A STUDY OF THE IMPACT OF INFORMATION TECHNOLOGY ON
THE EFFICIENCY OF SECURITY MARKET IN NIGERIA

BY

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DECLARATION

I declare that the work in the project report entitled “A Study of the Impact of Information Technology on the Efficiency of Security Market in Nigeria” has been performed by me in the Department of Business Administration. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this project report was previously presented for another degree or diploma at any university.

____________________ ________________ __________
Yabagi Bala Ahmed     Signature     Date
CERTIFICATION

This is to certify this project titled “A Study of the Impact of Information Technology on the Efficiency of Security Market in Nigeria” written by Yabagi, Bala Ahmed, meets the regulations governing the Award of the Degree of Master of Business Administration (MBA) of Ahmadu Bello University, Zaria and it is therefore approved for its contributions to Knowledge, and literally presentation.

Chairman, Supervisory Committee    Signature    Date

Dr M.N Maiturare
Head of department    Signature    Date

External Examiner    Signature    Date

Dean, Postgraduate School    Signature    Date
DEDICATION

This research work is dedicated to first of all the Almighty Allah for his bounties showere upon me and to the following people my MENTOR, DR, M. N. Maiturare, Alhaji Umar Sanda (Director, Niger State Ministry of Local Government and Chieftaincy Affairs), Late Etsu Nupe Dr Umar Sanda Ndayako, my parents Alhaji Abubakar Yabagi and Zainab Abubakar Yabagi, my wife Fatima Ahmed Bala and my two daughters Khadijat L.B. Ahmed and Aisha L.B. Ahmed.
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ABSTRACT

Information technology is an instrument of major proportions both as an economic tool and social phenomenon. Virtually every organization in the business community is in need of modern information technological machines. And the public can well attest to this extensive need of modern technology, for surely no one has escape exposure to this highly effective tool of communication. As a result there is an ever-going interest in learning more about modern information technological machines.

This research work has been designed as an over view of information technology. It is intended not only for those who are interested in the activities of the Nigeria security market, but also for those who are interested in such diverse activities as the many others facts of business. As information technology increases in importance as a communication tool, it be hooves as such persons to understand it and available its potential contribution to the efficiency of the Nigerian security market.

To all those who will affect and be affected by the modern information technological machines, this research as to provide a solid understanding of why and how information technology works. To be sure, we all have some knowledge of information technology, therefore, such a limited knowledge tend to give many people a distorted view of modern information technological machines, and it is hope that the reader can come away from these research with a more balanced insight on the subject.

It most be noted, however, that the more I examine the field of information technology, the more I realize that it is a most dynamic subject –ever changing, ever evolving. Therefore, I have consciously avoided making too much hard-and-fast statement. A recognize that information technology is, after all, on art as well as science.
Data and illustration for this research represented the most recently attainable commensurate with the production time lag of a booklet size and nature. I hope these are not just ornamentally, but rather that they make the text matter both clearer and more stimulating.

Because so many people approach a first cause in information technology with preconceived ideas about its economic and social implication, I feel these topics must be considered first.
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CHAPTER ONE: INTRODUCTION

1.0 GENERAL BACKGROUND OF THE STUDY

Today’s forty-five years after the financial market has witnessed a tremendous growth in terms of asset, physical expansion, range of securities, style and scope of operation. One can think of an environment as the setting within which this occur, the framework which influences and is in turn modified by what occur by providing incentives throwing up challenges, creating obstacles and offering opportunities, view in this light the information technology is obviously shaped the nature and structure of the capital market.

The physical expansion is the system bred stiff competition and the unfolding rat race, survival instinct is bringing out the best of every investor. The range of new securities and operations is now very vast and investors are being elevated to the level of profundity. The most striking development as the competitive environment becomes more intensive is office automation via the computer technology, which has reduced today’s operational processes to a function of what they used to be. Gradually more people are becoming receptive to the European trend where by retail business is developed with the necessity of substantial branch network, it is believed in some quarters that may be closure of branches in favour of electronic substituted.

The role of information technology and communication in concluding securities transaction is obvious. Technology when properly harnessed is a powerful tool improving efficiency and competitiveness in security market, to conserve this,
information is very important, therefore, the link between information technology and security market is brought into sharp focus when one compares the developed country situation. According to Bankers trust vision, advance in information technology and electronic communication are so rapid in occurrences that many of the task now undertaken by financial intermediaries such as rapid security trading, research analysts e.t.c. will be done automatic by computers. One of the most resent and perhaps most functional to investors are the propose of online security trading system by many stock exchange market in Nigeria.

1.1 STATEMENT OF PROBLEMS

The main problem of these research works is to identify the influence and implication of information technology in the Nigeria Security market. Technological instrument that when utilizes will bust the market efficiency, but the problems are as follows:

(a) Most or our investor do not use some of those modern technological investment, these could be as a result of lack of awareness of either existence for the portfolio analysis.

(b) In Nigeria a mere or less family business cannot make use of the modern technological machine for more information about the security transaction in the financial market, because most of the private companies sale and buy their securities outside the security market.
(c) Absence of good and modern technology system (communication facilities) also hinder the efficiency of the security market, because investors only patronize the market when the securities are listed in the newspapers and other financial institution for advertisement.

(d) Security market are yet to fully developed a marketing management system, which allows for coherent coordination of the activities of the entire activities involved.

(e) Most of the people do not seem to appreciate the idea while a lot more fine no satisfaction un the whole concept and as much do not see anything of interest therein. As a result, the security market is saddle with problems of proper coordination of the entire activities and the result translated into poor transaction due to the vandalization of most installation and equipment.

(f) Low rate of return on investment also contribute to the security efficiency problems, because the number of security quoted in the market will not return even the cost of modern machine installation.

Information technology have a lot of advantages, therefore the research work is attempt to explore in to the possible areas of developing efficient market and result oriented in modern marketing system and techniques aimed primarily at improving the general transaction and services, and above all creating much needed awareness those will go along way in serving as antedoted to some of the problems just mentioned.
1.2 OBJECTIVE OF THE STUDY

It should be noted that the Nigeria financial market took a new dimension since 1990 when most of the institution introduce office automation, where since then emphasis was diverted to computer system.

