Funding Liquidity Risk in Ghanaian Microfinance Institutions (MFI's)

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Abstract

The paper presents an objective insight into the liquidity challenges faced by MFI's in Ghana and proposes ways to manage it. It provides an impetus for financial institutions to critically examine their funding performance throughout the year. The survey goes further to reveal that the selected Microfinance Institutions do not conduct periodic evaluation on their financial capabilities to meet the obligations and needs of their customers in terms of readily providing loans and other credit instruments throughout the year. This is because clients make huge withdrawals in the last quarter of the year thus causing a liquidity concentration risk during such periods. Further, the paper suggests that the introduction of viable and innovative products into the market by the various Microfinance institutions coupled with a selective review of prices of products that are doing well in the market is likely to address the funding of the liquidity lapses in Ghanaian Microfinance Institutions. The two processes should however be underpinned by a technological based led monitoring and periodic liquidity trend analysis as it can have an attractive profit augmentation opportunity accessible for the sustainability of MFI's.

Keywords

Microfinance institutions (MFI'S), Funding, Liquidity Risk, Supply-side economics, Deposits, Withdrawal

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1. Introduction

Microfinance is popular in developing economies like Ghana where most people do not have access to economical sources of financial assistance **Robinson (1998)**. In view of this some Savings and Loans Companies offer financial services to individuals who do not have access to such readily available support **Lidgerwood (1999)**. The targeted group of MFI's in Ghana is the relatively low income entrepreneurs who are usually self-employed such as provisions store operators[1], petty traders, carpenters, seamstresses, hairdressers, artisans, small farmers, commercial drivers and street vendors. The most well-known of these services is financial aids that they often provide to their clients. However, unfortunately many formal financial institutions do not usually offer these financial aids to small informal businesses which are normally run by financially deprived persons. This has led to defaulting of payments given out by the Microfinance Institutions as their clients are mostly unable to pay back. In the light of this, many MFI's in Ghana have winded up as a result of the huge non-performing loans incurred. In a response by **Belnye (2011),** this scenario has led to rampant collapse and reduction of MFI's or Susu[2]companies in recent times.

A study by **Manu (2015)** indicates that Small Medium Enterprises are confronted with several challenges in accessing credit facilities from formal financial institutions. Notable amongst these challenges are bureaucracy and huge volume of paper work, lack of opportunity to take second loan, high risk and uncertainty, high level of interest rate on credit, low level of knowledge about credit sourcing, shorter repayment period, total amount applied for is not realized and difficulty in repayment in the event of business failure. According to **Boateng et al (2016)** the main problem faced by Microfinance Institutions are unduly risky due to unscrupulous and unlawful practices, mismanagement and disregard of due diligence, which when convoluted by external factors like panic withdrawals and other macroeconomic instabilities, push the risk levels of MFI's beyond control.

[1]Provisions store operators is a name for small retail business that stocks a range of everyday items. It is also referred to as convenient or grocery stores.

[2]Susu is a word in the Ghanaian local language which means deposits or savings done in small margins.

2. Problem Statement

The MFI's in Ghana particularly in the Greater Accra region face liquidity challenges at the last quarter[3] of the year. The challenge is such that these MFI's are unable to meet their financial obligations to their clients and would-be clients as disbursement of loans to clients and staff is held on freeze. Unknown to customers some of the Microfinance Institutions rely on other avenues to pay huge withdrawals. As a result of this the Microfinance Institutions that are unable to address the issue are forced out of business, collapsing eventually[4].

This study employs a supply side economics approach[5] and a capital intensive mechanism in resolving the liquidity funding challenges in the Ghanaian MFI's with particular reference to the Greater Accra region of Ghana. The supply-side economics theory as per this study revolves around using policies and strategies that lessens barriers on liquidity thus making funding readily available to clients and would-be clients especially around the first and last quarter of the year. On the other hand, the capital intensive strategies appreciate the role of technology in providing readily available data for sound decision making.

