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The Effect of Foreign Exchange Exposure on the Financial Performance of Commercial Banks in Kenya

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Abstract- Exchange rate movement in Kenya has been variable with periods of rapid depreciation of the domestic currency Kenya Shilling, which adversely affect the Kenyan economy. Even though studies have been conducted on the exchange rate regimes and the implications for macroeconomic management as well as managing foreign exchange risk, very little has been done on the study of the firm exposure to exchange risk in Kenya. It is in this context that this research was to evaluate the effects (if any) that variations in the exchange rate has in the financial performance of the selected listed commercial banks in Kenya in the Nairobi Stock Exchange. The overall objective of the study is to find out the effect of foreign exchange exposure on commercial bank performance. The research used both secondary and primary data. The study utilized descriptive design. Data was analysed using Statistical Package for Social Sciences (SPSS). The study found that first; interest rates have an insignificant positive effect on commercial bank performance, secondly, foreign exchange exposure has negative effect on the performance of listed commercial banks in Kenya and finally, inflation has negative effect on bank performance. The study recommended that regulators who include Central Bank of Kenya to manage the interest rates in the country so as to ensure stable exchange rate environment and the management of commercial banks in Kenya to continue improving the foreign exchange exposure management techniques.

Index Terms- **KES;** The Kenya Shilling is the official currency of Kenya.

Euro; The name for the composite monetary unit of the European Union that has replaced national currencies in several European countries (Euro zone). It was launched in 1999 as Europe‘s single currency now shared by 17 EU countries and around 331 million citizens. Member states are Belgium, Germany, Estonia, Ireland, Greece, Spain, France, Italy, Cyprus, Luxembourg, Malta, Netherlands, Austria, Portugal, Slovenia, Slovakia and Finland. Non-participants are Bulgaria, Czech Republic, Denmark, Latvia, Lithuania, Hungary, Poland, Romania, Sweden and the United Kingdom are EU Member States but do not currently use the single European currency.

Financial risk; Financial risk refers to unexpected events in a country‘s financial, economic, or business life.

Foreign exchange (FX); The exchange of one currency for another or the conversion of one currency into another currency. Foreign exchange also refers to the global market where currencies are traded virtually around-the-clock. The term foreign exchange is usually abbreviated as "forex" and occasionally as "FX."

Foreign exchange rate; The rate or price of the currency of one country in terms of the currency of another for example, the value of British pounds expressed in U.S. dollars.

GBP; The Great Britain Pound or the Sterling Pound is the currency used by the countries ofthe United Kingdom consisting of England, Northern Ireland, Scotland and Wales.

JPY (100); The Japanese Yen expressed in 100 Kes is the official currency of Japan. It is the third most-traded currency in the foreign exchange market after the United States dollar and the Euro.

USD; United States Dollar is the official currency of the United States of America.

I. Introduction

Most international business results in the exchange of one currency for another to make payment. Since exchange rate fluctuates on daily basis, the cash outflows required to make payments change accordingly. Consequently the number of unit of a firm home currency needed to purchase foreign supplies can change even if the suppliers have not adjusted their prices.

Exchange rate risk can be broadly defined as the risk that a company performance will be affected by exchange rate movements. Financial managers must understand how to measure the exposure to exchange rate fluctuations so that they can determine whether and how to protect their company from such exposure.

Foreign exchange exposure refers to the sensitivity of a firms cash flows, real domestic currency value of assets, liabilities, or operating incomes to unanticipated changes in exchange rates.

Foreign exchange rate movements could be an important source of risk for banking institutions. In the worst case, large foreign exchange losses could lead to bank failures. Even for a mild scenario, foreign exchange losses could cause huge burdens on banks' profitability. Due to their serious implications for risk management and banking sector stability, measuring banks' foreign exchange exposure has long been a core interest of risk management professionals, academics, and central banks.

