

Aspects of Risk Management in Banking Sector of Bangladesh

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Abstract: The purpose of this paper is to identify the risks faced by banking sector and the process of risk management of different banks in Bangladesh. This paper also examined the different techniques adopted by banking industry for risk management. In the use of Bangladesh Bank guidelines for managing risks, it is revealed that asset liability management, investment risk management and foreign exchange risk management are much significant to the bankers. In order to make the risk management effective in the selected commercial banks operating in Bangladesh, the major types of risks, e.g., credit risk, market risk, operational risk, interest rate risk, foreign exchange risk, equity risk, liquidity risk, money laundering risk, information technology risk, marketing risk and human resource risk need to be emphasized by the concerned bank authority. This paper reviews the different literature on risk management of banking sector of Bangladesh. Banks in Bangladesh are found to have a clear understanding of risk and risk management, and have efficient risk identification, risk assessment analysis, risk monitoring, credit risk analysis and risk management practices. The paper discusses the current status of risk and risk management employed in the banking sector of Bangladesh. It identifies the tools and methods used in managing credit risk, market risk, liquidity risk and operational risk by different banks.

Keywords: Risk, Risk Management, Techniques, Banking Sector, Bangladesh.

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I. Introduction

Banking system plays very important role in the economic life of the nation. The health of the economy is closely related to the soundness of its banking system. Moreover, risk management serves as means of checking if decisions taken regarding risk are in accordance with the business strategy and objectives. Risk management in banking designates the entire set of risk management processes and models upon which, risk-based policies and practices are determined. Risk management is a continuous process that depends directly on changes in the internal and external environment of banks. These changes in the environment require continuous attention for identification of risk and risk control. Risk Management refers to the exercise or practice of forecasting the potential risks thus analyzing and evaluating those risks and taking some corrective measures to reduce or minimize those risks. Till now we have seen how risk management works and how much it is important to curb or reduce the risk. As risk is inherent particularly in financial institutions and banking organizations and even in general, so this article will deal with how Risk Management is important for banking institutions. Till date banking sectors have been working in regulated environment and were not much exposed to the risks but due to the increase of severe competition banks have been exposed to various types of risks such as financial risks and non-financial risks. Risk is a natural element of business and community life. Risk is a condition that raises the chance of losses/gains and the uncertain potential events which could manipulate the success of financial institutions. A well established risk management practices can assist banks to reduce their exposure to risks. (Khalid & Amjad, 2012).

Risk management is one of the core banking activities in all kinds of financial institution which involves basically two types of risk existing in the market, the systematic risk and unsystematic risk. Systematic risk refers to the risk that is positive correlated with market and the can be minimized by using different risk management practice. On the other hand the unsystematic risk is associated with the value of the asset. Unsystematic risk cannot explain by general market moments and can be avoidable through diversification. (Nazir, Daniel & Nawaz, 2012). In early 2003 and 2004, the BB issued guidelines on six core risk to meet risk management in the banking sector. These are credit risk management, asset liability risk management, foreign exchange risk management, internal control and compliance risk management, anti-money laundering risk management and information technology risk management.

Various risk management practices in financial organizations became the need of the time just after the financial distress faced by the whole world in last decade. In particular, United States required long time to restore their economy with serious regulatory changes. Many post crisis analysts found dissimilarities in terms

of risk identification and management in different banks and financial organization before and during the crisis which was a self-destructive thought that brought such loss to the world economy. Risk management defines the need of identification of core risks, method to develop consistent and accurate risk measurement, give the importance of risk reduction, avoidance and transfer through proper risk return calculation and best monitoring procedures of risk position for the organization. For banks, meeting the regulation not necessarily can avoid bankruptcy or financial harassment. Bank personnel require reliable risk identification, measurement and management culture to follow and monitor best risk-reward ratio. Risk management is therefore a continuous and vigilant process for the banks. Banks must always be proactive and put in place and effectively managing the inherent risk associated with banking business. The goal of an effective risk management system is not only to avoid financial losses, but also to ensure that the bank achieves its financial results with a high degree of reliability and consistency. It thus serves as a pre-requisite for the soundness, stability and sustainability of any financial institutions (Khan and Muljawan, 2006).

In this regard Oldfield and Santomero (1997) refer to three generic risk-mitigation strategies: (1) eliminate or avoid risks by simple business practices; (2) transfer risks to other participants; and (3) actively manage risks at the bank level (acceptance of risk).

