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CAUSAL RELATIONSHIP OF FINANCIAL LITERACY WITH INDICATORS OF THE FINANCIAL AND SOCIAL SECTORS

Abstract. In a situation where the growing likelihood of financial sector crises in both individual countries and globally, the issue of fragility of financial institutions as a result of significant credit, accumulation of "toxic" loans is becoming increasingly important. And low level of financial literacy of the population also plays an important role.

Low financial literacy of the population has many consequences, including: excessive credit, lack of proper responsibility for their own financial decisions, etc. All this, as a result, has an impact on the personal financial status, and even on the spread of poverty.

A significant contribution to the development of the theory, methodology and practical issues of financial literacy development has been made by the following famous scientists: A. Lusardi, O.Mitchell; A.Hasler; A. Meir, Y. Mugerman, O. Sade; V. R. Maarten, others.

At the same time, there are not enough scientific papers that highlight the peculiarities of influencing the level of financial literacy on the development of the financial and social sectors.

In this research, the task of checking hypotheses about the existence of a relationship between the level of financial literacy and the indicators of financial and social sectors development is set. The article deals with the relationship between the level of financial literacy and the indicators of the development of financial and social sectors according to the data of the EU-28 and countries of the world as a whole. The results are: as financial literacy grows, the borrowers less often take money from a private informal lender and from a family or friends and more frequently - from a financial institution; there is an inverse interrelation between the level of financial literacy among adults and the NPL (nonperforming loans); also, for the EU-28 countries, the direct interrelation between the severely materially deprived people (% of total population) and the NPL level has been confirmed.

The problem of raising the level of financial literacy should be a public priority in countries with high rates of "bad" loans, with widespread poverty.

Keywords: financial literacy; loans; non-performing loans; poverty.
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ДОСЛІДЖЕННЯ ПРИЧИННО-НАСЛІДКОВОГО ЗВ`ЯЗКУ ФІНАНСОВОЇ ГРАМОТНОСТІ З ПОКАЗНИКАМИ ФІНАНСОВОГО ТА СОЦІАЛЬНОГО СЕКТОРІВ

Анотація. В умовах, коли зросла ймовірність криз фінансового сектору як в окремих країнах, так і у світовому масштабі, все більшої важливості набуває питання крихкості фінансових інститутів внаслідок значної закредитованості, накопичення «токсичних» кредитів.

І не останню роль в цьому грає низький рівень фінансової грамотності населення, серед наслідків якого: надмірна закредитованість, відсутність належної відповідальності за прийняті власні фінансові рішення та ін. Все це в результаті має вплив на стан особистих фінансів, і навіть - на поширення бідності.

Значний внесок у розвиток теорії, методології та практичних питань розвитку фінансової грамотності зробили такі відомі вчені: А. Лусарді, О. Мітчелл; А.Хаслер; А.Меїр, Ю. Мугерман, О. Сад; В. Р. Маартен, інші.

У той же час, недостатньо наукових праць, які висвітлюють особливості впливу рівня фінансової грамотності на розвиток фінансового та соціального секторів.

У цьому дослідженні встановлено завдання перевірки трьох гіпотез про існування зв'язку між рівнем фінансової грамотності та показниками розвитку фінансового та соціального секторів. У статті розглянуто зазначений взаємозв`язок за даними EU-28 та країн світу в цілому. Результати: оскільки фінансова грамотність зростає, позичальники рідше позичають гроші з приватного неформального кредитора, від родини або друзів, а частіше - від фінансової установи; існує зворотний взаємозв'язок між рівнем фінансової грамотності серед дорослих та рівнем непрацюючих кредитів (NPL); також для країн ЄС-28 існує прямий статистично підтверджений зв'язок між кількістю людей у злиднях (у % від загальної чисельності населення) та рівнем непрацюючих кредитів.

Проблема підвищення рівня фінансової грамотності повинна стати державним пріоритетом в країнах з високими показниками «поганих» кредитів, з поширеною бідністю.

