

**STOCK MARKET AND PERFORMANCE OF BROKERAGE
FIRMS IN UGANDA**

CASE STUDY: MBEA BROKERAGE SERVICES (U) LIMITED

A Research
Presented to the
School of Business and Management
Kampala International University

A Partial Fulfillment
of the Requirement for the Degree Award of
Bachelor of Business Administration

by

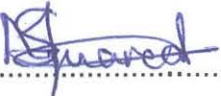
MUNJUA MARY WAIRIMU

FEBRUARY, 2006

DECLARATION

I **MUNJUA MARY WAIRIMU** do hereby declare that this research is my own original work based on the investigations I carried out and has never been submitted to any institution.

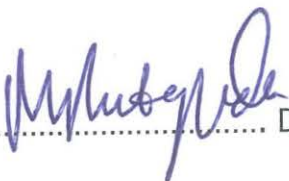
MUNJUA MARY WAIRIMU

Signature.......... Date.....13/02/06.....

APPROVAL

This research has been submitted to Kampala international University for examination with the approval of:

MR. MICHAEL RUTADANGA

Signature.......... Date.....13/02/06.....

DEDICATION

To my dad and mum and two adorable sisters Jacque and Maureen

ACKNOWLEDGEMENT

I wish to express my sincere appreciation to all those people who gave me both material and moral support in the course of producing this work.

Special gratitude goes to my lecturer, Mr. Michael Rutadanga for his guidelines all through my research and to my classmates Joyce, Diana, Michael, Daniel, Eunice and the rest who I haven't mentioned.

To my family members especially my parents and sisters for their continued moral and financial support, my very close friends, Fatel, Isaac, Mwansiti, Albert, Val and all those who I haven't mentioned for their continuous encouragement at various stages of this research development.

Finally, to all those who gave me guidelines, contributions, constructive criticisms and my very close friend, Kalidas and Paul for assisting me with their Personal Computer to type this work. I truly appreciate all of your assistance. I couldn't have done it without you all.

ABSTRACT

In Uganda, as in very many developing countries around the world, financial markets are still very shallow, poorly developed and dominated by commercial banks. As a result, there are few alternative sources of finances other than commercial bank loans. This has greatly contributed to the poor saving culture dominated by most Ugandans. Performance of Brokerage firms has equally been affected by the slow development of stock markets.

The general objective of this study was to determine the development of stock market and its relationship to the performance of Brokerage firms in Uganda. This study was based in MBEA Brokerage Services (U) Limited. Its specific objectives included to determine the profile of MBEA Brokerage Services Ltd, determine the degree to which stock market affect the level of performance of MBEA Brokerage Services Ltd and analyze MBEA Brokerage services Ltd strengths, weakness, investment risks.

The research design was a descriptive survey method. A sample of 30 respondents from four departments: finance and administration department, research department, portfolio department and personnel department were selected.

The findings on performance of MBEA Brokerage Services Ltd was measured with regard to the effectiveness of the Capital Market Authority policies using a five point scale response and there was a slightly high level of effectiveness.

The saving culture of the clients was measured by assigning percentages to the three categories of investors. The findings revealed that 61% and above of

their clients have no idea of what they want when they approach the Brokerage firm, 40% of the investors have a rough idea of what they want to buy or sell whereas less than 19% of the investors know what shares or securities they want to buy or sell.

It was established that there was a slightly positive relationship between Capital Market Authority policies and development of stock markets and performance of the Brokerage firms.

From the findings, a summary, conclusion and recommendation were made. Capital Market Authority should ensure that they enact policies with particular emphasis on developing the stock markets through intensive sensation, fiscal stimulus to promote the supply of securities in capital markets and incentives for foreign investments.

LIST OF TABLES AND GRAPHS

	Page
Table 1.0: Measuring risk.....	23
Graph 1: Set of outcomes of investments.....	24
Table 1.1: Response rates.....	26
Table 1.2: Savings culture.....	27
Table 1.3: Factors hindering development of stock markets.....	29
Table 1.4: Effectiveness of Capital market authority policies.....	30
Table 1.5: Rate of Performance of MBEA Brokerage Ltd.....	31
Graph II: Trading statistics.....	32
Table 1.6(a): A bivariate frequency.....	33
Table 1.6(b): Computation of Chi- square.....	34
Table 1.7: Determination of Strength and Degree of the variable.....	37

TABLE OF CONTENTS

	Page
Declaration.....	i
Approval.....	ii
Dedication.....	iii
Acknowledgement.....	iv
Abstract.....	v
List of tables.....	vii
Table of contents.....	viii
INTRODUCTION.....	1
Rationale of the Study	1
Theory	4
Review of the Related Literature.....	7
Significance of the Study.....	12
Objectives.....	13
Statement of Null Hypothesis.....	14
RESEARCH METHODOLOGY.....	15
Design.....	15
Environment.....	15
Respondents.....	15
Instrument.....	16

Data Collection Procedures.....	16
Statistical Treatment of Data.....	16
Limitation of Study.....	16

DATA PRESENTATION, ANALYSIS AND INTERPRETATION.....17

History.....	17
Management Structure.....	18
Financial services offered.....	20
Strengths.....	21
Weaknesses.....	22
Investment risk.....	22
Categories of departments.....	26
Determining savings culture.....	27
Factors hindering development of stock markets.....	28
Effects of capital market authority policies.....	30
Performance of MBEA Brokerage Ltd.....	31
A Bivariate frequency table.....	33
Computation of Chi- square.....	34
Determining the degree of relationship.....	35

SUMMARY, CONCLUSION ND RECOMMENDATION.....36

Summary.....	36
Conclusion.....	37

Recommendation.....	39
Suggested areas for further studies.....	41

DEFINITION OF TERMS.....	42
---------------------------------	-----------

BIBLIOGRAPHY.....	44
--------------------------	-----------

APPENDICES

Appendix A Transmittal Letter for the Managing Director.....	45
Of MBEA Brokerage Services (U) Limited	
Appendix B (a) Interview Schedule.....	46
Appendix B (b) Questionnaire.....	47
Appendix C Chi – square Distribution table.....	50
Appendix D Project work plan and budget cost.....	53

THE PROBLEM AND ITS SCOPE

INTRODUCTION

Rationale of the Study

In Uganda, dealing in shares and stocks started when the country was still a British colony. There was no formal market, no rules and no regulations to govern stock broking activities. Trading took place on gentleman's agreement in which standard commissions were charged with clients being obliged to honor their contractual commitment for making good delivery and setting relevant costs. Shares were only traded by government parastatals and not on the stock market. Stocks were traded in form of bonds and securities by the central bank.

At that time, stock broking was a sideline business conducted by accountants, auctioneers, estate agents and lawyers who met to exchange prices over a cup of tea. Because these firms were engaged in other areas of specialization, the need of association did not arise.

At the dawn of independence, stock market activity slumped due to uncertainty about the future of independence in Uganda. However, after several years of calm and economic growth, confidence in the market was once again rekindled and the exchange handled a number of highly over-subscribed public issues.

The growth was however halted when the oil crisis of 1972 introduced inflationary pressure in the economy, which depressed share prices. A 35% capital gain tax

introduced in 1975, though suspended in 1985, inflicted further losses to the Exchange which at the same time lost its regional character following the nationalization, exchange controls and other inter territorial restrictions introduced in neighboring Tanzania.

In 1976, Uganda compulsory acquired a number of companies that were either quoted or subsidiaries of companies quoted on the Nairobi Stock Exchange. In the 1980s, Uganda realized the need to design and implement policy reforms to foster sustainable economic development with an efficient and stable financial system.

In particular, it set out to enhance the role of the private sector in the economy, reduce the demands of public enterprises on the exchequer, rationalize the operations of the public sector to broaden the base of ownership and enhance capital market development.

