

# Risk Management in Rural and Community Banks: The Ghanaian Experience

Justice Ray Achoanya Ayam Catholic University College of Ghana, Ghana E-mail: ajrayam@yahoo.com

Gabriel S. Ahinful Kwame Nkrumah University of Science & Technology, Ghana E-mail: gabrielahinful@yahoo.com

Received: March 18, 2015	Accepted: March 30, 2015	Published: April 15, 2015
doi:10.5296/csbm.v2i1.7263	URL: http://dx.doi.org/1	0.5296/csbm.v2i1.7263

#### Abstract

Despite the significance of effective risk management practices in deepening prudent financial management in Ghana's Rural and Community Banks (RCBs) there appear to be a paucity of empirical studies highlighting the various kinds of risks faced by RCBs. Such studies will enhance RCBs understanding of the extent to which Ghana's RCBs operations are affected by ineffective risk management practices. The purpose of this paper therefore is to examine the extent to which Ghanaian Rural and Community Banks deploy risk management practices in addressing the types of risk affecting their operations using data through a survey involving respondents from Rural and Community Banks and Bank of Ghana/ARB Apex bank. The study uses primary data collected through survey questionnaire from respondents sampled from the RCBs and the Bank of Ghana/ARB/Apex Bank. The research also uses secondary data collected from the ARB/Apex Bank quarterly reports on Rural and Community Banks operations in Ghana. Our empirical findings indicate that credit risk, liquidity risk, operational risk and legal /regulatory risk are the major forms of risk affecting rural and community banks in Ghana. The paper recommends the enforcement of risk management regulations by the ARB Apex Bank and the Bank of Ghana. On the other hand, Rural and community banks should create risk management department and recruit qualified and experience personnel to ensure effective and efficient risk management practices. The research focused on Rural and Community Banks in Ghana and as such the results may not necessarily represent RCBs in other countries.



**Keywords:** Rural and community banks, Risk management, Liquidity risk, Ghana, Bank of Ghana, ARB Apex Bank of Ghana, Credit risk, Operational risk



### 1. Introduction

Undoubtedly, risk management has become the cornerstone of prudent banking practices across the globe. Banks in present day volatile environment faces greater risk exposures in the areas of credit, liquidity, foreign exchange, market and interest rate among others. These risks have different levels of impact on the performance of banks. Chijoriga (1997) argued that the magnitude and the level of loss resulting from credit risk is the major cause of bank failures. As a result, banks need to estimate the size of the potential loss in other to stay within the acceptable limits prescribed by the central banks. Banks are most likely to face difficulties when there is a slight deterioration in the quality of loan portfolios. In view of the volatility, bank managers require reliable risk measures so as to direct capital to business activities with an acceptable risk/reward ratio. In response to this, banks across the globe are embarking upon an upgrading of their risk management and control systems. Efficient risk management is therefore absolutely required in other to maximise profits and offer the best value to shareholders.

Arguably, since, 1976 rural and community banks (RCBs) in Ghana despite their success story have continued to face a number of challenges such as: competition from commercial and foreign banks, changing regulatory environment, ineffective risk management practices amongst others. This has resulted in the folding up of 23 RCBs, since the inception of RCB in Ghana (Jha et al., 2003). Among the challenges facing RCBs in Ghana, risk management has consistently emerged as one of the major challenge of these banks. These banks continue to face daunting difficulties in evaluating the various kinds of risk such as credit, operational, liquidity, market or systemic risk. Carey (2001) argues that RCBs have over the years failed to institute pragmatic risk management frameworks to minimise these inherent risk factors. He further typifies the importance of risk management in financial institutions in other to maintain financial soundness. The purpose of this paper is to examine the extent to which RCBs in Ghana have employed risk management practices in managing their different types of risks affecting their operations. The paper also addressed the effectiveness of risk management practices employed by RCBs in Ghana. Due to the paucity of literature on how RCBs in Ghana manage risk, this paper therefore contribute to both theoretical and empirical literature on the extent to which RCB in Ghana manage the various forms of risk.

