“Financial literacy in Ukraine: from micro to macro level”

AUTHORS	Oksana Dudchyk https://orcid.org/0000-0002-4794-1874 Iryna Matvijchuk https://orcid.org/0000-0002-1228-8334 Mariia Kovinia https://orcid.org/0000-0002-9189-2125 Tetiana Salnykova https://orcid.org/0000-0001-7117-0259 Iryna Tubolets https://orcid.org/0000-0002-4930-2427

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Oksana Dudchyk (Ukraine), **Iryna Matvijchuk** (Ukraine), **Mariia Kovinia** (Ukraine), **Tetiana Salnykova** (Ukraine), **Iryna Tubolets** (Ukraine)

FINANCIAL LITERACY IN UKRAINE: FROM MICRO TO MACRO LEVEL

Abstract

Low financial literacy of population hinders the financial market development, limits the possibilities of using the savings for investing and creating the additional capital in the country. At the state level it results in inflation, the budget deficit creation, a decrease in country's gold and foreign exchange reserves, an increase in internal and external government debt. The article analyzes the approaches to understanding the concept of financial literacy, tools for its measuring and comparing at micro and macro levels, dynamics of savings and gold and foreign currency reserves, peculiarities of financial literacy through the analysis of dynamics and structure of revenues and expenditures of the government budget and the population of Ukraine. Factors influencing the financial literacy of the population have been systematized. The findings give an idea of creating the optimal managerial influence based on the estimation of financial literacy of the Ukrainian population with the help of specific statistical indicators to expand the possibilities of such influence and to regulate the economic processes to achieve the financial stability of the state and the population. The study showed low financial literacy at both population and state levels. However, at the micro level, creating the credit relations, as well as income, expenses, and savings is more effective than at the macro level.

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Oksana Dudchyk, Ph.D. (Economics), Associate Professor, Department of State, Local and Corporate Finance, University of Customs and Finance, Ukraine.

Iryna Matvijchuk, Ph.D. (Economics), Associate Professor, Department of Banking and Financial Services, University of Customs and Finance, Ukraine.

Mariia Kovinia, Ph.D. (Economics), Associate Professor, Department of State, Local and Corporate Finance, University of Customs and Finance, Ukraine.

Tetiana Salnykova, Ph.D. (Economics), Associate Professor, Department of State, Local and Corporate Finance, University of Customs and Finance, Ukraine.

Iryna Tubolets, Ph.D. (Economics), Associate Professor, Department of State, Local and Corporate Finance, University of Customs and Finance, Ukraine.

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INTRODUCTION

In the contemporary economic context (new geopolitical challenges, declined investor activity, reduced range of activity of many large Ukrainian companies, etc.), the investment and socio-economic capacity of the country's development are becoming increasingly dependent on the quality of human capital. In order for the national economy stability to increase, it is essential to raise the level of financial literacy of the population, as it influences the risks of financial sector entities' operation and the safe use of financial and credit resources by the population. At the state level it`s crucial to have the ability to handle the financial indicators, ensuring that the state performs its functions.

Without awareness of basic financial concepts, the population is not capable of making the decisions related to financial management. Instead, financially literate people have the opportunity to make the informed financial choices about savings, investment, borrowing, etc. Financial knowledge is especially important at a time when increasingly complex financial products are becoming available to a wide range of users. For example, as governments in many countries try to increase the access to financial services, the number of people with bank accounts and access to credit products grows rapidly.

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Financial illiteracy leads to heavy expenses. Consumers who do not understand the concept of interest payment spend more on transaction fees, increase the debt and pay higher credit interest rates (Lusardi, & Mitchell, 2007; Lusardi & Scheresberg, 2013). They also borrow more and save less. In the meantime, there are many potential benefits to financial literacy. People who have at least basic financial skills, better plan their finances, skillfully make the retirement savings, distributing them between different channels (Behrman, Mitchell, Soo, & Bravo, 2012; Lusardi & Mitchell, 2014). Financially savvy investors are more likely to diversify the risk by distributing the funds to multiple businesses (Abreu, & Mendes, 2010).

Financially literate and competent people are the key to a prosperous country. The population possesses the significant funds, the effective use of which leads to an increase in the well-being of citizens, which in turn has a positive impact on the financial climate in the country. Unfortunately, in Ukraine, financial literacy is taught only in specialized financial or economic schools and in some ordinary schools as an experiment. However, this is not just about the micro level because to build a country, it is necessary to raise the financial literacy of the population to a much higher level, to a macro level where the financial actions of citizens will have a significant impact on the state's economy.

The financially competent persons are efficient consumers of financial products; they can distribute their risks, assess the possibilities of efficient use of their financial resources and can use their savings to improve both their well-being and economic growth of the country. Households with higher financial literacy better manage their risks, generate more income, and thus increase the tax revenues. Enterprises with financially competent employees and managers, owing to increasing the profits by making the right financial decisions, can participate in investing and co-financing the projects and programs that are beneficial to the public and the state.

