Changing Dynamics of Banking Landscape : What Do We Know and What Lies Ahead?

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Abstract

Purpose : The primary objective of this paper was to conduct a thorough analysis of the banking sector's altering dynamics. In doing so, the study answered questions regarding the current picture of the banking landscape as well as the potential future avenues that can be explored by scholars in this domain.

Methodology : The research design of this study was based on a systematic literature review (SLR). One hundred sixty-eight documents retrieved from the Scopus database for the period 1990 to 2022 were scrutinized through in-depth content analysis to identify their focal themes and trace the changing shapes of the banking sector.

Findings : A total of six broad themes were identified, which portray the various modifications in the banking industry across the globe in the past three decades. These banking adaptations cut across various dimensions such as technology, innovations, consumers, products, as well as bank expansions and have left an indelible mark on the banking operations and models.

Implications : The study has implications for banking organizations, facilitating them in understanding, adapting, as well as adopting a forward-looking approach to various upgradations in the banking arena. It would also enable future research scholars to trace the developments in the banking landscape and work on the directions highlighted through the review.

Originality : Despite the availability of a large pool of studies on the banking sector, the literature failed to juxtapose changes from the past to the present in areas of emerging technology, regulation, and the like. The current study filled this research gap by providing new insights, as well as by synthesizing and contextualizing the body of existing information on the changing dynamics of the banking sector in order to present a comprehensive overview of the subject.

Keywords : **banking, SLR, bank innovations, bank performance, Scopus**

JEL Classifications Code : G21, G22, G32, G33

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Almost every economy revolves around the banking sector, which is essential for the stability of financial systems in particular. The overall output swings in a country are typically made worse by disturbances to the financial sector's seamless operations. As such, there are notable output losses linked to banking crises. Therefore, maintaining the stability of the banking sector is crucial (Kumar Singh et al., 2022; Sardana & Shukla, 2020). Fintech is an emerging market disruption that is affecting traditional financial institutions and business models (Chiu, 2016). This disintermediates the traditional function of incumbent banks in offering financial services and products. Fintech firms and digital disruptors compete with banks, but there are also opportunities for banks that can quickly adjust to new developments (Vives, 2019). The emergence of new bank types, such as niche banks, neo-banks, differentiated banks (including payment banks and small finance banks), the integration of big data-driven insights into banking models (Narasimha Rao, 2013), and most significantly, the application of artificial intelligence (AI) — all have an impact on changes in the banking industry (Mishra & Sharma, 2023). It is suggested that in the future, applications for AI will determine how banks communicate with their clients, and these technologies will be the key components in improving productivity and streamlining processes (Purdy & Daugherty, 2016). Nevertheless, in spite of the abundance of research on the banking industry, the literature does not compare historical and contemporary developments in the fields of new technology, regulation, and other relevant aspects. This study seeks to close the gap above.

The primary objective of this paper is to conduct a thorough analysis of the banking sector's altering dynamics. The study seeks to close a significant research gap by providing new insights and viewpoints, as well as by synthesizing and contextualizing the body of existing information on the changing dynamics of the banking sector, in order to provide a comprehensive overview of the subject that considers factors about consumers, technology, regulations, and the economy. By doing this, the study provides answers to queries about the state of the banking industry today as well as prospective directions that researchers in this field may pursue in the future.