Empirical evidence suggests that there is a positive relationship between bank size and foreign-exchange exposure. This may be partly due to the fact that larger banks tend to have more significant foreign-exchange operations and trading positions. Larger banks may also have more businesses with large and international corporations, of which competitiveness and profitability are sensitive to exchange-rate movements. These may contribute to the more significant foreign-exchange exposure of larger Kenyan banks.

In addition, the average foreign-exchange exposures of commercial banks in Kenya are high. This may reflect the lack of financial instruments available for Kenya banks to hedge their foreign-exchange risk, or that the banks are less experienced in managing foreign-exchange risk. However, partly due to the lack of data, past analyses on the foreign exchange exposure of Commercial banks are rather primitive which mainly focused on the quantification of foreign exchange exposure arising from the banks' unhedged foreign assets and liabilities (i.e. direct or transaction exposures). A bank's loan to an exporter as an example demonstrate that banks that perfectly hedge their accounting exposure could still be exposed to significant foreign exchange risk if exchange rate movements affect cash flows, competitiveness, and credit risk of banks' customers significantly(i.e. indirect or economic exposures). This indicates that the sources of foreign exchange risk of banks are far more than just their holdings of net foreign assets.

It is also found that foreign-exchange exposure tends to be different among banks, with negative foreign-exchange exposure more prevalent for larger banks, suggesting that an appreciation of the kes tends to reduce their equity values. Since larger banks constitute a major portion of assets in the banking sector, this empirical result suggests that an appreciation of the kes is likely to hamper the banking sector's performance. Together with the fact that decreases in equity values generally imply higher default risk, how banks would be affected under different scenarios of kes appreciation should be closely monitored.

Like many firms, banks can be affected by exchange rate fluctuations. Exchange rates affect most directly those banks with foreign currency transactions and foreign operations. Even without such activities, exchange rates can affect banks indirectly through their influence on the extent of foreign competition, the demand for loans, and other aspects of banking conditions.

II. NATURE AND MEASUREMENT OF FOREIGN EXCHANGE RISKS

The importance of foreign exchange exposure increased shortly after 1973 as the world moved towards a flexible exchange rate system. While banks faced currency risks prior to that time as there were significant deviations from purchasing power parity, foreign exchange risk became explicitly and nominally much more important after 1973. Exposure to foreign risk can arise when the domestic currency values of assets, liabilities and cash flows denominated in a foreign currency are subject to change due to exchange rate changes. Under the perfect market conditions and if parity conditions in the foreign exchange market (purchasing power and interest rate) hold, changes in the domestic currency values of foreign assets, liabilities and cash flows should offset changes in exchange rates so that there would be no foreign exchange exposure. Because of market frictions and deviations from rational expectations, most commercial banks face significant exposure to exchange rate changes.

2.1 Four Methods To Translate Foreign Currency To Home Currency

Current/Non-Current Method: All current assets and current liabilities are translated at current exchange rates.

Monetary/Non-Monetary Method: All monetary assets and liabilities are translated at current exchange rates.

Temporal Method: Same as monetary/non-monetary method but inventory may be translated at current exchange rate if it is shown at market value.

Current Rate Method: All balance sheet and income statement items are translated at current exchange rate.

2.2 Classification Of Forex Exposures And Averting Strategies

Financial economists distinguish between three types of currency exposures- transaction exposures, translation exposures and economic exposures. All three affect the bottom- line of the business. Transaction exposure can be defined as "the sensitivity of realized domestic currency values of the firm's contractual cash flows denominated in foreign currencies to unexpected exchange rate changes. Transaction exposure is the gain or loss that might occur during settlement of foreign exchange transaction. Such a transaction could be the sale/ purchase of product or services, lending or borrowing of money or any other transaction involving mergers and acquisitions.

