



Systemic Review of Literature on Bank Stability

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Abstract

This study looked into some fundamental issues surrounding bank stability. 72 peer-reviewed bank stability articles drawn from six databases were reviewed using the Systematic Assessment Quantitative Technique (SQAT) developed by Australian researchers (Catherine Pickering and Jason Antony Byrne). SQAT deals with the methods in which articles in this review were presented. The articles were analyzed into time and geographical distributions, article type, research theories and themes, and data source. A large number of the articles published came from European countries followed by Asia. 69 out of the 72 articles were empirical in nature while 3 were theoretical or opinion in nature. 35.53% adopted regulatory/supervisory framework as a theme, followed by competition-stability or competition-fragility with 25%, measuring bank stability has 22.37%, while diversification with 17.10%. Theoretical work on bank stability should henceforth be encouraged to give more understanding of the subject-matter using other themes for example, income diversification and bank stability, market concentration and bank stability, management strategies, innovations and bank stability since only 22.37% (17) articles and 17.10% (9) articles adopted measuring and diversification as themes. On a general note, there should be a paradigm shift for conceptual framework to give theoretical understanding of bank stability. To the best of the researchers' knowledge, this study is the first to have reviewed banking system stability using the Systematic Assessment Quantitative Technique (SQAT) developed by Australian researchers (Catherine Pickering and Jason Antony Byrne) for the decade 2011 to 2020. Thus, this review contributes through its methodology to the academic debate and understanding of bank stability in extant literature as it revealed especially, geographical and time gaps in the literature. Therefore, shifting from empirical to theoretical approach as carried out in this study pictured its novelty.

Keywords: Bank Stability; Financial System; Systematic Quantitative Assessment Technique review

JEL Classification: G21; C62; Q5

Contribution to/Originality Knowledge:

This study is among the first few in extant literature to have reviewed banking system stability using the Systematic Assessment Quantitative Technique (SQAT) developed by Australian researchers (Catherine Pickering and Jason Antony Byrne) for the current decade 2011 to 2020. Thus, this review contributes, through its methodology to the academic debate and understanding of bank stability as it revealed especially, geographical and time gaps in the literature. Therefore, shifting from the usual empirical to theoretical approach as carried out in this study pictured its novelty.

1.0 Introduction

The Asian financial turmoil of the late 1990s spurred the need for macro-prudential stance to identify sources of vulnerabilities in the financial system, while the global financial crisis of 2008 further exacerbated the need for improved information on the soundness and stability of financial institutions, especially the banking sub-sector which constitutes 90.0 percent of financial system assets. The enormous dangers posed by the crises triggered the need to identify, measure, monitor and properly manage banks risk. Paucity of financial data and lack of dissemination of comparable international data (especially of credit risk) were recognized as key causes, and measures to have forestalled the 2008

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global crisis (Bushman, Hendricks & Williams, 2015; Shaddady & Moore, 2019). Every productive activity is anchored on a banking system that undertakes financial intermediation, payment systems services and transmission of monetary policy. Thus, the banking system must function efficiently in order to support the levels of investment required for growth and to effectively withstand adverse economic shocks (Qu, Liang & Qian, 2014; Ahamed & Mallick, 2019).

Noting that banking stability is undoubtedly desired in every economy, its absence has repercussive effect on both the domestic and the global economy (Kasman & Kasman, 2015). While the development and stability of the financial/banking system changes in tandem with developments in the economy, extant literature (e.g., Chu, 2015; Chiarmonte, Poli & Oriani, 2015; Oduor, Ngoka & Odongo, 2017) explained that the structure and development variables of banking system determine its stability. Academics, Shijaku (2017), Barra and Zotti (2019), Albaity, Mallek and Noman (2019) posited that market power enhances the stability of the banking system (concentration-stability hypothesis), while Amidu and Wolfe (2013), Kasman and Kasman (2015), Hou and Wang (2016) emphasized on competition-stability (deconcentration); Vallascas and Keasey (2012), Qu, Liang and Qian (2014), Fratzscher, König and Lambert (2016) averred on the roles of banks supervisors and regulatory bodies. Similarly, Nguyen, Skully and Perera (2012), Bornemann et al. (2014), Abuzayed, Al-Fayoumi and Molyneux (2018), Ali and Iness (2020) emphasized the importance of earnings and asset diversification to ensuring profitability and therefore, the stability of the banking system. Consolidation through merger and acquisition where fragile and feeble banks are absorbed by competent large banks enhances banks capital base, enable banks to acquire relevant technology, engage high and quality personnel, absorb shocks, offer better and value-added services while increasing its earning capacity. Furthermore, consolidation increases the potential of banks to compete effectively at the national, regional and global levels (Oduor, Ngoka & Odongo, 2017). Thus, bank stability is worth researching considering the frequencies of banking reforms in the past two decades.

Motivated by academic debates, ambiguous theoretical and empirical results on the effects or impacts of macroeconomic variables, microeconomic factors and banks systemic conditions on banking system stability, this paper is a modest contribution to making a systematic review in the literature to ascertain the quantum of time, geographic (countries and continents), theories, themes, article type, and data sources from six peer-reviewed data bases. To the best of the researchers' knowledge, literature on bank stability have dwelled majorly on empirical study with paucity on systematic review. Drawn by these motivations, the researchers find this a prolific ground to use the Systematic Quantitative Assessment Technique (SQAT) (Pickering & Byrne, 2013) for a review of the literature on bank stability. Therefore, we attempted to figure out and broke into components the journal articles that were sourced from the six databases. These components comprised of time and geographic distributions, conceptual and empirical (article type), theories, themes, and the source(s) of data used in each of the 72 articles. This exercise is carried out for the purpose of pointing out possible undiscovered areas in the field of bank stability and therefore encourage prospective and past researchers to delve into such areas. Thus, the study is delimited to a review on bank stability using the Systematic Quantitative Assessment Technique (SQAT) developed by Pickering and Byrne. It covered the period from 2011 to 2020.

The study is organized into four (4) parts. Section 1 follows the introduction, and reviews related literature on bank stability, while section 2 focused on research methodology. Section 3 presents the findings, results and discussions for future research, while section 4 concludes the study.



2.0 Literature review

2.1 Concept of Bank Stability

The concept of banking sector stability is an issue of major concern for policy analysts because it is still poorly understood. The rationale for banking stability implies banks capacity to absorb and resist detrimental consequences. A stable financial system is defined as one that is resilient and has the ability to withstand normal fluctuations in asset prices that result from dynamic demand and supply conditions, as well as substantial increases in uncertainty (Vallascas & Keasey, 2012). The authors further mentioned that financial institutions must have the capacity to instil confidence and value in the customer in the process of managing their deposit liabilities in the midst of uncertainty and competition to forestall instability which can impede economic activity and reduce economic welfare. Consequently, if financial institutions become dysfunctional, severely strained due to excessive risks taking it leads to overall bank fragility with the attendant pressure on businesses and households causing adverse effects on the real economy as capital may be prevented from flowing to worthy investments, and credit crunches may develop, precipitating intervention of regulatory authorities (Vallascas & Keasey, 2012).

Similarly, (Hou & Wang, 2016; Kusi et al., 2020)) see financial stability as a condition in which the system comprising of financial intermediaries, markets and market infrastructure is capable of withstanding shocks and the unravelling of financial imbalances, thereby mitigating the likelihood of disruptions in the financial intermediation process which are severe enough to significantly impair the allocation of savings/loans to profitable investment opportunities. It implies that bank stability is the condition of the absence of banking crises which can take the form of bank failures, insolvencies, magnitude of banking losses, or magnitude of interest rate fluctuations. To Bai and Elyasiani (2012); Mutarindwa, Schafer, and Stephen (2020), financial or bank stability is a condition in which the financial system is not unstable, but capable of efficiently allocating quality resources, assessing and managing financial risks, maintaining employment levels, facilitate and enhance economic processes and absorb shocks, and its absence can cause financial losses, illiquidity, distorting its credit risk ability; and in 2007 the destabilizing effect of the financial system hampered bank lending resulting to credit crisis and recession that lingered to 2008.

In the same vein, Ghenimi, Chaibi and Omri (2017); Shaddady and Moore. (2019); Kusi et al. (2020) agree that bank stability refers to a situation in which capitalized financial institutions are sound enough to carry out their financial intermediation functions. The literatures further posited that it is the effort of the banks aimed at advancing sound and well-managed banking business void of systemic distress, loss of confidence, but promoting value in its business of managing risk; and because banks are interconnected and regulated, their stability is essentially founded on public confidence. Thus, the survival and stability of any bank depends upon its ability to source for quality deposits necessary for its sustenance, and one of the modes of survival is “exchange”, whereby a bank creates and offers products and services that are able to attract and satisfy the customers in exchange of its value, creating confidence in the investing public.