Inadequate attention of financial sector entities to the problem of increasing the population's financial literacy leads to an increase in information asymmetry and financial risks, to the limitation of the level and quality of financial inflows from the citizens, to the strengthening of disparities in the development of the national economy.

1. THEORETICAL BACKGROUND

The Organization for Economic Cooperation and Development (OECD) officially defines the financial literacy concept: "A combination of awareness, knowledge, skill, attitude and behavior necessary to make sound financial decisions and ultimately achieve individual financial well-being" (Organization for Economic Cooperation and Development, 2018).

Financial literacy, as a field of study, is multifaceted, based on an understanding of different economic processes and relationships. Adam Smith, the classic of political economy, was the first to mention such an education as a contribution to human capital. He saw the relationship between its formation and economic development (Smith, 1776).

One of the earliest works in the field of youth financial literacy is that by Larson (1970) who evaluated the students' financial literacy and noted a high level of audience knowledge in personal finance budgeting.

One can highlight early fundamental studies assessing the level of financial literacy, namely those by Danes and Hira (1987). The authors point out the need to include a relevant subject at all education levels while noting the average level of financial literacy (Danes & Hira, 1987). A similar result was obtained during the Jumpstart Coalition research cycle (1997, 2000, 2009) and in the work by Lusardi and Mitchell (2007).

The differentiating feature of these studies is that the financial literacy level is assessed by testing the audience for certain terms and does not make it possible to conclude whether the respondents are capable of making financially sound decisions in practice.

Most modern financial literacy researchers, including Gordon (2018), emphasize that financial literacy programs are designed to give a person better decision-making power while respecting their interests and preferences. A financially competent person can shape his/her long-term well-being and to be an effective consumer of financially complex products. Gordon notes that financial literacy is based on three basic principles, namely the ability to make interest rate calculations, understand the causes and consequences of inflation, and be aware of the value of risk diversification (Gordon, 2018).

Bianchi (2017) argues that financial literacy makes it possible to control the portfolio risk, increase the household income compared to less financially literate households (0.4% higher annual income).

Berková and Krpálek (2017) explored the financial literacy among 1,207 15-year-old Czech students, compared with students of a similar age group from 18 countries. They also examined the relationship between actual financial competence, economic studies, and school performance among 284 Czech students aged 17-18. The authors found a weak dependence of actual skills on school performance, the low correlation between actual financial skills and school activities, and low financial competence in the "remember, understand, and use" planes. It has consequently been proven that studying the economic disciplines by persons aged 17-18 in the Czech Republic does not guarantee a sufficient level of financial literacy (Berková & Krpálek, 2017).

Brown, Grigsby, Klaauw, Wen, and Zafar (2016) identified the impact of financial literacy on the development of the US financial sector. They found that it is the study of financial disciplines within the framework of the financial literacy program that contributes to the involvement of young people in the use of financial market services, and the economic and mathematical education do not achieve this effect. The authors conclude that economic and mathematical education are unrelated and do not exacerbate the effect when combining the courses in high school (Brown, Grigsby, Klaauw, Wen, & Zafar, 2016).

Bielova, Oliinyk, N. Nilova, and M. Nilova (2018) studied the impact of financial literacy on financial sector development. The results of their research show a direct dependency, in which the rise of financial literacy leads to borrowers less often taking money from an informal private lender and more often from a financial institution. The authors also confirmed the correlation between the financial literacy level among adults and the level of non-performing loans and outstanding debt in the EU countries (Bielova, Oliinyk, N. Nilova, & M. Nilova, 2018).

Belás, Nguyen, Smrčka, Kolembus, and Cipovová (2016) found out the peculiarities of financial literacy programs in secondary schools in the Czech Republic and Slovakia. A study of financial literacy among secondary school students and students of commercial academies in the Czech Republic and Slovakia has shown that it is necessary to ensure that theoretical knowledge can be applied in the course of financial education. The assessment was conducted using the method of testing the knowledge on different sections of financial literacy. The academy students showed the lowest rates of correct answers in terms of savings (16.33 and 21.33% in Slovakia and the Czech Republic, respectively), the best were the rates as to consumer loans (87.76% and 61.33%) and use of payment cards (77.55% and 73.33%) (Belás, Nguyen, Smrčka, Kolembus, & Cipovová, 2016).

Sagi and Lentner (2019), while exploring the Hungarian households, confirm that financial literacy is closely related to household saving and borrowing schemes and, if insufficient, threatens the long-term welfare of the households. Besides, the tendency for excessive debt manifests itself not only in a poor macroeconomic political climate but also during an economic boom (Sági & Lentner, 2019).

According to the "Financial Literacy Around the World" study, financial literacy at the country level ranges from 71% to 13% (Global Financial Literacy Excellence Center of the George Washington University, 2015). In the meantime, about 3.5 billion adults worldwide (most of the developing world) lack an understanding of basic financial concepts.

The countries with the highest financial literacy rates are Australia, Canada, Denmark, Finland,

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Germany, Israel, the Netherlands, Norway, Sweden, and the United Kingdom, with 65% and more financially literate adults. In South Asia, on the other hand, some countries have the lowest financial literacy rates, with only a quarter of adults (or less) financially literate.