To achieve this, the government introduces a computer programme into our various institutions, from primary to the university level. To achieve the Nigeria financial market has to be place at the center circle of the programme and it played a very significance role. From 1995 to the year 2005 to date there has been some changes in the security market regarding its day-to-day transactions. Therefore, the objectives of the study are as follows:

1) To determine the role-played by the information technology in the development of the Nigeria business environment in particular Nigeria economy in general.

2) The under-utilization or non-utilization of information technology may be because of having hidden factors behind it. Therefore, this study intend to bring out such problems if any for the economy and socio-political advantage of the nation.

3) To create awareness of both market and individual investor the use of information technology on the portfolio analysis and the efficient of the capital market.
4) To know why information technology are under-utilized if so what are things responsible for these under-utilization, is it because of lack of knowledge by the individual investor.

5) To bring out the importance of using information technology as the office automation in order to improve efficiency in the security market.

1.3 SIGNIFICANCE OF THE STUDY

Information technology goes beyond just stock efficiency of security market in Nigeria. It involves a careful cultivation of existing connections and seeking for the connections to the advantages of both the companies and the investors.

This study is however significant as it tries to analyze the impact of information technology in the efficiency of security market in Nigeria.

So much importance is attached to the role of information technology played in the development of Nigerian economy. This is because the security market provided the essential facilities for investors, government and prospective investors used information technology for their business expansion and development with ultimate economic benefit for all Nigerian’s.

It also creates awareness about the existence of security market and so highlight the benefit of information technological machine for any investment or management decision. The researches also point out the benefit gains by the securities quoted in the security market. Above all it will serve as a data bank for
other scholastic work especially for student wishing to undertake research on similar topics.

1.4 RESEARCH HYPOTHESIS

A hypothesis could be a null hypothesis denoted by Ho, or an alternative hypothesis denoted by Hi, if the alternative hypothesis is accepted and vise-versa. Therefore a statistical hypothesis can be defined as an assumption or statement which may or may not be true” (Walpole 1983)

Hypothesis is an idea or suggestion put for both researcher and reader. Base on the important of the hypothesis, for this work three hypothesis are formulated for testing thus:-

HYPOTHESIS I

Lack of modern and sophisticated technological machine is not responsible for the market in-efficiency

Lack of modern and sophisticated technological machine is responsible for the market in-efficiency

HYPOTHESIS II

Ho: Lack of knowledgeable and experience personnel is not responsible for the market in-efficiency.
Hi: Lack of knowledgeable and experience personnel is responsible for the market in-efficiency.

HYPOTHESIS III

Ho: Retail level of our investors is not responsible for the market in-efficiency

Hi: Retail level of our investors is responsible for the market in-efficiency

The acceptance or otherwise of the above null or alternate hypothesis developed on the outcome of the analysis of data collected.

1.5 SCOPE OF THE STUDY

This research focuses on how the security market as a financial institution effectively uses the information technology and how the individual investor utilizes them.

1.6 LIMITATIONS OF THE STUDY

Research of this nature can not be made without limitations and problems: these includes:-

1. Time constraints: Time for conducting research in this field is too short to allow a comprehensive study, collection of data, data analysis and write up of a report.

2. Financial constraints limit the study to all the branches of security market in Nigeria.
The research did not attempt to study all the modern technology that are been used or communication rather those technologies that are been used in developing countries like Nigeria as office automation i.e. computer and internet.

These research will rely very much on secondary source, various journals, textbooks, paper presented in various seminars.

1.7 DEFINITION OF TERMS

It is essential that key terms used over and over in this study are properly defined in this context in which they have been used in the body of this work. The following key terms are defined thus:

**Technology:** Is the use of any or all of the applied services that have a practical value in an industrial content

**Information Technology:** Is defined as “Acquisition, processing and dissemination of vocal, pictorial, textual and numerical information by a micro –based combination of computing and telecommunication”

**Stocks:** One of the two many types of security dealt with on stock exchange, the other being shares.

**Stock Exchange:** A highly organized market for dealings in stock and shares.

**Securities:** These represent specific chains on a stream on income and / or particular assets.

**Risk:** This means the uncertainty in the probability distribution of returns.
Disintermediation:- Is the term used to describe how securities markets displaced corporate banking and how money market funds captured a large portion of deposits from retail banks.

1.8 PLAN OF THE STUDY

This research work has been designed as an overview of information technology on the efficiency of security market in Nigeria.

Chapter one of the research addresses these two topic as well as the historical roots. Chapter two addresses literature review, the collection of essay from different author that are relevant to my study.

The third chapter, it concerned with research methodology, which described the method of data collected, chapter four deals with data presentation and analysis, which bring the clear testing of the three hypotheses stated in chapter 1. The final chapter deals with, summary, conclusion and recommendation of the research work.

1.9 SUMMARY OF THE CHAPTER

In this chapter, the researcher to make attempt clearly state the general background of the study, the statement of the problem was also stated, the objective of the stud and its significance. Also the scope, limitation, plan of the study and possible hypothesis to be tested at the end of the research. Definition of relevant terms was stated.
CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

The development of security market is the feature of modern economy. It presuppose the absence of complete financial autonomy, there must be some economic unit whose receipts exceed their expenditure and of course, there will be those units whose expenditure exceeds their receipts.

Therefore, business environment of today is changing very fast. It is demanding for their profits, improving customer turnover of its resources as well as vision for a break through performance in a competitive environment. In other words business are faced with challenges of corporate survival thereby, making it necessary to evaluate alternatives choices by constantly employing emerging technologies to open competitive edge.

The challenges for the business sector are to keep peace with these developments by improving on its information technology infrastructure.

