

## **OFF-BALANCE SHEET ACTIVITIES ON PERFORMANCE AND STABILITY OF COMMERCIAL BANKS: SYSTEMATIC LITERATURE REVIEW (SLR)**

Yogesh <sup>1</sup>

---

### **Abstract**

*This paper investigates the nature of off-balance sheet activities and its role in performance and stability of commercial banks. Explain about depth of systematic literature review (SLR). We examined the trend of off-balance sheet activities with the help of contingent liabilities and total income of different ownership group of banks. It seems private banks are more effective than public sector banks in generating total income. Furthermore their treatment of off-balance sheet activities in terms of risk management seems sound as compared to public sector banks. The observations also indicate a positive relationship between contingent liabilities and the total income of different ownership groups of banks, as a research question seeking empirical evidence. This indicates an opportunity for banks to improve their overall profitability by engaging in different types of contingent liabilities.*

**KEYWORDS-** Banking; Off-balance sheet activities; Non-interest income; Diversification of income

**JEL Classification-** G21, G23, G24, G29

---

<sup>1</sup> Assistant Professor, Sri Venkateswara College, University of Delhi, Email: Yogesh.brac@gmail.com

## **1. Introduction**

Since the 15<sup>th</sup> century, banks have come into existence. Their growth and relevance have grown ever since around the world and across different strata of society. Even in the 21<sup>st</sup> century, the role of banks cannot be undermined, and the banking industry has acquired an important place in the global market because of its size and role in economic development. But today the global banking industry is facing contemporary problems concerning its operations and earnings structure (Covid-19 is one of the reasons behind it). This is mounting pressure on banks to find new ways to improve their profitability (Li et al., 2021). In recent years, development and deregulation of the financial markets and improvements in financial innovation have also encouraged banks to offer new products and services to meet the modern demands of customers and increase the profits for such unique types of financial institutions (Boyd & Graham, 1986). Since the mid 1980s, there has been a substantial increase in off-balance sheet (OBS) activities (blackwell, 2019). Like fee-based activities, off-balance sheet activities also generate fees income for commercial banks. Off-balance sheet activities are an intriguing part of the financial statements because OBS activities have the feature of representing either contingent assets or contingent liabilities. They have an important economic impact that affects the future rather than the current shape of an institution. Off-balance sheet activities of a commercial bank normally include activities like loan commitments, guarantees and derivatives, etc.

In today's contemporary environment, these non-traditional activities have become an important source of a bank's revenue, especially for large commercial banks. By engaging in off-balance sheet activities, a financial institution doesn't only increase its earnings, but the institution can also avoid some regulatory costs or taxes. Reserve requirements and deposit insurance premiums are not applicable to off-balance sheet activities, but in the recent past, several central banks have globally the existing norms for banks and similar financial institutions. With changing basel norms, now financial institutions are required to convert off-balance sheet items to on-balance sheet using a conversion factor as per Basel III (blackwell, 2019). On one hand, diversification into non-traditional activities has been beneficial to the banking sector specifically, by implementing an additional fee income or by developing a new technique for hedging specific risk. On the other hand, non-traditional activities have also influenced the bank's conditions by increasing bank's exposure to different types of risks (Abbas & Ali, 2022). A school of thought argues that diversification of banking activities into non-traditional activities is the result of the decreasing in

profitability of traditional banking and the increasing in competitiveness among financial institutions (Edwards & Mishkin, 1995).

## **2. Gap of the Study**

Like on-balance sheet activities, OBS activities also have certain limitations. These limitations have been discussed by several authors (Christian & Raymond, 2010) in their work. For instance, the main problem with such types of activities is that they affect different ownership group of banks differently which have not been analyzed in the past in systematic manner. The second issue with such type of activities is that the decision by banks to enter into non-traditional activities is either self motivated or the outcome of market forces and third the main problem with such types of activities is their valuation on the assessment date.

