Structural and Value Dimensions of Household Indebtedness in Bulgaria

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Abstract

The assertion that household indebtedness is directly related to financial macrostability is considered an axiomatic rule in economic theory. The presence of a high level of indebtedness and sharp increases in its values are considered by experts as an indicator of an impending financial crisis and recession. The study of the dynamics and trends in household debt liabilities changes could answer many questions related to households' financial stability and the measures that regulators should take. This research issue is particularly relevant in the current economic crisis caused by the global Covid-19 pandemic. The analysis of the structural and value dimensions of household indebtedness provides the necessary basis for studying the financial sustainability of households, with which they enter this challenging period.

Keywords: household indebtedness, financial crisis, financial literacy, global pandemic Covid-19, bank loans, consumer lending, mortgages

JEL Code: D1, G5 *DOI: https://doi.org/10.36997/IJUSV-ESS/2020.9.1.17*

Introduction

The analysis of the dynamics in the structure and pricing of bank loans to households, just before the global pandemic, could be important and useful in terms of households' financial sustainability, with which they are entering this difficult and challenging period. Highly indebted households that are experiencing a shock decline in their incomes and have limited stocks of liquid assets are among the most vulnerable. The information provision of the present study is based on the official statistics of the Bulgarian National Bank /BNB/. Based on the analysis of statistical data and the authors' own calculations, current trends, future challenges are outlined and conclusions are formulated for the structural and price aspects of household indebtedness in Bulgaria. The body of the paper is structured in three sections. In the first one a literature review is performed, in which the results of the conducted research are systematized and more light is shed on separate theoretical and applied aspects of the researched issues. This part of the study pays special attention to the problem of "household indebtedness" in the context of the crisis caused by the global pandemic. The second section makes a critical analysis of the factors that affect the level of indebtedness of households. The third section focuses on a dynamic analysis of the structure of household liabilities to banks and some non-bank financial institutions. This part of the article also reveals specific pricing effects in the formation of household indebtedness in Bulgaria. The paper ends with a conclusion, which summarizes the most important inferences and recommendations.

1. Literature review

According to neoclassicism, rising debt fuels consumption and economic growth. In the economic literature, it is often argued that, especially in post-crisis periods, debt growth has a positive impact on economic growth, as it encourages household consumption. Why then is the growing indebtedness of households treated as an economic problem? Expectations for short-term positive effects of increased household indebtedness would be temporary if debt had a negative impact on long-term expenditures, which would have the opposite effect on the economy (Lombardi et al., 2017). According to Dynan (2002), the phenomenon of "household debt overhang" leads to increased debt service costs, which in turn suppresses consumption and generally has a negative impact on economic development. The results of a number of other studies also refute the neoclassical doctrine of the beneficial effects of debt. It is found, for example, that an increase in the household debt-to-GDP ratio actually leads to a decrease in consumption in the medium term, even under normal market conditions (Mian et al., 2015). The increase in household debt-to-GDP ratio in the medium term also causes a slower growth rate of GDP and rising unemployment. This trend is observed even more clearly in countries with stricter monetary policy and those in which there is a regime of fixed exchange rates, such as Bulgaria.

Many authors share the assertion that there is a connection between the level of household indebtedness and financial macrostability. High levels of indebtedness can lead to declining consumption, investment and economic growth (Yoshino and Gupta, 2019). Schularick and Taylor (2012) identify high levels of household indebtedness as a reliable indicator of an impending financial crisis and an important factor for the intensity of an impending recession. According to Drehmann and Juselius (2014), the dominance of high levels of household indebtedness can serve as a tool for predicting an impending crisis in the banking system.

Traditionally, systemically important financial institutions, in particular large banks, are the focus of financial stability assessments, as they concentrate and manage many risk factors that affect the stability of the financial system (Santoso and Sukada, 2009). With the improvement of risk management techniques by financial institutions, the development of innovative and increasingly complex financial services in recent decades, some types of risk are transferred to customers, including households. Therefore, the assessment of financial stability begins to focus on households and their ability to absorb shocks such as changes in interest rates, income or rising unemployment. There are various channels through which risk is "injected" into households as the ultimate carriers of financial risk in the system or is "infected" by them and transmitted down the chain (IMF, 2005). Households are exposed to varying degrees of risk in their roles as depositors, beneficiaries of insurance policies, equity and bonds investors. Undoubtedly, however, households are most vulnerable as borrowers from financial institutions. They are exposed to a "bouquet" of financial risks of various nature: market risk, inflation risk, investment and reinvestment risk, etc. The occurrence of risky events and shocks that lead to mass difficulties or inability to service the debt obligations of households, can incur huge potential public costs.

