DEEPENING FINANCIAL INCLUSION AND STABILITY OF COMMERCIAL BANKS IN KENYA: SYNERGIES AND TRADE-OFFS.

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ABSTRACT

There are important trade-offs and synergies between financial inclusion and stability. Poorly implemented financial inclusion policies can impair stability, and also, there may be important synergies brought by broad use of financial services which help financial institutions diversify risk and hence aid stability. Financial stability can enhance financial inclusion through trust build in stable financial systems and hence increase the use of financial services. Excessive emphasis on financial stability can prolong involuntary financial exclusion especially in times of regulatory tightening in an attempt to boost profits and cut off risky segments. It is therefore important for financial institutions to understand the interlinkages in advancing financial inclusion and stability. This study analyzed the effect of financial inclusion on commercial banks stability with a view of establishing the significant relationship between them. The specific objectives were to analyze the effect of Branch networks, ATMs, Agents and Mobile banking on the stability of commercial banks in Kenya. The research design was explanatory non – experimental. The target population was all the 42 commercial banks in Kenya and the study used secondary data. Descriptive statistics were used to establish the trend of financial inclusion and stability of commercial banks while inferential statistics were used for testing the hypotheses. The results revealed that financial inclusion had a statistically significant effect on the stability of commercial banks in Kenya during the study period between 2007-2015. Increase in Branches, ATMs, Agents and Mobile banking were found to support stability (synergy) due to increased deposit mobilization and access to credit. Overall, the results point to the role of financial inclusion and bank stability in Kenya. Moreover, the state of financial inclusion is a major factor that determines Kenyas vision 2030. Therefore, the study recommends increasing the banking customers, advancing affordable and accessible banking services to disadvantaged groups in different regions in the country. In this regard, reforms in financial sector should aim at increasing financial inclusion through digital finance which is a cost cutting measure and to ensure that bank stability indicators commensurate in the role of deepening financial intermediation and hence forming an all-inclusive and stable financial sector over time.

Keywords: Financial Inclusion, Unbankable Stability, Synergy, Trade-off, Financial Deepening.

INTRODUCTION

Commercial banks are important financial intermediaries in the economy who perform the basic functions of accepting deposits, lending the money and offering transfer services. The commercial banks also represent a vital link in the transmission of government's economic policies particularly monetary policy to the rest of the economy (Ongore& Kusa,2013). In emerging market economies like Kenya, commercial banks remain the dominant channel of financial intermediation. Bank deposits represent the most significant component of money supply used by the public and changes in money growth are highly correlated with changes in prices of goods and services in the economy. For commercial banks to efficiently perform their intermediation role of providing liquidity, they must be stable. Bank stability has been a key international agenda by policy makers since the Global Financial Crisis of 2007-2009. The financial Stability Board and Basel Accord have been key in enhancing financial stability. For Kenya one of the mandate of the Central Bank is to foster financial stability through regulation. The CBK has ensured stability by adopting the Basel II Accord and ensuring compliance by the commercial banks.

Bank Stability

Bank stability refers to the distance of an individual bank from insolvency and failure (Beck et al., 2008). According to the Basels Accord, the core indicators relating to bank financial stability include capital adequacy, asset quality, management soundness, earnings and profitability, liquidity and sensitivity to market risk abbreviated as CAMELS(Beck et al., 2009). Measuring of individual bank stability has been based on accounting data using Z-score and Non-Performing Loan (NPL) ratio (Ghosh,2008; Becket al., 2009; Mostak&Sushanta,2015). The Z-score is termed to be a more comprehensive measure that combines information on leverage (equity to assets) with performance (return on assets) and risk (standard deviation of return on assets) to more fully approximate the likelihood of insolvency in the commercial banks (Mare et al.,2015). The Z index increases with higher profitability and capitalization levels, and decreases with unstable earnings reflected by higher standard deviation of ROA. A large value of Z-score indicates a small risk profile for a bank and higher bank stability (Kalunda,2015).