In our research work, we all confront the same problem: how to fully document and assess the level of knowledge on a specific issue. Systematic reviews are an effective method for achieving this. That is why, in our study, we used domain based approached in systematic literature reviewer (SLR) to appraise and collate all relevant empirical evidence on off-balance-sheet activities or non-traditional activities of commercial banks in order to provide a complete interpretation of research results, in-depth understanding of OBS, identify research gaps, and identify prominent research questions for future research. So, in a nutshell, SLR will assist us in providing a clear and thorough assessment of existing research work on OBS activities and its role in boosting performance.

## **3. Relevance of the Study**

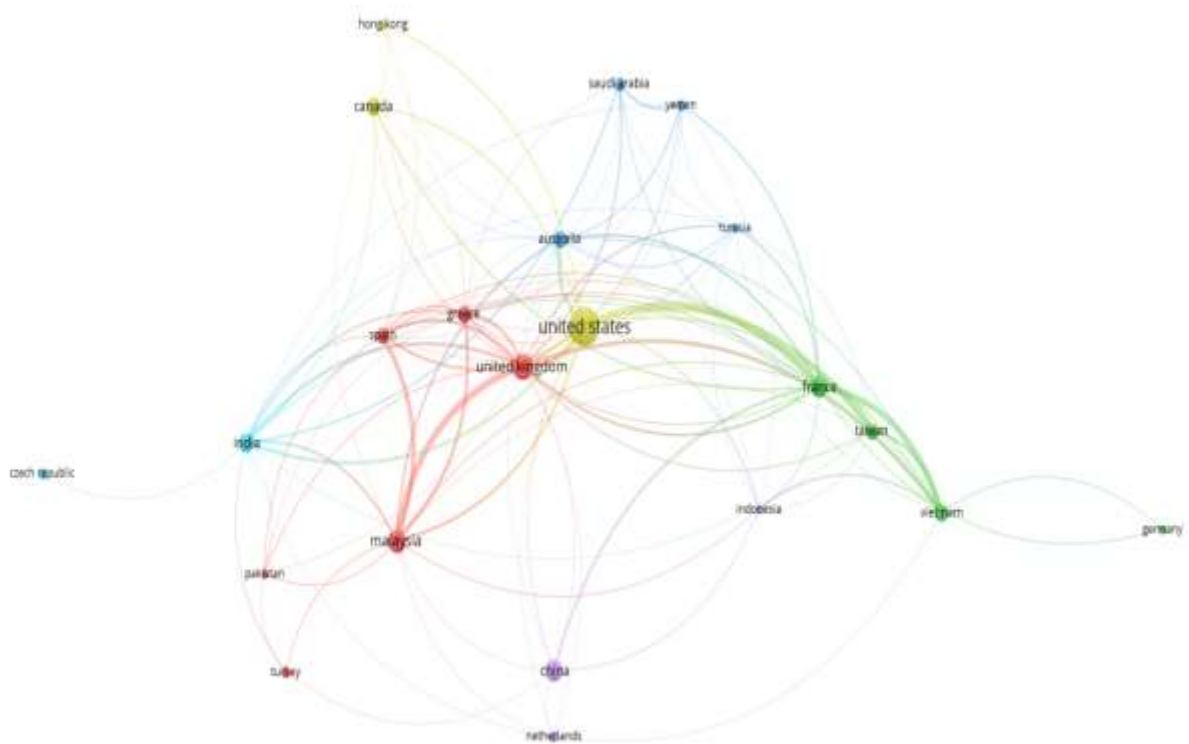
An examination of the bank's balance sheet provides important information about the operation of banks. But there are certain activities that do not readily show up in the bank's balance sheet. Some of these activities are performed by banks directly, others by their subsidiaries. Income from such types of activity comes in the form of fee rather than interest income, and OBS activities are one of the examples of fee-generating activities. But they have a special feature of representing either contingent assets or contingent liabilities. Contingent assets are those off-balance sheet items that may ultimately become on-balance sheet assets of the banks like loan commitments. Contingent liabilities are those off-balance sheet items that may ultimately become on-balance sheet obligations of the bank like letters of credit. Off-balance sheet activities have important economic impacts that affect the future rather than the current performance of a financial institution. Even these activities are difficult to trace by retail investors and researchers, despite its critical role in