The rest of the paper is divided into four sections; the next section examines the literature on risk management and the various forms of risk management. The second section describes the methodology employed. Third section presents the results and the discussion of the results and followed by the main findings. The paper ends with the discussions of practical implications for management and practice, recommendations for further research and limitations.

#### 2. Literature Review

Pyle (1997) in his paper delivered at the risk management and regulation in banking conference in Jerusalem defined risk management as "the process by which managers satisfy their needs by identifying key risks, obtaining consistent, understandable, operational risk measures, choosing which risk to reduce and which to increase and by what means, and



establishing procedures to monitor the resulting risk position". Similarly, Al-Tammie et al. (2007) examined risk management between United Arab Emirate (UAE) banks and foreign banks. The results revealed the following: The three most important types of risk facing the UAE Commercial banks are foreign exchange risk, Credit risk and operating risk. Interestingly, the four most important risk identification methods by UAE banks were: inspection by the bank risk managers, audit or physical inspection, financial statement analysis and risk survey, and UAE banks were somewhat efficient in assessing and analysing risk, risk management practices, risk monitoring and risk identification. He further argued that the effectiveness of risk management is dependent on factors such as the economic conditions, the competition and the regulatory environment. On the one hand, Oldfield and Santomero (1997) examined risk management in financial institutions. Their findings suggested the following four techniques of risk management: the establishment of standards and reports; the institution of position limits and rules such as counterparty exposures, credit limits and position concentration; the establishment of investment guidelines and strategies, and finally, the creation of performance-based compensation contracts.

In addition, Dedman and Robert-Tissot (2001) also enumerated the following seven systemic approaches to risk management: Reviewing losses and claims experience both within the bank and within other banks conducting similar business, Reviewing the manner in which instruction are handled, Consider how procedures may be improve in order to reduce risk, Operate, where possible, a system of dual control, Consider which staff should bear responsibility and for what, and how that responsibility will be managed, Consider the adoption of standard letters to client covering important areas, and When drafting letters of engagement consider specifying the purpose of the advice so that liability for losses falling outside the parties purpose can effectively be excluded. The most important benefit of managing financial risk as opined by Michael (2008) is safeguarding the firms' ability to run its own business and enhance its objectives. Effective risk policy encourages loyalty from equity investors, creditors, managers, works, suppliers and customers that can generate many other benefits, including: the enhancement of the firms' reputation; a reduction in earnings volatility; a reduction in average tax liabilities from greater earnings stability; the protection of cash flow; a possible reduction in capital cost; an improvement in supply chain management and a more stable customer base, and a stronger position from which to deal with mergers and acquisitions.

According to Zaher (2006), the general purpose of the 1988 Basel I Capital Accord was to: Strengthen the stability of international banking system, and Set up a fair and a consistent international banking system in order to decrease competitive inequality among international banks. Despite its success in defining banks' capital and the banks' capital ratio, Zaher (2006) criticized the Basel I Capital Accord on the basis of limited differentiation of credit risk, static measure of default risk, no recognition of term structure of credit risk, simplified calculation of potential future counterparty risk, and lack of recognition of portfolio diversification effects. In a similar vein, Koszner (2008) opined in a speech delivered at the Federal Reserve Bank of Boston AMA conference that, Basel I have become outdated for large international banks, hence the introduction of Basel II to bridge the gap. He emphasised



that not only did Basel II establish more risk sensitive and meaningful regulatory capital requirements, but also encourage ongoing improvements in banks risk management practices. Risk identification as Tchankova (2002) rightly stated is the first stage of risk management which eventually develops the next steps—analysis and control of risk management. Accurate and appropriate risk identification will usually lead to effective risk management. Greene and Trieschmann (1984) pointed out that risk managers should adequately identify all possible losses or gains that challenge their institutions in order for risk to become manageable. By engaging in risk identification the institution will be able to study business activities and places to determine where the institutions resources are exposed to risks (Williams et al., 1998). Tchankova (2002) identified sources of risk; hazards factors; perils; and exposure to risk as elements of risk identification.