Liquidity risk is used to measure the risk associated with a mismatch between assets and liabilities. This study will adopt the loan-to-deposits ratio as the indicator for liquidity risk. It is argued that the liquidity of a bank is usually evaluated by using a host of tools and techniques, but the traditional loan-to-deposits ratio is a measure that often receives the most attention by analysts and regulators. This is because it captures the bank's ability to repay depositors and other creditors without incurring excessive costs and while continuing to fund its expansion (Aggerer&Fieldman, 1998).

Loans are the major assets of commercial banks and their most important single and largest source of income. The quality of loan portfolio determines the profitability of banks

(Ongoro&Kusa, 2013). The highest risk facing a bank is the losses derived from delinquent loans. Delis et al.(2014) observed that NPL ratio is the best to measure credit risk exposure. A major concern of all commercial banks is to keep the amount of NLP low as this is indicative of good health of the bank portfolio and high level of NPL affects profitability negatively. NPL is computed as the ratio of the volume of non-performing loans to total loans of a bank. A default occurs when the bank considers that a borrower is unlikely to repay his credit obligations in full, without recourse to collateral (Morgan & Poutines,2014).

Banks and financial inclusion

Financial inclusion is the increasing access to formal financial services including having bank accounts, using credit and savings facilitated through the banks. Over the years financial inclusion has grown beyond physical branch as ICT is revolutionizing the access and use of bank services globally (Diniz et al, 2012). Kenya has succeeded in significantly expanding the reach of financial services over the past decade since 2007 (Ngugi,2015). There are several factors that have contributed to this greater level of inclusion; one, expanding reach of the major types of financial providers, commercial banks, savings and credit co-operatives (SACCOs) and micro finance institutions(MFIs) (CBK, 2012). Two is the identification of financial inclusion as a national priority in Vision 2030 and three is the accessibility brought about by financial innovations.

Financial inclusion in Kenya has been characterized by rapid technological change in the finance sector that has led to the development of financial innovations, new products and new forms of payment. According to the CBK 2012, the banking sector has undergone substantive transformation particulary from the year 2007. With the introduction of mobile phone payment platform M-pesa, Airtel money Yu-cash, which dramatically changed the financial landscape by offering a simple efficient and cost-effective method to transfer money and make payments (Kenyoru,2013). Agency banking has enabled bank customers to access the basic banking services by allowing small businesses to operate as satellite branches (Musau, 2013). In 2012, Safaricom LTD in conjuction with Commercial Bank of Africa, one of the Kenya registered commercial bank, launched a service dubbed M-SHWARI that automatically opens a bank account for M-pesa registered customer and operates fully like a bank account. This has made sure that more population is included in the formal financial sector.

Currently commercial banks are actively targeting groups previously targeted by MFI and previously referred to as unbankable (Allen et al.,2012) under a phenomenon known as downscaling (Delfiner& Peron, 2007). Chiba (2009) observed that commercial banks have taken action to address financial inclusion by designing new services and products targeting the low-wage earners and the poor throughout the world.

Financial inclusion and bank stability

Increasing financial access through financial inclusion changes the composition of the customers in terms of saving and borrowing behavior. These compositional changes may support financial stability through risk diversification (Hannings & Jansen, 2010). However, if financial access is expanded to unfamiliar areas and uncreditworthy clients through financial inclusion, this poses an increase in financial risk and hence a threat to stability. Mohrotra and Yetman, 2014 observed that financial stability can enhance trust in the financial system and therefore improving financial inclusion. Conversely, excessive emphasis on financial stability can prolong involuntary financial exclusion. Especially in times of regulatory tightening in an attempt to boost profits and cut off risky segment.