Financial literacy rates are significantly different between major developed and developing countries. On average, 55% of adults in large, advanced economies are financially literate. But even in these countries, the financial literacy level varies widely, from 37% in Italy to 68% in Canada.

In contrast, in the BRICS countries (Brazil, the Russian Federation, India, China and South Africa), an average of 28% of adults are financially literate. There is also a difference between these countries, with figures ranging from 24% in India to 42% in South Africa.

With that in mind, the question arises: Does the existence of high income explain the differences in financial literacy across the world? In richer countries, with rather high GDP per capita, the level of financial literacy is usually higher (Global Financial Literacy Excellence Center of the George Washington University, 2015). However, this is true only in the analysis of 50% of the richest economies in the world. In these economies, approximately 3% of the variations in financial literacy levels can be due to differences in income across countries. For poorer economies with GDP per capita amounting to USD 12,000 or less, there is no direct evidence that income is connected to financial literacy. This probably means that national-level policies, such as consumer education and protection, affect the financial literacy in these economies more than any other factor.

Zaika (2014) notes that in order for financial literacy to develop in Ukraine, it is essential to formulate a clear concept of raising the population's financial literacy level, to determine the central body responsible for coordinating the actions on the spread of financial literacy, to approve the Strategy for raising the level of financial literacy. The Strategy should be based on the analysis of the current state and assessment of financial literacy of the population; an important element should be the monitoring methodology, the assessment of the activity effectiveness and the level of financial literacy.

Gavurova, Huculova, Kubak, and Cepel (2017) examined the relationship between financial literacy and the level of retirement savings among students of economics in Slovakia, assessed the respondents' financial behavior and their financial literacy skills, analyzed the correlation of the selected variables and their intensity. The results showed the dependence of financial literacy on respondents' gender and age: female respondents achieved higher financial literacy than men, and older students did not achieve higher rates of financial literacy when compared to younger ones (Gavurova, Huculova, Kubak, & Cepel, 2017).

Nguyen, Rózsa, Belás, and Belásová (2017) investigated the factors affecting the propensity to save in the developing markets. The influence of the following factors has been identified: the level of financial literacy, actual financial knowledge, self-assessment of financial knowledge, tolerance to financial risk, and demographic characteristics of respondents (Nguyen, Rózsa, Belás, & Belásová, 2017).

Owusu, Ismail, Osman, and Kuan (2019) and Ngek (2016) stated that a high level of financial literacy can be good for financial policy development not only by improving the management of personal finances by the public but also by developing the skills and abilities of small and medium-sized enterprises. The increased level of financial literacy of managers will facilitate more effective financial decision-making, which in turn will lead to business development, positively affect the efficiency of small and medium-sized enterprises, help to attract the financial resources, create the effective financial capital, liberate the entrepreneurs from financial constraints (Lusardi & Tufano, 2015; Organization for Economic Cooperation and Development, 2018).

Thus, increasing the level of financial literacy is necessary for improving the well-being of households. It contributes to the growth of government revenues and investment, financing socially significant projects and programs, positive shift in the state's financial policy, and improving the economic climate in the country. Government agencies and educational institutions are responsible for raising the level of population's financial literacy in the developed countries; they develop the strategies and policies for raising and implementing the financial literacy, promoting and disseminating the financial knowledge among young people and adults.

In December 2018, the representatives of the Financial Sector Transformation Project of the United States Agency for International Development (USAID) surveyed the population in Ukraine to find out how citizens understand and interact with the financial system. This is the third study (the first was in 2010, the second in 2017), but, according to the OECD methodology, it is the first study that allows for comparing the results obtained with other countries. The results of the study proved to be disappointing; according to the Financial Literacy Index, Ukraine ranked 30th among the OECD countries, scoring only 11.6 points out of 21.

The Financial Literacy Index includes three main components:

- level of financial knowledge – 84% of respondents rightly defined the inflation (OECD countries – 78%), but as for interest paid on credit, risk and income, money time value, diversification, interest rate on deposits, the number of right answers was much lower than in other countries where the study was conducted. This indicates that Ukrainians are accustomed to living in difficult times, and they know the negative financial terms much better than the positive ones. This block brought Ukraine 4 points out of 7 possible;

- financial behavior – Ukraine received 5.2 points out of 9, but this is a quite high figure, since the OECD average is 5.4. 61% of respondents in Ukraine are trying to save, 48% have a financial goal, and 50% are ready to seek additional income to achieve it, 82% of the population keep track of their budget, and 19% even keep a record of their expenses;

- financial relevance – 2.4 points out of 5. This is a very low figure and a major problem is that Ukrainians find it better to live today than to save and create the savings. This is because most people's incomes are very low; after paying utility bills, buying food and necessities, there is little money left for large expenditures and even more so for savings and investment.

Financial literacy is important not in itself but as a means to improve the financial well-being. 60% of Ukrainians consider their welfare levels low. 41-44% fully agree with the following statements: "I am not satisfied with my current financial situation," "My financial position limits my ability to do what is important to me," and "My finances control my life."