II. Literature Review

There have been a large number of theoretical studies published about risk management in banking in general. Risk is the deviation of the expected outcome. In one way, risk can be classified as business risk and financial risk. Business risk arises from the nature of a firm's business which relates to factors affecting the product market. Financial risk arises from possible losses in financial markets due to movements in financial variables (Jorion and Sarkis, 1996). It is usually associated with leverage with the risk that obligations and liabilities cannot be met with current assets (Alam and Masukujjaman, 2011). Bangladesh Bank, the prime supervisory authority of the financial sector implemented the new capital standard – Basel II from January 2009 in parallel with Basel I. From January 01, 2010 Basel II has been solely implemented in the banking sector. Basel II requires addressing and managing the market risk and operational risk in addition to the existing (as per Basel I) credit risk. Basel II capital standard is acting as a major catalyst for enrichment of risk management practices within the bank embedding the risk culture in the bank's operation. In response to the new capital accord (Basel II), risk management process within the bank has been introduced supporting the principles of more risk sensitive approach to capital adequacy. Ho Hahm (2004) conducted an empirical study on interest rate and exchange rate exposures of banking institutions in pre-crisis Korea. Results indicated that Korean commercial banks and merchant banking corporations had been significantly exposed to both interest rate and exchange rate risks, and that the subsequent profitability of commercial banks was significantly associated with the degree of pre-crisis exposure. The results also indicated that the Korean case highlights the importance of upgrading financial supervision and risk management practices as a precondition for successful financial liberalization. Linbo (2004) worked with risk and efficiency in big banks of United States. His finding suggests that profitability of a bank is sensitive to credit and solvency risk but not to liquidity risk or to the investment/ portfolio mix. A similar empirical work was conducted by Ho Hahm (2004) on interest rate and exchange rate exposures in Korea. His work depicts that Korean commercial banks had been very much involved with both interest rate and exchange rate risks. The result also says that the efficiency of Korean banks significantly associated with the degree of interest rate and credit policy.

Niinimaäki (2004) mentioned that the attitude of risk loving of the investors depends on the structure of Banks' risk management. In addition, if banks do work in monopoly market seems take higher risk than that of a competitive market operator. In contrast, banks which have deposit insurance seem taking higher risk, if it is found that banks are competing for deposits. As a result, the rate of interest for deposit account became higher than normal which, in result, increases banks' risk taking attitude to be profitable in competition. He also concluded that if the bank is a monopoly or banks are competing only in the loan market, deposit insurance has no effect on risk taking. Banks in this situation tend to take risks, although extreme risk taking is avoided. In contrast, introducing deposit insurance increases risk taking if banks are competing for deposits. In this case, deposit rates become excessively high, thereby forcing banks to take extreme risks. Koziol and Lawrenz (2009) highlighted the bankruptcy and the failure of the risk. They claimed that regulation of the banking stuff matters a lot for meeting the efficient criteria of Risk management. The essence of the study was Uncover situation when the Credit manager will take financing decision. Because the major source of the earning for the bank is to lend the money.

Wetmore (2004) examined the relationship between liquidity risk and loans-to-core deposits ratio of large commercial bank holding companies. He concluded that the average loan-to-core deposit ratio had increased over the period studied, which reflects a change in the asset/liability management practices of banks. He also concluded that there is a positive relationship occurring between market risk and the change in loan-to-core deposits ratio after 1994, with a negative relationship occurring before 1994. Khalid and Amjad (2012)

conducted a research on the risk management in Islamic banking in Pakistan. The author use the same model suggested by Al-Tamimi and Al-Mazrooei (2007) of risk management practices. The data was collected from the primary sources with the questionnaire distributed in Islamic banks of Pakistan of 135 inclusive with very high response rate. The regression has been run to evaluate the result and finding suggests that Islamic banking system in Pakistan have a positive and significant effect on risk management practices. The most influencing and significant variable of the study was credit risk analysis, risk monitoring and understanding risk and risk management. Khambata and Bagdi (2003) examined off-balance-sheet (OBS) credit risk across the top 20 Japanese banks. The main results of this study indicated that financial derivatives are heavily used by the top four banks and that loan commitments are the largest source of credit risk among traditional OBS instruments. The results also indicated that there is a wide difference across the banks in the use of derivative leverage. As compared to USA and European banks, Japanese banks use fewer OBS instruments as a percentage of their assets. This implies that Japanese banks are more conservative and risk-averse in general than their USA or European counterparts, especially given the bad financial condition of Japanese banks.