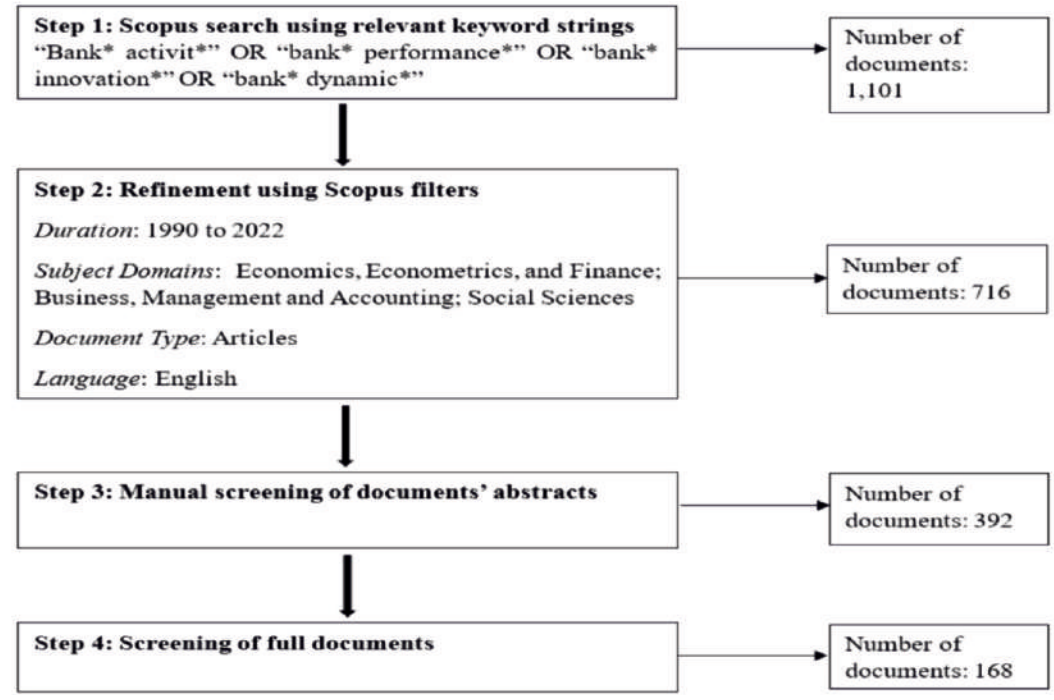
Research Methodology

Search and Screening Process

In order to retrieve the relevant documents for the review analysis, a search was run on the Scopus database with a specific search string (Figure 1). A total of 1,101 papers produced between the year of conception and 2022 were found by using the same keyword string in the abstract, title, and keywords fields during the first search. The most pertinent research papers were then included in the final evaluation using a set of screening criteria.

Documents were screened on the basis of the period to consider documents published between 1990 and 2022. This period essentially covers all the significant changes in the banking sector, from globalization to financial crisis to fintech disruptions, along with major technological advancements in banking services. Using the filter of subject domains, only those documents were included that were from areas related to banking, such as economics, finance, management, etc. Furthermore, documents were restricted to "articles" to the exclusion of books, book chapters, as well as conference papers so as to keep any grey literature in abeyance (Sardana & Singhania, 2023; Singhania et al., 2022). The only language in which articles were written and published was English. In order to guarantee that only appropriate papers were included, a final step involved going through the abstracts manually, which resulted in the removal of 324 additional documents. The remaining articles were then subjected to a thorough screening process (Sardana et al., 2023). Analysis has been conducted on a final sample of 168 documents. The search methodology and screening procedure used in the study are shown in full flow in Figure 1.

Figure 1. *Search Protocol and Screening of Documents*



Method Used

The study's research design is based on a systematic literature review (SLR). The SLR consists of a review protocol that specifies the topic to be examined and the unique method to conduct the review (Grover & Chawla, 2022). A systematic literature search, as opposed to the trial-and-error approach, looks for and locates papers to critically examine the body of literature and identify any potential gaps in knowledge (Tranfield et al., 2003).

Findings From the Review : What Do We Know?

This section presents, in detail, the results of the in-depth review of the documents included in the sample. A total of six broad themes have been identified which portray the various modifications in the banking industry across the globe in the past three decades. These banking adaptations cut across various dimensions such as technology, innovations, consumers, products, as well as bank expansions and have left an indelible mark on the banking operations and models.