the collapse of an organization, and its systemic repercussions in banking. That's why there are several arguments which support the regulation of OBS activities. The transformation of the banking sector, the complexity of the products, the reliance of the banks on the OTC derivatives, the failure of banks and the increase of the leverage of the banks are some of them. As previously stated, OBS actions completely change the financial sector. The borrower-lender relationship had broken down. This was the effect of loan securitization. As previously stated, OBS actions completely change the financial sector. The borrower-lender relationship had broken down. This was the effect of loan securitization. According to Gabbi et al (2014), banks no longer cared if the borrower defaulted because the loans had already been sold to investors. Traditional banking has undergone a transformation. According to Altunbas et al. (2014), securitization and financial derivatives alter banking behaviour, causing banks to sell loans and transfer credit risk to investors. According to Shin (2009), the procedure generates enormous quantities of cash, and some banks, such as Northern Rock, rely on it for liquidity. Even in India, various banks and non-banking firms, including Punjab National Bank, Yes Bank, and Infrastructure Leasing & Financial Services, have failed or were on the verge of failing. As a result, it is critical to limit OBS activities, particularly securitization and financial derivatives. This does not imply that regulatory authorities must restrict OBS operations because some of them generate revenue for banks.

There are several studies on OBS activities that provide mixed evidence about their impacts on the performance and stability of commercial banks. On one hand, a school of thought supports the use of OBS activities by banks because their findings indicate that diversification towards non-traditional activities have improved the performance of commercial banks (Elsas et al., 2010; Sanya and Wolfe, 2011; Aktan et al., 2013). On the another hand, another school of thought opposes the use of OBS activities because their results show the negative impact of OBS activities on the performance of commercial banks (Stiroh, 2004; Mercieca et al., 2007; Berger et al., 2010; and Maudos, 2017). The relevance of this study can be understood from the comments made by the reserve bank of India in their report on "Trend and Progress of Banking in 2002-03" suggested that the future profitability of public sector banks would depend on their ability to generate greater non-interest income and control operating expenses. Since then, the motivation to focus on non-traditional banking activities may have invigorated across banks. The importance of such types of activities can also be understood from the following figures. In the first part (fig 1 & 1a), we tried to identify the commercial banks of those countries, or those countries that have expertise in

dealing with OBS or non-interest income activities of commercial banks. After analysis of results extracted from Scopus, we have found that commercial banks of developed countries like USA, UK, Spain, Australia and Netherlands (Countries whose banking system have been well capitalized) are more specialized than commercial banks operating in other countries like, Hong Kong, Finland Pakistan and turkey etc. But we can also infer from the result that commercial banks from countries like India, Canada, Taiwan & France have also diversified their sources of earning from interest to non-interest sources of earning to survive in the competitive world and generate more extra income for banks (Nisar et al. 2018).

**1. Countries wise analysis result of commercial banks engaged in non-interest income through using the VOSviewer software.**



