Analysis of Non-Bank Loans in the Context of the Romanian Economy: Risks and Implications

Alexandrina Brînză
Ioana Lăzărescu
Doina Iacob
"Dunarea de Jos" University of Galati,
Faculty of Economics and Business Administration, Romania
brinza.alexandrina00@gmail.com
ioanalupasc22@yahoo.com
doina.iacobb@gmail.com

Abstract

The analysis of data concerning non-bank financial institutions in Romania reveals a consistent increase in loan issuance over the past 11 years, especially in the context of the pandemic. The excessive growth in the number of loans has generated an elevated risk of non-repayment, necessitating careful debtor management. Warning signs, such as decreasing available funds and payment delays, represent critical points for assessing credit risk. National-level analysis underscores the importance of implementing preventive measures to avoid the risk of bankruptcy. Non-bank financial institutions must adopt proactive and adaptable strategies to efficiently manage the loan portfolio and ensure the long-term stability of the financial sector.

Key words: IFN (Non-Banking Financial Institutions), banking risk, credit, crisis, bankruptcy.
J.E.L. classification: G01, G21, G32

1. Introduction

In a continuously evolving economy, the financial-banking sector represents an essential pillar of development and economic stability. In the context of Romania, non-banking financial institutions have become increasingly relevant in providing diverse financial services, including credit issuance. Statistical analysis of credits granted by non-banking financial institutions in Romania is crucial for understanding the dynamics of the financial market and assessing the risks associated with this sector. We aim to explore and interpret relevant data regarding credits granted by non-banking financial institutions, with the purpose of highlighting trends, risks, and their impact on the national economy.

Through detailed data exploration and the application of rigorous analytical methodologies, we seek to provide a clear and objective perspective on the credit situation in Romania's non-banking sector. This analysis will not only bring to light recent trends and challenges but will also serve as a useful tool for making informed decisions regarding financial policy and regulation in the banking sector. Additionally, we will examine available data, identify relevant patterns and correlations, and draw conclusions to provide a deeper understanding of the financial-banking landscape in Romania.

2. Literature review

The financial-banking system represents an essential element of the functioning of a modern economy, facilitating financial intermediation, mobilizing savings, and ensuring access to financial services for various segments of the population. Within this system, both banking and non-banking entities fulfill distinct roles, contributing to the diversification and expansion of access to financial and credit services.

Authors such as Frederic S. Mishkin and Stanley G. Eakins in their works "Financial Markets and Institutions" and "Financial Markets, Institutions & Money" examine in detail the functioning and role of banking institutions in credit intermediation and financial risk management (Mishkin, Frederic, Eakins, Stanley, 2018, p.34-36). In parallel, non-banking entities have gained significant importance in providing financial services, including in the field of lending. Works by authors such as Anthony Saunders and Marcia Millon Cornett, such as "Financial Institutions Management: A Risk Management Approach" and "Financial Markets and Institutions," analyze the implications of transformations in the financial sector and the contribution of non-banking entities to diversifying the lending market.

Credits granted by non-banking entities represent a dynamic component of the financial market, offering funding alternatives and access to capital for consumers and businesses. Researchers such as Edward I. Altman and Anthony Saunders in their works "Credit Risk Measurement: New Approaches to Value at Risk and Other Paradigms" and "Credit Risk Measurement and Management" analyze various aspects of credit risk assessment and management, including within non-banking entities. The financial-banking system is a vast and complex field, in which both traditional banking institutions and non-banking entities contribute to the provision of financial and credit services. Understanding the evolution of lending in non-banking entities requires an interdisciplinary approach and careful analysis of the works of relevant authors in the financial and banking fields.

3. Research methodology

To analyze the evolution of the number of loans and commitments granted by non-banking institutions in Romania, we adopted a linear regression method. This method was selected for its ability to highlight the relationship between time and the variables of interest, thus allowing for the observation of long-term trends (Saunders&Cornett, 2021, p. 78-80). The data analyzed were collected annually, providing a solid basis for evaluation. We used linear regression analysis to determine the coefficients that describe the relationship between time and the number of loans and commitments. This analysis allowed us to identify an upward trend in non-banking financial activity. To validate the model, we compared the estimated values with the actual values, finding a good fit for the model.

