a range of different ways in which the respondent made ends meet the last time they ran short of money. The derived variable indicates people who are making ends meet without borrowing refusals will score 1).	0 if the respondent used credit to make ends meet. 1 in all other cases.

2.2.1. Behavior Statements

Several indicators used in the measure of financial behavior rely on a 5-point scale, to give the respondent an opportunity to report the extent to which they behave in a certain way (Table 4).

Table 4: Financial behavior statements

Behavior	Text	Possible answers
Carefully considers purchases	Before I buy something I carefully consider whether I can afford it	5 point scale: 1=Completely agree; 5=completely disagree
Pays bills on time	I pay my bills on time	
Keep close watch on personal financial affairs	I keep a close personal watch on my financial affairs	
Set long terms goals and strives to achieve them	Set long term financial goals and strive to achieve them	

Respondents who gave answers 1 or 2 on the above statements are considered to behave in a financially literate way. Most people agreed or completely agreed (70%) that they carefully consider purchases.

Financial literacy also requires organizational skills in order that individuals meet their financial commitments and thus avoid problems such as reduced access to affordable credit or fines for nonpayment. Timely payment of the bills was a standard for 3 out of 4 respondents (75%).

A third behavior statement asks respondents how often they keep a close personal watch on their financial affairs – nearly one third claimed that they never keep an eye on their own finances and 68% of respondents claimed that they keep close watch on personal financial affairs - a behavior that could help them to better manage their day-to-day finances. When it comes to setting long term financial goals and strive to achieve them, the proportion of respondents who agreed on this statement is quite low (41%) compared to the other three statements.

Table 5: Distribution of financial behavior

Carefully considers purchases	Pays bills on time	Keep close watch on personal financial affairs	Set long terms goals and strives to achieve them
70%	75%	68%	41%

2.2.2. Budgeting

Budgeting is widely accepted as a valuable tool for money management and an integral component of financial literacy as indicated in G20/OECD INFE Core Competencies Framework on Financial Literacy for Adults⁷.

The analysis showed that most of those surveyed (88%) claimed that they have a budgeting tool for the household. This percentage is higher than in G20 survey where the average percentage of households using budgeting was 60%. Furthermore, 84% of respondents take at least some responsibility for household financial decisions.

However, it must be noted that having a household budget, but not taking any responsibility for drafting it or for any other financial decisions in the household, cannot be considered a financially sound behavior. Similarly, a person cannot be considered financially literate if he/she is responsible for financial decisions in the household, yet the household does not have a budget at all. Combining information about household budgets and responsibility for financial decisions indicates that, three out of four respondents (76%) take some responsibility for financial decisions and live in a household with a budget.

Table 6: Household financial decisions and budgeting

Who is responsible for making day-to-day decisions in your household?	Does your household have a budget? [Yes]	Responsible for financial decisions in a household with a budget
84%	88%	76%
% making decisions by themselves or with someone else	% responding yes	% making decisions and reporting that the household has a budget

2.2.3. Active saving

Saving behavior is considered to be an important component of financial literacy, building financial security and reducing the reliance on credit. As the actual amount that a person can save and the length of time they can keep money to one side varies immensely, the financial literacy measure focuses exclusively on whether or not respondents save money. Respondents were asked 'In the past 12 months have you been saving money in any of the following ways?' The questionnaire then lists a variety of ways in which people typically save, and any type of saving is recorded. The results of the survey show that 56% of adults in Republic of Macedonia save in some way.

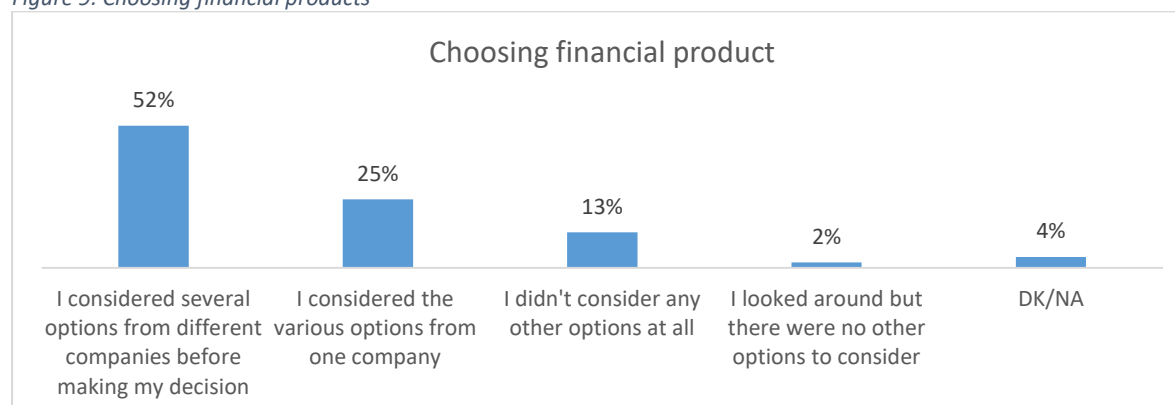
2.2.4. Choosing products

The way people behave when choosing financial products is also an important aspect of their overall financial literacy. If people attempt to make an informed decision by shopping around or using independent advice they are more likely to choose appropriate products that meet their needs in a cost effective way, less likely to buy something inappropriate, and less likely to be subject to mis-selling or fraud.

As explained earlier, the indicator for choosing products combines two questions, and the derived variable used for the analysis showed that 54% of adults in Macedonia had made an attempt to make an informed decision i.e. to shop around for financial products prior to making the choice (Figure 9; columns 1 and 4).