The Covid-19 global pandemic has caused a sudden and sharp decline in economic activity. This in turn has led to dramatic jobs cuts in many industries and significant income losses for many households. The pandemic and the ensuing inevitable recession have led to a huge negative shock, forcing households around the world to cope with reduced working hours and unemployment (Zabai, 2020). The question reasonably arises as to how the crisis caused by the pandemic will affect the ability of households to service their debt correctly (Bilyk, 2020). This issue is particularly acute for those households that have accumulated solid debts and those that register a significant decline in their current income. Younger households and those employed in the most affected industries have been found to be more vulnerable (Adams et al., 2020). Only about half of these households could cover their expenses for three months with liquid assets in their possession. Heavier indebted households have limited capacity to manage unexpected losses and cope with increased costs, especially if debt is used to finance illiquid assets such as real estate.

Some authors attempt to draw a parallel between the Great Depression and the current economic conditions in the United States and Australia caused by the global pandemic crisis by comparing 4 key indicators: household indebtedness, real estate market, capital market and business turnover. It is concluded that currently household liabilities in the United States and Australia represent a significantly heavier burden than in the 1920s (Romano, 2020). The analysis of changes in economic conditions under the pressure of the effects of the global pandemic indicates that high levels of household indebtedness are a prerequisite for generating increased risk not only for the households themselves but also for the financial system (Akkaya et al., 2020). It is difficult to predict how effective government programs will be in the medium and long term to compensate for the decline in employment and income. It is equally difficult to predict the ability of state budgets and the capacity of credit institutions to offer rescheduling of current liabilities to their customers and to provide interest-free loans with budgetary resources. In these conditions of uncertainty, the structural and value analysis of household indebtedness acquires special relevance and significance.

2. Factors affecting the level of household indebtedness

According to the traditional postulate of the 'income/life cycle' model, households save or borrow depending on their life expectancy, real interest rates and demographic factors. According to this model, households need credit markets as they strive to permanently improve their standard of living. Incomes usually increase during the working age of individuals and decrease in the period after retirement. Debt is the means that allows households to address costs: younger people expect an increase in their future income and consume more than they earn and accumulate debts that they will pay off in adulthood. Following this logical construction, households are likely to accumulate more debt than they could repay (D’Alessio and Iezzi, 2013). In the conditions of normal and well-functioning financial markets, households strive to smooth their consumption even with varying incomes from remuneration or assets during different periods of their life cycle.

Numerous publications focus on the study of traditional factors that influence the growth of household indebtedness, such as interest rates, future incomes, population demographics, and insertainty (Finocchiaro et al., 2011). For example, in the Barnes and Young (2003) model, housing is seen as both a consumer good and an investment asset, with changes in interest rates, future incomes, and demographics, explaining the increase in US household debt in the 1990s. However, this model cannot account for the increase in indebtedness a decade earlier in the conditions of high inflation, respectively interest rates and low real income growth rates.

The importance of market interest rates as a factor influencing household indebtedness is also asserted by Johansson and Persson (2006), who note that according to the results of their stress test, the households sector is much more sensitive to rising interest rates than to unemployment rates. At the same time, even a sharp jump in the interest rate combined with a significant decline in housing prices does not generate enough losses in the banking sector to pose a threat to the stability of the financial system. However, the high level of indebtedness is the factor that could cause serious problems with debt repayment and jeopardize financial macrostability.

It is unequivocally clear that changes in market interest rates are directly reflected in the ability of domestic debt service providers. This, of course, applies to a much higher degree for loans with variable interest rates, which prevail in Bulgaria. Changes in housing prices can also show the impact on highly-indebted households, especially for those who invest for speculative purposes or plan to relocate (Sinai and Souleles, 2005). The sharp collapse in real estate prices leads to an unpleasant situation for owners, where the amount for repaying a mortgage is considerably greater that the value of the mortgaged property. When property prices in the United States plummeted during the global crisis, a 7% decrease in homeowners with a positive balance of the ratio of the market price of the property to the value of the mortgage was registered (Chakrabarti et al., 2011).

