ISSN 2181-39-65
2023-YIL, 4-SON
VOLUME 5

MOLIYAVIY TEXNOLOGIYALAR

ILMIY ELEKTRON JURNALI

TOSHKENT 2023

O’zbekiston Respublikasi OAK Rayosatining 2023-yil 3-iyundagi 364-son qarori bilan “Moliyaviy texnologiyalar” jurnali iqtisodiyot fanlari bo’yicha falsafa doktori (PhD) va fan doktori (DSc) ilmiy darajasiga talabgorlarning dissertatsiyalari yuzasidan assosiy ilmiy natijalarini chop etish tavsiya etilgan ilmiy nashrlar ro’yxatiga kiritilgan.

ISSN: 2181-3965
VOLUME 5

MUNDARIJA

ISSN: 2181-3965
VOLUME 5

ISSN: 2181-3965
VOLUME 5

THEORIES OF NON-PERFORMING LOANS ACCUMULATION FACTORS

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Abstract. This article examines theories that explain the reasons for the accumulation of problem loans (NP) in the financial sector. Three well-known theories are considered - the theory of moral hazard, the theory of information asymmetry and the theory of consumer credit. The study provides insight into the multifaceted drivers of NPL accumulation and highlights the importance of understanding these theories for effective risk management and financial stability.

Keywords: problem loans, moral hazard theory, information asymmetry theory, consumer lending theory, financial literacy, financial stability.

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Annotatsiya. Ushbu maqolada moliyaviy sektorda muammoli kreditlar (NP) to'planishi sabablarini tushuntiruvchi nazariyalar ko'rib chiqilgan. Uchta mashhur nazariy, yani axloqiy risk nazariyasi, axborot assimetriyasi nazariyasi va iste'mol krediti nazariyasi tahlil etilgan. Tadqiqotda NPL to'planishining ko'p qirrali omillari haqida tushuncha berilgan, samarali risklarni boshqarish va moliyaviy barqarorlik uchun ushbu nazariyalarni tushunish muhimligi ta'kidlangan.

Kalit so'zlar: muammoli kreditlar, axloqiy risk nazariyasi, axborot assimetriyasi nazariyasi, iste'mol krediti nazariyasi, moliyaviy savodxonlik, moliyaviy barqarorlik.

ТЕОРИЯ ФАКТОРОВ НАКОПЛЕНИЯ ПРОБЛЕМНЫХ КРЕДИТОВ

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ISSN: 2181-3965
VOLUME 5

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Аннотация. В данной статье исследуются теории, объясняющие причины накопления проблемных кредитов (ПК) в финансовой сфере. Рассмотрены три известные теории – теория морального риска, теория информационной асимметрии и теория потребительского кредита. Исследование дает представление о многогранных факторах накопления проблемных кредитов и подчеркивает важность понимания этих теорий для эффективного управления рисками и финансовой стабильности.

Ключевые слова: проблемные кредиты, теория морального риска, теория информационной асимметрии, теория потребительского кредитования, финансовая грамотность, финансовая устойчивость.

Introduction

In the complex scenery of banking and finance, the accumulation of Non-Performing Loans (NPLs) stands as a critical concern with far-reaching implications for financial institutions, economies, and the stability of the broader financial system. NPLs, often defined as loans where scheduled payments are not met or are severely overdue, pose significant challenges to the functioning of financial markets and the overall health of economies. Understanding the underlying factors that contribute to the accumulation of NPLs is of paramount importance for devising effective risk management strategies and safeguarding economic resilience.

This study delves into the multifaceted realm of NPL accumulation factors by examining three prominent theories that shed light on this phenomenon: The Moral Hazard Theory, Information Asymmetry Theory, and Consumer Loan Theory. Each of these theories offers a unique perspective on the dynamics that drive the accumulation of NPLs within financial systems. By delving into the intricacies of these theories, this study seeks to unravel the complexities surrounding NPL accumulation and provide valuable insights for financial institutions, regulators, policymakers, and researchers alike.

The study of these theories promises to uncover the intricate interplay of behavioral patterns, market mechanisms, and regulatory landscapes that contribute to the NPL burden. As economic systems continue to evolve and adapt, understanding these theories becomes increasingly pertinent for effectively managing risks, pre-empting financial crises, and fostering sustainable economic growth.

Each theory has been dissected, explored, and critically evaluated, drawing from a combination of empirical data, case studies, expert insights, and existing literature. By doing so, this study aims to contribute to the broader discourse on NPL accumulation and to provide a comprehensive understanding of the underlying factors that shape this intricate facet of the financial world. Through this exploration, we endeavor to shed light on the factors that drive NPL accumulation and pave the way for more informed decision-making in the realms of finance, policy, and regulation.

