Global Economics Review (GER)
URL: http://dx.doi.org/10.31703/ger.2022(VII-IV).03

Asghar Kamal [*] Muhammad Sadil Ali [†] Muhammad Mahmood shah Khan [‡]

Impact of Fintech on the Financial Stability of Banks: A Systematic Literature Review

Pages: 33– 40 | Vol. VII, No. IV (Fall 2022) | DOI: 10.31703/ger.2022(VII-IV).03
p-ISSN: 2521-2974 | e-ISSN: 2707-0093 | L-ISSN: 2521-2974

Contents

Abstract: In recent decades, financial technology and stability have been debated and studied for decades. This study examines the relationship between financial technology (Fintech) and global bank financial stability. The study collected articles from research databases for this (Science Direct, Welly, Emerald, Springer Link, Google Scholar, and Research Gate). We map the financial technology–financial stability research domain and identify key developments and patterns from 1995 to 2022 using peer-reviewed articles. Financial technology's theoretical relationship to financial stability is also examined. Fintech, financial stability, and determinants are examined. This paper builds a comprehensive model of the relationship between Fintech and banking sector financial stability. Banking sectors use financial technology and financial stability practices to achieve financial stability goals and gain competitive advantages. Financial technology has increased the global banking sector financial stability.

Key Words: Fintech, Financial Stability and Literature Review

JEL Classification:

Introduction

Financial technology (hereafter FinTech) start-ups and the size of their markets have expanded considerably over the past decade due to the development of new digital technologies. But established actors in the financial sector, particularly financial institutions, have only gradually adopted new technological innovations (Brandl and Hornuf, 2017). In spite of the fact that banks have acquired FinTech companies on occasion in recent years, the vast majority of FinTech startups are bank-independent and available to investor interests. The growth of FinTech companies will necessitate that they take over a number of duties currently performed by traditional banks, as many banks, outside of the largest ones, continue to provide antiquated, costly, and burdensome financial services (Li, Spigt, and Swinkels, 2017).

Technological advancements have reshaped the basic financial service and product fields to fulfil the needs of the entire population and enhance financial stability. Technology gives equal access to both individual and firm-level financial services. Prior research has shown that developed financial systems promote financial innovation

[*] PhD Scholar, University of Management and Technology, Lahore, Punjab, Pakistan.
[†] Research Associate, Department of Commerce, Allama Iqbal Open University, Islamabad, Pakistan.
Email: sadil.ali@aiou.edu.pk *(Corresponding Author)*
[‡] Assistant Professor, Hasan Murad School of Management (HSM), Lahore, Punjab, Pakistan.

Citation: Kamal, A., Ali, M. S., & Khan, M. M. S. (2022). Impact of Fintech on the Financial Stability of Banks: A Systematic Literature Review. *Global Economics Review, VII*(IV), 33-40. https://doi.org/10.31703/ger.2022(VII-IV).03

(Xiao and Zhao, 2012; Zhu et al., 2020). The CGFS-FSB (2017) says that there is no internationally accepted definition of fintech. In general, FSB defines FinTech as a process where borrowers and lenders are directly matched through electronic platforms. Furthermore, Classens et al. (2018) defined financial technology as a source of funding for both businesses and end users.

The term "fintech" has gained significant attention in the last few decades in the field of economics and financial systems. FinTech, which stands for "financial technology," is a new field in finance. It means using technology to make small or big changes in the way financial services are provided (Alshater and Othman, 2020). This new subfield of finance is referred to as "FinTech," which stands for "financial technology." It refers to the application of technology in order to effect changes, whether minor or significant, in the manner in which financial services are provided (Thakor, 2020). Luo et al. (2022) define fintech as providing a smooth platform in the fields of insurance, retail finance, equity rise, and credit provision. Financial technologies can strongly influence the financial system. According to the report from KPMG (2021), financial technology investment around the globe reached $95 billion.

