

Impact of financial inclusion and financial stability: Empirical and theoretical review

Asghar Kamal* | Talat Hussain | M. Mahmood Shah Khan

Department of Banking and Finance, School of Business and Economics, University of Management and Technology (UMT), Lahore, Pakistan.

*Correspondence Emails: asgharkamal5523@gmail.com | ktk_asghar6946@yahoo.com

Abstract

The foremost objective of this research is to review the connection between financial inclusion (FI) and banks' financial stability (FS). The research article surveys a vast body of literature devoted to evaluating the relationship between the FI and FS of the banks. The literature review evaluates recent empirical research studies on the impact of FS and banks FS. The research works are divided into the following parts: (i) What is financial inclusion (FI) (ii) What is financial stability (FS) (iii) the influence of FI and FS (iv) FI measurement and indicator (v) whether FI led to enhance the FS. This paper presents the relevant review of imperialistic research on the nexus between the influence of FI on FS from the period 1995-2020. Abundant research studies to date suggest that FI has a positive and significant impact on the FS of the banks' stability. A few other research studies also reveal that when FI have a negative influence on the FS, it is due to the lack of efficient management. When the credit is expanded this time, it will increase the risk for financial stability.

Article History

Received:
March 2, 2021

Last Revised:
June 18, 2021

Accepted:
June 20, 2021

Published:
June 30, 2021

Keywords: financial inclusion, financial inclusion indicators, financial inclusion measurement, financial stability, banks financial stability, impact of financial stability.

How to Cite:

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>

Publisher's Note:

IDEA PUBLISHERS (IDEA Journals Group) stands neutral with regard to the jurisdictional claims in the published maps and the institutional affiliations.

Copyright:

© 2021 The Author(s), published by IDEA PUBLISHERS (IDEA Journals Group).

This is an Open Access article published under the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>)

1. Introduction

The FI concept has gained a lot of attention in the last few decades. In the 2000s, empirical evidence revealed that FI had a significant positive effect and reduced poverty in the country (Shiimi, 2010). The current study has a few parts: (a) financial inclusion, (b) financial stability, (c) How to measure financial inclusion and what the indicators are, and (d) FI's influence on banks' stability. In financial literature, financial inclusion plays an active role; however, there has been no recognised definition of FI in the past literature (Tita & Aziakpono, 2017). FI denotes the financial service access to both levels in the society discrete level as well as the business level of financial produced and service of the financial institution like transaction, payment, saving, credit and insurance at an affordable cost (Alex Bank, 2017). FI is a state where the bulk of financial product research is done in society (Olaniyi, 2017). The main impartial drive of the FI is to improve the social life of the individual and household well-being, increase the activity of the SME, and increase the employment opportunities and economic growth of the entire country.

The research works defined FI as a basic financial service of the financial sectors to be provided at a low and affordable cost to the weaker section of the population without any discrimination (Rangarajan, 2008). The term FI refers to the financial products and services such as debit cards and credit cards for the enormous segment at an affordable cost to the population (Chhabra, 2015). The main purpose of the FI is access to financial services and products, which is the type of group that is excluded from financial services in society. FI includes the saving and payment of accounts, credit insurance, pensions and ATMs (Ambarkhane *et al.*, 2014). However, some other research works explain that FI is easy access to the availability and accessibility of financial services at a reasonable cost to an entire segment of the population (Sarma, 2008). Enhancement in the FI service will lead to a higher rate of saving, an increase in capital, a reduction in poverty, an improvement in well-being, an increase in employment rate, improved economic development and lead to economic growth (Park & Mecado, 2018). Other research work also examines that FI is easy access to financial products and services to the entire society, including the weaker group of society, at a cheap cost and without any judgment (Chakrabarty, 2013).

FI is the financial service for the society that the members can use effectively and efficiently (Demirguc-Kunt *et al.*, 2017). However, another examiner also defines FI as easy access and availability to the financial services of all members of society, including members who are excluded from basic financial services for different reasons (Ozili, 2018). Some other scholars also define the FI as a basic banking financial service to all members of society at a cheap cost and without disadvantages and low-income groups (Dev, 2006). The research studies indicate that financial inclusion (FI) focuses on the access and availability of finances to each member of society at an affordable cost. FI will bring the population of the society to the formal financial services that haven't access to financial products and services in the society (Allen *et al.*, 2016). However, the examiner concluded that only one factor is not sufficient, and FI is the procedure in which every member of society positively and equally contributes to and helps the weaker section of society (Sarma, 2012). However, another research study by this author examines how access to financial services to the entire section of society contributes to the economy (Sarma, 2008).

Many research studies define FI as access to basic financial products and services, including at both levels of society, such as the individual and enterprise levels (Kim, 2016). In the modern

economic system, everyone participates in financial inclusion activities. FI is familiar as a system that enhances the quality, quantity, and efficiency of financial intermediary services (Babajide et al., 2015), which leads to improved lives and more opportunities and enhances the economic growth of the country. Babajide *et al.* (2015) reveal that FI brings an increase in savings and investment in local businesses. Moreover, the research study also reveals that technological innovation also brings improvement in access to finance, such as ATMs, ATM cards, debit cards, and prepaid cards (Frame *et al.*, 2018). Moreover, the term FI refers to the state of access to financial products and services at low and affordable costs to the entire population without any discrimination (Aduda & Kalunda, 2012). The main purpose behind the FI is to increase the population's access to financial products and services without any discrimination (Hariharan & Marktanner, 2012).

FI is defined as a place where financial products and services can be provided to the whole society without any discrimination. The segment of society that cannot use financial inclusion is the banking products and services which the entire population benefits from (Kama & Adigun, 2013). FI is also defined as the delivery of financial services at an affordable cost to members of society who are excluded from basic financial services (Dev, 2006). Moreover, a few other research studies also examine that the FI is a process of operating the financial accounts for the well-being of the individual (Allen *et al.*, 2012).