Each national market has its own specific features in terms of the fundamental factors that determine the degree of households’ indebtedness: growth rate of disposable income, share of active population, interest rates, the ratio between rental price and market value of housing, etc. Bulgaria is a country with a relatively high share of people owning their own homes. The desire to own housing is a factor that influences the increase in the level of indebtedness due to the fact that a large part of home purchases are financed through bank loans. In addition, there are large disparities in real estate prices by region and town. The persistent trend of migration of the working population from smaller settlements to larger ones is also one of the important factors for the increased demand for residential properties for purchase or rent in the capital and larger regional centers.

One of the most frequently cited factors for the causes of excessive debt accumulation and the occurrence of loan servicing problems is the lack of an adequate level of financial literacy among borrowers (Disney, Bridges and Gathergood, 2008; Anderloni and Vandone, 2010). It is most often expressed in poor financial judgment as a result of underestimation or misunderstanding of the real price of the loan. Problems with the regular servicing of debts may be due to not only the lack of financial literacy of borrowers and their inability to manage their finances correctly, but also in some cases to a lack of transparency of lenders' terms and conditions (Lusardi and Tufano, 2009). In this regard, Bucks and Pence (2008) found that many borrowers with adjustable-rate mortgages tend to underestimate their capabilities or do not understand or are unaware of how much the interest rate on their loans can change.

Over-indebtedness can also be caused by the occurrence of unexpected events that change the initial conditions under which the loan agreement was concluded (Keese, 2009). These include an unexpected decline in household income in the event of job loss, an unexpected increase in costs (eg medical treatment), a sharp increase in the price of debt - in a worsening market situation and a subsequent increase in market interest rates. Unexpected changes in the structure of the household can also negatively affect the ability to pay debts: divorce, birth or death of a family member. In other cases, external factors on the part of the foreign exchange market may have an impact: for example, servicing a long-term foreign currency loan whose exchange rate changes in an unfavorable direction[1] or an unexpected change in the BGN/EUR exchange rate within the admissible "corridor" in the Eurozone "waiting room".

In some cases, over-indebtedness results from poverty, which pushes individuals who are unable to pay part of their costs to apply for a loan that has little chance of being repaid. This usually happens when creditors have made a wrong assessment of creditworthiness. Factors such as alcohol, drug and gambling addiction are also considered the cause of over-indebtedness, although they are rarely the focus of research in the literature.

3. Dynamics of structural and price changes in household indebtedness in Bulgaria

The analysis of the dynamics of household indebtedness in Bulgaria is based on data from the official statistics of the Central bank of Bulgaria (BNB). The statistics bring together the Households and Non-profit institutions serving households (NPISH) sectors[2].

Statistics distinguish four main types of loans: consumer, housing, overdraft and others (Fig. 1).

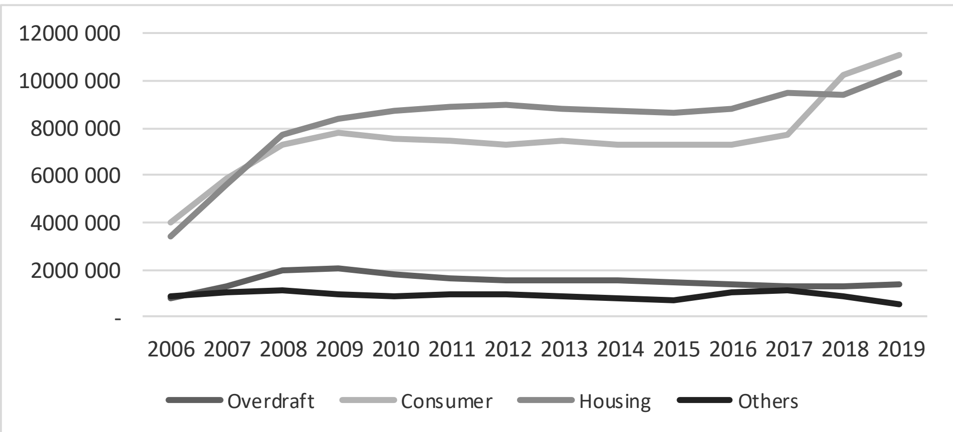

Figure 1. Dynamics of the structure of loans for households and NPISH in BGN thousand
(Source: prepared with data from http://www.bnb.bg/Statistics/StMonetaryInterestRate/StDepositsAndCredits/)

[1] An example is housing loans granted to Bulgarian borrowers by Bulgarian banks denominated in CHF due to lower interest rates on loans in this currency, which, however, became problematic due to the sharp decline of the euro against the Swiss franc during the global financial crisis.