The study found that the lowest financial literacy level is in the age group of 18-24 years (10.6 points), the highest – 25-34 years (11.9 points). Therefore, studying the basics of financial literacy is still very acute at school.

Permanent economic crises in Ukraine contribute neither to savings nor to long-term financial planning. There is no trust in banks and other financial institutions; insurance, mortgage, and investment markets are not developed; annexation of the Crimea and armed hostilities in the Donbas region have worsened the country's economic climate and well-being, and the question arose as to the security (Financial Club, 2019).

Financial literacy is one of the factors enhancing a person's financial well-being, along with factors such as income, financial system, economic, political and social status. However, the impact of financial literacy on the development of the country's economy has not been investigated by the USAID Financial Sector Transformation Project. Therefore, it is important to identify the common features in the financial behavior of the population, as a bearer of financial literacy, and the state that shapes and implements the financial policy.

2. RESULTS

In Ukraine, there are no norms and criteria to assess the level of financial literacy. But one can distinguish the instruments used by both the population and the government institutions: budget

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generation, use of credit resources, creation of reserve funds. Analyzing the statistical information by these criteria gives an idea of the financial behavior at the micro and macro levels.

1. In order for both citizens and the state to exist effectively, it is essential to generate budgets, whose revenues must exceed the expenses.

Understanding what the income-to-expenses ratio is and where the money is spent is the basis of any financial plan. Exceeding the expenditures indicates a well-formed financial plan and the ability to manage funds effectively. But if it is the other way around, then there are only two ways to solve the problem, namely either start earning more or think how to cut costs. And no matter, it is about the individual or the country.

Table 1 shows the incomes and expenses of the Ukrainian population for 2009–2018.

From 2009 to 2018, the aggregate income of the population exceeded their expenses, which allowed the citizens to generate the savings. The most significant growth of incomes was observed in 2010 and 2017, by 23.1% and 29.3%, respectively. In 2014, there was a 2.1% decline in household incomes, with 3.7% increase in expenses, which was the lowest indicator for the whole analyzed period. In 2015, there was a rapid increase in both incomes and expenses by 16.8% and 17.1%, respectively. This can be due to the population adapting to the new way of living after the 2014 crisis and the increase in money supply, i.e., inflationary processes. In 2010, revenues exceeded the expenditures by 17.2%, and overall the savings have more than doubled. Since 2013, savings have been steadily decreasing compared to the previous year. The worst situation was observed in 2014, when savings decreased by 73.5%, and in 2016, when this figure reached 59.5%. One can observe an interesting situation in 2017, when the excess of revenues over expenditures was only 1.2%, and the total amount of savings increased almost 2.5 times when compared to 2016.

Anyone looking at their expenses will always find the sources of savings, and financially competent person will find the ways to generate additional income: placing funds for deposits, investing in investment certificates, other securities, investing in real estate, etc. Therefore, people need to compare their income and expenses and turn the savings into investments.

At the state level, the government budget is the main financial plan. Table 2 shows the performance of the government budget of Ukraine for the period of 2009–2018.

In 2009–2018, budget revenues increased by UAH 718.408 million, or 4.43 times; expenses increased by UAH 743,404.8 million, or 4.07 times; the deficit increased by UAH 23,730.7 million, or 66.8%. The maximum increase in revenues and expenditures was observed in 2015, when the national currency unit depreciated the most. Besides, a significant increase occurred during 2017–2018, but during this period, one can speak about certain

Table 1. Income and expenses of the population of Ukraine, UAH mln

Source: Compiled based on the State Statistics Service (2019) data.

Period	Income		Expenses		Savings		
	UAH mln	Deviation from the previous year, %	UAH mln	Deviation from the previous year, %	Excess of income over expenses: UAH mln	Excess of income over expenses: %	Deviation from the previous year, %
2009	894,286	–	813,909	–	80,377	9.9	–
2010	1,101,175	23.1	939,308	15.4	161,867	17.2	101.4
2011	1,266,753	15.0	1,143,630	21.8	123,123	10.8	–23.9
2012	1,457,864	15.1	1,310,584	14.6	147,280	11.2	19.6
2013	1,548,733	6.2	1,432,467	9.3	116,266	8.1	–21.1
2014	1,516,768	–2.1	1,485,988	3.7	30,780	2.1	–73.5
2015	1,772,016	16.8	1,740,943	17.2	31,073	1.8	0.9
2016	2,051,331	15.8	2,038,740	17.1	12,591	0.6	–59.5
2017	2,652,082	29.3	2,621,444	28.6	30,638	1.2	143.3
2018	3,219,518	21.4	3,202,747	22.2	16,771	0.5	–45.3

Table 2. Execution of the government budget of Ukraine, UAH mln

Source: Compiled based on the Ministry of Finance of Ukraine (2019b, 2019d) and the National Bank of Ukraine (2019b) data.