2.1 EVOLUTION OF SECURITY MARKET IN NIGERIA

The stock exchange only obtained a formal constitutional building of its own at the beginning of the 19th century, but by that time, organized dealing in stocks and shares had been going on for well over a hundred years. Stock exchange literature suggest that the practices that have gradually metamorphosed into the stock exchange
as it is known today took their roots or emanated from the “burgeoning trade in agricultural and other commodities developing in some of the major European centers the middle ages” Alile and Anao (1986). Like several other features of modern financial system, including banking and insurance, the stock market developed during the years of commercial and intellectual ferment. During this period, it was a common practice at these trade fair centers that traders gather at a place on appointed days to strike bargains on commodities.

According to John (2004), trade in this market was frequently conducted on credit. As time went on instruments such as bills of exchange and notes come to be used as evidence of the credit and as instrument of effective settlement. These documents, later on, become possible to be also traded or discounted. Anao and Alile (1986) noted that the trade in these documents appears “to be the bearer to the trade in other forms of securities such as issued by government or equity shares issued by commercial firms”.

According to Bello (2005), for most of the early stock exchanges that sprang up in many European centers, the pattern of development from trade in commodities to trade in securities was roughly the same. For example, there was developed stock exchange where shares of companies were publicly sold during the 17th century in Amsterdam that before then was a major trading center in Europe. Also, the periodic meetings of traders in coffee houses in London (Great Britain) to strike bargains amounted to a formal stock exchange which by 1773 it had moved to its own premises. However, this wind of change did not leave any trading center, and as such
stock exchanges developed with time in virtually the same in other trading center in Berlin, Copenhagen, Philadelphia, and so on. In the same way, in New York traders has been meeting at 68 Wall Street to engage in commodity trade before a formal association of merchants took place from about 1792 to form the nucleus of the New York Stock Exchange.

Alile and Anao (2002), three important factors could be identified to have spurred the early development of the stock exchange;

i) The initial impetus provided by the prior existence of trade as explained above.

ii) The development of allied financial institutions such as banks and insurance companies to meet the growing demand of expanding volume of trade and commerce at the same period.

iii) Government’s frequent need of funds with which to meet its expanded obligations due its increasingly complexity.

According to Areago (2001), the stock exchange was thus needed because the growing financial institutions themselves needed capital to finance their own operations; such funds could only be readily obtained through sale of securities assisted by the stock exchange. Also, government restored to the sale of securities through the facilities offered by the stock exchange.

According to Elias (1988), it is instructive that stock exchanges are not found in socialist economies. This is because the task of capital allocation is performed by a
central; (government) authority. The stock exchange has the image of a completely private club of individuals, which is more or less self regulated. The opportunities and challenges offered by the emerging free enterprise economics of the middle ages and the era of the industrial resolution bequeaths to the stock exchange a character which remains typical of it today, that of a purely capitalist institution. This means that the emergence of the institution of the stock exchange as a spontaneous reaction of enterprising businessmen had the central task of the mobilization of funds in the hands of myriad individuals who save and the footing and channeling of such funds into productive uses.

According to Ekezie (2002), the stock exchanges in the U.S.A, however, are in slightly different category because of the Securities and Exchange Commission (SEC) Acts of 1933 and 1934, which established a public commission that literally controls the exchanges. Notwithstanding, others have experienced over time a major or minor inroad by stock exchanges, such as the Nigeria Stock Exchange (NSE) fall into this category. The extend to which the NSE fits into or diverges from the traditional mould remains to be identified.

According to Eardlex (1989), activities that are reminiscent of the practices of the organized and modern stock market in Nigeria dates back to antiquity. A thrift form of capital market such as “Ojo”, “Esusu” and “Adashi” were widely practiced, and are still maintained in some part of the country even today. However, the Ten Year Plan Local Loan Ordinance promulgated in 1946, which provided for the floatation of 3000,000 (N600,000) loan stock bearing interest at 31/4 percent could
be traced as the earliest critical incident leading to the establishment of a stock market in Nigeria. (Source The Nigeria Stock Market in Operation).

In 1951, the creation of a loan fund for financing some public utilities was another attempt at capital accumulation in the public sector. This scheme funded from publicity collected revenue was used to issued soft loans (bearing low interest rates and easy repayment terms) to assist in the development of the nation’s vital corporations. These and similar endeavors forming part of the implementation strategy for the year Development Plan (1946-1955) constituted the first significant attempts made under the British colonial Administration to give investment opportunities to Nigerian, thus making the take off of capital market development in Nigeria.

The late 1950’s witnessed an upsurge of private industrial investments pursued mainly through the diversion of some of the profits earned from purely trading activities into industrial projects and also to expanding the existing local commercial undertakings. This and other issues led to extensive debates among politicians, academicians, financial experts and businessmen as to the desirability of an organized capital market in Nigeria. Such other issues included the following:

- The need to mobilize finance to embark upon development programme;
- Increasing pressure from nationalists.
- The need for government of finances the growing budget deficits as from 1958.
- The deteriorating balance of payment deficits as from the late 1950’s.
Coupled with the approaching independence, prompted the government into taking necessary steps towards the establishment of a capital market in Nigeria. Asabia (1983) noted that “unlike developments elsewhere, government initiative is dominant and securities market owes a great deal to the government in its origin and development”, and even today, the government has continued to play a significant role in the operation of the stock market.

As a result in 1958, a committee under Professor Barback (Director of the Nigeria Institute of social and Economic Research) was appointed to consider the ways and means of fostering shares market in Nigeria. The committee that became known as the Barback Committee published in 1959 their report recommending among others:

- The creation of facilities for dealing in shares;
- The establishment of rules regulating transfer, and
- Measures to encourage saving and issue of securities of government by the government and other organization.

In pursuance of its role in respect of the development of a capital market, the CBN floated in 1959 the first Federation Of Nigeria Development Loan of N4 million on behalf of the government. Though the attempt of institutionalizing a Nigeria capital market could be traced to 1959, it was only in 1960 that the Lagos Stock Exchange Act of 1961 incorporated the stock exchange as a follow-up to the
report of the Barback committee; with the registration name “The Lagos Exchange (LSE)” established. It is the first stock exchange in the West African region and sixth in Africa continent. It is a non-profit organization (any excess of income over expenditure or its accumulated reserves are not available for distribution as dividend to the company’s shareholder whose liability is limited to their shareholdings only), and a private company limited by guarantee, with membership drawn from financial institutions and Nigerian individuals with proven integrity and experience in finance and business.