Bank stability (BS) rests on the ability of banks to harmonize two contrasting analogies of finance; risk and confidence, in order to create value, and when risk is sufficiently offset by confidence, transaction occurs and value is created (Fratzcher, Konig & Lambert, 2016; Kusi et al., 2020). And a decline in confidence reduces value, unless risk-taking declines proportionately (Stewart et al., 2020). Increased capital increases a bank's value which raises the incentive to innovate or revolutionize a bank's product or service to serve the customer better (Oduor, Ngoka & Odongo, 2017; Raji, 2017; Boulanour, Alqahtani & Hamdi, 2021; Riahi, 2020). The argument for innovation holds that banks must be resilient, take calculated financial risk to improve its products and services because insolvency and illiquidity



affect banks performance causing a loss of confidence in the system (Al-Shboul et al., 2020, Uddin, Mollah & Ali, 2020). When the value of a financial system declines continuously through inability of operators to harmonize risk-taking with confidence, building the health and stability of the system is jeopardized (Fratzcher, Konig & Lambert, 2016). Extant literature (e.g., Acosta-Smith, Grill & Lang, 2020; Raykov & Silva-Boustan, 2020; Abdelsalam et al., 2020) explained that losses from credit provision can also be suffered by banks as a result of non-performing accounts which can spur and aggravate systemic crisis/risk or bank failure leading to instability. However, systemic risk can be controlled through asset allocation by owning different classes of assets in a portfolio having zero, negative or low correlation which can reduce their volatility (Bornemann et al., 2014; Zigraiova & Havranek, 2016) thereby enhancing bank stability.

Importantly, the concept of banking system stability, which is a state of being steady and not changing or disturbed in any way has also been viewed within the context of the asymmetric theory (two parts that are incompatible) (Ghenimi, Chaibi & Omri, 2017). The author conceptualized it as a non-linear disruption to financial markets in which adverse selection and moral hazard problems become so bad that financial markets are unable to channel funds to economic agents who have the most productive investment opportunities. The devastating effect of moral hazard precipitated by adverse selection by banks officials endangers banks; causing distress, insolvency, illiquidity and consequent bank fragility.

2.2 Theoretical Review

The global financial system is characterized with vulnerability to systemic distress and macroeconomic volatility (Oduor, Ngoka & Odongo, 2017; Ali & Iness, 2020). For instance, the Global Financial Crisis (GFC) of 2008 was as a result of systemic risk caused by the homogeneity and interconnectedness of banks which made them vulnerable to financial exposure (Bornemann et al., 2014; Ali & Iness, 2020). Systemic risk or distress can be due to banking panics, falling assets, contagion and unpredictability of future events. Academics, Gregor, Sascha and Rostandzic (2014) analyzed the systemic risk effects of bank mergers to test the concentration-fragility hypothesis for 400 depository and non-depository financial institutions in U.S, Canada, European Union, and Norway. The authors found clear evidence for a significant increase in the merging banks', the combined banks' as well as their competitors' contribution to systemic risk following mergers, thus confirming the concentration-fragility (competition-stability) hypothesis. Exploring the role of systemic risk and macroeconomic conditions on bank stability, Ali, Ekpe, and Aigba (2019) investigated the impact of liquidity, credit risk, funding risk and corruption in Pakistan banking system. The literature confirmed that bank size, liquidity risk, and corruption in Pakistan exerted a positive impact on bank stability. The authors further confirmed a negative correlation between credit risk and bank stability.

On the other hand, Saksonova and Solovjova (2012); Saif-Al-Yousfi, Saha and Md-Rus (2020) assessed the impact of competition on bank fragility (concentration-stability hypothesis), pre and post financial crisis eras in the GCC banking market, measured by bank risk-taking behavior and bank stability during 1998 to 2016. Conversely, Saksonova and Solovjova (2012) averred that a higher degree of bank competition and the lesser degree of concentration adds to financial fragility. The authors further found that lower level of competition and lower concentration in the banking market increases the risk-taking behavior of low capitalized, low liquid and small size banks which add to fragility in the banking system. The mix results confirmed assertion by Deltuviate (2015) that a third hypothesis, namely, concentration-stability (fragility) "no relationship" hypothesis involves more than a simple trade-off, and the effects of concentration on banking system stability may depend on specific economic conditions, researches assumptions, circumstances and data used to analyze concentration and stability.



On regulatory and supervisory authorities, Saif-Al-Yousfi, Saha and Md-Rus (2020) posited that countries with greater capital stringency, greater regulatory power, greater market discipline and private monitoring, with explicit deposit insurance schemes, higher shareholder protection, and higher efficiency decrease bank risk-taking and increase bank stability. However, the literature further affirmed that greater regulatory restrictions and higher creditor protection decrease banks stability and increase risk in some economies. Corroborating with Saif-Al-Yousfi, Saha and Md-Rus (2020) on regulatory and supervisory bodies and bank stability, Li (2019) investigated the impact of banking sector reform and competition on bank stability. Based on an unbalanced data from 22 European countries for the period 1998-2016, the author found both a positive correlation between market power and bank fragility, and between bank reform and bank stability. According to the author, an inverse relationship exists between market power and bank fragility, whereas banking system reforms enhances bank stability. Linking activity restrictions to diversification, Li (2019) posits that both higher activity restrictions and more explicit guidelines for asset diversification increase bank stability. This is supported by Barra and Zotti (2019), Sarpong-Kumankoma et al. (2020) that banks also help in the allocation of resources among alternative uses, allow efficient risk diversification through portfolio management, facilitate exchange of commodity transaction, and serve as mechanism for the implementation of government monetary policy enhancing the stability of the banking system.

However, the positive effect of asset diversification is weak for banks with higher market power; and more stringent capital requirement in combination with higher market power increase the risk of insolvency in banks. In analyzing the relationship between consolidation and bank stability, Chu (2015) found that during the period 1867 to 1935 in Canada, a consolidation exercise where a two-third geographic diversification resulted in a reduction of instability supporting the efficiency hypothesis as 423 bank branches shrank from a total of 4676 banks.

In investigating the effect of ownership on bank profitability in Nigerian banking system for the period 2006 to 2015, Ozili and Uadiale (2017) obtained data from bank scope from a sample of 27 banks. A simple criterion indicating whether a bank has what type of equity ownership was used while capital adequacy, cost efficiency, regulatory capital, asset quality, and economic growth rate (GDP) were used as functions of profitability. The authors found that banks in Nigeria with high ownership profile or concentration have higher returns on assets, higher net interest margin and higher recurring earning power, while banks with dispersed ownership have lower return on assets but have higher return on equity. Also, higher cost efficiency improved the return on assets of higher ownership profile banks improving the profitability, and therefore the stability of the banking system in Nigeria.

2.3 Empirical Review

Financial stability has been examined in numerous public and academic debates. For instance, De Haan and Poghosyan (2012) examined the impact of bank size and the degree of concentration on banks' earnings volatility. Quarterly data on all commercial, savings and corporative banks in the U.S were collected for the period 2004 to 2009. Using the Herfindahl Hirschman index (HHI) for bank concentration and bank size, and the Z-Score to determine the number of standard deviations by which a bank's return on assets has to fall for the bank to become insolvent. While controlling for the quality of management, leverage, and diversification, the authors found that bank size reduces return on volatility. That is, the impact of increase concentration decreases earnings volatility confirming the concentration-stability nexus. However, the literature found a reverse during the 2007/2008 GFC. Corroborating with De Haan and Poghosyan (2012) regarding earning volatility, Kasman and Kasman (2015) investigated the dynamic relationship between earnings volatility, concentration and stability on the entire Turkish banking sector for the period 2002 to 2011. Using the Granger-Causality test to analyze the causal relationship between variables. The analysis showed that bank size and concentration



negatively granger-caused earnings volatility, suggesting that larger banks and more concentrated banking markets decrease earnings volatility supporting the concentration-stability view.

