A STUDY ON THE ROLE OF TREASURY MANAGEMENT ON CURRENCY RISK MANAGEMENT: THE CASE OF SELECTED COMMERCIAL BANKS IN TANZANIA.

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ABSTRACT

The increased volatility of the international foreign exchange market generates increased financial risk especially to commercial banks. Exchange rate change is one of the financial risks where the increased volatility is reflected to the greatest extent. Therefore, if banks are to measure, price, and control currency risk, they must establish an appropriate unit responsible for currency risk management. This paper attempts to show that, commercial banks in Tanzania have the necessary resources to curb risks associated to currency risks.

This paper briefly provide some highlights on the research findings as regards to the role of treasury management in currency risk management and then poses recommendations and challenges on the magnitude of sustainability of the registered best practice for currency risk management in commercial banks.

The study employed both primary and secondary data with a comparative case study orientation. Published financial statements and other desk materials were collected principally from selected banks. Interviews were also conducted with responsible treasury managers.

There are various ways (economic, translation and transaction), that the bank can utilize in analyzing and setting the exchange rate risk management. In this study, transaction and translation exposure were the chosen methods of analysis.

1.0. Background

Today, the economic environment in which most commercial banks operate is highly volatile and uncertain. The increase in volatility and uncertainty of international financial markets has generated increased financial risk to commercial banks (Hillier, 2003). One of the main factors contributing to this phenomenon is the increased market globalisation and internationalisation which is reflected in increased exchange, interest, inflation rates fluctuations as well as in high competition, demand levels etc. Exchange rate change is one of the financial risks where the increased volatility is reflected to the greatest extent and commercial banks are particularly exposed to exchange rate fluctuation. Thus, special attention should be paid to exchange rate management. The key to successful foreign exchange trading is to understand and manage risks involved in currency risk, namely: replacement risk, delivery risk, position risk, liquidity risk and amount/cash risk (Kenyon, 1990).

Many risks arise from the fact that today's banks are engaged in a wide range of activities (Hillier, 2003). Majority of commercial banks trade in all kinds of cash instruments as well as derivatives products such as swaps, forward contract, futures and options-either for their own account or to facilitate customer transactions (Crouhy et al, 2001).

Treasury management is the efficient management of financial risk and liquidity of the business; it is often called risk management, which is simply managing risks facing banks (Hillier, 2003).The specialist treasury management is a recent development for many banks (Hillier, 2003). In Tanzania, treasury management function has grown dramatically since the gradual easing of foreign exchange controls by the Bank of Tanzania (BOT). The liberalization of foreign trade and the free foreign exchange regime that was effected in March 1992 (through the enactment of the Foreign Exchange Act, 1991 that has replaced the Exchange Control Ordinance (which was not compatible with the dynamic macroeconomic policies adopted under Enterprise Risk Progrm (ERP)) is the main reason for the establishment of treasury management unit in majority of commercial banks in Tanzania.

As per the best practices, management of risks has to have the following process:

- The identification of the risks to which a bank is exposed;
- The quantification of the exposure;

- The determination of possible outcomes of exposure; and
- The design of a strategy to transform risk exposures to achieve a desired outcome.

A common problem in managing currency risk is that most banks only realize that they have been at risk when losses have occurred. In an ideal situation however, currency risk management should begin before the exposure occurs; otherwise fundamental operating, investing and financing decisions would be taken on the basis of incomplete information (Hillier, 2003). Thus, efficient management of currency risk is of vital importance for both banks and regulatory bodies.

1.1. The Problem

In recent times, treasury risk management has often been in the news especially in situations where things have gone wrong. For example losses of £150 million in foreign exchange trading by Allied Lyons; US$ 691 at the Allfirst Financial; and AUD 360 millions at the National Australian Bank are a result of the weaknesses in the way currency risk is being managed. These losses indicate, therefore, that weaknesses in the commercial bank's internal controls, especially in currency risk management, can have a very significant impact to the existence and sustainability of banks, both financially and operationally, in the final act this can result to the instability of the whole financial system in the country.

