THE USV ANNALS OF ECONOMICS AND PUBLIC ADMINISTRATION | VOLUME 18, ISSUE 2(28), 2018

BANK ASSETS QUALITY. NON-PERFORMING LOANS IN ROMANIA

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Abstract:
The importance of having as a volume of non-performing loans as low as possible derives from the role and functions that banks have in the economic life of a country. That is why bank management is based on the analysis of the following indicators: Capital, Assets, Management, Earnings and Liquidity. Banking risk indicators, according to EBA: capital risks, liquidity and financing risks and environmental risks are calculated and monitored more than ever. This paper reviews the evolution of non-performing loans in the Romanian banking sector during the period 2010-2017. Empirically we identify the causes of the occurrence of non-performing loans and the concrete data to help us demonstrate the above.

Key words: assets quality, non-performing loans, credit risk, bank management

JEL classification: G21, G32

1. THEORETICAL CONSIDERATIONS

Often, the term bank is mistake for credit institution, even if, as it is known, banks are only a part, though significant, of the structure of credit institutions.

According to the legislation on credit institutions and capital adequacy, in force since 1 January 2007, GEO no. 99/2006 defines the banking activity as *„attraction of deposits or other repayable funds from the public and granting loans on own account”*, the credit institution being defined as follows:
„An undertaking whose activity consists in the attraction of deposits or other repayable funds from the public and granting credits on its own account.” [1]

Credit institutions can be organized and can operate in one of the following categories: banks, credit co-operative organizations, savings and loan banks for the housing stock, mortgage banks.

The Romanian banking system has witnessed a spectacular quantitative development over recent decades, through the transition from an excessively centralized banking system, with most banking functions concentrated in the NBR operations and some specialized banks, towards a banking system adapted to market economy requirements, and, implicitly, financial globalization. Fundamentally, the banking system, although classified according to a set of criteria, is structured on two levels. Thus, in the current banking landscape, alongside the central bank, there are banks of second rank, also called commercial or deposit banks and specialized banks.

In the sense, banks are clearly a category of entities essential / fundamental for the functioning and prosperity of national economies and of the contemporary global economy, an important *„link”* in the *„chain”* of socio-economic development, as they have a *„specific share”* in the total financial assets of the economy.

One of the main tasks of banks is to grant credits that allow companies to invest and create jobs. Credits also allow individuals to purchase durable goods produced in the real sector.

Bank management is based on the analysis of the following indicators: Capital (Capital adequacy); Assets (assets quality); Management; Earnings (Profitability) and Liquidity.

Asset management starts from the premise that the bank's main asset, represented by loans, does not always easily turn into liquidity, especially when the economy is in recession. The bank earns interest income from these loans.

Therefore, it is assumed that granting of loans is not risk-free, because the bank can never be sure that borrowers will repay the loan and pay interest at the agreed term. If the borrower terminates the loan repayment or the interest payment, the bank has to classify the loan after a certain period into the *„non-performing loans"* category.

The balance sheet, a clear expression of balance at the level of bank entities, shows, in its structure and dynamics, that asset and liabilities management is, after a certain period of time, an integral part of the bank management process.

Thus, the key objectives in the bank asset and liability management (MAP) are interdependent, reducing, if one can say so, to: *„increasing the bank's investment income corroborated with lowering costs of attracted sources, maintaining an acceptable risk and complying with regulations in force on capital adequacy and bank liquidity."* [2]

In the existing relationship between bank administration and banking management, it is argued that, although theoretically we tend to relate equally to the two concepts, it seems that practice shows us that the difference between the two is, however, a fundamental one, since bank administration (through the three specific hypotheses: risk management, asset and liability management and transparency of public information) is an integral part of bank management (a concept that requires a certain policy of behaviour and orientation of human actions for optimal and legal development of banking business, in a climate of stability and growth in its own value, reflected by asset growth and public confidence in the bank. [3]

In the above-mentioned sense, it is inferred that the importance of the risks (hence their implicit management and the reduction of the negative results as a result of the exposure to risk) inherently influences the bank performance, so its dynamics and development.