On June 1997, the capital market authority approved Uganda Stock Exchange (U.S.E), effectively making it the only approved stock exchange in Uganda and the 17th licensed stock exchange in Africa. In the last couple of years, the U.S.E has embarked on an extensive modernization exercise including being situated at spacious premises at Worker's house.1 Pilkington Road. 2nd Floor, Northern Wing and facilities like a modern information centre. Computerization has also been enhanced and with an effort to increase trading volumes, electronic trading has become feasible.

Ugandans today have limited knowledge about the Exchange. For this reason, very few investors participate in the activities of the Exchange and many of those are still

not quite sure how to invest profitably in shares of companies quoted at the Exchange. This attitude has adversely affected the performance and growth of brokerage firms in Uganda.

Currently there are only five local listed companies which include: Uganda Clays Limited (2000), British America Tobacco (2000), Bank of Baroda (2002), DFCU Limited (2004) and New Vision (2004). Cross listed companies include East African Breweries Limited (2001) and Kenya Airways Limited (2002).

In addition, there are currently only five firms licensed to carry the function of broker/ dealer and investment advisory, seven firms or individuals licensed to operate solely as investment advisors, three fund managers who also double as investment advisors and one collective investment schemes trustee. And it's only the incorporated companies who can hold broker/ dealer license while individuals can be investment advisors.

More so, financial markets are shallow, poorly developed and dominated by commercial banks. As a result there are few alternative sources of finance other than commercial bank loans. However, many Ugandans particularly those who are newly established in their businesses, face great difficulties in accessing bank loans of any sort because they lack a track record of commercial success and suitable collateral to secure their borrowing. Due to this, brokerage firms have equally been affected since they're not known to many of their importance or the major role they play as an intermediary to stock markets.

The saving culture of most Ugandans is very poor. A large percentage has no clue on how the stock market operates and the function of brokerage firms or investment banks. Most of them still have and practice the traditional way of saving.

Theory

The study is based on the theory of James M. (1995), who stated a brokerage firm as a finance house that provides financial intermediation services. This means that the investment banks act as a mechanism by which people, individuals or institutions that are looking for money are able to find those who have money they would like to invest. Investment banking involves structuring of instruments for this intermediation.

Investment banking has become the mantra in Uganda stockbrokers. Stock brokerage firms are now moving with dispatch to set up investment banking houses in a move that has the potential to profoundly affect the way business growth and expansion is financed in Uganda.

Commercial banks intermediate, that is, they take money from one party, hold the money as their own and lend it to third parties. The borrowers have no clue where the money comes from nor does the depositor have any idea who the money will be lent to. The bank takes the risk of the borrower.

Uganda banks right from the colonial period have dominated the country similar to banks in Kenya and Tanzania. Fortunately, at independence, the Governments established development institutions to cover every economic sector. These development banks got their money from various sources and lent on a long-term basis directly to clients. It was a form of investing banking.

There has been a dilemma after these institutions collapsed. The rise of investment banking can be seen as coming in to fill this vacuum. "Time is therefore, now ripe for investment banking," he says. Indeed, stock brokerage firms are increasingly transforming themselves into investment banks, despite the quite onerous terms of changing their status. A number of factors are driving this change.

One is the increasing sophistication of clients. Previously, stockbrokers only bought and sold shares, with hardly any obligation to provide information to their clients. Some brokers, however, started developing research capacity in order to meet the growing demand for information from their clients.

Most brokers are feeling the pinch of the limitation and are working towards converting to investment banks soon and this is what the regulator (C.M.A) wishes, all brokerage firms will have to convert to investment banks. In fact, with the economy poised to continue registering growth and thus driving the on going investment climate, stock brokerage firms in the country would mostly have to convert to reap maximum benefit. The days when the country's financial sector was dominated by commercial banks are long gone. Innovation is now the driving force in the financial sector and investment banks have proved to be innovative.

The role of brokerage firms primarily is that of disintermediation. In this role, brokerage firms are on one hand able to identify or are approached by those companies or institutions that need short or long term funds for funding their development activities. These firms identify individuals, companies and institutions that have surplus funds that they could make available for short or long term periods.

The next task is to bring the parties on both sides together where the companies

or institutions that need to borrow funds are able to borrow directly from those who have the surplus funds. A firm will achieve this by creating an investment product that the borrowers are able to make use of to raise funds and savers are able to invest in conveniently. Such investments include commercial papers, bonds, preference shares, ordinary shares and other specialized investment products.

By removing the intermediary like a commercial bank and enabling the borrower to take funds directly from the savers, the borrowers are able to get funds at lower rates of interest and for periods that suit their project.

On the other hand, by lending to the borrower, savers are able to get enhanced interest rates and they are also able to lend the funds for periods that suit their liability profiles. While this arrangement is very convenient for the borrowers who are able to borrow directly from a wide variety of savers and the savers are able to invest their funds at competitive rates, the savers have and do take the direct risk of the borrowing entities.

The process of issuing corporate bonds ensures that the investors are given adequate information about the borrowers, the purpose of the funds and the terms offered. Sometimes if the savers are not satisfied with the credibility of the issuer, they could demand that the issuers provide them with guarantees from more reputable and acceptable institutions or they can demand for tangible securities although this is rare.

To minimize the risk of savers, CMA has put clear guidelines on which companies or institutions qualify to issue bonds and it has also provided a very elaborate disclosure matrix that requires the bond issuers to give adequate details about themselves to enable the investors make informed decisions about the viability of the borrower's

proposals.

In a country where development banks have collapsed, issuing of corporate bonds remains one of the most suitable alternative avenues for raising the right type of development funds. Individuals, companies and institutions that need those type of funds should approach brokerage firms and be assisted to structure a borrowing instruments that will suit their specific needs and any other investment advise and risk that may involved can well be explained.

Review of the Related Literature

According to Gerald M., government's economic development strategy plays the leading role in growth of the stock market and the private sector. A modern private enterprise economy depends upon efficient financial markets to mobilize and allocate finance efficiently.

In Uganda, as in very many developing countries around the world, financial markets are shallow, poorly developed and dominated by a few commercial banks. A larger population lacks information on the importance of the financial markets as sources of finance.

The capital markets play an important role in enabling private entrepreneurs to mobilize long-term capital. It provides a means through which the better established investors can access long term finance at a lower cost than would be possible from bank lending.

Capital markets also provide the means to enable newly established entrepreneurs

without access to bank loans to mobilize capital for investment. In addition, the capital markets stimulate savings and help to attract capital from abroad by widening the banks for the savings of the public and other financial institutions (Murigu, 1995).

The government of Uganda has also implemented major reforms to establish capital markets in Uganda. It has enacted capital markets legislation and provided support to set up and operate the CMA and Stock Exchange (The Exchange, 2005).

A prudent macro economic management has maintained the stable macro economic conditions with consistently low inflation, which is essential for long term savings and investment. Low inflation is prerequisite for robust long-term private sector investment because inflation increases uncertainty about future business prospects and therefore, shortens the planning horizons of private investors (Gerald, 1997).

Government has implemented many other reforms, which have improved the economic environment for investment. For instance, the tax reforms have given the business sector a moderate uniform corporate income tax, which is very competitive both regionally and internationally, together with generous depreciation allowances for investment in capital equipment, provided at the capital market (Kanyike, 1997).

The leading performing bourse was Egypt, which posted a 90.3 return in dollar term. The Uganda Securities Exchange was rated the second posting a return rate of 53.3 per cent in both US dollar and local currency terms. The Kenyan bourse was the fifth best performing bourse in Africa in the same quarter. The small Ugandan bourse has been a star performer in Africa over the last three years. Its index rose more than 100 points between end March and mid June 2005, to 585.5 from 401 points (Databank Group of Ghana and Standard Bank of South Africa, 2005).