Academics, Elbannan (2015), in examining the effect of bank consolidation and foreign ownership on bank risk-taking in the Egyptian banking sector. Using the Ordinary Least Squares regression models under two main analyses to test the correlation between concentration and foreign ownership on one hand and bank risk-taking behavior on the other hand, and the Z-Score statistic to measure for bank stability for the period 2000 to 2011. Data were obtained from BankScope and Kompass -Egypt for a sample of 576 banks. It was found that bank concentration was associated with low insolvency risk and credit risk as measured by loan loss provisioning (LLP). This result is consistent with the concentration-stability view implying a linear relationship between market concentration and banking system stability. Again, the literature explained that the evidential presence of foreign banks reduced bank credit risk which often increase insolvency risk. In a related development, Elbannan (2015) further explained that regulations and exercises such as bank consolidation in emerging markets should support foreign investment in banks to transfer better managerial skills and systems. However, government-owned banks are prone to insolvency and credit risks, thus, their ownership should be discouraged. The author emphasized prudence to be observed by policy makers in determining the capital adequacy ratio (CAR) and intensively monitor less profitable well-capitalized banks during bank consolidation, because regulatory adequate capital is a pillar for absorption of losses from NPLs, meet the credit needs of small and medium businesses to catapult economic growth (Oduor, Ngoka & Odonga, 2017; Kim, Batten & Ryu, 2020; Yu et al., 2020).

Implementation and the practice of corporate governance is beneficial for the survival, profitability and stability of the banking system. In examining the effect of corporate governance, market structure and economic growth, Diallo and Zhang (2017) used panel data for 29 manufacturing sectors from 34 EU countries for the period 1980 to 2010. Data were obtained from the UNIDO industrial statistics Data base to compute for growth rate while the HHI was used for CR3. It was found that monopolistic market structure exerted a negative effect on growth, causing credit crunch for industries that are most dependent on external financing. Monopolistic banking structure is prone to instability caused by adverse selection and moral hazard arising from credit risk due to mounting non-performing loans (NPLs) or toxic assets (Djebali & Zaghdoudi, 2020; Asteriou, Pilbeam & Tomuleasa, 2020).

However, for banking markets with high level of corporate governance, a non-competitive structure is less harmful to economic growth (Diallo & Zhang, 2017). The literature further revealed that the implication for emerging economies is that due to the prevalence of under-developed financial structure and the existence of imperfect market structures in the banking system, high corporate governance is crucial for promoting growth and prosperity which is tandem with bank stability. Supporting the positive impact of corporate governance for financial stability, Lassoued and Sassi (2018) examined their relationship in Islamic banking system in Malaysia. The Sharia Board Size (SBS), Size Board Members (SBMs), and proportion of independent directors were used as dimensions for corporate governance. Using annual bank-level data of 16 Islamic banks for the period 2005 to 2015, and the adoption of the Generalized Least Square random effect models and the Ordinary Least Square methods to provide empirical evidences. The author found that the percentage of independent members on the board had a positive impact on the financial stability of the Islamic banks in Malaysia, while the SBS and the SBMs were found to have no positive influence towards financial stability.

Empirical evidences have also examined bank stability in relation to macroeconomic and microeconomic vulnerabilities. For instance, Cuestas, Lucette and Reigl (2019) assessed the potential non-linear relationship between competition and bank risk for a sample of 40 commercial banks in the



Baltic countries over the period 2000 to 2014. The authors used the Lerner Index (LI) and market share for competition, while the Z-Score and loan loss reserves as proxies for bank risk or stability. The authors found an inverse U-shape correlation between competition and financial stability. This implies that above a certain threshold (60% for LI and 50% for market share) the lack of competition is likely to exacerbate the individual risk-taking behavior of the banks which could be detrimental to the stability of the banking sector in the Baltic region. On the other hand, increase market power and market share through consolidation (M&As) is associated with decrease in risk-taking behavior by banks and in the risk of insolvency for up to a certain threshold after which the relationship turns negative. Thus, a forced consolidation not driven by market forces but by regulatory policy and program do encourage banks towards excessive risk-taking because of regulators' "too- big-to-fail" policies endangering stability (Vallascas & Keasey, 2012; Qu, Liang & Qian, 2014; Chu, 2015; Yusgiantoro, Soedarmono & Taraza, 2019).

In a related development, Danisman and Tarazi (2020) studied the impact of financial inclusion on bank stability to find whether the interconnectedness between financial inclusion and bank stability, or whether a trade-off exist between the two. Data for the study were sourced from Global Findex data base covering more than 140 countries for the period 2010-2017, while three measures of bank stability namely, default risk, leverage risk, and portfolio risk were measured with the use of the Z-Score statistic. The authors found that advancements in financial inclusion through more account ownership and digital payments have stabilizing effect on banking stability. The stabilizing effect was driven by targeting the disadvantaged adults who are young, undereducated, unemployed and live-in rural areas. Hence, besides other benefits to the entire society, financial inclusion has the additional benefit of improving the stability of the financial system (Vo, Nguyen & Van, 2021). Thus, there should be a policy configuration specially designed to achieve financial inclusion for disadvantaged adults in emerging economies.

2.4 Major themes identified in bank stability literature

The extant literature in this (bank stability) review majorly centered on the roles of banks supervisors and regulatory bodies (Vallascas & Keasey, 2012; Qu, Liang & Qian, 2014; Fratzscher, Konig & Lambert, 2016; Ahamed & Mallick, 2019; Shaddady & Moore, 2019), competition-stability and competition-fragility (Amidu & Wolfe, 2013; Albaity, Mallek & Noman, 2019), diversification (Nguyen, Skully & Perera, 2012; Abuzayed, Al-Fayoumi & Molyneux, 2018; Shim, 2019), and market power (Kasman & Kasman, 2015; Hou & Wang, 2016; Barra & Zotti, 2019). In this review, it is our opinion that attention should be paid to the development of management strategies or innovations, banks branch diversification, bank market structure, sectoral loan portfolio concentration as much as sectoral deposit(s) portfolio concentration. This will help banks to have and to maintain sufficient liquidity to meet not only customers demand on their deposits but to handle the requests and demand for credit investment. This will repose confidence in the depositors and shareholders, improve transparency and accountability guaranteeing a strong and stable banking system.

Hence this research is geared towards identifying untapped areas and attempt to make a review of bank stability. The researchers sourced for articles from six peer reviewed publishers that are believed to have valid and reliable academic discourse. These publishers are Emerald, Springer, Sage, Elsevier, Wiley, and Inderscience. This research work considered journal articles published between 2011 and 2020. Additionally, since the aim of every banking system is to ensure stability and promote sustained rapid economic growth and development, there is the need for continuous and regular research in the areas of the effect of economic variables on bank stability, bank's management (Agency and stewardship) efficiency and bank stability, and diversification and bank stability. These areas are generally deficient compared to measuring and regulating bank stability. We can argue that the essence



is to keep shareholders and customers better informed of their stakes, and also abreast supervisory-regulatory agencies of banks' possible unethical practices thereby alerting them to adopt policy measures that will avert any possible bank failure or distress that might result to instability.

3.0 Research Methodology

To the best of the researchers' knowledge, Pickering and Byrne (2013), were the pioneer developers of the systematic quantitative assessment technique (SQAT). This study adopted the Pickering and Byrne technique found in Bikefe et al. (2020). The technique can be used in a systematic review because it results in generating similar and verifiable outcomes or reviews by identifying "vital geographic, scalar, theoretical and methodological gaps in the literature".

For a systematic review to be effective and achieve its purpose, SQAT in Pickering and Byrne (2013) recommended five (5) necessary steps to be used. The essence of the steps is to guide a researcher towards easy identification of gaps for a study. We used only 72 articles drawn from 6 databases. These bank stability articles were published in English. Tables 1 and 2, respectively, described the steps and applications, the numbers of articles downloaded and used from each of the six databases. Worldly recognized databases, Springer, Emerald, Sage, Elsevier, Wiley, and Inderscience provided sufficient literature on bank stability and therefore enhanced this review compared to other databases such as Taylor and Francise, Jstor, Ingenta, MIT University, Oxford University, Cambridge University, Harvard University, SSRN and Hein Online with scanty and incomplete information on the subject-matter. The downloaded articles were accessed through google scholar with the aid of Sci-hub window.

Table 1: Description and application of SQAT

Step	Application in current study
1. Define topic	Bank Stability
	Six research questions:
	1. What is the time distribution of BS research articles?
	2. In which countries were these articles written?
	3. What kind of BS articles published? (Empirical or Conceptual)
2. Formulate Research Questions	4. What kind of theories applied in the articles?
	5. What are the specific themes explored by these articles, and what use are the main findings in each theme?
	6. What were the source(s) of data used in each article?
3. Identify keywords	Bank Stability
4. Identify and search databases	1. 6 databases were used: Emerald, Elsevier, 2. "All in title" search with the use of one (1) search combination: "Bank Stability".
5. Read and assess Publications	1. Abstracts of articles down loaded were read to ensure they dealt solely with Bank Stability 2. Peer-reviewed (Theoretical/Conceptual and Empirical) articles.