3. Objective of the Study

The objective of the research is to find out the possible reasons for the liquidity challenges faced by Microfinance institutions. It also seeks to devise strategies to manage and overturn those occurrences to help market such institutions in a much more profitable way.

4. Literature Review

According to **Basel Committee on Banking Supervision (2008, 2010)**[6], liquidity risk, or, funding liquidity risk, is the possibility that over a specific horizon a bank or financial institution will be not capable to fund increases in assets as well as meet other obligations as they come due.

[3] MICROCAPITAL BRIEF: Thirty Microfinance Institutions (MFI's) Close in Ghana: http://www.microcapital.org/: The customers, most of whom had huge deposits with those institutions could not get a refund for the owners could either not be traced, or where they were traced, they failed to raise the requisite funds to pay the customers.

[4] http://thebftonline.com/content/bank-ghana-asked-toughen-Microfinance-regulation.

[5] Supply-side economics theory holds that, by lowering taxes on corporations, government can stimulate investment in industry and thereby raise production.

[6] Basel Committee on Banking Supervision (2008, 2010): Principles for Sound Liquidity Risk Management and Supervision, International framework for liquidity risk measurement, standards and monitoring.

Practically almost every fiscal commitment or transaction has inferences for its institution's liquidity. Efficient liquidity risk management guarantees a financial institution's capacity to meet cash flow commitments, which are uncertain as they are affected by internal and external agents. The large-scale financial crisis has revealed significant flaws in the management of the funding liquidity risk in financial institutions, and has prompted a call for fresh liquidity risk regulation. **Landskroner and Paroush (2008)** notes that though varied scholastic and regulatory studies on different forms of risks, such as credit risk, market risk and operation risk have been conducted; comparatively diminutive attention has been given to the of funding liquidity risk. Thus, further systematic enquiry into funding liquidity risk should be of chief importance as liquidity deficits in any financial institution can have systemic consequences.

Liquidity is frequently used in numerous perspectives, for instance an asset's liquidity can be used to describe how easily, quickly and costly it is to change an asset into cash **(Berger & Bouwman, 2008)**. Liquidity could also be used to depict a financial standing by the sum total of cash or near cash assets a firm has; the more liquid assets, the stronger a firm's liquidity. Financial ratios that measure liquidity are referred to as a company's liquidity ratios. One such ratio is the current ratio which determines a company's ability to pay short term debts as they fall due **(Van Ness, 2009).** This inability to pay short term monetary commitments can cause a company to face serious financial problems. So, liquidity risk can also be explained in the context of the counterparty to a transaction. In this sense the term means the risk inbuilt in the fact that the counterparty may not be able to settle the transaction even if they are in good fiscal standing, for the reason being lack of liquidity **(Petria & Petria, 2009)**.

According to **Owojori, Akintoye and Adidu (2011)** the nature of banking business is surrounded by an environment of high risk. The enterprise is usually risky in that, it is the only business where the share of borrowed funds is extremely above the owner's equity.

Risk is a possibility of a loss which could be either financial or reputational. Risks are therefore complex since a single activity can lead to several risks, **Luy (2010)** asserts that risk contain risks. According to BCBS, risks can be categorized into market risk, credit risk and operational risk. However **Crouhy, Galai and Mark (2006)** classifies risk into market risk, liquidity risk, credit risk, legal risk operational risk, strategic risk, business risk and reputation risk.

Liquidity Risk - Liquidity risk refers to the likelihood that over a given duration, the bank will become incapable to settle obligations promptly **Drehmann & Nikolaou (2009)**. This is because financial institutions and for that Microfinance institutions fund their long-standing assets through short term liabilities. In such cases, there is a possibility that such financial institutions may not meet its maturing liabilities or may be able to do so only by raising capital at higher costs or by selling off its assets at very low prices. The liquidity risks are in categorized in different ways:

- **Funding Risk-**This literally refers to failure to raise funds to meet maturing liabilities, mostly as a result of unexpected cash outflows (withdrawals).
- **Time Risk -** Impediment of financial institutions expected cash inflows owing to the increase in non-performing assets.
- **Call Risk -** Crystallization of conditional liabilities which would not aid in undertaking lucrative business prospects when needed.