Ключові слова: фінансова грамотність; кредит; неробочі кредити; бідність.
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ИССЛЕДОВАНИЕ ПРИЧИННО-СЛЕДСТВЕННОЙ СВЯЗИ ФИНАНСОВОЙ ГРАМОТНОСТИ С ПОКАЗАТЕЛЯМИ ФИНАНСОВОГО И СОЦИАЛЬНОГО СЕКТОРОВ

Аннотация. В условиях возрастающей вероятности кризисов финансового сектора как в отдельных странах, так и в мировом масштабе, все большую важность приобретает вопрос хрупкости финансовых институтов вследствие значительной закредитованности, накопления «токсичных» кредитов. И не последнюю роль в этом играет низкий уровень финансовой грамотности населения, среди последствий которого: чрезмерная закредитованность, отсутствие должной ответственности за принятые собственные финансовые решения и др. Все это в результате влияет на состояние личных финансов, а также - на распространение бедности.

Значительный вклад в развитие теории, методологии и практических вопросов развития финансовой грамотности сделали такие известные ученые: А. Лусарди, А. Митчелл; А.Хаслер; А.Меир, Ю. Мугерман, А. Сад, В. Г. Маартен, другие.

В то же время, недостаточно научных работ, освещающих особенности влияния уровня финансовой грамотности на развитие финансового и социального секторов.

В этом исследовании постановлена задача проверки трех гипотез о связи между уровнем финансовой грамотности и показателями развития финансового и социального секторов. В статье рассмотрены указанная взаимосвязь на основе данных по EU-28 и стран мира в целом. Результаты: поскольку финансовая грамотность растет, заемщики реже занимают деньги у частного неформального кредитора, от семьи или друзей, а чаще – в финансовом учреждении; существует обратная взаимосвязь между уровнем финансовой грамотности среди взрослых и уровнем неработающих кредитов (NPL); также для стран ЕС-28 существует прямая статистически подтверждена связь между количеством людей в нищете (в % от общей численности населения) и уровнем неработающих кредитов.

Проблема повышения уровня финансовой грамотности должна стать государственным приоритетом в странах с высокими показателями «плохих» кредитов, распространенной бедностью.

Ключевые слова: финансовая грамотность; кредит; нерабочие кредиты; бедность.
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1. Introduction
Given the growing likelihood of crises in the financial sector the issue of fragility of financial institutions as a result of significant level of debt overburden, and the accumulation of "toxic" loans is becoming increasingly important. The problem is relevant in both separate countries and globally. Low level of financial literacy of the population plays not the least role in this.

This research deals with the task of checking 3 hypotheses about the interrelation of financial literacy and development indicators of financial and social sectors.

Significant contributions to the development of theory, methodology and practical issues of financial literacy development were made by the following well-known scientists: Annamaria Lusardi, Olivia S. Mitchell; Andrea Hasler; Adi Meir, Yevgeny Mugerman, Orly Sade; Van Rooij Maarten, Rob Alessie; Adriaan S. Kalwija et al., Sonia Marcolin, Anne Abraham.

At the same time, there is not enough scientific papers that cover the peculiarities of how the level of financial literacy influences the development of financial and social sectors.

Low financial literacy of the population has many consequences, including: excessive debt overburden, lack of proper responsibility for financial decisions made, etc. As a result, all of the above effect the state of personal finances, and even the spread of poverty.

The article explores the relationship between the level of financial literacy and the indicators of financial and social sectors development according to the data of the EU-28 and the countries worldwide.

The issue of improving the financial literacy level should be a state priority in countries with high rates of "bad" loans and widespread poverty.

2. Literature Review and the problem statement

Financial illiteracy is too widespread throughout the world nowadays. Only one in three adults demonstrates an understanding of the fundamental principles of finance. The situation is the worst among women, the elderly and in countries with specific social and cultural background, which in turn affects the development of the financial market. However, the existing studies do not clearly identify the link between financial literacy and income levels in a country.

Current economic environment raises serious concerns about the financial illiteracy of low-income people who have a limited capacity to withstand crisis situations in the economy and lack the proper skills to take advantage of the financial environment.

Financing expenses for the purchase of real estate, retirement etc. - all these are examples of decisions that must be made on a sound and reasonable basis and not with significant negative consequences, as evidenced, for example, by the experience of substandard mortgage lending (as one of the causes of the global crisis).

Loans in bank and non-bank financial institutions can have quite different consequences for the borrower (including due to different levels of regulation of these spheres, and a significant gap in interest rates).

