

Non-Performing Loans in Bulgaria and Alleviations for Debtors in Times of Covid-19 Pandemic

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Info Articles

Abstract

Keywords:

Bulgarian banking system, capital adequacy, non-performing loans, Covid-19 pandemic, moratoria on loan payments

Objective: This paper is focused on examining the condition of non-performing loans (NPLs) in Bulgaria in the light of the COVID-19 pandemic. Its purpose is to present the serious threat that NPLs can be for economic and financial stability and to prove that adequate measures are taken in Bulgaria for reducing the share of bad loans during the pandemic.

Methodology: The study presents the dynamics in lending and share of non-performing loans (NPLs) in Bulgaria by examining monetary statistics data for the period 2016-2021. The statement presents basic measures and policies taken in Bulgaria for alleviation of borrowers in times of crisis and impaired economic stability. The empirical study is based on econometric model - a multiple linear regression model is performed for checking the correlation between NPLs and three key macroeconomic indices which are very tangible in times of crisis: government deficit/surplus, unemployment, GDP growth. For illustration of essential tendencies and results are used tables and graphs based on observations, comparative analysis and systematization.

Results: The results show that up to the middle of 2021 the amount of NPLs in Bulgaria has not increased considerably as a result of the pandemic. It is due to the adequate measures taken by the government and the financial authorities which give the obligors the possibility to postpone their payments in future. Suspension of the payment moratoria and increase of unemployment may lead to higher amount of NPLs in Bulgarian banking system.

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INTRODUCTION

The COVID-19 pandemic inevitably has slowed down the economic performance of Bulgaria. The gross domestic product (GDP) has contracted to - 4.2 % in 2020 as a result of the lockdown.¹ The fiscal deficit widens to -3,4%². The number of granted credits is smaller. Despite the decrease of non-performing loans ratio in recent years, this situation may change due to the pandemic-driven economic contraction. Though, banks are generally well-capitalized and liquid. New waves of infections and new restrictive measures are expected. There is a big uncertainty in the course of the pandemic – uncertainty about health and life, jobs and wages, and of course, about loans.

The increasing number of non-performing loans (NPLs) in the banks' portfolio can induce economic and financial distress. There is a broad consensus among researchers and scientists that the great value of NPLs has negative impact on the economy of the country concerned because they affect banks' balance sheet stability and profitability and put limitation on bank lending activities. Non-performing loans influence macroeconomic indicators such as GDP growth, unemployment and inflation, and their acceleration adversely affects the real economy (Klein 2013). Minimization of NPLs is necessary for a stable economic growth. Deteriorated loan portfolio of banks causes problems in the banking system and is a prerequisite for financial crisis (Messai and Jouini 2013).

Example for serious crisis caused by NPLs is those of 2007-2009. In 2007, the citizens of one of the richest countries in the world, the United States, live well over their financial possibilities and this influences the whole world economy. The growing consumption forces Americans to borrow and consume as if their income has increased. As a result, savings are replaced by debts. Interest rates, taxes and increasing housing prices are very profitable for creditors while borrowers take new loans, not facing the reality. This credit boom is based on the presumption that housing prices will be increasing continuously in future (Stiglitz 2010). When the bubble bursts, the United States face serious financial and economic crisis, which extends over the whole world due to the domino effect.

High economic growth combined with a credit boom can be interpreted as a signal of economic "overheating" and therefore as a potential threat to the stability of the banking sector (Festic et al. 2009). In prospering economic times creditors grant many loans, including bad loans, result of the prevailing optimistic mood and expectations. In the next phase of the boom people believe that the economic cycle is eternal and are tempted to invest money which they do not actually own (Otte 2006). Their investments can survive if the expansion is endless. This may happen in a perfect world but the reality is different and such investments should be directed to a healthy and stable growth.

Loans are expensive commodities bound up with taking certain economic risks. Their future is always unsure. For this reason both lenders and borrowers should be cautious. After the serious damages caused by the crisis of 2007-2009, NPLs have been observed carefully by policymakers and supervisory bodies. In the European Union, the European Banking Authority together with other EU bodies and institutions is responsible for the creation and implementation of an action plan for solving the problem with non-performing loans in the member states and keeping the value of NPLs to the reference level. Nevertheless, a number of banks in the EU member states have been experiencing high levels of non-performing loans.³

Unfortunately, the COVID-19 pandemic raises expectations for growth of non-performing loans. The confinement of the population leads to serious social and economic consequences. Many businesses and individuals are expected to face liquidity problems and difficulties in timely payment of their financial obligations. This could affect the stability of the credit institutions due to the possibility for additional expenditures, large number of defaults and increased capital requirements.

This paper examines the actual situation with the amount of NPLs in Bulgaria after the development of the COVID-19 pandemic and tests the effect of key economic indicators on their value. The second section includes statistical information for the amount of NPLs in the countries of the European Union and comparative information for Bulgaria, multiple linear regression model showing the influence of macroeconomic variables on NPLs and description of measures taken in Bulgaria by banking and non-banking financial institutions for reducing debt burden. The results are summarized in the conclusion.

METHODS

Lending behavior of banks is related to economic activity and to key economic indicators. The

^{1,2} Eurostat Official Statistics Data

³ European Central bank, Banking Supervision, 2017. *Guidance to banks on non-performing loans*

supply of loans is influenced by the capital adequacy requirements for the credit institutions – a downturn in economic activity shrinks lending and increases capital adequacy ratios.

This research includes information for the capital adequacy of the Bulgarian banking system, statistical information for the values of NPLs in Bulgaria before and after the burst of the COVID-19 pandemic, measures taken by the Bulgarian government and Bulgarian National Bank for alleviation of borrowers and multiple regression analysis presenting the effect on NPLs of GDP growth, unemployment and government deficit/surplus.

The independent variables are selected after literature review of the factors which influence NPLs. The effect of GDP growth and unemployment is proved in number of researches (Klein 2013; Beck, Jakubík и Piloiu 2013; Kupčinskas and Paškevičius 2017; Kuzucu & Kuzucu 2019). There is a consensus on the negative effect of GDP growth on NPLs - higher GDP presumes fewer bad loans and vice versa. An economic slowdown increases unemployment rate and bad loans increase as well. The positive correlation between public debt and NPLs is also found which suggests that fiscal problems may lead to a rise of problem loans (Makri , Tsagkanos and Bellas 2014). Public debt increases fiscal burdens imposed on citizens and this deteriorates their repayment capacity (Ciukaj and Kil 2020).