Efficiency risk management has become a critical element of banks' sustainability and growth. Therefore, any problems in the risk management have an immediate effect on banking industry, financial markets, and financial systems at large; this can indirectly influence the country's economic system. The other concern is that commercial banks hold larger deposits compared to other financial or non-commercial banking institution. Thus, efficient management of the risk has an impact on the sustainable growth of the banking industry and the economy at large.

The trend of changing economic environment and, hence free and open market operation in the financial market in Tanzania compels most commercial banks determine how they can best adapt to currency trading, position management and currency risk management (within the existing regulatory framework). These efforts of trying to adjust to economic changes via privatization and open market policies are not only inevitable, but also of interest in the performance of the banking industry in light of the reforms.

1.2. Objectives

The general objective of the study was to empirically review the role of treasury management's both in currency risk mitigation and management for commercial banks in Tanzania, challenge the existing practices and possibly suggest the best way forward.

More specifically, the study intended to:

1) Determine the extent to which currency risk management is integrated in the commercial bank's treasury management operations, for the purpose of facilitating timely identification, measurement and communication of the currency risk;
2) Assess whether Tanzania's commercial banks' treasury management have the requisite capacity in terms of tools, techniques and trained skilled personnel to manage currency risk across banks; and
3) Establish how commercial banks in Tanzania implement their formal currency risk management programs in place.

1.3. Research Methodology

The study was both qualitative and quantitative. A sample of commercial banks selected was judgemental in the sense that the study selected a sample believed to deliver the best information to meet the research objectives. Data collection instruments used was questionnaires, interviews and documentary review.

2.1. General Observations

This sub section describes results and findings as they answered questions intended to address commercial banks' efficiency in currency risk management. The analysis and findings are mainly on whether currency risk management programs have been integrated in the treasury management policies as well as treasury's capacity for foreign currency risk management.

2.2. The Law Governing Currency Risk Management in Tanzania

In Tanzania, foreign currency trading and position management is subject to prudential supervision, but, beyond regulatory standards, broad discretion is allowed. Despite the fact that commercial banks in Tanzania are allowed to establish their own policies, procedures and regulations to govern their foreign currency risk management, those policies should not violate the laws, by-laws and guidelines governing foreign currency risk management. Laws that govern foreign currency risk management for commercial banks in Tanzania are: Bank of Tanzania Act of 1995 which repealed and replaced The Bank of Tanzania Act 1965 as amended in 1978 as well as the Banking and Financial Institution Act of 1991. Also there are regulations, guidelines and circulars which govern foreign currency risk management in Tanzania. The Risk Management guideline of 2005 consolidates and maps the way forward for commercial banks in view of establishing individual banks' policies for risk management.

2.3. Currency Risk Management Policies for Commercial Banks in Tanzania

Currency risk management policies for commercial banks are based on sound commercial basis and compliance to the Banking and Financial Institution Act, 1991 (as amended), the Bank of Tanzania Act, 1995 (as amended), Risk Management guidelines of 2005, Regulations and Circulars issued by BOT as well as memorandum and articles of association of these banks and other business strategies, policies, regulations and guidelines issued by their boards. For example, the BOT guideline on risk management that was issued in 2005 specifies that board of directors of banks should be responsible for issuing and/or approving currency risk management policies and/or amendments thereafter.

The approved currency risk management policies should be communicated to treasury unit staff whose day to day responsibilities relates to currency risk management. Accoding to Crouhy, et al (2001), the modern approach to risk management typically proceeds by classifying the role of currency risk management to the treasury management function.

2.4. Objectives of Foreign Currency Risk Management Policies

Effective management of foreign currency trading and open currency position monitoring functions is fundamental to the banks' safety and soundness; this is due to the fact that foreign currency trading is one of the major and most obvious sources of risk to banks. Regarding the inherent risks in both on and off-balance sheet foreign currency items, currency risk management policies for banks aim at ensuring that foreign currency deposit acceptance and trading activities within the banks are not only consistent to bank's strategic direction but also conform to acceptable and established norms of best practices, codes of ethics and BOT regulations. The main objectives of these policies are:

- To provide for adequate identification, measurement, monitoring, and control of the risks posed by the significant activities undertaken by the bank;
- Be consistent with the complexity and size of the bank's business, its stated goals and objectives, and the bank's overall financial strength;
- To clearly delineate accountability and lines of authority across the bank's activities; and
- To provide for the review of new activities to ensure that the infrastructures necessary to identify, monitor, and control risks associated with an activity are in place before the activity is initiated.