Al-Tamimi investigated UAE commercial banks and their risks management techniques. The study revealed that the credit risk was their high concern. The significant findings of the study are inspection by managers and financial analysis was the main risk identification method. Establishing standards, credit score, credit worthiness analysis, risk rating and collateral seems popular risk measurement techniques; the study also highlighted the willingness to use the most sophisticated risk management techniques in those banks. Salas and Saurina (2002) contributed by providing policy guideline from their study which examined credit risk in Spanish banks; the study compared the determinants of problem loans during 1985-1997. Their suggestions are related to raise important bank supervisory policy issues: the use of bank-level variables as early warning indicators and the role of banking competition and ownership in determining credit risk. Oldfield and Santomero (1997) investigated risk management in financial institutions. In this study, they suggested four steps for active risk management techniques: (1) the establishment of standards and reports; (2) the imposition of position limits and rules (i.e. contemporary exposures, credit limits and position concentration); (3) the creation of self-investment guidelines and strategies; and (4) the alignment of incentive contracts and compensation (performance-based compensation contracts).

Hussain and Al-Ajmi (2012) conducted a comparative analysis on risk management practices between the Islamic and conventional banking system in Bahrain. The data has been collected from the questionnaire to generalize the finding of comparative analysis. The new modified dummy variable bank type has been used to make the optimum comparison. The finding of the study was to Understanding risk and risk management, risk identification, risk monitoring, risk assessment and analysis and credit risk analysis have a positive and significant effect on risk management practices in Islamic and conventional banking of Bahrain. The comparative analysis of the study was that there is only the understanding risk and risk management got the significant difference between the Islamic and conventional banking of Bahrain. The other entire variables were not significantly different in Bahrain Islamic and conventional banking system. These consequences indicate that banks are facing higher credit and market risks now when compared with the situation prior to the uprising. RMPs have been widely investigated over the years. However, little attention has been paid to banks operating in emerging markets and, in particular, Islamic banks (Al-Tamimi, 2002; Al-Tamimi and Al-Mazrooei, 2007; Hassan, 2009). Since risk management failure has been identified as one of the main causes of the financial crisis, additional study of the subject is warranted.

III. Objectives Of The Study

The main objective of the study is to identify the risks faces by the banking sector of Bangladesh. The other specific objectives of the study are to trace out the process and to examine the techniques of risk management adapted by banks.