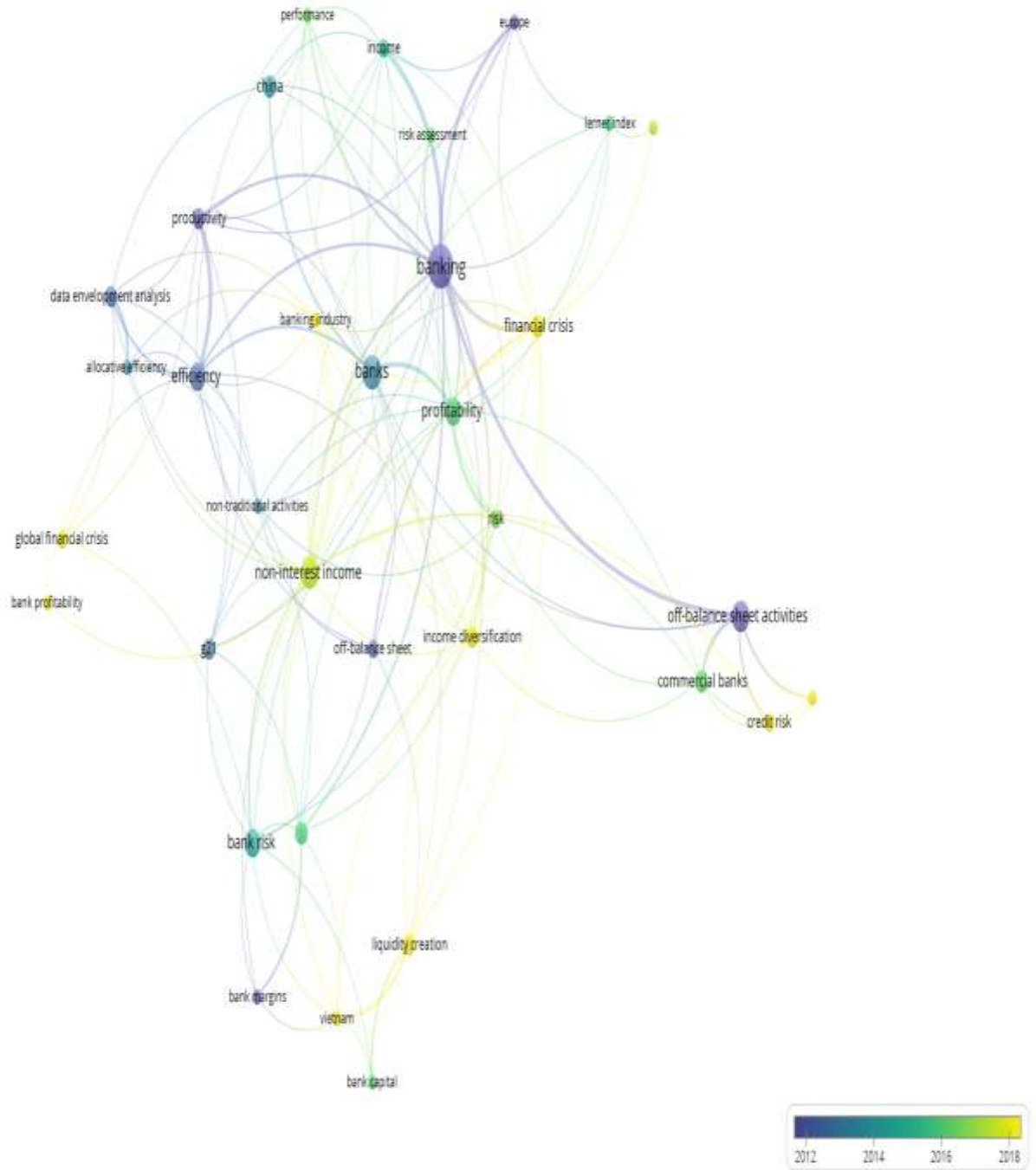
**Source: Data extracted from Scopus.**

**Figure: 1a. Countries wise analysis result of commercial banks engaged in non-interest income tabular form.**

S.NO.	Country	Documents	Citations	Total Link Strength
1	australia	6	185	30
2	canada	7	108	15
3	china	9	37	13
4	czech republic	3	8	1
5	finland	2	6	0
6	france	9	613	58
7	germany	2	49	4
8	greece	6	295	30
9	hong kong	2	20	7
10	india	8	94	35
11	indonesia	2	80	16
12	malaysia	10	55	50
13	netherlands	3	120	6
14	nigeria	2	3	0
15	pakistan	2	9	10
16	saudi arabia	4	90	15
17	spain	5	393	34
18	taiwan	5	113	24
19	tunisia	2	85	17
20	turkey	3	20	6
21	united kingdom	14	556	62
22	united states	29	622	64
23	viet nam	6	88	37
24	yemen	3	17	16