Source: Adopted: Pickering & Byrne (2013)

Table 2. Number of Articles downloaded in databases

Database	Number of Papers
Elsevier	47
Emerald	9
Wiley	6



Springer	5
Sage	4
Inderscience	1
Total	72

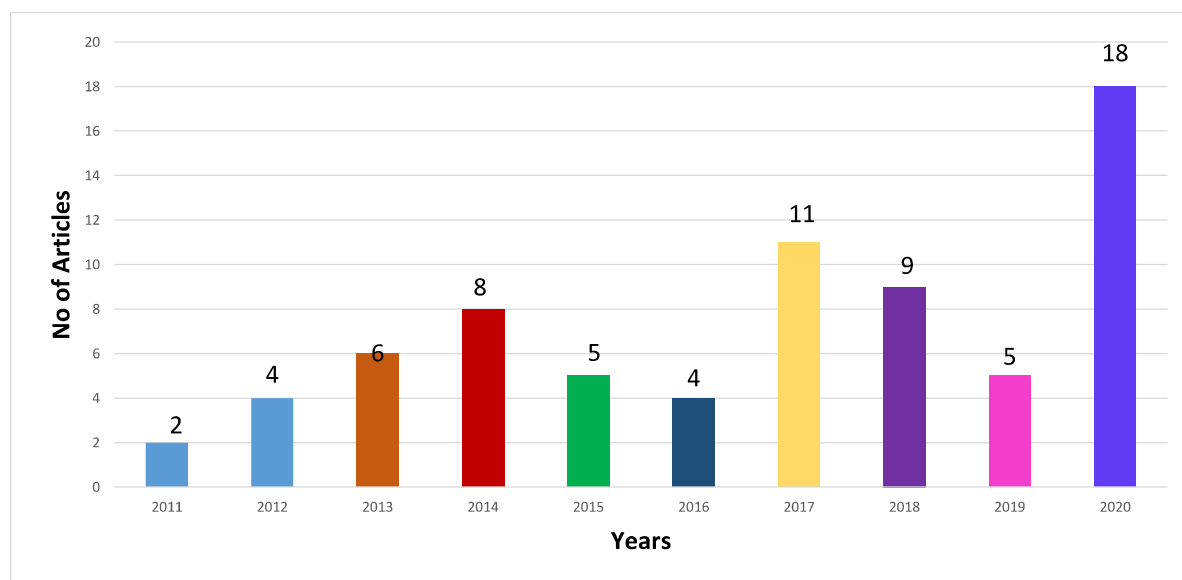
Source: Authors' Review

4.0 Findings, Results and Discussions

4.1 Time Distribution of Articles on Bank Stability

Based on this study's sample of 72 articles published from 2011-2020, time distribution analysis of bank stability research was done. This analysis revealed that 2020 was the most productive year for bank stability research with 18 articles published, followed by 2017 with 11 articles, whilst 2012 and 2016, and 2015 and 2019, had 4 and 5 articles respectively published amongst the databases reviewed for the study. However, in this review, the year 2011 was the least productive with only 2 articles published on bank stability in the six data bases. Figure 1 shows the time distribution of bank stability articles reviewed.

Figure 1: Time Distribution of Articles on bank stability from 2011 – 2020

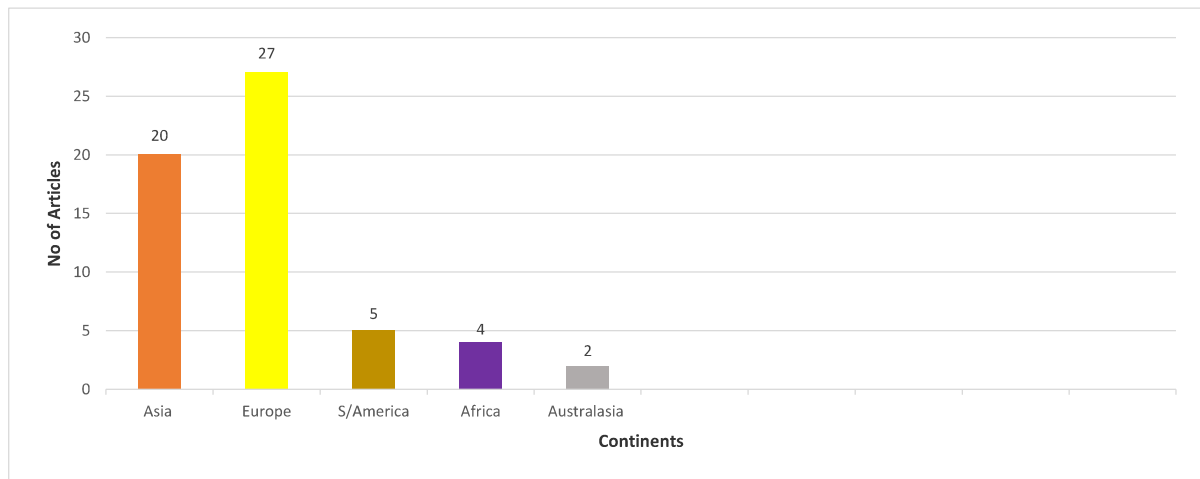


Source: Authors' Review 2020

4.2 Geographical Distribution of Articles on Bank Stability on Continents

Figure 2 presents the geographical distribution of the 72-bank stability articles reviewed based on continent in which the study took place.

Figure 2: Geographical distribution of articles on BS from 2011-2020



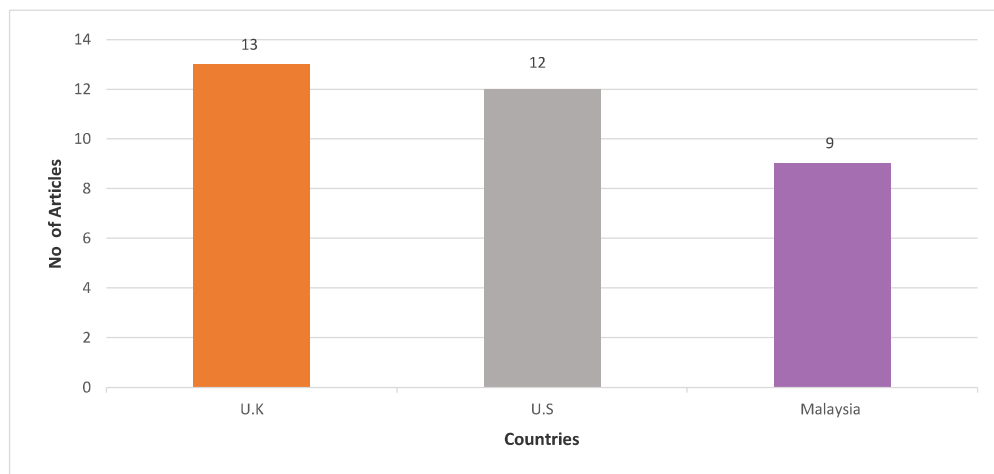
Source: Authors' Review

The analysis showed that the articles reviewed have sample of European countries banks with the highest number of articles (27) published, followed by Asia (20), North America (14), South America (5), Africa (4), and lastly Australasia (2). Africa had 4, followed by Australasia with the least number of research work on bank stability. The deficiency in South America, Africa, and Australasia reflects a geographical gap in the research work.

From a country perspective, 38 countries were represented in BS. UK had the highest with 13 articles, followed by USA with 12 while, Malaysia had 9 articles. Figure 3 presents the top three countries where bank stability research was conducted in this review.

3.3 Country Distribution of Articles on Bank Stability

Figure 3: Top 3 countries research on Bank Stability



Source: Authors' Review.

In order to concretize more on geographic distribution, an additional table (table 3) is provided to further explain, on a country's perspective of the remaining 38 articles. Only Spain, France and Qatar had two each while 32 countries had one each.



Table 3. Analysis of 35 Remaining countries with Bank Stability articles

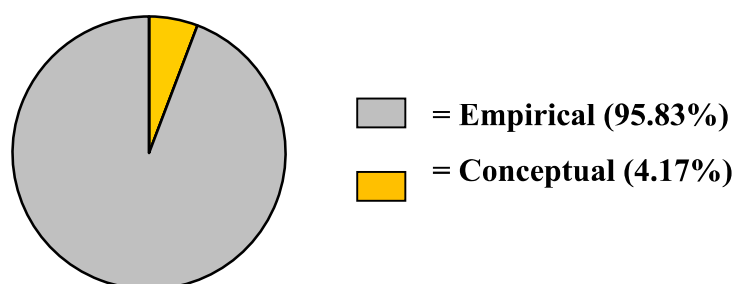
S/N	Country	Number of articles	S/N	Country	Number of articles
1.	Canada	1	22.	Finland	1
2.	Mexico	1	23.	Belgium	1
3.	Denmark	1	24.	Spain	2
4.	Finland	1	25.	Hungary	1
5.	Cuba	1	26.	North Nicaragua	1
6.	Costa Rica	1	27.	Nigeria	1
7.	France	2	28.	Greenland	1
8.	Germany	1	29.	Russia	1
9.	Greece	1	30.	Ghana	1
10.	Bahamas	1	31.	Sweden	1
11.	Ireland	1	32.	Poland	1
12.	Italy	1	33.	Brazil	1
13.	China	1	34.	Tunisia	1
14.	Thailand	1	35.	Venezuela	1
15.	Taiwan	1			
16.	Pakistan	1			
17.	Turkey	1			
18.	Qatar	2			
19.	Netherlands	1			
20.	Saudi Arabia	1			
21.	Portugal	1			

Source: Authors' Review

4.4 Article Type

Two categories of articles emerged from the 72 articles in which the systematic review was carried out. These were conceptual (3 papers), and empirical (69 papers). While conceptual articles point to theoretical discussions on the subject-matter, empirical articles validate the research work. Figure 4 shows the breakdown of the 72-bank stability articles based on the above classification.