⁷ Available at: <http://www.oecd.org/daf/fin/financial-education/OECD-INFE-International-Survey-of-Adult-Financial-Literacy-Competencies.pdf>

Figure 9: Choosing financial products



2.2.5. Making ends meet

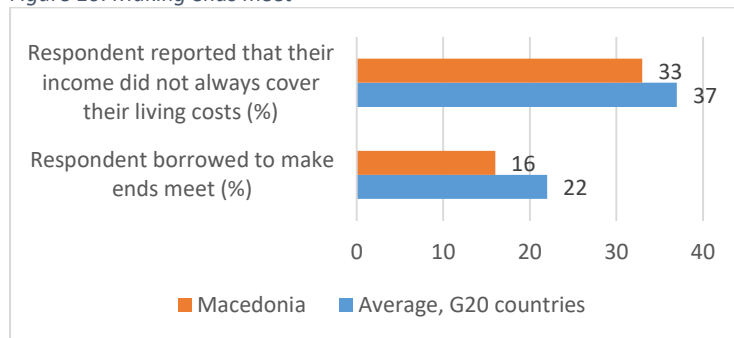
Financially literate people will have strategies to smooth income flows and a tendency to avoid using credit for essentials such as food and utilities. The extent to which these strategies are successful will depend on the predictability of their income and expenditure as well as the extent to which they have the necessary skills. It is recognized that it is not always possible to prevent shortfalls in income, but a reliance on credit for basic living can become very dangerous and impossible to escape. According to OECD/INFE methodology a derived variable is created, which identify people who reported that sometimes their income didn't meet their needs, and that the last time this happened they had to borrow to make ends meet. The indicator created from the 2 relevant questions gives a score of 1 to those respondents who have either a) not faced a shortfall in income during the past year (indicating good financial literacy skills in terms of budgeting and financial management) or b) have fallen behind, but did not resort to borrowing to pay their bills (indicating that they had already put plans in place to deal with such situations). Those who borrowed to make ends meet scored 0.

Table 7: Questions on making ends meet

Question	Responses	Notes
Sometimes people find that their income does not quite cover their living costs. In the last 12 months, has this happened to you, personally?	Responses yes/no	
What did you do to make ends meet the last time this happened?	Multiple responses allowed	This question was used to identify respondents who borrow or fail to meet existing financial commitments in order to make ends meet.

The results obtained showed that one in three people (33%) had faced a situation where income did not quite cover living costs in the last 12 months, and 16% of all respondents had resorted to borrowing in such cases in the same period, which is almost every second adult who had faced such situation. The percentage of people who had faced situation in which they could not make ends meet in Republic of Macedonia is almost the same as the average in G20 countries, however, the percentage of those who borrowed in G20 is higher than those in Macedonia.

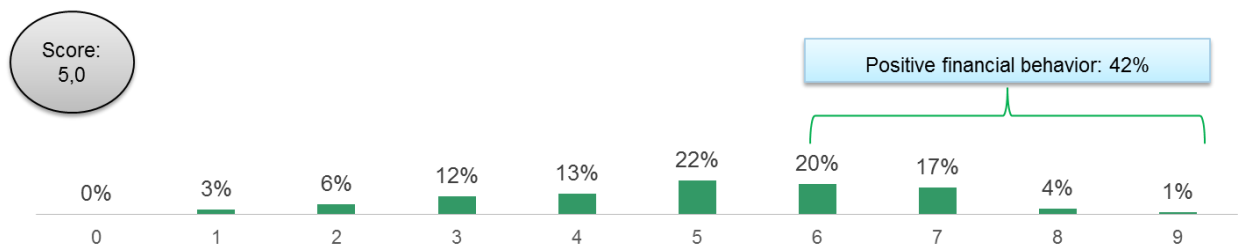
Figure 10: Making ends meet



2.2.6. Overall Financial Behavior Score

The overall financial behavior score counts positive behaviors exhibited in the answers to the questions described in the sections above. The behavior score takes a minimum value of 0 and a maximum value of 9. According to the OECD/INFE methodology, a score of 6 or more is considered to be relatively high, reflecting the proportion of respondents exhibiting at least 2/3 of the positive behaviors. 42% of those surveyed in Republic of Macedonia achieved a behavior score of 6 or more. The distributions presented in Figure 11 show that relatively few respondents exhibited all of the positive behaviors assessed by this study; most people display some positive behaviors. The average behavior score is 5.0 out of the maximum of 9.

Figure 11: Overall financial behavior score



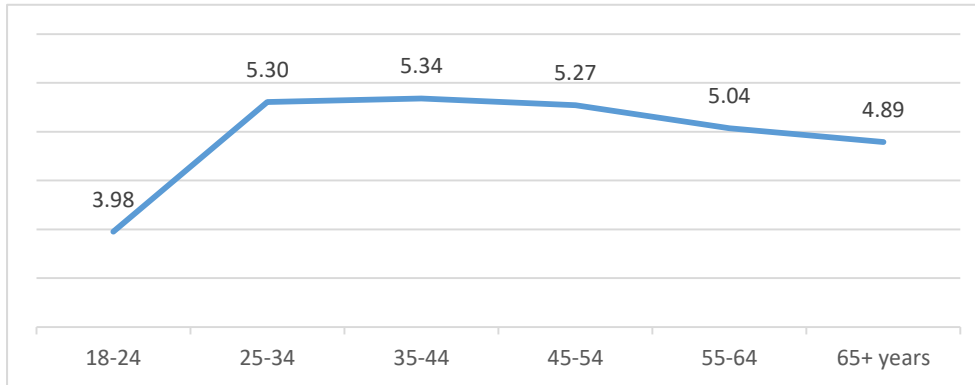
2.2.7. Gender differences in financial behavior

Similar proportions of men and women achieved the minimum score for positive financial behavior and virtually there is no difference in the average behavior score between women (5.02) and men (5.00).

2.2.8. Age

The highest score for financial behavior is achieved by adults aged 35-44 years old followed by 25-34 and 45-54 age cohorts (Figure 12).

Figure 12: Financial behavior score by age



2.2.9. Education

As with the financial knowledge, it can be noticed that there is a strong relationship between increased level of education and high scores for financial behavior. The financial behavior score is increasing as the education level increases (Figure 13).