The ease of access to finance will alleviate income inequality in society (Kim, 2016). FI alleviates income inequality and reduces poverty in society (Beck *et al.*, 2007). Financial inclusion enhances the economic growth and development of the country (Khan, 2011). FI means the financial product and service at a low and affordable cost to the weaker sections of society; both can be accessed by society at individual and firm levels (Seman, 2016). Numerous research also examine that FI means access to financial services at a low cost to a low segment of society (Sharma & Kukreja, 2013). Moreover, the research works also defined FI as a state where financial products and services at reasonable cost to the entire population, such as debit cards, credit cards, formal savings, payments, pension funds and insurance (Umar *et al.*, 2019). Similarly, numerous studies show that Islamic finance can only attract a segment of society that is excluded from basic financial products and services for religious reasons (Haneef & Tahir, 2018). The research investigates that Islamic finance is a key player in attracting the excluded segment in Muslim and non-Muslim countries.

1.1. Financial stability

The idea of the (FS) has taken the attention of both policymakers and academia in the recent crisis of 2007-2009. Due to the recent financial crisis around the globe, financial stability has renewed interest in the priority of research works around the world. Prior research work reveals that financial stability plays the main role in the development and sustainability of the countries. In the meantime, in the case of financial crises, the standing position of the term financial stability has involved the consideration of scholars, legislators, and practitioners. After the financial crises of 2007-2008, financial stability was the hottest topic for research scholars and policymakers in developed and emerging markets (Beck *et al.*, 2007). The author reveals that the FS is the ability to help the economic system manage the risk in the country, absorb shock and allocate resources (Houben *et al.*, 2004). FS is a broad terminology; it consists of three different dimensions of the financial system: (i) financial market, (ii) financial institution, and (iii) financial infrastructure (Houben *et al.*, 2004). However, other studies state that institutions depend on the FS, and FS is made the financial system of the country (Crockett,

1997). Additionally, the research study finds a correlation between financial access and FS in the data of SMEs in Armenia (Morgan & Pontines, 2014).

The prior studies measure the FS through different techniques, such as banks' Z-score and nonperforming loans (NPL). Furthermore, the author argued that FS is a state where financial shock can be controlled by the country's financial system, including financial market intermediaries and infrastructure (Anatolyevna & Ramilevna, 2013). According to the research efforts, the term financial stability of banks is the gap that exists between bankruptcy and actual failure (Beck *et al.*, 2007). Furthermore, the research shows that financial stability is the spectrum variation eventually and reliable with manifold mixtures of its essential elements, showing the capability to help the economic system assign capital to succeed risks and absorb shocks (Houben *et al.*, 2004). The author argued that the FS is a key pillar and pathway to the economic stability of the countries (Popovska, 2014).

Therefore, research shows that FS is the ability to be resistant to financial shock in a financial institution. According to research, the term financial stability of banks is the gap that exists between bankruptcy and actual failure (Beck *et al.*, 2007). Furthermore, the research effort also shows that financial stability is the spectrum variation eventually and reliable with manifold mixtures of its essential elements, showing that the capability to support the economic system assigns capital to succeed jeopardies and fascinate shocks (Houben *et al.*, 2004). Furthermore, the research works reveal that the FS is considered the state in the financial market to “absorb shock, without triggering a failure of financial institutions, financial markets and payment structures (Motelle & Biekpe, 2015).

1.2. Glance of comparison of Islamic and conventional banks

The research analysis from prior works shows that Islamic banks are much more stable than conventional banks (Rashid, 2020; Ramlan & Adnan, 2016). No doubt, financial stability plays a significant role in the efficient financial system and economic growth of the country. Such a study reveals that the financial stability of the banking sector not only enhances the economic growth of the countryside alongside the countryside but also increases the capability to sustain internal and external shocks and leads to achieving local financial stability and global financial stability (Athanasoglou *et al.*, 2008). Similarly, the research also finds that the main reason behind the Islamic banking stability is the diversification of the assets (Ghassan & Taher, 2013). Islamic banks efficiently managed the risk in the financial crisis of 2007-2008 (Rahim & Zakaria, 2013; Mirza *et al.*, 2015). Taking a sample of 46 Islamic and 71 conventional banks operating operation in the GCC countries from the period 2005-2017, the examiner research reveals that, on average, the Islamic banks are more profitable than their counterparts (Hadrache, 2015).

Numerous studies have conducted comparative investigations of Islamic and conventional banks. For instance, the authors examine that the Islamic banks are better performed than the conventional banks in terms of profitability and stability (Safiullah, 2010). However, the research study also reveals that the Islamic financial system performs superiorly to its counterpart financial system due to the lower risk and better regulation (Erol *et al.*, 2014). Further, the research work also examines the fact that conventional banks are more profitable than Islamic banks due to their large capital and market size (Johnes *et al.*, 2014). Similarly, some of the researchers claim that Islamic and conventional banks are insignificant in terms of

profitability (Hamid & Azmi, 2011). Some of the researchers treat Islamic and conventional banks in the same realm in terms of efficiency (Rozzani & Rehman, 2013).

Financial stability and access to financial services have become a priority for researchers and financial policymakers in the last few decades. Manifold's research studies explore the fact that financial inclusion has affected economic inequality, poverty reduction, economic growth, and financial stability. The article overviews various research worldwide on whether financial inclusion enhances the financial stability of banking sectors. The first research article asks what financial inclusion is. Financial inclusion is the financial inclusion service initiative by the local government to ease access to financial products and services to the entire population without any discrimination.