Figure 4: Article Type Breakdown on Bank Stability from 2011-2020



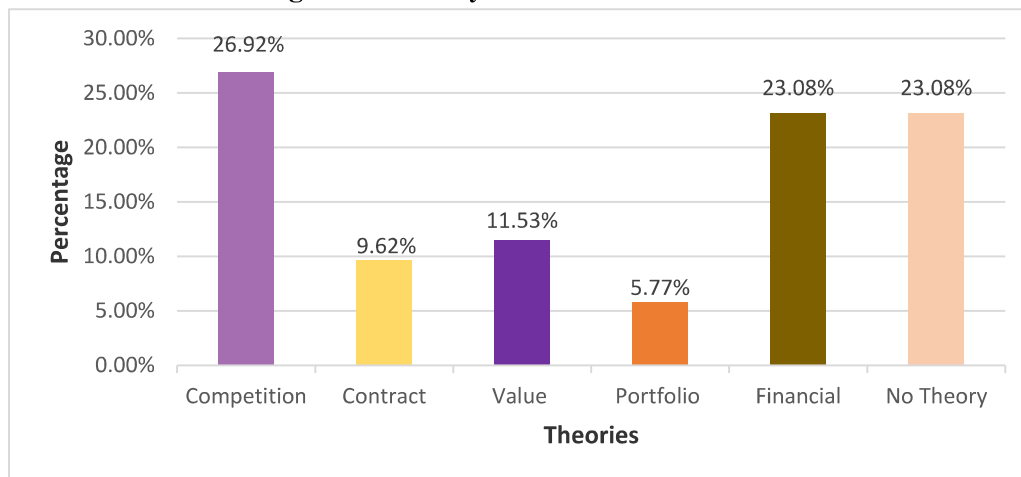
Source: Authors' Review

Most articles reviewed took empirical dimension, concretizing or validating result(s) through facts and figures obtained through data from banks financial statements. In the study, empirical articles were 69 representing 95.83%, while theoretical or conceptual were 3 representing 4.17%. The low number of articles in conceptual portrays the need for more theoretical research as it adds to better comprehension

of the subject-matter. The need for more conceptual research is further supported by Arif (2020), Elbadri and Bektas (2020), and Zegeye et al. (2020). However empirical research is quite important as results obtained in bank stability are of validity and therefore give direction to regulatory/supervisory authorities and policy makers to set and execute right financial policies that will further strengthen and bring stability to the entire financial system.

4.5 Theory Breakdown of Top 5 BS Research

Figure 5: Theory Breakdown of BS research



Source: Authors' review

From the breakdown of the 72 articles, 12 articles (23.11%) adopted no theory, while 14 articles (26.92%) had competition as a theory. Five articles (9.62%) focused on contract (agency and stewardship) as a theory, three articles (5.77%) focused on portfolio, six articles (11.55%) adopted value, while twelve articles representing 23.08% used financial as a theory. However, 20 articles each had or used more than a theory (e.g., Akins et al. (2018) used concentration, economic and conventional as theories; Saksonova and Solovjova (2012) adopted strategy, innovation and value as theories).

The competition theory is of two dimensions: Competition stability and competition fragility. Competition-stability nexus postulates that competition in the banking system lowers lending rates, affording investors/clients to settle their obligations, reducing credit default enhancing bank stability. However high competition can result in excessive risk-taking by banks resulting to instability. Similarly, Akins et al. (2018), and Saif-Al-Yousfi, Saha and Md-Rus (2020), in explaining the conventional theory, pointed out that an increase in competition could affect a bank's ability to continue to do business in the future, which is akin to increase in risk taking affecting bank stability. However, banks with more market power (extent to which a bank can influence the prices of its products/services by exercising control over its demand and supply) have higher charter value because of their ability to charge higher rents (excessive incomes) (Saif-Al-Yousfi, Saha & Md-Rus, 2020). This theory explains the need for and against competition for bank stability.

The agency and stewardship (contract) theories hold that managers (as agents) who head big or large banks can have personal benefits and therefore receive more compensation. High compensation serves as an incentive, encouraging bank managers to perform their role as agents, and be prudent in managing risk assets they control. Similarly, the stewardship theory sees the manager of a large bank as an honest servant, and it is not likely that such a person misappropriates a bank's resources, and couple with structural convenience (organizational structure), bank stability is ensured. Thus, inter-personal



relationship between a bank's equity holders and its servants (managers) must be enhanced so that it can engender bank stability.

The portfolio theory is explained in two dimensions: traditional and corporate finance theories. Traditional banking stresses concentration-stability (diversification of loan portfolio) to reduce chances of failure through gathering of information thereby reducing moral hazard which enhances financial stability. However, Basel Committee on banking Supervision (1991) opines that loan concentration is associated with banking crisis which affects BS. The higher the concentration in the local banking market, the higher prices and rates are for financial services. In the long run, this can create default in loan repayment, and stymie bank's profitability causing bank crisis resulting in instability. However, the essence of the portfolio theory suggests that a good combination of assets in a portfolio enhances stability (Asteriou, Pilbeam & Tomuleasa, 2020).

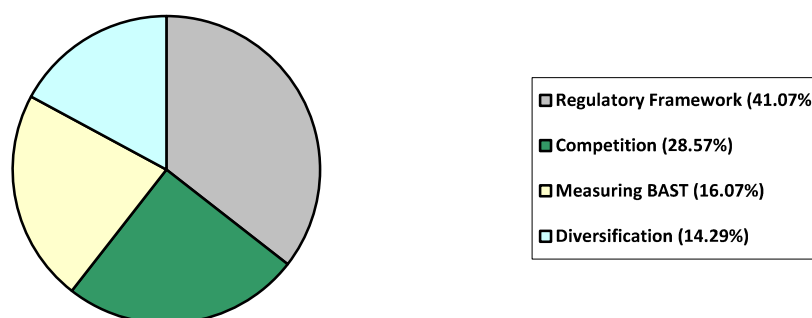
The financial theory concerns the role of financial intermediation and innovations by banks. The intermediation role explains that there is a relationship between liquidity and credit risks. The theory suggests that too many projects funded through loans could cause banks not to meet up with the demands of depositors when they need their money (Kusi et al., 2020). The deteriorating effect of assets at this point will lead to bank instability (Abdelsalam et al., 2020). Innovations by banks on the other hand make banks efficient and responsive in times of crises. Thus, banks' innovativeness through novelty or value addition in product development, modification and diversification, and service delivery in the financial landscape could enhance bank stability.

The value theory explains the systemic interconnectivity of banks as a system. Because of the value attached to each other, the probability of a sharp decline in a bank's stock price on the condition that there is a crash in the banking stock index, individual banks could react to systemic shocks (Abdelsalam et al., 2020; Djebali & Zaghdoudi, 2020). According to this theory there is higher contagious risk effect across banks in a situation of a crash in the entire banking system. The value is further categorized into three specific theories namely; neoclassical, portfolio, and monetary. The neoclassical stresses that investment or asset creation is a function of not only the lag in prices of assets but on the future yield of such assets. The portfolio theory explains that the optimization of assets in a portfolio depends on the final returns on such assets (Abdelsalam et al., 2020). The monetary theory emphasizes the role of adjustment costs in determining the behavior for continuous investment. The strategy theory is varied which include financial, marketing, human resource, information technology, and security. Bank's management must adopt financial strategy for maximizing both shareholders and the bank's wealth. In marketing, price mechanism, customers' retention in addition to addressing information asymmetry problem that creates adverse selection and moral hazards can be stability enhancing.