Fintech is revolutionizing the way financial services, products, and businesses are operated. It can be used to improve efficiency, reduce costs, and increase customer satisfaction. For example, banks and other financial institutions can use fintech to provide customers with more efficient services, such as online banking, automated payments, and faster loan approvals. Fintech also helps to reduce the cost of financial transactions, making it easier and cheaper for customers to access financial services. In addition, fintech also helps to increase the speed of financial transactions, making them more efficient and affordable.

This topic has been propelled to the forefront of the discussion within the academic community ever since the start of the financial crisis (Beck et al., 2012 & Arcand et al., 2012). Since the onset of the financial crisis, this issue has been thrust to the forefront of the discussion within the academic community (Cecchetti and Kharroubi, 2012).

Prior literature studies widely use the Z-score index for financial stability in the corporate and banking literature (Beck et al., 2013; Nguyen & Dang, 2022). The capacity to facilitate and improve economic processes, as well as to effectively manage risks and absorb shocks, is how financial stability is typically characterized. Moreover, financial stability is considered to be a continuum, meaning that it varies and can be achieved through a variety of different permutations of the components that make up finance (Schinasi, 2004).

Review of Literature

Furthermore, research has shown that financial innovation (FI) is a significant source of the financial stability of both types of the baking sector in Pakistan (Kamal et al., 2021). In the same way, it was found that financial technology and global financial stability are positively linked (Kamal et al., 2021). Additionally, the research study examined that fintech has a positive link with financial stability, but on the other hand, fintech has an adverse effect on the real economy (FSB, 2017). Also, between 2006 and 2017, data from 63 countries was collected to look at the link between fintech and financial stability. The research found that financial technology has a positive relationship with financial stability. However, emerging market financial technology creates competition and enhances participation in the market (Feyen et al., 2021). Additionally, in the same line, fintech creates competition and increases the number of participants in emerging markets (Pazarbasioglu et al., 2020).

Also, financial technology makes markets more competitive, which helps customers compare products and services (OECD, 2018). However, the research study also examined that when there is competition in the market, there is diversification, which enhances the financial stability of the market (Goetz, 2018). In the same way, look into how competition in the market affects financial stability (Caminal and Matutes, 2002). Other research studies

(Kabir and Worthing, 2007; Albaity et al., 2021) also looked at how market competition reduces market power and profit margins, which leads to more instability in the long run.

The growth of financial services could make a positive contribution to the stability of the macroeconomy by reducing the number of constraints; this would result in quicker economic expansion, a reduction in poverty, and a narrowing of the income gap; however, additionally, it has the potential to be a source of instability if not properly regulated. Financial services, such as banking and insurance, are essential for a functioning economy, as they provide liquidity to facilitate investment and borrowing (Weller & Zulfigar, 2013).

Due to the rapid pace at which it is developing, FinTech may have some positive effects, but it also has the potential to introduce financial risks as well. For example, FinTech products and services are typically not subject to the same regulations as traditional banking services, which could lead to increased risk of fraud and cyber-attacks. Additionally, FinTech could potentially lead to increased levels of financial instability due to its use of algorithms and automated decision-making processes. Finally, FinTech could potentially lead to a concentration of financial power in a few large players, leading to reduced competition and decreased consumer choice. FinTech is taken into account by both international organizations and national agencies when assessing the likelihood of potential risks and constructing regulatory frameworks. This is done with the intention of preserving financial stability and gaining an understanding of how it could be impacted by activities related to FinTech. The goal of this endeavour is to gain a better understanding of how financial stability could be impacted.

In this light, the Financial Stability Board (hereafter FSB) established the Financial Innovation Network, an organisation tasked with keeping an eye on developments in the financial technology sector from the point of view of maintaining financial stability. The Financial Innovation Network was given the task of keeping an eye on developments in the financial technology sector from the point of view of maintaining financial stability (FSB, 2017). According to the regulation that mandates the European Banking Authority (EBA) to monitor innovations and the influence of FinTech on the business models of institutions located in the European Union, the EBA does this by developing regulatory and implementing technical standards (RTS/ITS) for prudential and conduct of business requirements for financial institutions, strengthening supervisory convergence, and monitoring financial markets to identify and address potential risks. This is in accordance with the requirement that the EBA ensure the proper operation of financial markets. The regulation assigns the European Banking Authority (EBA) the responsibility of evaluating the influence of financial technologies (FinTech) on the operational procedures of organizations based in the European Union. In addition, EBA is required to ensure that financial markets maintain their integrity and transparency (EU). This monitoring is carried out in accordance with the mandate given to the EBA to monitor the role of FinTech in various business models of various institutions (EBA, 2019).