The risk, according to DEX 2009, is defined as a possible danger or the possibility of getting into trouble, of having to face a difficulty or to bear a loss. [4]

Banking risk is the element of uncertainty that may affect the activity of the banking corporation or the conduct of its economic and financial operation. [5]

Although the literature in the field shows that there are different banking risk classification modes / criteria defined as losses associated with adverse outcomes, they are not stable / fixed but have a wide variety, being structurally related to changes in the environment and the banking universe, its size and dynamics. Banking risk is structured on the following components: *„uncertainty"* about the occurrence of a future event and *„exposure to loss"*, as shown in the figure below:

Figure no. 1. Components of banking risk

If both components are not present, we cannot talk about risk. For example, a lending bank faces the uncertainty of repayment at maturity, despite the guarantee, due to the possibility of reducing its value over time and / or the size of its execution costs. The bank takes the risk because it is exposed to uncertainty.[6]

Next, we present bank risk analysis indicators, or the so-called *„banking risk indicators"*, in the EBA's sense, a reality structured on three components: capital risks, liquidity and funding risks and environmental risks:

Table no. 1. Components of risk, types of risk and risk factors in EBA optics

	Types of risk	Risk factors/vulnerabilities
CAPITAL	Credit risk	⌑ non-performing loans remain numerous ⌑ there are impediments for the reduction of NPL ⌑ the risk of high levels of indebtedness
	Market risk	⌑ the risk of increasing volatility ⌑ market liquidity ⌑ the revaluation potential
	Operational risk	⌑ cyber attacks ⌑ cost pressure as an obstacle to building sound ICT systems ⌑ outsourcing
	Concentration risk	⌑ environment with low interest rate ⌑ accumulation of concentrations in certain classes of assets
	Reputational and legal risk	⌑ unsafe risks due to deviations
	Profitability risk	⌑ the sustainability trend has to be confirmed ⌑ income is determined by unsustainable components
LIQUIDITY AND FUNDING	Access to funding and maturity distribution	⌑ vulnerability due to volatility
	Funding structure	⌑ potential challenges to achieving MREL
ENVIRONMENT	Regulatory and legal environment	⌑ implementation of MREL, Brexit;
	Fragmentation	⌑ asset quality; ⌑ return; ⌑ fair regulatory conditions;
	Sovereign risk	⌑ political risk ⌑ excess of debts

Source: European Banking Authority, *Risk Dashboard Q4*, 2017; valid online on: https:// www. eba. europa. eu/ documents/10180/2175405/EBA+Dashboard+-+Q4+2017.pdf

A performing loan will provide the bank with the interest income it needs to earn profits and grant new loans, which is not generally the case for a non-performing one.

In general, European supervisory authorities consider that a credit is non-performing if there are indications as to the likelihood that the borrower will not reimburse the loan due to financial difficulties or when more than 90 days have passed without the borrower having paid the agreed rates.

This can happen, for example, when a person loses his/her job and therefore cannot repay a mortgage under the agreed conditions or when a company is facing financial difficulties.

In the worst case scenario, the borrower is totally unable to repay the loan and the bank has to adjust the amount of credit on its balance sheet - sometimes even up to zero. This operation is often referred to as *„removing from a book"* of a credit.

Unfortunately, non-performing loans are a daily reality for banks. In order to be prosperous in the long term, a bank must keep non-performing loans at a minimum. If the amount of non-performing loans exceeds a certain level, the bank's profitability is impaired, as the earnings from the lending activity are lower. Banks need to save money, or make a provision as a safety measure for situations where they need to reduce or cancel the amount of the loan at a given time.

Both the reduction of revenue and the saving of funds, for the worst case scenario, result in a reduction of funds available for new loans, which further reduces the bank's profits.