Risk assessment identifies and considers internal factors such as the nature of the bank's business activities the quality of personnel, organisational changes and employee turnover, as well as external factors such as fluctuating economic conditions, changes in industry and technological advances that adversely affect the achievement of banks objectives. Morgan (1992) recommended the following approaches to risk analysis; appreciate that there can be no return without risk, understand and be transparent about risk, avoid risks that you cannot or do not understand, gain experience; new model will never substitute for an experienced risk manager, always know what the assumptions are and continuously question them, encourage a culture where risks are aired openly; communication is vital diversify risks, avoid concentration, be consistent and rigorous, showing discipline in your risk methodology, use common sense; do not spend infinite time striving for perfection, and get a "risk grade" assess the true returns of your business by accurately increasing all the risks associated with them.

On the one hand, Institute of Risk Management (IRM) (2002) highlighted that effective risk management requires a reporting and review structure to ensure that risks are effectively identified and assessed and that appropriate controls and responses are in place. Regular audits of policy and standards compliance should be carried out and standards performance reviewed to identify opportunities for improvement. IRM further stress that the monitoring and control process should provide assurance that there existed appropriate controls in the organisation's Business activities and should determine whether: the measures adopted resulted in what was intended, the procedures adopted and information gathered for undertaking the assessment was appropriate; Improved knowledge would have helped to reach better decisions and identify what lessons could be learned from future assessments and management of risks. Krishnan et al. (2005) arguably said the benefits of risk monitoring are realised if investors accurately understand changes in an institutions risk condition and incorporate their assessment into the prices of risky debts.

Michael (2008) categorised the different types of risk into market, credit and financial or liquidity risk. Gai et al. (2007) defined market risk as the risk over and above those natural priced and managed by financial intermediaries themselves. Santomero (1997) observed two forms of market risk which may affect banks as: variation in the general level of interest rates, and The relative value of currencies. The literature has dealt extensively with the different



types of risk banks may face in the process of providing financial services. The following are a brief overview of some of the types of risk that affect financial institutions; Credit risk, Market risk, Liquidity or Financial risk, Operational risk, and Legal risk. Eccles et al. (2001) argued that current lending practices in credit risk management have made considerable progress. They stressed that measures of credit risk now take account of the riskiness rather than just the size of the asset. In recent times, the proliferation of financial contracts that entail counter-party default risk such as swaps, back-to-back loans, and derivatives have shifted the attention on ways to deal with credit risk in marketplaces (Louberge` & Schlesinger, 2005). As DeBandt and Hartmann (2000) rightly stated, credit risk entails an important systematic components and it has conceptually much in common with other types of risk where an accumulation of losses may also arise as a consequence of market-wide phenomena.

A study by AL-Tamimi (2002) revealed that UAE Commercial banks were mainly facing credit risk. The results also showed that inspection by branch managers and financial analysts were the main methods used in risk identification by UAE banks. Khambata and Bagdi (2003) revealed that financial derivatives were heavily used by the top four Japanese banks and that loan commitments were the largest sources of credit risk. A review of Basel II by Leeladhar (2007) indicated that even though Basel II had a wider scope, it still underscored the significance of credit risk in banks operations. He emphasised in his review that several banking crises in many countries had their roots in lax credit standards, poor portfolio risk management, and the inability or failure to evaluate the impact of changing economic environment on credit worthiness of banks borrowers.

*Market Risk:* financial institutions may face market risk due to unexpected movement in interest which arises mainly as a result of positions in fixed income securities taken by traders (Fooladi et al., 2000). This was further supported by Pyle (1997), who described market risk as the change in net asset due to changes in underlying economic factors such as interest rates, exchange rates, and equity and commodity prices. According to Abor (2005) "foreign exchange risk is the risk that an entity will be required to pay more or less than expected as a result of fluctuations in the exchange rate between its currency and the foreign currency in which payment must be made". Some of the tools banks deploy to determine the level of acceptable risk as rightly enumerated by Michael (2008) include: natural hedging where different risk exposures may offset each other, forwards—contracts made today for the delivery of an asset at a specified date at an agreed price, securitisation—the conversion of financial or physical assets into tradable financial institution, options—contracts giving the holder the right, but not the obligation, to buy or sell an underlying asset at an agreed price in the future, and