Innovations in the Realm of Banking

Financial innovation can be defined as any new product/service, process or organizational form that either reduces costs, reduces risks, or is better able to satisfy the demands of the participants of the financial system (Frame & White, 2010). The review revealed that technology-driven financial innovation that exploded in the past three decades can be divided into three categories:

➯ ***Product and Services.*** The major product innovation, which was in the United States of America (USA), was in the form of subprime mortgages. This form of mortgage lending involves lending to low-credit borrowers, made possible due to the use of technology, such as credit scoring models and internal risk management techniques. On the one hand, it helped to increase access to homes and the number of homeowners (Chinloy & Macdonald, 2005), while on the other, it came with high-interest rates and pre-payment penalties (Elliehausen & Staten, 2004; Ho & Pennington-Cross, 2006). Although subprime lending is said to have extended credit to hitherto un-served people, thereby enhancing social welfare, it often encompasses predatory lending. The main problems of subprime mortgage lending that became apparent during the crisis of 2007–2009 included an increase in borrower leverage, a decline in underwriting standards as well as lax screening of subprime borrowers (Keys et al., 2010; Mayer et al., 2009).

The introduction of ATMs, debit cards, internet banking, and prepaid cards is one example of how service innovations have improved client convenience. Debit cards are found to be adversely correlated with customers' age and net wealth but positively correlated with customers' education levels and the ownership status of firms (Stavins, 2001). Evidence from developed nations shows that online banking is adopted by large, young banks that are situated in urban areas or are affiliated with a holding company (Furst et al., 2002). The adoption of online banking has benefited banks in the form of higher profits and lower costs, and this form of banking works best as a complement to a physical bank branch (DeYoung et al., 2007).

- ***Production Processes.*** Bank's production processes have witnessed the greatest number of financial innovations. These include (a) Automated clearing house (ACH), an electronic network that is used to transfer funds between banks automatically (Bauer & Hancock, 1995; Gowrisankaran & Stavins, 2004), (b) small business credit scoring, which involves using technology in order to determine the credit scores for informationally opaque small businesses (Akhavein et al., 2005; Frame et al., 2001), (c) asset securitization, i.e., the process by which non-tradable assets, such as bank loans, are converted into tradable asset-backed securities, and, (d) risk measurement and management techniques for banks such as stress testing and value at risk (VAR).

- ***Organisational Form.*** Internet-only banks, one of the biggest breakthroughs in bank organizational structure, did not last long in countries like the USA. While internet-only banks were linked to established banks in Europe, they were founded as new institutions in the USA, which resulted in their purchase, liquidation, or collapse (Delgado et al., 2007). According to DeYoung (2005), this shows that although this method of bank organization may seem appealing given its low banking volumes and little to no earnings, it cannot survive unless it is combined with a physical presence, such as click-and-mortar banks.

Banking Mergers – Crossing the National Boundaries

Although financial institutions, including banks, are among the largest multinational institutions across the world, cross-border mergers and acquisitions (M&As) of banks are relatively few as compared to domestic M&As, which is indicative of the existence of barriers in the international financial arena. There are a number of factors that act as driving or impeding forces of cross-border mergers (Mainrai & Mohania, 2020; Yadav & Mohania, 2020). The first category is information costs, which are the expenses incurred in determining if an M&A with the target company would be lucrative. A financial institution that operates internationally must overcome a number of obstacles, including distance, linguistic hurdles, variations in the legal and regulatory frameworks, and cultural differences. All of these increase the information cost for the acquirer firm, which impedes cross-border mergers (Buch & DeLong, 2004). Secondly, regulations act as direct and explicit barriers to the integration of banks across national boundaries. Banks find it easier to enter and acquire the domestic banks of a country that has undergone privatization or has low government entry barriers (Bonin & Abel, 2000; Guillen & Tschoegl, 1999). Bank-specific characteristics come in third. The attributes of banks that participate in cross-border M&As include bank efficiency, economies of scale and scope, and experience servicing domestic clients with a global presence. Studies show that if a target bank were less profitable, more cost-effective, and better capitalized, a bank would purchase a bank in a foreign country (Peristiani, 1993; Wheelock & Wilson, 2000).

The impacts of cross-border M&As on bank risks are mixed. While many such mergers allow geographical diversification of banks, two costs offset this benefit and contribute to increasing the risk exposure of the banks and bank regulators: the incentives of the foreign banks to exploit the regulatory safety nets (such as deposit insurance) of the host country by acquiring a risky bank (John et al., 2000; Sardana & Singhania, 2022), and the costs associated with additional risk monitoring in a new environment (Gupta & Sardana, 2021; Winton, 1999). Studies suggest that usually, cross-border mergers do not increase or decrease the risk of the acquiring banks significantly, but any change in the risk is dependent on the bank; that is, it is idiosyncratic (Amihud et al., 2002; Buch & DeLong, 2004).