Literature review

The main target of banks is to earn much money in the process of lending capital that give loans that accepted deposits which are idle funds of investors to borrowers, but they face a huge risk to perform this function. Thus, investors and analysts try to calculate measurements of risk in a bank management. Non-performing loans is exactly the most important indicator at any time for evaluation of risk. For this reason, banks usually act to hold NPL ratio under the control and to deal with possible problematic loans. In this process, when controlling and solving NPL, bankers have to take into account some hypothesis such as "bad luck", "bad management", "skimping", and "moral hazard". These hypotheses are related to each other (not mutually exclusive) and to find the most significant one among them is impossible.

Initially, "bad luck", "bad management", "skimping" and "moral hazard" hypotheses are studied by Berger and DeYoung, analyzing relationship between problem loans and cost efficiency in 1995. Furthermore, these hypotheses were investigated by some researchers, with analyzing different data collected on different countries or regions: Williams (2004); Rossi, Schwaiger and Winkler (2005); Podpiera and Weill (2007); Lousiz et al (2010); Vardar and Ozguler (2015); Muratbek (2017); Krugman (2009), Zhang et al (2015) and others. It is important to note that the most important in "bad luck", "bad management", "skimping" and "moral hazard" hypotheses are to investigate the relationship between cost efficiency and NPLs, although cost efficiency is also one of the determinants of financial performance in banks. There is no doubt that increasing cost efficiency leads to rising ROA or ROE ratio or vice versa. Thus, these hypotheses are indirectly appropriate for identifying determinants of NPLs, considering the impact of NPLs on financial performance at banks. Other theories asymmetric information and consumer loan theories are two more hypotheses which explain NPL accumulation.

Discussion and results

According to *"bad luck" hypothesis*, external events (change in economic policies, increasing unemployment rate due to the increase of foreign migrants, a sharp increase in population, occurrence of international war, increase in tax rate and fees, shut down of local plants and others) cause to increase NPLs in banking system. In other words, this hypothesis imply that main economic conditions are very important factors of NPLs and financial performance in banks. External occurrences, according to the bad luck hypothesis, raise non-performing loans for banks. This increases operating expenses at the banks in dealing with issue loans, reducing banking efficiency [1]. The bad luck hypothesis highlights an increase in non-performing loans as a result of an unforeseen external occurrence (qualifying as bad luck), such as the economic slump. As a result, banks will incur more costs to manage these loans, resulting in decreased efficiency [2]. The association between problem loans and measured cost efficiency is a key differentiating implication of the "bad luck" theory. In favor of bad luck hypothesis, when decreases in loan quality occur precede decreases in cost and profit efficiency [3]. In the result of loans become NPLs, the bank has to increase managerial expanses to solve possible problem loans. These additional costs may be spent on monitoring unmanageable borrowers and their collateral, analyzing borrower's financial situation and possible opportunities to ensure possible arrangements, the additional expanses of collecting, preserving, and finally disposing of collateral when failure happens later, filing an application in court and participating in this process as a plaintiff, introducing new additional attention to preserve actual performing loans that are repaid regularly according to loan schedule, diverting the attention of managerial personals away from addressing other operational problems, losing potential investors who wanted to deposit their investments to the bank, costing to maintain banking security and status in the banking sector. The most part of these costs are undergone after the loan becomes overdue. Attention should be paid to all of the listed additional costs that may not carry out and there may be other versions of additional costs. Therefore, according to the "bad luck" hypothesis, the consequence of the elevation of NPLs increases significantly costs. It is crucial to highlight that under the "bad luck" hypothesis, the additional charges associated with dealing with issue loans would provide the appearance of reduced cost efficiency and in the result, financial performance or/and profitability will deteriorate in a bank.

"Bad management" hypothesis implies that poor management in the bank causes to strengthen negative relationship between NPLs and measured cost efficiency. According to this hypothesis appearance of low measured cost efficiency give a notice about "bad management" practices in a bank. The bad management hypothesis considers low efficiency as a signal of poor managerial performance, which also effects on loan granting behavior [1]. Low-level managers fail to adequately control their spending, which effects cost efficiency, and they also fail to perform effective loan underwriting and monitoring. A greater cost-to-income ratio indicates poor bank management in loan underwriting, monitoring, and control of the loan portfolio [4,5,6]. According to the bad management hypothesis, falls in cost and profit efficiency are usually followed by declines in loan quality [7]. "Bad management" hypothesis may be a result of following factors: firstly, "Bad" managers may have little experience and credit rating skills and so, select a disproportionate number of loans with low or negative net present value. Secondly, they have not enough proficient in valuing collateral. Thirdly, they have trouble monitoring borrowers once loans are made to ensure that covenants are followed and money are prudently invested. Fourthly, they have a high interest in increasing bonuses, because many bonuses are many months for them. Thus, they give credit to borrowers even if they know that borrower has poor financial performance.