Activity at the local capital market began declining in November last year as investors held onto their shares awaiting dividend payments. This trend dominated much of the first quarter of the year 2005. However, it reversed in the second quarter as listed companies issued their trading results (Bank of Uganda Economic report, 2005).

The Dar-Es-Salaam Stock Exchange, which posted a two per cent return in dollar terms in the first quarter, has entered the negative zone. By May 2005, the bourse was minus 11.5 in US dollar terms. The reason for the decline appears to be lethargy among investors. Investors are said to have taken a break from the capital market. It is not clear why the Tanzania bourse was lackluster.

However, the daily trading reports show a similar trend as Ugandan's bourse. Few shares are traded; in some instances, hardly 10,000 shares are traded. Investors are holding onto their scrip, also awaiting dividends this pointer. This trend of the investors has adversely affected the performance of brokerage firms. Many on the other hand fear to play in the stock market for fear of the risks that may be involved.

In the case of a corporation whose stock is widely held and actively traded, the owners (stock holders) of the institutions are clearly better off if the institutions stock price that is, equity value in the market place rises (Standard Bank Annual Report, 2005).

The stock prices depend heavily on two factors: expected returns from the firm's operations and the risk of the firm as viewed by the investor. Therefore, if the management of a financial institution can enhance the institution's perceived level of risk, the value of the firm's stock should raise other factors being equal. Riding on the back of strong financial performance and a bullish stock exchange, makes a company push the

securities any time he needs to and this increases turn over and enhances the performance of the market (Kenan and Eric, 1998).

The price at which an individual or a firm stands to buy a security is known as its bid price. The price which the individual or firm stands ready to sell a security is known as its offer price. By offering both to sell and buy a security, a brokerage firm "makes a market". As market conditions change during the day the brokerage firm raise or lower the firms bid and offer price.

By standing ready to buy or sell securities at their posted prices the brokerage firm plays the role that specialists and competitive market makers do in the exchange floor. Unfortunately for brokerage firms, trading is not quite easy. Traders would like to buy and sell the same number of shares each day so that at the end of the day they would not have any inventory to be worried about.

If brokerage firms are getting more buyers than sellers they compensate by raising the bid and asked prices. By raising the bid price the brokerage firm hopes to attract more sellers. By raising the offer price the firm hopes to attract more buyers. By attracting more sellers and few buyers the firm hopes to bring the number of buy and sell orders back to balance (Joseph E., 1998).

To minimize the risk of market participants, Capital Market has put guide lines on which companies or institutions qualify to issue bonds, and it has also provided a very elaborate disclosure matrix that requires the bond issuer to give adequate information about themselves to enable investors make informed decisions about the viability of the borrowers proposal.

Multi-national corporations that do not have alternative sources of financing would always benefit from floatation by encouraging public participation and committed interest in their company as a listed corporation on the Exchange, particularly on a stock market such as Uganda Securities Exchange that has limited number of products.

The philosophy of the Uganda Securities Exchange is to ensure broad based market participation for both investors and issuers alike which means equal access to the same quality information country wide and listed criteria that is inclusive and reflects the early stage growth of Uganda's private sector. The brokerage firms are to coordinate all of the professional advisers, correspond with the regulatory authority and Exchange on behalf of the client. They also advise the client on the floatation price and act as a broker through arranging the underwriting for the issue (Geoffrey S., 2002).

Money affects the stock prices and hence brokerage firms should ensure they advise their clients effectively. A sudden increase or contraction in money supply, nominal cash balances in the hands of the public may be greater or less than the amounts people want to hold. In this regard, market participation could greatly be influenced (Franco, 1994).

Significance of the Study

The study will benefit the following persons:

Uganda Capital Markets Authority will be able to target more investors in the brokerage firms. That is, those who know what they want in the stock market, those who have a rough idea of what they want and those who have no clue of what they want in the stock market.

Public will be sensitized on the benefit of saving and investing in stocks, shares and other financial instruments.

Students will be able to know more about stock markets and the activities undertaken by the brokerage firms.

Future researchers will be able to refer to this study and get more ideas on stock markets and brokerage firms and equally expand on the research.

Objectives

General: This study was to determine stock market and its relation to performance of Brokerage firms in Uganda.

Specific: This study was:

1. Determine the profile of MBEA Brokerage Services Limited as to:
 - 1.1 history
 - 1.2 management structure
 - 1.3 financial security offered
2. Determine the degree to which stock markets affects the level of performance of MBEA Brokerage Services Limited.
3. Determine if there is a significant relationship between the stock market and level of performance of MBEA Brokerage Services (U) Limited.
4. Analyze the performance of MBEA Brokerage Services (U) Limited in terms of its:
 - 4.1 strengths
 - 4.2 weaknesses
 - 4.3 Investment risks
5. Propose improvements based on the findings of the study.

Statement of Null Hypothesis

There is a significant relationship between the Capital Market Authority policies and the development of stock markets in Uganda.

There is significant relationship between the development of stock market and level of performance of Brokerage firms in Uganda.

RESEARCH METHODOLOGY

Design

This study employed a descriptive survey method to determine stock market and its relation to performance of Brokerage firms in Uganda.

Environment

This study was conducted at MBEA Brokerage Services Limited which is an investment consultant firm located on 44 Lumumba Avenue, Kampala. It consists of licensed broker/dealers, investment advisors and fund managers. They are all charged with responsibility of trading a security so as to maintain a fair, orderly and competitive market. MBEA brokerage Services Limited offers the following services to its clients: buying and selling of shares, bonds and corporate bonds, Investment advisory, share valuation, portfolio management, underwriting, private placement and equities.

Respondents

This study involved four (4) sections of MBEA Brokerage Services Limited which include:

Table 1.0 Sample size

Nature of respondents	Sample
Finance and admin.	10
Research dept.	10
Portfolio dept.	5
personnel dept.	5
Total	30

Instruments

This study utilized researcher made instruments which included interview questions that asked about the strengths, weaknesses and investment risks of MBEA Brokerage Services Limited. The questionnaire precisely aimed at collecting information on the profile of the company and data on performance of MBEA Brokerage Service Limited and role of Capital Market Authority (U).

Data Collection Procedures

The researcher sought permission from the concerned authority of MBEA Brokerage Services Limited to collect data in the firm.

The collected data was then processed and analyzed using statistical tables, graphs.

Statistical Treatment of Data

This study used the bivariate frequency where by the chi-square was computed using the formulae:

$$F_e \text{ is } = \frac{\text{Row total} \times \text{Column total}}{\text{Total respondents}}$$

Where number of respondents is F_o

Limitation of the study

- The time limit assigned to undertake the study was not enough.
- The county wide electricity rationing made it difficult to type, print and finish the work on time.
- Lack of enough finances to cater for material, transport costs, typing, printing, photocopying and binding.

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

From the interview schedule, the researcher was able to obtain the information below:

History

MBEA Brokerage Services (Uganda) Limited ("MBEA") which stands for Massachusetts Bays Estuary Association is a financial services firm headquartered in Kampala, Uganda. The firm is a Licensed Dealing Member (LDM) and founding member of the Uganda Securities Exchange (USE) and was issued with a Broker/Dealer license and an Investment Advisor's license by Uganda's Capital Markets Authority (CMA) in May 1997.

MBEA Brokerage Services, its technical partners, affiliates and strategic alliances have extensive experience in the African capital markets and access to a wide portfolio of local and foreign investors. The combined team brings a significant amount of experience and expertise in financial advisory services, primary and secondary securities issues, securities sales and trading, and investment advice and management.