The issue of risks for borrowers of non-bank financial institutions is of particular relevance for countries like Ukraine, where there are no statutory limits on interest rates on loans, or on the ratio of "earnings" of the creditor (accrued interest, penalties, fines, etc.) to the principal amount of the debt irrespective of the overdue period. In most countries, limitations apply to this ratio (no more than 100%). In Ukraine it can reach 300%, or sometimes even more than this.

In addition, in cases where the creditor obtains a right on a collateral for a loan, the debtor, after returning the collateral, may still have a certain amount of debt since the acquisition of the collateral by the creditor does not terminate the debt if the amount from the collateral's sale is not enough for reimbursement. Loan rates in non-bank financial institutions in Ukraine can go up to 500% per annum or even higher. At the same time, the borrower does not always understand what the exact loan cost would be for him, because he is not always properly informed about the price, and sometimes he does not even understand what 1% of the interest per day can result in, when taking a loan for half a year/a year.

Given these conditions, and due to the state of permanent poverty and crisis in a country, one cannot expect proper financial discipline from a financially illiterate person. And the problem of bad debts then ceases to be purely financial, very often it becomes social, and even gets a criminal aspect. Borrowers with significant debts before the banks often become robbers, hired killers or commit suicides.

Carrying out a research on the mutual influence of the level of financial literacy and indicators that characterize the development of the financial and social sectors constitutes an important task.

The issue of financial literacy has become relevant not so long ago. Financial literacy is the ability to use a set of skills and knowledge that allows to make effective decisions about one's financial resources.

Regarding this issue, the launch by the Organization for Economic Co-operation and Development (OECD) of an intergovernmental project aimed at improving financial education and literacy standards through the elaboration of general principles of financial literacy in 2003 was of the highest importance.

The most common method of assessing the level of literacy is self-assessment, which is carried out in many countries worldwide with the help of special agencies and institutions. At the international level, the assessment is carried out by the National Bureau of Economic Research (NBER) in the USA. The Standard & Poor's agency, which provides rating services, carries out the Global Financial Literacy Survey (S&P Global FinLit Survey) [21]. This survey builds on the initiatives of the OECD International Network on Financial Education (INFE), the World Bank surveys, the Financial Literacy around the World (FLAT World) project and numerous national survey initiatives in more than 140 economies.

Financial literacy surveys have been conducted only during few recent years, but there are already a number of relevant research areas.

Thus, authors A. Lusardi and O. Mitchell (2014) [14] as well as A.Hasler, A. Lusardi (2017) [7] distinguish such part of the problem as the gender gap in the level of financial literacy. Also, these authors explore the link between financial literacy among men/women and percentage of those who have savings at financial institutions or those who save money for old age.

The Israeli experience of the impact of financial literacy on the planning of retirement was studied by Adi Meir, Yevgeny Mugerman, Orly Sade (2016) [16].

Van Rooij, Maarten, Annamaria Lusardi, and Rob Alessie (2011) [18] studied the impact of financial literacy on the development of the stock market in their research. They identify two channels through which financial literacy can contribute to the accumulation of wealth: 1) financial knowledge increases the likelihood of investing into the stock market; 2) financial literacy is positively linked to the retirement planning.

Adriaan S. Kalwija, together with other co-authors, (2017) studied the effects of teaching financial literacy to Dutch school students [9].

Authors from Australia Sonia Marcolin and Anne Abraham (2006) [15] worked on the elaboration of realistic criteria for measuring the level of financial literacy which should help determine the quality of implementation of educational strategies for improving financial literacy in schools, universities and colleges.

The analysis of available studies (Lusardi, A., Schneider, D. and Tufano P., 2011) [13] on how causal factors influence the behavior of financially fragile households covers examples from the USA, where households are identified as such if their income is below $ 2000 per month (about $ 66 a day). Lack of savings and high dependence on loans in these households may be due to overspending or attitudes towards risk, that lead to weakening of social ties and make it more difficult to access credit from family and friends. It is important to look into all of this in order to develop the state's actions for provision of significant direct and indirect federal support to American households.

Ben Bernanke (2011), a former Chairman of the United States Federal Reserve, pointed out [1] that "in our dynamic and complex financial market-place, financial education must be a life-long pursuit that enables consumers of all ages and economic positions to stay attuned to changes in their financial needs and circumstances and to take advantage of products and services that best meet their goals. Well-informed consumers, who can serve as their own advocates, are one of the best lines of defense against the proliferation of financial products and services that are unsuitable, unnecessarily costly, or abusive." There are other statements on financial literacy made by Ben Bernanke in different years.