The first section of this article underlines how important it is for countries all over the world to work together on FinTech. When conducting risk assessments and developing micro and macroprudential regulatory frameworks, international and national entities should pay attention to the ten areas that have been recognized by the Financial Stability Board (2017) as needing such attention. The second section of the piece provides an explanation of the connection between innovative financial practices and the structure of the market. Even though the market structure is most commonly associated with its effects on competition, it can also have an effect on financial stability (FSB, 2019). FinTech could potentially influence the structure of the market through many routes, including FinTech credits, FinTech firms, and the services of third parties. FinTech credits offer borrowers direct communication with their lenders, making them available as an alternative source of funding.

Furthermore, Wang et al. (2021) discovered that the impact of FinTech on banks' levels of risk-taking is most pronounced in institutions that have higher levels of shadow banking and lower levels of operational efficiency. This was one of the findings of their study. Both shadow banking and the productive capacity of banks are connected to the composition of bank shareholders (Ding et al., 2020). There is a correlation between the make-up of bank shareholders and the productive capacity of banks, also known as shadow banking (Figueira et al., 2009). The composition of a bank's shareholders and its productive capacity, also known as shadow banking, has been shown to have a relationship with one another. (Lensink et al., 2008).

Asymmetric information may have a positive influence on stock crashes in the banking industry, as the concept of asymmetric information suggests (Kosmidou et al., 2017). As a result, FinTech can become a viable option for promoting transparency through the utilization of big data analysis, thereby reducing information asymmetry and increasing financial stability.

This can be accomplished through strengthening financial stability. Additionally, increased diversity in the financial industry might lead to increased economic stability (Weller & Zulfiqar, 2013). By conducting research on FinTech in 63 different nations, Daud et al. (2021) presented additional empirical data to support the thesis that it enhances financial stability.

Prior research studies have found mixed results between financial technology and financial stability. Prior research has found that financial technology has a divergent relationship with financial stability if the government implements a financial regulatory sandbox. Similarly, the research study collected data of 63 developing countries to examine the fintech and financial stability association. They concluded that there is a beneficial and substantial connection between fintech and financial security (Daud et al., 2021). According to the findings of the study, fintech also contributes to the promotion of financial stability through a variety of channels, including artificial intelligence, data technology, and cloud computing technology.

When it comes to determining overall economic growth, the state of the financial system is by far the single most important factor, especially in less developed countries (Levine, 1997). The increase in the use of financial technology has had a negative impact on the reliability of the financial system. Second, to the best of the authors knowledge, this study is the first of its kind to examine how market discipline affects the expansion of FinTech and the stability of the financial sector. We showed that emerging markets can benefit from market discipline because it helps these markets limit the potentially negative effects that fintech can have on financial stability. This is one of the benefits that we demonstrated. Third, we investigated the effect that the growth of FinTech and market discipline have on the dependability of the monetary system as a whole. When it comes to mitigating the potentially disastrous effects of disruptive technologies like fintech, the discipline of the market is proven to be the most effective tool. The last part of our study consisted of an investigation into the part that ownership structure plays in the expansion of FinTech, in addition to market discipline and financial stability. When international organisations rather than individual nations own fintech companies, any potentially damaging effects that fintech may have on the economy are significantly reduced. When there is a greater share of state ownership in banks, market discipline helps to mitigate the negative effects that the development of FinTech can have on the financial system stability. When there is a greater proportion of foreign ownership in a bank, this effect is seen to be less pronounced.