*Finance/Liquidity Risk:* liquidity risk is the current and prospective risk to earnings or capital arising from bank's inability to meet its obligations when they come due without incurring unacceptable losses. This may include the inability to manage unplanned decreases or changes in funding sources or failure to recognise or address changes in market conditions that affect the ability to liquidate assets quickly and with minimal loss in value. Liquidity management derives its rationale from the institutions concern for refinancing, a position



stated in various contexts by Thakor et al. (1981) and Scharfstein and Stein (1993). Managing liquidity risk which was not high on the regulatory or banking agenda before the crisis may well become the fore in the wake of the global credit crunch McDowall (2008).

**Operational Risk:** operational risk is defined by the Revised Framework of the International Convergence of Capital Measurement and Capital Standards as the "risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. This definition includes legal risk, but excludes strategic and reputational risk". Thirwell (2002) argued that banks do not understand operational risk and that regulators should refrain from trying to change the management practices of banks and instead encourage them to understand risk management. The British Bankers Association (BBA) said the lack of a standard definition for operational risk is the most obvious example of the lack of standardisation between banks. According to Mainelli (2002) Basel II has not been specific about how operational risk will be calculated. He stated that the Accord only indicates that operational risk will on average, come to about 20 percent of the overall capital charge and consequently suggested the following three methods for calculating operational risk; Basic Indicator approach, Standardised approach, and Internal Measurement approach.

Legal Risk: legal Risk is the risk in which an institution is exposed to legal actions (Padmanabhan, 2007). New Status, tax legislation, court opinions and regulations can put formerly well-established transactions into contention even when all parties have performed exposed to a number of legal risks such as; product liability risk, employee liability risk, tax liability risk, and environmental risk. Thompson (1998) stated that banks are placing considerable emphasis on environmental risk management in their corporate lending operations. Violations of regulations or laws can lead to significant losses to banks. Financial turbulence experienced by banks in recent times has revealed some weaknesses in existing risk management techniques. A research conducted by Ross (2000) mentioned how banks have begun implementing additional risk management techniques due to failures of the existing models to prevent certain financial risk losses. The conclusion of this survey indicated that even though the awareness level by banks of the key elements of strong financial risk management was acceptable, there were still fairly wide discrepancies in the level of implementation. Honohan (2008) concluded in a study of risk management and the costs of the banking crisis that the structured financial crisis that has hit banking institutions in recent times is working itself out against a background of macroeconomic imbalances and the reversal of overly—optimistic risk pricing. Haag (2009) argued that the short and medium term impact of the financial crisis on developing countries will be a slowdown of growth. He further stated that the extent of the slowdown will depend on how deep the recession in the rich countries will be and how quick financial markets can return to normal operation. Tlelima (2009) categorically mentioned the following sectors of Africa's economies that may be affected by the credit crunch as: the financial sector, the Export and Import industry, the Tourism industry, and Workers' Remittances.



# 3. Methodology

This study employed a quantitative study designs through a survey strategy. Data collection was through survey questionnaire involving two groups of respondents namely: respondents from RCBs and Bank of Ghana/ARB Apex bank. Out of a total of 126 RCB, 47 RCBSs were involved in the study representing 37.3% of the total sample population. The data on RCBs were obtained from the Bank of Ghana and The ARB/Apex bank first quarter (2008) report on rural banks in Ghana (Note 1). The RCBs respondents were selected from 47 out of the 126 rural and community banks using stratified sampling technique. The data collection process was in two stages which involve 25 respondents selected from 63 examiners and monitoring officers of the Bank of Ghana and ARB/Apex bank. The first questionnaire consisted of 35 questions based on a 5 point Likert scale. The first phase of the data collection consisted of 141 questionnaire administered by the researcher. The questionnaire centred on risk management practices in the 47 selected rural and community banks. This approach enabled the researcher to list carefully structured questions chosen after considerably testing, with a view to eliciting reliable responses from the chosen sample (Collis & Hussey 2003). The respondents of the first questionnaire consisted of: (a) managers who are largely responsible for initiating and exercising risk management practice in their rural banks, (b) the credit or project officers who are basically in charge of the credit management functions in their banks and (c) The internal auditors responsible for risk monitoring and control.