By way of discovering the importance of liquidity to the proper functioning of the banking sector and financial markets, the Basel Committee introduced a liquidity regulation framework as part of the Basel III accord. This is a significant departure from the Basel I and II accords, which focus on strengthening capital regulation.

In the context of a possible connection between capital and funding liquidity risk, **Diamond and Rajan (2000, 2001)** suggests a relationship model that raises funds from depositors and lends them to entrepreneurs within the financial segment. **Besanko and Kanatas (1993)** however argue that a higher capital requirement may lead to greater outside equity, which is likely to increase the ethical hazard of managers. **Gennotte and Pyle (1991) and Blum (1999)** assert that a higher capital requirement can induce banks or financial institutions to take greater risk. **Bhattacharya and Thakor (1993)**, **Repullo (2004)** and **Coval and Thakor (2005)** speculate that bank capital expands the risk-bearing capacity of banks and allows them to take more liquidity risk.

5. Research Methodology

The study employed mainly qualitative approaches in attaining its objective. The qualitative research method used in this study was In depth interviews (IDI's). Each interview lasted for about thirty (30) minutes after which some omissions and uncertainties were clarified. In order to ensure that responses obtained were relevant to the subject under investigation, senior level managers in six different Greater Accra based

Microfinance institutions operating for the past ten (10) years were chosen for the IDIs. Out of the six, three were chosen from each of the two metropolitan districts[7] in the Greater Accra Region. As per BoG[8] 2016 report, there are about three hundred and eighty five (385) registered and licensed Microfinance institutions in Ghana out of which about two hundred and forty (240) are in Greater Accra. A disproportionate stratified random sampling method was employed in selecting the main respondents as the initial pilot study conducted revealed a disproportionate number of responses from selected financial institutions. Also, a normality test was carried out on the sampled responses to examine whether the distributions of the responses obtained was normal distributions. Further, percentage analysis and cross tabulation analysis was employed in analyzing eighty-four (84) responses from customers belonging to the selected six (6) Microfinance institutions.

6. Data Analysis and Discussion of Results

This section presents and discusses the results of the study.

Table 1: Frequency of making deposits*Period for huge Withdrawals Cross Tabulation

Count							
		Period for huge withdrawals					Total
		January March	April June	July Sept	Oct Dec	All year round	
Frequency of making Deposits	Once a month	1	6	7	5	0	19
	Twice a month	1	3	2	7	1	14
	Thrice a month	3	10	9	15	2	39
	More than thrice a month	0	3	3	5	1	12
Total		5	22	21	32	4	84

[7]The Greater Accra region of Ghana contains sixteen (16) districts made up of two (2) metropolitan districts, seven (7) municipal districts and seven (7) ordinary districts. The metropolitan districts have a minimum population of two hundred and fifty thousand people.
[8]BoG is an abbreviation for Bank of Ghana. BoG is the Central Bank of Ghana.

Table 1 shows a cross tabulation on the statement "**Frequency of making deposits**" and "**Period for huge withdrawals**". It is observed that (15+5=20) respondents representing [$(20/32)$* 100 = 62.5%] of the respondents make huge withdrawals and deposits at least thrice a month; between the months of October and December, correspondingly (10+3=13) respondents representing [$(13/22)$* 100 = 59.09%] make huge withdrawals as well as deposits at least thrice a month; between the months of April and June. This goes further to indicate the probable contribution to the reasons why the institution faces challenges around the last quarter. Also, from the interview discussions with the six senior managers, it came to light that the Microfinance institutions do not conduct periodic risk and trend analysis to ascertain their financial performance and thus it's unable to monitor risk levels to ensure timely review of risks positions and exceptions.