The study aims to examine the relationship between fintech and cost efficiency by looking at data from the Chinese baking industry from the years 2003 to 2019. According to the findings of the study, fintech results in lower cost efficiency (Lee et al., 2021). After analyzing data collected from 37 commercial banks in Vietnam between 2010 and 2020, it was determined that there exists a significant association between fintech and financial stability. This conclusion was reached after analyzing the data. The findings of the study indicate that fintech negatively effect financial stability in Vietnam's (Nguyen, 2022). In addition, research compiled data from 41 commercial financial institutions to investigate the impact of fintech on the financial stability of financial firms. They concluded that there is a connection, albeit a negative one, between fintech and the financial security of the banking sector (Phan et al., 2018).

In addition to this, the research work investigates the connection between fintech and financial security. They found that the use of fintech had a positive impact on the Islamic bank's financial stability (Yoshida, 2019). In addition, the research works investigate the connection between fintech and financial stability, and the findings of the research works suggest that fintech has a beneficial connection to financial stability (Varma et al., 2022). However, the research study also investigates the relationship between financial technology and financial performance from 2011 to 2017. The researchers discovered that fintech increases inflation while improving economic performance in other cases (Kammoun et al., 2020). Additionally, the research collected data on the Indian banking sector to explore the link between fintech and financial stability. They found (Syed et al., 2022) that fintech has a big and negative effect on India's financial stability. However, the data collected of the cross from the 73 countries cover the time of 2013 to 2018 to examine the relationship among fintech and financial stability. They found the financial technology has a negative association with the financial stability of a country (Nguyen et al., 2021). This is because financial technology can potentially disrupt the traditional banking system, creating instability in the financial sector. This could have dire consequences for financial stability and should be addressed through stronger regulatory oversight.

Research Method

The systemic literature review (SLR) of the earlier study work done on financial technology and the financial stability of banks is going to be the focus of this research project, which aims to investigate its overall objectives. The prior research study studied the connection between the two by employing a research approach known as a systematic review to carry out the investigation (Danese et al., 2018). It was necessary to use publications sourced from Science Direct, Welly, Emerald, Springer Link, Google Scholar, and Research Gate in order to locate contemporary research works on the connection between financial technology and the financial stability of banks.

Discussion & Conclusion

Earlier studies that used the data from this study came to the conclusion that financial technology has a big and good effect on the stability of the financial system. Using the data from the study, the researchers came to this conclusion. Researchers came to this conclusion by using the information they got from the investigation. The research was able to come to conclusions based on these findings to cite just a few examples: (Daud et al., 2022; Xiao and Zhao, 2022 & Zhu et al., 2020).

In the same line of research, studies also found that financial technology has positively accelerated financial stability (Feyen et al., 2021; Cheng and Qu, 2020; Pazarbasioglu et al., 2020; Frost et al., 2021; Goetz, 2018). Additionally, Caminal and Matutes (2002) and Wang et al., (2021) investigate the relationship between financial technology and financial stability, and they find that fintech has a positive relationship with financial stability. Financial technology has been shown to improve security in some studies while having the opposite effect in others (Kabir and Worthington, 2017; Albaity et al., 2021; Caminal and Matutes, 2002; Mishkin, 1999; Pantielieieva et al., 2018).

The main objective of this research is to examine the literature review of fintech and financial stability around the world. Fintech brings the opportunity to the market for both customers and market participants, but it also brings risk, which must be managed. The comprehensive literature review came to the conclusion that several of the research papers that were considered for the review offered conceptual and empirical proof that there is a connection between financial technology and financial stability. These findings were revealed in the review. Previous research investigations that investigated both the direct and indirect linkages that exist between financial technology and financial stability concluded that the influence had both a positive and significant impact. During this time period, a variety of research organizations were investigating the question of whether or not advances in financial technology have a detrimental effect on the robustness of the financial system.