The descriptive method was used to observe the general characteristics of the data and to identify patterns in the evolution of the studied phenomenon.

4. Findings

4.1. Credits granted and commitments undertaken by Non-Banking Financial Institutions

The geopolitical shock caused by the conflicts involving our neighboring country has generated major macrofinancial consequences (Basno C., Dardac N., 1999, p. 62-66). Uncertainties regarding the evolution of the economy and financial markets have increased, accentuating the risks associated with the financial-banking sector. The critical situation we are facing requires prudence from both banks, the population, and banking supervision authorities.

Non-Banking Financial Institutions represent an important segment of the financial sector and play a vital role in providing financial services and granting loans to consumers and businesses. The number of loans granted and the manner in which they are granted are indicators of the activity and trust in the non-banking financial sector. These institutions offer a diverse range of financial products, including personal loans, mortgages, business loans, and others, which are often more flexible in terms and conditions than those offered by traditional banking institutions. They have the ability to reach segments of the population or businesses that may have limited access to traditional banking services.

Regarding the granting of loans, non-banking institutions analyze the risk and repayment capacity of potential borrowers before granting loans. The evaluation process may include analyzing credit history, income, and other relevant financial aspects. Typically, these institutions offer a variety of lending options to adapt to the needs and individual circumstances of customers. The granting of loans by non-banking institutions may be influenced by general economic conditions, government regulations, and customer behavior. During periods of economic growth, increased demand for loans may be observed, and non-banking institutions may be more willing to grant loans (Simona&Popa, 2010, p. 10). On the other hand, during periods of economic uncertainty, the demand for loans may decrease, and non-banking institutions may adopt a more cautious approach to lending.

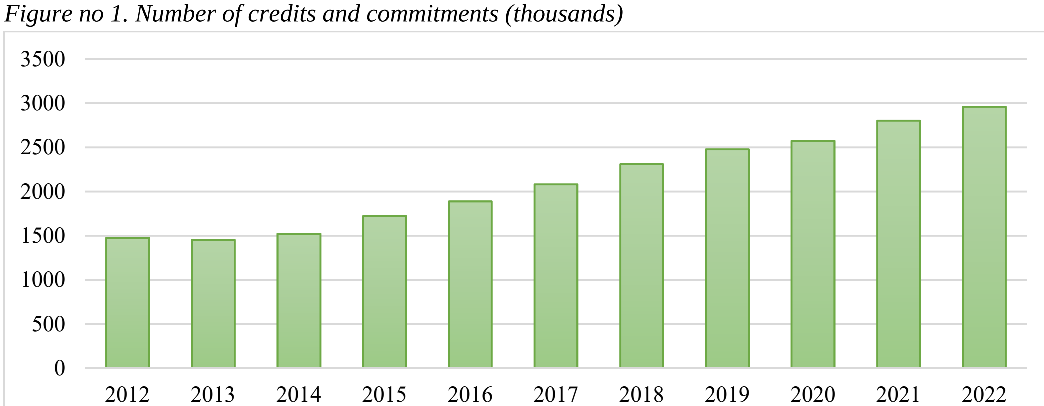
It is essential for non-banking institutions to implement responsible lending practices and closely monitor the risks associated with their loan portfolio. According to data extracted from the National Bank of Romania's reports, we have observed that over the past 11 years, the number of loans granted and commitments undertaken by non-banking financial institutions follows a linear pattern. For this reason, we have applied the time trend statistical application to observe the variation in the number of loans granted.

Table no. 1 Number of loans and commitments granted by non-bank financial institutions

Nr. ctr.	**Date**	**Number of credits and commitments**	**ti**	**ti2**	**yi * ti**	**yti =a+b* ti**	**│ yi – yti │**
		THOUSANDS					
1	2012	1476	-5	25	-7380	1301,727	174,273
2	2013	1453	-4	16	-5812	1464,509	11,509
3	2014	1523	-3	9	-4569	1627,291	104,291
4	2015	1724	-2	4	-3448	1790,073	66,073
5	2016	1889	-1	1	-1889	1952,855	63,855
6	2017	2082	0	0	0	2115,636	33,636
7	2018	2309	1	1	2309	2278,418	30,582
8	2019	2478	2	4	4956	2441,200	36,800
9	2020	2574	3	9	7722	2603,982	29,982
10	2021	2803	4	16	11212	2766,764	36,236
11	2022	2961	5	25	14805	2929,545	31,455
	TOTAL	**23.272,000**	**0,000**	**110,000**	**17.906,000**	**23.272,000**	**618,691**