The quantitative data is in the form of numbers showing percentage annual values for Bulgaria of the following variables - Gross non-performing loans, domestic and foreign entities - % of gross loans; Government deficit/surplus, debt and associated data as percentage of GDP; unemployment rate; GDP growth rate – percentage change on the previous period. The data is in the form of time series derived from Eurostat Database. The multiple linear regression model is performed by using SPSS.

Banking system in Bulgaria and share of NPLs.

The COVID-19 pandemic finds the Bulgarian banking system in very good condition - with very high capital adequacy ratios, decreasing amount of non-performing loans and high profits in the period 2017-2019. The state of emergency in the country is announced on 13 March 2020. Data published by BNB supervisory statistics shows that the capital adequacy for the whole banking system in Bulgaria in March 2020 is as follows: 19.44% Common Equity Tier 1, 19,82% Tier 1 capital and 20,45 % total capital adequacy. According to the capital adequacy requirements of Basel III, the minimum level of Common Equity Tier 1 should be at least 4.5% of risk-weighted assets (RWA) , Tier 1 capital - at least 6% of RWA and total capital adequacy - at least 8.0% of RWA. In December 2020 and in June 2021 the Capital Adequacy indices of the Bulgarian banking system are again at very high level which exceeds substantially the regulatory requirements. (See Table 1 and Figure 1).

Table 1

Capital Adequacy of the Bulgarian Banking System							
	March 2020	June 2020	September 2020	December 2020	March 2021	June 2021	Minimum required level under Basel III
Common Equity Tier 1 (%)	19,44%	22,10%	21,86%	21,69%	21,53%	21,96%	4,50%
Tier 1 capital (%)	19,82%	22,51%	22,27%	22,10%	21,92%	22,35%	6%
Total capital adequacy(%)	20,45%	23,14%	22,93%	22,74%	22,54%	22,94%	8%

Source: BNB

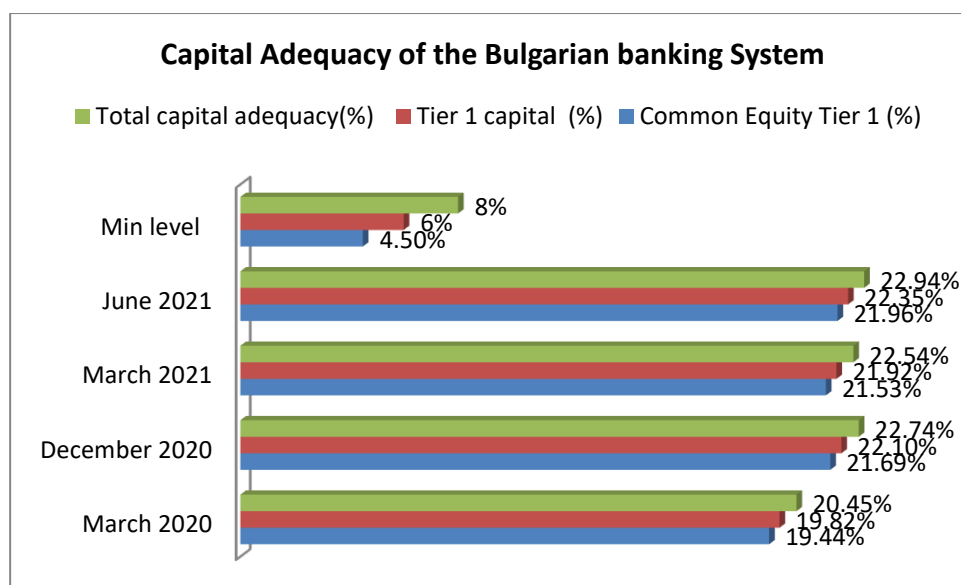


Figure 1

Analysis made by the Bulgarian Credit Rating Agency (BCRA) in April 2020⁴ presents both optimistic and pessimistic scenarios with expectations for a decline of the Bulgarian economy in 2020 in the range of 2-10%. The government expects 3% decline in GDP when updating the state budget. As mentioned before – the real decline in GDP is somewhere in the middle -4.2 % according to data from Eurostat. BCRA predicts a serious negative impact on the cash flows of both individuals and legal entities. Payment disruptions in a number of economic sectors, receivables cycle extension, delays in debt obligations service, limited consumption and job losses, increase in defaults on households' loans – all these expected consequences of the COVID-9 pandemic could enhance the risk for financial institutions.

At the beginning of 2021 the banking sector in Bulgaria operates in an environment of restricted measures initiated against the COVID-19 pandemic. There is a partial recovery of the economic activity, which remains significantly lower compared to the same period of the previous year. The Bulgarian National Bank (BNB) warns⁵ in an address on the occasion of the banker's day that there is high uncertainty for the financial position of corporations and households in the following months. The significant uncertainty surrounding the economic situation leads to an increase in the accrued impairments⁶ - according to information from BNB this is among the major factors behind the decreased profits and lower profitability indicators of the banks compared with the previous year.⁷ The National Bank also recognizes the possibility of deepening the coronavirus crisis. This would worsen the economy and reverse the trend of decreasing the share of non-performing loans in bank portfolios.

Lending in Bulgaria increases in the last five years as it can be seen in *Table 2*. There is a continuous tendency for an increase in the number and amount of the loans granted through the years. Data shows that the pandemic has decreased the number of the granted loans by the banking financial institutions with 204 900 at the end of 2020 compared to the end of 2019. Though, the value of the granted loans in 2020 is up with more than 2,5 mln. BGN. In 2021 lending in Bulgaria continues to rise.

⁴ BCRA, 2020. *Expected impact of the COVID-19 pandemic: Financial sector in Bulgaria*

⁵ Association of Banks in Bulgaria, 2020. *Quarterly bulletin, Issue № 64*

⁶ Impairment means reduction in the value of an asset because the asset no longer generates the benefits expected earlier due to changes in market value of the asset, business environment, government regulations, etc. Impairment occurs when an asset suffers a depreciation in fair market value. Impaired assets must be recognized as a loss on an income statement. The technical definition of impairment loss is a decrease in net carrying value of an asset and this decrease is greater than the future undisclosed cash flow of the impaired asset. (n.d.) In Investopedia.com dictionary. Retrieved from <https://www.investopedia.com/terms/i/impairment.asp>