This research mentions the different indicators of financial inclusion. Secondly, financial stability is resistance to the financial shock in financial sectors. Thirdly, numerous research studies have shown that FI has a constructive impact on the FS of the financial sectors. Financial inclusion enhances the financial stability of the financial sectors (Demirguc-Kunt *et al.*, 2017; Ditta & Saputra, 2020; Ikram & Lohdi, 2015; Le *et al.*, 2019; Shihadeh *et al.*, 2018; Yousef, 2020). The basic research questions of the research study are: (a) what is financial stability and theory? (b) What is the financial inclusion and measurement approach? (c) Is there an empirical connection between the FI and FS? (d) Is there any theoretical link between the FI and banks' stability?

3. Theoretical approaches

According to the research works, the segment of society that did not use basic financial services ultimately benefits from financial inclusion (Bhandari, 2018). Little research studies also believe that females also benefit from financial services in society (Demirguc-Kunt *et al.*, 2017; Ghosh & Vinod, 2017). Moreover, some research studies also investigate the fact that finances have a positive impact on the country's economic growth, financial stability, and poverty reduction (Kim *et al.*, 2018; Mehrotra & Yetman, 2015). Several research studies empirically and theoretically established and analysed that FI enriches the financial stability of the banking sector. Below are some financial inclusion theories that support the links between financial inclusion and financial stability.

3.1. Public good theory

Public good theory and the financial inclusion theory argue that (a) the basic financial service is easily access to the whole region and discrimination in the service, (b) there is no restriction for anyone in the society, and every member benefits from the financial service. The theory claims that every member will contribute to the economy, and no one can be excluded from the basic financial service. According to the public good theory, all members of society benefit from the financial inclusion service. The main financial inclusion services are Automated Teller Machines (ATM), Bank accounts, credit cards, debit cards and bank deposits.

3.2. Financial intermediation theory

The FI theory, the financial intermediation theory stated that the banks are working as an intermediary between individual and population. The financial intermediary theory is based on the transaction cost and information asymmetric.

3.3. Dissatisfaction theory

Financial access theory, the financial theory argued that financial access program in society only targeted the section of society who already use the financial service but left due dissatisfaction the from the financial service of the financial sector. Therefore, the financial inclusion theory claimed that focused on the section of the society who already engaged in previously in the financial service.

3.4. Vulnerable group theory

The financial access principle is that financial access programs target vulnerable groups in society, such as young people, women, poor people, and older people who suffer from financial crises due to certain reasons. The group was the most affected during the financial and economic crisis of 2007-2009. Therefore, the theory reveals that the financial inclusion initiative program targeted the weaker section of people in society. Hence, the vulnerable theory brings the people who were affected during the economic recession of 200-2009 and brings a formal financial program.

3.5. Echelon theory

The echelon theory and the financial inclusion theory argue that basic financial must be delivered to the section of society that is excluded from the basic financial service. The financial service should be on their communal leader because the community leader has an influence on the society. The community will trust their leader in society and give much respect to the leaders. The entire members of the society trust the leaders, and the members of the society think that the leader's decisions are beneficial for the community.

3.6. Public service theory

The financial inclusion theory defines that financial inclusion services are the public responsibility of the government initiative by where they impose on it. The public service claims that financial inclusion is the financial service that should be delivered to the entire society without any discrimination. The public good theory states that the theory works for the welfare of society and targets the section that is excluded from the basic financial service. The theory quantified that without government support, the financial inclusion program cannot be achieved unless when the government takes responsibility for financial inclusion. When the economic and financial system is controlled by the government, then financial inclusion as public service is accomplished.

3.7. Special agent theory

The theory of financial theory argues for the distribution of financial services to the section of society. A special type of person is hired to deliver the financial service to the section that is excluded from the financial service. The special agent theory claims that the hired person should be highly skilful and be able to bring the excluded population of society to formal financial service. The hired person has a personal relationship with the principal person. The special agent theory also claims that financial institutions and technology play a significant role in the special person.

4. Research methodology

The main strategy of the current research article methodology: We first explained what financial stability is, what financial inclusion is, and whether financial services enhance the financial stability of the banks. The current research effort assesses 100 around an article from the globe to examine the role of financial access on banking stability. The article is divided into a few stages. Such as indicator and measurement techniques of FI and FS and the role of FI on banking stability from international research works. The research article reviews around one hundred over the time span from 2000 to 2020. The articles from this research work were selected from different research engines, including Google Scholar, Science Direct, Emerald, and Springer Link.

5. Financial inclusion and financial stability: A discussion

The research has found mixed consequences on the association between financial service and profitability/performance. The researcher uses different countries and different proxies in his research work. A stable financial system enhances economic performance and wealth accumulation (Houben *et al.*, 2004). According to research, FI is the condition where the bulk of financial services spread and adequately serve a huge segment of the population in society (Olaniyi, 2017). The study established that the extension of automatic Teller machines would increase the financial performance of Nigerian banks (Jegade, 2014). To investigate the impact of credit cards on the bank's performance in Kenya, the results show that credit cards will improve the financial performance of the Bank of Kenya (Alfonse & Florence, 2012). To explore the affiliation between financial performance and electronic-based banking, financial performance was measured through return on asset and return on equity. The research described that electronic-based service has a positive impact on financial performance (Akhisar *et al.*, 2015). The research advocates that financial access to Islamic financial products has an affirmative relationship with FI in mostly Muslim countries (Mohseni-Cheraghlo, 2017).

Ahmed (2013) described that FI, use, and access to finance, financial development, and public policy are not clear yet and expended. Taking the data from 5 Nigerian banks over the period of 2009-2015 using the "Panel Least Squares" technique, the study concluded that ATM and mobile Phone accounts have a positive impact on commercial banks (Anyanwaokoro & Ogbu, 2017). To scrutinise the link between the FI and the bank's financial stability using PCA and common factor Analysis, the results described that financial inclusion highly correlated with financial stability (Amidzic *et al.*, 2014). Readdress the financial inclusion and bring reform in the financial sector in Nigeria. The result of the research work reveals that financial inclusions improve financial profitability. Taking a sample of Nigerian banks to examine the role of credit cards on the bank's profit, the research works examine that credit card has a positive impact on bank profit (Akhisa *et al.*, 2015; Yousef, 2020).