The second phase of the data collection process consisted of the following respondents: (a) 22 inspectors or examiners randomly selected from the bank of Ghana's examination division and (b) 3 monitoring officers of the ARB/APEX bank's monitoring unit. In all, 142 respondents were involved in the study. In addition, the secondary data source included an examination of the ARB/APEX banks quarterly performance reports for the past one year on the rural and community banks in Ghana, the financial statements of some of the rural and community banks. These data were readily available at the rural and community banks and access was not a hindrance. All data were analysed by thematic structure as set by the literature and the research questions.

#### 4. Results and Findings

The results from the respondents of the RCBs showed some level of risk management activities. The RCBs also indicated their commitment in integrating risk management into their core business functions. Most of the respondents in these categories gave a positive indication that risk management existing in their banks is inefficient and ineffective in achieving their set objectives. Respondents of RCB were generally of the opinion that their banks are fairly identifying risk, analysing and monitoring risk as depicted in the survey outcome in table 1 below.



### Table 1. Results of RCBs survey respondents

Description	N		Mean	Median	Mode	Std. Deviation
	Valid	Missing				201141011
Understanding Risk and Risk Management	101	1	3.85	4.00	3.67	0.85
Identification of Risk	101	1	3.05	3.00	3.33	1.09
Risk Analysis and Assessment	81	1	3.25	2.80	2.80	0.79
Risk Monitoring and Review	102	0	3.66	4.00	4.00	0.78
Risk Management practices	101	1	3.40	3.14	3.14	0.95

Even though, they believe staffs of RCBs understand risk and risk management practices, the regulatory institutions—Bank of Ghana and ARB Apex banks—viewed the risk management

Function in rural and community banks as highly insufficient and ineffective. Table 2 below shows the survey results of respondents from the Bank of Ghana and ARB Apex bank.

Description	N		Mean	Median	Mode	Std. Deviation
Description	Valid	Missing				
Understanding Risk and Risk Management	19	-	2.59	3.00	3.00	0.58
Identification of Risk	19	-	2.67	2.67	2.67	0.48
Risk Analysis and Assessment	19	-	2.16	2.00	2.00	0.42
Risk Monitoring and Review	19	-	2.13	2.00	2.00	0.75
Risk Management practices	19	-	2.68	2.71	2.57	0.78

#### Table 2. Results of BOG and ARB Apex Bank survey respondents

In relation to RCBs risk analysis, monitoring and control systems the two groups of respondents' views were contradictory. The responses of the RCBs staffs indicated a certain level of risk analysis, monitoring and control effectiveness within the RCBs. On the contrary, the Bank of Ghana and ARB Apex banks respondents' opined that they were clear absent of effective risk analysis, monitoring and control mechanism in the RCBs. Such disparities in the responses from the two groups of respondents clearly showed that RCBs do not have in place an efficient risk analysis, monitoring and control systems as revealed by the regulators.

The survey results in table 3 shows that the two groups of respondents clearly identified four key types of risks facing RCBs in Ghana as: credit risk, operating risk, liquidity risk and legal/regulatory risk. Responses of the two groups of respondents also pointed out that the main risk identification methods used by RCBs is audit and physical inspection and inspection by Bank of Ghana and others.