The Nigerian stock Exchange commenced business in 1961 with 3 equities and 5 government securities into its listing. This initial list comprised 1st and 2nd development stocks of the federation of Nigeria which were issued in 1959 and 1961, industrial securities, and the stock of some British companies already operating in Nigeria which were quoted on the London stock Exchange. However, trading on the Lagos Stock Exchange (LSE) during the early years was extremely poor because of the low rate of capital formation at the time and the obligation surrounding the mechanics stock exchange dealings and poor communication. This is evident by the fact that during the first nine years of operation (1962-1970), only four new issues of industrial securities were handled by the exchange, with the federal government stock dominating the market, regularly accounting for between 90 and 98 percent of the annual turnover of the exchange which rarely exceeded N15 million. In view of the recognition of the recommendations of the Okiogbo Commission, among other things the decentralization of the exchange so as to bring the benefits of capital market
operation near to a greater section of the citizenry and thus enhance the performance of the market’s function. The federal government in 1977 transformed the Lagos Stock Exchange into the Nigeria Stock exchange with branches in Lagos, Kaduna and Port Harcourt. The Kaduna and Port Harcourt stock exchange, opened in 1978 and 1980 respectively, was to serve as trading floors of the main stock exchange in their regions following the acceptance of principle of decentralization with the option for a national stock exchange which had a strong and lasting impact on the growth of the capital market include the income Tax Management Act 1961, the Exchange Control Act 1962, the Insurance Miscellaneous Act 1964, the Nigeria Enterprises promotion Decree 1972 and 1977, the capital issues Commission Decree 1979 and 1988 and in addition the abolition of exchange controls towards encouraging foreign direct investment by the government in the 1990’s.

2.2 THE OPERATIONS/ACTIVITIES OF THE NIGERIAN CAPITAL MARKET

According to Fredrick (1983), operations of the capital market essentially connote the activities carried on or the application of the facilities provided for trading and sourcing funds through the capital market. a developed or standard capital market consist of two branches namely primarily and secondary market.

Primary Market:- It is that segment of the capital market where funds are sourced and issues or offer gets fund direct from thee individual and corporate investors. It can also be called first or original market because it involves the creation and offer of
completely new securities by the issuer. There proceeds goes to the issuer and not any other else. It is worthy of note that the market does not have a particular site like the secondary market. The mode of offer for the securities trade in this market includes: offer for sale offer for subscription, offer by introduction and private placement.

**METHOD OF OFFERING SECURITIES.**

**Offer For Sale:** This is an offer to the public by or on behalf of a departing shareholder. It is an invitation to purchase existing shares of a company being divested by existing shareholders e.g. the privatization programme is an offer by the government to divest part all of its shareholding to the public investors like the offer for subscription. The proceeds of offer for sale go to the diversity investor and not the coy whose shares are being divested. The terms of offer for sale are contained in an offer document called the prospectus. See section 48(1) ISA. A number of capital market operations are involved and the general public subscribe for shares.

An offer for sale can be made by firm price is quoted and the public is invited to purchase the shares at the quoted price while lender offer involves the specification of a minimum price and members of the public are invited to tender any price above the minimum. A sticking price is established which allows the coy or the selling the tenderers will subscribed at a sticky. Price.
**Offer For Subscription:**- This connotes an invitation to the public to invest in the new issue of securities of the company issuer. It involves the creation of new securities for the investing public to acquire at a mixed price. The term of the offer are contained in the document called prospects. The proceeds of the issuer of the security. In the new issuer is the equity instrument. The capital base and membership of the company is enlarged by the holders' ownership right in relation to the biz including the companies' assets. The holder is of course a part owner of the companies’ debt.

**Offer By Introduction:**- This involves the introduction of a company already existing and subscribed securities to the market for secondary trading. Listing the security on the stock exchange after meeting all necessary conditions and such ad the minimum number of shareholders usually does this. Percentage of shares holding etc. this happen especially where the securities involved had earlier been privately placed by the company and the offer is just to enable the secondary market trading in the securities on the stock exchange. It is a formal measure of complying with the commission of public offer of securities without the said securities actually to you investors as the securities are already held by existing investors.

**Private Placement:**- This is an instance where a company issuer invite privately selected individuals and or institutions to acquire its instrument. There is no public invitation to subscribe to the issuer. Since the subscription to the issuer is private invitation, the issuer can dictate who is to buy the share. The method is usually favoured by private
companies, which are not subjected to capital market regulation. The proceeds of the issuer by private placement go to the issuing company.

**Cross Boarder Listing:** It involves public offering of securities issued and listed in more than one country across the boarder or beyond the country of the coy issuer. This step goes beyond what is refers to a international quotation where a coy may issue its securities by private placement in foreign countries without such securities been listed on the stock exchange of such countries. There are more strength listing requirement to be meet by the issuing coy in the case of cross boarder listing.

**PUBLIC OFFERING PROCESS**

The public offer of securities is a process within the primary or initial translation in the capital market. There are numerous activities involves which are performed by several market operation. To ensure the success of the issue, those operations beside the coy issuer are the issuing house which serves as co-ordinate others includes stock brokers, receiving agent, register, solicitor and in the case of debt issue trustee.

There are three major stages in the process of offering, securities to the public known as pre-offer activities, subscription activities and post-offer activities.

**Pre-Offer Activities:** It should be noted that the company that is capable to source money from the public by offering it securities, debt equality or amphibian (hybnide)
must be a public UN company. See section 22(5) CAMA. When a private coy or government enterprise decides to service fund through invitation to the general public, it must take step to firstly convert the amendment of memorandum and article of association to reflect the new status and to accommodate the proposed initial issue. Section (1) and (2a,b,c). if the coy is already a public coy it will hold AGM where a resolution will be passed to increase the coy share capital to accommodate the proposed additional issue s. 102(1).