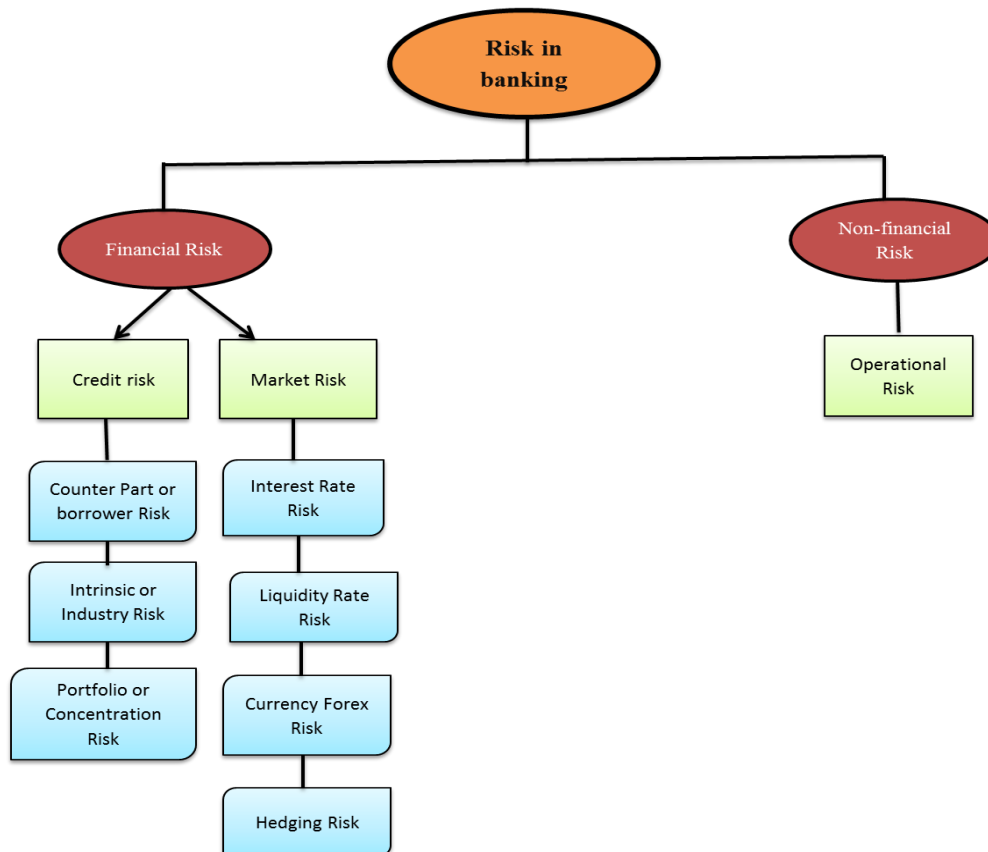
IV. Methodology Of The Study

The study is conducted only based on secondary sources of data and these data are collected through company's corporate profile, daily newspaper, different journals & articles, banks' websites and Bangladesh bank's website. Actually we did not collect information through interview of bank executives for conducting the study. The findings of the study are reliable as the authentic sources of data. The major limitation of the study is that no primary data is involved in the study.

V. Discussion

5.1. Types of risk in bank

In view of growing complexity of bank business and the dynamic operating environment, risk management has become very significant, especially in the financial sector. Risk at the apex level may be visualized as the probability of a bank's financial health being impaired due to one or more contingent factors. While the parameters indicating the bank's health may vary from net interest margin to market value of equity, the factors which can cause the important are also numerous. For instance, these could be default in repayment of loans by borrowers, change in value of assets or disruption of operation due to reason like technological failure. While the first two factors may be classified as credit risk and market risk, generally banks have all risks excluding the credit risk and market risk as operational risk.



Financial Risk: Financial risk arises from any business transaction undertaken by a bank, which is exposed to potential loss. This risk can be further classified into Credit risk and Market risk.

Credit Risk: Credit risks involve borrower risk, industry risk and portfolio risk. It checks the creditworthiness of the industry, borrower etc. It is also known as default risk which checks the inability of an industry, counterparty or a customer who are unable to meet the commitments of making settlement of financial transactions. Internal and external factors both influence credit risk of bank portfolio. Internal factors consist of lack of appraisal of borrower's financial status, inadequate risk pricing, lending limits are not defined properly, absence of post sanctions surveillance, proper loan agreements or policies are not defined etc. Whereas external factor comprises of trade restrictions, fluctuation in exchange rates and interest rates, fluctuations in commodities or equity prices, tax structure, government policies, political system etc.

Market Risk: Earlier, majorly for all the banks managing credit risk was the primary task or challenge. But due to the modernization and progress in banking sector, market risk started arising such as fluctuation in interest rates, changes in market variables, fluctuation in commodity prices or equity prices and even fluctuation in foreign exchange rates etc. So, it became essential to manage the market risk too. As even a minute change in market variables results into substantial change of economic value of banks. Market risk comprises of liquidity risk, interest rate risk, foreign exchange rate risk and hedging risk.

Operational Risk: For a better risk management practice, it has become essential to manage the operational risk. Operational risk arises due to the modernization of banking sector and financial markets which gave rise to structural changes, increase in volume of transactions and complex support systems. Operational risk cannot be

categorized as market risk or credit risk as this risk can be described as risk related to settlement of payments, interruption in business activities, legal and administrative risk. As operational risk involves risk related to business interruption or problem so this could trigger the market or credit risks. Therefore, operational risk has some sort of linkages with credit or market risks

5.2. Factors affecting the risk management

Credit Risk Management and Risk Factors: Credit Risk is the risk that the borrower may be unable or unwilling to repay the debt owed to the Bank, or to honor other contractual commitments. In managing credit risk, the Bank has clearly specified the processes for credit approval which include the formulation of credit policy, the credit risk rating for customers, and the establishment of different levels of delegation of authority for credit approval depending upon the type of business and/or the size of the credit line. In considering the approval of loans in general, the Bank considers the purpose of the loan and assesses the repayment ability of the applicant; taking into account the applicant's operating cash flows, business feasibility and the capability of management, as well as collateral coverage. The Bank also performs credit reviews which include reviewing credit risk rating levels on a regular basis. Credit Risk Factors are those which may affect the ability of borrowers to fully repay loans and include factors which may affect the Bank's ability to resolve non-performing loans. A primary risk factor is the global economic crisis which has had a significant adverse impact on the demand for export goods in some industries. Consequently, a number of companies in those industries have had to reduce their production capacity and to downsize their workforce. This has led to increased unemployment and decreased purchasing power in Bangladesh. The Bank therefore needs to closely monitor the industries affected by the crisis.