A bank with an excessive amount of non-performing loans cannot properly provide businesses with the loans they need to invest and create jobs. A situation where a large number of banks are confronted with this problem which on a large scale affects the economy as a whole and, implicitly, the members of society. Reducing the companies' investments and reducing the number of new jobs leads to a downturn in economic growth.

Banks should avoid from the outset granting excessively risky loans by properly assessing the creditworthiness of borrowers. It is also important to introduce a proper monitoring system to enable the bank to detect at an early stage when the borrower is facing financial difficulties and to be able to solve this problem. In some cases, simply advising the client on his / her financial situation may be sufficient to avoid credit becoming non-performing.

Banks have a range of options available to reduce the level of non-performing loans in their accounting records. One possibility is the renegotiation with the borrowers of the terms of the loan agreements. This could mean, for example, giving a longer time to borrowers to repay the loan.

Such a measure could allow a person who has lost his/her job or a company facing temporary financial problems to survive financially and ultimately to repay his loan.

A bank may also decide to sell non-performing loans to investors, which usually request an update of their value. The bank may experience a loss as a result of such a transaction, but removing it completely from the accounting records would generally lead to even greater losses.

If none of the attempts to find a solution is successful, for example because the borrower is insolvent, banks can resort to legal ways to try to recover at least some of the funds.

Addressing the problem of non-performing loans in the European banking system is one of the key priorities of the ECB's supervisory activity.

2. CREDIT RISK AND BANK ASSETS IN THE LIGHT OF THE ANALYSIS INDICATORS

Risk through credit activity means the possibility of future events occurring in clients' activities with negative effects in terms of loan recovery or interest collection. [8]

Asset quality indicators are used to highlight the performance of a bank's assets as well as the capacity of its revenue-generating activity. In international practice, for example, these indicators are used to identify asset quality issues across the portfolio and are calculated using the level of non-performing loans (NPL).

Non-performing loans are payment commitments that the client, whether natural person or legal entity, does not comply with, thus generating overdue loans and unpaid interest that will have negative effects on the bank asset, solvency and expenses. That is why a **non-performing loan** is an ordinary loan that can or is already recorded by banks as a loss-making loan, which is why these types of loans are considered to be one of the main causes that lead to the stagnation of the national economy.

There are various definitions of this term depending on the type of loans and the policy of the lender. When the payment of the rate and interest rate of a credit is overdue for 90 days or more, the loan is considered to be non-performing and the borrower in default.

Non-performing loans can be defined as those loans to clients whose financial and economic situation, damaged in various causes at various stages of the lending process, no longer provides conditions for full or partial repayment of the credit or for the payment of interest and related commissions.

However, the level of these loans should be as low as possible, due to the impact on the bank's profitability. This goal can only be achieved through a prudent lending policy, based on the economic conjuncture and the financial environment, as well as a proper risk rating and appreciation.

A loan may become non-performing at any stage of the lending process, including the analysis phase, due to causes dependent or independent of the banking practice, but at this stage it does not manifest itself in practice, it must be passed into the non-performing category when it becomes a certainty, so when its recovery becomes a problem for the bank or when the credit clients no longer provide repayment or interest repayment terms, or both.

The existence of non-performing loans, as a separate category of credits, as well as their negative effects, required separate management of these types of loans and the classification into a portfolio of non-performing loans. When these credits arise, there are also a series of adverse effects felt by the bank, by the client and also at macroeconomic level. Simply listing these negative effects of non-performing loans shows us why banks need to conduct a performing lending activity.

Since there is no standard definition of NPL, in order to improve comparability of the data used, the IMF Compilation Guide [10] recommends that loans (and other assets) be classified as NPLs when: principal and interest payment ratios are overdue for three months (90 days) or more, or interest for three months (90 days) or moreover when they have been capitalized (reinvested in the principal amount), refinanced or redeemed (i.e. payment has been postponed by agreement). The 90 days criterion is the most common practice in different countries for determining non-performing loans.