The coy after due consultation appoint an issuing house and gives of the mandate to package the offer. This ions usually done by the board of directors by resolution passed at its board meeting. Upon the receipt of the mandate the issuing house convey a meeting of all the parties (operators) that home function to perform, to ensure the success of the offer and assigned duty to them after there consent is obtained. The preparation of the prospectus, which is a vital document of the offer, is the duty of issuing house. The prospectus offer, the pursuant to this duty, the issuing house request from the coy the following documents for the preparation of the prospectus. Those documents includes:

(a) The balance sheet (Financial)
(b) Memorandum/Articles of association
(c) Description of the nature of the coy biz.
(d) Contract entered into in the past 2years by the company.
The issuing house uses the financial to compute the share value is whether the stock of 50K or will be sold at per or premium or at discount.

There after the issuing house applied to Sec and the share price is finally determined through the prescribe method agreed upon by the issuing house and the SEC. It is at thin point that the issuing house can properly have a complete prospectus.

According to French (2001), a completion board meeting is the last all parties meeting is conveying where all the boards of the coy approves the documents and all other parties signed relevant documents relating to the offer especially to rectify all information given on various aspects of the issuing. The signed copies of the offer documents are submitted to SEC for registration. It is then the offer can open to the public. The issuing offer in some National dailies for public awareness.

**Subscription Activities**: this stage is otherwise marketing/distribution. At this stage the issuing house is dispatching subscription form and prospectus to collecting agents such as stockbrokers and or bank to distribute to the public.

Members of the investing public obtained and returned the completed application form together with their cheques to the at collecting agent are numerous and locate all over the different geographical areas. the said collecting agent makes return largely to the register and in some case to the issuing house.
**Post Offer Activities:**- After the closure of the issue the register or the issuing house collects the application from and send all cheques to the receiving banker. In a situation where there is over subscription, an atonement committee comprising the issuing house, the coy issuer and the register determines who gets share. In Nigeria the SEC guidelines on allotment of securities must be complied with the issuing house submit the allotment done to the SEC for clearance. Once it is cleared the issuing house instruct the receiving banker to release the proceed of issue of coy issuer and then allotment announcement is made by publication through the news media. In event of over subscription the excess money is return to the subscriber either wholly due to rejection of application or partly as a result of subscribers been allotted shares less than the volume applied for. However, increase where the securities are under subscribe by the public the coy undertakes, underwriting of the share. The underwriter usually the issuing house at the time of packaging the offer commit itself to underwrite for the unsubscribe number of shares to the coy issuer.

After completion of allotment the registrar open a register of members for the company, if the offer is initial, coy offer and enters the names if the new investors there is 83(1 a and b). But if the offer is an additional issue, the register merely continues with the existing register. The investors are henceforth entitling to dividend even if the share certificate are not yet dispatch to them provided the terms of the offer state that the investment is cum-dividend section 114 (a).

Finally, the register prepares share certificate the new investors and sends them to the coy for signature and sealed before dispatching them to the investors.
SECONDARY MARKET OPERATION

Secondary market is another segment in the capital market where securities as evidence by certificate or other forms o document of title are exchanged for fund. Those who acquire securities to others in the secondary market provided such securities are listed on the stock exchange. The sticking features of the secondary market are briefly stated as follows:

(i) The proceeds of sales goes to the holder of the instrument and not the coy.
(ii) The securities sold in this market are not new instrument but second hand initially bought from the primary market.
(iii) The market is still largely identifiable with a particular site, popularly called trading floor.

The secondary market is divided into two broad categories namely:

(1) The centralized auction market.
(2) The dealers market.

THE CENTRALIZED AUCTION MARKET

This is identified and characterized by the establishment and operation of the stock exchange. The stock exchange is refers to as a characterized organized market where securities are listed for trading purpose. It is also a must for continuous trading of company’s securities. It is called stock exchange because an investors can
exchange stocks or securities for cash and vis-versa. Only stockbrokers who are members of the exchange can trade at the central location of the exchange.

A stockbroker obtains sales or purchase order from willing market location to execute the orders of their client-principal.

**THE DEALER MARKET**

The dealer market unlike the stock exchange has not particular location or centralized place of transacting biz or securities. The majority of security traded in the dealers market is mostly those that cannot be listed in the stock exchange. Many of these securities belongs to government e.g. treasury bond, long term bond and also money market instrument of public unlisted company’s such as commercial papers, bankers acceptance issues and certificate of deposit. Brokers appointed by governments or company variously trade these securities largely at the counters or screen of issuing houses that were issuers company’s agent and in some cases. The security dealer is actively involved in this market largely as principal buying securities for his own account in wholesale and reselling o retail to his client at a margin above the price he bought. The operation of biz transaction in the dealer market is largely over the counter (OTC).
OPERATIONS OF THE SECONDARY MARKET

Listing An Issue On The Stock Exchange

The listing of an issue on the stock exchange simply mean the formal introduction of security on a recognized secondary market known as stock exchange for the purpose of trading it securities or screen on its floor. An application for listing an issue is made by stockbroker to be issued to the stock exchange. This application is made at the time or immediately after the issuing house submitted the company’s application for regulation of the security to the SEC.

There are listing requirements prescribe by the stock exchange as may be applicable from time to time which the coy is bound to fulfill to the satisfaction of the stock exchange. Those requirements includes:

(a) Minimum number of shareholders.
(b) Percentage of share hold by the public.
(c) Submission of audited financial statement for specified number of years
(d) Public corporation status
(e) Disclosure of financial and other material facts.
(f) Written undertaking to submit specified report regularly.
(g) Written under taking to comply with post-written requirement even after the coy have satisfied the listed requirement by the stock exchange, the security can not be listed until the holders.
Upon receipt of the information supported by evidence that the certificate had been dispatched the stock exchange then entered the company’s name into the appropriate industrial sector on the stock exchange daily official list. The stock exchange will then confirm the listing to the stockbrokers who in turn inform the company issuer. At this stage trading can commence on the security when the need arises.