Market Risk Management and Risk Factors: Market Risk is the risk that arises from fluctuations in interest rates, exchange rates and the prices of instruments used in the money and capital markets, all of which may affect the financial performance of the Bank. The Bank aims to manage market risks to a level which is deemed appropriate, acceptable, and in compliance with the overall risk management policy of the Bank. In general, the Bank's policy is to match assets and liabilities denominated in both Baht and foreign currencies. In the case of mismatches, the Bank will typically hedge the exposures in various ways, for example by engaging in foreign currency and interest rate swaps, forward contracts, or using derivative instruments to hedge against interest rate and/or exchange rate risks. The Board of Executive Directors approves the appropriate limit for foreign currency positions within the risk appetite as determined by the Risk Management Committee and the Board of Directors, while the Asset and Liability Management Committee, the Treasury Division and the Market Risk Unit are responsible for monitoring, managing and making recommendations for enhancing the policy and monitoring references as appropriate, given the prevailing market conditions.

Liquidity Risk Management and Risk Factors: Liquidity Risk is the risk that the Bank may not be able to meet cash flow obligations within a stipulated timeframe. The purpose of the Bank's liquidity risk management is to maintain suitable and sufficient funds to meet present and future liquidity obligations while managing the use of the funds to generate an appropriate return in light of prevailing market conditions. The Bank manages its liquidity risk by diversifying the sources of funds. Liquidity risk factors include the structure of the sources and uses of funds, the competition among commercial banks for a larger market share in deposits, the political situation and domestic unrest, the fluctuation of the Baht, and government policies which may affect capital movements in and out of Thailand. Other factors include the overseas money markets conditions, particularly in markets affected by the worldwide financial crisis, which may consequently affect the bank's liquidity in foreign currency denominations.

Capital Adequacy Risk Management and Risk Factors: Capital Adequacy Risk is the risk that the Bank may not have sufficient capital reserves to operate its business or to absorb unexpected losses arising from credit, market and operational risks. The objective of the Bank's capital management policy is to maintain an adequate level of capital to support growth strategies under an acceptable risk framework, and to meet regulatory requirements and market expectations. The framework has established new risk weightings for different types of assets, and imposes minimum capital requirements for market risks and operational risks, all of which have had a direct impact on the bank's capital adequacy ratio and the provisioning for doubtful accounts.

Operational Risk Management and Risk Factors: Operational Risk is the risk of loss from failed or inadequate internal processes, people and systems or from external events. This includes legal risks, but does not include strategic risks and reputational risks. The Bank's operational risk management includes defining, assessing, monitoring, mitigating and controlling risk. Every unit in the Bank is directly responsible for managing its operational risk and for establishing measures to mitigate and control risk to the designated level by allocating appropriate resources and establishing an organizational culture for managing operational risk.

Operational Risk Factors Significant operational risk factors include the following:

Internal factors: 1. Factors related to the efficiency of internal processes and internal control systems, including operational processes supporting business operations and processes for taking care of personnel. 2. Factors related to personnel, including appropriate staffing levels, staff qualifications and efficiency. 3. Factors related to the operating systems of the Bank, including the capability to support business operations, the complexity of systems which may cause risks, the issue of data security, the accuracy of data processing, and the development of and changes in technologies.

External factors: Factors outside the Bank's control including actions by outsiders such as theft or embezzlement of assets or data, and catastrophic or natural disasters that damage the Bank's assets. The Bank understands that good operational risk management is vital to long-term and sustainable business success, particularly in the current environment of increasing uncertainty, both domestic and international, including economic factors where the global economy is currently in recession, political factors, terrorism, natural disasters and pandemics. The Bank therefore places great importance on effective operational risk management with sufficient coverage of all aspects of operations in order to be able to deal promptly with any event, and to ensure sustainable stability of the organization.