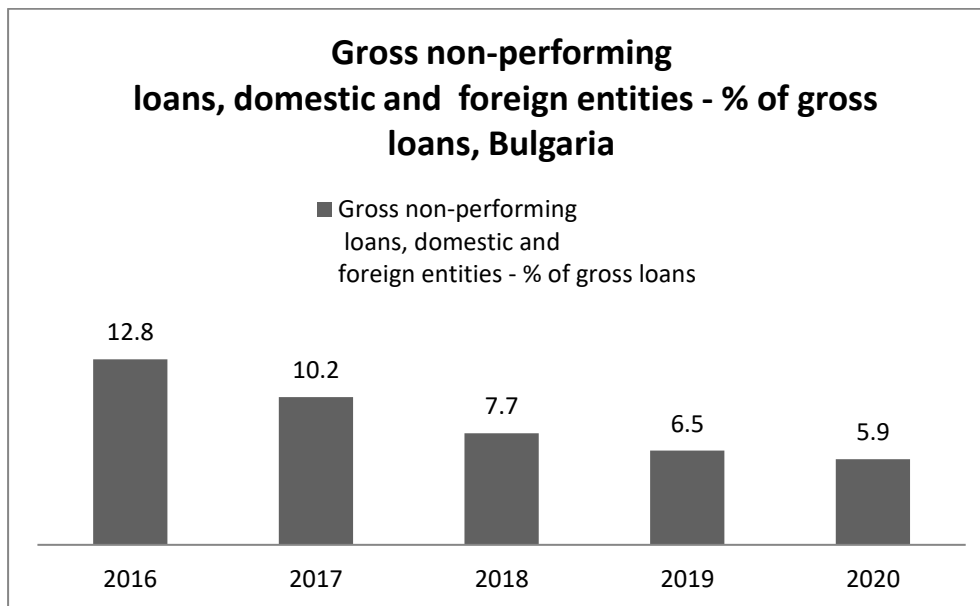
⁷ Association of Banks in Bulgaria, 2021. *The economy and the banking sector in Bulgaria, Fourth quarter of 2020*

Table 2

LOANS TO NON-FINANCIAL CORPORATIONS, HOUSEHOLDS AND NON-COMMERCIAL ORGANIZATIONS SERVING HOUSEHOLDS						
	12.2016	12.2017	12.2018	12.2019	12.2020	06.2021
number	2 741 743	2 746 507	3 065 552	3 117 690	2 912 790	2 919 616
thousand lv/BGN	49 176 457	50 828 566	54 739 350	58 826 557	61 503 859	67 761 797

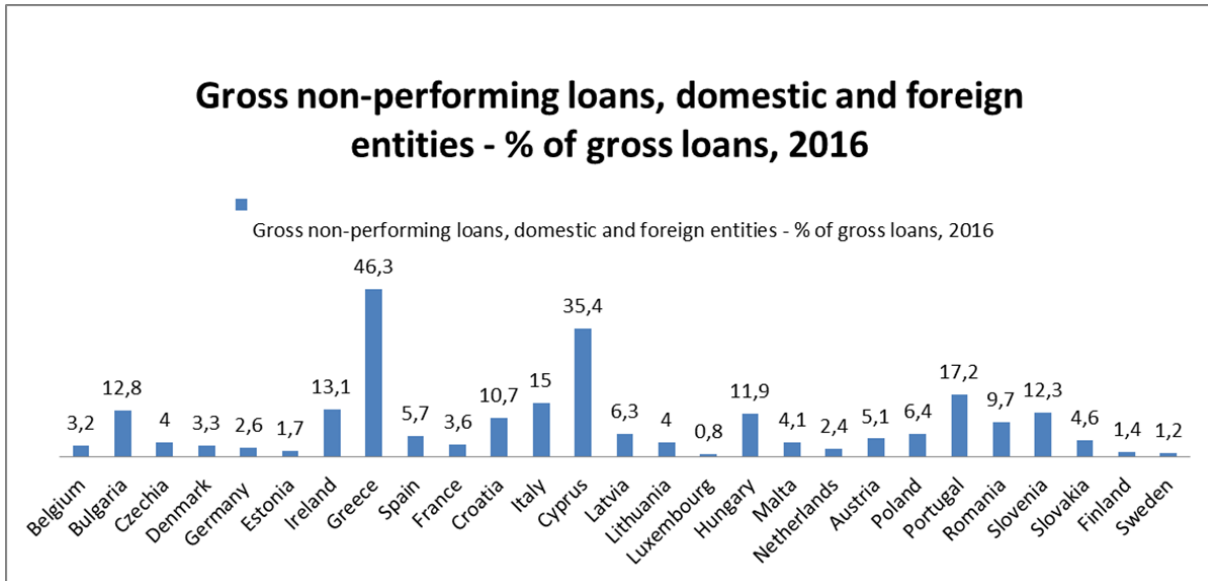
Source:BNB

At the background of increased lending activity in the period 2016-2020 the share of non-performing loans in Bulgaria has decreased significantly (See Figure 2). As it can be seen from Figure 3, in 2016 Bulgaria is among the leaders of non-performing loans in EU, according to data from Eurostat. In 2019 Bulgaria takes the fourth place with a share of 6,5% gross NPLs (Figure 4). Trying to fulfill the recommendations of the European authorities, the country initiates amendments in bank capital adequacy and insolvency framework. The share of non-performing loans to total gross loans in Bulgaria decreases from 12,8% in 2016 to 5,9% in 2020. The report of the European Commission from 2020 European Semester: *Assessment of progress on structural reforms, prevention and correction of macroeconomic imbalances* notes that there has been “progress in banking sector and non-performing loans” in Bulgaria. Banking sector has strengthened, banks are profitable and well capitalized and the share of non-performing loans has decreased. Nevertheless, Bulgaria is still among the countries with highest levels of NPLs in the EU.