**Source: Data extracted from Scopus.**

**Figure: 2. Yearly wise analysis result of non-interest income activities through using the VOSviewer software**



**Source: Data extracted from Scopus.**

The term OBS, or Non-interest activities was first used in 1980s by big US commercial banks to take the advantage of changes in banking regulations and compete with the other banking and non-banking financial institutions to survive, improve profitability, and reduce risks. But now days commercial banks are being involved in such types of activities to diversify their sources of earning and to meet the modern demand of their customers. Initially, commercial banks were not allowed to engage in such types of activities because these activities were reserved for investment banks and other types of financial institutions. But due to changes in the business environment and legal environment, which motivated the government around the world to liberalize the activities of commercial banks so that they could provide all types of financial services to their clients at one single place. Many researchers believe that these activities are negatively related to interest income activities or in other words the pace of such activities increase with the slowdown in the economy because these activities are more stable than interest income activities. We can infer from the second figure (fig 2) that the pace of these activities was higher around 2012 than now (highlighted in the violet and yellow colours in fig 2), that was the time when banks around the world were struggling in earning minimum required rate of return on their traditional activities. But commercial banks are still securing more than one third of their total income from non-interest income activities (Nisar et al. 2018). At the end, we can conclude that these activities have helped a lot the commercial banks in maintaining the profitability and survival in the dynamic environment.

#### **4. Literature Review**

Based on the tenure of the last two decades of publications searched and reviewed from the ABDC A and B listed journals, the relevance of OBS activities has been placed here under. In the recent years, commercial banks globally have experienced a downturn in their traditional activities of financing loans by issuing deposits. Simultaneously, banks are more involved in non-traditional activities that generate fee income for banks. There are several studies on off-balance sheet activities. Among them, Rogers and Sinkey (1999) analyzed the relationship between the non-traditional activities and certain variables of the financial statements of 8,931 banks for the period 1989–1993. They have found a negative and significant relationship between net interest margin and non-traditional activities. In addition, they argued that most of the big banks focused on non-traditional activities. Davis and Tuori (2000) examined the income structures of banks in OECD countries for the period 1979–1995. They found evidence of changes in the income structure from



interest income to non-interest income, with the rapid growth of OBS activities in most of the EU countries.

Empirical investigations have also been conducted into the risks associated with OBS activities. Among these studies, Boyd and Graham (1986) examined the relationship between bank risks and non-traditional activities for the period 1971–1983. They discovered no significant relationship between OBS activities and bank risks. However, non-traditional activities were positively correlated to the risk of banks during the period 1971-1977. They indicated that the degree of association between the risk of a bank's failure and non-traditional activities increases when there is no tight regulation on non-traditional activities. As a result, the positive relationship between the two variables disappears when there are tighter regulations. The impact of off-balance sheet activities on a bank's performance was also investigated by Aktan et al. (2013). They discovered a positive relationship between OBS operations and the performance of commercial banks. Chatterjee and Sinha (2005) used the data envelopment approach to measure the efficiency of Indian commercial banks, with non-interest income as one of the performance indicators. The findings indicate that commercial banks' performance is improving.

In line with the above arguments, existing empirical studies on the impact of revenue diversification on the profitability of commercial banks have reported mixed results. For instance, investigations like Stiroh (2004), Mercieca et al. (2007), Berger et al. (2010) and Maudos (2017) all claimed that there is a negative impact of diversification into non-traditional activities on the performance of commercial banks. On the other hand, authors such as Elsas et al. (2010), Sanya and Wolfe (2011), Aktan et al. (2013), Ahamed, M. M. (2017), Nisar et al. (2018) and Li et al. (2021) observed a positive relationship between non-traditional activities and the profitability of commercial banks.