SHARE PURCHASE

According to King (1989), share purchase is a transaction carried or at the floor of the stock exchange. It is the purchase of shares by investors who wishes to exchange them for cash. Purchase of shares cannot take place if there is no seller of those shares. That means it is a buying and selling transaction. The process basically involves two stages pre-transaction and transaction process.

PRE-TRANSACTION PROCESS

A buyer approaches a stock broker gives him purchase mandate for securities and he deposit a sum of money to cover the cost of purchase of the securities. The stockbroker issues his client (buyer) with a receipt for the money deposited and proceeds to the stock trading section. On the other hand, the request to sell his shares and accordingly hands over him certificate to him for necessary processing.

The stockbrokers send the certificate to the register for signature and verification. A scrip receipt is issue to the selling investor for with his shares certificate., the registrar upon signature and verification send the certificate to the
CSCS for clearance and deposit. at the depository an account is open for the investor under the account of the lodging stock broker. After clearance from the CSCS, the selling stockbroker goes to offer the share on the floor of the stock exchange during a trading section.

**TRANSACTION PROCESS**

The buying and selling brokers meet at the trading floor of the stock exchange where the buy and sell orders are executed. In a successful bid bargain ships are exchange between buyer and sellers with the stock exchange retaining a copy for his record. The buyer is issued with a purchase contract note while the seller is issued with a sale contract note.

The buyer submits with CSCS allotment request form for “buy” and a duly-executed transfer form.

A seller also submit with CSCs allotment request form for “offer” The stock exchange send the transaction diskette to the clearing corporation where clearing is comparison and confirmation of transaction and netting of obligation are done. This involves the CSCS upon the receipt of the allotment request buy form, debiting the stockbroker A/C and crediting the buying client with the stock bought.

The CSCS makes it mandatory that on conclusion of processing of all materials receipt from the registrar the y are return to the re-circle to the registrar for security. If the registrar raises no objection to the transaction, the selling stockbroker deliver the proceed of sales to the selling investor after deducting his commission and
other statutory fees. The CSCS would subsequently send the record of the transaction to the purpose of dividend payment and other auxiliaries’ privileges upon payment of prescribe fee. The CSCS would issue a statement that shows the number of shares the investors has in the system. The statement now replaces the re-issue of share certificate in favour of the new owners. Although of a new owner insist the register will have to ensure that a share certificate is issued to him. This is because at present the CSCs operate an optional system.

2.3 EVOLUTION OF INFORMATION TECHNOLOGY IN THE NIGERIA SECURITY MARKET

According to Oliver & Chapman (1990), Technology is the use of any or all of the applied services that have a practical value in an industrial context therefore, information technology is defined as “Acquisition, processing and dissemination of vocal, pictorial, textual and numerical information by a micro-based combination of computing and telecommunications.

Information technology using power of computer and telecommunication by Nigeria capital market is challenges posed by the environment and can be used by our investors to provide all internal information needed as well as to serve as a powerful tool in ensuring smooth operation within the Nigeria stock market. And can be used to manipulate textual data in a document easily and effectively.

Information is a data that have been interpreted and understood by the recipient of the message, it will be noted that the user not just the sender is involved
in the transformation of data into information. Because data become information if it is understood by the recipient, (Areago, 2001)

The historical view of security market technology helps us to appreciate the implication of technological trends. The development of technology precedes its application. In Nigeria we are behind in applying technology, we can see clearly what the near future holds in store. From a historical perspective we can avoid mistakes made by others where we are for sighted enough we can actually by-pass stages in the development in our securities markets. Evolution of information technology historically Nigeria security market starts by employing”-

a. MECHANIZATION: In this stage market use mechanical adding and accounting machine to improve the efficiency of individual investors.

b. EARLY COMPUTERIZATION INVOLVED AUTOMATING SOME OF THE OFFICE PROCESSES: This allowed the volume of transaction to increase significantly without a corresponding increase in staff. The number of staff often decreased even though the volume of transaction increased tremendously.

c. COMMUNICATION: The next major advance involved the use of communication lines to feed data from Stock brokers to a central computing center. This reduce the flow of paper of magnetic media improve market made data fathering. A customer with securities of different companies could have a daily trading price though these prices were 24hours old.
d. COMPUTERIZATION (Investors and Management Function):- This brought changes which enhanced their function, There were two (2) main development The use of personal computer and real time processing. Personal computers helped to automate the production of management reports by using word processing, Database and Spread sheet processing allowed information to current and customers could have up to the minute prices.

The chapter shall examine the historical components of the topic, in a schematic manner, the aspect of present day banking service delivery in banks and banks business performance in general could be significantly enhanced through the application of IT. Both past and present literature on IT as it relates to security market in Nigeria opinion of different authors were sought and interwoven to produce a synergy, (Fedrick 1983)

Woherem, (2000) he advent of IT has brought enormous change, challenging how organizations are structured and how businesses are being run. Yet, it is not static, it is continually evolving, breaking new barriers, defining horizons and bringing new dimensions to our lifestyle.

Simply defined IT is a systematic body of tools, techniques and infrastructure for generating, collecting, storing, processing and transmitting data and information. In explaining the evolution of information technology, it is important to talk about the history of computer’s since IT evolved round it.
ADVENT OF COMPUTER

Following the application of current technologies to information processing from computer telecommunication and micro-electronics, the early development of computer can be said to have started before the 20th century and has been improved upon over the centuries. It is therefore categorized into generations. Several efforts had been made on the development of computer centuries before the development of electronic computer. Among these are a simple device called Abacus which consists of sets of beads for addition and subtraction; Napier's Bones for multiplication; Pascaline which was the first mechanical calculating machine for addition and subtraction, invented by Blaise Pascal in 1642; multiplier wheel for multiplication and division, developed by Gottfriend W. Leibniz in 1674; and Analytical Engine developed by Charles Babbage in 1834. Further to the development of computer in 1937, it was discovered that adding machines and slide rules was performing more complex calculations. Then in 1939, John V. Atanasoff, a professor of physics and Clifford E. Berry, a graduate student at Iowa state college, developed an electronic computer called Atanasoff - Berry computer (ABC). The computer used 300 vacuum tubes to perform calculations, capacitor to store binary data and punched cards to communicate input/output. Unlike the old mechanical adding machine that used direct counting, the ABC utilized logical operation to perform addition and subtraction.