Source: Modeling based on statistical data published in the Annual Reports of the National Bank of Romania, https://bnr.ro/PublicationDocuments.aspx?icid=3043

Figure no 1. Number of credits and commitments (thousands)



Source: Modeling based on statistical data published in the Annual Reports of the National Bank of Romania, https://bnr.ro/PublicationDocuments.aspx?icid=3043

The analysis of the data from Figure 1 shows a decrease of 1.55% in the number of credits in 2013 compared to 2012, while between 2013 and 2022 there is a general trend of growth in the credits and commitments granted by non-banking financial institutions. This trend may reflect an increased demand for financial services and an expansion of non-banking institutions' activities in response to changing economic needs. This trend is evident in both the number of credits granted and in the interpretation of the linear regression equation applied to the data through descriptive methods.

Starting from 2013, the number of credits granted and commitments assumed by non-banking financial institutions in Romania has shown a consistent increase each year, reflected in an upward linear model. This consistent growth suggests high confidence in the non-banking financial sector and a continuously increasing demand for the services and products offered by these institutions. Additionally, the difference between the actual number of credits granted and commitments assumed and the number estimated by the linear regression equation is relatively small, indicating a good fit of the linear model with the observed data.

Moreover, within the linear regression analysis, coefficients a and b were calculated, describing the linear relationship between time and the number of credits and commitments. The coefficient b=162.78 indicates an average increase in the number of credits and commitments over time, suggesting a growth trend in financial activity during the examined period. This means that for each additional unit of time (for example, one more year), the number of credits and commitments increases, on average, by approximately 162.78. Overall, the activity of non-banking institutions increases over time, showing a positive trend in the granting of credits and commitments by these institutions. The descriptive method applied, the Trend of the Phenomenon over Time, highlighted through the optimal variant, which is equal to 2.659% (it was incorrect in Excel), that the linear regression model is efficient and provides a good fit to the data, suitable for analyzing trends in the number of credits and commitments over time.

In conclusion, the results obtained mark a strong trend of growth in the activity of non-banking institutions in the field of granting credits and commitments, reflecting a stable and confident evolution.

4.2. Outstanding credits and commitments of non-banking financial institutions

In the dynamic landscape of the financial market, loans and commitments provided by non-banking financial institutions represent an essential aspect of economic activity. These entities, alongside traditional banks, play a vital role in providing various financial services and credit facilities to diverse segments of society. Analyzing the number of loans and outstanding commitments provides important insights into the stability and financial evolution of an economy. Non-bank loans are often perceived as a quick and convenient solution for immediate financing needs (Mishkin, Frederic S., Eakins, Stanley G. 2018, p 102-105). Their main advantage lies in their relative accessibility and less stringent procedures compared to traditional banking institutions. However, this advantage comes with certain risks and hidden costs, which may not always be evident to the average consumer.

Firstly, non-bank loans are known for their high interest rates and additional fees, which can significantly add to the total cost of the loan. While access to financing may be quicker and simpler with non-bank loans, costs can become substantial in the long run due to high interest rates and hidden fees. Another important aspect is the risk of default associated with non-bank loans. Since these loans are often granted without rigorous analysis of the borrower's repayment capacity and without a detailed evaluation of their financial history, there is a high risk that borrowers may not be able to meet their financial obligations. Additionally, the specific characteristics of non-bank loans, such as complex terms and conditions or unclear clauses, can lead to confusion and misunderstandings between the lender and the borrower. This can amplify the risk of default and have negative consequences on the borrower's financial situation. In the case of loans secured with assets (such as mortgages or auto loans), non-banking institutions may resort to repossessing the respective assets to offset outstanding amounts.

It is important to emphasize that non-banking institutions are subject to specific regulations and legal norms regarding the recovery of outstanding loans. They must respect consumers' rights and protection during the debt collection process, avoiding abusive practices.