7. Findings

The study reveals that the selected Microfinance institutions are not rigorously dedicated in conducting periodic evaluations on their financial capabilities to meet the obligations and needs of their customers in terms of readily providing loans and other credit instruments. Thus this could be one of the key reasons for the difficulty in tracking liquidity challenges faced by Microfinance institutions in Ghana. The study also reveals that some clients make huge withdrawals in the last quarter of the year. This scenario leads to a relay of funding challenges into the first quarter of the year as the institutions lack the deposits to give out loans [Refer figure 2.0]. Surprisingly; the few customers who make huge withdrawals contribute to the large deposit base of the total deposits in the selected Microfinance institutions as per this study. This situation eventually results in a deposit concentration risk. For instance in an interview with the managers in the various financial institutions, it came to light that, every year the huge depositors who are mainly retailers in general merchandise travel to Asia; particularly to China, to import goods before their Chinese business counterparts go on leave in the month of October. Thus they either withdraw or transfer all the deposits to their suppliers so as to have goods to sell during the Chinese goldenweek[9] break. Similarly

[9]The Chinese golden week break is celebrated every year to venerate the founding of the People's Republic of China; it starts from 1st October to the 8th October officially. However the week usually

another period which creates liquidity challenges is when customers stock up goods for Christmas sales in the month of December. During such times the selected Microfinance institutions rely on soft oans[10]to mobilize funds to settle the financial wants and needs of their clients.

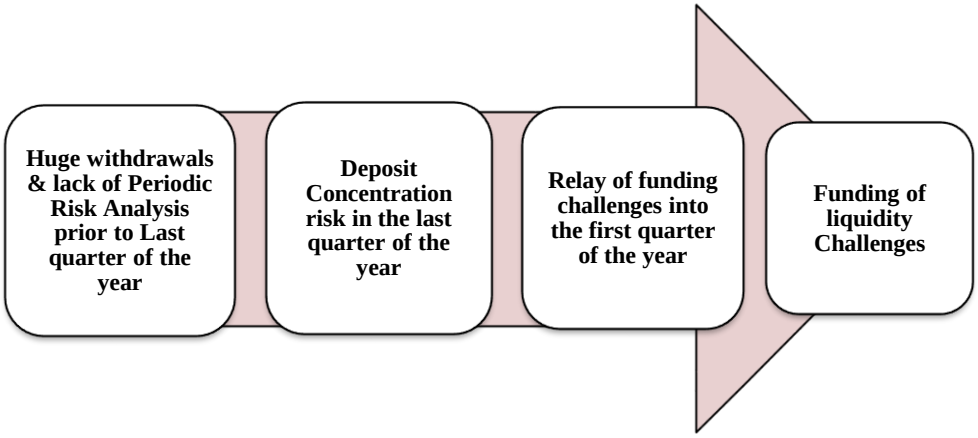

Figure 2.0

Source: Boohene David et al*. [Path showing funding liquidity challenges in last quarter of the year]*

8. Recommendations

The Microfinance institutions can rely on technological application to support the functionality of Human Capital Development (HCD) Practices[11] with regards to risk and trend analysis **Boohene & Maxwell (2017)**. The role of technology can be used to augment the assessment procedure for new and amended products. In other to ensure continuous

spans to over a month as many business owners and workers in China take time off work during the period to make the most of the special events by going on vacations. The effect on this for importers and exporters is that most Chinese suppliers shut down business operations during the period. Again Cargo flights are cancelled where as ports operate with skeleton crews, and carriers reduce their sailings to approximately 40% of average weekly capacity. This implies that little product gets in or out of China during this time.

[10]Soft loan as used in the text is a loan with a below market rate of interest acquired by the Microfinance institutions from bigger financial firms to offset clients financial demands i.e. funding of liquidity risk.