Lending Technologies

Small business firms are generally opaque in terms of information and are not publicly traded, thereby having no clear market price. As a result, most of their external financing comes from banks that use a number of lending technologies, such as relationship lending and small business credit scoring, to collect information and lend funds to these businesses. In the case of relationship lending, the stronger the relationship of the borrower with the bank, the greater the availability of credit (Machauer & Weber, 2000; Petersen & Rajan, 1994), and better the borrower's performance as the bank helps the firm in times of financial distress as well as encourages innovation (Dahiya et al., 2003; Rosenfeld, 2007). On the negative side, a close and exclusive relationship can result in two issues: the hold-up problem, in which the bank may use its superior knowledge of the borrower to extract rents from the borrower, and the soft budget constraint, which is the bank's inability to limit the amount it lends to the company even in the event of a default, thus decreasing the company's incentive to reduce its risks (Rajan, 1992; Sharpe, 1990). Multiple bank relationships, wherein the bank maintains relationships with more than one bank, help to mitigate these two problems by avoiding information monopoly and promoting competition among the lending banks (Elsas et al., 2004; von Thadden, 1992). The technology of small business lending can be used in two ways: either as a cut-off score for accepting or rejecting loan applications or by combining the score with other information and then making a decision. It is most commonly used for borrowers who are distant or are located outside the market where the bank operates (Frame et al., 2004).

Research undertaken to gauge the effect of consolidation on small business lending has yielded ambiguous results. On the face of it, multi-market and foreign banks may have a comparative disadvantage in soft information, and hence, consolidation reduces small business lending (Degryse & Ongena, 2007; Stein, 2002). However, it has been suggested that the relative advantage of these banks in hard information outweighs any disadvantages, and by using superior hard information technologies, these banks can actually increase the supply of credit to small businesses (Berger & Udell, 2006).

A crucial modification in small business loans is the "hardening" of the data used. There is evidence that the physical gap between banks and small company borrowers is growing, which is causing the two parties' interpersonal interactions and relationships to deteriorate. Financial and technological innovations that have given banks a comparative advantage in hard information lending technologies, such as those in information processing, telecommunications, and small business lending scores (DeYoung et al., 2007; Frame et al., 2004), as well as bank size increases brought about by consolidation, have made this change possible.

The Demand and Supply of Consumer Lending

The extension of cash credit to customers by banks or delayed payment accepted by retailers for various durable goods and services encompasses consumer lending. The demand for consumer loans arises due to their ability to provide net positive benefits to consumers (Elliehausen & Lawrence, 2001), especially when the credit is used for investment in durable goods rather than meeting immediate financial hardships. Various financial institutions undertake the supply of consumer loans by acting as an intermediary between surplus and deficit units. The supply curve to individual borrowers is backward bending because of the assumption that the borrower's wealth and ability to pay is limited. Hence, the lender is not willing to provide credit beyond a particular amount due to the increased risk of default (Jaffee & Modigliani, 1969). Lenders may use credit rationing to limit credit to borrowers who fall into specific risk classes and whose individual interest rates exceed the common class interest rates of that risk class (Jaffee & Modigliani, 1969). This is done when legal restrictions or the greater good of the community in a country prevent charging different interest rates to different individual borrowers based on their risk. Moreover, in case there exists information asymmetry between borrower and lender, an increase in the interest rates may promote adverse selection and moral hazard among banks, thereby encouraging the lender to undertake credit rationing rather than increasing interest rates (Stiglitz & Weiss, 1981).

However, today, the significance of the models of credit supply that take into account asymmetric information and encourage the bank or lender to undertake credit rationing has been declining on account of a reduction in information asymmetry. This has been made possible due to two changes that now allow risk-based pricing of loans: first, the emergence of credit bureaus that collect, store, and process a large amount of data for credit usage, and second, statistical credit scoring, which allows the prediction of creditworthiness and future repayment abilities of borrowers.