[2] NPISHs include political and religious organizations, trade unions, non-governmental organizations and others; their share is negligibly small - about half a percent, measured as final consumption of GDP (Minassian, 2015).

It can be noted from the data in the chart (Fig. 1) that consumer and housing loans form the main part of the liabilities of households in Bulgaria. The changes in their volumes run in parallel, with a sharp increase in the period 2006-2008 and then a prolonged leveling-off around the same values over the next decade. This picture corresponds to the expansionist growth of bank lending in the period before the global financial crisis. In just 2 years - between 2006 and 2008 the volume of loans to households doubled. In the post-crisis period, banks introduced measures that are more restrictive to "cool off" lending activity. In 2018 and 2019, however, there was again a tendency to increase debt liabilities, more pronounced in consumer loans, which even exceeded the volume of housing loans. This growth raises legitimate concerns as to whether this situation portends a new recession, this time further fueled by the Covid-19 crisis.

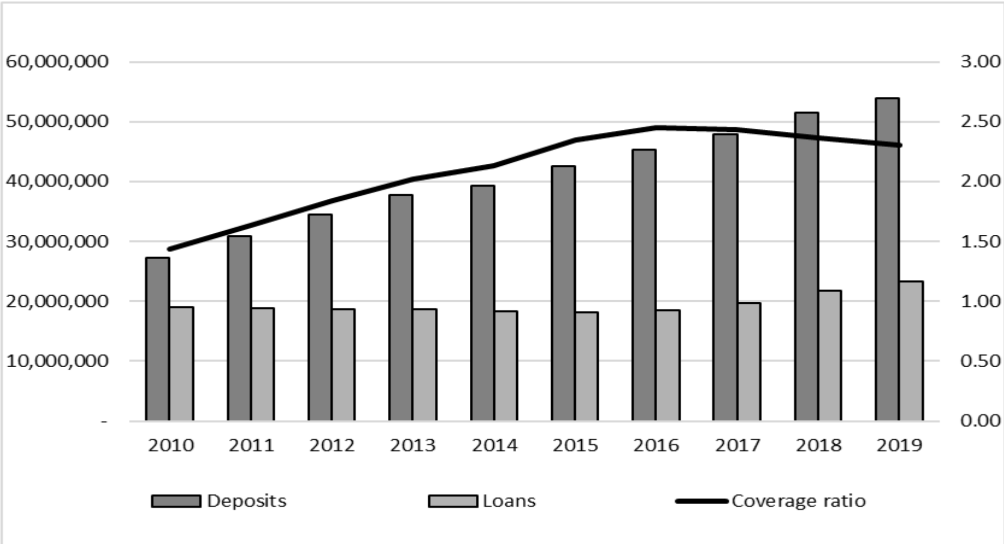

Figure 2. Dynamics of deposits and loans for households and NPISH in BGN thousand (left scale) and coverage ratio (right scale)
(Source: authors' own calculations based on data from http://www.bnb.bg/Statistics/StMonetaryInterestRate/StDepositsAndCredits/)

Feedback about household debt problems can be obtained from various indicators. One of them is the coverage ratio of loans with deposits. The analysis of the presented data shows that there has been an increase in the values of this indicator in the last ten years (Fig. 2). This can be interpreted as good news, as there is a higher growth rate of household deposits compared to the growth of the amount of loans. Bulgaria is one of the leading countries in the European Union in terms of "coverage of liabilities with household assets"[3].

The next two figures present data on the most important indicators for the pricing of loans: the annual percentage rate of charge (APRC) and the interest rate on consumer and housing loans. It can be seen from the data in fig. 3 that there is a pronounced contrast between the price of consumer loans in EUR and in BGN, expressed through the APRS indicator, which is a measure of the real cost of financing. This contrast is especially noticeable for short-term loans (up to 1 year). In these loans, the APRS exceeded 30% in 2016 and 2017 and in 2019 it remained at levels around 28%. It is paradoxical that these extremely high values are registered against the background of record low market interest rates nationally and worldwide! However, when we look at the APRC values for longer-term consumer loans (with maturities over 5 years) we see that these values have been around 6.5% for the last two years.

[3] According to Eurostat data, this indicator in Bulgaria is 4.74 for the first quarter of 2020. Only Hungary ranks higher with a value of 5.9, and the average value for the European Union of 3.27 (https://ec.europa.eu/eurostat/web/covid-19/data).