From the stand point of the above objectives, it is clear that one of the principal controls over the treasury function is the existence of a comprehensive set of treasury policies. These cover various topics as mentioned above. One of the most important topics is the treasury structure necessary for currency trading and risk management. Cooper (2004) urgues that the currency trading and open currency position management functions should be separated. The currency trading, treasury sales, liquidity and market making activities granted by the bank rests with treasury front office, while confirmation of trading activities, settlement, foreign currency open position reconciliation, foreign currency profit computation and/or confirmation and reporting are under treasury back office.

2.5. Integrating Currency Risk Management in the Bank's Treasury Management Function

Currency risk management is a sensitive area the banking business. In today's increased volatility, there is tendency for commercial banks to position currency risk management function under the treasury stewardship. The study indicates the case to be the same for Tanzania commercial banks. In the study respondents indicated that there is a treasury function in their organigram that is separated between front and back office. (89%) of the respondents agreed that they have well established treasury function in their banks, whose among other roles, currency risk management is their major area of concern. Out of them, 78% of the respondents indicated that treasury unit is separated between back and front office. This is necessary for prudent currency risk management where separation of roles and responsibilities is not only a requirement, but inevitable. While 67% of the respondents (most of them being multinational banks) indicated that, they have had treasury functions separated before the BOT risk management guideline requirement issued in 2005, 33% have indicated that the BOT risk management guideline has played a major role towards facilitation in the establishment of the structure.

Though separation of treasury is imperative for best practice and prudent risk management in banks, these separate reporting lines are as well necessary for ensuring real segregation of duties. In this regard, treasury front office which is headed by the treasurer. (67%) and (22%) responded that the treasury front office reports to the CEO and Head (Director) of finance respectively, while (11%) were not sure. On the other hand, treasury back office which is responsible for risk monitoring and control is headed by the Treasury Operations Manager who reports to the Head of Finance (22%), Head of Operations (56%) and 22% were not sure.

The magnitude of treasury front office's role in relation to foreign currency trading is mainly around currency trading, and market-making. Respondent agreed that treasury front office is regarded as profit centre for their banks. As indicated above, back office is responsible for risk monitoring, evaluation and control for what treasury front office does. Hence treasury back office role is specifically risk management related. Respondents reported that settlement risk, confirmation risk, position management risk, and the attached penalties for failure or late submission of the foreign currency trading and position management of the bank to the BOT are their major areas of concerned.

Findings from the study also uncovered that, before the introduction of the modern treasury structure, the traditional methodology for currency risk management was to assign risks among different departments in the bank, mainly finance, operations and/or auditing.

2.6. Treasury Capacity for Currency Risk Management

This study was designed to find out whether treasury management unit (for commercial banks in Tanzania) possesses the necessary tools, techniques and treasury management information system (TMIS) necessary for currency risk management. The study revealed that lack of the tools, techniques and TMIS is a major concerned for most commercial banks in Tanzania especially for small local banks. 56% of respondents agree that senior management have been affording the necessary support in terms of allocation of appropriate resources to enable the treasury function carry their risk management function accordingly. Only 33% of the respondents disagree to experience lack of resources problem in the currency trading and risk management in their banks.

2.7. Experience in the Use of Hedging as a Risk management Technique

The study surveyed financial risk management practice and the use of financial derivatives as risk management tools by commercial banks in Tanzania. The survey questioned on certain aspects of derivatives used in currency risk management practice. The report compares responses taken from the various surveys and points out the changes in responses over time. Results demonstrated that the percentage of banks that uses derivatives in Tanzania has remained constant over time. However, the intensity of usage appeared to be increasing among these banks over time. This indicates that these institutions are generally finding derivatives useful in the currency management in their businesses.