[11]Human Capital Development (HCD) Practices are lasting practices such as training and continuous education designed to improve the competencies and skill set of employees to enable them perform tasks required of them. (See BOOHENE David, et al.; Saudi J. Bus. Manag. Stud.; Vol-2, Iss-7 (Jul, 2017):711-715)

reliable cash flow as ameasure against the liquidity challenge, the Microfinance institutions should seek new business initiatives that can generate lasting revenues. Further, the financial institutions can do a price review on products that are performing extremely well in the market; prices of such products can be increased as increasing the prices of products that customer's value can boost profit. Microfinance institutions in Ghana can enlarge their pricing analytics with detailed customer insights to categorize all the main buying factors that establish how much an existing product will be worth to a customer. Again, viable and innovative products that serve the need of the market can be introduced at strategic times within the year as there are products that are likely to be affected by seasonal or business cycle. For example prior to Christmas the financial institutions can introduce products that will be of interest to their clients. Thus such pricing strategies coupled with a supply-side economics approach of introducing viable and innovative products into the market is likely to be a source of generating revenue.In summary, introducing viable and innovative products, as well as having a selective review of prices of products that are doing well in the market which is underpinned by a technology based led monitoring and periodic liquidity trend analysis may be one of the most attractive profit augmentation opportunities accessible to Microfinance institutions in Ghana. An action plan for implementation is presented in Figure 1.0 to help achieve this feat and deal with liquidity challenges.

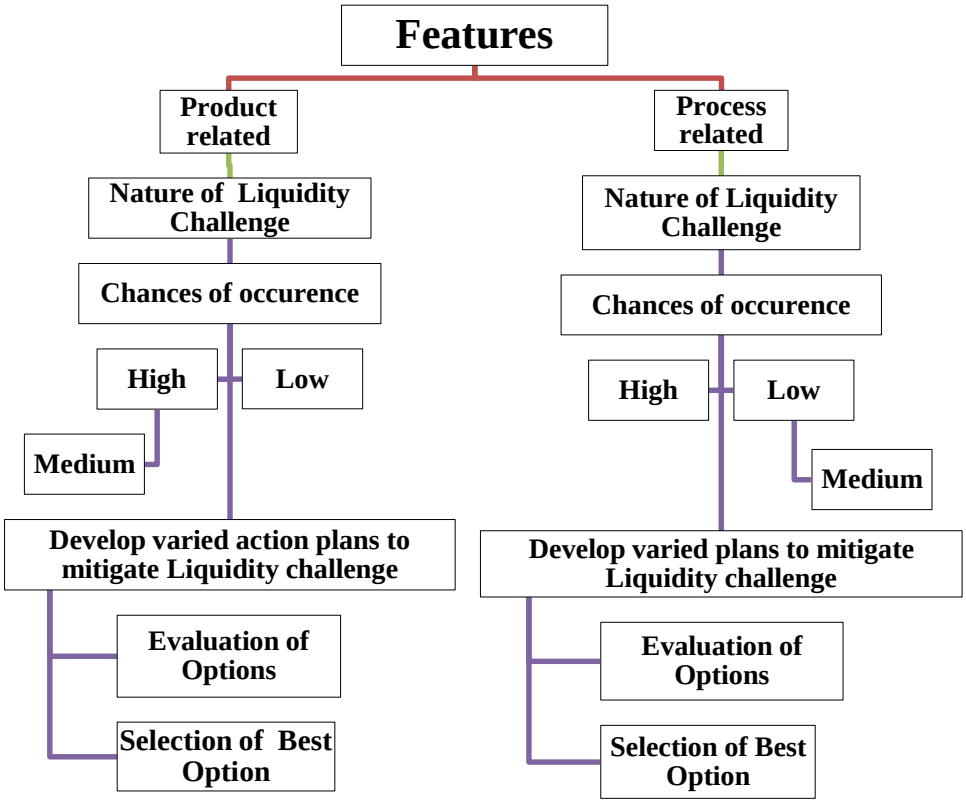

Figure 1.0 Action Implementation Plan

Source: Boohene David et al. *[Implementation action plan model for funding liquidity risk in Ghanaian Microfinance Institutions]*

Figure 1.0 is a suggested model for addressing the liquidity challenges in Ghanaian Microfinance institutions. As seen from above the feature of the liquidity challenges has been grouped into two perspectives, namely; process related and product related. In consequence, when the nature of credit is identified, it can systematically be examined to know whether the chances of risk occurring will be high, medium or low. Once the chances of risk occurrence are known to be high, medium or low, its corresponding option to mitigate the prevailing situation is selected.