LITERATURE REVIEW

Theoretical Literature

The connection between financial inclusion can be understood in the context of the finance growth theory. The crux of the finance growth theory (Bagehot, 1973) is that financial inclusion creates a productive environment for economic growth. This theory supports financial stability which is a condition where the financial intermediation process functions smoothly. And according to Spatt (2013), the success of economic growth depends on the level of financial inclusion, composition and stability of the financial institutions. Thus the existence of an energetic financial sector has growth enhancing effects. Schumpter (1911) posted that banks enable an economy to grow by providing efficient markets for funds. Goldsmith (1969),Mckinnon, (1973),Levin and Zervos (1996) emphasized the positive role of financial systems in economic growth as cited by Ndebbio (2004). Financial markets evolve in response to increased demand for financial services from an already budding economy. Therefore, the deepening of financial inclusion is a reflection of growth in other sectors of the economy and for financial institutions to support financial inclusion, they must be financially stable.

Another theory which offers an explanation for the possible relationship between financial inclusion and bank stability is the financial intermediation theory. The theory by Diamond in 1984 explains how banks act as intermediaries between borrowers and savers. As financial intermediaries, banks provide access, financial diversification and financial utilization. The extent of inclusion has an influence on the level of stability as confirmed by literature. Financial intermediation is seen as the extent to which financial institutions bring deficit spending units and surplus spending units together (Ndebbio, 2004). Diamond (1984) pointed out that banks are able to effectively monitor borrowers and thus play the role of delegated monitoring. Reduced monitoring costs are a source of comparative advantage. Diamond and Dybrig (1983) analyzed the position of liquidity that is transformation of illiquid assets into liquid liabilities by banks. In their model, identical investors or depositors are risk averse and uncertain about the timely of their future consumption need. Without an intermediary all

investors are locked into illiquid long term investments that yield high pay offs to those who consume later.

The effect of financial inclusion on bank stability can also be viewed from the perspective of the financial asymmetry theory. Information asymmetry arises where one party in a debt contract has more and better information than the other party. The theory was proposed by Akerlof in 1970 and observes that it may be difficult to distinguish good from bad borrowers. According to Richard (2011) moral hazard and adverse selection results from information asymmetry between borrowers and lenders can contribute to contractions in credit hence affecting performance and stability. Moral hazard is the risk which a party to a transaction provides misleading information about its assets, liabilities or credit capacity. This is noted to be contributing to Non-Performing Loans.

Adverse selection assumes that lenders cannot distinguish between borrowers of different degrees of risk and that loan contracts are limited. This leads to borrowers repaying loans when they have the means to do so, and hence significant accumulation of Non-Performing Loans (Bofondi & Gobbi,2003). Financial Inclusion is characterized by entry of new, inexperienced and numerous customers into the formal financial sector including Commercial Banks (Hansen & Jansen, 2010). This creates a challenge in the debt market because lenders have difficulties in determining whether the customer is a good risk and this threatens financial performance and hence stability. Therefore it becomes difficult for banks to establish whether financial inclusion is a low risk good investment or otherwise.

Empirical Review

In Kenya, the concept of financial inclusion has been fused with the goals of poverty alleviation and general economic growth as envisaged in the vision 2030, the country's economic blueprint (Government of Kenya, 2007). This has seen the banking system undergo numerous important reforms and structural changes. Key among those changes include : increased bank and branch network, shift from brick and mortal outlets, agency banking which was commissioned in 2010, innovations in product development, use of information communication and technology (ICT) and emergence of non-bank financial institutions. According to CBK (2013) the country's banking sector has undergone substantial transformation between 2006 and 2013 was the number of deposit accounts went up from 2 million to 18 million while loan accounts increased from 1 million to 3 million. Also the population of adult population totally excluded from financial services declined from 39.3% in 2006 to 25.4% in 2013 (FSD, 2013). It's therefore important to analyse the influence these changes have had on the stability of the commercial banks in Kenya.

The Kenya government has embraced the concept of financial inclusion through the economic pillar contained in the vision 2030. Commercial banks in Kenya responded to the initiative by opening doors and developed products and services for the previously unbanked population. For the banks to fully appreciate the concept of financial inclusion there is need

to understand its effect on the banks that engage in it. This is because financial inclusion clientele are considered opaque, numerous and characterized by frequent small value transactions with high operating costs (Hannig& Jansen, 2010) and this can pose potential threat to stability. According to Kipesha and Zhang (2013) financial inclusion in Kenya and other developing countries was previously spearheaded by MFI's and government owned banks. However, currently commercial banks which are mainly profit seeking have engaged in financial inclusion. Due to the change in financial inclusion landscape by commercial banks, it's important to understand its implication on their stability.