The main objective of MBEA Brokerage Services is to work closely with both private and public sector entities to develop the country's primary and secondary securities market by assisting these entities to source alternative forms of competitively priced capital, thereby expanding the alternative investment vehicles currently available to the business community, government and the public at large.

Management structure

MBEA Brokerage Services is committed to performance with professionalism, confidentiality, strong work ethics and sensitivity to the needs of their clients. Its top management structure is as follows:

Andrew N. O. Owiny (Executive Director)

Andrew Owiny is the Executive Director and member of the Board of Directors of MBEA Brokerage Services. In his capacity, Mr. Owiny serves as a Board Member of the Governing Council of the Uganda Securities Exchange (USE), and is the overall Chief Executive of the Firm. For over the last 10 years, Mr. Owiny was part of the senior management of a U.S. full service investment-banking firm.

Hamu Mugenyi (Director and Secretary to the Board/Company Secretary)

Hamu Mugenyi serves as a Director and Company Secretary to the Board of MBEA Brokerage Services. Mr. Mugenyi is a partner in the law firm, Mugenyi & Co. Advocates, which serves as MBEA Brokerage Services local Legal Counsel in Uganda. Mr. Mugenyi is the Advocate directly responsible for the Firm. He commenced his legal practice as Solicitor and Legal Assistant at Mugenyi and Co. Advocates, as well as head of up-country stations.

Inga Rubadiri-Nyangabyaki (Mrs.) (Manager, Finance & Administration)

Inga Nyangabyaki is the Manager of Finance & Administration at MBEA Brokerage services with primary responsibility for sales and trading, finance, and administrative issues. Mrs. Nyangabyaki held various positions at a U.S. commercial bank for 3 years before returning to Uganda. She worked as the Finance Manager with one of the first private telecommunications company in Uganda, prior to joining MBEA Brokerage Services.

Davis L. Gathaara (Manager, Corporate Finance and Research)

Davis Gathaara is the Manager of Corporate Finance and Research at MBEA Brokerage Services. He has the primary responsibility for provision of the brokerage's corporate finance and financial advisory services. In addition, he is in-charge of the Firm's research capability, which includes the production of research publications.

Anita L. Matovu (Analyst)

Anita Matovu is an Analyst within both the Research and Back Office departments of MBEA Brokerage Services. She is responsible for writing research notes, trading on the floor of the Uganda Security Exchange (U.S.E), and back office operations.

Financial services offered.

The primary focus of the firm's business is to deliver financial services to the Ugandan institutional and retail community with emphasis on the following:

- Corporate Finance Services / Financial Advisory Services;
- Financial Services Intermediation;
- Brokerage Services;
- Investment Management and Advisory Services

The detailed services provided include:

- General Financial Advisory services / Corporate Finance Services
- Capital Mobilization
- Securities Sales and Trading – including, through the Uganda Securities Exchange (USE);
 - Trading of shares / Bonds / Government treasury bills
- Sponsoring of Stock Exchange Listings
- Management of New and Secondary Securities Issues – including;
 - Initial Public Offerings (IPO's) Rights' issues / issues of Bonds and Commercial paper
- Acting as Market Maker for Listed Securities

- Investment Advisory / Management Services
- Financial Analysis and Stock Market Research
- Privatization Advisory Services
- Mergers and Acquisitions

Strengths

To survive in this competitive market environment, MBEA has a number of strengths. These include:

- A group of legal advisors who are professionally equipped to offer advise to their clients on any legal issue. (Mugenyi & Co. advocates which serves as the local legal counsel for MBEA Brokerage Service Limited in Uganda).
- A successful total Quality Management has been implemented. Excellent market research is undertaken by the research department to ensure efficiency in executing their services to clients by thoroughly researching on the needs of its clients and ways of satisfying those needs without undergoing losses.
- Organizational systems and control are also in place. Highly capable human resource is employed to ensure successful results of the firm.
- The long term good reputation of the firm also stands as strength for the firm. Outstanding quality services and products of the firm have raised the reputation of the firm to great levels.

Weaknesses

MBEA Brokerage Services Limited has not established major weaknesses in the market environment. However, it has greatly been affected in executing its services due to the Capital Market Authority policies and the regulations of the government.

Investment risks

MBEA Brokerage Services (U) Limited has the responsibility of advising investors on which shares and securities to invest in. An investment advisor has to analyze the state of the economy and measure the risk of investing in that risk.

The most commonly used index with which risk is measured is the standard deviation. Variance of the rate of return of the stock, denoted by σ^2 is measure first then the standard deviation is calculated.

$$\sigma^2 = \sum_{i=1}^M P_i (R_i - \bar{R})^2$$

Where R_i is the i^{th} possible return on the risk

P_i is the probability of outcome i

M is the number of possible outcomes

$\bar{R}$ is the expected rate of return.

Standard deviation denoted by σ is simply the square root of σ^2 . It measures the average deviation of various outcomes from the expected rate of return. The larger the deviation the larger the variance and the standard deviation.

If one investment has a higher variance than the other, the former will also have a higher standard deviation. Therefore, both variance and standard deviation are used

interchangeably as measures of risk. Standard deviation measures the volatility of the rates of return around the expected rate of return. The greater the volatility, the larger the standard deviation.

An illustration of how risk is measured is shown below:

Suppose X, Y and Z are the only stocks available in the market and an investor chooses to invest in only one of them. An investment analyst would then have to compare the returns on each of these three stocks.

Table 1.0 Measuring risk

	STOCK X	STOCK Y		STOCK Z	
Return (R ₁)	\$130	\$120	\$120	\$110	\$150
Prob. (P ₁)	1	½	½	½	½
Expected Ret. (R ₁ P ₁)	130	130 ^a		130 ^b	
Variance (σ ²)	0	100 ^c		400 ^d	
STD. DEV.(√σ ²)	0	10		20	

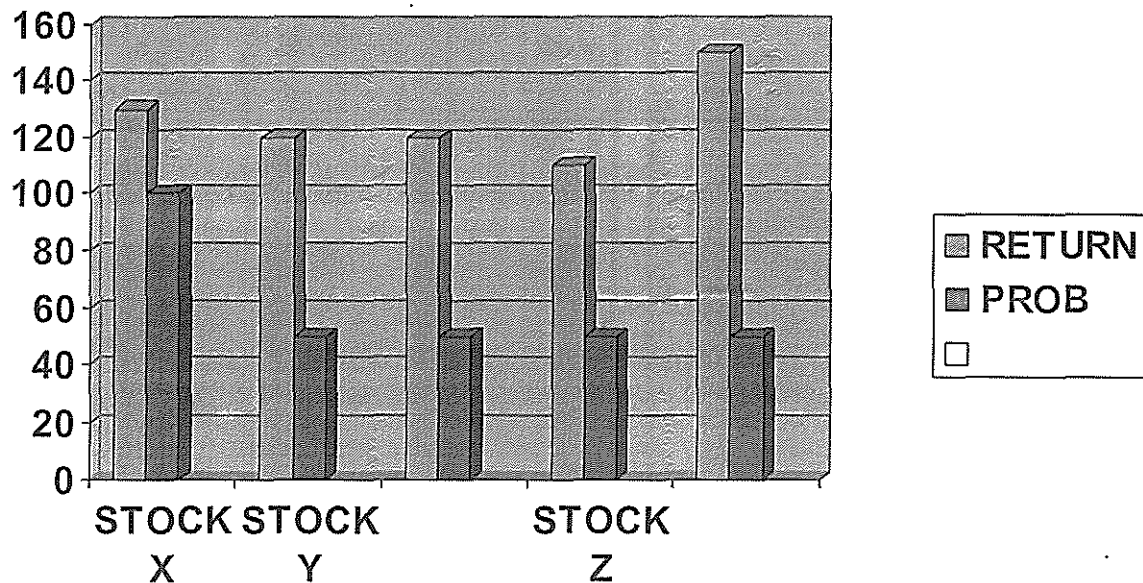
$$^a \left(\frac{1}{2} \times 120\right) + \left(\frac{1}{2} \times 140\right) = 130$$

$$^c \frac{1}{2} \times (120 - 130)^2 + \frac{1}{2} \times (140 - 130)^2 = 100$$

$$^d \frac{1}{2} \times (110 - 130)^2 + \frac{1}{2} \times (150 - 130)^2 = 400$$

$$^b (\frac{1}{2} \times 110) + (\frac{1}{2} \times 150) = 130$$

The set of outcomes of investments in the three stocks accompanied by the probabilities of these outcomes is shown in the graph below:



GRAPH I

From the above, an analyst can deduce that stock Y is identical to stock X plus \$10 and - \$10 and with an equal probability. Stock Z is identical to stock X plus \$20 and negative 20\$ with an equal probability.