In 1941, Konrad Luge began work on a device called l3 in Germany and in 1946, researchers made more advances to ease the burden of performing calculations.
Then J. Presper Eckert and William Manchly developed the ENIA (Electronic Numerical Integrator and Calculation) at the Pennsylvania. The computer used 18000 Vacuum tubes to perform calculations at the rate of 5000 additions per second. This is much faster than what any human brain could perform, but much slower than the computers of today. The evolution of computer is now categorized into first, second, third, fourth and fifth generations.

The computers produced in each generation are unique for their purpose. Each generation is characterized by a major technological development that has changed the way the computer operates, resulting in increasingly smaller, cheaper, more powerful and more efficient and reliable devices.

It has been a major tool for achieving goal for companies and countries, in terms of number of computers in use, the number of PC networks in use and the level of telecommunications infrastructure. In the past, capital, labour and raw materials were regarded as the critical ingredient productivity. Today information is not only regarded as the fourth factor of production, it seems destined to be progressively the relatively significance of the first three. Though it is now possible for one country to provide the capital, but use the labour and raw materials of another, regardless of distance. Thanks mainly to IT, and telecommunication in particular, countries can now trade with each other without border restrictions.

In order to survive in the highly competitive world of today, in which countries and companies alike are struggling to acquire new business and financial strength, either to maintain or improve market shares in the international and local
business milieu. It is important for them to wire themselves in readiness for the traffic of information that has now become a fourth factor of production. As Gates out it (1995).

"Conventionally, business share information internally by exchanging paper work, placing telephone calls, and/or gathering around a conference table or white board. Plenty of time and plenty of expensive face-to-face meetings and presentations are requires to each good decisions, this way the potential for inefficiency is enormous companies that continue to rely on these methods exclusively risk loosing out to competition who reach decision faster while devoting fewer resources and probably fewer layers of management to practice".

For countries to have Worldwide connectivity, it is vital that they set up the infrastructure that would facilitate inter and intra company communications. The free flow of information within and between countries and organizations is critical. to competitive advantage.

Telecommunication has become an agent of change. It is the major force ushering in the 'global village'. It is being hailed as a major contributor to:

(i) The democratization of countries.
(ii) Deregulation of industries.
(iii) Privatization of government parastatals.
(iv) The networking of groups and companies.
(v) The development and distribution of information and ideas.
Below are some of the major functions of information technology:

a. The reduction of uncertainty in decision making, though it ought to be recognized that more information may add other possible outcomes to a situation not previously considered thus increasingly uncertainty.

b. The provision of error signals, which indicates any deviation from, planned performance or operation thus aiding control activities.

c. The provision of a mechanism for communication of plans forecasts, procedures, guidelines etc.

d. The supply of historical evidence of transaction, levels of performance, result and decision etc.

The reduction of complexity though enhancing users knowledge and understanding of the situation (Charles, 1985).

INTERNET (ONLINE)

The internet which could also be referred to as World Wide Web (WWW) is the interconnection (network) of computers world wide virtually any kind of information ranging from politics, religious, culture, tourism, education etc. can be gotten from surfing the internet. Internet operations has become the apex of information technology, here an investor is able to make transactions in his bank account from any where in the world via the internet.
ELECTRONIC MAIL (E-MAIL)

This combines the feature of telephone and paper communication. It has the advantage of the speed and veracity. The electronic mail system can provide banks with the following service:

i. A variety of message formats for instance formal letter, notepads and memo's of financial statement.

ii. Communication to other branches and customers over long or short distances.

iii. Text manipulation facilities to allow the composing editing and storing of messages. This enhances banks clerical operations.

iv. The ability to receive messages in real time or asynchronously are at their terminal or to be stored at their mail box to be read later.

FACSIMILE (FAX)

This allows the sending of an exact copy of an original (using for instance, radio transmission or telephone network) to be recomposed by the receiver’s equipment. In banks fax machine could be used to send documents in which the signature has to be verified, for inter bank transactions with customers. Facsimile system works by scanning a document and digitally coding the contents, which are then transmitted and recorded at the receiving end.
DECISION SUPPORT SYSTEM (DSS)

This system refers to the application of IT on the problem met by decision makers. Those problems include marketing, forecasting, statistical analysis etc. the DSS multipurpose application can also be used to support functions like credit and corporate planning of all levels of management. In general the DSS will enable bank management use analysis tools, which will make information more effective.

A DSS should possess a user-friendly interface to encourage frequent use of the system. The DSS has the ability to capture, store and manage large volumes of data; it makes use of packages like Lotus 1.2.3 and super cal. These and other packages can be used for instance in analyzing the profitability of opening of new branch at particular location putting into consideration several factors.

According to Eardley et al (1989) in choosing DSS software the following factors should be put into consideration.

i. Cost consideration.

ii. Vendor consideration.

iii. Compatibility.

iv. Ease of use.

v. Integration
SMART CARDS

A smart card is a small plastic card on which information is stored in electronic form. It contains a microchip that has information about the cardholder. Such information may include account balance and authorized code. Smart cards could either be a credit card, of the counting machine; this delay has been greatly reduced. A counting machine looks somewhat like a large calculator. It has split that enables it pick paper money one by one but at a very rapid speed. The counting machine can either be used to ascertain the number of note from a bundle.

TELE CONFERENCING

Teleconferencing is the linking of two or more locations by using any transmission media. With teleconferencing facilities banks can conduct meetings without the physical presence of the individual involved. Banks having large branch network may no longer need to converge in one place to hold crucial meetings. This saves the cost and risk involved in traveling accommodation, feeding and so on. Teleconferencing technology could either be audio conferencing or video conferencing. Visual conferencing is more expensive but it has the ability to send both audio and visual transmission, marketing concerning a real as possible (ACCA: 989).