Results from the study revealed that banks tend to use swaps, in addition to more physical products, such as spot and forwards transactions. It was uncovered in the study that the size of the bank, as measured by the foreign currency balance sheet and foreign turnover, has the most important effect on the decision on whether or not to employ derivatives as a hedging strategy. However, the research results indicated that there are no statistical relationship between the size of the bank’s foreign exchange exposure and the balance sheet size. 56% of the surveyed banks indicate that they used derivatives, emphasized that the most important objective for using derivatives was to manage the volatility of their cash flows.

2.8. Treasury Management Systems for Currency Risk Management

For prudent currency risk management, Bank of Tanzania requires commercial banks to maintain systems necessary for currency risk management. The study focused on looking for evidence on whether commercial banks in Tanzania have management information system in place necessary for currency risk management, if there an existing problem of poor TMIS, what are the causes of such problem and what ways have been adopted by banks in converting with such a problem.

The research indicated that most banks do not have treasury management information systems in place and therefore lacks sophisticated systems for timely capture, recording and reporting of foreign currency risks. This is especially the case for small banks. Therefore, the magnitude of the problem is moderate.

On the other hand, only (22%) of all the respondents agreed that their banks have adequate management information system software for currency risk identification. While all banks agreed that they do not have software for risk analysis, evaluation as and treatment, 33% indicated that they have software for risk monitoring and reporting. The rest (67%) indicated that they do not have treasury management information system software at all. This implies that majority of the commercial banks in Tanzania agree that they do not have treasury management systems and capabilities for identification, quantification and communication of foreign currency risks.

2.9. Contingency and Business Continuity

Empirical evidence (BOT, 2005) suggests that the existence of an effective contingent plan is one way that management can use to reduce the impact of the risk similar to that of treasury operations. A contingency plan should be tested periodically to demonstrate its continued efficiency. Such contingency should form an extension of a treasury's system of internal control.

(78%) of the respondents indicated that they have developed reliable strategies for handling the crisis and that the key steps are well documented and are tested on a periodic basis and that they are contained in the strategy in case of financial crisis and that they were adequate and reliable. 22% of the respondents indicated that they do not have a contingent plan but are in the process of developing one.

Majority of the banks (89%) affirm that they have strategies for handling the financial crisis. 67% said the reliability of their business continuity plan strategies is 'strong' while 22% said it is very strong. Largely, respondent banks concurred that have strategies outlined by the treasury in their policies and that they have definitive procedures that can be followed for a fast response to a foreign exchange obligation stress condition that might occur in the foreign exchange markets.

2.9.1. Poor Treasury Function as the factor for bank's risks and losses

One of the inner objectives of the study was to examine if there is a clearly established relationship between the treasury performance and currency risk and loss. One of the challenges facing treasury is to identify and measure the scale and timing of the currency exposure. Therefore, poor performance of these activities by treasury such as delays in identification of the exposure, lack of accuracy in exposure identification, poor knowledge of hedging, volatility of currencies, lack of sophisticated systems to improve control over the identification and measurement of many types of currency exposure, could result in massive losses to the bank.

It was revealed in the study that (67%) of the respondents have treasury units with poor or lack of resources (e.g., electronic link, electronic data interchange systems, poorly trained staff, unfocused treasury management) is the most acute and significant problem to the bank's cost and revenue structure in the banking business. It was observed that most of the respondents were aware of this problem.

2.10. Observation and Recommendations and Conclusion

The study has analysed the actual practices in currency trading, operations and exposure management and systems. Below are observations and suggestions. It is important to note that, these suggestions are in line with literature review where awareness of the role of treasury in currency risk management as a separate category is relatively novel in most banks.

2.10.1. Programs for currency risk identification, measurement and management.

Observation: In regard to whether commercial banks in Tanzania have programs required for enabling the identification, measurement and management of currency risk. In this respect, study revealed that most of the respondent banks have well documented programs for identification, monitoring, evaluation and control of currency risk, however, for most banks, this is propelled by recent risk management guidelines issued by BOT.

Recommendation: based on the knowledge from the study, it is recommended that banks should make risk management programs and strategies as more of internal control generated rather than regulatory requirements. In his book Cooper noted that "financial institutions management should have key performance indicators (KPI) and benchmarks within themselves that will enable the management to measure the performance of the treasury department in terms of currency risk identification, quantification, and determination and design the strategy to transform the risk strategy to achieve a desired outcome" (Cooper, 2004), otherwise they will be reacting whenever financial losses resulting from poor currency risk management has happened or depending on the financial regulatory bodies act on their behalf.