The data was taken from the 149 respondents, and regression analysis was to check the impact of FI on banks' profitability. The results of the study show that financial inclusion is not statistically significant but has a positive impact on financial profitability (Ikram & Lohdi, 2015). To explore the link between Islamic financial banks and FI, the research work uses both secondary and primary data. The results of the research effort show that Islamic finance repaid growth around the globe, which ultimately leads to economic growth (Nazer, 2017). The research used a Probit model to check the affiliation of FI, Islamic banking and finance of the OIC. The research results show that the Islamic banking system is more financially inclusive

than conventional banks (Abdu *et al.*, 2018). Nawaz (2018) took the data from 18 Islamic banks in Bangladesh and Pakistan to run a regression model. The results of the research study reveal that in both countries, Islamic banks are more engaged in financial inclusion than their counterparts. To check whether financial inclusion directly impacts the Islamic bank's performance. The research work results show that FI positively improves Islamic bank's performance and sustainability (Shihadeh *et al.*, 2018; Le *et al.*, 2019; Ditta & Saputra, 2020). Similarly, the research work also investigates whether FI is equally important in Islamic banks in Pakistan. We did not find research that examines the link between access to finance and Islamic banks' ROA in the context of Pakistan.

In the last few decades, Islamic finance has received great attention from researchers and academia around the globe. The main principle of Islamic banks around the world is to follow the principal profit and loss sharing (P/L). Such few contracts of Islamic banks are the Mudabrah contract, Musharakah contract, Musawamah, Salam, and Istisna contracts. Islamic banking plays a key and dominant role in Pakistan's economic growth. The research study reveals that financial institutions play a significant role in enhancing economic growth, performance, and better allocation of resources (Ahmed, 2010). Islamic financial systems have gained incredible attention due to their quick growth and expansion, with a predictable increase of 15-20 per cent annually both in the Muslim and non-Muslim world (Lone & Bhat, 2019). However, numerous research studies reveal that on one side, Islamic gain repaid growth in the market while on the other, Islamic finance is extremely suffering from the unbanked FI in Muslim countries as well as the MENA area, Sub-Saharan Africa and Central Asia (Ali *et al.*, 2015). However, Islamic banking signifies a positive relationship with financial inclusion (World Bank, 2014). However, to check the association between Islamic finance and FI, the examiner reveals that technology, religious factors and Islamic finance product awareness have a positive association (Shinkafi *et al.*, 2019).

Research work found diverse outcomes on the association between the FI and FS. The researchers use different countries and different proxies in their research work. Khan (2011) discloses from the research work that FI has an affirmative effect on the banks' stability. The foremost goal of Islamic banks and finance is to promote well-being and establish socio-economic and equal distribution of wealth and FS (IMF, 2018). Financial stability is the ability to help the economic system allocate resources, manage risk and absorb the shocks (Houben *et al.*, 2014). Financial stability is interconnected with financial bubbles, or more generally, with volatility in the financial market, and those market bubbles impair financial market efficiency (Crockett *et al.*, 2003). The research works also reveal that FS is a comprehensive notion that covers three main financial systems: the financial market, financial infrastructure and financial institutions Houben *et al.* (2004). Financial stability plays a significant and positive role in a country's GDP (Creel *et al.*, 2015). In the last few decades, financial inclusions have received great attention from the research field, politicians, the business sector and financial stakeholders. FI is universal access to financial products and services (e.g., ATM, deposit, ATM machine, etc.) at a reasonable cost (Sarma, 2008).

The researchers say that FI is the easy usage of financial services for all members of society (Ozili, 2018; Olaniyi, 2017). Taking the data from the small and medium enterprises (SMEs) of Armenia, the study found that there is a parallel between financial access and banks' stability (Morgan & Pontine, 2014). The research measured the financial stability through z-score using GGM dynamic panel estimation of unbalanced small and medium enterprises over the period of 2005-2011. The concept of financial stability was the case study of Back (2009); the

researcher measured financial stability through the Z-score, where the measurement definition is liquidation jeopardy and non-performing loan ratio to the credit risk. The Z-score indicates that the standard deviation of the bank's ROA is to drop below the expected value before the equity. The Z-score increases the high profit and capitalization level, reducing unstable earnings by the higher standard deviation of ROA (Ahamed & Mallick, 2019).

Research has focused on the determinants of FI in Africa (Zins & Weill, 2016; Uddin *et al.*, 2017). Moreover, the research efforts examine that FI is the access and usage of finance. Around the world, there are different indicators of FI, such as formal savings, formal accounts, credit and insurance, and formal financial institutions (Demirguc-Kunt & Klapper, 2012). The FI is consistent with deposits, transaction accounts and financial services for repayment purposes and saving money (Demirgu-Kunt *et al.*, 2017). The term FI is the situation, the delivery of a wide range of financial products and services at an affordable price, such as savings, credit cards, remittances, insurance services and payment services (Sarma & Pias, 2011). Research finds different results that show a non-linear relationship between FS and financial stability (Ardic *et al.*, 2013). Moreover, Al-Smadi (2018) shows that financial services have an adverse effect on financial stability. For the research results, the researcher used fully modified least squares time series data. Financial stability is a condition where financial shocks (e.g., 2007-2008) can be resisted by a financial system that contains the financial market, infrastructure and financial intermediaries (Anatolyevna & Ramilevna, 2013). A study by Khan (2011) shows that when the financial sector is efficient, the banks perform a financial intermediation process among the users and financial sector-supported financial infrastructure. The research reveals that when the financial system is not stable, the system divested the economy of the country.