Regulations on consumer lending have been in place from the very beginning; however, where earlier regulation consisted of either absolute prohibition of interests on consumer loans or a ceiling on the interest rates (Masciandaro, 2001), today these have given way to ensuring transparency and disclosure in consumer lending transactions and regulating specific lending practices of banks (Durkin & Elliehausen, 2010).

Evolution of Mortgages

A mortgage is a legal agreement between a lender, i.e., the mortgagee, and the borrower, i.e., the mortgage, wherein the lender provides funds to the borrower in exchange for title to a property held by the borrower, with the understanding that the mortgagee would lose all their rights on the property upon the full and final payment of the debt (along with interest) by the mortgagor. A residential mortgage consists of determining the value of the collateral, determining the loan-to-value (LTV) ratio, mortgage payments schedule, amortization schedule, mortgage servicing, and terms of seizure of collateral. While entering into a residential mortgage, households are required to make a number of decisions, which can be divided into two categories. First is deciding about the choice of mortgage features, such as the amount to borrow, acceptable interest rate, amortization schedule, and the existence of pre-payment penalties. The second set of decisions is related to the various issues after the mortgage has been taken, such as whether to refinance the mortgage at different terms or to default.

Where on the one hand, a mortgage is a liability for the borrower, it is an asset for the lending bank as it can be sold individually in the secondary market. A mortgage, to be sold in the secondary market, is valued on the basis of the cash streams generated by it over its life, wherein the major concern in determining the cash flows is finding the probability of default or prepayment (Duffie, 1992). When a group of mortgages are used to back securities, it leads to the creation of mortgage-backed securities (MBS). Over some time, a shift has been observed from the mortgages being held as loans in the bank balance sheets to these being securitized and sold in the secondary market. This shift has occurred due to the lower regulatory capital requirement for banks attached to MBS, the increased liquidity provided by them, the ability of banks to outsource their “funding” function to the financial markets through securitization, and the ability of securitization to lower the cost of funds for the ultimate borrower through splitting of risks attached with various mortgages into different classes and selling them to the less risk-averse investors.

Bank regulators require the banks to hold capital as a cushion against a shock to the value of assets, and the amount of capital is linked with the riskiness of assets. However, when it comes to residential mortgages, certain factors act as obstacles in calculating the adequate amount of capital required by banks. First, the credit risk associated with residential mortgages is dependent on the house prices (Del Negro & Otrok, 2005). Secondly, the credit risk also varies along with the mortgage characteristics, such as whether the mortgage is a fixed rate or a variable rate. Finally, calculating the correct amount of capital required for holding residential mortgages on a bank's balance sheet requires data on the performance of a wide variety of mortgages under different situations (Cordell et al., 2008).

Securitization of Bank Assets

Traditionally, the assets that were securitized consisted of a large number of small-sized, consumer-related assets such as residential mortgages, auto loans, education loans, and the like. These were known as granular assets and were preferred because pooling a large number of such loans helped to diversify the unsystematic risks associated with each one of them (Cordell et al., 2008). However, it exposed investors to systematic risks, as was seen in the case of the shock to the mortgages and, eventually, MBS. This traditional securitization process has now been replaced by a few numbers of large assets that are heterogeneous, such as leverage loans (called collateralized loan obligations), high-yielding bonds (collateralized bond obligations) or tranches of other asset-backed securities, and these have come to be known as collateralized debt obligations (CDOs). The main aim of CDOs, apart from providing liquidity to the underlying assets, is to encourage investors to diversify their portfolios into risky assets of the credit markets.