Despite its essential role in the collapse of an organisation and its systemic ramifications in banking, OBS actions are difficult for retail investors and scholars to track. when it comes to revenue diversification and commercial bank stability, a lot of research shows a negative relation between non-interest income and bank stability in the United States and in other developed countries DeYoung and Roland (2001) and Stiroh and Rumble (2006). Non-interest income, according to these studies, is more volatile than interest income, resulting in greater costs and lower risk-adjusted earnings (stability). Using data from Italian banks from 1993 to 2003, Chiorazzo et al. (2008) found that revenue diversification increases risk-adjusted returns. In a

separate study, Lee et al. (2014b) looked at the banks of 22 Asian countries and discovered that their non-interest activities reduced risk (improved stability) of commercial banks. Sanya and Wolfe (2011) used a panel data set of 226 listed banks from 11 emerging economies to evaluate the impact of a shift toward non-interest income on bank performance and insolvency risk. They discovered that diversification across industries is beneficial. Li et al. (2021) investigated the impact of diversification into non-traditional activities on performance and stability of commercial banks during covid-19 and they found a positive relationship between non-traditional activities and stability of commercial banks

### **5. Indian Banking System And The Development Of The Off- Balance Sheet Transactions (Contingents Liabilities)**

In the last two decades, the banking sector in India has undergone many reforms, like allowing foreign private banks to operate in the Indian market (Mostak Ahamed, 2017), the introduction of a corporate debt restructuring plan, to make it one of the most efficient banking systems in the world. An efficient and stable banking sector is a prerequisite for any economy to support the growth and development projects in any economy. The importance of the banking system has automatically increased in developing countries in the absence of a well-capitalized financial market (relative to developed countries) (Nisar et al., 2018). But today the banking systems in developing countries as well as in developed countries face lots of complex and contemporary problems with respect to their earning structures that encourage them to engage in new types of business activities to improve their overall performance (Li et al., 2021). Even central bank of India (RBI) highlighted in its report “Trend and Progress of Banking in 2002-03” suggested that the future profitability of public sector banks would depend on their ability to generate greater non-interest income and control operating expenses. Since then, the motivation to focus on non-traditional banking activities may have invigorated across banks.

### **6. Result**

The primary objective of this study is to examine the prior research work on off-balance-sheet activities with respect to performance and stability of commercial banks. In this regard, we have started our work in systematic manner by adopting domain based approach to investigating the outcomes of previous studies done in this area. Based on the analysis of previous research work on off-balance sheet activities, we can say that the relationship between contingent liabilities and certain variables of financial statements of different ownership groups of banks (public & private

banks) is still quite debatable. Some research says OBS activities help the commercial banks in improving their performance and stability and other says these activities are risky for banks. But in addition to this we have found something interesting which seems, have not been discussed by previous authors that the private owned banks are more effective in handling OBS activities in improving the performance of commercial banks than publically owned banks. This makes this study quite unique from other studies on OBS activities with respect to Indian banking system (Nisar et al., 2018). Second observations were that it seems commercial banks diversification into non-traditional activities or OBS activities is due to market forces (Li et al., 2021). So in nutshell we can say that our study is in line of those studies which were showing the positive relationship between OBS and performance of commercial banks Stiroh (2004), Mercieca et al. (2007), Berger et al. (2010) and Maudos (2017).

## **7. Conclusion**

The study undertakes a review of existing published literature in the domain of off balance sheet items especially in context of stability of banks and sudden collapse of institutions due to contingent liabilities being reflected as major liability. The review of existing literature in the domain of performance and stability of banks indicates that there have been a large number of instances referring to off balance sheet items as a prominent factor. In the context of Indian banking, the market share of public sector banks has declined during the last two decades due to declining performance, poor asset quality and acquisitions by other banks due to bleak prospects of survival. This paper highlights the need of providing empirical evidence towards the role of OBS activities in the survival and sudden collapse of commercial banks.