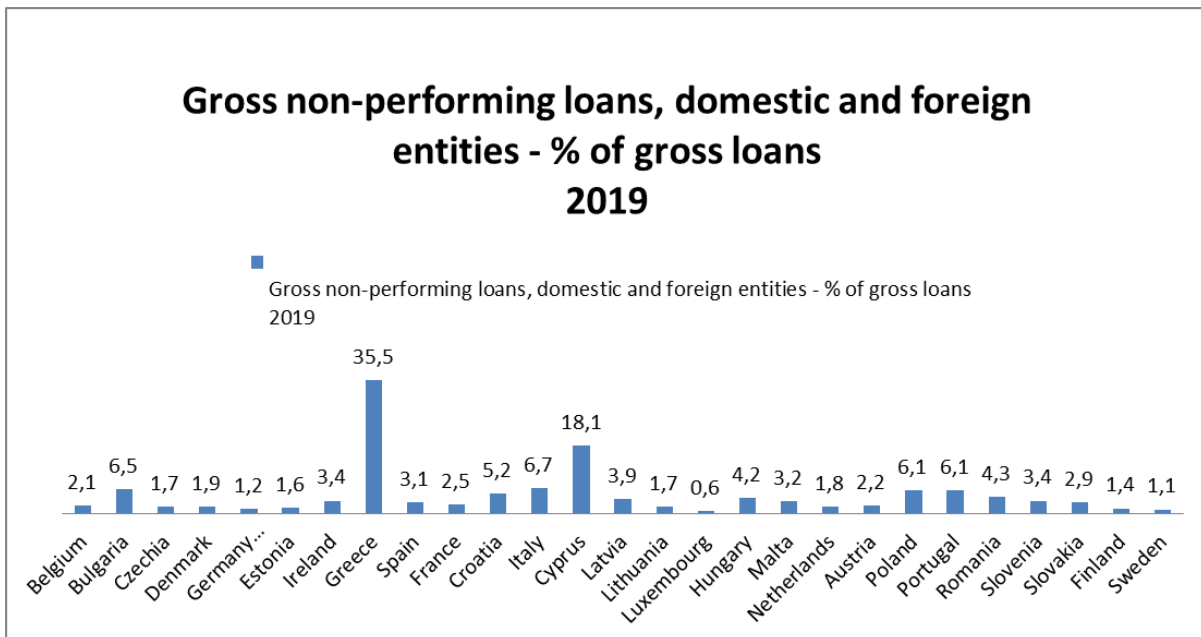
Data: Eurostat

Figure 2



Data: Eurostat

Figure 3. The level of the NPLs in European Union countries in 2016



Data: Eurostat

Figure 4. The level of the NPLs in European Union countries in 2019

The reference level of NPLs in EU is determined by the European Central Bank on the basis of consolidated banking data from domestic banking groups and stand-alone banks in the EU member states. Data for the reference levels of NPLs at the end of the year for the period 2014-2020 is presented in *Table 3*. At the end of 2020 the reference level of Gross non-performing loans and advances (% of total gross loans and advances) is 2.59 %. Bulgaria always surpasses the reference level. Nevertheless, from 2016 to 2020 there is a significant decrease in the amount of NPLs and endeavour for reaching the reference level.

Table 3

Gross non-performing loans and advances [% of total gross loans and advances]						
Consolidated Banking data						
2014-Q4	2015-Q4	2016-Q4	2017-Q4	2018-Q4	2019-Q4	2020-Q4
6.7155	6.8432	5.2916	4.0601	3.2059	2.7815	2.5865

Source: European Central Bank

Regression model

The simple model of the multiple linear regression is generalized in equation 1.1. The dependent variable is NPLs. The explanatory variables are GOV DEFICIT/SURPLUS, UNEMPLOYMENT and GDP GROWTH. After calculating the coefficients via SPSS is received equation 2.2 for a linear regression. The whole regression analysis is presented in Appendix 1.

$$NPLs = b_0 + b_1 * GOV DEFICIT/SURPLUS + b_2 * UNEMPLOYMENT + b_3 * GDP GROWTH + e_i \quad (1.1)$$

$$NPLs = 0,782 - 0,117 * GOV DEFICIT/SURPLUS + 1,232 * UNEMPLOYMENT + 0,414 * GDP GROWTH \quad (2.2)$$

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	,782	,805		,971	,369
GOV DEFICIT/SURPLUS	-,117	,146	-,066	-,802	,453
UNEMPLOYMENT	1,232	,093	,954	13,208	,000
GDP GROWTH	,414	,123	,245	3,353	,015

a. Dependent Variable: NPLs

The F-test shows that there is a regular multiple dependence between NPLs and GOV DEFICIT/SURPLUS, UNEMPLOYMENT, GDP GROWTH. The model is adequate and it can be used for research. The coefficient of correlation $R=0.988$, $0,7 < R=0.988 < 1$ determines that there is very strong multiple dependence of NPLs upon GOV DEFICIT/SURPLUS, UNEMPLOYMENT, GDP GROWTH.

The tests for Statistical significance of coefficients (T-test) show that coefficients GDP GROWTH and UNEMPLOYMENT are statistically significant. The coefficient GOV DEFICIT/SURPLUS is statistically insignificant.

Both coefficients GDP GROWTH and UNEMPLOYMENT are positive, consequently there is a straight one-way dependence – increase of UNEMPLOYMENT and GDP GROWTH leads to an increase of NPLs. Increase of UNEMPLOYMENT with 1% leads to 1,232% increase of NPLs. Increase of GDP GROWTH with 1% leads to 0,414 % increase of NPLs.

Based on the regression analysis it can be inferred that an increase of unemployment and increase of GDP growth in Bulgaria may lead to a growth of the amount of NPLs in the country. The influence of the government deficit/surplus on NPLs is not significant and it can be assumed that the growing deficit as a result of the pandemic will not lead to a burst of bad loans.

Measures taken by the financial authorities for debt burden relief during the pandemic.**Measures taken by the European authorities.**

European and national financial authorities play a crucial role in ensuring financial stability. In March 2020 the European Central Bank announces a new Pandemic Emergency Purchase Program (PEPP) intended specifically for addressing the effects of the COVID-19 pandemic. This is a new temporary asset purchase programme of private and public sector securities which aims to counter the serious risks to the monetary policy transmission mechanism.

The European Central Bank recommends that banks should restrict dividend distribution and enhance their loss absorption capacity through their capital buffers.

As a result of the expectation for possible imbalances in the economic and financial stability, the

European Banking Authority issues Guidelines on legislative and non-legislative moratoria on loan repayments applied in the light of the COVID-19 crisis (EBA/GL/2020/02)⁸. The aim of the Guidelines is to clarify that payment moratoria applied before 31 March 2021 do not trigger forbearance classification if they are based on applicable national law or on an approved industry-wide measures. Risk measurement is crucial in this situation of difficult economic circumstances, so the obligors expected to face longer-term financial difficulties and the quality of banks' portfolios should be observed carefully.