Prior research found mixed results on the relationship between financial inclusion and bank stability and profitability. Financial performance was measured through the return on asset (ROA) and Return on equity, whereas for the measurement of the financial inclusion of the banks, the research work uses six different indicators (Credit to Small and medium enterprises, Automatic Teller machine (ATM), new service of ATM, and number of ATM, and number of credit) has significant impact on the financial performance (Shihadeh *et al.*, 2018; Ussif & Yussif, 2020). Other authors examined the fact that financial inclusion has a positive impact on the bank's return on equity (ROE). However, the author's results reveal that there is an affirmative relationship between the financial inclusion index and the bank's return on assets (ROA) (Oranga & Ondabu, 2018). The research described that financial inclusion is good for the banks' financial stability (Wairimu & Omagwa, 2020). Taking the data from the MENA region, the research work examines that financial inclusions have a positive impact on financial stability (Neaime & Gaysset, 2017). Alvi *et al.* (2020) found that there is a controversy between financial access and financial stability. Arun and Kamath (2015) took data from Indian commercial banks showing that financial inclusion boosts GDP and sustainability. The author says that the ATM is the key player in financial inclusion (Das & Guha, 2015).

Gupte *et al.* (2012) say that FI is access to an inclusive choice of financial facility at a low and reasonable cost. Moreover, there is little research work done on how financial inclusion affects financial stability. However, use a GMM for the panel data from the African countries over the time period of 2004-2011. Financial stability was measured through the Z-score. The findings of the research study show that outstanding loans have a positive impact on financial stability, whereas deposits have a negative impact on banks' financial stability (Amatus & Alireza, 2015). However, Mehrotra and Yetman (2015) Show that access to basic financial services

speeds up growth for financial stability. Using cross-country data, Sahay et al. (2015) investigate the negative impact of FI on the stability of banking sectors. Since that crisis, little research has been done on whether financial inclusion affects financial stability. Petersen and Rajan (1995) say that financial inclusion is the element that works to alleviate injustice, promote financial stability, and reduce information asymmetry. A theoretical research study was done to check the relationship between financial inclusion; the authors examine technology effective financial access, Islamic financial, religious factors and awareness of Islamic financial products' significant impact on financial inclusion (Shinkafi *et al.*, 2019).

6. Conclusion

The main objective of the current research effort is to evaluate the influence of financial services on the financial stability of banks from the period 2000-2020. In light of this research paper, the affiliation between financial access and banking stability is very relevant to the research community. The research review reviews the literature on the link between FI and FS. Numerous research works explore the significant association between FI and banking stability. The prior research works have measured financial inclusion through ATM cards, Debit cards, ATM machines, bank deposits, insurance and finance for small and medium enterprises. Overall, the links between financial inclusion and the financial stability of banks are still inconclusive due to the mixed results found in the literature. A number of research work reveals from the research works that financial inclusions have a positive impact on financial stability. However, some research studies also examine the fact that financial services have a negative impact on financial stability. The optimistic view for financial inclusion on financial stability is based on the availability and accessibility of financial services in the bank's sectors.

Furthermore, the research works reveal that financial stability is considered as the state of the financial market, to “absorb shock, without triggering a failure of financial institutions, financial markets and payment structures (Motelle & Biekpe, 2015). Houben *et al.* (2004) say that financial stability is a broad concept that covers three main financial systems: financial market, financial infrastructure, and financial institutions. Financial stability plays a significant and positive role in a country's GDP (Creel *et al.*, 2015). In the last few decades, financial inclusions have received great attention from the research field, politicians, the business sector and financial stakeholders. Financial inclusion is universal access to financial products and services (e.g., ATM, deposit, ATM machines, etc.) at a reasonable cost (Sarma, 2008). A stable financial system performs financial mediation progression in the financial institution and financial infrastructure in the country (Khan, 2011). FS is defined as the ability to resist financial shock in the financial institution and payment system (Motelle & Biekpe, 2015).

References

- Aduda, J., & Kalunda, E. (2012). Financial inclusion and financial sector stability with reference to Kenya: A review of the literature. *Journal of Applied Finance and Banking*, 2(6), 95-120. http://www.scienpress.com/Upload/JAFB/Vol%202_6_8.pdf
- Abdu, M., Jibir, A., Abdullahi, S., & Rabi'u, A. A. (2018). Can Islamic banking and finance spur financial inclusion? Evidence from Sub-Saharan Africa. *CBN Journal of Applied Statistics*, 9(1), 77-104. <https://www.econstor.eu/handle/10419/191712>
- Ahamed, M. M., & Mallick, S. K. (2019). Is financial inclusion good for bank stability? International evidence. *Journal of Economic Behaviour and Organization*, 157, 403-