In conclusion, while non-bank loans can provide quick solutions in emergency situations or for immediate needs, it is important for loan seekers to be aware of the associated risks and costs and to evaluate their options responsibly. A clear understanding of contractual terms and conditions, a realistic assessment of repayment capacity, and careful analysis of alternatives are essential for making informed financial decisions and avoiding unpleasant situations in the future.

Table no. 2 Number of Restated Loans and Commitments

Nr.	Date	Number of Restated Loans and Commitments	ti	ti2	yi *ti	yti =a+b* ti	│yi – yti│
		thousands					
1	2012	316	-5	25	-1580	282,136	33,864
2	2013	291	-4	16	-1164	277,127	13,873
3	2014	271	-3	9	-813	272,118	1,118
4	2015	259	-2	4	-518	267,109	8,109
5	2016	233	-1	1	-233	262,100	29,100
6	2017	230	0	0	0	257,091	27,091
7	2018	242	1	1	242	252,082	10,082
8	2019	244	2	4	488	247,073	3,073
9	2020	220	3	9	660	242,064	22,064
10	2021	243	4	16	972	237,055	5,945
11	2022	279	5	25	1395	232,045	46,955
	TOTAL	**2.828,000**	**0,000**	**110,000**	**-551,000**	**2.828,000**	**201,273**

Source: Modeling based on statistical data published in the Annual Reports of the National Bank of Romania, https://bnr.ro/PublicationDocuments.aspx?icid=3043

Upon analyzing the data, we found that the number of loans and commitments outstanding to non-banking financial institutions exhibits a linear decreasing trend during the period of 2012-2017. An upward trend is observed during the period of 2020-2022. This observation led us to apply the formulas associated with the descriptive method of Time Phenomena Trend to facilitate a proper comparison between the loans granted and those outstanding.By applying the formulas mentioned in Table 2, we have the opportunity to quantify and compare various aspects of the loans, thus providing a deeper understanding of the dynamics and behavior of loans in different time contexts.

Figure no 2. Number of outstanding credits and commitments

Source: Modeling based on statistical data published in the Annual Reports of the National Bank of Romania, https://bnr.ro/PublicationDocuments.aspx?icid=3043

Figure 2 presents a detailed picture of the number of outstanding loans and commitments over a period of 11 years, spanning from 2012 to 2022. The analysis of Table 1.2 reveals a series of fluctuations in the number of outstanding loans over time. In the first 6 years, between 2012 and 2017, there is a downward trend in the number of outstanding loans. This decline may result from debt collection efforts or changes in the credit policies of financial institutions. Subsequently, between 2018 and 2022, we observe periodic fluctuations in the number of outstanding loans.

These fluctuations may be influenced by various factors, such as changes in the economy, shifts in customer payment behavior, or adjustments in the credit policies of financial institutions. For example, significant increases in the number of outstanding loans in 2018 and 2019 may indicate a decrease in the repayment capacity of borrowers or a temporary relaxation of credit standards. On the other hand, the major declines observed in 2017 and 2020 could be the result of increased debt collection efforts or stricter credit policies. It is important to note that fluctuations in the number of outstanding loans can also be influenced by major economic events, such as recessions or periods of economic growth. For example, during recession periods, there is an increase in the number of outstanding loans due to the financial difficulties faced by borrowers.

These fluctuations can be influenced by various economic and financial factors, such as changes in financial regulations, modifications in the credit policies of non-bank financial institutions, or changes in credit demand from consumers and businesses. Moreover, a detailed analysis of the data shows that there are some discrepancies between the actual and forecasted values (yti), indicating possible deviations between the actual market behavior and the predictive models used. These discrepancies may indicate the need for periodic review of evaluation methodologies and forecast models to ensure the accuracy and relevance of the analysis. To assess this evolution, specific statistical formulas and methods have been applied to extract useful information about the long-term behavior of loans.