Transaction exposure arises from fixed price contracting in a world where exchange rates are changing randomly. The profitability of the export transaction can be completely wiped out by the movement in the exchange rate. Such transaction exposures arise whenever a business has foreign currency denominated receipt and payment. The risk is an adverse movement of the exchange rate from the time the transaction is budgeted till the time the exposure is extinguished by sale or purchase of the foreign currency against the domestic currency.

Four different strategies are available to a company for managing foreign currency risk: take no action; Trade positions actively; always hedge everything and selectively hedge risk. For most companies the first two approaches are impractical alternatives. The third option- to adopt a fully hedged strategy- is costly and offers no flexibility, but does relieve management of the need to take an active decision- making posture. A selective hedging policy, however, relies on economic decision making as the basis for judging the company's exposure to risk or, conversely, ability to gain. The company should cover only those exposures where the currency risk exceeds the cost of hedging. Treasury should constantly evaluate and reassess its risk to currency fluctuations and the cost of hedging exposures on a selective basis.

A variety of hedging techniques are available for managing currency risk. These techniques may be classified under two groups: internal techniques- those aimed at reducing or preventing an exposed position from arising and external techniques typically contractual measures aimed at minimizing exchange losses that may result from an existing exposure. Each company must specify which hedging products are acceptable for managing their exposures. Treasury staff must have clear guidelines within which to function on a day-to-day basis.

III. FOREIGN EXCHANGE RISK IN COMMERCIAL BANKS

Commercial banks, actively deal in foreign currencies holding assets and liabilities in foreign denominated currencies,

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are continuously exposed to Foreign Exchange Risk. Foreign Exchange Risk of a commercial bank comes from its very trade and non-trade services.

Foreign Exchange Trading Activities include:

1. The purchase and sale of foreign currencies to allow customers to partake in and complete international commercial trade transactions.
2. The purchase and sale of foreign currencies to allow customers (or the financial institution itself) to take positions in foreign real and financial investments.
3. The Purchase and sale of foreign currencies for hedging purposes to offset customer exposure in any given currency.
4. To purchase and sale of foreign currencies for speculative purposes base on forecasting or expecting future movements in Foreign Exchange rates. The above mentioned Trade Activities do not expose a commercial bank to foreign exchange risk as a result of all of the above. The commercial bank is exposed to foreign exchange risk only up to the extent to which it has not hedged or covered its position. Wherever there is any uncertainty that the future exchange rates will affect the value of financial instruments, there lies the foreign exchange risk of a commercial bank. Foreign Exchange risk does not lie where the future exchange rate is predefined by using different instruments and tools by the bank.

IV. FOREIGN CURRENCY EXPOSURE OF A COMMERCIAL BANK

Any unhedged position in a particular currency gives rise to foreign exchange risk and such a position is said to be Open Position in that particular currency. If a bank has sold more foreign currency than it has purchased, it is said to be Net Short in that currency, alternatively if it has purchased more foreign currency than it has purchased than it is in Net Long position. Both of these positions are exposed to risk as the foreign currency may fall in value as compared to local or home currency and becomes a reason for substantial loss for the bank if it is in Net Long position or the foreign currency may rise in value and cause losses if the bank is Net Short in that currency. Long Position is also known as overbought or Net Asset Position and Short Position is also known as Net Liability or Oversold Position. Sum of all the Net Asset positions & Net Liability positions is known as Net Open Position or Net Foreign Currency Exposure. "Net Foreign Currency Exposure" gives the information about the Foreign Exchange Risk that has been assumed by the bank at that point of time. This figure represents the unhedged position of bank in all the foreign currencies. A negative figure shows Net Short Position whereas positive figure shows Net Open Position.