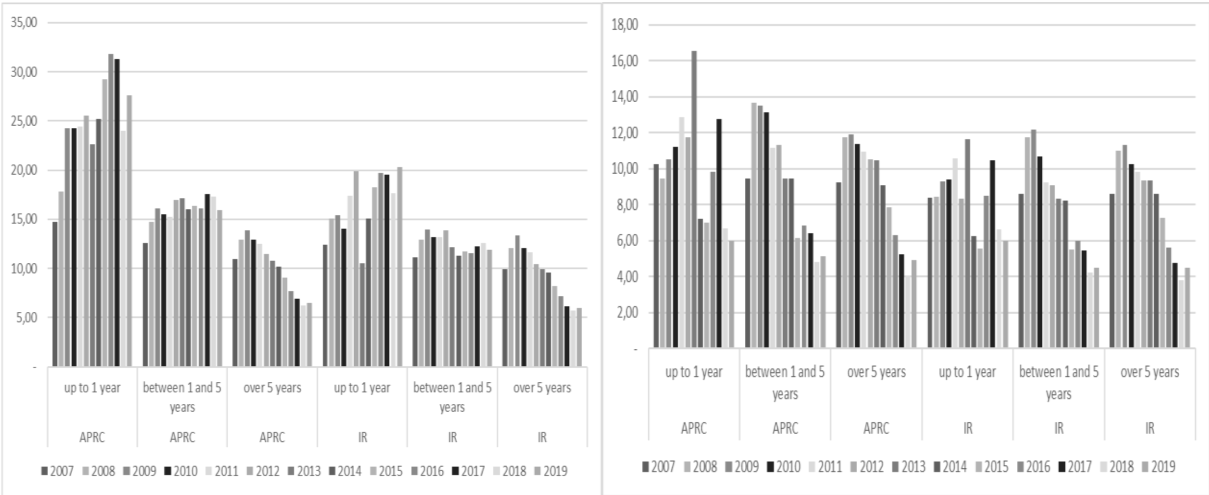

Figure 3. Annual percentage rate of charge (APRC) and interest rate (IR) on newly granted consumer loans in BGN (the diagram on the left) and EUR (to the right)
(Source: according to BNB data)

The large difference between the APRC values and the interest rates on short-term consumer loans in BGN and EUR is worth noting. For short-term consumer loans provided in euros, the APRC values are not as high as for loans in BGN - only 5.96% in 2019, which is over four times lower compared to loans in BGN for the same period!

The data on the price of housing loans do not show the same disparities as in consumer loans (Fig. 4). There is a tendency to significantly decrease the APRC and interest rates on loans in BGN and EUR: from levels around 10% in the first years to between 3% and 4% in the last years of the analyzed period. This trend is not surprising and is in line with the unprecedentedly low market interest rates on the global financial markets in the last few years.

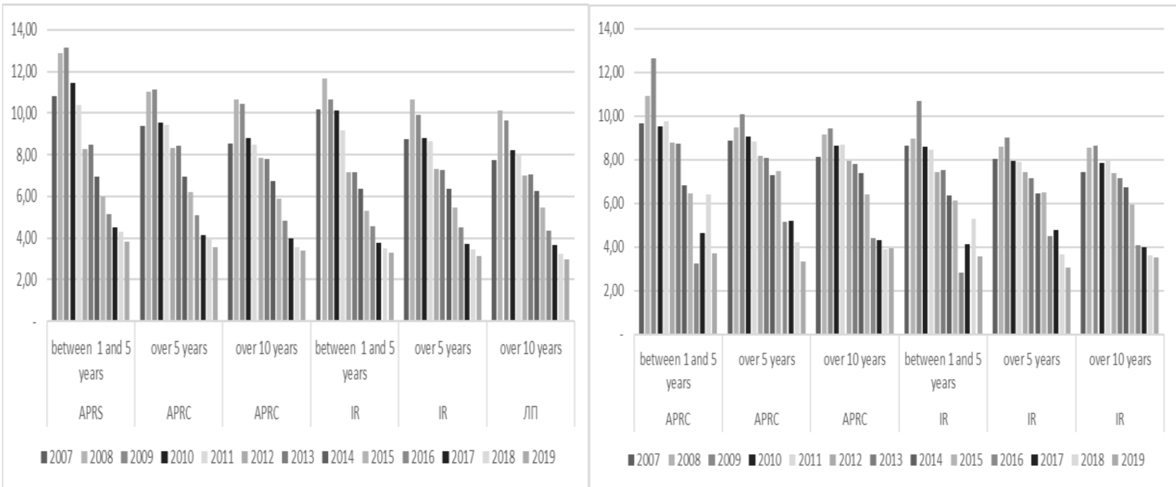

Figure 4. APRC and interest rates on newly granted housing loans in BGN (the diagram on the left) and EUR (to the right)
(Source: according to BNB data)