427. <https://doi.org/10.1016/j.jebo.2017.07.027>.
- Amidzic, G., Massara, M. A., & Mialou, A. (2014). *Assessing countries' financial inclusion standing new composite index*. International Monetary Fund.
- Ahmed, H. (2013). Financial inclusion and Islamic finance: organizational formats, products, outreach, and sustainability. *Economic Development and Islamic Finance*, 203.
- Ahmed, A. (2010). Global financial crisis: An Islamic finance perspective. *International Journal of Islamic and Middle Eastern Finance and Management*, 3(4), 306-320. <https://doi.org/10.1108/17538391011093252>
- Akhisar, I., Tunay, K. B., & Tunay, N. (2015). The effects of innovations on bank performance: The case of electronic banking services. *Procedia-Social and Behavioral Sciences*, 195, 369-375. <https://doi.org/10.1016/j.sbspro.2015.06.336>
- Amatus, H., & Alireza, N. (2015). Financial inclusion and financial stability in Sub-Saharan Africa. *International Journal of Social Sciences*, 36(1), 2305-4557. <https://www.tijoss.com/TIJoss%2036th%20Volume/5Amatus.pdf>
- Ardic, O. P., Imboden, K., & Latortue, A. (2013). Financial access 2012: Getting to a more comprehensive picture. *CGAP and Partners Report*, (6).
- Alfonse, O. A., & Florence, M. S. (2012). Credit cards and performance of commercial banks portfolio in Kenya. *International Journal of Arts and Commerce*, 1(6), 167-173. <https://ijac.org.uk/images/frontImages/gallery/Vol. 1 No. 6 /18.pdf>
- Alvi, M. A., Rafique, A., & Shehzad, K. (2020). Financial inclusion and bank stability controversy: Evidence from South Asian region. *International Journal of Financial Engineering*, 7(04), 2050038. <https://doi.org/10.1142/S2424786320500383>
- Al-Smadi, M. O. (2018). The role of financial inclusion in financial stability: lesson from Jordan. *Banks & Bank Systems*, 13(4), 31-39. <https://www.cceol.com/search/article-detail?id=741786>
- Allen, F., Demircuc-Kunt, A., Klapper, L., & Peria, M. S. M. (2016). The foundations of financial inclusion: Understanding ownership and use of formal accounts. *Journal of Financial Intermediation*, 27, 1-30. <https://doi.org/10.1016/j.jfi.2015.12.003>
- Ambarkhane, D., Singh, A. S., & Venkataramani, B. (2016). Measuring financial inclusion of Indian states. *International Journal of Rural Management*, 12(1), 72-100. <https://doi.org/10.1177%2F0973005216633940>
- Anatolyevna, M. I., & Ramilevna, S. L. (2013). Financial stability concept: main characteristics and tools. *World Applied Sciences Journal*, 22(6), 856-858. <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.388.2058&rep=rep1&type=pdf>
- Anyanwaokoro, M., & Ogbu, E. G. (2017). Effect of Commercial Bank Credits on the Performance of Agricultural and Manufacturing Sectors in Nigeria; 1986-2016. *Saudi Journal of Economics and Finance (SJEF)*, 2(4), 122-128. <https://saudijournals.com/media/articles/SJEF-24-122-128-c.pdf>
- Athanasoglou, P. P., Brissimis, S. N., & Delis, M. D. (2008). Bank-specific, industry-specific and macroeconomic determinants of bank profitability. *Journal of International Financial Markets, Institutions and Money*, 18(2), 121-136. <https://doi.org/10.1016/j.intfin.2006.07.001>
- Babajide, A. A., Adegboye, F. B., & Omankhanlen, A. E. (2015). Financial inclusion and economic growth in Nigeria. *International Journal of Economics and Financial Issues*, 5(3), 629-637. <http://eprints.covenantuniversity.edu.ng/5426/#.YOlsEOgzaM8>

- Beck, T., Demirgüç-Kunt, A., & Levine, R. (2007). Finance, inequality and the poor. *Journal of Economic Growth*, 12(1), 27-49. <https://link.springer.com/article/10.1007/s10887-007-9010-6>
- Creel, J., Hubert, P., & Labondance, F. (2015). Financial stability and economic performance. *Economic Modelling*, 48, 25-40. <https://doi.org/10.1016/j.econmod.2014.10.025>
- Crockett, A. (1997). Why is financial stability a goal of public policy? *Economic Review-Federal Reserve Bank of Kansas City*, 82, 5-22.
- Crockett, A., Ferguson, R. W., Issing, O., Mussa, M., & Yamaguchi, Y. (2003). Monetary stability, financial stability and the business cycle: five views. *Bank for International Settlement (BIS) Papers*, No. 18. <https://www.bis.org/publ/bppdf/bispap18.pdf>
- Chhabra, N. (2015). *Financial inclusion in India*.
- Chakrabarty, K. 2. (2013). Financial Inclusion in India: Journey so far and way forward. *Keynote Address at the finance inclusion conclave. Organized by CNBC TV, 18*. <https://rbidocs.rbi.org.in/rdocs/Bulletin/PDFs/01SP071013F.pdf>
- Demirguc-Kunt, A., & Klapper, L. (2012). Measuring financial inclusion: The global index database. *The World Bank*.
- Dev, S. M. (2006). Financial inclusion: Issues and challenges. *Economic and Political Weekly*, 41(41), 4310-4313. <https://www.jstor.org/stable/4418799>
- Demirguc-Kunt, A., Klapper, L., & Singer, D. (2017). Financial inclusion and inclusive growth: A review of recent empirical evidence. <https://ssrn.com/abstract=2958542>
- Ditta, A. S. A., & Saputra, A. (2020). Financial inclusion and banking performance in Indonesia. *Journal of Accounting, Finance and Auditing Studies*, 6(2), 50-69. <https://www.um.edu.my/library/oar/handle/123456789/54041>
- Das, T., & Guha, P. (2015). A study on the differences in the banking parameters between pre- and post-financial inclusion periods: Some evidence for India. *IUP Journal of Bank Management*, 14(1), 39-56. <https://www.proquest.com/openview/53af456f396f2efd33355c3cc464b4c3/1?pq-origsite=gscholar&cbl=54443>
- Erol, C., Baklaci, H. F., Aydoğan, B., & Tunç, G. (2014). Performance comparison of Islamic (participation) banks and commercial banks in Turkish banking sector. *EuroMed Journal of Business*, 9(2), 114-128. <https://doi.org/10.1108/EMJB-05-2013-0024>
- Frame, W. S., Wall, L. D., & White, L. J. (2018). Technological change and financial innovation in banking: Some implications for fintech. *FRB Atlanta Working Paper No. 2018-11*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3261732
- Hadrihe, M. (2015). Banks performance determinants: Comparative analysis between conventional and Islamic banks from GCC countries. *International Journal of Economics and Finance*, 7(9), 169-177. <http://dx.doi.org/10.5539/ijef.v7n9p169>
- Hamid, M. A., & Azmi, S. M. (2011). The performance of banking during 2000-2009: Bank Islam Malaysia Berhad and Conventional banking in Malaysia. *International Journal of Economics and Management Sciences*, 1(1), 09-19.
- Haneef, M. A., & Tahir, S. (2018). Rethinking Islamic Economics and Finance: Taking Stock and Moving Forward. *Intellectual Discourse*, 26(2), 281-290. <https://www.proquest.com/openview/0baaf92281be95c01b959344e6d323e3/1?pq-origsite=gscholar&cbl=826340>
- Hariharan, G., & Marktanner, M. (2012). The growth potential from financial inclusion. *ICA Institute and Kennesaw State University*, 2(5), 1-12. <https://www.atlantafed.org/-/media/Documents/news/conferences/2012/intl-development/Hariharan.pdf>
- Ghassan, H. B., & Taher, F. B. (2013). Financial Stability of Islamic and Conventional Banks