Given the hardship in the Indian banking sector's traditional activities, a fascinating application of this research may be how different types of contingent liabilities (such as loan commitments and unrealized gains on derivatives) assist banks to in enhancing their total income. An extension of this paper could look at whether types of contingent liability provide more benefits to banks and which types of contingent liability pose a greater danger to commercial banks.

## References

- Abbas, F., & Ali, S. (2021). Dynamics of diversification and banks' risk-taking and stability: Empirical analysis of commercial banks. *Managerial and Decision Economics*.
- Abedifar, P., Molyneux, P., & Tarazi, A. (2018). Non-interest income and bank lending. *Journal of Banking & Finance*, 87, 411-426.
- Ahamed, M. M. (2017). Asset quality, non-interest income, and bank profitability: Evidence from Indian banks. *Economic Modelling*, 63, 1-14.
- Aktan, B., Gee, C. S., Žiković, S., & Evrim-Mandaci, P. (2013). Off-balance sheet activities impact on commercial banks performance: An emerging market perspective. *Economic research-Ekonomska istraživanja*, 26(3), 117-132.
- Angori, G., Aristei, D., & Gallo, M. (2019). Determinants of banks' net interest margin: Evidence from the Euro area during the crisis and post-crisis period. *Sustainability*, 11(14), 3785.
- Basheer, M. F., Hidthiir, M. H., & Waemustafa, W. (2019). Impact of bank regulatory change and bank specific factors upon off-balance-sheet activities across commercial banks in south Asia. *Asian Economic and Financial Review*, 9(4), 419-431.
- Berger, A. N., Guedhami, O., Kim, H. H., & Li, X. (2020). Economic policy uncertainty and bank liquidity hoarding. *Journal of Financial Intermediation*, 100893.
- Berger, A. N., Hasan, I., & Zhou, M. (2010). The effects of focus versus diversification on bank performance: Evidence from Chinese banks. *Journal of Banking & Finance*, 34(7), 1417-1435.
- Blackwell, D. K. (2019). *Financial Institutions, Market and Money*. Wiley.
- Boyd, J. H., & Graham, S. L. (1986). Risk, regulation, and bank holding company expansion into nonbanking. *Quarterly Review*, 10(Spring), 2-17.
- Calmes, C., & Théoret, R. (2010). The impact of off-balance-sheet activities on banks returns: An application of the ARCH-M to Canadian data. *Journal of Banking & Finance*, 34(7), 1719-1728.
- Chen, T. H., Lu, C. W., & Hsieh, M. F. (2022). Onshore guarantees for offshore loans and bank risk-taking: Evidences from Taiwanese banks. *Research in International Business and Finance*, 60, 101626.
- Chiorazzo, V., Milani, C., & Salvini, F. (2008). Income diversification and bank performance: Evidence from Italian banks. *Journal of financial services research*, 33(3), 181-203.
- Davis, E. P., & Tuori, K. (2000). The changing structure of banks' income-an empirical investigation.
- Detzer, D., Creel, J., Labondance, F., Levasseur, S., Shabani, M., Toporowski, J., ... & Rodriguez Gonzalez, C. A. (2014). Financial systems in financial crisis—An analysis of banking systems in the EU. *Intereconomics*, 49(2), 56-87.
- Edwards, F. R., & Mishkin, F. S. (1995). The decline of traditional banking: Implications for financial stability and regulatory policy.
- Guo, M., Jin, J., Liu, Y., & Nainar, S. K. (2021). Non-traditional Banking Activities and Bank Financial Reporting Quality. *Asia-Pacific Journal of Financial Studies*, 50(2), 238-264.
- Hang, D., Ha, H., & Nhan, D. (2017). The impact of income diversification on profitability and risk of commercial banks: Cases of Vietnam. *International Journal of Applied Business and Economic*, 5(15), 123-137.
- Islam, M. Z. R. M. S. (2018). Use of CAMEL rating framework: A comparative performance evaluation of selected Bangladeshi private commercial banks. *International Journal of Economics and Finance*, 10(1).