Another research [18], the Dutch Household Survey (DHS), is a special household survey carried out the De Nederlandsche Bank (Maarten, V.R., Lusardi, A. and Alessie R., 2011), found

that financial literacy, both directly and indirectly, has a strong link to household wealth, but based on this result, the authors cannot conclude that financial education programs lead to the increase in financial literacy. To do that, one needs to be able to separate the impact of financial education on financial means from the knowledge obtained from other channels.

Therefore, the most prominent researchers in the field of financial literacy to date are[3, 6-17]: Demirguc-Kunt, A., et al. (2015); Klapper, L., et al. (2015); Lusardi A., Mitchell O.S. (2014); Hasler A., Lusardi A. (2017); Lusardi A. and Tufano P. (2015); Lusardi A. and Scheresberg C.B. (2013); Lusardi A., Tufano P. and Scheresberg C.B. (2011); A. Meir, Y. Mugerman, O. Sade (2016); Maarten V. R., Lusardi A., Alessie R. (2011); Adriaan S. Kalwija et al. (2017); Sonia Marcolin, Anne Abraham (2006); Krechovska M. (2015); Kaiser T. and Menkof L. (2016).

Unexplored aspects of the general problem. With a fairly large number of studies on financial literacy, the following aspects remain unexplored: the study of causal relationship of financial literacy with the level of debt overburden, the dynamics of credit quality, and the spread of poverty.

Low financial literacy of the population entails the following results:

- low level of expertise in financial matters leads to a reckless and ill-considered financial behavior that provokes the "now and immediately" consumption mentality. That is, such individuals take loans more often compared to others, even in the absence of the need, and are unthrifty/reckless regarding their spending. In fact, there is a rise in the level of debt overburden in such cases;

- financial ignorance does not contribute to understanding the consequences of obtaining a loan. This does not allow to properly assess financial resources, especially in times of crisis, when income is substantially reduced and the unemployment level rises. It is for this reason that the debt quality decreases during the crisis, and the number of "toxic loans" goes up;

- the uninformed population is not able to protect their consumers' rights (both because of their ignorance and due to the lack of adequate funds, including for litigation). That is, the proliferation of poverty combined with poor education does not allow to use the opportunities of financial markets and be an advocate for oneself.

Therefore, in our study, we will face the task of checking 3 hypotheses on interrelation of the level of financial literacy and development indicators of the financial and social sectors:

- hypothesis 1 - on the interrelation of financial literacy and borrowing from various sources;
- hypothesis 2 - on the interrelation of financial literacy and credit quality;
- hypothesis 3 - on the interrelation of financial literacy and social sector indicators.

Let us examine the hypotheses of the interrelation of the indicators.

We will start with hypothesis 1 (the interrelation of financial literacy and borrowing from different sources). The World Bank statistics contain the following indicators for borrowing from different sources (% age 15+) [21]:

- Borrowed from a private informal lender;
- Borrowed from a financial institution;
- Borrowed from family or friends;
- Borrowed any money in the past year.

We refer to the largest and most comprehensive source, the S&P Global Financial Literacy Survey [20], for data on financial literacy (adults who are financially literate, %).

All input data is taken for 2014, because more recent indicators of financial literacy level are not in place yet. One set of indicators is presented for the EU-28 countries, another one - for 143 countries, where the necessary statistics is in place.

Graphical and correlational analyzes of 2014 data (Table 1) show that the following is fair both for the EU-28 countries and for the world in general:

1) there is no interrelation between financial literacy and borrowed money in the past year (% age 15+);

2) as financial literacy grows, the borrowers less often take the money from a private informal lender and from a family or friends, and more frequently from a financial institution;

3) average (by its strength) interrelation (Pearson correlation coefficient constitutes 0.59 and 0.47) of financial literacy and % of borrowers from a financial institution or family or friends is confirmed only for the EU-28 group.