In addition, non-performing loans will also include those loans with a debt service of less than 90 days but which, under national law, are recognized as non-performing - in the sense that there is reason to classify a loan as non-performing even without incurring arrears for over 90 days, for example in bankruptcy.

The calculation of the following two indicators is considered relevant for asset quality analysis:

1. The share of non-performing loans in total assets: highlights assets that do not compete with the performance of the bank, a large volume of which leads to losses with major effects on the bank's capital:

$$\text{The share of NPL n total assets} = \frac{\text{non - performing loans}}{\text{total assets}} \text{ x } 100$$

2. The share of non-performing loans in total loans: is calculated as the ratio between the amount of non-performing loans and the total amount of loans (including non-performing loans before deducting specific provisions for loan losses):

$$\text{The share of NPL in the total loan portfolio} = \frac{\text{non - performing loans}}{\text{total assets}} \text{ x } 100$$

The indicator shows the quality of the loan portfolio in the banking sector. A large share or a rising trend indicates a deterioration in the quality of the loan portfolio and hence an increased risk of insolvency. In the calculation of the report, loans are used at gross (accounting) value.

At present, the best known asset quality indicators and prudence intervals are set by EBA, and they are as follows:

Table no. 2. Credit risk analysis indicators and EBA safety intervals

	Analysis indicators	Explanations	Safety intervals
CREDIT RISK	**Rates of non-performing loans and advances**	Non-performing loans and advances / Total exposures from loans and advances	**<3%**
			[3%-8%]
			>8%

	Provision coverage of non-performing loans	Impairment adjustments for non-performing loans / Non-performing loans and advances	**>55%**
			[40%-55%]
			<40%
	Rate of credits and advances with restructuring measures	Exposures from loans and advances with restructuring measures / Total exposures from loans and advances	**<1.5%**
			[1.5%-4%]
			>4%

Source: European Banking Authority, *Risk Dashboard Q4,* 2017

According to EBA, a level of non-performing loans of over 8% of total credits falls into the red band; a level of non-performing loans of 3-8% falls into the yellow band; a level of non-performing loans of less than 3% of total credits falls into the green band.

Taking into account the methodological indications of the EBA and the evaluation intervals set by this one, the NBR performs similar analyses of the national banking system on the basis of the information reported by individual banks. These analyses finally highlight the quality of the assets of the national banking system.

Before granting the loan, creditors have to verify that borrowers can cope with unfavourable developments in interest rates, exchange rates and available income, and the maximum degree of indebtedness in the event that those risks arise must not exceed the explicitly mentioned thresholds.

In conclusion, the bank assets quality is of great importance for the good course of banking activity. The management of a whole portfolio of a bank can be referred to as the management of assets and liabilities.

3. CAUSES OF NON-PERFORMING LOANS IN ROMANIA

The occurrence of non-performing loans, their dynamics are related to the existing economic situation, which may be different from one sector of activity to another, and the tightening of monetary conditions can accentuate the occurrence of this type of loan.

The economic areas underlying such a process are those for which the banking system finances both a significant part of their working capital and the demand for the products / services they provide. The most eloquent example is given by the construction sector, where bank loans provide both real estate developer financing and most of the resources needed to buy the apartments and commercial spaces so created by economic agents.

One of the major problems of the Romanian banks after 2010 was the recording of non-performing loans. The non-performing loans reached 31.5% of total loans in 2013, registering high values in 2011, 2012, 2014 and even 2015. Over the last years (2016, 2017), non-performing loans have declined, reaching 6.4% of total loans at the end of December 2017.

Deepening the factors that can determine the level of non-performing loans can lead to separate credit assessments of the companies and the population. From the existing studies [11], the macroeconomic determinants of default rates are generally the same for the two categories of participants in the lending process, the inflation rate and the short-term interest rate influencing in similar proportions both the repayment capacity of the companies, as well as that of the population.

Other factors such as the annual growth rate of GDP, the degree of financial indebtedness, the unemployment rate, the real interest rate or the disposable income, influence the default rate of the loans granted. [12]

In Romania, the results of some econometric studies [13] suggest that real economy dynamics is the main factor in the influence of the existence of arrears at the level of the credit portfolio granted to economic agents.