Securitization has a number of implications for banks and the financial system. First, it has changed the model of banking business by making the hitherto illiquid assets available outside the banking sector. Subsequently, it provides the benefit of smoothening credit risk among many investors (Duffie, 2007). On the one hand, this enhances the stability of banks. Still, on the other, the transfer of credit risk can lead to an increase in contagion and a reduction in welfare due to increased inter-linkages between banks and markets (Allen & Carletti, 2006; Morrison, 2005). Third, securitization has decreased the effectiveness of bank lending and broad credit channels to transmit the monetary policy in the economy. The increase in the liquidity of various credit market products, more continuous pricing, and better modes of measuring creditworthiness have removed the information asymmetries between the borrowers and lenders in the credit markets, thereby enabling the borrowing firms to have better access to funds on the one hand, and enabling banks to diversify their funding sources, thereby reducing dependence on reservable deposits on the other (Altunbas et al., 2007; Loutskina & Strahan, 2006).

Discussion and What Lies Ahead?

The banking industry is currently changing due to a complex regulatory environment, evolving client demands, and rapid technological advancements. The literature review highlights several significant research directions while keeping an eye on the aforementioned subjects. These themes offer guidance for the future of banking research.

Impact of Fintech

Financial systems are undergoing rapid transformations due to the fast growth of the digital economy on a national and international scale, which has caused the global economy to become more financially integrated (Zveryakov et al., 2019). The fintech revolution, which is a combination of finance and technology, has officially begun.

Citigroup founded the Financial Services Technology Consortium in the early 1990s, which is where the term "Fintech" initially appeared (Schueffel, 2016). It denotes the financial technology innovation and a new financial model that uses technology as a carrier to provide financial services like financing, financial management, and settlement via cloud computing, mobile payments, online settlement, and other cutting-edge scientific and technological methods (Schueffel, 2016). According to S&P analysts, fintech has the potential to alter traditional financial services and products drastically and have a huge impact on the global financial sector. In this context, there is a need to research more about fintech's current and future growth areas, including (a) the execution of various transactions such as payments and settlements; (b) management of funds, including advances, deposits, equity, capital, and investments; and (c) insurance (Navaretti et al., 2018).

Gender Diversity in the Banking Sector

One of the 2030 Agenda for the United Nations' Sustainable Development Goals (SDGs) is gender equality (United Nations, Department of Economic and Social Affairs, 2015). Even with the notable advancements in women's rights, full gender equality is still a goal, especially in light of the COVID-19 pandemic (United Nations, Department of Economic and Social Affairs, 2020). Fair representation of women in a variety of departments and jobs—not just in support roles but also in traditionally male-dominated industries like risk management, trading, and investment banking—is a key component of gender diversity.

Recent research on gender studies in the workplace by financial management scholars has revealed that women's skills are frequently undervalued and underappreciated, and have a significant impact on the financial performance of their companies (Oware & Mallikarjunappa, 2021; Singh et al., 2019, 2021). The necessity of increasing the proportion of women in senior and intermediate management roles within companies has been brought to the attention of corporate governance scholars (Jain et al., 2021). However, certain shortcomings in recent studies may be addressed through further investigation. First, the samples usually consist of banks from several nations, each of which has different regulations and policies in place to address challenges related to gender equality. In this regard, future studies can focus on examining the effects of gender diversity in institutions that are part of nations that are carrying out Agenda 2030's SDGs. Second, factors that can moderate or influence the relationship between the percentage of women in the workforce and bank performance have been rarely considered, including age, culture, country, and education (Galletta et al., 2022). Thus, it would be insightful to explore the moderating influence of the variables listed in further studies.

Liquidity Risk

The ability to finance asset growth and pay commitments on time is known as liquidity in the banking industry, and it is essential to the institution's continued existence. Sound liquidity management reduces the probability of banks going bankrupt as well as the occurrence of bank runs. In this domain, past research discusses the definitions of risk, liquidity, and risk management. It also covers how to establish a system for managing liquidity risk (Kumar & Yadav, 2013). Stablecoins and cryptocurrencies have gained popularity as a result of technological breakthroughs and the creation of new financial products using AI and machine learning (ML). They might be applied to risk management of liquidity. With the aid of AI and ML, this management can be automated, more intricate liquidity risk models can be developed, and real-time insights on liquidity hazards can be gained. Subsequent investigations ought to focus on these developments in the banking industry.