- in Saudi Arabia: Evidence using pooled and panel models. *Gulf Research Centre, Cambridge Conference Book GRM 2013, Vol. 2, Islamic Finance: Risk, Stability, Growth*. <https://mp.ra.ub.uni-muenchen.de/id/eprint/54472>
- Ghosh, S., & Vinod, D. (2017). What constrains financial inclusion for women? Evidence from Indian micro data. *World Development*, 92, 60-81. <https://doi.org/10.1016/j.worlddev.2016.11.011>
- Gupte, R., Venkataramani, B., & Gupta, D. (2012). Computation of financial inclusion index for India. *Procedia-Social and Behavioral Sciences*, 37, 133-149. <https://doi.org/10.1016/j.sbspro.2012.03.281>
- Houben, A. G., Kakes, J., & Schinasi, G. J. (2004). Toward a framework for safeguarding financial stability. *IMF Working Papers*, 2004(101), 3-27. <https://www.elibrary.imf.org/view/journals/001/2004/101/article-A001-en.xml>
- Ikram, I., & Lohdi, S. (2015). Impact of financial inclusion on banks profitability: An empirical study of banking sector of Karachi, Pakistan. *International Journal of Management Sciences and Business Research*, 4(10), 88-98.
- Jegade, C. A. (2014). Effects of automated teller machine on the performance of Nigerian banks. *American Journal of Applied Mathematics and Statistics*, 2(1), 40-46.
- Johnes, J., Izzeldin, M., & Pappas, V. (2014). A comparison of the performance of Islamic and conventional banks 2004–2009. *Journal of Economic Behaviour & Organization*, 103, S93-S107. <https://doi.org/10.1016/j.jebo.2013.07.016>
- Kama, U., & Adigun, M. (2013). Financial Inclusion in Nigeria: The Journey so Far. SSRN. <https://dx.doi.org/10.2139/ssrn.2365209>
- Kim, D. W., Yu, J. S., & Hassan, M. K. (2018). Financial inclusion and economic growth in OIC countries. *Research in International Business and Finance*, 43, 1-14. <https://doi.org/10.1016/j.ribaf.2017.07.178>
- Kim, J. H. (2016). A study on the effect of financial inclusion on the relationship between income inequality and economic growth. *Emerging Markets Finance and Trade*, 52(2), 498-512. <https://doi.org/10.1080/1540496X.2016.1110467>
- Khan, H. R. (2011). Financial inclusion and financial stability: are they two sides of the same coin. *Address by Shri HR Khan, Deputy Governor of the Reserve Bank of India, at BANCON*.
- Lone, F. A., & Bhat, U. R. (2019). Does the tag “Islamic” help in customer satisfaction in dual banking sector? *Journal of Islamic Marketing*, 10(1), 138-149. <https://doi.org/10.1108/JIMA-11-2016-0084>
- Morgan, P., & Pontines, V. (2014). Financial stability and financial inclusion. *ADB Working Paper 488*. <https://dx.doi.org/10.2139/ssrn.2464018>
- Mohseni-Cheraghlo, A. (2017). Financial inclusion and poverty alleviation in Muslim-majority countries: the role of Islamic finance and Qard Hassan. In *Financial Inclusion and Poverty Alleviation* (pp. 141-197). Palgrave Macmillan, Cham.
- Mehrotra, A. N., & Yetman, J. (2015). Financial inclusion issues for central banks. *BIS Quarterly Review March*.
- Motelle, S., & Biekpe, N. (2015). Financial integration and stability in the Southern African development community. *Journal of Economics and Business*, 79, 100-117. <https://doi.org/10.1016/j.jeconbus.2015.01.002>
- Mirza, N., Rahat, B., & Reddy, K. (2015). Business dynamics, efficiency, asset quality and stability: The case of financial intermediaries in Pakistan. *Economic Modelling*, 46, 358-363. <https://doi.org/10.1016/j.econmod.2015.02.006>