Foreign direct investment or export volume negatively influences the dynamics of non-performing loans as well as the exchange rate, the dynamics of which is reflected in the evolution of loan repayment capacity in the trade, service and construction sectors. There is also a strong link between the evolution of mortgage loan and the dynamics of non-performing loans in the construction sector.

Synthetically, we present the main causes of non-performing credit recordings in the Romanian banking sector since 2010. Here is a summary of these causes:
- the state of the economy, the economic situation highlighted by the GDP indicator, here we can hint that some economic branches are more sensitive to the evolution of the economy and are therefore more risky for banks,
- the degree of financial indebtedness of economic agents, here we can see the existence of negative capital (in the case of companies) and the situation of the net wealth of the population (absolute and relative poverty of households)
- erroneous lending policies promoted by banks (granting loans in exotic currencies, exposing certain risky areas, wanting to win by granting loans with excessively high interest rates); in 2017 five credit institutions accounted for 70% of the volume of out-of-balance-sheet loans [14]
- deficiencies in the preparation of banking staff,
- poor financial education of the population.

Based on this, in the table below we identified the evolution of non-performing loans in the period 2010-2017 as well as some macroeconomic indicators.

Analysing the evolution of these indicators, we can demonstrate whether the causes of non-performing credit recordings have been correctly identified.

The Romanian banking system recorded periods of positive net financial results (2013, 2015-2017), interrupted by years with losses, mainly due to the size of the expenses on provisions, amplified by the reduction of the operational profitability (or attenuated in the years with favourable evolutions of this one).

Table no. 3. Evolution of Banking Indicators and GDP in the Period 2010-2017

Years	**Non-performing loans** (%)	**Profit** (millions lei)	**Evolution of the loan granted to the private sector** (% compared to the previous year)	**Loans in currency** (% in the total loans for the private sector)	**Long term loans granted for the private sector** (% in the total loans for the private sector)	**Share of total indebtness in GDP** (%)	**Evolution of GDP** (%)	**Difference ROBOR-EURIBOR**
2010	15,0	-516	n/a	63,0	57,70	60,97	-1,1	n/a
2011	19,9	-777	6,6	63,4	56,46	56.80	2,3	n/a
2012	27,6	-2.300	1,3	46,3	54,98	56.51	0,6	n/a
2013	31,5	49	-3,2	62,5	54,95	49.96	3,5	5,24[1]
2014	20,7	-4.700	-3,3	60,9	54,58	50.29	3,0	1.38
2015	13,5	4.878	2,9	49,3	54,52	46.45	3,8	1,00
2016	9,6	4.259	1,2	42,8	54,45	42.87	4,8	1,40
2017	6,4	5.335	5,5	37,2	54,19	39.28	6,9	2,90

Source: Processing according to NBR, interactive database [1]) 31 march 2013

The economic situation highlighted by the GDP indicator shows that banks recorded non-performing loans on the background of GDP falling or rising at low rates. Thus, in 2009, GDP fell by -6.6% [15], falling also in 2010, in which the rate of non-performing loans reached 15.0%, culminating in 2013 when it recorded the highest value (31.5%), amid a modest increase of only 3.5% of GDP.

This was amplified by the unceasing rhythm of credit growth in previous years. For example, the annual growth rate of RON-denominated loans granted to households and non-financial corporations was 24% in January 2008, the annual growth rate of loans in foreign currency granted to households was 124.1% and the annual growth rate of loans in foreign currency granted to companies was 20.4% [15].

From the analysis of the data in the above table it can be concluded that the degree of financial indebtedness of the economic agents influenced the level of non-performing loans. In the years 2010, 2011 and 2012, the share of total indebtedness recorded the highest levels (60.97%, 56, 80% and 56.51%). Thus, there can be a direct link with the high level of non-performing credit recorded during this period and in following years.