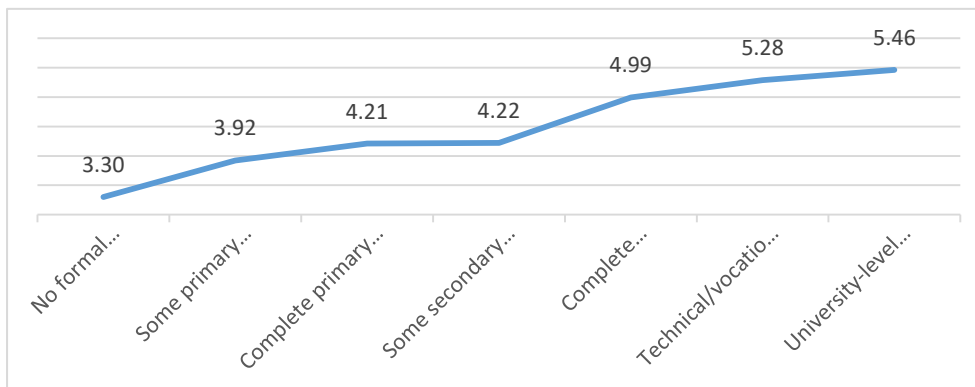
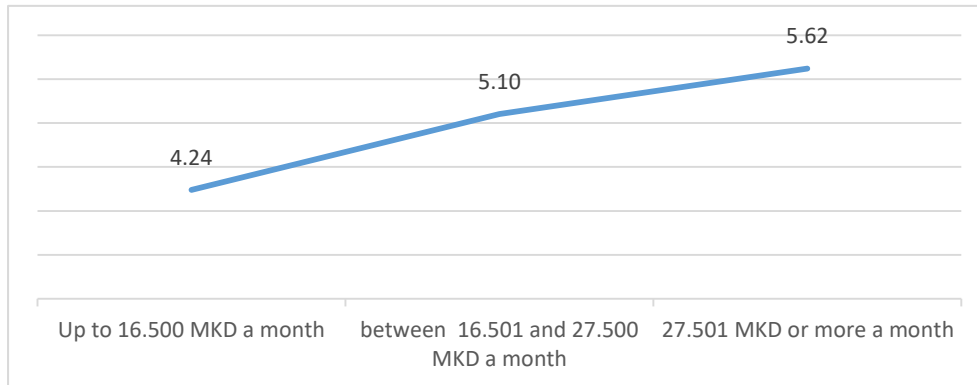


Figure 13: Financial behavior score by education

2.2.10. Income

By comparing the results on the financial behavior score it can be seen that it is positively correlated with the income of respondents i.e. the behavior score increases as the income increases (Figure 14).

Figure 14: Financial behavior score by income



2.3. Financial Attitudes

The OECD/INFE definition of financial literacy recognizes that even if an individual has sufficient knowledge and ability to act in a particular way, their attitude will influence their decision of whether or not to act. Attitudes and preferences are considered to be an important element of financial literacy. If people have a rather negative attitude towards saving for their future, for example, it is argued that they will be less inclined to undertake such behavior. Similarly, if they prefer to prioritize short term wants over long-term security then they are unlikely to provide themselves with emergency savings or to make longer term financial plans. In the section that follows, we therefore report the responses to three attitudinal statements focusing on attitudes towards money, and particularly towards planning for the future. The responses to three attitude statements are therefore used to gauge respondents' attitudes towards money and planning for the future (Table 8 and Figure 15).

Table 8: Financial attitudes statements

Question	Responses	Notes
I tend to live for today and let tomorrow take care of itself	5-point scale: 1=Completely agree; 5=completely disagree	to indicate whether the respondent focuses exclusively on the short-term goals (agrees) or has a preference for longer-term security (disagrees).
I find it more satisfying to spend money than to save it for the long term		
Money is there to be spent		

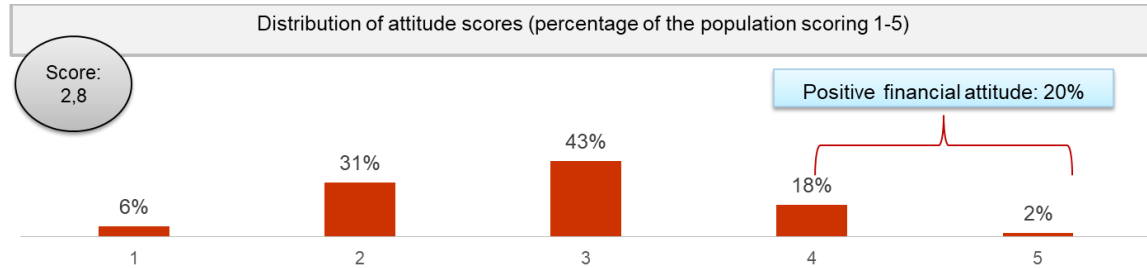
Each of the statements focuses on preferences for the short term through 'living for today' and spending money. These kinds of preferences are likely to hinder behavior that could lead to improved financial resilience and well-being. More financially literate people would tend to disagree with the statements.

Figure 15: Distribution of negative responses on attitudes statements

Following 3 statements aim at assessing if the respondents prioritize short-term financial wants (i.e. agree with given statements) or long-term financial security (disagree with given statements)			
	I find it more satisfying to spend money than to save it for the long term	I tend to live for today and let tomorrow take care of itself	Money is there to be spent
Disagrees	25%	57%	9%
Percentage putting themselves at 4 or 5 on the scale (disagreeing or strongly disagreeing with statements)			

The analysis of financial attitudes showed that that only 25% of the population finds it more satisfying to save for the long-term instead of spending it. Further, 57% of the respondents focus on satisfying short-term financial needs instead of long-term financial goals. On a 5-point scale, used for the attitude statements, 1 point indicates short-term financial preferences, and 5 points indicate long-term preferences. Taking the average of the 3 responses gives us a simple way to compare general attitudes towards the short-term vs longer-term vision of finances. According to OECD/INFE methodology, the average attitude indicator above 3 is considered to be a 'high' score. In Republic of Macedonia one in five respondents (20%) received more than 3 points, which means one fifth had financially literate attitudes to spending and longer term preferences. The average attitude score of the population is 2.8 out of the maximum of 5 points (Figure 16).

Figure 16: Financial attitudes score and distribution



2.3.1. Demographic differences in financial attitudes score

There is virtually no difference between women and men in the financial attitudes score, with women having a slightly higher score (2.81) compared to men (2.77). With regard to age, as with knowledge and behavior, the attitudes score also rises as the age increases, except that for the attitudes score there is no decline after 54 years old age cohorts (Figure 17).