Pearson correlation coefficients R^2
(Borrowing from various sources by adults who are financially literate)

Dependent variable:	R^2
EU-28	
Borrowed from family or friends (% age 15+)	0.2188
Borrowed from private informal lender (% age 15+)	0.0096
Borrowed from a financial institution (% age 15+)	0.3535
Borrowed any money in the past year (% age 15+)	0.0008
143 countries of the World	
Borrowed from family or friends (% age 15+)	0.0921
Borrowed from private informal lender (% age 15+)	0.1076
Borrowed from a financial institution (% age 15+)	0.2309
Borrowed any money in the past year (% age 15+)	0.0139

Factor - Adults who are financially literate (%)

To test hypothesis 2 (regarding the interrelation of levels of financial literacy and "bad" loans) we will need data from the official World Bank website on bank nonperforming loans to gross loans (%).

First, we will study the dynamics of the NPL. This indicator showed a tendency towards decreasing by almost 5% (from 8.95% to 3.9%) over the research period in the whole world, the similar trend took place in all regions (according to the World Bank classification), and NPL remained unchanged (about 5%) only for the EU-28. Countries that have significantly improved the NPL indicator (compared to the global trends) include: Brazil, China, India, Russian Federation and new members of the European Union: Czech Republic, Lithuania, Poland, Romania, Slovak Republic - in total, almost 40 countries. Significant decrease of the NPL indicator (more than 5%) occurred in: Albania, Burundi, Croatia, Hungary, Ireland, Italy, Portugal, San Marino, Swaziland, and Vanuatu.

Cyprus, Greece, Sierra Leone, San Marino, Ukraine have abysmal performance regarding the level of NPL (from one third to half of all loans). Such indicators of credit quality cannot but affect the sustainability of the financial sectors in these countries.

Due to the fact that there is no separate data on bad loans of individuals and legal entities worldwide, which, of course, may impair the quality of the received models, we have to use data on the total amounts of NPL.

The result of the correlation analysis of the interrelation of these indicators is as follows: there is a small inverse statistically significant interrelation between these indicators at α = 0.01. According to statistics for all countries, the Pearson correlation coefficient is -0.23 (Fischer's F-criteria = 5.99), and for the EU-28, the correlation coefficient is -0.52 (F = 9.78). Therefore, in general, there is a tendency for the NPL level to decrease with a higher the level of financial literacy.

An overview of literary sources on factors influencing the NPL (Nkusu, M., 2011, etc.), shows that such factors are as follows:
- weakness of the loans portfolio due to unskilled credit analysis;
- high interest rates of the loans;
- unemployment in the country;
- lack of transparency in the activities of the borrower, fraud;

- unreasonable and excessive leniency of banks in case of violation of loans conditions by borrowers;
- uneven distribution of income (Perugini, C., Hölscher, J. and Collie, S., 2015) [19];
- a sudden change of the exchange rate of the national currency. This matters not only when lending in foreign freely convertible currency becomes more frequent, but is also an important reason for reducing the borrowers' creditability when foreign exchange risks increase.

We believe that this list is not exhaustive and can possibly be supplemented with factors such as:
- level of financial literacy of the population;
- debt overburden, measured at the macro level by the ratio of loans to GDP;
- the number of poor people who are borrowing to survive paycheck to paycheck.

Now let us move on to checking hypothesis 3 that suggests that the level of NPL is influenced by social sector indicators, namely:
- level of financial literacy of the population (adults who are financially literate, %);
- private credit by deposit money banks and other financial institutions to GDP,% [20];
- household final consumption expenditure (% of GDP) - Household final consumption expenses, etc. (% of GDP) [2];
- severely materially deprived people (% of total population).

There is no data regarding severely materially deprived people in the world as a whole. Instead, the World Bank carries out studies on the following [21]:
- Poverty headcount ratio at $ 3.10 a day (2011 PPP) (% of population);
- Poverty headcount ratio at national poverty lines (% of population), including noncomparable values;
- Poverty gap in national poverty lines (%).

However, there is no data regarding the above on most countries, including the developed ones. Therefore, the model for the world in general will not include indicators that characterize the poverty level. They will be presented only for the European countries of EU-28 [2].

Table 2

Dependence of NPL % and private credit to GDP from the factors of influence, %

Dependent variable:	Factor	R² *(Pearson correlation coefficients)*
EU-28		
NPL	Financial Literacy	0.2734
NPL	Private credit to GDP (%)	0.1237
Private credit to GDP	Financial Literacy	0.0208
NPL	Materially deprived people, %	0.3126
100 countries of the World		
NPL	Financial Literacy	0.0520
NPL	Private credit to GDP (%)	0.0013
Private credit to GDP (%)	Financial Literacy	0.2899

To build a model for countries worldwide, there is data for 100 countries (out of 143 countries with statistics on financial literacy) where all the necessary indicators are available at the same time.