- Nazer, (2017). Impact analysis of Islamic finance on financial inclusion and economic growth in selected Muslim countries: OIC. *International Journal of Economics, Management and Accounting*, 26(2), 393-414. <https://journals.iium.edu.my/enmjurnal/index.php/enmj/article/view/512>
- Nawaz, T. (2018). Lifting the lid on financial inclusion: Evidence from emerging economies. *International Journal of Financial Studies*, 6(2), 59. <https://doi.org/10.3390/ijfs6020059>
- Neaime, S., & Gaysset, I. (2018). Financial inclusion and stability in MENA: Evidence from poverty and inequality. *Finance Research Letters*, 24, 230-237. <https://doi.org/10.1016/j.frl.2017.09.007>
- Oranga, O. J., & Ondabu, I. T. (2018). Effect of financial inclusion on financial performance of banks listed at the Nairobi securities exchange in Kenya. *International Journal of Scientific and Research Publications*, 8(5), 624-649.
- Olaniyi, E. (2017). Back to the land: The impact of financial inclusion on agriculture in Nigeria. *Iranian Economic Review*, 21(4), 885-903. <https://dx.doi.org/10.22059/ier.2017.64086>
- Ozili, P. K. (2018). Impact of digital finance on financial inclusion and stability. *Borsa Istanbul Review*, 18(4), 329-340. <https://doi.org/10.1016/j.bir.2017.12.003>
- Park, C. Y., & Mercado, R. (2018). Financial inclusion: New measurement and cross-country impact assessment. *SSRN*. <https://dx.doi.org/10.2139/ssrn.3199427>
- Petersen, M. A., & Rajan, R. G. (1995). The effect of credit market competition on lending relationships. *The Quarterly Journal of Economics*, 110(2), 407-443. <https://doi.org/10.2307/2118445>
- Popovska, J. (2014). Modelling financial stability: The case of the banking sector in Macedonia. *Journal of Applied Economics and Business*, 2(1), 68-91. <http://www.aebjournal.org/articles/0201/020104.pdf>
- Rashid, A. (2020). Nexus between Economic Growth, Investment, and Islamic Banking Development: The case of Dual Banking System. *Journal of Islamic Business and Management*, 10(2), 368-389.
- Rangarajan, C. (2008). Report of the committee on financial inclusion. *Ministry of Finance, Government of India*.
- Ramlan, H., & Adnan, M. S. (2016). The profitability of Islamic and conventional bank: Case study in Malaysia. *Procedia Economics and Finance*, 35, 359-367. [https://doi.org/10.1016/S2212-5671\(16\)00044-7](https://doi.org/10.1016/S2212-5671(16)00044-7)
- Rahim, S. R. M., & Zakaria, R. H. (2013). Comparison on stability between Islamic and conventional banks in Malaysia. *Journal of Islamic Economics, Banking and Finance*, 9(3), 131-149. <https://platform.almanhal.com/Files/2/40149>
- Rozzani, N., & Rahman, R. A. (2013). Camels and performance evaluation of banks in Malaysia: Conventional versus Islamic. *Journal of Islamic Finance and Business Research*, 2(1), 36-45.
- Safiullah, M. (2010). Superiority of conventional banks & Islamic banks of Bangladesh: A comparative study. *International Journal of Economics and Finance*, 2(3), 199-207. <https://pdfs.semanticscholar.org/0fe8/e16d3bc35e7ccf94f6e566ac58c144252935.pdf>
- Sahay, R., Čihák, M., N'Diaye, P., & Barajas, A. (2015). Rethinking financial deepening: Stability and growth in emerging markets. *Revista de Economía Institucional*, 17(33), 73-107.
- Sarma, M. (2008). Index of financial inclusion (No. 22259; Finance Working Papers). *East Asian Bureau of Economic Research*.

- Sarma, M., & Pais, J. (2011). Financial inclusion and development. *Journal of International Development*, 23(5), 613-628. <https://doi.org/10.1002/jid.1698>
- Sarma, M. (2012). Index of financial inclusion: A measure of financial sector inclusiveness. *Centre for International Trade and Development, School of International Studies, Working Paper Jawaharlal Nehru University*. https://finance-and-trade.htw-berlin.de/fileadmin/HTW/Forschung/Money_Finance_Trade_Development/working_paper_series/wp_07_2012_Sarma_Index-of-Financial-Inclusion.pdf
- Seman, J. A. (2016). *Financial inclusion: The role of financial system and other determinants*. Doctoral dissertation, University of Salford.
- Sharma, A., & Kukreja, S. (2013). An analytical study: Relevance of financial inclusion for developing nations. *International Journal of Engineering and Science*, 2(6), 15-20.
- Shiimi, I. (2010). Financial inclusion—an imperative towards Vision 2030. *Annual address by the Governor of the Reserve Bank of Namibia*, 28.
- Shihadeh, F. H., Hannon, A. M., Guan, J., Ul Haq, I., & Wang, X. (2018). Does financial inclusion improve the banks' performance? Evidence from Jordan. In *Global tensions in financial markets*. Emerald Publishing, 117-138 <https://doi.org/10.1108/S0196-382120170000034005>
- Shinkafi, A. A., Yahaya, S., & Sani, T. A. (2019). Realizing financial inclusion in Islamic finance. *Journal of Islamic Marketing*, 11(1), 143-160. <https://doi.org/10.1108/JIMA-02-2017-0020>
- Tita, A. F., & Aziakpono, M. J. (2017). The relationship between financial inclusion and income inequality in sub-Saharan Africa: Evidence from disaggregated data. *African Review of Economics and Finance*, 9(2), 30-65. <https://www.ajol.info/index.php/aref/article/view/164547>
- Uddin, A., Chowdhury, M. A. F., & Islam, M. N. (2017). Determinants of financial inclusion in Bangladesh: Dynamic GMM & quantile regression approach. *The Journal of Developing Areas*, 51(2), 221-237. <https://doi.org/10.1353/jda.2017.0041>
- Ussif, D. R., & Yussif, U. (2020). Establishing Islamic Banking and Financing (IBF) in Ghana: Issues challenges and prospects. *Global Scientific Journals*, 8(5). 1805-1821.
- Umar, U. H., Ado, M. B., & Ayuba, H. (2019). Is religion (interest) an impediment to Nigeria's financial inclusion targets by the year 2020? A qualitative inquiry. *Qualitative Research in Financial Markets*, 12(3), 283-300. <https://doi.org/10.1108/QRFM-01-2019-0010>
- Wairimu, K. D. (2020). *Financial inclusion and banks stability of commercial banks listed in Nairobi securities exchange*. Kenyatta University. <https://ir-library.ku.ac.ke/bitstream/handle/123456789/21832/Financial%20inclusion.....pdf?sequence=1>
- Yousef, M. H. (2020). The impact of financial inclusion on the performance of traditional banks: An analytical study on conventional banks listed on the Palestine Stock Exchange using the CAMELS model, 8(4), 01-36. <https://doi.org/10.53671/ptukrj.v8i4.95>
- Zins, A., & Weill, L. (2016). The determinants of financial inclusion in Africa. *Review of Development Finance*, 6(1), 46-57. <https://doi.org/10.1016/j.rdf.2016.05.001>