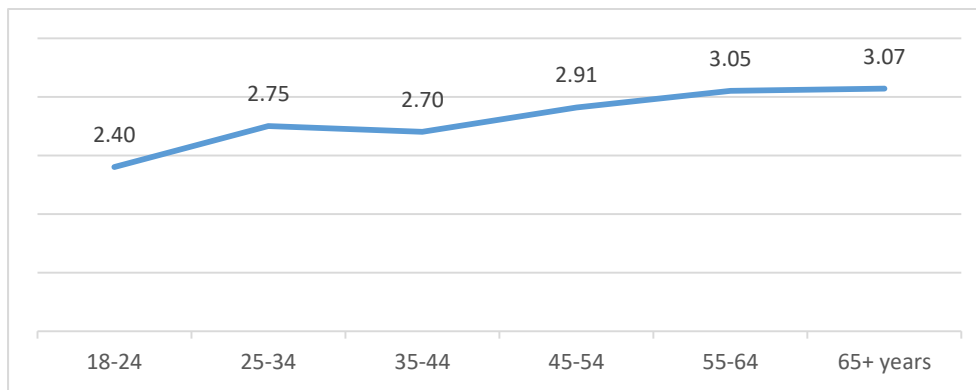


Figure 17: Attitudes score by age

Analyzing the results on the financial attitudes score across the educational background it can be seen that the higher score is achieved among respondents with no formal education or some primary school education (Figure 18). Finally, there is no difference in the attitudes score among different education level groups.

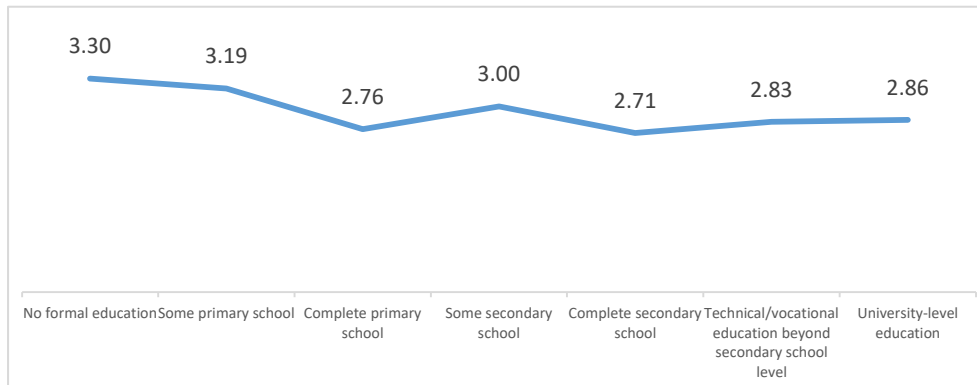


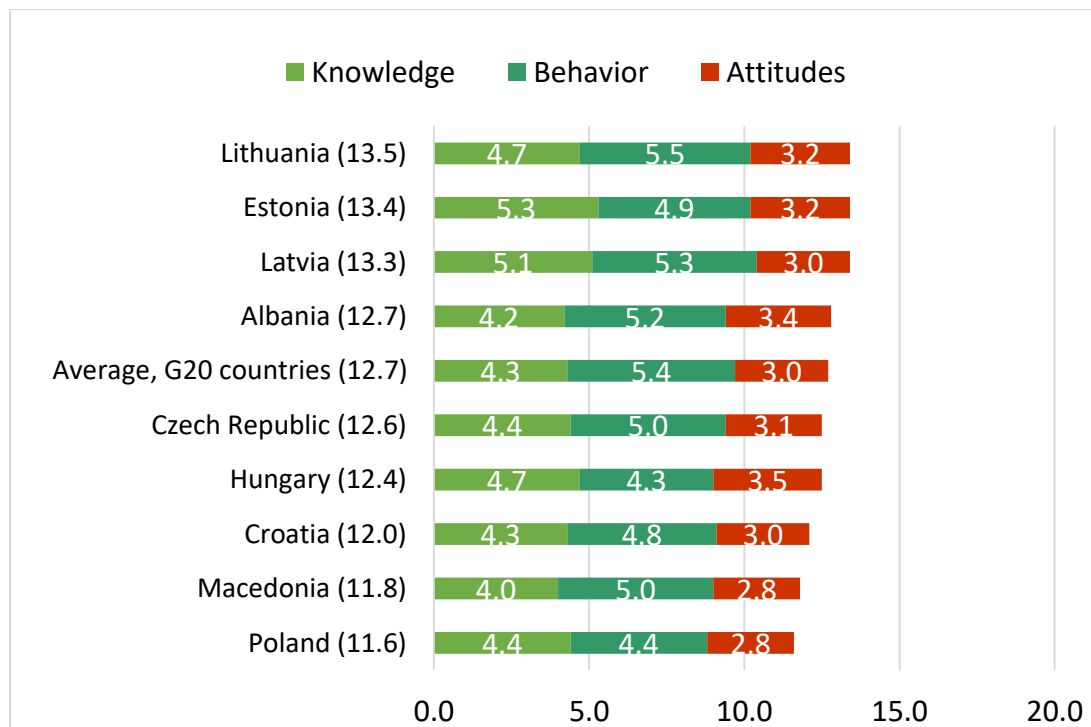
Figure 18: Attitudes score by education

3. Overall Level of Financial Literacy

Financial literacy is considered to be a complex phenomenon, made up of a combination of knowledge, attitudes and behavior, more specifically, the overall financial literacy score is a sum of the three components discussed in this report. The resulting score is primarily driven by financial behavior as it contributes up to 9 of the 21 possible points. This reflects the general understanding that financial well-being results primarily from positive behavior and that financial education therefore needs to ultimately change behavior to improve financial well-being.

Figure 19 shows that the average financial score for Macedonian population is 11.8 out of maximum 21 points. Compared to average in the G20 countries (12.7), the overall financial literacy score in Macedonia is lower by 0.9 points, the gap mainly derived from knowledge and attitudes scores, which are among the lowest scores in selected countries shown in the graph, whereas in behavior adults in Macedonia scored averagely compared to the countries listed.