The optimal value (VI) = Number of outstanding loans and commitments / $\mid$ yi - yti $\mid$ is 7.117 percentage points, which represents an indicator of efficiency and stability in managing the loan portfolio of non-bank financial institutions. A lower optimal value indicates a lower level of outstanding loans in the institution's loan portfolio, suggesting efficient management of credit risk and a solid debt collection capability. This contributes to maintaining financial stability and protecting the solvency of the financial institution against potential difficulties. Additionally, a lower optimal value indicates higher market confidence in the financial institution, which may attract new investors and clients. Therefore, the optimal value of 7.117% is a positive sign of performance and responsible credit management. To maintain or even improve this optimal value, financial institutions should continue to strengthen their responsible lending practices, provide support and assistance to customers in financial distress, and constantly monitor the performance of the loan portfolio.

This way, they can adapt to market changes and effectively manage credit risk in a dynamic and complex financial environment. In conclusion, using the statistical method of Trend of phenomena over time and applying the appropriate formulas allows us to obtain valuable details regarding the behavior and evolution of the number of loans granted by non-bank financial institutions and those outstanding. This approach helps us make informed decisions and identify potential trends and risks in the financial-banking sector.

5. Conclusions

In the light of the analysis conducted, a complex and dynamic picture of the Romanian financial-banking sector emerges, with a focus on the activity of non-bank financial institutions. The analysis of relevant statistical data and the interpretation of results provide a detailed perspective on the evolution and trends in this vital area of the national economy.

First and foremost, it is evident that the financial-banking sector represents a crucial engine of economic development and financial stability in Romania. Non-bank financial institutions have gained increasing importance in providing financial services, including lending, contributing to the diversification and expansion of access to financing for various segments of society.

The analysis of the number of loans granted by non-bank institutions reveals several relevant trends and fluctuations. The steady increase in the number of loans granted reflects increased confidence in the non-bank financial sector and the growing demand for the services and products offered by these entities. However, the observed fluctuations suggest the influence of various economic, financial, and legislative factors on the activities of non-bank institutions and lending behavior overall Chiciudean I., David G., 2011, p. 84-88). Careful monitoring of market trends and fluctuations provides important information for adjusting strategies and lending policies, allowing for rapid adaptation to changes in the environment. In the loan approval process, transparency and financial education are key elements for creditors. Non-bank financial institutions should provide clear and accessible information regarding lending conditions, associated costs, and risks involved to enable customers to make informed and responsible lending decisions.

Following the analysis conducted for the period 2012-2022, based on the data presented in Tables 1.1 and 1.2, we observe a rising trend for loans granted by non-bank institutions. Outstanding loans mark a decreasing trend from 2012 to 2017, starting to increase from 2020 until 2022. In the context of the pandemic outbreak, we observed a significant increase in the number of loans granted, recording 229 thousand more loans issued in 2021 compared to 2020. However, this excessive increase also raised the risk of non-repayment. Outstanding loans have various causes, including the evolution of the economic cycle and subjective causes, requiring careful management by non-bank financial institutions. Identifying warning signals, such as decreasing funds in the debtor's account, increasing frequency of calls for credit lines, or late payments, is essential for detecting problems in a timely manner. Once payment delays become evident, financial institutions must initiate negotiations with the debtor and reassess the terms of the loan agreement. Failure to take appropriate measures can lead to the risk of bankruptcy for the debtor. To effectively manage credit risk, it is important for non-bank financial institutions to adhere to optimal loan values.

These findings highlight the need for a proactive and careful approach by non-bank institutions in managing the loan portfolio and associated risks to ensure the long-term stability and viability of the non-bank financial sector. Regarding the risk of loan defaults, the results of the analysis show that the optimal value of the number of loans granted is equal to 2.659%, marking an increasing linear fluctuation. The number of outstanding loans has an optimal value equal to 7.117%. This observation underscores the need for a secure approach and the implementation of appropriate measures to manage and minimize lending risks. It is essential for non-bank financial institutions to adopt sound risk assessment policies, monitor loans, and implement lending strategies to reduce exposure to financial risks and ensure the long-term stability of the non-bank sector.

In conclusion, the use of statistical methods and rigorous data analysis are essential tools for understanding and interpreting the dynamics of lending in the non-bank financial sector in Romania. This information is vital for making informed decisions regarding financial policy and regulation in the banking sector, thus contributing to promoting sustainable economic growth and ensuring financial stability in the country.

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