Period	Income		Expenses		Lending		Budget deficit	
	UAH mln	% of GDP	UAH mln	% of GDP	UAH mln	% of GDP	UAH mln	% of GDP
2009	209,700.3	23.0	242,437.2	26.5	2,780.3	0.3	35,517.2	3.9
2010	240,615.2	22.2	303,588.7	28.0	1,292.0	0.12	64,265.5	5.9
2011	314,616.9	23.9	333,459.5	25.3	4,715.0	0.36	23,557.6	1.8
2012	346,054.0	24.6	395,681.5	28.1	3,817.7	0.27	53,445.2	3.8
2013	339,180.3	23.3	403,403.2	27.7	484.7	0.03	64,707.6	4.5
2014	357,084.2	22.8	430,217.8	27.5	4,919.3	0.31	78,052.8	5.0
2015	534,694.8	27.0	576,911.4	29.1	2,950.9	0.15	45,167.5	2.3
2016	616,274.8	25.9	684,743.4	28.7	1,661.6	0.07	70,130.2	2.9
2017	793,265.0	26.6	839,243.7	28.1	1,870.9	0.06	47,849.6	1.6
2018	928,108.3	26.1	985,842.0	27.7	1,514.3	0.04	59,247.9	1.7

economy stabilization, adaptation of enterprises to new realities, profit generation, which contributed to filling the budget. As Table 2 shows, the government budget of Ukraine is chronically deficient. In this case, there is no regularity in terms of its size. Thus, from 2009 to 2018, it ranged between 1.6% of GDP in 2017 and 5.9% of GDP in 2011. According to Tables 1 and 2, the population generates the savings; therefore, it generally makes financially sound steps, while the budget deficit cannot indicate the effective financial policy of the state. There is a need to raise funds to cover it, so the state has debts.

2. The credit availability results in additional costs and their inefficient use creates the financial dependence in the long run. Therefore, both at the macro and micro levels, it is necessary to avoid or at least minimize the debt.

Both people and states use the loans. And if currently, the population in Ukraine is not active in the use of loans because of their high cost, then the state is actively attracting the international loans, forgetting that they will have to be repaid.

One of the motives for obtaining a loan by individuals is covering the deficit of money for daily consumption, attracting the borrowed funds to pay for education, traveling, leisure. The desire of households to start or expand their businesses is another motive for obtaining a loan. In this case, the loan is an effective way to use the borrowed funds, since the borrower, when profiting from the business, will be able to repay the loan and pay the interest (Kizyma, 2012).

The National Bank of Ukraine keeps the record of loans to households and provides the relevant statistical information (Table 3).

According to Table 3, in 2015–2016, there was a decrease in the credit activity of the population. This change in financial behavior is due to the decline in real household incomes and uncertainty in the future financial situation. In 2016, the lowest level for the whole analyzed period was observed, UAH –163.333 million, which is caused not only by lower income levels but also by increased financial literacy of the population, when potential borrowers are aware of the financial consequences of attracting the credit in a crisis period. The volume of credits has been growing since 2017.

The population mainly receives the consumer loans to buy goods (household, computer, modern gadgets, furniture, etc.). The share of consumer loans to households during 2009–2018 amounted to 56.8-75.4%. The prevalence of consumer loans can be due to a simple registration procedure, which mainly takes place at points of sale.

The purchase, construction, and reconstruction of real estate loans were granted from 22.1% to 41.0% in different years. The increase in these loans indicates the investment nature of the use of the obtained loans, which, unlike consumer lending, enables the borrower to profit in the future from renting or reselling (Dudchyk & Yakymenko, 2018). This situation was observed in 2009 as a consequence of the global financial crisis of 2008–2009 and in 2014–2015, which is a crisis period for Ukraine.

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Table 3. Loans to households in Ukraine, UAH mln

Source: Compiled based on the National Bank of Ukraine (2019c) data.

Period	Total	Consumer credits		Real estate purchase, construction and reconstruction loans		Other loans	
		UAH mln	%	UAH mln	%	UAH mln	%
2009	241,249	137,113	56.8	98,792	41.0	5,343	2.2
2010	209,538	122,942	58.7	81,953	39.1	4,643	2.2
2011	201,224	126,192	62.7	70,447	35.0	4,585	2.3
2012	187,629	125,011	66.7	58,427	31.1	4,191	2.2
2013	193,529	137,346	71.0	51,447	26.6	4,736	2.4
2014	211,215	135,094	64.0	71,803	34.0	4,318	2.0
2015	174,869	104,879	60.0	66,169	37.8	3,821	2.2
2016	163,333	101,528	62.2	58,549	35.8	3,255	2.0
2017	174,182	122,066	70.1	48,268	27.7	3,848	2.2
2018	201,102	151,625	75.4	44,458	22.1	5,019	2.5

Table 4. Dynamics of the government debt of Ukraine, UAH mln

Source: Compiled based on the Ministry of Finance of Ukraine (2019a, 2019c) data.