Interest Rate Risk Factors: The rate of interest is a major factor in determining the Bank's interest income from assets and interest expenses on liabilities. The Bank is exposed to interest rate risk as interest rates for its assets and liabilities may be adjusted at different times, or assets and liabilities may be subject to different contractual maturities, or movements of the benchmark interest rates on assets and liabilities may be inconsistent with one another, thus having impact on the Bank's net interest income.

Foreign Exchange Rate Risk Factors: Foreign exchange rate risk factors include the increasing volatility of foreign exchange rates as a result of imbalances in global trade, and the trend towards depreciation of the US dollar due partly to the reduction in US interest rates to avoid or alleviate the economic slowdown caused by the sub-prime mortgage and structured-product crisis.

5.3. Process of Risk Management

To overcome the risk and to make banking function well, there is a need to manage all kinds of risks associated with the banking. Risk management becomes one of the main functions of any banking services risk management consists of identifying the risk and controlling them, means keeping the risk at acceptable level. These levels differ from institution to institution and country to country. The basic objective of risk management is to ensure stakeholders' value by maximizing the profit and optimizing the capital funds for ensuring long term solvency of the banking organization. In the process of risk management following functions comprises:



5.4. Techniques of Risk Management

Risk management techniques are used to identify, assess and plan responses to individual risks and overall risk. The most common types of risk management techniques include the following:

Avoidance of Risk: The easiest way for a business to manage its identified risk is to avoid it altogether. In its most common form, avoidance takes place when a business refuses to engage in activities known or perceived to carry risk of any kind. Although avoiding risk is a simple method to manage potential threats to a business, the strategy also often results in lost revenue potential.

Risk Mitigation: Businesses can also choose to manage risk through mitigation or reduction. Mitigating business risk is meant to lessen any negative consequence or impact of specific, known risks, and is most often used when those risks are unavoidable.

Transfer of Risk: In some instances, businesses choose to transfer risk away from the organization. Risk transfer typically takes place by paying a premium to an insurance company in exchange for protection against substantial financial loss.

Risk Acceptance: Risk management can also be implemented through the acceptance of risk. Companies retain a certain level of risk brought on by specific projects or expansion if the anticipated profit generated from the activity is far greater than its potential risk.

Loss Prevention: Loss prevention is a technique that limits, rather than eliminates, loss. Instead of avoiding a risk completely, this technique accepts a risk but attempts to minimize the loss as a result of it.

Separation: Separation is a risk control technique that involves dispersing key assets. This ensures that if something catastrophic occurs at one location, the impact to the business is limited to the assets only at that location. On the other hand, if all assets were at that location, then the business would face a much more serious challenge.

Duplication: Duplication is a risk control technique that essentially involves the creation of a backup plan. This is often necessary with technology. A failure with an information systems server shouldn't bring the whole business to a halt. Instead, a backup or fail-over server should be readily available for access in the event that the primary server fails.

Diversification: Diversification is a risk control technique that allocates business resources to create multiple lines of business that offer a variety of products and/or services in different industries. With diversification, a significant revenue loss from one line of business will not cause irreparable harm to the company's bottom line. Risk control is a key component in any sound company strategy. It's necessary to ensure long-term organization sustainability and profitability.

VI. Conclusion, Implications And Limitations

In order to make the risk management effective in the banks operating in Bangladesh, the following risks, e.g., credit risk, market risk, operational risk, interest rate risk, foreign exchange risk, equity risk, liquidity risk, money laundering risk, information technology risk, marketing risk and human resource risk need to be emphasized by the concerned bank authority. The objective of risk management is not to prohibit or prevent risk taking activity, but to ensure that the risks are consciously taken with full knowledge, clear purpose and understanding so that it can be measured and mitigated. The effectiveness of risk measurement in banks depends on efficient Management Information System, computerization and networking of the branch activities.

The results of the study have implications for clients, banks' management, investors and regulators. Depositors should know that they are facing higher risks when they deal with banks, and they would therefore expect to receive a higher rate of returns. Also, borrowers are expected to pay a higher profit (interest) rate to banks because those banks share the asset risk with them. As for management and regulators, knowledge of the unique types of risk facing each type of bank should lead to the development of special risk management techniques and monitoring procedures that are suitable for those risks, in addition to enhancing transparency. The main limitation of this paper is that the study has been conducted by only secondary data. Many aspects could not be discussed in the present study.

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