According to the general payment moratoria „forbearance“ means temporarily postponement of capital payments and/or interest payments of a loan for borrowers in financial difficulty. Credit institutions are required to categorize the exposures as performing or non-performing according to the requirements. Very important issue is the performance of individual assessment of the payment capacity of the borrower and granting forbearance measures for each specific case with no consideration of diminished financial obligation. The following conditions must be fulfilled:

- The reason for the moratorium is a response to a financial problem created as a result of the COVID-19 pandemic and it is announced and applied before 31 March 2021.
- Both legislative and non-legislative moratoria have to be based on a broad initiative. Institutions are encouraged to coordinate their activities.
- Countries which have banking associations may delegate the coordination of the moratorium scheme to such association.
- The moratorium has to be applicable for a large number of obligors affected by the crises caused by the pandemic, regardless of their creditworthiness.
- The creditworthiness of the obligors is not decisive for applying the general payment moratoria because it should be in force for those who faced financial difficulties before the pandemic and for those who didn't have faced such difficulties as well. The forborne exposures must maintain this classification.
- The moratorium is not obligatory and can be applied after request from the obligor presenting the consequences from the pandemic for the debt. The decision of the application must be taken before 31 March 2021.
- The conditions of the moratorium are standardized for all obligors affected by the pandemic. Separate moratorium scheme with different conditions can be elaborated for specific group of obligations, for example consumer loans, mortgage loans, etc.
- The moratorium makes amendments only in the schedule of the payments. Its objective is to resolve problems with short-term liquidity shortages. It can postpone or reduce payments for specified period of time. This may extend the duration of the loan payment or may lead to higher payments after the end of the moratorium. The other conditions of the loan should stay unchanged, especially the interest rate. The only reason for changes in the interest rate of the loan payment scheme can be the need of compensation for losses due to payment delays as a result of applying the moratorium. Such changes in the interest rate would neutralize the impact of the net present value of the credit obligation. Change in the interest rate related to changes in the benchmark rate is not considered a change in the terms and conditions of the loan.
- The moratorium is not applicable for new loans granted after the date of the moratorium. In this context, the use of existing credit lines and renewal of revolving loans is not a new loan. This constraint aims to ensure that the moratorium is used for payment problems arising as a result of the COVID-19 pandemic. The original date on which the moratorium was launched should be used for making the decision for treatment of the loan according to the conditions of the general payment moratoria.
- Regardless of the application of the conditions of the moratorium for obligors with payment delays as a result of the pandemic, credit institutions are allowed and encouraged to grant new loans to both new and existing clients. The new lending should be based on adequate individual assessment of the creditworthiness of the borrower. The application of the moratorium for the new loans should not be necessary.

The postponement of the loan payments in the future means higher risk of insolvency for the borrower. This can influence bank's capital adequacy and overall stability. The exceptional circumstances created by the lockdowns strengthen the need for proper risk assessment. For limitation of the risk faced by banks, the EBA puts constraint on the length of the postponement of the payments in future – the general payment moratoria can be up to 9 months. This means that loan payments can be postponed several times but totally for 9 months.

The institutions have to identify all obligors who make use of the moratorium. Institutions should

⁸ European Banking Authority, 2020

also assess borrower's unlikeliness to pay in relation to the general payment moratoria because this would indicate the obligors under a moratorium that have long term solvency issues. All actions taken by institutions under the general payment moratoria should be made in a transparent public manner.

Other measures recommended by the European Banking Authority are:

- Guidelines on Covid -19 measures reporting and disclosure - presenting reporting and disclosure requirements to monitor the use of payment moratoria;
- Guidelines on loan origination and monitoring – their aim is to present standards for credit risk taking and granting loans of high credit quality;
- Guidelines on Credit Risk Mitigation for institutions applying the internal rating- based approach with own estimates of loss given defaults (LGDs) – clarifying the credit risk mitigation framework.

In December 2020 the European Commission publishes an action plan for “Tackling non-performing loans (NPLs) in the aftermath of the COVID-19 pandemic”. The focus of this plan is on development of the secondary markets for distressed assets. This will allow banks to move the NPLs off their balance sheets into asset management companies (AMCs). The cooperation of national asset management companies at EU level is encouraged.

Measures taken in Bulgaria.

The first version of the Guidelines on legislative and non-legislative moratoria on loan repayments is published on 4 April 2020, amended on 26 June 2020 and on 2 December 2020. The Emergency Status in Bulgaria is announced on 13 March 2020. The Bulgarian legislator creates measures for alleviation of the debtors immediately after the announcement of the Emergency Status.

According to the Bulgarian *Act on the measures and actions during the state of emergency declared with the decision of the National Assembly of 13 March 2020*⁹ no statutory interest is accrued for debtors in credit agreements and other forms of financing and consequences from payment delays are not applied until cancellation of the state of emergency. The decision of the National Assembly of the Republic of Bulgaria specifies that the state of emergency is until 13 April 2020¹⁰ and later this term is extended until 13 May 2020.¹¹ Simultaneously, the non-accumulation of statutory interest for debtors is prolonged – up to two months after the cancellation of the state of emergency which means until 13 July 2020.

Debtors are exempted from the statutory interest but not from the interest rates according to their credit contracts. The statutory interest is moratory, punitive interest; it is not agreed but is provided for by law. It is regulated in the Obligations and Contracts Act: “In case of non-performance of a monetary obligation, the debtor shall be liable for damages to the amount of the interest accrued from the date of default ... The rate of interest is set forth by the Council of Ministers.”¹²

The statutory interest gives compensation to the lender for payment delays from the debtor. The annual amount of the statutory interest for overdue monetary liabilities in Bulgaria is the amount of the base interest rate of the Bulgarian National Bank plus 10 percentage points. The daily amount of the statutory interest for overdue monetary obligations is equal to 1/360 part of the annual amount.¹³ The base interest rate of Bulgarian National Bank for 2020 is 0,00%¹⁴ which means that the annual statutory punitive interest for debtors is 10%.

Other government measures for the period of the state of emergency in the country and up to two months after its cancellation with particular importance for the stability of the financial sector are:

- The enforcement proceedings are suspended;
- All announced public sales and introductions into possession announced by public and private bailiffs are suspended;
- Distrains are not allowed either upon individuals' bank accounts or to salaries and pensions.

On 19 March 2020, the Bulgarian National Bank announces a package of measures aimed primarily at further strengthening the capital and liquidity of banks in the context of the COVID-19 pandemic estimated at BGN 9.3 billion. They include:

- capitalization of the profit generated in the banking system in 2019 at the amount of BGN 1.6 billion. As a result, some of the banks in the Bulgarian banking system will not be able to distribute dividends to their shareholders and will have to reinvest all their profits;

⁹ Act on the measures and actions during the state of emergency declared with the decision of the National Assembly of March 13th, 2020, and on overcoming the consequences, 2020

¹⁰ Decision to declare a state of emergency, SG 22/ 13 March 2020 r.,

¹¹ Decision for extension of the term of the declared state of emergency, SG 33/ & April 2020 r.