9. Conclusion

The study is aimed at understanding the liquidity challenges that Microfinance institutions face in Ghana. The challenge as noted is that Microfinance institutions especially in the Greater Accra region of Ghana are unable to meet their financial obligations and hence the disbursement of loan to customers and staff is congealed particularly within the first and last quarter of the year.

The paper goes further to suggests the introduction of viable and innovative products into the market by the various Microfinance institutions together with a selective review of prices of products that are doing well as a conduit to address the funding of the liquidity lapses in Ghanaian Microfinance institutions. The two processes should however be underpinned by a technological based led monitoring and periodic liquidity trend analysis as it can have an attractive profit augmentation opportunity accessible for the sustainability of Microfinance institutions in Ghana.

10. Limitations

Inferences made with regards to this study are limited to six MFI's in Ghana, precisely within the Greater Accra Region.

References

1. Belnye, F. (2011). *Achieving financial inclusion through appropriate regulatory policy:* The case of Ghana's informal and semiformal financial institutions.
2. Besanko, D., and G. Kanatas (1993). *Credit market equilibrium with bank monitoring and moral hazard.* Review of Financial Studies 6(1): 213-232.
3. Berg, Bruce L. (2007). *Qualitative Research Methods for the Social Sciences*.6th Edition. San Francisco: Pearson Education, Inc.
4. Berger, A. N., & Bouwman, C. H.(2008).*Financial Crises and Bank Liquidity Creation*. Retrieved March 2010, from Social Science Research Network http://ssrn.com/abstract=1231562
5. Bhattacharya, S., and A. V. Thakor (1993). *Contemporary Banking Theory.* Journal of Financial Intermediation 3: 2–50.

6. Block S. B., Hirt G. A., (1992).*Foundations of Financial Management*, Richard D. Irwin Inc.,Boston, Mass.
7. Blum J. (1999). *Do capital adequacy requirements reduce risks in banking?* Journal of Banking and Finance 23: 755-771.
8. Boateng et al., (2016).*Collapsing Microfinance institutions in Ghana:* An Account of how four expanded and imploded in the Ashanti Region. International Journal of African Development, Vol 3. N.2. Spring 2016.
9. BoG (2016).Report on licensed Microfinance companies in operation as at 31st July 2016. https://www.bog.gov.gh/-privatecontent/Banking_Supervision/LICENSED%20MFIs%20IN%20GOOD%20STANDING%20-%2031-7-16.pdf.
10. Boohene D. &Amita M. (2017).*Technological applications and its functionality* on HCD Practices. International Research Journal of Human Resources and Social Sciences. Vol 4, Issue 7
11. BOOHENE David, et al. (2017).*HCD Practices and Its Impact on Sustainable Growth: A Study on Selected Banks in Ghana. Saudi Journal of Business and Management. Studies;* Vol-2, Iss-7 (Jul, 2017):711-715
12. Cooper R. and Thomas R. (1998).Bank Runs: Liquidity Costs and Investment Distortions. Ll
13. Journal of Monterey Economics, Vol. 41, No. 1, pp. 27-38.
14. Coval, J. D., and A. V. Thakor (2005). Financial Intermediation as a Beliefs-Bridge between
15. Optimists and Pessimists. Journal of Financial Economics 75:535-569.
16. Crouhy, M.; Galai, D. & Mark,. (2006). *The Essentials of Risk Management.* McGraw-Hill.USA
17. Diamond, D. W., and R. G. Rajan (2000). *A Theory of Bank Capital. Journal of Finance* 55: 2431–65.
18. Diamond, D. W., and R. G. Rajan (2001). *Liquidity Risk, Liquidity Creation, and Financial Fragility:* Theory of Banking. Journal of Political Economy 109: 287–327