An interesting factor to note is that board members for some banks do not review these programs regularly. Another factor is that most of these banks do not have plans to train their board members on currency risk management to ensure that they have a through understanding on the subject. The reason to justify this was that since board members are not involved in the daily operations of the treasury activities, then it is not a requisite for them to engage much on the understanding perspective.

In summing up the above mentioned problem, the following section outlines recommendations to various stakeholders, particularly members of the board and senior management of the respective institutions.

Banks should be more pro-active to currency risk management. Bank's board members could establish the risk management committee within themselves. This committee should work in collaboration with the bank's risk management committee in ensuring that bank's risk management programs are updated and they should also be more pro-active to risk issues as well as be able to make informed decisions and set targets for the treasury team based on the programs, strategies and planned activities which are well understood by the board and the banks' senior management. Further more, besides training for staff and senior management personnel; banks should make the necessary efforts towards training their board members on risk management.

2.10.2. Capacity relevant for currency risk management

Observation: The second observation is on treasury's capacity in dealing with the challenges of currency risk management. As expressed before, in order to position themselves as capable to manage risk management challenges, treasury team should have the necessary tools, techniques, skills and training necessary for currency trading and risk management. However, most of the respondents indicated that lack of in-depth training on treasury and other financial trading instruments and risk management as well as poor MIS are major hindrances in their efforts for currency trading and risk management.

Recommendation: In fact, by taking a deeper look at most of treasuries in Tanzania commercial banks especially small banks and those with local ownership, we might find that they do not have computers software and treasury management information systems for undertaking most of the routine treasury operation activities and risk management. Availability of these software and systems could be applied by the treasury teams for banks by indicating maturity ladder of foreign currency trading instruments and therefore ease management of foreign exchange liquidity, marking to market of financial derivatives as well as for internal and external reporting purposes through the use of direct feeds from Reuters, FXFX, or Bloomberg. Other beneficial functions from the system are on open position monitoring and evaluation.

From the discussion above, financial market in Tanzania lacks the appropriate speculative and hedging instruments that could be utilized to maximize on foreign currency trading profits while minimizing foreign currency risk levels. Also, banks' treasuries teams lack the appropriate capacities in terms of human resources skills and training (both managerial and technical). Most of the banks surveyed indicated that they do not have in-depth training on treasury and other financial markets training as well as computer application software for currency risk management.

Though financial budgetary constraints was sighted to be a major contributor on these shortfalls, this study suggests that in order to minimize the exposure that arises as a result of the above factors, bank owners and management should take deliberate efforts towards improving budgets for acquiring the necessary and appropriate computer software and other treasury management information systems that can be utilised in minimizing financial losses arises from human errors as well as number of staff in treasury teams.

For the case of training, again management has the responsibility of ensuring that their treasury teams have the necessary skills acquired through both internal and external training which must be supported financially, time wise and morally by the bank's management. As for lack of financial instruments required for treasury trading, hedging and speculating, the study suggest that all stakeholders in the financial markets should pull their efforts and work jointly towards improving the financial market depth, whose multiplier effect will be improved liquidity in the market, as well as more financial instruments alternatives for trading and risk hedging.

2.10.3. Hedging measurement period and netting strategy

Observation: Banks surveyed indicated that they measure their currency risk and hedging on the daily basis.

Recommendation: As it has been mentioned above, Tanzania commercial banks do hedge their foreign currency open position on daily basis, and most of them use the netting strategy to manage both the transaction and translation foreign exchange exposure. From the basic theory, it is considered that the biggest problem of the netting strategy is when there are a lot of opposite way exchange rate transactions; i.e., when the amount foreign currency shorts (sells) are the same as the amount of foreign currency long (bought). The longer the period, the bigger the probability of opposite exchange rate transactions and the bigger the use of netting strategy.