4.1 Net Foreign Currency Exposure

The very first research question is to check whether there is any Net Foreign Currency Exposure assumed by the commercial banks in Kenya. For this purpose, Annual Financial Statements of listed commercial banks are studied. As per the statutory requirements, all the banks operating in Kenya including commercial banks have to mention in the notes to financial statements "Net Foreign Currency Exposure" in Kenyan shillings, the calculated net position by bank, under the heading of "Foreign Exchange Risk". Whether this Net Foreign Currency Exposure varies from bank to bank or there is a set rule for all the banks? If a bank has zero Net Foreign Currency Exposure, it means it has all of its assets and liabilities hedged and offset against other currencies or in the same currency. It can be analyzed either relative to Total Assets or Net Assets of the bank; however, it is more appropriate to analyze it with its relativeness to Net Assets. Therefore, a new variable is constructed i.e. "Net Foreign Currency Exposure relative to Net Assets.

4.2 Kinds of Foreign Exchange Exposure

Risk management techniques vary with the type of exposure (accounting or economic) and term of exposure. Accounting exposure, also called translation exposure, results from the need to restate foreign subsidiaries' financial statements into the parent's reporting currency and is the sensitivity of net income to the variation in the exchange rate between a foreign subsidiary and its parent.

Economic exposure is the extent to which a firm's market value, in any particular currency, is sensitive to unexpected changes in foreign currency. Currency fluctuations affect the value of the firm's operating cash flows, income statement and competitive position, hence market share and stock price. Currency fluctuations also affect a firm's balance sheet by changing the value of the firm's assets and liabilities, accounts payable, accounts receivables, inventory, loans in foreign currency, investments in foreign banks; this type of economic exposure is called balance sheet exposure.

Transaction exposure is a form of short term economic exposure due to fixed price contracting in an atmosphere of exchange-rate volatility. The most common definition of the measure of exchange-rate exposure is the sensitivity of the value of the firm proxies by the bank's stock return, to an unanticipated change in an exchange rate.

4.3 Factors that Affect Foreign Currency Exposure

Political Stability

The political stability of the country or countries that use a foreign currency influences how risky it is to hold their currency. Countries with long-standing, stable governments like the United States and Japan are likely to enjoy relatively stable currency values. On the other hand, countries that experience political turmoil such as frequency changes in government leadership, protests, riots and civil wars may experience greater fluctuations in the value of their currency. For example, the value of currency in Somalia drops suddenly when a new political faction attempts to take power. Unexpected political, economic, social and environmental events that affect foreign nations are an ever-present risk in foreign currency trading.

Inflation and Interest Rates

Inflation is the rate at which prices increase in an economy, which is another factor that makes it risky to hold foreign currency. If inflation rises in one country it can make their currency value fall with respect to currencies in other countries that do not experience the same increase in inflation. Inflation is difficult to predict and based largely upon expectations and the monetary policy of the government. For instance, if a certain country decided to print a large amount of new currency to pay off debts, it would likely lead to inflation which could cause the value of the currency to decline rapidly.

Interest rates can also influence currency values. If interest rates are high in a certain country, it tends to increase the demand for their currency and increase the currency's value. If the foreign nation decides to reduce interest rates, it can cause demand for the currency to fall resulting in a declining currency value.

Fraud

Foreign currency trading has the potential to yield large profits in short periods of time, which attracts predators that attempt to defraud hopeful FOREX investors. According to The U.S. Commodity Futures Trading Commission (CFTC), if you are solicited by a company that claims to trade foreign currencies, it may be an attempt at defrauding you. The commission recommends that investors steer clear of opportunities that sound too good to be true, offer high, guaranteed returns, or claim that investments carry little or no risk.

V. FOREIGN EXCHANGE RISK & ITS ASSOCIATION WITH OTHER TYPES OF RISKS

Foreign exchange risk is not only the impact of adverse exchange rate movements on the earnings of the bank due to different open positions held; it impacts the earnings & capital of bank in different ways.