Figure 19: Financial literacy score – knowledge, behavior, attitudes (stacked points)

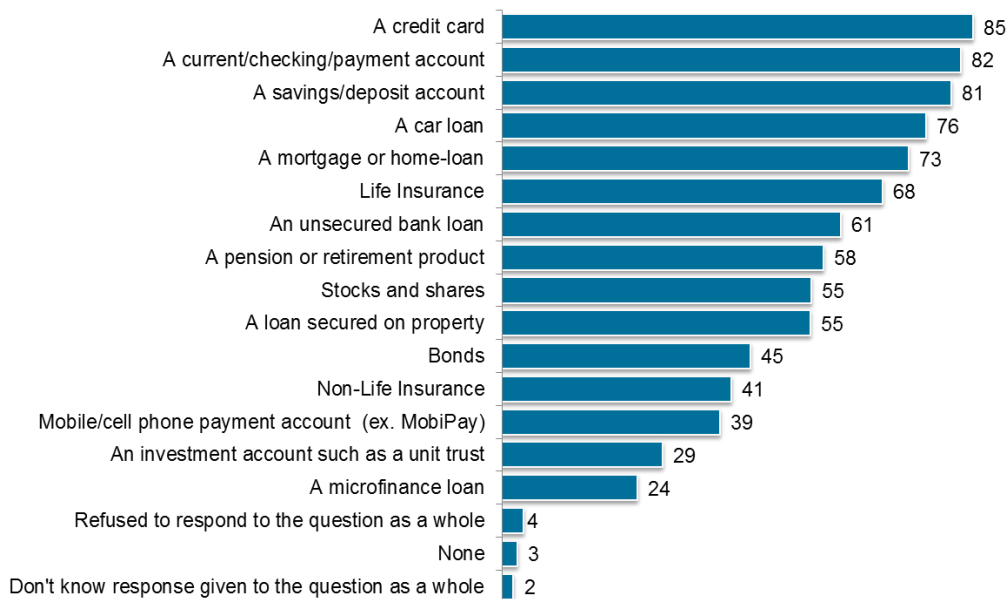


Normalized to 100 point scale, the financial literacy score for Macedonian population is 56 points, which is an intermediate result, indicating the need to enhance financial literacy initiatives in the country.

4. Familiarity with financial products

The next part presents familiarity with financial products. Being aware means that respondents is familiar (knows) that certain financial product exist i.e. answered 'yes' on the following question: Please can you tell me whether you have heard of any of these types of financial products. This indicator is evaluated through stimulated awareness regarding different types of products that exists on the Macedonian market. The figure below portraits the picture of familiarity with different financial products offered by banks in the country.

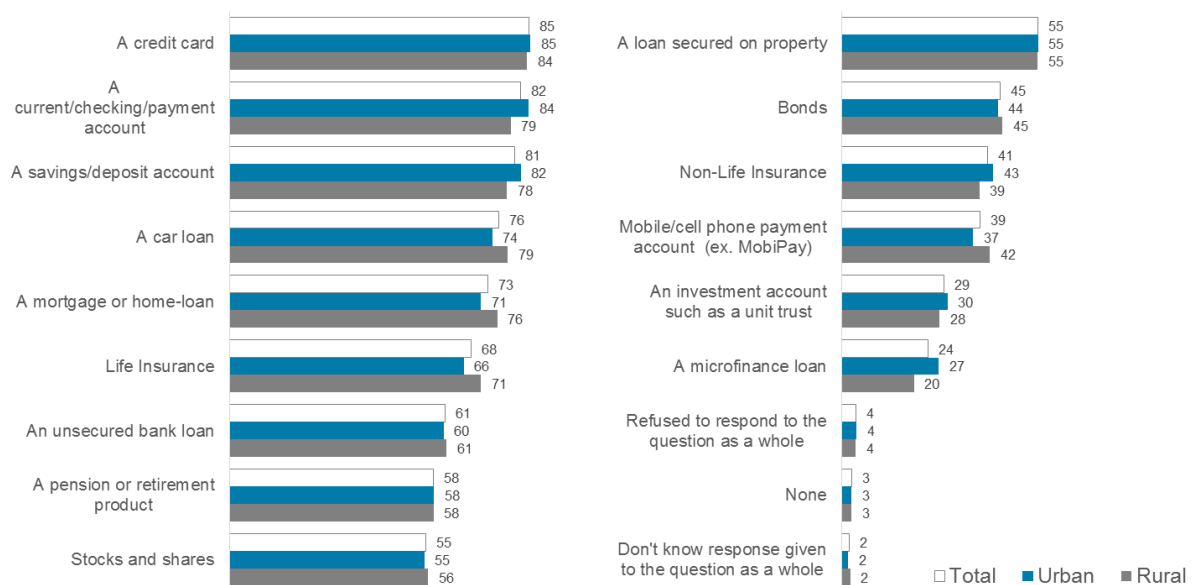
Figure 20: *Stimulated awareness regarding financial products (%)*



The results show that highest awareness exists for credit cards, closely followed by current payment account and savings/deposit account. The majority of respondents or over 80% are aware for these three products. Next in line are car loan, mortgage loan and life insurance. On the other hand, citizens are least familiar with the following financial products: a microfinance loan (24%), an investment account such as a unit trust (29%), a mobile/cell phone payment account (ex. MobiPay) (39%), with some even lower familiarity among older age groups especially for mobile payment account. Familiarity with these types of products ranges from one quarter to one third of the respondents. Interesting finding is that only 5 % stated that they aren't familiar with any financial product (3% stated they don't know any of the products, while 2 % refused to provide an answer).

Additional analysis provides insights into awareness for financial products by area of living (urban versus rural areas). Disaggregated data by this characteristic are provided on the chart below.