The "skimping" hypothesis predicts a positive sign between cost efficiency and non-performing loans. By this hypothesis, the amount of spending resources on monitoring loans impact on both non-performing loans and banking efficiency. The "skimping" hypothesis may be distinguished by the speed-of-lending impact and the loans-pyramid effect, both of which are negatively connected with financial stability [8]. Thus, bank executives would have to choose between short-term operational expenses and long-term non-performing loans. As a result, they may be persuaded to decrease short-term operating expenses by reducing resources assigned to loan monitoring that cause to increase cost efficiency, even if this results in a higher number of non-performing loans in the future, since they place a high value on short-term profits. Skimping provides the impression that banks are cost-efficient in the short term since fewer inputs yield the same number of outputs, even when non-performing loans are at the rise. According to this hypothesis, improved cost efficiency should lead to a rise in the amount of non-performing loans.

The "moral hazard" hypothesis is a typical example of excessive risk-taking when another party bears a portion of the risk and is unable to charge for it. The risk that one party did not enter into a contract in good faith or gave deceptive information about its assets, obligations, or credit capacity is known as moral hazard. Furthermore, moral hazard may indicate that a party has an incentive to take extraordinary risks in order to gain a profit before the contract settles. Moral hazard is not immediately visible but may be inferred from observing bank behavior, and excessive risk-taking in lending is one of the key symptoms of a moral hazard problem [9]. Moral hazard is a situation in which one party determines how much risk to take while keeping in mind that someone else would suffer in the expense if things go wrong [10].

The next important hypothesis that impact on increasing the amount of NPLs is "*adverse selection*". A situation where borrowers with a higher risk of defaulting on their loans are more likely to seek for and acquire loans than borrowers with a lower risk is known as adverse selection in bank lending. The result might be a pool of borrowers who are more likely to fail, increasing credit risks and the possibility of financial losses for the banks.

Adverse selection occurs in financial markets when the potential borrowers who are most likely to deliver an undesired (adverse) outcome – the bad credit risks – are chosen. Because adverse selection increases the likelihood that loans would be issued to bad credit risks, lenders may decide not to offer any loans even if the market contains good credit risks [11]. Credit rationing results from asymmetric information and the ensuing adverse selection dilemma, in which certain borrowers are turned down for loans even though they would be ready to pay a higher interest rate. This happens because the people and businesses with the riskiest investment proposals are also the ones who are willing to pay the highest interest rates since they stand to gain the most if the high-risk venture is successful. Therefore, a higher interest rate results in even more adverse selection, which raises the likelihood that the bank will make a loan to a high-risk borrower [12]. Adverse selection results in the displacement of high-quality borrowers by low-quality borrowers, which over time results in a decline in the overall quality of bank loan portfolios, the accumulation of non-performing loans, a decline in profitability, and capital erosion [13,14,15].

Some theories arise in bank lending under the hypotheses that explained above. One of them is *asymmetry information theory* that is the most important in bank financial performance. The underlying source of moral hazard and adverse selection is a basis for the asymmetry information theory. Moral hazard is an issue that develops when the party with more knowledge has an incentive to behave bad from the perspective of the party with less information. If the information asymmetry problem is mitigated, the moral hazard problem and adverse selection can be reduced to a bare minimum. Asymmetric information causes issues in the financial system in two ways: before the transaction (adverse selection) and after the transaction (moral hazard) [11]. To minimize adverse selection, banks should gather as much information as possible on potential borrowers [16]. Information sharing can increase bank knowledge of credit applicants and reduce the likelihood of adverse selection [17].

Banks face risks in lending credits to borrowers. A bank has to obtain comprehensive information about a client in order to adequately assess and manage such risks. The problem of a bank's limited ability to independently obtain such information and a client's unwillingness to provide it is called information asymmetry [18]. Information asymmetry occurs when the party taking the risk in a transaction has more information than the person bearing the repercussions of the risk. In other words, when the borrower has more knowledge of his financial situation than the lender, this is one striking example of asymmetric information in the financial markets. In financial markets such as borrowing and lending, asymmetric information is an issue. In these marketplaces, the borrower knows far more about his financial situation than the lender. Generally, the asymmetry information theory means that it is hard to distinguish between bad and good borrowers, so it may affect lending behavior and can arise moral hazard and adverse selection issues [19]. As a result, the party with less detailed information is in a position to make either the correct or incorrect transaction decision. The establishment of moral hazards and adverse selections may result in an increase in NPLs [13].