¹² Obligations and contracts act, 1950, Art. 86 ,

¹³ Resolution № 426 of the Council of Ministers of 18 december 2014 to determine the amount of statutory interest on overdue monetary obligations, SG 106/ 23 December 2014 r.

¹⁴ Bulgarian National Bank Statistics, Base Interest Rate, 2020.

- a cancellation of the planned increases of the countercyclical capital buffer applicable to local credit risk exposures, and maintaining its level of 0.5% in the second half of 2020 and in 2021. Maintaining the current level of the buffer aims to contribute to maintaining the resilience of the banking system against potential adverse trends in the economic environment, credit risk losses and pressure on the profitability and capital position of credit institutions ;
- reduction in commercial banks' foreign exposures which will strengthen the liquidity of the Bulgarian banking system with BGN 7 billion .

The preparation and coordination of general payment moratorium in Bulgaria is performed by the Association of Banks in Bulgaria (ABB) which currently represents the banks in Bulgaria.

On 3 April 2020 the Governing Council of the Bulgarian National Bank (BNB) makes a decision¹⁵ for compliance with the adopted by the European Banking Authority (EBA) Guidelines on legislative and non-legislative moratoria on loan repayments (EBA/ GL/2020/02). BNB requires from the commercial banks to propose in five working days a draft of rules on private moratorium on bank loan payments in relation to the COVID-19 situation. On 9 April 2020 BNB approves the "Procedure for Deferral and Settlement of Liabilities Payable to Banks and their Subsidiaries – Financial Institutions in relation to the state of emergency enforced by the National Assembly on 13 March 2020 as a result of the COVID-19 pandemic" /Procedure for deferral/.^{16,17} With decisions made on 9 July 2020 and on 11 December 2020, after a proposal made by the Association of Banks in Bulgaria, BNB twice approves extension of the deadline for submitting requests by bank clients for deferral of their liabilities.

For deferral of liabilities in Bulgaria can apply borrowers with difficulties in payment of their obligations as a result of the COVID-19 pandemic. All borrower's obligations before 1 March 2020 should have been regularly paid and with no more than 90 days past due. Loan payments can be postponed for up to 9 months. The period of postponement should expire not later than 31 December 2021. Requests for deferral can be made by bank clients until 23 March 2021 and the creditor must take its decision not later than 31 March 2021.

The procedure offers three deferral mechanisms:

Mechanism 1 – deferral of principal and interest payments for up to 9 months, but not later than 31 December 2021. After the period of postponement of credit payments, a new payment plan should be elaborated and the outstanding debt should be repaid in a term up to 9 months longer than the initial one.

Mechanism 2 – deferral of principal payments for up to 9 months but not later than 31 December 2021. The bank client makes interest payments according to the loan contract. After the period of postponement of principal payments, a new payment plan is prepared and the outstanding debt should be repaid in a term up to 9 months longer than the initial one.

Mechanism 3, applicable to revolving products – payments and limits concerning revolving products can be postponed for up to 9 months but not later than 31 December 2021.

The type of liability deferral mechanism is chosen with common decision of both parties. The creditors can also elaborate individual deferral schemes for the individual needs of their customers.

According to data from BNB reflecting the state of the banking system in Bulgaria up to the end of March 2021¹⁸, totally of 131 576 applications are submitted under the Procedure for Deferral and Settlement of Liabilities Payable to Banks and their Subsidiaries - financial institutions, with a gross value of liabilities of BGN 9,7 billion. From these 110 849 applications are approved and the gross value of the approved deferrals is 92,6% of the total value (See table 6.) The value of NPLs decreases on yearly basis but their share in the gross book value of all credits and advances increases to 7,4% at the end of 2020. The share of NPLs in the gross book value in June 2021 slightly decreases to 6,7 %. (See Table 7)

¹⁵ Bulgarian National Bank, 2020, Press release_3 April 2020

¹⁶ Bulgarian National Bank, 2020, Press release_10 April 2020

¹⁷ Association of Bank in Bulgaria, 2020

¹⁸ Bulgarian National Bank Supervision Statistics, 2020

Table 6. Information under the Procedure for Deferral and Settlement of Liabilities payable to Banks and their Subsidiaries (Procedure for Defferal)

	30.6.2020		30.9.2020		31.12.2020		31.3.2021	
	number	value (thousand lv.)	number	value (thousand lv.)	number	value (thousand lv.)	number	value (thousand lv.)
submitted requests	118 584	9 771 986	124 950	9 997 531	108 211	8 759 762	131 576	9 700 951
approved requests	98 499	8 117 145	106 481	9 023 161	89 478	8 073 698	110 849	8 983 106
% approved	83,1	83,1	85,2	90,3	82,7	92,2	84,2	92,6

Source: BNB

Table 7

Non-performing loans and advances and accumulated impairment (thousand lv./BGN)							
Credits and advances							
	December 2016	December 2017	December 2018	December 2019	December 2020	March 2021	June 2021
Gross book value	77 517 396	81 547 552	89 028 962	94 454 735	76 678 451	80 231 080	82 083 843
Performing	67 556 371	73 255 301	82 234 014	88 334 418	70 967 310	74 533 323	76 570 400
Non-performing	9 961 025	8 292 251	6 794 948	6 120 317	5 711 141	5 697 757	5 513 443
With possibility of non-payment, which are regular or overdue <= 90 days	2 966 597	2 638 392	2 247 295	2 185 552	2 388 803	2 376 069	2 240 751
Overdue > 90 days <= 180 days	519 109	373 257	359 799	454 544	302 170	354 726	436 089
Overdue > 180 дни	6 475 319	5 280 602	4 187 854	3 480 221	3 020 168	2 966 962	2 836 603
Non-performing loans as % of the Gross book value	12,9	10,2	7,6	6,5	7,4	7,1	6,7
Accumulated impairment, accumulated changes in fair value due to credit risk and provisions	-5 270 585	-4 379 368	-4 090 453	-3 617 288	-3 586 062	-3 586 079	-3 598 029

Source: BNB

This official statistic of NPLs in Bulgarian banking system does not include the value of the loans approved under the procedure for deferral according to the moratoria on loan repayments. Excluded are also the non-performing "fast loans" granted by non-banking financial institutions. The percentage of approved requests under the Procedure of Deferral is continuously growing and reaches 84,2 % in March 2021.

According to the application of the International Financial Reporting Standard 9 (IFRS 9), the banks by using their own models make forecasts for potential impairments for the expected credit losses due to COVID-19 and accumulate preliminary provisions before the potential negative effect on the loan impairments occurs. Those actions, in accordance with IFRS, affect the amount of the impairments, made by banks in the course of 2020.