Most of the early studies are carried out at the sector level with a few studies dealing with individual banks (Hanning& Johnson, 2010; Han &Maleck, 2013; Morgan&poritiness, 2014; Mostak&Sushanta, 2015; Amatus&Alireza, 2015). These studies established that increased financial inclusion improves stability of the banking sector. However, other studies have revealed potential threats caused by financial inclusion. Lending to those previously excluded from the formal banking sector in India revealed that new customers were not credit worthy and were a threat to banks stability (Gokhale, 2009; Allen et al., 2012; Khan 2011). This has created two divergent schools of thought with one claiming the financial inclusion-stability effect and the other claiming financial inclusion-instability outcome. Another stand of research posits that financial inclusion and financial stability have a relationship and that synergies between the two exist (Adasmeet al., 2008; Cihakiet al 2015).The foregoing studies confirm that there exists an empirical gap in the area of financial inclusion and stability at micro level as opposed to macro level. This study aims at enriching the existing related literature by studying the relationship between financial inclusion and stability of commercial banks in Kenya.

RESEARCH METHODOLOGY

The main objective of the study is to determine whether increased financial inclusion is good for the stability of commercial banks in Kenya.

Research hypotheses

The study will be guided by the following null hypothesis:

H_{01}: Financial inclusion has no relationship with the stability of commercial banks in Kenya.

Empirical Model

Cross tabulation model was be used to analyse the relationship between financial inclusion and stability of commercial banks in Kenya. This model is preferred since it permits the analysis of decisions across more than two categories in the dependent variable, hence

making it possible to determine choice probabilities of different levels of stability (Greene, 2002). The general empirical model that will be used in this study is as follows;

$Yij=\alpha + \beta Xit + \varepsilon it$……..…….(1)

Where Yijis the dependent variable denoting unstable, stable and above stable condition of bank i at time t proxied by three variables: Z score, Exposure to Credit risk and Exposure to Liquidity risk. it= denotes the observation (Bank), it= 1--------42 while t is the time period t= 2007--------2015. Xit denotes a vector of independent variables (financial inclusion), β is coefficients to be estimated, α is a constant term, and εit it is a composite error term.

RESULTS AND DISCUSSIONS

Trends, cross-tabulations and multinomial logit regression analysis were used as the techniques of analysis. Trends provided a graphical representation of changes in variables across the study period while multinomial logit model was used to establish the relationship between Bank branches, ATMs, Agents, (independent variables) and Bank stability (dependent variables)

Financial Inclusion * Bank Stability Cross tabulations

This section provides cross tabulations of financial inclusion measures and bank stability. All the financial inclusion measures used (branch network, ATM network, agency banking, and mobile banking) were measured on categorical scale. On the other hand, stability measures were computed using industry mean into three categories (stable, unstable and above stability).

Table 3: Financial Stability*Branch Network Cross tabulation

		Z-Score				**Credit Risk**				**Liquidity Risk**			
		US	S	AS	**Total**	US	S	AS	**Total**	US	S	AS	**Total**
Branch Network	Low	12	6	11	**29**	7	11	11	**29**	10	7	12	**29**
	High	5	3	5	**13**	2	6	5	**13**	4	6	3	**13**
	Total	**17**	**9**	**16**	**42**	**9**	**17**	**16**	**42**	**14**	**13**	**15**	**42**
	Chi-Square	X^2=0.043 (0.119)				X^2=0.48 (0.0079)				X^2=2.285 (0.0031)			
ATM Network	Low	7	5	11	**23**	5	8	10	**23**	10	3	10	**23**
	High	10	4	5	**19**	4	9	6	**19**	4	10	5	**19**
	Total	**17**	**9**	**16**	**42**	**9**	**17**	**16**	**42**	**14**	**13**	**15**	**42**
	Chi-Square	X^2=2.533 (0.228)				X^2=0.799 (0.372)				X^2=7.696 (0.0211)			
AGENCY	No	8	6	9	**23**	4	7	12	**23**	5	7	11	**23**