It is crucial that the relationship between financial technology and financial stability be studied from a wide range of research and practical perspectives in order to evaluate and determine all of the possible variables that can affect this relationship. This can be done to assess and identify all factors that may influence the connection between financial innovation and security. This will allow for a more precise evaluation and determination of the connection between financial sector technological progress and financial security. The concepts that were gleaned from this in-depth analysis of the pertinent literature are going to be applied in theoretical and managerial settings, respectively. Theoretical applications are useful for scholars, especially in regard to the suggested variables that are included in the developed conceptual model and affect the relationship between financial technology and financial stability. These variables can have an effect on the model in a number of ways, including directly and indirectly. Academics can benefit from utilizing this paradigm in a variety of different ways. Theoretical implementations are beneficial to scholars because of the light that they shed on recommended factors.

Reference

Albaity, M., Mallek, R. S., Hassan Al‐Tamimi, H. A., & Noman, A. H. M. (2021). Does competition lead to financial stability or financial fragility for Islamic and conventional banks? Evidence from the GCC countries. *International Journal of Finance & Economics*, *26*(3), 4706-4722. https://doi.org/10.1002/ijfe.2037

Alshater, M. M., & Othman, A. H. A. (2020). Financial Technology Developments and their Effect on Islamic Finance Education of King Abdulaziz University: *Islamic Economics*, *33*(3), 161-187. https://doi.org/10.4197/Islec.33-3.9

Claessens, S., Frost, J., Turner, G., & Zhu, F. (2018). Fintech credit markets around the world: size, drivers and policy issues. BIS Quarterly Review September.

Danese, P., Manfè, V., & Romano, P. (2018). A systematic literature review on recent lean research: state‐of‐the‐art and future directions. *International Journal of Management Reviews*, *20*(2), 579-605. https://doi.org/10.1111/ijmr.12156

Daud, S. N. M., Ahmad, A. H., Khalid, A., & Azman-Saini, W. (2022). FinTech and financial stability: Threat or opportunity? *Finance Research Letters*, *47*, 102667. https://doi.org/10.1016/j.frl.2021.102667

Feyen, E., Frost, J., Gambacorta, L., Natarajan, H., & Saal, M. (2021). Fintech and the digital transformation of financial services: implications for market structure and public policy. BIS Papers.

Feyen, E., Frost, J., Natarajan, H., & Rice, T. (2021). What does digital money mean for emerging markets and developing economies?. In *The Palgrave Handbook of Technological Finance* (pp. 217-241). Palgrave Macmillan, Cham.

Goetz, M. R. (2018). Competition and bank stability. *Journal of Financial Intermediation*, *35*, 57-69. https://doi.org/10.1016/j.jfi.2017.06.001

Kamal, A., Hussain, T., & Khan, M. M. S. (2021). Impact of Financial inclusion and financial stability: Empirical and theoretical review. *Liberal Arts and Social Sciences International Journal (LASSIJ)*, *5*(1), 510-524. https://doi.org/10.47264/idea.lassij/5.1.33

Kamal1st, A., Khan2nd, M. M. S., Kazmi3rd, U. E. R., Anis4th, W., Hussain5th, T., & Sualeh6th, M. (2021). Impact of Financial Inclusion and Corporate Social Responsibility on Islamic Banks Financial stability with the Moderating Role of Corporate Governance. *Indian Journal of Economics and Business*, *20*(1), 1019-1031.

Kammoun, S., Loukil, S., & Loukil, Y. B. R. (2020). The Impact of FinTech on economic performance and financial stability in MENA zone. In *Impact of Financial Technology (FinTech) on Islamic Finance and Financial Stability* (pp. 253-277). IGI Global.

Khan, A., Chen, C. C., Suanpong, K., Ruangkanjanases, A., Kittikowit, S., & Chen, S. C. (2021). The impact of CSR on sustainable innovation ambidexterity: The mediating role of sustainable supply chain management and second-order social capital. *Sustainability*, *13*(21), 12160. https://doi.org/10.3390/su132112160

Lee, C. C., Li, X., Yu, C. H., & Zhao, J. (2021). Does fintech innovation improve bank efficiency? Evidence from China's banking industry. *International Review of Economics & Finance*, *74*, 468-483. https://doi.org/10.1016/j.iref.2021.03.009

Levine, R. (1997). Financial development and economic growth: views and agenda. *Journal of economic literature*, *35*(2), 688-726. https://www.jstor.org/stable/2729790

Li, Y., Spigt, R., & Swinkels, L. (2017). The impact of FinTech start-ups on incumbent retail banks' share prices. *Financial Innovation*, *3*(1), 1-16.