As per Risk Management Guidelines published by Central Bank of Kenya for Commercial banks, Foreign exchange risk also exposes a bank to Interest Rate Risk due to the mismatches in the maturity pattern of foreign assets and liabilities. Even if the maturities of different assets and liabilities are properly matched, mismatches in the maturities of forward positions taken by bank also expose it to interest rate risk. Since the banks hold assets and liabilities in foreign currency, it also poses a serious risk of Counterparty (default) Risk, although in such case there is no principal is at stake due to the notional principal of the contracts but still the bank has to enter into different spot and forward positions to cover such failed transactions.

In this case bank faces replacement cost depending upon the exchange rates at that time. The forex transactions with the parties situated outside the home country also lead to Time Zone Risk, risk arising because of difference of settlement time between the markets in two different time-zones, and Sovereign or Country Risk.

VI. FOREIGN EXCHANGE RISK MANAGEMENT

Foreign currency exchange risk is the additional riskiness or variance of a firm's cash flows that may be attributed to currency fluctuations. Normally, foreign currency risk exists in three forms; translation, transaction and economic exposures.

Foreign currency risk management involves taking decisions which aim at minimizing or eliminating the negative effects of currency fluctuations on balance sheet and income statement values, a firm's receipts and payments arising out of current transactions and on long term future cash flows of the bank.

Creativity by managers and innovations in financial instruments have made available to banks mitigating tools that can be followed in managing the impact of foreign currency rate fluctuations. These tools are commonly known as hedging techniques. A hedge is a means of prevention against a possible probable loss. Hedging is the process of reducing exposure and consists of a number of techniques intended to offset or minimize the exchange risk of loss on the assets or liabilities which are denominated in a foreign currency. Some hedging techniques can be implemented within the firm without involving any market-based financial instruments. These are known as internal hedging techniques. All other techniques necessitate taking recourse to market-based financial instruments. These are external hedging techniques.

6.1 Hedging Strategies

Contractual Hedge: Forward, money, futures and options market hedges.

Operating Hedge: Risk-sharing agreements, leads and lags in payment terms, swaps and other strategies.

Natural Hedge: Offsetting operating cash flows.

Financial Hedge: Offsetting debt obligation or some type of financial derivative such as a swap.

Currency futures, swaps, options, forward contracts can be used to stabilize cash flows or bank can borrow or lend in a foreign currency. Financial hedging may be a more cost-effective strategy than operational hedging for many firms since it doesn't involve major redeployment of resources like building branches in other countries. While not a substitute for the long-term, financial hedging can be used to stabilize the bank's cash flow.

6.2 Hedging Foreign Exchange Risk

There is a spectrum of opinions regarding foreign exchange hedging. Some banks feel hedging techniques as speculative or do not fall in their area of expertise and hence do not venture into hedging practices. Other firms are unaware of being exposed to foreign exchange risks. There are a set of firms who only hedge some of their risks, while others are aware of the various risks they face, but are unaware of the methods to guard the bank against the risks. There is yet another set of companies who believe shareholder value cannot be increased by hedging the firm's foreign exchange risks as shareholders can themselves individually hedge themselves against the same using instruments like forward contracts available in the market or diversify such risks out by manipulating their portfolio.

6.3 Hedging Strategies / Instruments

A derivative is a financial contract whose value is derived from the value of some other financial asset, such as a stock price, a commodity price, an exchange rate, an interest rate, or even an index of prices. The main role of derivatives is that they reallocate risk among financial market participants, help to make financial markets more complete. The following outlines the hedging strategies using derivatives with foreign exchange being the only risk assumed:

- **Forwards**

A forward is a made-to-measure agreement between two parties to buy/sell a specified amount of currency at a specified rate on a particular date in the future. The depreciation of the receivable currency is hedged against by selling a currency forward. If the risk is that of a currency appreciation, it can hedge by buying the currency forward. The main advantage of a forward is that it can be tailored to the specific needs of the firms and an exact hedge can be obtained. On the downside, these contracts are not marketable, they can't be sold to another party when are no longer required and are binding.