The main results of calculations are presented in Table 3 and Table 4.

Consequently, according to Table 4, statistics confirm the model of direct effect of the "debt overburden" indicator on "bad debts" (private credit to GDP,%), as well as feedback effect of the proportion (%) of adults who are financially literate, based on the data for 100 countries of the world and separately for the EU-28.

Table 3

Pearson correlation coefficients

Factor 1	Factor 2	World (100 countries)	EU-28
Bank nonperforming loans to gross loans, %	Adults who are financially literate (%)	0.23	0.52
Bank nonperforming loans to gross loans, %	Private credit by deposit money banks and other financial institutions to GDP (%)	0.04	0.35
Bank nonperforming loans to gross loans, %	Severely materially deprived people (Percentage of total population)	… (n/d)	0.56
Bank nonperforming loans to gross loans, %	Household final consumption expenditure, etc. (% of GDP)	… (n/d)	0.53
Private credit by deposit money banks and other financial institutions to GDP (%)	Adults who are financially literate (%)	0.54	0.14

Parameters of models are listed in Table 4:

Table 4

Models' parameters

Dependent variable: NPL	World (100 countries)	EU-28		
		model 1	model 2	model 3
F-criteria (p-value)	5.32 (0.006)	10.63 (0.0005)	8.76 (0.0004)	14.25 (1.54E-05)
R	0.315	0.678	0.723	0.800
Coefficients:				
Private credit by deposit money banks and other financial institutions to GDP (%)	0.035**	0.071***	0.0681***	0.0910***
Adults who are financially literate (%)	-0.206***	-0.475***	-0.3315**	-0.1870*
Household final consumption expenditure, etc. (% of GDP)			0.3654*	
Severely materially deprived people (Percentage of total population)				0.7451***
Constant	12.879***	25.120***	-1.9776*	0.5797

*** Significant at the 1% level,
** Significant at the 5% level,
* Significant at the 10% level.

3. Results and Conclusions.

Consequently, the parameters of the obtained models indicate that their adequacy is characterized based on the F-criteria, and the ways of the effect confirm our hypotheses that:

- the level of financial literacy does not affect the decision-making rate on getting a loan. But as financial literacy grows, the borrowers less often take money from a private informal lender and from a family or friends and more frequently - from a financial institution;

- a higher financial literacy level leads to a stronger tendency of the NPL to decrease in

general;

- there is a direct interrelation between private credit by deposit money banks and other financial institutions to GDP (%) and NPL (Bank nonperforming loans to total gross loans, %). That is, a higher level of debt overburden leads to a poorer crediting quality;

- there is an inverse interrelation between the level of financial literacy among adults and the NPL. People who are more knowledgeable about finances are less likely to allow "bad" debts;

- also, for the EU-28 countries, the direct interrelation between the severely materially deprived people (% of total population) the NPL level has been confirmed.

The latter interrelation is relevant for poor countries only, since the poorest people in these countries are forced to use loans to survive until the next paycheck. Nevertheless, high level of unemployment, poor living conditions, low health care level, etc. lead to loss of jobs, illnesses, disability, all of which only further worsen loan servicing. Crummy salaries in these countries do not provide poor families with funds sufficient to repay loan interest, which logically leads to the impossibility of normal loan servicing. And sometimes salary is below the subsistence minimum, since it is established on the so-called resource approach (rather than the absolute one), which takes into account the capabilities of a state, and not the citizens' need for money to meet the minimum living needs.

It goes without saying that costs are needed to spread the financial knowledge; financial education in schools, colleges and universities should become the main source for receiving such knowledge. This will lead to a more considerate attitude towards money and equip young people with the necessary skills and knowledge.

Back in 2002 Alan Greenspan [5] underlined the importance of beginning the learning process in financial education from early age. This can help prevent younger people from making poor financial decisions.

A very important role in teaching belongs to colleges and universities: they provide remote learning options to allow students to pursue continuing education via the Internet, they help to use the rapid adoption of new information technologies; they give specific information on financial transactions and comprehension of the budgeting and saving.

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