Period	Internal debt	External debt	Total government debt	Deviation from the previous year	
				UAH mln	%
2009	105,132.9	211,751.7	316,884.6	–	–
2010	155,489.8	276,745.6	432,235.4	115,350.8	36.4
2011	173,707.7	299,413.9	473,121.6	40,886.2	9.5
2012	206,510.7	308,999.8	515,510.6	42,389.0	9.0
2013	284,088.7	300,025.4	584,114.1	68,603.5	13.3
2014	488,866.9	611,697.1	1,100,564.0	516,449.9	88.4
2015	529,460.6	1,042,719.6	1,572,180.2	471,616.2	42.9
2016	689,730.0	1,240,028.7	1,929,758.7	357,578.5	22.7
2017	766,678.9	1,374,995.5	2,141,674.4	211,915.7	11.0
2018	771,409.3	1,397,217.8	2,168,627.1	26,952.7	1.3

Table 4 examines the dynamics of government debt for 2009–2018.

Since the end of 2013, the government debt has increased by UAH 1,584,513 million, or by 271.3% (3.7 times). At the same time, for the previous five years (2009–2013), the increase amounted to UAH 267,229.5 million, or 84.3% (1.8 times). The maximum increase in government debt occurred in 2014 by UAH 516,449.9 million, or 88.4% (1.9 times) compared to 2013. The smallest increase is observed in 2018 – UAH 26,952.7 million, or 1.3%.

The economically secure level of government and government-guaranteed debt for Ukraine is about 35% of GDP. A secure level of government debt was recently observed in 2009 (Table 5). By the end of 2013, the amount of debt was slightly above the safe level, but was not critical. In 2014–2017, total government debt exceeds 70% of GDP (critical level is 60% of GDP) and requires a fiscal policy aimed at its reduction, that is, repayment. In 2018, GDP growth of 19.3%, with the lowest debt growth of 1.3% over the whole period analyzed, led to 60.9% reduction in the share of government debt in GDP.

If a person has several loans, it is logical first to repay the most expensive loan, that is, where the highest interest is accrued, but do not forget to take into account the terms of repayment, so as not to pay the penalties. At the state level, the situation is more complicated. Firstly, at this stage, the state does not have the opportunity to return at all, and secondly, the terms must be fulfilled that Ukraine has agreed to, receiving one or another loan; and it is well to bear in mind that these terms are not always positive for the country.

3. Both every citizen and the state must have a reserve fund to ensure the financial security.

Table 5. Government debt-to-GDP ratio in Ukraine, UAH mln

Source: Compiled based on the Ministry of Finance of Ukraine (2019a, 2019c) and the National Bank of Ukraine (2019d) data.

Period	Total government debt	Deviation from the previous year		GDP	Deviation from the previous year		The share of the government debt in GDP
		UAH mln	%		UAH mln	%	
2009	316,884.6	–	–	913,345	–	–	34.7
2010	432,235.4	115,350.8	36.4	1,082,569	169,224	18.5	39.9
2011	473,121.6	40,886.2	9.5	1,316,600	234,031	21.6	35.9
2012	515,510.6	42,389.0	9.0	1,408,889	92,289	7.0	36.6
2013	584,114.1	68,603.5	13.3	1,454,931	46,042	3.3	40.1
2014	1,100,564.0	516,449.9	88.4	1,566,728	111,797	7.7	70.2
2015	1,572,180.2	471,616.2	42.9	1,979,458	412,730	26.3	79.4
2016	1,929,758.7	357,578.5	22.7	2,383,182	403,724	20.4	81.0
2017	2,141,674.4	211,915.7	11.0	2,982,920	599,738	25.2	71.8
2018	2,168,627.1	26,952.7	1.3	3,558,706	575,786	19.3	60.9

For people, having a reserve is a financially literate step, since, in case of unforeseen events, it will allow them not to go to credit and more or less calmly deal with a difficult situation. Such a reserve is called a financial airbag and its size should ensure a normal existence within 6-12 months if the person has lost the main source of income.

In Ukraine, household savings are placed in cash deposits, securities, and foreign currency. Table 6 shows the dynamics of savings of Ukraine's population for 2009–2018.

The investment of savings into intangible assets is unstable. For the 2009–2018 period, their increase was observed only in 2010, 2013, and 2018. It is difficult to explain such a significant decline in non-financial assets during 2015–2017, when observing the huge number of new buildings, which are the main non-financial assets into which financial assets of the population accumulated as foreign currency and cash deposits, flow. The growth of financial assets for the entire period of 2009–2018 is positive. During 2013, financial assets decreased by 26.2%, in 2014 – by 74.9%, in 2016, they dropped by 45.5%, and in 2018 – by 42.9%. The largest amounts of the population's savings were observed during 2010–2013, the smallest were during 2014–2016. The worst situation was in 2014, when the savings decreased by 73.5% (3.8 times), and in 2016, when they fell by 59.5% (2.5 times). At the same time, 2017 can be considered as an economic recovery, since the savings increased almost 2.5 times.

Deposits in banking institutions are the main type of household savings (Table 7).

From 2009 to 2013, there was a constant increase of household deposits. In 2014 and 2015, the to-

Table 6. Savings of the population of Ukraine, UAH mln

Source: The State Statistics Service of Ukraine (2019).