Table 3. Types of affecting RCBs

TYPES OF RISK	RCBs Results (%)	BOG and ARB Apex Bank Results (%)
INTEREST RATE RISK	15.79	5.26
CREDIT RISK	100.00	47.37
OPERATING RISK	100.00	100.00
LIQUIDITY RISK	100.00	100.00
LEGAL RISK	100.00	100.00
TOTAL	415.79	252.63

In addition, the analysis of the results revealed that RCBs understanding of risk and risk management were inadequate. Conversely, both RCBs and the regulators held a strong view that managing risk was important to the performance and the overall success of RCBs operations in Ghana. The results in table 4 below revealed that there was significant difference in opinions of respondents of both groups—RCBs and BOG/Apex bank—whiles RCBs said they effectively identified risk affecting their operations using appropriate methods; the regulators said RCBs face substantive difficulties in identifying risk affecting their operations. Interestingly, both groups of respondents classify two main risk identification methods mostly used by RCBs in risk identification. These include: audit and physical inspection and inspection by Bank of Ghana/ARB Apex bank.

RISK IDENTIFICATION METHODS	RCBs Results (%)	BOG and ARB Apex Bank Results (%)
INSPECTION BY BANK RISK MANAGER	5.26	5.26
FINANCIAL STATEMENT ANALYSIS	47.37	47.37
AUDIT & PHYSICAL INSPECTION	100.00	100.00
INSPECTION BY BANK OF GHANA & OTHERS	100.00	100.00
TOTAL	252.63	252.63

Table 4. RCBs Risk Identification Methods

#### 5. Conclusions, Implications and Recommendations

The following conclusions can be drawn based on the findings of the paper: Ghanaian RCBs do not have sufficient understanding of risk and risk management, the RCBs face some difficulties in identifying the potential risk affecting the operations using appropriate risk identification methods, the Rural and Community banks do not have in place effective and efficient risk analysis, monitoring and control mechanism, the general conclusion is that risk management practices existing in Ghanaian RCBs are ineffective.

# Macrothink Institute™

Based on the findings from this paper, some recommendations can be suggested. Clearly, the analysis revealed a considerable level of weaknesses in risk management in the RCBs of Ghana. This should certainly be a cause for concern to the regulators—Bank of Ghana and ARB Apex bank—including the Government of Ghana and the District/Municipal Assemblies, the shareholders and stakeholders of these RCBs.First, the Bank of Ghana may want to enforce its regulatory function by ensuring that findings and recommendations related to risk management in their periodic RCBs examination reports are adhered to and implemented on time. The ARB/Apex bank monitoring and evaluation unit should be strengthened to enable them compliment the efforts of the inspectorate division of the Bank of Ghana. Another recommendation would be for the regulatory bodies to ensure that all RCBs develop and implement pragmatic risk management policy guidelines that can be understood and used by RCBs staff. More strikingly, most RCBs do not have these policy documents to guide them in their risk management roles. In addition, most RCBs in Ghana do not have risk departments/units, hence, their ineffectiveness in managing risk.

It is also important to note that the function should be decoupled from the Micro Finance units of the RCBs in other to effectively evaluate, analyse and control the potential risk affecting RCBs. Finally, intensive staff training and computerizing the operations of RCBs would enhance risk management. The study showed that staff of RCBs lack the requisite knowledge and skill in bank risk management. Accordingly, regular training in risk management would assist in upgrading the skills level of RCB staff. Furthermore, the Bank of Ghana and ARB Apex bank recent initiative to computerized and network all RCBs in the country is in the right direction as computerizing the RCBs will lead to greater efficiency and better risk management.

On the one hand, the Government of Ghana and the District/Municipal Assemblies may also want to incorporate into its guidelines for releasing funds to RCBs for on lending, a system of verifying and satisfying itself that the RCBs risk management functions are effective. Shareholders and stakeholders at large must ensure that RCBs recruit staff with the requisite expertise of managing bank risk. It is important that Board of Directors recruit the competence and skills levels needed to develop the right policies needed to improve on the risk management function. It has been observed in the study that most Board of Directors of RCBs often fall short of the competence level expected from them as the apex decision makers. A policy direction that incorporates the recommendations above will certainly lead to a significant improvement of the risk management function of RCBs in Ghana.