	Yes	9	3	7	**19**	5	10	4	**19**	9	6	4	**19**
	Total	**17**	**9**	**16**	**42**	**9**	**17**	**16**	**42**	**14**	**13**	**15**	**42**
		X^2=0.936				X^2=4.299				X^2=4.143			
	Chi-Square	(0.0026)				(0.0017)				(0.0026)			
Mobile Banking	Low	6	2	6	**14**	3	8	3	14	5	4	5	**14**
	High	11	7	10	**28**	6	9	13	28	9	9	10	**28**
	Total	**17**	**9**	**16**	**42**	**9**	**17**	**16**	**42**	**14**	**13**	**15**	**42**
		X^2=0.654				X^2=2.972				X^2=0.074			
	Chi-Square	(0.0021)				(0.0006)				(0.0014)			

US= Unstable
S= Stable
AS= Above Stable

The results presented in Table 3 indicated that over 50% of the commercial banks that were categorized as having high branch network were either stable or above stable under all measures (z-score, credit risk and liquidity risk) of stability. However, the relationship between branch network and stability was found to be insignificant using the z-score as shown by the chi-square results. Having high branch network enhances commercial banks stability.

The results also showed that large percent commercial banks in Kenya that had high ATM network were either stable or above stable using credit risk and liquidity risk. However, commercial banks with high ATM network were found to be unstable using z-score measure of stability. The results further showed that only liquidity risks measures of stability had a significant relationship with ATM network as by chi-square results.

On agency banking, large percent of commercial bank with agency banking were found to be either stable or above stability. This was an indication that agency banking which increased financial inclusion enhanced commercial banks stability.

The findings further showed that large percent of commercial banks that had high number of mobile accounts were also found to be either stable or above stable. Mobile money technology in Kenya has aided in increasing financial inclusion and the findings of this study confirmed that increasing financial inclusion doesn't jeopardize the stability of commercial banks in Kenya.

In summary, the implications of findings above is that commercial banks that have enhanced their financial inclusion through increasing branch network, ATM network, agency banking and mobile banking have also remained stable as measured by z-score, credit risk and liquidity risk.

CONCLUSIONS AND POLICY RECOMMENDATION

Based on the findings, the study concluded that majority of commercial banks in Kenya have adopted various ways of ensuring financial inclusivity. Commercial banks pursue financial inclusivity with the main aim of increasing the numbers of their customer base and consequently boosting their deposits and loans accounts. However, increasing financial inclusivity leads to increase in NPLs which jeopardize the stability of commercial banks by increasing credit risk and liquidity risk of commercial banks. The study further concluded that commercial banks in Kenya that have enhanced financial inclusivity through increasing the number of branches, ATMs, Agents and mobile accounts have also performed well in terms of stability indicators. The study further concludes that increase in branch networks increases operating cost to a certain point, which reduces once the new branches breaks even. However ATMs, Agents and Mobile banking are found to support stability (synergy) due to increased deposit mobilization. . These results support previous evidence that financial inclusion improves stability (Kalunda, 2015, Mostak & Sushanta, 2015, Cihaki et al, 2016)

Based on the findings the following recommendations were made to the commercial banks and other financial institutions. First the study recommended that commercial banks in Kenya should pursue financial inclusion to increase the banking population, to advance affordable and accessible banking services to disadvantaged groups in different regions in the country. This can be achieved through increasing branches, ATMs, and adoption of other mobile money technologies such as mobile and agency banking.

Secondly, commercial banks should formulate policy to ensure they remain stable while accommodating their activities to ensure financial inclusion. Since, financial inclusion and stability are found to complement each other. In this regard, reforms in financial sector should aim at increasing financial inclusion through digital finance which is a cost cutting measure and to ensure that bank stability indicators commensurate in the role of deepening financial intermediation and hence forming an all inclusive and stable financial sector over time.

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