Risk averters do not like such changes (of ± 10) because the satisfaction that they might derive from the gain if they realize the higher return (an extra \$10 on stock Y or \$20 on stock Z) is not tempting enough to offset the loss if they realize the lower income (\$10 less on sock Y or \$ 20 less on stock Z). From the above, an investor can know which investment is more risky and the return to get from the investment.

Investors with most of their money in stocks, bonds and mutual funds may be in trouble if the "bull market falls flat." Investing a large fraction of wealth in a single security is similar to putting too many eggs in one basket. That wealth is not diversified among enough assets.

If an investor holds more than one risky asset in an investment portfolio, the asset will depend on the standard deviation of its own rate of return and on the correlation of its rate of return with the rates of return on other assets held in the portfolio.

At this stage, correlation which is a measure of the degree to which the rate of return on one asset moves in relation to the rate of return on another asset is used. If the rate of return on two assets tends to increase and decrease together, they are positively correlated. If the return on one asset tends to increase when the other one decreases, they are negatively correlated.

The correlation between two stocks is denoted by ρ (read as rho): $\rho = 1$ when there is a perfect positive correlation. $\rho = -1$ when there is a perfect negative correlation and $\rho = 0$ if two assets are uncorrelated or independent (if there is no relationship between the asset's return. Thus ρ is in the range $-1 \leq \rho \leq +1$; and the larger ρ is (in absolute value) the stronger the degree of association between the assets.

Though each asset is risky, when held separately, they are less risky when held together in a portfolio. The perfect negative correlation between two assets' returns completely eliminates uncertainty. Hence, an individual asset's standard deviation represents risk only when the asset is held in isolation. This principle holds (albeit to a

lesser degree) even if the correlation is not -1, as long as it is not +1. When the asset is held in a portfolio with other assets, the correlation between asset rates of return has to be incorporated into the risk measure.

The findings below are presented with the objective of answering the research questions raised in the questionnaires. The evaluation of the findings enabled the researcher relate the performance of MBEA Brokerage Services (U) Limited to stock markets.

A sample of 22 respondents out of 30 targeted respondents was obtained. The main techniques used include frequency tables, percentages analysis, graphs, chi square, and correlation coefficient denoted by, P.

Categories of Departments

The researcher was able to approach different respondents in four departments of MBEA Brokerage Services (U) Limited. This is illustrated in the table below.

Table 1.1 showing response rates

DEPARTMENT	TARGET NUMBER	ACTUAL RESPONDENTS	PERCENTAGE
Finance dept.	10	8	80%
Research dept.	10	5	50%
Portfolio dept.	5	5	100%
Personnel dept.	5	2	40%
Total	30	22	73%

The researcher met the target number of respondents from the portfolio department to the tune of 100% and 80% from the finance and administration department. From the research department, the researcher was able to get a response of 70%. The personnel department recorded the least rate of response with 40%. In total, the researcher was able to get a total of 22 respondents which represented 73% of the total number of respondents.

Determining the savings culture of clients (investors) of MBEA Brokerage Services (U) Limited

The researcher investigated the different categories of investors that approach MBEA Brokerage firm and the findings were as shown below:

Table 1.2 showing the saving culture

CATEGORIES	BELOW 19%	20%	40%	60%	61% - ABOVE
THOSE WHO KNOW WHAT THEY WANT	8	-	-	-	-
THOSE WHO HAVE A ROUGH IDEA OF WHAT THEY WANT	-	-	4	-	-
THOSE WHO HAVE NO IDEA OF WHAT THEY WANT	-	-	-	-	11

More than 61% of the investors do not know what shares are and therefore they are not able to determine which ones are good to invest in. What they want is to be advised on which the best shares are and how much they should be invested in them. They also want to know when the shares could be sold and when to buy more.

40% of investors have a rough idea of what shares are and what they want to buy or sell. However, they still require a second opinion from the brokerage firm. Such clients come to the brokerage firm with their views and enquire if they should risk in the share. Below 19% of the investors know exactly what they want when they approach a Brokerage firm. Such clients give the brokerage firm their purchase and sale orders which are executed for them.

Factors hindering development of stock markets

The researcher was able to outline several factors that affect the development of stock markets and the response rate to the factors. This is shown in the Table 1.3.

Table 1.3 showing factors hindering development of stock markets.

FACTORS	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
Lack of information	14 61%	7 39%	0 0%	0 0%	0 0%
Fiscal policies	12 52%	8 35%	3 13%	0 0%	0 0%
Money market status	13 57%	5 22%	3 13%	2 9%	0 0%
Political environment	2 9%	3 13%	6 26%	9 39%	3 13%
Tax policies	10 43%	7 30%	3 13%	3 3%	0 0%
Others	8 35%	9 39%	5 22%	1 4%	0 0%

The major factor hindering development of stock market is lack of information as identified by 61% of respondents who strongly agree and 39% agree. 52% strongly agreed and 35% agreed that fiscal policies also hinder development of stock markets.

However, 13% of the respondents are not sure. 57% strongly agreed and 22% agreed that money market status hinder development of stock market. However, 13% and 9% are not sure and disagree respectively. 43% strongly agree and 30 % agree that tax policies equally hinder development of stock markets but, 13% and 3% are not sure and disagree respectively.

Effects of Capital Market Authority (U) policies on performance of MBEA Brokerage services limited

Table 1.4 showing level of effectiveness of C.M.A (U) policies

LEVEL	FREQUENCY	PERCENTAGE
Highly effective	6	27%
Effective	10	45%
Partly effective	2	9%
Not sure	3	14%
Not effective	1	5%
TOTAL	22	100%

It can be observed that 10 respondents constituting 45% of the target number agreed that the effectiveness of the Capital Market Authority (U) policies have a relationship with performance of MBEA Brokerage services (U) Limited. 27% of the respondents equally agreed that the C.M.A (U) policies were highly effective.

However, 9% of the respondents said that Capital Market Authority policies were

partly effective and 14% were not sure. 5% of the respondents said the Capital Market Authority policies have no effective and hence had no relationship with the performance of MBEA Brokerage Services Limited.