- **Futures**

A futures contract is similar to the forward contract but is more liquid because it is traded in an organized exchange i.e the futures market. Depreciation of a currency can be hedged by selling futures and appreciation can be hedged by buying futures. Advantages of futures are that there is a central market for futures which eliminates the problem of double coincidence. Futures require a small initial outlay (a portion of the value of the future) with which significant amounts of money can be gained or lost with the actual forwards price fluctuations. This provides a sort of leverage.

- **Options**

A currency option is a contract giving the right, not the obligation, to buy or sell a specific quantity of one foreign currency in exchange for another at a fixed price; called the Exercise Price or Strike Price. The fixed nature of the exercise price reduces the uncertainty of exchange rate changes and limits the losses of open currency positions. Options are particularly suited as a hedging tool for contingent cash flows, as is the case in bidding processes. Call options are used if the risk is an upward trend in price (of the currency), while Put Options are used if the risk is a downward trend.

- **Swaps**

A swap is a foreign currency contract whereby the buyer and seller exchange equal initial principal amounts of two different currencies at the spot rate. The buyer and seller exchange fixed or floating rate interest payments in their respective swapped currencies over the term of the contract. At maturity, the principal amount is effectively re-swapped at a predetermined exchange rate so that the parties end up with their original currencies. The advantages of swaps are that firms with limited appetite for exchange rate risk may move to a partially or completely hedged position through the mechanism of foreign currency swaps, while leaving the underlying borrowing intact. Apart from covering the exchange rate risk, swaps also allow firms to hedge the floating interest rate risk.

VII. RECOMMENDATIONS

Commercial banks in Kenya should explore avenues to enhance capacities within firms for managing foreign currency risk exposure. They should explore the route of continued education for those in workplaces through short term training that should be very practical oriented; this could involve professional organizations for finance specialists, other bankers and consultants. Such training should ideally be out of site because of the need to meet participants from diverse businesses and banks. These trainings should not only cover foreign currency alone but rather could be preceded by introductory contents on the import-export trade and the practical market challenges facing the banking industry.

Foreign exchange exposure risk faced by banks forms a significant component of their risk profile. It is therefore imperative that listed firms and generally all firms in Kenya with or without international operations effectively manage their risk to minimize their exposure to exchange rate risk. In an increasingly globalizing economy, domestic commercial banks and their clients are not insulated from the effects of international economic cycles, currency movements and global competition.

VIII. CONCLUSION

Kenyan commercial banks use income statement and owners' equity account to record foreign exchange differences. It is therefore concluded that unrealized foreign exchange gains/losses had an effect on the Net Income of multinational companies as it was posted to either income statements or owners' equity reserves. The use foreign exchange has an effect on import costs and accounts payables with the net effect on the Net Income. The interest rate in the banks goes up affecting the multinational companies.

All major hard currencies of international transaction are sources of foreign exchange risk to commercial banks in Kenya. In general, most commercial banks in Kenya are significantly exposed to foreign exchange risk emanating from all the major hard currencies of international trade, namely, the US dollar, the sterling pound, the Euro and the Japanese Yen.

The practical relevance in foreign exchange management lies in the fact that, even though there are a number of techniques such as balance sheet hedging, use of derivatives, leading and lagging almost others available to manage foreign exchange risk in most developed countries, these measures tend to be rather too sophisticated and difficult to implement in developing countries like Kenya with less developed financial systems.

Corporate managers and investors in Kenya should endeavour to apply a combination of simple tools such as the use of forward contracts and swaps to supplement price adjustments and investment in foreign currency in order to minimize their exposure to exchange risk. Despite the short-comings of the financial system in terms of availability of tools for managing foreign exchange risk exposure, instruments are still available to manage the risk exposure.

It is therefore concluded that foreign exchange affect banks, companies, imports and accounts payables and export sales and accounts receivables thus with the net effect on the Net Income of multinational companies through the income statement or the owners' equity reserves.

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