Consumer loan theory, often known as consumer credit theory, investigates the dynamics and variables that influence consumers' borrowing behavior in the context of personal loans and credit. It delves at the motivations, decision-making processes, and outcomes of consumer borrowing. Consumer loan theory provides a framework for understanding how banks make consumer lending choices. This theory emphasize that banks must weigh the danger of loan default against the potential return on loan (under the "bad management"), must be able to identify the difference between good and bad borrowers (under the "adverse selection"), must be capable of preventing borrowers from taking on excessive risks after receiving a loan (under the "moral hazard" or credit rationing), may be unable to lend to all qualifying borrowers, because of limited resources (under the "skimping").

Banks utilize consumer loan theory to make decisions about the following aspects of consumer lending: (1) determining interest rates on consumer loans depending on the risk of default and the possible return on the loan, (2) setting loan terms depending on the borrower's creditworthiness, such as the payback period and the required down payment, (3) requiring borrowers to provide collateral, (4) analyzing a borrower's creditworthiness using a range of indicators such as income, job history, and debt-to-income ratio. Consumer loan theory is a complicated and ever-changing area. To control the risks connected with consumer lending, banks employ a number of instruments and strategies. Banks can make better judgments about lending money to customers if they grasp the ideas of consumer loan theory.

Understanding consumer loan theory enables governance, banks, and borrowers to make more educated decisions about loan availability, lending practices, consumer protection regulations, and financial education efforts. Stakeholders may promote responsible borrowing, reduce financial vulnerabilities, and support sustainable consumer credit markets by taking into account the factors that drive borrowing behavior. To act under this theory in banks can reduce the amount of NPLs in lending and create well-being financial performance.

Conclusion

In the realm of banking and finance, the accumulation of Non-Performing Loans (NPLs) emerges as a critical concern, bearing implications that extend beyond individual financial institutions to the stability of entire economies. Throughout this study, we have embarked on a journey to dissect and analyze three prominent theories – Moral Hazard Theory, Information Asymmetry Theory, and Consumer Loan Theory – that shed light on the intricate factors contributing to the accumulation of NPLs. As we draw this exploration to a close, several key takeaways emerge, highlighting the significance of these theories in understanding and mitigating the challenges posed by NPL accumulation.

The Moral Hazard Theory underscored the behavioral aspect of NPL accumulation, emphasizing how borrowers' perceptions of limited repercussions might lead to risky behaviors. Our analysis illuminated the potential moral hazard dilemmas that arise when borrowers believe in potential bailouts or interventions, resulting in higher default probabilities and exacerbating NPL levels. The Information Asymmetry Theory, on the other hand, illuminated the critical role of accurate information in risk assessment. As we explored, the lack of transparent and comprehensive borrower data can hinder lenders' ability to assess creditworthiness accurately, potentially leading to increased NPLs due to misguided lending decisions.

Consumer Loan Theory delved into the individual financial behaviors that contribute to NPL accumulation. Our investigation demonstrated how consumer behavior, often driven by a lack of financial literacy or unexpected economic shocks, can lead to excessive debt burdens and subsequent defaults. This theory serves as a reminder that addressing NPL accumulation necessitates a nuanced understanding of the financial decisions and vulnerabilities of individual borrowers.

Through the lenses of these theories, we have unveiled a multifaceted scenery where economic, psychological, and structural factors converge to shape the trajectory of NPL accumulation. The insights gained from this exploration extend beyond academic interest, offering practical implications for financial institutions, policymakers, and regulators. Crafting robust risk management strategies requires an amalgamation of these theories' insights, encompassing comprehensive borrower information, prudent lending practices, and measures that mitigate moral hazard tendencies.

As financial markets continue to evolve and economies encounter new challenges, the relevance of understanding NPL accumulation factors becomes increasingly apparent. By acknowledging and addressing the interplay of these factors, stakeholders can work towards mitigating the risks posed by NPLs, promoting financial stability, and fostering sustainable economic growth. This study is but a stepping stone in this ongoing exploration that demands ongoing research, collaboration, and adaptability to ensure a resilient and well-functioning financial ecosystem in the face of NPL challenges.

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