The conclusion that can be drawn from the obvious disproportions in the formation of price indicators for consumer loans is that there is a tendency to increase pricing for short-term consumer loans in BGN. This fact can be explained by the inclusion in the statistics of loans provided by specialized lending companies, which are inherently part of the landscape of the so-called “shadow banking”. Their product range is limited mainly to offering ultra-short-term loans, popularly known as "fast loans". They are characterized by their very short repayment terms and the application of non-market pricing with high costs for borrowers[4].

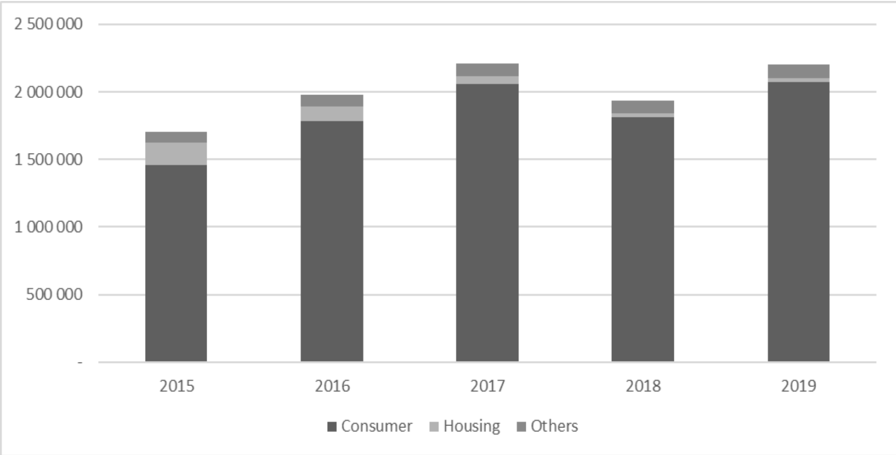

Figure. 5 Structure of receivables on loans to companies specializing in lending to households and NPISHs in BGN thousand
(Source: according to BNB data)

From the data presented in fig. 5 on the provided "fast loans”, we can trace the tendency to their increase in volume and as a share of all granted loans. Their structure is dominated by consumer loans, which confirms the logical argument that they mainly affect their pricing. The share of "fast loans" in consumer lending is constantly increasing - from 14% in 2013 to an impressive amount of BGN 2.07 billion, which already represents nearly 19% relative share.

Conclusion

Unambiguous conclusions cannot be drawn from the analysis of the structural dynamics of household debt liabilities in Bulgaria and the pricing of loans. On the one hand, the level of indebtedness and in particular the indicator for coverage of loans with deposits are within acceptable norms. On the other hand, it has been established that the price of short-term consumer loans does not correspond to market realities. Particularly vulnerable are those households that are over-indebted and those that regularly rely on fast credit services. These findings highlight the problem of financial literacy of households. Without underestimating the role and importance of other factors systematized in the paper, the efforts of the state and society should focus mainly on increasing financial literacy. Understanding the patterns of economic cycles, analyzing historical data on interest rates, incomes and prices would help to make an informed decision on the part of households concerning financing with a loan. The collection and processing of data and conducting research is useful not only in view of decision-making by households, but also for conducting an adequate economic and social policy. Particularly important is the issue of conducting such a policy, which is aimed at increasing the transparency of lending conditions and the real cost of

[4] Minassian (2015) describes very successfully this type of "fast and problem-free" loans at incredibly high prices. A common offer is, for example, the following: "You receive BGN 100, you pay back BGN 105." However, the offer does not mention the one-month repayment term, which raises the annual interest rate to almost 80%!“

borrowing. A very important element of the policy is the organization of information and educational programs to increase the financial literacy of households. These programs can be financed from the State budget or under projects financed by European funds. In terms of content, they can offer individual or group face-to-face or online trainings and video lessons distributed on social networks.

Acknowledgement

The present scientific work is funded under Project NPI 38/2019

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