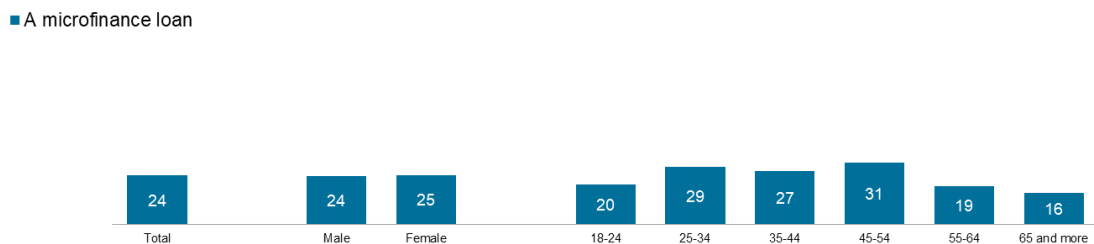
Figure 21: Stimulated awareness regarding financial products by area of living (%)



The results confirm the general assumption that there are no big, notable differences in familiarity among citizens who live in urban and rural areas. One exception is higher awareness of microfinance loans among citizens living in urban areas (27%) compared to citizens living in rural areas (20%). The abovementioned results could be due to the availability of microfinance organizations e.g. the fact that most of the branches of such organizations are located in city centers.

Further analysis presents the profile of respondents that are familiar with the least familiar financial products on the market (mobile/cell phone payment account e.g. MobiPay and a microfinance loan). An investment account such as unit trust is omitted from the analysis due to its purpose for specific markets. The analysis seeks to identify differences in demographic characteristics of the respondents. The following chart depicts the profile of respondents familiar with microfinance loan, the least familiar service on the market.

Figure 22: Profile of respondents familiar with microfinance loan (%)

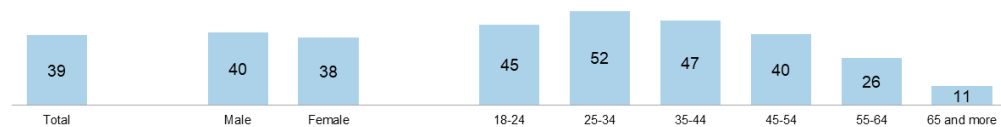


The chart show that respondents aged 25-34 and 55-54 are more familiar with microfinance loan. The next chart presents the same analysis for with mobile/cell phone payment account.

The results show similar profile as the one identified for microfinance loan. Namely, aged 25-34 are more familiar with mobile phone payment account, most probably because this group is end user of the product (Figure 23).

Figure 23: Profile of respondents familiar with mobile/cell phone payment account (%)

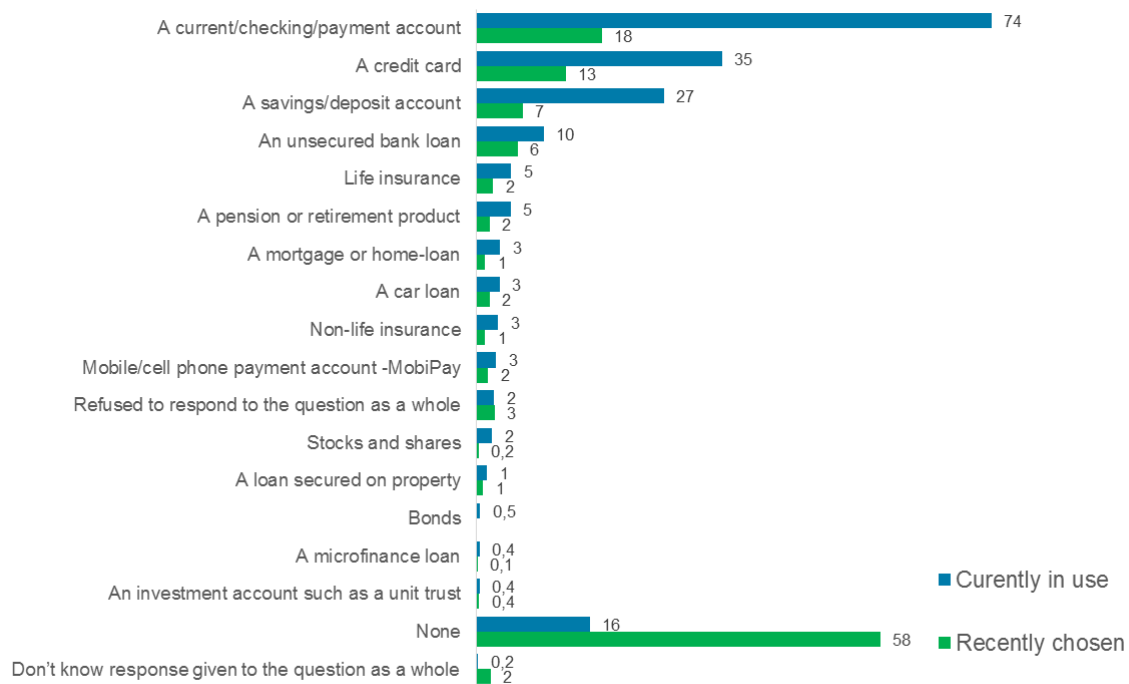
■ Mobile/cell phone payment account (ex. MobiPay)



5. Usage of financial products

The next chart outlines the usage of different financial products as stated by the respondents. Usage means that the respondents use/have the financial product i.e. answered 'yes' on the following question: can you tell me whether you currently hold any of these types of products (personally or jointly)? The chart shows current usage of financial products versus recent choice of financial product (chosen in the last two years).