- Köhler, M. (2019). An Analysis of Non-Traditional Activities at German Savings Banks—Does the Type of Fee and Commission Income Matter?. *Credit and Capital Markets*, 52(2), 253-289.
- Le, T. D. (2017). The interrelationship between net interest margin and non-interest income: Evidence from Vietnam. *International Journal of Managerial Finance*.
- Lee, C. C., Chen, P. F., & Zeng, J. H. (2020). Bank income diversification, asset correlation and systemic risk. *South African Journal of Economics*, 88(1), 71-89.
- Li, X., Feng, H., Zhao, S., & Carter, D. A. (2021). The effect of revenue diversification on bank profitability and risk during the COVID-19 pandemic. *Finance Research Letters*, 101957.
- Lozano-Vivas, A., & Pasiouras, F. (2010). The impact of non-traditional activities on the estimation of bank efficiency: International evidence. *Journal of Banking & Finance*, 34(7), 1436-1449.
- Lozano-Vivas, A., & Pasiouras, F. (2014). Bank productivity change and off-balance-sheet activities across different levels of economic development. *Journal of Financial Services Research*, 46(3), 271-294.
- Marques-Ibanez, D., Altunbas, Y., & Leuvensteijn, M. V. (2014). Competition and bank risk: the effect of securitization and bank capital.
- Maudos, J. (2017). Income structure, profitability and risk in the European banking sector: The impact of the crisis. *Research in International Business and Finance*, 39, 85-101.
- Morris, S., & Shin, H. S. (2009). *Illiquidity component of credit risk*. working paper, Princeton University.
- Nisar, S., Peng, K., Wang, S., & Ashraf, B. N. (2018). The impact of revenue diversification on bank profitability and stability: Empirical evidence from South Asian countries. *International journal of financial studies*, 6(2), 40.
- Rajan, R. (2016). Resolving stress in the banking system. *Dr. Raghuram G. Rajan, Governor-June*, 22.
- Rogers, K., & Sinkey Jr, J. F. (1999). An analysis of nontraditional activities at US commercial banks. *Review of Financial Economics*, 8(1), 25-39.
- Saif-Alyousfi, A. Y. (2020). Determinants of bank profitability: evidence from 47 Asian countries. *Journal of Economic Studies*.
- Saif-Alyousfi, A. Y., & Saha, A. (2021). Determinants of banks' risk-taking behavior, stability and profitability: evidence from GCC countries. *International Journal of Islamic and Middle Eastern Finance and Management*.
- Sanya, S., & Wolfe, S. (2011). Can banks in emerging economies benefit from revenue diversification?. *Journal of Financial Services Research*, 40(1), 79-101.
- Sinha, R. P. (2005). Off Balance Sheet Exposure of Indian Commercial Banks-Some Empirical Results. In *Indian Institute of Capital Markets 9th Capital Markets Conference Paper*.
- Stiroh, K. J. (2004). Diversification in banking: Is noninterest income the answer?. *Journal of money, Credit and Banking*, 853-882.
- Sufian, F., & Habibullah, M. S. (2009). Non-traditional activities and bank efficiency: empirical evidence from the Chinese banking sector during the post-reform period. *International Journal of Economic Policy in Emerging Economies*, 2(2), 107-132.
- Vozková, K., & Teplý, P. (2018). Determinants of Bank Fee Income in the EU Banking Industry-Does Market Concentration Matter?. *Prague Economic Papers*, 27(1), 3-20.