Performance of MBEA Brokerage Services (U) Limited

The researcher investigated the performance of MBEA Brokerage Services (U) Limited for the past five years and the findings were summarized as follows:

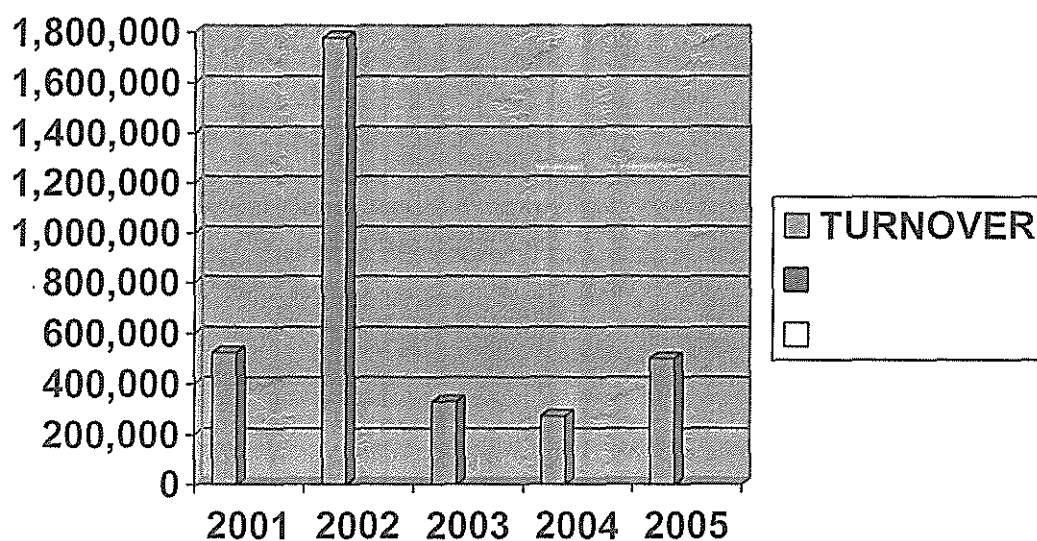
Table 1.5 showing the rate of performance

PERFORMANCE	FREQUENCY	PERCENTAGE
Highly improved	2	9%
Slightly improved	11	50%
Not sure	5	23%
No improvement	4	18%
TOTAL	22	100%

The researcher used the table 1.5 to indicate the performance of MBEA Brokerage Services (U) Limited. 50% of the respondents said that the performance of the firm has slightly improved. 23% of the respondents are not sure if the performance of the firm has improved, 9% say the performance has highly improved whereas 18% of the respondents claim that there has not been any improvement for the last five years.

Trading statistics show that the annual turn over since the year 2001 was as follows:

Year:	Annual turn over
2001	UGX 523,721,670
2002	UGX 1,777,357,058
2003	UGX 330,219,170
2004	UGX 272,219,170
2005 TO DATE	UGX 498,588,878



GRAPH II

It is evident from the above graph that in the year 2001 the annual turn over was UGX.523,721,670 In the year 2002 the annual turn over increased significantly to a figure of UGX 1,777,357,058 but drastically fell to UGX 330,776,950 in 2003 and

Where F_o is the number of responses

$F_e = \frac{\text{Row total} \times \text{column total}}{\text{Total respondents}}$

Total respondents

Table 1.6 (b) computation of the Chi – Square

F_o	F_e	$F_o - F_e$	$(F_o - F_e)^2$	$(F_o - F_e)^2 / F_e$
1	0.52	0.48	0.2304	0.443
3	2.87	0.13	0.0169	0.006
2	1.36	0.64	0.4096	0.301
0	1.09	-1.09	1.1881	1.09
1	1.0	0	0	0.0
6	5.5	0.5	0.25	0.045
2	2.5	-0.5	0.25	0.1
2	2.0	0	0	0.0
0	0.18	-1.18	0.0324	0.18
2	1.0	1.0	1.00	1.00
0	0.45	-0.45	0.2025	0.45
0	0.36	-0.36	0.1296	0.36
0	0.27	-0.27	0.0729	0.27
0	1.5	-1.5	2.25	1.50
2	0.68	1.32	1.7424	2.562
3	0.55	2.45	6.0025	10.914
TOTAL				19.221

The result of the computation of the chi - square which is the value of:

$$(F_o - F_e)^2 / F_e = 19.221$$

Using the 95% confidence levels, a degree of freedom was computed.

$$\begin{aligned}\text{Degree of freedom} &= (R - 1) \times (C - 1) \\ &= (4 - 1) \times (5 - 1) \\ &= 12\end{aligned}$$

This means that under the 95% confidence level and degree of freedom of 12, the Chi - square observed is 28.2997 (Appendix C)

From the computation above, since the chi - square of 19.211 is less than the chi - square observed at 95% confidence level and degree of freedom of 12, (28.2997) the researcher established that there is a relationship between development of stock market and the performance of brokerage firms.

Determination of the relationship between development of stock market and performance of MBEA Brokerage Services (U) Limited.

To determine the relationship between the development of stock markets and performance of MBEA Brokerage Ltd more precisely, the phi correlation coefficient which is denoted by ϕ was used.

$$\phi = \frac{AD - BC}{\sqrt{(A+D)(B+C)(A+C)(B+D)}}$$

Table 1.7 Determination of the strength and degree of the two variables

RESPONSES	Strongly agree + Agree	Not sure + Disagree+ Strongly Disagree
Highly improved + Slightly improved	8A	1B
Not sure + No Improvement	1C	2D

$$\square = \frac{AD - BC}{\Sigma (A+D) (B+C) (A+C) (B+D)}$$

$$= \frac{(8 \times 2) - (1 \times 1)}{\Sigma (8 + 2) (1 + 1) (8 + 1) (1 + 2)}$$

$$= \frac{16 - 1}{\Sigma 10 + 2 + 9 + 3}$$

$$= 0.028$$

$$= 2.8\%$$

SUMMARY, CONCLUSION AND RECOMMENDATION

Summary

The findings rates 22 respondents (73%) of the targeted sample of 30 respondents. The general objective of the study was to determine the effects of stock markets on performance of Brokerage firms in Uganda.

The research included use of questionnaires and an interview schedule whereby respondents' primary data was collected and analyzed with the assistance of secondary data.

Findings revealed that Capital Market Authority (U) which is the regulator body responsible for the promotion, development and regulation of the capital market industry in Uganda plays an important role in the growth of the brokerage firms in Uganda. 45% of the respondents agreed that policies set by C.M.A (U) affect the performance and growth of brokerage firms. Capital Market Authority (U) policies should am building a capital market industry that is transparent, robust, fair and efficient.

Findings further revealed that there are several factors that hinder the development of stock markets. These include lack of information, fiscal policies and monetary policies set by the government, political environment and tax policies. Lack of information was identified as the major hindering factor with 61% strongly agreeing followed by fiscal policies set by the government with 52% strongly agreeing.

Findings also revealed that the performance of MBEA Brokerage Services (U) Limited has for the past five years slightly improved. The annual turnover also reveals that there was a major slump in the turn over from UGX 1,777,357,058 in 2002 to UGX 330,776,950 and UGX 272,219,170 in the year 2003 and 2004 respectfully. However, the findings also reveal there was an increase in the year 2005 to UGX 498,588,878.

The various types of investors identified revealed that majority of them did not have an idea of what they want when they approach the brokerage firm. They do not know how to invest and make money in the Exchange and only below 19% of the investors actually know what they want they approach a brokerage.

Conclusion

From the findings, the researcher concluded that the development of stock markets and policies set by the government and Capital Market Authority (U) affect the growth and performance of brokerage firms in Uganda. This is because there exist a significant relationship between the developments of stock markets and the performance of MBEA Brokerage Ltd in the phi correlation coefficient of 2.8%.

Capital Market Authority is mandated to carry, regulate and promote the development of stock marketing in Uganda, approve stock exchanges, license broker/dealer, investment advisors, fund managers and approve all offers of securities to the public.

The function of capital markets is to ensure that resources are productively employed and contribute towards achieving the highest possible rate of growth for the nation. For the capital markets to fulfill its function it must be efficient, fair and transparent.

For brokerage firms to grow and execute effective assistance, the nation should be sensitized on the importance of stock markets and enact sound monetary policy as it is evident that one of the main reasons for the reluctant growth rate is lack of information. In addition, above 61% of potential investors approach brokerage firms do not know what shares are and unfortunately most Ugandan belong to this group.