# 6. Limitations

The research focused on Rural and Community banks in Ghana and as such the results may not necessarily represent what pertains in other countries. The research did not perform an independent evaluation of risk management practices of the sampled Rural and Community banks. However, in other to validate the findings of the research, five RCBs examinations reports periodically released by the Bank of Ghana were examined, in addition to analysing some published financial statements of the RCBs. The research was generally based on survey response and face-to-face interviews from selected employees of the sampled banks.



The research could not address in detail RCBs credit risk management. Therefore, future research may examine credit risk as it is one of the most important types of risk affecting Ghanaian RCBs. A second area for future study would be to analyse liquidity risk management in the RCBs. Liquidity risk affect most banks including Ghanaian RCBs. A weak liquidity position can lead to the liquidation of a Rural or community bank. Another area that may be considered for future research may be a comparative analysis of risk management practices between Ghanaian commercial Banks and the RCBs. This could be useful in determining the level of risk management effectiveness of these banks in Ghana. A future study to determine the extent to which the Basel Accord impact on risk management of Ghanaian RCBs could reveal some relevant findings that will be useful for policy formulation. Finally, further research could be an independent examination of the risk management function of RCBs in Ghana to substantiate most of the findings of the Bank of Ghana periodic examination reports.

#### References

Abor, J. (2005). Managing foreign exchange risk among Ghanaian firms. *Journal of Risk Finance*, 6(4), 306-318. http://dx.doi.org/10.1108/15265940510613642

Al-Tamimi, H. (2002). Risk management practices: empirical analysis of the UAE Commercial banks. *Finance India*, *16*(3), 1045-1057.

Al-Tamimi, H. A. H., & Al-Mazrooei, F. M. (2007). Banks risk management: a comparison study of UAE national and foreign banks. *Journal of Risk Finance*, 8(4), 394-409. http://dx.doi.org/10.1108/15265940710777333

Basel Committee on Banking Supervision. (2004). *Basel II: International of capital measurement and capital standards—A revised framework*. Basel Committee Publications, No. 107. The Bank forInternational Settlements, Basel.

Carey, A. (2001). Effective risk management in financial institutions: the turnbull approach. *Balance Sheet*, *9*, 24-27. http://dx.doi.org/10.1108/09657960110696014

Chijoriga, M. M. (1997). Application of credit scoring and financial distress prediction models to commercial banks' lending: the case of Tanzania. PhD dissertation, wirtschaftsnnversitatwien, (WU), Vienna.

Collis, V., & Hussey, R. (2003). Business Research, A practical guide for undergraduates and postgraduates students, Palgraw Macmillan.

DeBandt, O., & Hartmann, P. (2000). Systemic risk: a survey working paper. European central bank, Frankfurt.

Dedman, R., & Tissot, R. S. (2001). Risk Management: Where banks fail. *Balance Sheet*, 9(2), 16-19. http://dx.doi.org/10.1108/09657960110695628

Eccles, R., Herz, R., Keegan, M., & Philips, M. (2001). The Risk of Risk. *Balance Sheet*, *9*(2), 28-32. http://dx.doi.org/10.1108/09657960110696069

# Macrothink Institute™

Fooladi, I. J., & Mackay, D. C. (2000). Risk management with duration analysis. *Managerial Finance*, *26*(3). http://dx.doi.org/10.1108/03074350010766558

Gai, P., Jenkinson, N., & Kapadia, S. (2007). Systemic risk in modern financial system: analytical and policy design. *Journal of Risk Management*, 8(2), 156-165. http://dx.doi.org/10.1108/15265940710732387

Greene, M. R., & Trieschmann, J. S. (1984). *Risk and Insurance*. Cincinati, OH: South-western publishing Co.

Haag, D. (2009). The financial crisis and the developing countries. Institute of Social studies.

Honohan, P. (2008). Risk Management and the costs of the Banking crisis. *National Institute Economic Review*, 206, 15-24. http://dx.doi.org/10.1177/0027950108099839

Institute of Risk Management. (2002). A Risk Management Standard (p. 5).