Bulgarian National Bank accepts decisions for applying the guidelines issued by the European Banking Authority:

- Guidelines on Covid -19 measures reporting and disclosure;
- Guidelines on loan origination and monitoring;
- Guidelines on Credit Risk Mitigation for institutions applying the internal rating- based approach with own estimates of loss given defaults (LGDs).

Moreover, as a result of the continuing uncertainty and the challenges related to the economic effects of the spread of COVID-19 and the imposed restrictive measures, BNB adopts a decision to maintain the macroprudential measure for capitalization of the full profit of banks for 2020.

Loans granted by non-bank financial institutions.

The BNB credit statistics presents data about the number and amount of granted loans and non-performing loans concerning only credit institutions (commercial banks). In Bulgaria, a significant share of short-term loans, the so-called "fast loans", are granted by non-bank financial institutions. These are companies specialized in lending, which provide loans with funds that are not raised through public

charging of deposits or other repayable funds. There is a public register of these non-bank financial institutions operating on the territory of the Republic of Bulgaria, supported by the Bulgarian National Bank.

Usually, clients of such companies are people with bad credit history, who cannot apply for significantly cheaper financing from the commercial banks, or do not want long-term financial commitment. Banks also will not give financing to these clients because they do not meet the creditworthiness requirements. Often the clients of the non-banking financial institutions for "fast loans" are in the "shadow economy" sector.

In the National Charter of Undeclared Employment the Bulgarian Association of Industrial Capital (BICA, 2021) indicates that the undeclared employment in the Bulgarian economy according to employers is 25.3%, and according to employees about 33%. Many employees pay their insurances on the basis of much lower wage than they actually receive, thus paying lower social security payments by the employee and the employer. A large number of employees cannot prove their official income and therefore cannot meet bank requirements.

The reported statistics about the "fast loans" is published by BNB and formed on the basis of data provided by the companies specialized in lending. The volume of the granted "fast loans" has a tendency to increase over the last five years. At the same time, in the period 2016-2019 the volume of non-performing fast loans decreases. It is the increase in the volume of fast loans and the decline in the share of non-performing fast loans that indicates that there is a large share of solvent borrowers who, upon different reasons, prefer non-banking financial institutions to cover their needs for additional funds.

At the end of December 2020, the loan receivables of the companies specialized in lending are BGN 3.073 billion (2.6% of GDP) compared to BGN 2.898 billion (2.4% of GDP) at the end of December 2019. At the end of December 2020, the amount of non-performing fast loans is BGN 297.4 million. It increases by 57.8% (BGN 109.0 million) compared to the end of December 2019.¹⁹ In the first half of 2021 lending of non-banking financial institutions in Bulgaria is growing and the percentage ratio of their NPLs is too high – 9.1%. (See Table 8)

Table 8

RECEIVABLES OF COMPANIES SPECIALIZED IN LENDING ¹							
thousand lv. /BGN							
	31.12.2016	31.12.2017	31.12.2018	31.12.2019	31.12.2020	31.3.2021	30.6.2021
Total	2 508 929	2 747 987	2 436 082	2 897 822	3 072 541	3 128 493	3 346 439
With Maturity	2 100 247	2 405 561	2 231 120	2 709 350	2 775 021	2 834 658	3 043 213
up to 1 year	488 263	564 918	495 597	672 812	708 899	703 568	792 793
1 to 5 years	727 559	787 822	663 891	755 539	747 174	752 140	769 576
over 5 years	884 425	1 052 821	1 071 632	1 280 999	1 318 948	1 378 950	1 480 844
Non-performing²	408 682	342 426	204 962	188 472	297 520	293 835	303 226
% NPLS	16,3	12,5	8,4	6,5	9,7	9,4	9,1

¹ The list of reporting is updated in accordance with the Register of Financial Institutions under Art. 3a. of the Credit Institutions Act.

² Non-performing loans under Regulation (EU) № 680/2014 in relation to applicable accounting standards.

Source: BNB

The companies specialized in lending have developed and applied a unified approach to their borrowers affected by COVID-19 from the very beginning of the state of emergency in the country. Some of the measures include full or partial deferral of contributions, as well as renegotiation of terms of repayment, for clients affected by the pandemic, in particular: customers sick with COVID-19, customers that have lost their job as a result of the pandemic, or are in unpaid leave. The measures are valid for the period of state of emergency in the country and applied on the basis of providing documents certifying the existence of reasons for deferral of contributions. The measures are available to customers who have regularly repaid their loans until the state of emergency.

If the non-performing loans of Bulgarian banking and non-banking institutions are summed, the result shows that the total value of NPLs continuously decreases over the years. Even at the end of 2020, after the burst and the development of the pandemic, the total value of NPLs is over BGN 300 million less than their value at the end of 2019. In 2021 the amount of NPLs decreases. (See Table 9)

¹⁹ Bulgarian National Bank Statistics, 2020. *Companies specialized in lending*

Table 9

Non-performing loans banks and non-banking institutions (thousand lv./BGN)							
	December 2016	December 2017	December 2018	December 2019	December 2020	March 2021	June 2021
Non-performing Loans Credits of Commercial Banks	9 961 025	8 292 251	6 794 948	6 120 317	5 711 141	5 697 757	5 513 443
Non-performing Loans Companies Specialized in Crediting	408682	342426	204962	188472	297 520	293 835	303 226
Total	10 369 707	8 634 677	6 999 910	6 308 789	6 008 661	5 991 592	5 816 669

Source: BNB

CONCLUSION

Bulgarian authorities - the government and the Bulgarian National Bank – have taken adequate and timely measures for alleviation of debtors in the break-out of the COVID-19 pandemic and the following economic crisis. New waves of infection and new measures lie ahead. There are enormous uncertainties and expected big risks about the solvency of individuals and legal entities. Nevertheless, the Bulgarian financial system exceeds the capital adequacy requirements.

The amount of NPLs in Bulgaria has not increased significantly from the beginning of the pandemic. Undoubtedly, the reason for this is the provided payment relief for obligors affected by the COVID-19 pandemic. The Procedure for deferral and settlement of liabilities

allows suspension or postponement of payments within a specified limited period of time and not later than 31 December 2021. The obligors have opportunity to return to regular payments after the situation is back to normal. The European Banking Authority defined this moratorium as a general preventive measure that applies to a large group of obligors. Bulgarian National Bank together with the Association of Banks in Bulgaria takes into consideration all provisions of the moratoria. Furthermore, BNB has adopted all guidelines addressed by the European authorities to credit institutions concerning debt burden relief and mitigating risk in times of COVID-19 pandemic. The official position of the non-banking financial institutions in Bulgaria is that they apply an individual approach to each obligor who faces payment problems.