Shadow Banking

Shadow banking encompasses any operations on credit intermediation, liquidity, and maturity transformations that occur outside the purview of the overseen banking system. The network of specialist financial organizations, known as the "shadow banking system," transfers funds from investors to savers via a variety of secured funding and securitization options. Even though the entities that make up the shadow banking system work on similar lines as traditional banks in terms of credit and maturity transformations, they do not have access to direct public sources of liquidity. This makes shadow banks intrinsically unstable in many ways (Adrian & Ashcraft, 2016). After considering all the complexities of shadow banking, there could be future research about the impact of shadow banking during and after the period of a pandemic, such as COVID-19, along with the factors (such as financial literacy) that can play a role in curbing the ill-effects of such a system (Goyal, 2023). It will provide a clearer and more thorough understanding of shadow banking and how it affects the dynamics of the banking industry. Additional research is necessary to fully understand the complex interactions between shadow banking and financial stability, including systemic risk, financial market volatility, and macroeconomic effects.

Financial Inclusion

The growing paradigm of financial inclusion in economic growth is one of the primary drivers of a country's efforts to end poverty. It discusses how the general public, which includes both wealthy and impoverished people, can use affordable financial services that help close the wealth gap in society. Banks and other financial institutions are the solid bases of progress, economic growth, and economic development in the modern economic environment (Alam Iqbal & Sami, 2016). Financial inclusion encompasses basic banking services like savings accounts, credit, insurance, and remittance services. Future studies on financial inclusion instruments should investigate the relationship between these instruments and the risk and performance of banks in developing nations (Shihadeh, 2020).

Conclusion and Implications

Banking is a term with multiple meanings, complexities, and ambiguities attached to it. No wonder banks have attracted so much attention and have been the center of research taking place all around the world. However, there exists a gap in terms of the synthesis of this research to draw an overall picture of the banking landscape across the world. This study aims to outline the dynamics and advancements in the banking sector through an SLR of 168 relevant documents extracted from the Scopus database. The findings from the in-depth analysis of the documents revealed the various activities that banks have forayed into and how they have responded to the multitude of innovations, challenges, products, and services that have come their way, including demand from small businesses, consumers, and mortgagors. Based on this, six broad themes that have been researched extensively have been identified and elaborated. These include product, service, process, and institutional innovations in the sphere of banking, mergers and acquisitions, advancements in lending technologies, transformations in consumer lending, the evolution of mortgages, and the expansion of securitization. The study also highlights various agendas for future research that consist of themes and topics that are either yet to be explored or present scope for further research penetration.

The outcomes of this study have practical implications for banking organizations as well as policymakers and academic implications for research scholars. The research aims to assist banks in comprehending, adjusting, and embracing a proactive stance towards the numerous advancements in the banking sector. Policymakers will also benefit from reviews like the one this paper presents, which explain the implications of different laws, rules, and supervisory standards. Additionally, it would make it possible for other researchers to follow the paths the review highlights and track changes in the banking industry.

Limitations of the Study and the Way Forward

The study, although valuable, has many limitations. These include the use of a single database to extract pertinent papers for examination and the potential exclusion of some important documents because of the screening criteria. However, the paper will constitute a significant contribution to the banking literature.

Authors' Contribution

Varda Sardana and Dr. Amiya Kumar Mohapatra established the concept and preliminary research task plan. Dr. Deepankar Chakrabarti and Dr. Shubham Singhania approved the concept and turned it into a thorough study framework. Additionally, in order to identify the research gaps, Dr. Shubham Singhania and Varda Sardana conducted a thorough assessment of the literature. Dr. Deepankar Chakrabarti and Dr. Amiya Kumar Mohapatra used the proper research instruments and methodologies to gather and examine the data. Dr. Shubham Singhania and Varda Sardana carefully examined the data and findings and then provided the conclusions and the required interpretation. The detailed manuscript was prepared by Dr. Shubham Singhania, Dr. Amiya Kumar Mohapatra, and Varda Sardana. Lastly, Dr. Deepankar Chakrabarti and Dr. Amiya Kumar Mohapatra finalized the research findings and did the necessary formatting and copyediting of the manuscript.

Conflict of Interest

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

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