4.6 Bank Stability Research Themes

We conducted an analysis of 72 articles on bank stability and 4 major broad themes were coined out. The breakdown in percentage form shows the extent of coverage of each theme used from the 72 articles analyzed. However, we find it necessary and important to explain that though 72 articles were analyzed, a total of 76 were reflected in the analysis. Reason been, those 4 articles adopted a mix or dual theme, and therefore were counted twice. For example, market power, revenue diversification and bank stability (Nguyen, Skully & Perera, 2012; Liang, Moreira & Lee, 2020); bank competition, concentration and financial stability in Turkish banking industry (Kasman & Kasman, 2015); does bank competition and diversification lead to greater stability? Evidence from emerging markets (Amidu, 2013).

Figure 6. BS Research Themes



Source: Authors' Review, 2020

Figure 6 depicts a pictorial presentation of the articles analyzed and categorized into themes. A number of 27 articles (35.53%) featured and discussed regulatory and supervisory framework on bank stability. Regulatory and supervisory framework is focused in various forms to address issues ranging from capital beef-up or recapitalization, consolidation (M&As), ownership, and quality institutional involvement (Lee & Hsieh, 2014; Chu, 2015; Oduor, Ngoka & Odongo, 2017). Banking regulations and supervision are meant to protect systemic stability by regulating lending activities prevalent in banks in order to curtail bank default and making the banking system resilient to systemic risk (Vallascas & Keasey, 2012; Fratzscher, Konig & Lambert, 2016). In stressing the importance and the need to regulate the banking system, Raji (2017), Pak (2019), Kusi et al. (2020) emphasized that the banking industry is the most regulated sector in an economy because of its strategic importance; serving as a conduit pipe and a connecting rod to other sectors of the economy.

Competition is the second theme prominent in the 72 analyzed articles, with a total of 19 (25%) articles emphasizing on competition-stability, competition-fragility, and market power. Competition-stability hypothesis enhances BS through provision of credits to investors at lower rates, enhancing borrowers' ability to repay both principal and interest thereby reducing banks insolvency risk, lowering the effect of NPLs, and improving bank profitability and asset quality increasing stability (Amidu & Wolfe, 2013; Kasman & Kasman, 2015; Goetz, 2018). Competition-fragility or concentration-stability on the other hand has a negative impact on small size banks because of mega banks 'credit rationing', precluding access of credits by small investors, increase of credit crunch, complex in monitoring, excessive risk-taking due to incentives as they are regarded as too -big- to- fail, ultimately resulting in instability (Kasman & Kasman, 2015; Clark, Radic & Sharipova, 2018; Albaity, Mallek & Noman, 2019).

Competition can also be championed through bank's market power which implies a bank's ability to attract and maintain deposits from both current and prospective customers, and also bank's commitment to successfully manage every proportion of loan issued to its customers (Hou & Wang, 2016; Barra & Zotti, 2019). This is because bank's market power is positively associated with credit risk or lower insolvency risk if prices are charged above marginal cost of production, or by influencing the price(s) through controlling both the supply and demand of their products/services. (Ovi, Perera & Colombage, 2014; Yusgiantoro, Soedarmono & Tarazi, 2019).

The third theme in the bank stability analysis, an acronym, the CAMELS, is often adopted by banks as an indicator and a measure of bank stability. A total of 17 articles (22.37%) formed part of this theme. The CAMELS implies capital adequacy, asset quality, management quality, earning quality, liquidity sufficiency, and sensitivity to market analysis (Oduor, Ngoka & Odongo, 2017; Karim et al., 2018;



Djebali & Zaghdoudi, 2020). An enhanced capital base gives a bank a competitive edge, enables it to acquire relevant technology, engage high quality personnel, absorbs losses or toxic assets, provide better services and ultimately increases its earnings. The quality and magnitude of deposits held by a bank besides its fixed assets is positively linked to bank stability (Oduor, Ngoka & Odongo, 2017; Ghenimi, Chaibi & Omri, 2017; Anginer, Demirgüç-Kunt & Mare, 2018). This is because asset quality forestalls visible erosion of assets thereby engendering stability (Jin et al., 2017; Ali & Pauh, 2018). Credit risk management is a function of the policies and skills demonstrated by bank's management in its innovative ability to manage her credit risk portfolio and enhance income through loan interest, reduce or completely avert loan default and possible insolvency risk; couple with bank's alertness to market analysis (sensitivity analysis) in respect to the effect of changes in both interest and exchange rates, and derivatives (Bai & Elyasiani, 2012; Karim, 2018; Ali & Pauh, 2018). The most important management strategies (human resource, IT, marketing, security, finance) to be adopted by a bank is to ensure stability by correctly selecting appropriate strategy in every changing environment and situation; and a bank without a strategy is a mere collection of assets heaped with liabilities correlated to instability (Saksonova & Solovjova, 2012; Bai & Elyasiani, 2012).

Diversification (17.10%), appeared the fourth with 13 articles considered in the bank stability analysis. It is common with financial institutions to diversify either by branch location, loan or credit, market concentration, or diversify in terms of asset or revenue (Lee & Hsieh, 2014; Hendrickson, Nichols & Fairchild, 2014; Lassoued & Sassi, 2018). The authors further stressed that loan diversification has a positive impact on a bank's financial strength or stability just as a bank operating in a highly concentrated market. The composition, trend and quality of credit and its effect on a bank's interest income in relation to its income diversification is negatively related to a bank insolvency thereby propelling stability (Nguyen, Skully & Perera, 2012; Amidu & Wolfe, 2013; Shim, 2019; Liang, Moreira & Lee, 2020).

Table 4: Summary of findings of review of 72 Bank Stability articles

S/N	Heading	Key Finding	Implications
1	Time distribution (2011–2020)	<ul style="list-style-type: none"> – BS articles were published every year from 2011 – 2020. – 2020 was the most productive year with 18 articles, while 2012 and 2016 had four (4) articles each. However, 2011 was the least productive with only 2 articles published in the 6 data bases. 	<ul style="list-style-type: none"> – BS is crucial for effective intermediation role and sustenance of a healthy economy, interest in measuring BS in the six data bases to the best of our knowledge was deficient in 2011.
2	Geographic distribution	<ul style="list-style-type: none"> – Europe had the largest number of BS articles (27) among contributing continents, Asia had (20) and North-America had (14) while South America, Africa and Australasia had 5, 4 and 2 respectively. – UK had the largest number of BS articles (13) among contributing countries while USA had 12 followed by Malaysia with 9. 	<ul style="list-style-type: none"> – There is need for more BS research in South America, Africa and Australasia which are the least represented in articles reviewed.
3.	Article type	<ul style="list-style-type: none"> – Most articles reviewed were empirical in nature (69 out of 72), while only 3 were conceptual in nature. 	<ul style="list-style-type: none"> – There is much need for more conceptual BS research to give a more theoretical comprehension of BS.



4.	Data collection methods	– Two data collection methods were identified: Quantitative and qualitative. Quantitative (69), through banks and other financial institutions statements were utilized.	– Qualitative method where research instruments are administered and retrieved from banks loan officials and investing publics be used. However, outcome on BS might not be authentic due to biasness and the subjective nature of respondents.
5.	BS Themes	– Four different BS themes were identified. – 35.53% of the articles used regulatory as theme, 25% used competition, 22.37% used measuring (by systemic factors) BS while 17.10% used diversification as a theme.	– Regular measuring and adaptation of innovation through diversification could forestall possible instability.

4.7 Data collection Method of Bank Stability Research

The financial or the banking sector is a unique sector in an economy because of the unique role it plays in connecting and serving all other sectors (Kiema & Jokivuolle, 2014; Oduor, Ngoka & Odongo, 2017; Abuzayed, Al-Fayoumi & Molyneux, 2018). Research on bank stability is mostly empirical. Empirical research on BS could best adopt the quantitative method of data collection in order to avoid misjudgment or bias by respondents if data are to be sourced through survey or interview (Bai & Elyasiani, 2012; Lee & Hsieh, 2014; Fratzscher, Konig & Lambert, 2016). Moreover, authentic data in respect of banks performances or stability using CAMELS for instance could best be obtained from audited or published financial statements in reports “housed” by either the banks or regulatory agencies (Karim, 2017; Bempei, Kalyvas & Nguyen, 2018; Shim, 2019). However, Fratzscher, Konig and Lambert (2016) stressed the need for the use of qualitative data in assessing the impact of banks loans on customers’ satisfaction.

Based on the contents used to analyze the 72 articles, except for examples Raji, 2017, the 72 articles used content analysis, that is, data sourced from the statement of assets and liabilities (balance sheet) and the income statement (e.g., Bornemann et al., 2014; Karim, 2017; Yusgiantoro, Soedarmono & Tarazi, 2019). Related agencies such as Fitch Ratings and Bureau VanDijk Bankscope database or Bank scope databases (e.g., Hsieh et al., 2013; Ovi, Perera & Colombage, 2014; Ghenimi, Chaibi & Omri, 2017; Ahamed & Mallick, 2019; Clark, Radic & Sharipova, 2018) were the major source of data in the review.