Considering arguments made earlier, the more often the bank involve in hedging activities, the more hedging transaction costs the bank incurs. Thus, is it necessary to hedge transaction exposure every day? To answer this question, one would need to measure and compare hedging transaction costs spent with the possible transactions costs if it were hedged once or twice a week, and the gain from avoided transaction costs on the opposite way exchange rate transactions. Especially in cases where a lot of opposite way transactions take place, hedging frequency decreasing important issue to think about.

As for banks using forwards and foreign exchange swaps, we know from the economic theory that, forwards price is about 3% of the transaction amount. Therefore, the bigger the amount and more frequent the use of forward hedging instruments, the higher the transaction costs. Since banks using this strategy are big multinational banks it would therefore be reasonable to presume that the transaction costs compose a significant amount.

Depending on the hedging transactions volume and frequency, the transactions costs might reach a level where it might be more costly than useful to hedge.

Therefore, due to the above-mentioned reasons as well as for further possible surveys, this study recommends that it would be very useful if the bank would start to record their transaction costs.

2.11. Conclusion

In order to fulfil the purpose of the study, contemporary role and function of the treasury department in the commercial bank was overviewed, among diverse and different roles and functions of treasury, the study explored further on the risk role, the main concentration being on currency risk management. To better accomplish this purpose, the study presented an overview of the existing classifications and terminologies of financial risk and it's consisting parts, emphasizing transaction and translation foreign exchange exposure. These were thought to be most important due to the following reasons:

- Transaction exposure observes the whole life span of the foreign exchange transactions from quotation, to confirmation and settlement, again, transaction exposure covers the biggest part of the bank's foreign exchange exposure being one of the main business profit making activities.

- Given the nature of the banking business, foreign currency translation exposure forms a significant source of profit or loss, noting that banks usually mark to market their foreign exchange position on daily basis during the computation of profit or loss made form foreign exchange.

After the analysis of the chosen banks, the study concludes that the role of treasury in risk management by and large depends on the treasury structure and nature of the bank's ownership. The structure of the treasury department, in the sense that if the treasury is split into front and back office, the treasury's role in risk management is under the treasury back office unit, while front office has the duty of trading. In the case of ownership, for banks with foreign ownership, treasury's role in risk management is usually centralized at the group head office treasury.

Nine banks, ranging from small to medium and large (according to the balance sheet size) were selected in order to fulfil the second part of the study, i.e., empirical evidence. The study has analyzed the results from the questionnaire sent to respondents which covered the following sub-topics: importance of risk management in the bank, treasury role in risk management, exchange risk identification, measurement and monitoring, foreign currency hedging strategy and capacity of the treasury in dealing with the risk management challenges. Although these banks differ in size and have different forms of management, nevertheless the banks have significant similarities concerning exchange rate exposure management:

- All banks' financial risk management policy and programs define exchange rate risk exposure as one of the main risks, and that in managing exchange rate exposure the main focus is on the transaction and translation exposure management;
- In almost all banks, exchange rate risk exposure management is centralized in the head office treasury department, where all the currency exchange operations take place;
- Almost all of the banks use exposed amounts netting strategy and they do not record their hedging transaction costs;
- Forward contract and foreign exchange swaps are the most highly considered bank's hedging instruments.

The second important conclusion concerns the risk hedging period and the transaction cost balancing. Neither of the banks surveyed recognizes the importance of transaction costs recording. Since most of the banks hedges transaction exposure every day using the netting strategy, a very high frequency might result in a loss of the netting system advantage. Therefore the researcher is on the view that these banks should consider revision and begin to consider costs involved on hedging.

One more important point to mention is board's role on risk management. Though it is well understood that the board of directors have ultimate responsibility for the level of risk taken by the bank, largely members lacks the appropriate knowledge to implement their responsibility. Opinion from the research is that it is imperative that banks should take the necessary efforts to conduct training in their management on risk management topic.

Another conclusion is on the capacity of treasury that should enable them to deal with their roles including the risk management function. Even if it is difficult for small banks to posses the necessary technology, and training as possessed by their counterparts (big banks), from the theoretical point of view, it is useful for banks' management to sacrifice some financial resources towards capacity building necessary for a strong treasury team which is beneficial to banks. This is especially true for new and developed markets like Tanzania, where the currency fluctuates and therefore risk is very high.

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