Period	Accumulation of non-financial assets		Increase in financial assets		Savings	
	UAH mln	Deviation from the previous year, %	UAH mln	Deviation from the previous year, %	UAH mln	Deviation from the previous year, %
2009	10,493	–	69,884	–	80,377	–
2010	19,578	86.6	142,289	103.6	161,867	101.4
2011	–1,159	–105.9	124,282	–12.7	123,123	–23.9
2012	–2,954	–154.9	150,234	20.9	147,280	19.6
2013	5,378	282.1	110,888	–26.2	116,266	–21.1
2014	2,912	–45.9	27,868	–74.9	30,780	–73.5
2015	–2,117	–172.7	33,190	19.1	31,073	0.9
2016	–5,481	–158.9	18,072	–45.5	12,591	–59.5
2017	–32,060	–484.9	62,698	246.9	30,638	143.3
2018	–19,034	40.6	35,805	–42.9	16,771	–45.3

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Table 7. Household deposits in Ukraine, UAH mln

Source: Compiled based on the National Bank of Ukraine (2019c) data.

Period	Total	Including upon request		In native currency		In foreign currency	
		UAH mln	%	UAH mln	%	UAH mln	%
2009	214,098	57,265	26.7	101,081	47.2	113,016	52.8
2010	275,093	66,164	24.1	142,924	52.0	132,169	48.0
2011	310,390	70,921	22.8	160,530	51.7	149,860	48.3
2012	369,264	77,153	20.9	186,772	50.6	182,493	49.4
2013	441,951	87,720	19.8	257,829	58.3	184,122	41.7
2014	418,135	100,171	24.0	200,859	48.0	217,275	52.0
2015	410,895	112,524	27.4	198,876	48.4	212,019	51.6
2016	444,676	129,638	29.2	209,601	47.1	235,075	52.9
2017	495,313	165,978	33.5	252,439	51.0	242,874	49.0
2018	530,250	203,410	38.4	289,416	54.6	240,834	45.4

tal deposits decreased, during which mass liquidation of banks took place, interest rates on deposits were significantly reduced, and public confidence in the banking system was undermined. Since 2016, household deposits have increased. It became clear which banks were more stable, reliable, non-bankrupt, and households returned to the banking system now choosing, however, primarily, state and foreign-owned banks for their contributions. This attested to the financial literacy of the population. By 2013, the share of demand deposits was gradually decreasing, which indicated an increase in the confidence in the banking system. Starting in 2014, the share of such deposits has grown, and it is 38.4% by the end of 2018. This indicates that the population is willing to lose income from deposits, but being able to withdraw the funds from their current accounts quickly. The population is still uncertain about the reliability of the banking system, which lost 104 banks in 2014–2018. At the end of 2018, there were 77 banks in the banking system. 2013 is indicative of the types of currencies in which the households deposit: the highest interest rates for the whole period, a sound banking system, and stable hryvnia – 58% of deposits in national currency. During 2014–2016, even despite low deposit rates, foreign currency deposits, which were more reliable and stable, prevailed. Since 2017, there has been no sharp change in the hryvnia exchange rate. The inflation index has decreased, the national currency has stabilized, banks offer higher interest rates on hryvnia deposits, their share increases to 54.6% at the end of 2018. That is, during the crisis period, the population quickly determined which currency and which deposits to choose; this means that the financial literacy of the population improves.

At the state level, the reserve fund is the country's gold and foreign exchange reserves (foreign exchange reserves, official reserve assets), that is, external highly liquid assets under the National Bank and the Government of Ukraine control (The Ministry of Finance of Ukraine, 2019). Gold and foreign exchange reserves are intended for the direct or indirect regulation of the balance of payments by conducting foreign exchange interventions and other purposes stipulated by the Ukrainian legislation. International reserves consist of foreign exchange reserves, reserve position in the IMF, special drawing rights (SDRs), monetary gold, cash in foreign currency or funds on accounts abroad, securities issued by non-residents, and any other reserve assets provided that their reliability and liquidity are available to the National Bank of Ukraine (The National Bank of Ukraine, 2019a). The most significant decrease in the reserve fund in 2014–2015 led to the attraction of external loans (Table 8).

By 2008, gold and foreign exchange reserves were growing steadily. Their decrease in 2008 and 2009 can be explained by the global financial crisis. In 2014, there was a significant decrease in gold and forex reserves, which decreased to the 2003 level. In 2014, international reserves decreased 2.7 times or by USD 12 882.4 million. Since 2015, reserves have been increasing because the government has received significant amounts of credit from international organizations. And, as already noted, the formation of significant government debt is dangerous for the country's economy.

Thus, the population and the state share at least three common features: the planning of income

Table 8. Dynamics of gold and foreign exchange reserves in Ukraine, UAH mln

Source: Compiled based on the Ministry of Finance of Ukraine (2019e) and the National Bank of Ukraine (2019a) data.