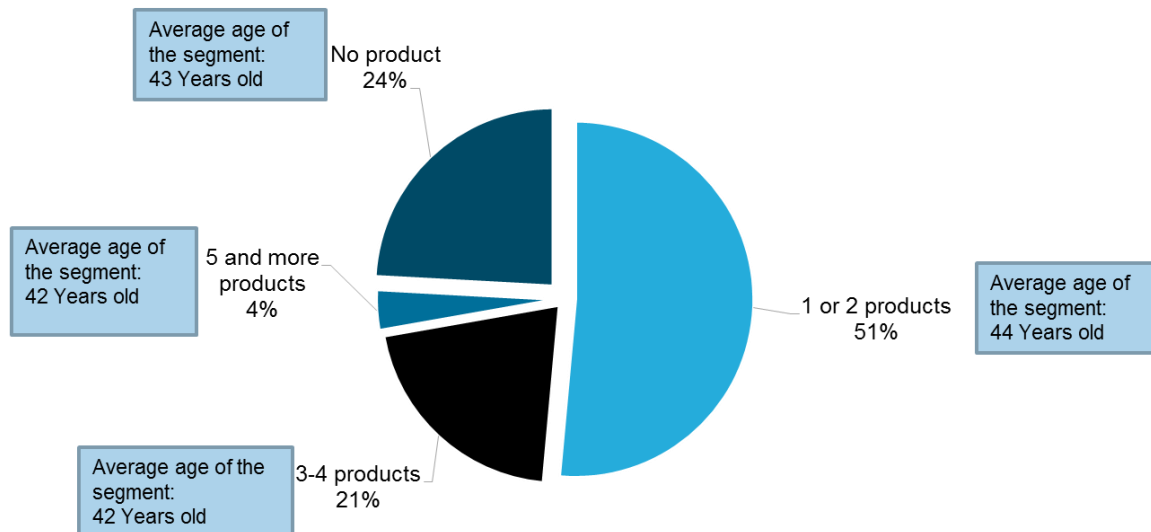
Figure 24: Usage of financial products, used versus recently chosen (%)



The analysis of recently chosen products shows that youngest respondents have highest percentage of recently chosen current checking /payment account, while the same group (18-24) has lowest usage of credit card and savings/deposit. Also, the oldest respondents have lowest percentage of recently chosen credit card. The pattern for recently chosen is similar to used products. Namely, respondents from rural areas have lower usage of current checking/payment account, credit card and saving deposit when compared to respondents from urban areas.

Further analysis provides insight into number of financial products that are used by the respondents. The results are presented on the graph below.

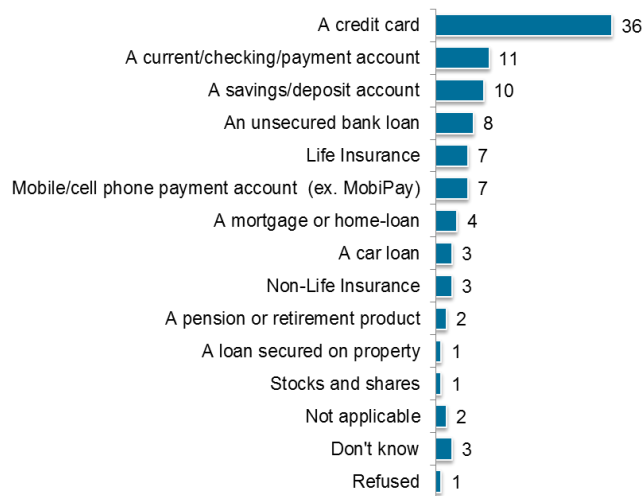
Figure 25: Number of used financial products (%)



The results reveal that half of the respondents use one or two products (51%), while around quarter of respondents (24%) reported that they have no product. On the other hand, around one fifth of the respondents (21%) stated that they use three to four products and only 4 % reported that they use 5 and more products.

Additional analysis was performed among respondents that declared they have two or more products in order to identify the most recently chosen product (Figure 26).

Figure 26: Most recent product among respondents with two or more products (%)



The results show that the most recently chosen product among respondents with two or more products is credit card, followed by current payment account and savings/deposit account. Credit card is chosen by more than one third (36%) of the respondents. Least recently chosen products are stocks, shares and loans secured on property (chosen by 1% of the respondents).

The table below provides summary of stimulated awareness, used financial products and products used chosen during the last two years.

Table 9: Most recent products among respondents with two or more products (%)

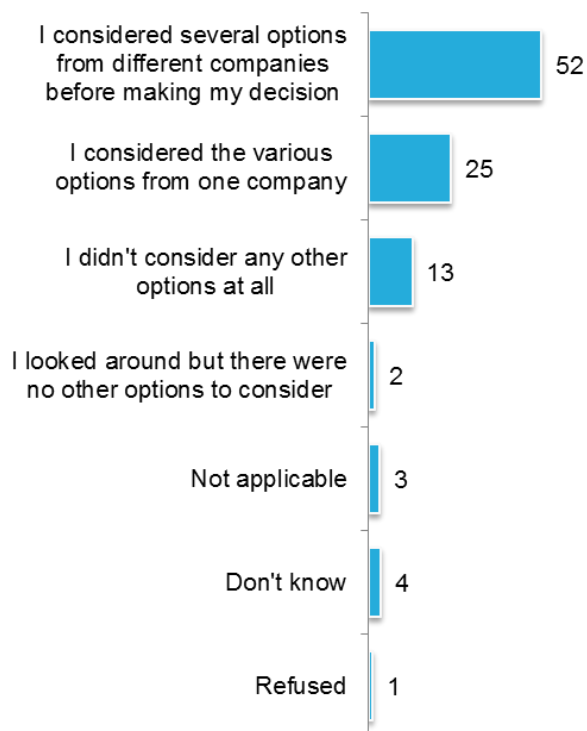
Financial products	Prompted awareness	Currently in use	Chosen during the last 2 years
A credit card	85%	35%	13%
A current/checking/payment account	82%	74%	18%
A savings/deposit account	81%	27%	7%
A car loan	76%	3%	2%
A mortgage or home-loan	73%	3%	1%
Life Insurance	68%	5%	2%
An unsecured bank loan	61%	10%	6%
A pension or retirement product	58%	5%	2%
Stocks and shares	55%	2%	0%
A loan secured on property	55%	1%	1%
Bonds	45%	0%	0%
Non-Life Insurance	41%	3%	1%
Mobile/cell phone payment account (ex. MobiPay)	39%	3%	2%
An investment account such as a unit trust	29%	0%	0%
A microfinance loan	24%	0%	0%

The results show expected pattern e.g. highest percentage is for familiarity of products, followed by currently used products and the lowest percentage is for financial products chosen in the last two years.