The payment moratoria introduced in Bulgaria and in other EU countries is a temporary decision which hides the actual amount of NPLs caused by insolvency during the pandemic. Therefore, no definite conclusions can be made in terms of the NPLs formation. After the expiration of the moratorium an increase in the amount of NPLs is expected. The performed analysis proves that if unemployment in Bulgaria increases, bad loans will rise. Unlike other countries, the performed regression analysis proves that GDP growth in Bulgaria leads to an increase of non-performing loans, albeit by a small percentage. This can be explained with ineffective risk measurement and too long insolvency procedures.

In these challenging times Bulgaria successfully joins the European Exchange Rate Mechanism (ERM II) in July 2020, taking another step toward adopting the euro. It is expected that ERM II membership and the Next Generation EU funds will facilitate further reforms in Bulgaria. Facilitation may come not only for the country but also for Bulgarian obligors. The capital adequacy ratios in Bulgaria significantly surpass EU requirements. Though, the unsatisfactory insolvency framework is one of the reasons for relatively high values of non-performing loans in the country. Bulgaria needs to follow the best practices in insolvency regimes in order to guarantee efficiently functioning financial system.

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Appendix 1

```
GET DATA /TYPE=XLSX
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/SHEET=name 'Лист1'
/CELLRANGE=full
/READNAMES=on
/ASSUMEDSTRWIDTH=32767.
EXECUTE.
DATASET NAME DataSet1 WINDOW=FRONT.
REGRESSION
/MISSING LISTWISE
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT NPLs
/METHOD=ENTER GOVDEFICITSURPLUS UNEMPLOYMENT GDPGROWTH.
```

Variables Entered/Removed^b

Model	Variables Entered	Variables Removed	Method
1	GDP GROWTH, UNEMPLOYMENT, GOV DEFICIT/SURPLUS	.	Enter

- a. All requested variables entered.
- b. Dependent Variable: NPL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,988 ^a	,976	,964	,8129

- a. Predictors: (Constant), GDP GROWTH, UNEMPLOYMENT, GOV DEFICIT/SURPLUS

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	160,364	3	53,455	80,890	,000 ^a
	Residual	3,965	6	,661		
	Total	164,329	9			

- a. Predictors: (Constant), GDP GROWTH, UNEMPLOYMENT, GOV DEFICIT/SURPLUS
- b. Dependent Variable: NPLs

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,782	,805		,971	,369
	GOV DEFICIT/SURPLUS	-,117	,146	-,066	-,802	,453
	UNEMPLOYMENT	1,232	,093	,954	13,208	,000
	GDP GROWTH	,414	,123	,245	3,353	,015

ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	160,364	3	53,455	80,890	,000 ^a
Residual	3,965	6	,661		
Total	164,329	9			

a. Dependent Variable: NPLs

Multiple Regression Model

$$NPLs = b_0 + b_1 * GOV DEFICIT/SURPLUS + b_2 * UNEMPLOYMENT + b_3 * GDP GROWTH + e_i$$

H₀: There is not linear dependence between NPLs and GOV DEFICIT/SURPLUS, UNEMPLOYMENT, GDP GROWTH. The model is not adequate.

H₁: There is a regular multiple dependence between NPLs and GOV DEFICIT/SURPLUS, UNEMPLOYMENT, GDP GROWTH. The model is adequate.

$$\alpha = 0,05$$

$$F = 80,890 \quad Sig = 0,000$$

$$Sig = 0,000 < \alpha = 0,05 \rightarrow H_0 \text{ is rejected}$$

There is a regular multiple dependence between NPLs and GOV DEFICIT/SURPLUS, UNEMPLOYMENT, GDP GROWTH. The model is adequate and it can be used for research.

$$NPLs = 0,782 - 0,117 * GOV DEFICIT/SURPLUS + 1,232 * UNEMPLOYMENT + 0,414 * GDP GROWTH$$

R = 0.988, 0,7 < R = 0.988 < 1, → strong multiple dependence of NPLs of GOV DEFICIT/SURPLUS, UNEMPLOYMENT, GDP GROWTH.

Statistical significance of coefficients:

GOV DEFICIT/SURPLUS

H₀: The coefficient GOV DEFICIT/SURPLUS is statistically insignificant.

H₁: The coefficient GOV DEFICIT/SURPLUS is statistically significant.

$$\alpha = 0,05$$

t = -0,802 Sig = 0,453 > α = 0,05 → H₀ is accepted and the coefficient GOV DEFICIT/SURPLUS is statistically insignificant.

UNEMPLOYMENT

H₀: The coefficient UNEMPLOYMENT is statistically insignificant.

H₁: The coefficient UNEMPLOYMENT is statistically significant.

$$\alpha = 0,05$$

t = 13,208 Sig = 0,000 < α = 0,05 → H₀ is rejected and the coefficient UNEMPLOYMENT is statistically significant.

GDP GROWTH

H₀: The coefficient GDP GROWTH is statistically insignificant.

H₁: The coefficient GDP GROWTH is statistically significant.

$$\alpha = 0,05$$

t = 3,353 Sig = 0,015 < α = 0,05 → H₀ is rejected and the coefficient GDP GROWTH is statistically significant.

Both coefficients UNEMPLOYMENT and GDP GROWTH are positive, consequently there is a straight one-way dependence – increase of UNEMPLOYMENT and GDP GROWTH leads to an increase of NPLs. Increase of UNEMPLOYMENT with 1% leads to 1,232% increase of NPLs. Increase of GDP GROWTH with 1% leads to 0,414 % increase of NPLs.

Appendix 2
Statistical data

	NPLs %	GOV DEFICIT/SURPLUS %	UNEMPLOYMENT %	GDP GROWTH %
2011	14,9*	-2	11,3	2,4
2012	16,6*	-0,3	12,3	0,4
2013	16,8*	-0,5	13	0,3
2014	16	-5,4	11,4	1,9
2015	14,5	-1,7	9,2	4
2016	12,8	0,2	7,6	3,8
2017	10,2	1,2	6,2	3,5
2018	7,7	2	5,2	3,1
2019	6,5	2,1	4,2	3,7
2020	5,9	-3,4	5,1	-4,2

Source: Eurostat*

*NPLs for 2011, 2012, 2013 - World Bank Data, no data in Eurostat Statistics