Jha, A., Negi, N., & Warriar, R. (2003). Ghana: Microfinance Investment Environment Profile. Retrieved from http://www.BOG.gov.gh/rpapers/rfdoc.htm

Khambata, D., & Bagdi, R. R. (2003). Off-balance sheet credit risk of the top 20 Japanese banks. *Journal of International Banking Regulation*, 5(1), 57-71. http://dx.doi.org/10.1057/palgrave.jbr.2340157

Krishnan, G. N. V., Ritchen, P. H., & Thomson, J. B. (2005). Monitoring and Controlling Bank Risk: Does Risky Debt Help? *The Journal of Finance*, *9*(1), 343-377. http://dx.doi.org/10.1111/j.1540-6261.2005.00732.x

Kroszner, R. S. (2008). *Risk management and Basel II*. Speech delivered at the Federal Reserve Bank of Boston AMA conference, MA.

Leeladhar, V. (2007). *Basic 11 and credit risk management*. Centre for Advance financial learning, BIS Review 108/2002.

Louberge, H., & Schlesinger, H. (2005). Coping with Credit risk. *Journal of Risk Finance*, *6*(2), 118-134. http://dx.doi.org/10.1108/15265940510585798

Michael, A. (2008). Financial Risk Management. Financial Management, pp. 46-47.

Morgan, J. P. (1992). The Cadbury Committee on the financial aspects of corporate governance. Retrieved from http://www.riskmetrics.com

Oldfield, G., & Santomero, A. (1997). The place of Risk Management in Financial Institutions. *Sloan Management Review*.

Padmanabhan, T. K. A. (2008). Corporate legal Risk-Management and Mitigation. Retrieved from http://www.icsi.edu/cs

Pyle, D. H. (1997). *Bank Risk Manage: theory*. Working paper RPF-272 Issued by Research program.



Santomero, A. M. (1997). *Commercial Bank Risk Management: An analysis of the process*. Working paper issued by Wharton financial Institution centre, University of Pennsylvania.

Saunders, M., Lewis, P., & Thornhill, A. (2003). *Research Methods for Business Students*. Pearson Education.

Scharfstein, F. K. D., & Stein, J. (1993). Risk management: Coordinating corporation investment and finance policies. *Journal of Finance, 48*, 1629-1658. http://dx.doi.org/10.1111/j.1540-6261.1993.tb05123.x

Selltiz, C., Wrightsman, L. S., & Cook, W. (1976). *Research Methods in Social Relations*. New York, NY: Holt Rinehart and Winston.

Tchankova, L. (2002). Risk Identification—basic stages in risk management. *Environmental Management and Health*, *13*(3), 290-297. http://dx.doi.org/10.1108/09566160210431088

Thakor, A., Hong, H., & Greenbaum, S. (1981). Bank Loan Commitment and Interest Rate Volatility. *Journal of Banking and Finance*, 5, 497-510. http://dx.doi.org/10.1016/S0378-4266(81)80004-0

Thirwell, J. (2002). Operational risk: the banks and the regulators struggle. *Balance Sheet*, *10*(2), 28-31. http://dx.doi.org/10.1108/09657960210697652

Thompson, P. (1998). Bank Lending and the Environment: policies and opportunities. *International Journal of Bank Marketing*, *16*(6), 243-252. http://dx.doi.org/10.1108/02652329810241384

Tlelima, T. (2009). US Credit Crunch impact on Africa's economies. Retrieved from http://international-financial-affairs.suite101.com

William, C. A., Smith, M. I., & Young, P. C. (1998). *Risk management and Insurance*. Irwin Mcgraw Hill.

Zaher, F. (2006). Does the Basel Accord strengthen Banks? Investopedia. Retrieved from http://www.investopedia.com/artcles/07/BaselCapitalAccord.asp

#### Note

*Note 1.* 1st Quarter ARB/APEX bank (2008) Report on the performance of Rural and Community Banks, Efficiency monitoring Unit, ARB/APEX Bank Ltd.

#### **Copyright Disclaimer**

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (http://creativecommons.org/licenses/by/3.0/).