6. Habits related to financial products

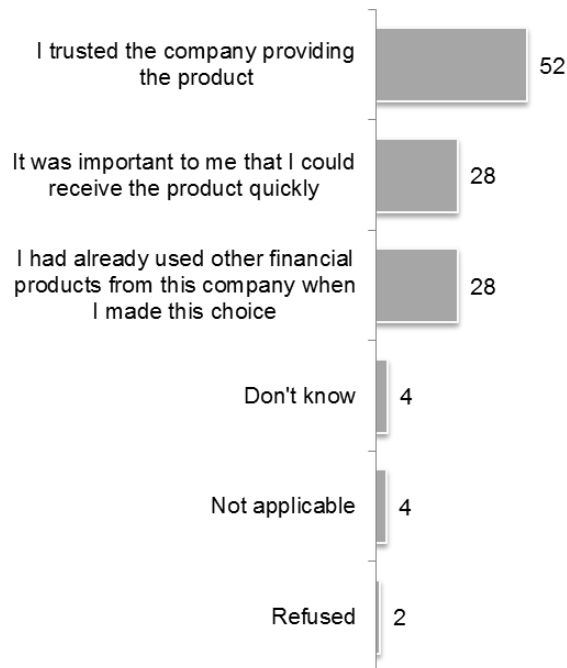
The next part presents the habits of citizens regarding several aspects: options taken into consideration when choosing financial products, service speed versus financial institution trust and sources of information when choosing financial products. The analysis is performed only on respondents that have chosen financial products in the last two years. The next graph presents options taken into consideration.

Figure 27: Options taken into consideration for choosing financial products (%)



Around half of respondents (52%) considered several options from different companies before making the decision for a specific bank. One quarter (25%) of the respondents stated that they considered various options from one financial institution, while 13 % claim that they didn't consider any options at all. The next graph presents the results for service speed versus financial institution trust.

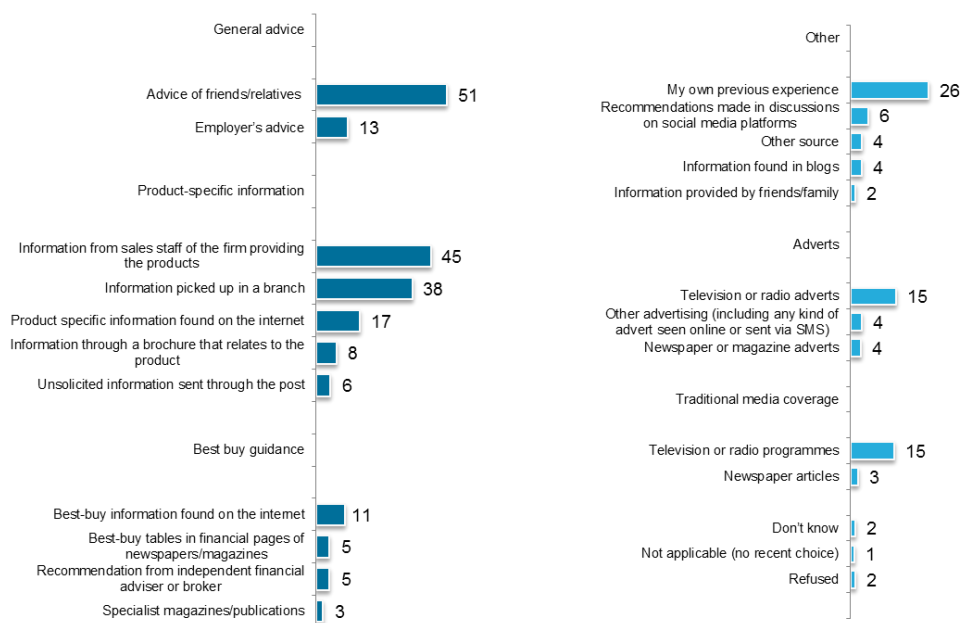
Figure 28: Service speed versus financial institution trust (%)



The results indicate that for half of the respondents (52%) trust in the financial institution played a crucial role while for 28% of the respondents it was important to receive the financial product quickly. Less than one third (28%) of the respondents claim that they already used other financial products from this financial institution when they made that choice. What follows (on the graph below) outlines the sources that were used for getting information on financial products.

The results show the classification of sources in several groups. The groups are: general advice, product-specific information, best buy guidance, advertisements and other sources (previous experience, recommendations from social media, blogs and other sources). Most reliable sources of information for making financial decisions are: advice of friends/relatives (not working and those who work in the financial services industry) (51%) and information from sales staff of the firm providing the products (45%). The conclusion follows the results and it reflects that most trusted sources are friends/relatives and employees who work in the bank.

Figure 29: Sources of information for financial products (%)



Annex 1: Demography

		N	%
Gender	Male	558	50,7
	Female	542	49,3
		N	%
Age	18-24	172	15,6
	25-34	227	20,6
	35-44	220	20,0
	45-54	199	18,1
	55-64	142	12,9
	64 and more	140	12,7
		N	%
Education	University-level education	304	27,6
	Technical/vocational education beyond secondary school level	102	9,3
	Complete secondary school	521	47,4
	Some secondary school	27	2,5
	Complete primary school	106	9,6
	Some primary school	26	2,4
	No formal education	10	0,9
	Refused	4	0,4
		N	%
Income	Up to 16.500 MKD a month	191	17,4
	between 16.501 and 27.500 MKD a month	279	25,4
	27.501 MKD or more a month	464	42,2
	Don't know	78	7,1
	Refused	88	8,0
		N	%
Ethnicity	Macedonian	735	66,8
	Albanian	285	25,9
	Other	80	7,3
		N	%
Occupation	Self-employed [work for yourself]	110	10,0
	In paid employment [work for someone else]	499	45,4
	Apprentice	13	1,2
	Looking after the home	42	3,8
	Looking for work [unemployed]	110	10,0
	Retired	158	14,4
	Unable to work due to sickness or ill-health	8	0,7
	Not working and not looking for work	34	3,1
	Student	85	7,7
	Other	23	2,1
	Don't know	8	0,7
	Refused	10	0,9
		N	%
Settlement type	Urban	624	56,7
	Rural	476	43,3
		N	%
Region	Skopje	321	29,2
	Polog	169	15,4
	Southwest	123	11,2
	Pelagonija	110	10,0
	Vardar	85	7,7
	Southeast	95	8,6
	East	101	9,2
	Northeast	96	8,7