Recommendations

The key success factors for a robust capital market industry and growth of brokerage firms in Uganda includes intensive sensitization and a sound macro economic environment which entails sound fiscal policies, sound monetary policies and credible exchange rate regime.

Capital Market Authority (U) which is the regulatory body responsible for the promotion, development and regulation of the capital market industry in Uganda should recognize that enhancing public education and awareness about securities is an important part of its mandate. C.M.A (U) should continue to develop mass education programs whose ultimate goal is to have all Ugandan benefit from participation in the capital market. Its only through knowledge and awareness that it can hope to achieve effective investor protection; investment professionals should provide the best services so that investors can understand risk and choose the right investment product.

Dissemination of knowledge concerning savings is a starting point for any potential investor. When people know why they should save then they are compelled and motivated to save.

Fiscal policies must focus on debt services, management of contingent liabilities arising out of state owned entities, recording of all accomplishment of fiscal prudence and coordination of fiscal policies with debt management, sound and sustainable budget, effective collection of revenue taxes and effective expenditure control mechanism coupled with efficient debt management framework.

The sound monetary policy should entail independent and efficient central bank, credible monetary policy such as inflation targeting and proper coordination of day to day fiscal and monetary operations.

Credible exchange rate regime should be sustainable in the short term as well as long term and there should be a carefully managed liberalization of capital account.

The government should ensure there is a stable political environment with track records of paying debts, adherence to sound policies; track record of smooth change of government and rule of law.

Tax treatment of various financial assets must be similar and simple; favorable taxation of compulsory savings, pensions, and collective investment schemes incentives must be targeted at enhancing efficient resource allocation.

A capital market requires an active money market that reduces liquidity risk attached to bonds; active risk management and profit focus by institutions; monetary policy implementation through indirect methods by the central bank; stimulation of inter bank trading and efficient government's cash management system.

An efficient and effective legal and regulator framework that entails protecting the investors (process, rights and responsibilities), reduces systematic risks and sets standards of accounting and auditing should be implemented. A strong supervision and enforcement system and strong and credible judicial system and allowing the government's authority to borrow and enhance will equally make a difference in the capital market industry.

Suggested areas for further study

Researcher suggests that ways of measuring risks of different securities should be researched further so that any potential investor is able to invest in the most profitable investment.

Secondly, policies and regulations governing stock markets and brokerage firms should be studied further.

DEFINITION OF TERMS

For the purpose of this study, the following terms are defined operationally:

Stock market is a place where stock exchange takes place. It is where stocks and shares are publicly bought and sold.

Performance is an action or achievement considered in relation to how successful it is. In relation to MBEA brokerage Services Limited, it is the ability for the firm to act efficiently in providing adequate information on the purchase and sale of stocks, shares, corporate bonds and other financial instruments and achieving an increase in individuals and institutions participating in the stock market activities.

Profile is a description of MBEA Brokerage Services (U) Limited in terms of the following:

1. History refers to when MBEA Brokerage Services started. It also includes general information about MBEA Brokerage limited and its main objectives.
2. Management structure refers to the way the management is organized, built or put together. It also refers to the control and making of decisions in the firm. It outlines the people in charge and their function in ensuring effective performance of the firm.
3. Financial services offered refer to the different types of financial assistance offered by the firm to its clients.

Analysis refers to MBEA Brokerage Services (U) Ltd.'s structure and nature. It includes the following:

1. Strengths refer to the strong holds the firm employs to resist obstacles that it may face. For instance, the strategies the firm employs when there is fluctuations in the stock prices in the market.
2. Weaknesses refer to the weak points at which the firm is not able to curb the obstacles it faces.
3. Investment risks refer to the uncertainty surrounding the returns of an investment in shares and stocks and how the firm assists clients decide on what to invest in by computing the risk.

BIBLIOGRAPHY

BOOKS

A. James Meigs MONEY MATTERS: ECONOMIC, MARKETS, POLITICS Harper and Row Pub; New York, 1972.

Bradford and Charles FUNDAMENTALS OF INVESTMENTS VALUATION AND MANAGEMENT 2nd Ed Mc Graw-Hill Pub; New York, 2002.

Frank, Franco Modigliani and Michael FOUNDATIONS OF FINANCIAL MARKETS AND INSTITUTIONS 2nd Ed. Prentice-Hall Inc; New Jersey, 1994.

Joseph E. Granville NEW STRATEGY OF DAILY STOCK MARKET TIMING FOR MAXIMUM PROFIT 6TH Ed. Prentice-Hall; Inc New Jersey, 1998.

Kenan and Erick THE REAL LIFE INVESTING GUIDE Mc Graw-Hill Pub; New York, 1998.

Geoffrey and Stanley, FUNDAMENTALS OF INVESTMENTS MANAGEMENT, 7TH Ed., McGraw Hill Pub; New York, 2002.

Peter and James, FINANCIAL INSTITUTION, 4TH Ed. Richard Irwin pub; United States, 1993.

MAGAZINES

The Exchange 2nd Quarter, 2005 Volume 2 Nairobi Stock Exchange

Capital Markets Volume 9 Jan – March, 2005 Journal for CMA, Uganda

WEBSITES

www.cmauganda.co.ug

www.mbea.net

www.nse.co.ke

APPENDIX A

TRANSMITTAL LETTER FOR THE MANAGING DIRECTOR OF MBEA BROKERAGE SERVICES (U) LIMITED

MUNJUA MARY WAIRIMU,
Kampala International University
P.O Box 20000
Kampala, Uganda

January 15, 2006

MANAGING DIRECTOR
MBEA Brokerage Services (U) Limited
44 Lumumba Avenue,
P.O Box 24613
Kampala, Uganda

Dear Sir,

I kindly request you to accord me with all possible assistance by availing me with data/ information that may be of help in the preparation of my research study entitled **"STOCK MARKET AND PERFORMANCE OF BROKERAGE FIRMS IN UGANDA"** which constitutes an essential component of my course of study.

Any assistance rendered will be highly appreciated.

Respectfully yours,

MUNJUA MARY WAIRIMU

QUESTIONNAIRE

Dear Respondent,

This is an academic research aimed at evaluating the performance and growth of brokerage firms in relation to development of stock markets in Uganda. The information provided will be used strictly for academic purposes and will be kept confidential.

Please kindly tick in the appropriate bracket and fill in the blanks accordingly.

1. In your own opinion how would you agree and rate the performance of MBEA Brokerage Services (U) Ltd for the last five years?

- a) Highly improved ☐ b) Not sure ☐
c) Slightly improved ☐ d) No improvement ☐

2. What reasons do you attribute for your answer above?

3. How can you rate the saving culture of your clients (investors) in shares and stocks?

CATEGORY OF INVESTORS	BELOW 19%	20%	40%	60%	61% - ABOVE
Those who know what they want					
Those who have a rough idea of what they want					
Those who have no idea of what they want					

4. In your opinion which of the following may you agree to as the major obstacles that hinder development of stock markets in Uganda?

FACTORS	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
Lack of information					
Fiscal policies					
Money market status					
Political environment					
Tax policies					

Others(specify).....

.....

5. In your view, how would you rate the Capital Market Authority (U) policies in enhancing performance of MBEA Brokerage Services (U) Limited?

a) Highly effective ☐

b) Partly effective ☐

c) Effective ☐

d) Not effective ☐

e) Not sure ☐

6. In your opinion, what do you think can be done to remove the obstacles facing growth of Capital Markets? (You may tick more than one)

a) Intensive sensitization

☐

b) Merging stock markets in East Africa

☐

c) Incentives for foreign investment

☐

d) Fiscal stimulus to promote supply of securities in capital market

☐

e) Others(specify)

.....

.....

.....

.....

.....

Thank you for your valuable time.