Another cause of non-performing loan recording is the granting of foreign currency loans to households and companies that do not earn income in the currency of the loan. In the period 2000-2011, foreign currency credit was predominant in total loans (in 2011, for example, it accounted for 63.4% of total loans). This trend culminated in lending in Swiss francs or Japanese yen.

According to a study carried out by the National Bank of Romania, the share of loans in Swiss francs *„amounts to about 10 percent of the total volume of loans granted to the population, and the number of individuals who contracted CHF loans represents 2.1 percent of the total number of borrowers of this category (i.e. 75 412 persons).*"[16]

Basically, the decision by the Swiss National Bank to waive the 1.2 CHF threshold for one EUR led to CHF appreciation against RON and generated the increase in debt service for all Swiss francs borrowers.

As a result of the above, *„Credit risk is relatively higher for CHF loans than for other currencies (the default rate is 12 percent for CHF loans compared to 9.4 percent for all foreign currency loans, November 2014)."*[17]

The analysis of ROBOR-EURIBOR 3M interest rate gap reveals that in March 2013 it was of 5.24, which proves that banks, in the chase after profit, demand high interest rates with an impact over time on borrowers' ability to repay, with effect on the rise in the level of non-performing loans. And in the years to come, as shown in the table, there is maintained a large gap between ROBOR and EURIBOR.

To keep up with the high pace of change in banking, staff must be continually prepared. Banks do not have coherent and consistent personnel training policies in their desire to make savings. The average annual expenditure of Romanian banks for the professional training of an employee is relatively small and increased from 490 lei in 2007 to around 900 lei in 2016. Employees involved in lending activity attract about 31% of the amounts allocated for training (June 2016). Banks that have allocated a higher share of money for staff training in the period prior to 2007 have lower rates of non-performing loans over the next period [18].

Financial education of the population is of great importance when people and companies plan to access a loan, when they negotiate with the bank, when they plan reimbursement terms, when they know how to work with the bank. Unfortunately, *„A study conducted by Standard & Poor's rating agency pointed out that Romania was ranked 124th out of the 143 countries surveyed, on the same place as Honduras, Sudan or Uzbekistan, in terms of financial education of the population. Only 21% of Romanians have financial knowledge and only 15% save or invest to secure a supplementary pension."*[19]

CONCLUSIONS

More than a decade after the onset of the global financial crisis, many banks worldwide and in Romania experienced its effect, registering large losses due to the occurrence of non-performing loans.

Even the less efficient business model of some banks, with risky or inadequate credit policies, leads to this type of credit. The dependence of the Romanian financial system on credit institutions increases credit risk and it makes the number and volume of non-performing loans increase.

In recent years, the largest banks in Romania, BCR and BRD Groupe Société Générale have suffered huge losses due to non-performing loans. There were also smaller banks with the same problems, namely Alpha Bank and Bancpost as well as Volksbank.

However, the banks in Romania registered a net profit of 5.335 millions lei at the end of 2017 and the market share of credit institutions with losses reached a historical minimum, amid the continuation of reducing the expenditures with the depreciation adjustments in a framework favourable domestic macroeconomic conditions, the extension of the low interest rate and the sustained pace of lending in national currency.

The bank assets quality continued to improve, as confirmed by the declining trend in non-performing loans.

The paper synthesized the main causes of non-performing loan recordings in the Romanian banking sector starting with 2010.

It has been shown that these have been the causes of a non-performing loan outlook with a series of macro and microeconomic indicators in a table. The state of the economy, the economic situation is the main cause, but one should not neglect the banks' erroneous policies, their lack of vision and the financial education of the economic agents.

In order to prevent similar situations from occurring, the ECB and the EBA have put in place new rules that banks will be obliged to follow regarding non-performing loans, rules on how to set up provisions for new non-performing loans, strong regulatory and oversight of EU banks, capital requirements have increased, new liquidity rules have been introduced with an impact on the maturity of the asset structure, and credit risk assessment is much more rigorous.

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