Luo, S., Sun, Y., Yang, F., & Zhou, G. (2022). Does fintech innovation promote enterprise transformation? Evidence from China. *Technology in Society*, *68*, 101821. https://doi.org/10.1016/j.techsoc.2021.101821

Nguyen, L., Tran, S., & Ho, T. (2021). Fintech credit, bank regulations and bank performance: a cross-country analysis. *Asia-Pacific Journal of Business Administration*.

Nguyen, Q. K. (2022). The effect of FinTech development on financial stability in an emerging market: The role of market discipline. *Research in Globalization*, *5*, 100105.

OECD., K. (2018). *OECD science, technology and innovation Outlook 2018*. Paris: OECD Publishing.

Pantielieieva, N., Krynytsia, S., Khutorna, M., & Potapenko, L. (2018, October). FinTech, transformation of financial intermediation and financial stability. In *2018 International Scientific-Practical Conference Problems of Infocommunications. Science and Technology (PIC S&T)* (pp. 553-559). IEEE.

Pazarbasioglu, C., Mora, A. G., Uttamchandani, M., Natarajan, H., Feyen, E., & Saal, M. (2020). *Digital financial services*. World Bank, 54.

Phan, D. H. B., Narayan, P. K., Rahman, R. E., & Hutabarat, A. R. (2020). Do financial technology firms influence bank performance? *Pacific-Basin Finance Journal*, *62*, 101210. https://doi.org/10.1016/j.pacfin.2019.101210

Schinasi, G. J. (2004). *Defining financial stability*.

Syed, A. A., Özen, E., & Kamal, M. A. (2022). Do Digital Financial Services Influence Banking Stability and Efficiency: An ARDL Analysis of a Developed and a Developing Economy. In *The New Digital Era: Digitalisation, Emerging Risks and Opportunities* (Vol. 109, pp. 13-30). Emerald Publishing Limited.

Thakor, A. V. (2020). Fintech and banking: What do we know? *Journal of Financial Intermediation*, *41*, 100833. https://doi.org/10.1016/j.jfi.2019.100833

Varma, P., Nijjer, S., Sood, K., Grima, S., & Rupeika-Apoga, R. (2022). Thematic Analysis of Financial Technology (Fintech) Influence on the Banking Industry. *Risks*, *10*(10), 186. https://doi.org/10.3390/risks10100186

Vučinić, M. (2020). Fintech and Financial Stability Potential Influence of FinTech on Financial Stability, Risks and Benefits. *Journal of Central Banking Theory and Practice*, *9*(2), 43-66. https://doi.org/10.2478/jcbtp-2020-0013

Vuong, Q. H., La, V. P., Nguyen, H. K. T., Ho, M. T., Vuong, T. T., & Ho, M. T. (2021). Identifying the moral–practical gaps in corporate social responsibility missions of Vietnamese firms: An event-based analysis of sustainability feasibility. *Corporate Social Responsibility and Environmental Management*, *28*(1), 30-41. https://doi.org/10.1002/csr.2029

Wardhani, N. (2021). Do financial technology firms influence bank performance? A reverse engineered pitch. *Journal of Accounting and Management Information Systems*, *20*(1), 154-160. https://doi.org/10.24818/jamis.2021.01008

Xiao, S., & Zhao, S. (2012). Financial development, government ownership of banks and firm innovation. Journal of International Money and Finance, 31(4), 880-906. https://doi.org/10.1016/j.jimonfin.2012.01.006

Yoshida, E. (2019). Fintech-Enabled Islamic Financial System and Financial Stability. In *Islamic Monetary Economics and Institutions* (pp. 181-192). Springer, Cham.

Zhu, X., Asimakopoulos, S., & Kim, J. (2020). Financial development and innovation-led growth: Is too much finance better? *Journal of International Money and Finance*, *100*, 102083. https://doi.org/10.1016/j.jimonfin.2019.102083