Therefore 69 articles (95.83%) adopted content analysis in the BS review, whilst 3 (4.17%) being conceptual, did not use any of the methods due to their nature. We concluded that data sources for bank stability research in the main time are principally secondary. We therefore recommend for survey or interview but caution that results obtained could be subjective due to biasness of individual respondents such as banks loan senior officers or investors.

5.0 Conclusion

A number of 69 empirical and 3 theoretical or conceptual articles were reviewed in this study. The articles were downloaded from six peer-reviewed English databases. The articles reviewed were broken down into six components: time distribution, geographical distribution, article type, research theories, major research themes, and source of data collection. Furthermore, the description and application of



systematic quantitative assessment technique (SQAT) in the methodology was used to state the topic, formulate research questions, identify and search the databases, and also stated that abstracts of downloaded articles were read and assessed. Numbers of articles downloaded were also reflected according to the category of databases.

A challenge was identified in this review. The sixty-nine articles mainly empirical, indicate the need for more conceptual framework. However, the nature and uniqueness of the sector and especially the area of study requires quantitative source of data which should not be compromised.

This review is not without some limitations which can be considered as gaps to be filled.

Firstly, only articles written in English language were downloaded from the six major databases. The possibility of bank stability articles in other languages is enormous. Again, databases such as Taylor and Francis, Jstor, Ingenta, Universities of MIT, Oxford, Cambridge, and Harvard were not explored and therefore excluded. Another challenge was that the year 2011 had only 2 articles found in the six data bases based on the general standard spelt out in SQAT methodology.

Secondly, the study used only “title search” in the six databases which certainly might not have all the peer reviewed bank stability articles. If the scope was extended to feature other databases, more articles in respect of bank stability would have been explored.

Thirdly, a key word search which would have provided chances for more relevant articles was ignored and instead a title word search which provides direct search for bank stability articles was used.

Fourthly, there is a dearth of theoretical work on bank stability especially for emerging economies. Therefore, adequate attention be given on specific-country economic performance and impact on bank stability.

Fifthly, qualitative instruments or tools could be utilized (which is not criterion and therefore ignored in this review) on banks clients to ascertain the extent of financial institutions performances in respect to services on credit risks, their possible impact on banks customers/clients which can translate to affect the general growth, development of the economy, and also stability of financial systems.

REFERENCE

- Abdelsalam, O., Elnahass, M., Ahmed, H., & Williams, J. (2020). Asset securitizations and bank stability: evidence from different banking systems. *Global Finance Journal*, 100551.
- Abuzayed, B., Al-Fayoumi, N., & Molyneux, P. (2018). Diversification and bank stability in the GCC. *Journal of International Financial Markets, Institutions and Money*, 57, 17-43.
- Acosta-Smith, J., Grill, M., & Lang, J. H. (2020). The leverage ratio, risk-taking and bank stability. *Journal of Financial Stability*, 100833.
- Ahamed, M. M., & Mallick, S. K. (2019). Is financial inclusion good for bank stability? International evidence. *Journal of Economic Behavior & Organization*, 157, 403-427.
- Akins, B., Li, L., Ng, J., & Rusticus, T. O. (2018). Bank competition and financial stability: evidence from the financial crisis. *Journal of Financial and Quantitative Analysis*, 51(1), 1-28.
- Albaity, M., Mallek, R. S., & Noman, A. H. M. (2019). Competition and bank stability in the MENA region: The moderating effect of Islamic versus conventional banks. *Emerging Markets Review*, 38, 310-325.



- Ali, J.I; Ekpe, M.J; & Aigba, M.O. (2019) Banking sector reforms and bank performance in Sub-Saharan Africa: empirical evidence from Nigeria. *Journal of Business and Management*, 18(50), 36-47.
- Ali, M., & Puah, C. H. (2018). Does bank size and funding risk effect banks' stability? A lesson from Pakistan. *Global Business Review*, 19(5), 1166-1186.
- Ali, M., & Puah, C. H. (2018). The internal determinants of bank profitability and stability. *Management Research Review*, 42(1), 49-67.
- Ali, M., & Iness, A. (2020). Capital inflows and bank stability around the financial crisis: The mitigating role of macro-prudential policies. *Journal of International Financial Markets, Institutions and Money*, 69, 101254.
- Al-Shboul, M., Maghyreh, A., Hassan, A., & Molyneux, P. (2020). Political risk and bank stability in the Middle East and North Africa region. *Pacific-Basin Finance Journal*, 60, 101291.
- Amidu, M., & Wolfe, S. (2013). Does bank competition and diversification lead to greater stability? Evidence from emerging markets. *Journal of Development Finance*, 3, 152-166.
- Anginer, D., Demirgüç-Kunt, A., & Mare, D. S. (2018). Bank capital, institutional environment and systemic stability. *Journal of Financial Stability*, 37, 97-106.
- Arif, A. (2020). Effects of securitization and covered bonds on bank stability. *Research in International Business and Finance*, 53, 101196.
- Asteriou, D., Pilbeam, K., & Tomuleasa, I. (2020). The impact of corruption, economic freedom, regulation and transparency on bank profitability and bank stability: Evidence from the Eurozone area. *Journal of Economic Behavior & Organization*, 184, 150-177.
- Bai, G. & Elyasiani, E. (2012). Bank stability and managerial compensation. *Journal of Bank and Finance*, 37(2013), 799-813.
- Barra, C., & Zotti, R. (2019). Bank Performance, Financial Stability and Market Concentration: Evidence from Cooperative and Non-Cooperative Banks. *Annals of Public and Cooperative Economics*, 90(1), 103-139.
- Bermpei, T., Kalyvas, A., & Nguyen, T. C. (2018). Does institutional quality condition the effect of bank regulations and supervision on bank stability? Evidence from emerging and developing economies. *International Review of Financial Analysis*, 59, 255-275.
- Bikefe, G., Zubairu, U., Araga, S., Maitala, F., Ediuku, E., & Anyebe, D. (2020). Corporate Social Responsibility by small and medium enterprises (SMEs): a systematic review. *Journal of Small Business International Review*, 4(1), 16-33.
- Bornemann, S., Homölle, S., Hubensack, C., Kick, T., & Pfingsten, A. (2014). Visible reserves in banks—determinants of initial creation, usage and contribution to bank stability. *Journal of Business Finance & Accounting*, 41(5-6), 507-544.
- Boulanouar, Z., Alqahtani, F., & Hamdi, B. (2021). Bank ownership, institutional quality and financial stability: evidence from the GCC region. *Pacific-Basin Finance Journal*, 66, 101510.
- Bushman, R. M., Hendricks, B. E., & Williams, C. D. (2015). Perceived bank competition: Operational Decision-making and bank stability. *University of North Carolina-Chapel Hill Working Paper*, <http://papers.ssrn.com/sol3/Delivery.cfm>.