APPENDIX C

Critical values for the Chi Square Distribution

Significance Level					
df	0.10	0.05	0.025	0.01	0.005
1	2.7055	3.8415	5.0239	6.6349	7.8794
2	4.6052	5.9915	7.3778	9.2104	10.5965
3	6.2514	7.8147	9.3484	11.3449	12.8381
4	7.7794	9.4877	11.1433	13.2767	14.8602
5	9.2363	11.0705	12.8325	15.0863	16.7496
6	10.6446	12.5916	14.4494	16.8119	18.5475
7	12.017	14.0671	16.0128	18.4753	20.2777
8	13.3616	15.5073	17.5345	20.0902	21.9549
9	14.6837	16.9190	19.0228	21.6660	23.5893
10	15.9872	18.3070	20.4832	23.2093	25.1881
11	17.2750	19.6752	21.9200	24.7250	26.7569
12	18.5493	21.0261	23.3367	26.2170	28.2997
13	19.8119	22.3620	24.7356	27.6882	29.8193
14	21.0641	23.6848	26.1189	29.1412	31.3194
15	22.3071	24.9958	27.4884	30.5780	32.8015
16	23.5418	26.2962	28.8453	31.9999	34.2671
17	24.7690	27.5871	30.1910	33.4087	35.7184
18	25.9894	28.8693	31.5264	34.8052	37.1564
19	27.2036	30.1435	32.8523	36.1908	38.5821
20	28.4120	31.4104	34.1696	37.5663	39.9969
21	29.6151	32.6706	35.4789	38.9322	41.4009
22	30.8133	33.9245	36.7807	40.2894	42.7957
23	32.0069	35.1725	38.0756	41.6383	44.1814
24	33.1962	36.4150	39.3641	42.9798	45.5584
25	34.3816	37.6525	40.6465	44.3140	46.9280
26	35.5632	38.8851	41.9231	45.6416	48.2898
27	36.7412	40.1133	43.1945	46.9628	49.6450
28	37.9159	41.3372	44.4608	48.2782	50.9936
29	39.0875	42.5569	45.7223	49.5878	52.3355
30	40.2560	43.7730	46.9792	50.8922	53.6719
31	41.4217	44.9853	48.2319	52.1914	55.0025
32	42.5847	46.1942	49.4804	53.4857	56.3280
33	43.7452	47.3999	50.7251	54.7754	57.6483
34	44.9032	48.6024	51.9660	56.0609	58.9637
35	46.0588	49.8018	53.2033	57.3420	60.2746
36	47.2122	50.9985	54.4373	58.6192	61.5811
37	48.3634	52.1923	55.6680	59.8926	62.8832
38	49.5126	53.3835	56.8955	61.1620	64.1812
39	50.6598	54.5722	58.1201	62.4281	65.4753
40	51.8050	55.7585	59.3417	63.6908	66.7660
41	52.9485	56.9424	60.5606	64.9500	68.0526
42	54.0902	58.1240	61.7767	66.2063	69.3360

43	55.2302	59.3035	62.9903	67.4593	70.6157
44	56.3685	60.4809	64.2014	68.7096	71.8923
45	57.5053	61.6562	65.4101	69.9569	73.1660
46	58.6405	62.8296	66.6165	71.2015	74.4367
47	59.7743	64.0011	67.8206	72.4432	75.7039
48	60.9066	65.1708	69.0226	73.6826	76.9689
49	62.0375	66.3387	70.2224	74.9194	78.2306
50	63.1671	67.5048	71.4202	76.1538	79.4898
51	64.2954	68.6693	72.6160	77.386	80.7465
52	65.4224	69.8322	73.8099	78.6156	82.0006
53	66.5482	70.9934	75.0019	79.8434	83.2525
54	67.6728	72.1532	76.1921	81.0688	84.5018
55	68.7962	73.3115	77.3804	82.292	85.7491
56	69.9185	74.4683	78.5671	83.5136	86.9940
57	71.0397	75.6237	79.7522	84.7327	88.2366
58	72.1598	76.7778	80.9356	85.9501	89.4770
59	73.2789	77.9305	82.1174	87.1658	90.7153
60	74.3970	79.0820	83.2977	88.3794	91.9518
61	75.5141	80.2321	84.4764	89.5912	93.1862
62	76.6302	81.3810	85.6537	90.8015	94.4185
63	77.7454	82.5287	86.8296	92.0099	95.6492
64	78.8597	83.6752	88.0040	93.2167	96.8779
65	79.9730	84.8206	89.1772	94.4220	98.1049
66	81.0855	85.9649	90.3488	95.6256	99.3303
67	82.1971	87.1080	91.5193	96.8277	100.5538
68	83.3079	88.2502	92.6885	98.0283	101.7757
69	84.4179	89.3912	93.8565	99.2274	102.9961
70	85.5270	90.5313	95.0231	100.4251	104.2148
71	86.6354	91.6703	96.1887	101.6214	105.4323
72	87.7431	92.8083	97.3530	102.8163	106.6473
73	88.8499	93.9453	98.5162	104.0098	107.8619
74	89.9561	95.0815	99.6784	105.2019	109.0742
75	91.0615	96.2167	100.8393	106.3929	110.2854
76	92.1662	97.3510	101.9992	107.5824	111.4954
77	93.2702	98.4844	103.1581	108.7709	112.7037
78	94.3730	99.6170	104.3159	109.9582	113.9107
79	95.4762	100.7486	105.4727	111.1440	115.1163
80	96.5782	101.8790	106.6285	112.3288	116.3209
81	97.6796	103.0095	107.7834	113.5123	117.5240
82	98.7803	104.1387	108.9373	114.6948	118.7261
83	99.8805	105.2672	110.0902	115.8762	119.9270
84	100.980	106.3949	111.2422	117.0566	121.1262
85	102.0780	107.5217	112.3933	118.2356	122.3244
86	103.1773	108.6479	113.5436	119.4137	123.5218
87	104.2750	109.7733	114.6929	120.5909	124.7176
88	105.3723	110.8980	115.8415	121.7672	125.9123
89	106.4689	112.0220	116.9890	122.9422	127.1060
90	107.5650	113.1452	118.1359	124.1162	128.2987

91	108.6606	114.2679	119.2820	125.2893	129.4902
92	109.7556	115.3898	120.4270	126.4616	130.6812
93	110.8501	116.5110	121.5714	127.6330	131.8705
94	111.9442	117.6317	122.7152	128.8032	133.0589
95	113.0377	118.7516	123.8580	129.9725	134.2466
96	114.1307	119.8709	125.0001	131.1411	135.4327
97	115.2232	120.9897	126.1414	132.3089	136.6188
98	116.3153	122.1077	127.2821	133.4756	137.8030
99	117.4069	123.2252	128.4219	134.6415	138.9869
100	118.4980	124.3421	129.5613	135.8069	140.1697

APPENDIX D

PROJECT WORK PLAN

TASK	DURATION
SELECTION OF TOPIC	5 DAYS
PRESENTATION OF THE PROPOSIAL	1 WEEK
QUESTIONNAIRES DESIGN	3 WEEK
LITERATURE REVIEW	1 WEEK
DATA COLLECTION	6 DAYS
DATA PROCESSING AND ANALYSIS	3 WEEK
REPORT WRITING	1 WEEK
TYPE SETTING, PHOTOCOPYING AND PRESENTATION	1 WEEK

BUDGET COST

PARTICULARS	COST
PRINTING AND PHOTOCOPYING QUESTIONNAIRE	9,500/=
TRANSPORT	9,000/=
FLASH DISK	20,000/=
TYPE SETTING REPORT AND PRINTING	25,000/=
BINDING FINAL REPORT	16,500/=
MISCELLANEOUS EXPENCES	40,000/=
TOTAL	120,000/=