Period	Free currency	Special drawing rights	The volume of gold	The total amount of reserves	Deviation from the previous year	
					USD mln	%
2002	4,177	28	264	4,469	1,374	44.4
2003	6,662	21	260	6,943	2,474	55.4
2004	9,489.5	1.16	224.1	9,714.8	2,771.8	39.9
2005	18,987	1	402.5	19,390.6	9,675.8	99.6
2006	21,843.2	1.48	513.5	22,358.1	2,967.5	15.3
2007	31,479.1	2.82	693.1	32,479.1	10,121	45.3
2008	30,791.9	8.6	742.7	31,543.2	-935.9	-2.9
2009	25,493.3	63.57	948.2	26,505.1	-5,038.1	-16.0
2010	33,319.4	7.96	1,248.9	34,576.4	8,071.3	30.5
2011	30,391.4	17.91	1,385.3	31,794.6	-2,781.8	-8.0
2012	22,646.6	9.81	1,890	24,546.2	-7,248.4	-22.8
2013	18,759.5	16.01	1,640.2	20,415.7	-4,130.5	-16,8
2014	6,618.5	3.74	911.1	7,533.3	-12,882.4	-63.1
2015	12,359.2	8.82	931.9	13,300	5,766.7	76.5
2016	11,893.7	2,703.85	941.7	15,539.3	2,239.3	16.8
2017	15,582	2,165.65	1,060.7	18,808.5	3,269.2	21.0
2018	19,814.3	3.53	1,002.2	20,820.4	2,012.0	10.7

and expenditure, the availability of debt, and the creation of reserve funds. Financial policy should provide for overcoming the financial crisis. Priority strengthening of finances of economic entities, other legal entities and households is the basis for solving the financial problems of the state and the main prerequisite for social and structural and innovative reorientation of the economy. The redistribution of financial resources should ensure not only the state's defense capability and the prestigious level of development of military-industrial and space complexes but also a civilized standard of living and a decent level of remuneration of the entire population. In this case, the population will be able to financially manage their resources and contribute to the development of the country's economy.

High financial literacy contributes to the inflow of temporarily free funds of the population into the financial sector, stimulates the competition in the financial market and provides the macroeconomic stability in the society. Low level of financial literacy of the population limits the possibilities and reduces the efficiency of state regulation of the financial market, limits the level and quality of savings and investments, which shape the potential for the country's economic growth (Owusu, Ismail, Osman, & Kuan, 2019).

3. DISCUSSION

At the microeconomic level, the economic consequences and threats of low financial literacy of the population are reflected in the increase in the number of financial abuses, in the accumulation of excess loans by the population, and in the inefficient distribution of personal savings. At the macro level, low financial literacy impedes the development of financial markets, undermines the confidence in financial institutions and public policies that regulate them, puts additional strain on budgets, and results in an economic slowdown.

A set of measures may be proposed to improve the financial literacy of the population. Thus, given the financial crises and bank bankruptcies, the financial system must regain and win the population confidence because, without population savings that are stored outside the financial system, it is impossible to develop the economy, to activate the insurance and investment markets.

To change the behavior and attitudes of the people, it is essential to carry out the information and awareness work, familiarize the population with the existing and new financial products, focus on positive changes, provide the legislative guarantees as to the impossibility of fraud by financial institutions and personal liability of the state for the

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fraudulent schemes in the financial market. The population must be confident in the protection of their rights; this will facilitate the flow of funds to the financial system and the development of the country's economy. Therefore, legislation needs to be developed, improved, and enacted to protect the rights of consumers of financial services.

It is necessary to develop a strategy for improving the financial literacy of the population. However, along with this, not only international experience but also national peculiarities, namely, financial possibilities, culture of conduct, and the population mentality, should be taken into account.

Also, it would not hurt to create an independent information center that will accumulate reliable and accurate information about financial products from different companies; this will allow one to quickly compare and choose the best product in terms of profitability, risk, and liquidity. At the legislative level, it is essential to oblige all financial system entities to provide the center with up-to-date information.

The Financial Sector Transformation Project, a study conducted by the USAID, has found very low rates of financial literacy among Ukraine's population. Young people have shown the lowest level; therefore, the financial literacy course should be included in general education programs in the near future. Besides, Ukraine's financial sector is entering an era of electronic financial services, so Ukrainian citizens need to become more financially literate, more protected from fraud and abuse, and feel more comfortable using the electronic financial products. Therefore, teaching the financial literacy courses would be appropriate in colleges and higher education institutions in all specialties.

CONCLUSION

The study has indicated a lack of financial literacy at both the micro and macro levels, which does not allow for an effective system of income, costs, and savings. If the population income exceeds it expenses, a deficit of funds is created at the level of the government budget formation. If the population in a crisis significantly reduces the amount of loans received in order not to become financially dependent and to pay higher interest rates, then the state, on the contrary, actively attracts the loans. If the population has savings and deposits them in foreign currency or in intangible assets, then the state forms its reserves at the expense of international loans. With that, if a financial behavior strategy is developed at the macro level, it is absent at the micro level. A major drawback is the lack of clear approved norms and indicators for measuring the financial literacy and its development strategy that would allow assessing its level and identifying the shortcomings.

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