- Chiaramonte, L., Poli, F., & Oriani, M. E. (2015). Are cooperative banks a lever for promoting bank stability? Evidence from the recent financial crisis in OECD countries. *European Financial Management*, 21(3), 491-523.
- Chu, K. H. (2015). Bank consolidation and stability: The Canadian experience, 1867–1935. *Journal of Financial Stability*, 21, 46-60.
- Clark, E., Radić, N., & Sharipova, A. (2018). Bank competition and stability in the CIS markets. *Journal of International Financial Markets, Institutions and Money*, 54, 190-203.
- Cuestas, J. C; Lucette, Y; Reigl, N. (2019). Banking sector concentration, competition and financial stability. The case of the Baltic countries. *Post -communication Economies*. <https://doi.org/10.1080/14631377.2019.1640981>.
- Danisman, G. O., & Tarazi, A. (2020). Financial inclusion and bank stability: evidence from Europe. *The European Journal of Finance*, 26(18), 1842-1855.
- De Haan, J., & Poghosyan, T. (2012). Bank size, market concentration, and bank earnings volatility in the US. *Journal of International Financial Markets, Institutions and Money*, 22(1), 35-54.
- Deltuvaite, V. (2015). The concentration stability relationship in the Banking system: An empirical research. *Journal of Economics & Management*, 900-909.
- Diallo, B., & Zhang, Q. (2017). Bank concentration and sectoral growth: Evidence from Chinese provinces. *Economics Letters*, 154, 77-80.
- Djebali, N., & Zaghdoudi, K. (2020). Threshold effects of liquidity risk and credit risk on bank stability in the MENA region. *Journal of Policy Modeling*, 42(5), 1049-1063.
- Elbadri, M., & Bektaş, E. (2020). Dynamic relationship among the bank stability, oil, and gold prices: Evidence from the Islamic banks operating in the Gulf Cooperation Council countries. *International Journal of Finance & Economics*.
- ElBannan, M. A. (2015). Do consolidation and foreign ownership affect bank risk taking in an emerging economy? An empirical investigation. *Managerial Finance*, 41(9), 874-907.
- Fratzscher, M., König, P. J., & Lambert, C. (2016). Credit provision and banking stability after the Great Financial Crisis: The role of bank regulation and the quality of governance. *Journal of international money and finance*, 66, 113-135.
- Ghenimi, A., Chaibi, H., & Omri, M. A. B. (2017). The effects of liquidity risk and credit risk on bank stability: Evidence from the MENA region. *Borsa Istanbul Review*, 17(4), 238-248.
- Goetz, M. R. (2018). Competition and bank stability. *Journal of Financial Intermediation*, 35, 57-69.
- Gregor, N. F.W; Sascha, N; Bostandzic, D. (2014). Systemic risk and bank consolidation: International evidence. *Journal of Banking Finance*, 40(2014), 165-181.
- Hendrickson, J. M., Nichols, M. W., & Fairchild, D. R. (2014). Bank branch location and stability during distress. *Journal of Financial Economic Policy*, 6(2),133-151.
- Hou, X., & Wang, Q. (2016). Institutional quality, banking marketization, and bank stability: Evidence from China. *Economic Systems*, 40(4), 539-551.
- Hsieh, M. F., Chen, P. F., Lee, C. C., & Yang, S. J. (2013). How does diversification impact bank stability? The role of globalization, regulations, and governance environments. *Asia-Pacific Journal of Financial Studies*, 42(5), 813-844.
- Jin, J. Y., Kanagaretnam, K., Lobo, G. J., & Mathieu, R. (2017). Social capital and bank stability. *Journal of Financial Stability*, 32, 99-114.



- Karim, N. A., Alhabshi, S. M. S. J., Kassim, S., & Haron, R. (2018). Measuring Bank Stability: A Comparative Analysis Between Islamic and Conventional Banks in Malaysia. In *Proceedings of the 2nd Advances in Business Research International Conference*, 169-177, Singapore.
- Kasman, S., & Kasman, A. (2015). Bank competition, concentration and financial stability in the Turkish banking industry. *Economic Systems*, 39(3), 502-517.
- Kiema, I., & Jokivuolle, E. (2014). Does a leverage ratio requirement increase bank stability? *Journal of Banking & Finance*, 39, 240-254.
- Kim, H., Batten, J. A., & Ryu, D. (2020). Financial crisis, bank diversification, and financial stability: OECD countries. *International Review of Economics & Finance*, 65, 94-104.
- Kusi, B. A., Adzobu, L., Abasi, A. K., & Ansah-Adu, K. (2020). Sectoral Loan Portfolio Concentration and Bank Stability: Evidence from an Emerging Economy. *Journal of Emerging Market Finance*, 19(1), 66-99.
- Lassoued, N., & Sassi, H. (2018). Income diversification, bank stability and owners' identity: international evidence from emerging economies. *International Journal of Corporate Governance*, 8(1), 61-80.
- Lee, C. C., & Hsieh, M. F. (2014). Bank reforms, foreign ownership, and financial stability. *Journal of International Money and Finance*, 40, 204-224.
- Li, S. (2019). Banking sector reform, competition, and bank stability: an empirical analysis of transition countries. *Emerging Markets Finance and Trade*, 55(13), 3069-3093.
- Liang, S., Moreira, F., & Lee, J. (2020). Diversification and bank stability. *Economics Letters*, 193, 109312.
- Mutarindwa, S., Schäfer, D., & Stephan, A. (2020). Central banks' supervisory guidance on corporate governance and bank stability: Evidence from African countries. *Emerging Markets Review*, 43, 100694.
- Nguyen, M., Skully, M., & Perera, S. (2012). Market power, revenue diversification and bank stability: Evidence from selected South Asian countries. *Journal of International Financial Markets, Institutions and Money*, 22(4), 897-912.
- Oduor, J., Ngoka, K., & Odongo, M. (2017). Capital requirement, bank competition and stability in Africa. *Review of development finance*, 7(1), 45-51.
- Ovi, N. Z., Perera, S., & Colombage, S. (2014). Market power, credit risk, revenue diversification and bank stability in selected ASEAN countries. *South East Asia Research*, 22(3), 399-416.
- Ozili, P. K., & Uadiale, O. (2017). Ownership concentration and bank profitability. *Future Business Journal*, 3(2), 159-171.
- Pak, O. (2019). The impact of state ownership and business models on bank stability: Empirical evidence from the Eurasian Economic Union. *The Quarterly Review of Economics and Finance*, 71, 161-175.
- Pickering, C., & Byrne, J. (2013). The benefits of publishing systematic quantitative literature reviews for PhD candidates and other early-career researchers. *High Education Research and Development*, 33(3), 534-548. <http://doi.org/10.1080/07294360.2013>.
- Qu, H., Liang, Z., & Qian, H. (2014). A quantitative analysis of the relationship of franchise value, implicit insurance and bank stability. *International Journal of Convergence Computing*, 1(2), 127-136.



- Raji, S. (2017). Effect of recapitalization on banks' financial performance in Nigeria. *International Journal of contemporary Research and Review*, 9(1).
- Raykov, R., & Silva-Buston, C. (2020). Holding company affiliation and bank stability: Evidence from the US banking sector. *Journal of Corporate Finance*, 65, 101739.
- Riahi, Y. (2020). Examining the relationship between bank stability and earnings quality in Islamic and conventional banks. *International Journal of Islamic and Middle Eastern Finance and Management*.
- Saif-Al-Yousfi, A. Y., Saha, A., & Md-Rus, R. (2020). The impact of bank competition and concentration on bank risk-taking behavior and stability: Evidence from GCC countries. *The North American Journal of Economics and Finance*, 51, 100867.
- Saksonova, S., & Solovjova, I. (2012). Some quantitative aspects of stability management strategy in a bank. *Procedia - Social and Behavioral Sciences* 58, 569 – 577.
- Sarpong-Kumankoma, E., Abor, J. Y., Aboagye, A. Q., & Amidu, M. (2020). Economic freedom, competition and bank stability in Sub-Saharan Africa. *International Journal of Productivity and Performance Management*.
- Shaddady, A., & Moore, T. (2019). Investigation of the effects of financial regulation and supervision on bank stability: The application of CAMELS-DEA to quantile regressions. *Journal of International Financial Markets, Institutions and Money*, 58, 96-116.
- Shijaku, G. (2017). Does concentration matter for bank stability? Evidence from the Albanian banking sector. *Journal of Central Banking Theory and Practice*, 2017(3), 67-94.
- Shim, J. (2019). Loan portfolio diversification, market structure and bank stability. *Journal of Banking & Finance*, 104, 103-115.
- Stewart, R., Chowdhury, M., & Arjoon, V. (2020). Bank stability and economic growth: trade-offs or opportunities? *Empirical Economics*, 1-27.
- Uddin, M. H., Mollah, S., & Ali, M. H. (2020). Does cyber tech spending matter for bank stability? *International Review of Financial Analysis*, 72, 101587.
- Vallascas, F., & Keasey, K. (2012). Bank resilience to systemic shocks and the stability of banking systems: Small is beautiful. *Journal of International Money and Finance*, 31(6), 1745-1776.
- Vo, D. H., Nguyen, N. T., & Van, L. T. H. (2021). Financial inclusion and stability in the Asian region using bank-level data. *Borsa Istanbul Review*, 21(1), 36-43.
- Yu, G. A., Li, Z., Yang, H., Lu, J., Huang, H. Q., & Yi, Y. (2020). Effects of riparian plant roots on the unconsolidated bank stability of meandering channels in the Tarim River, China. *Geomorphology*, 351, 106958.
- Yusgiantoro, I., Soedarmono, W., & Tarazi, A. (2019). Bank consolidation and financial stability in Indonesia. *Journal of International Economics*, 159, 94-104.
- Zegeye, A. D., Langendoen, E. J., Steenhuis, T. S., Mekuria, W., & Tilahun, S. A. (2020). Bank stability and toe erosion model as a decision tool for gully bank stabilization in sub humid Ethiopian highlands. *Ecohydrology & Hydrobiology*, 20(2), 301-311.
- Zigraiova, D., & Havranek, T. (2016). Bank competition and financial stability: Much ado about nothing? *Journal of Economic Surveys*, 30(5), 944-981.