19. Distinguin, I., C. Roulet, and A. Tarazi (2013). *Bank regulatory capital and liquidity: Evidence from US and European publicly traded banks.* Journal of Banking and Finance 37(9): 3295-3317
20. Drehmann, M. and Nikolaou, K. (2009), "Funding liquidity risk: definition and measurement", ECB Working Paper No. 1024, available at: www.ecb.int/pub/pdf/scpwps/ecbwp1024.pdf
21. Gennotte, G., and D. Pyle (1991). Capital controls and bank risk. Journal of Banking and Finance15: 805-824.
22. GHAMFIN. (2014). *Performance monitoring and benchmarking of Microfinance institutions in Ghana: Trends in the Industry during the 2000s* (2006 – 2012).
23. Gitman, L. J. (2009). *Principles of managerial finance* (12thed.). Boston, MA: Pearson Prentice Hall.
24. Gitman, L.A (2005). Principles of Managerial Finance (11th Edition). New York: Addison Wesley Publishers.
25. Hull. J. C (2011). Risk Management and Financial Institutions. Second Edition Dorling Kindersley (India) Pvt. Ltd.
26. Landskroner, Y., and J. Paroush (2008). *Liquidity Risk and Competition in Banking*. NYU Working Paper No. FIN-07-053.
27. Ledgerwood, J., (1999). Microfinance handbook; an institutional and financial perspective. The World Bank, Washington D.C.
28. Luy, D. D. (2010).*Evaluation of Credit Risk Management Policies and Practices in a Vietnamese Joint-Stock Commercial Bank's Transaction Office.* Business Economics and Tourism.
29. Manu, H.B., (2015). *The effect of savings and loans companies on the operations of small and medium enterprises (SME's) in Kumasi Metropolis.* Accessed on September2017; Available at: http://ir.knu-st.edu.gh/bitstream/123456789/8714/1/HARRIET%20BONSO%20 MANU.pdfOwojori, A. A., Akintoye, R. I., and Adidu, A. F. (2011).*The challenge of risk management in Nigerian banks in the post consolidation era.* Journal of Accounting and Taxation, Vol. 13 (2), pp 23-31
30. Pandey I.M (2011). *Financial Management*. Tenth Edition. UBS Publishers PVT limited. Petria, N., & Petria, L. (2009). *Operational*

Risk Management and Base lII. Management and Economics, 96-100.

31. Richards, V. D., & Laughlin, E. J. (1980).*A cash conversion cycle approach to liquidity analysis.* Financial Management, 9(1), 32-38.
32. Repullo, R.. (2004). *Capital requirements, market power, and risk-taking in banking.* Journal of Financial Intermediation 13: 156–182.
33. Robert Mark, Dan Galai and Michel Crouhy (2013).*The Essentials of Risk Management*. Second Edition. ISBN: 9780071818513, Publisher: McGraw-Hill
34. Robinson, M. (1998).*The Paradigm Shift From credit Delivery to Sustainable Financial Intermediation,* In Mwangi S Kimenyi, Robert C Wieland and J D Von Pischke (eds), 1998,
35. Strategic Issues in Microfinance. Ashgate Publishing: Aldershot Sartoris, W. L., Hill, N. C., &Kallberg, J. G. (1983).*A Generalized Cash Flow Approach to Short-Term Financial Decisions/Discussion.* The Journal of Finance, 38(2), 349-360.
36. Smith K. (1980). *Profitability versus Liquidity Trade-offs in Working Capital Management, in Readings on the Management of Working Capital.* New York: St. Paul, West Publishing Company.