Information technology has assisted the way and manner in which security carry out their operations to satisfying both their existing and potential investors. It is on this basis that we shall look at what authorities had said regarding the services
rendered by security market using information technology like Automated Teller Machine, Telephone operations Internet operations among others.

2.4 INFLUENCE OF INFORMATION TECHNOLOGY ON THE SECURITY MARKET

Alabi (2005), discovered that technological development is often equated with Research and development (R and D) and with the introducing of new securities and new marketing processes. Although much depends on what is mean by “new” (new at the world level or at the level of the country or concerned).

The experience of the newly industrialized countries suggests that introducing new securities and new marketing processes is not of the center of technology development work needed for successful industrialization. What is the central is the acquisition and development of capabilities needed for making technological choices and for fostering more efficient security and investment performance. Anything that the country has not done before entails something new and involves some learning effect. It is important to identify local needed and constraints, to collect information to broaden the range of the choice.

According to Areago (2001), Nigeria security market tends to have a longer and greater continuity need Government to have a special role to play in the process as the repository of collective experience built up through their contacts.

Alile & Anao (2002) Security market tend to be efficient than other markets, as the good involved a claim by a piece of paper, it is transportable at a little cost and
is not subject to a physical deterioration, moreover, it can be defined and classified easily. All instruments have a common denominator in that they are express in term of money- the accepted medium of exchange.

1. The length of time and transaction cost required converting the assets in to money.

2. The certainly of the prize realized. Securities in Business term, securities are referred to the document evidencing creditor ship interest in a particular company.

When some one wants to buy securities various decision problems will arise and such he need to understand the major characteristics of each and every type of securities before he committed his resources.

Here the central issues is in connection with the timing and selection of alternative forms and resources of financing is whether financial manager or investors can “be at the market” if the -capital market are efficient in some sense. Therefore the capital market efficiency has been defined in three forms. These are as follows:-

i. **WEAK-FORM EFFICIENCY**:- The weak form efficiency holds that excess or abnormal returns cannot be earned on the basis of historical piece or return information. This is the actual work of an efficient market which is the current market price already reflects all historical approach.
ii. **SEMI STRONG FORM EFFICIENCY:** The semi strong form efficiency means that investors cannot earn abnormal returns from trading roles based on publicly available information. Once a capital market has reached this stage then both technical and fundamental analysis are of no value to investors since the assertion is that current market prices reflect not only historical information but also all published information about the respective company.

iii. **STRONG FORM EFFICIENCY:** Strong-form efficiency holds that excess returns cannot be earned using any information source, regardless of whether or not it is publicly available. Here stock prices reflects all information that are available, even inside (privilege) information can not be useful to investors in earning any special and or abnormal returns.

According to Ekezie (2002), in conjunction with above and the very fast changing of business environment of today, Nigeria security market is in need of more profit, improve customer turnover as well as letting vision for a break through performance in a competitive environment. In other words Nigeria Security Market are faced with challenges of corporate survival thereby, making it necessary to evaluate alternative choice by constantly employing emerging technologies to gain competitive edge. The challenges for the Nigeria security market are to keep peace with these developments by improving on its information technology.
2.4.1 EXPLOSION IN CONNECTIVITY AND ADVENTS OF UNIVERSAL STANDARDS IN THE STOCK MARKET

Eugene & Ruth (2004), We live, as everybody knows, in an increasingly information intensive economy; the contribution of information to security market is high and clearly rising. But what is even more striking is the extent to which information makes a vastly disproportionate contribution to competitive advantage. Information and mechanism for delivery it underlies much of what defines business boundaries, stabilizers corporate and drives competitive advantage. And fundamental cause is the explosion in connectivity and the information standard that are enabling the open and almost costs free exchange of a widening universe of rich information. When every investor can communicate richly with stock market, the narrow, hardwire communication channels that used to lay the investors together simply become obsolete. And so do all the marketing activities that create those channels or exploit them for competitive advantage.

The explosion in connectivity has taken almost every one by surprise. Conversely communicating information to large audience has required compromises in the quality of that in formation technology. have not allowed us to achieve simultaneously as much as we would like. Consider, for example the alternative through which seller persuade buyers. Securities advertisements reach a wide range of possible investor with limited, static content. Therefore relationship among and within stock market, as well as with investors, loyalty to a security or an agent, and trust of an investor agent or type of a security are all the product of information
among people who by doing so have narrowed their options. Therefore the fundamental unit of value is the investor’s relationship, which communication system is optimizing around servicing that relationship some securities are sold at low or negative margins in order to and build relationship. Others are then cross-sold at high margins to extract value from relationship that have been established.

According to Elias (1988), Electronic home trading look at first glance like another, but cheaper, because investors can access information and make transaction in a variety of fundamentally new ways. And investors can then sales and buy securities, make transfers, received day to day electronic transaction, reconcile and integrate all the data in to their future financial plans. However, ones connectivity has been established there is every incentive for every prospective investor to create standards that migrate up from the transportation layer into content, standards that allow for information across the entire universe of stock market.

And they will be able to compare alternative securities offerings and sweep funds automatically between companies at different industries, they will be able to announce their securities needed to buy or to sales and accept bids. They will be able to make sophisticated comparisons between securities offerings.

According to King (1989), but once it becomes easier for investors to compare and switch from one company/industry to another, the value, indeed the meaning, of the primary trading relationship will become problematic. Because competitive advantage will be determined security by security, and therefore providers with broad securities will lose ground to focused specialists. Therefore information business now
are quite different in the stock market because of setting and controlling standards, achieving preemptive critical mass, controlling patents and copyright, making alliances, adapting to an order of magnetite shift in the underlying technology every year and shifting the business boundaries.

2.4.2 DISINTERMEDIATION AND ON-LINE TRADING

According to Areago (2001), Disintermediation is not new. Bankers used the term in the 1970’s to describe how securities markets displaced corporate banking and how money market funds captured a large portion of deposits from retail banks. What is new, however, is the nature of the Disintermediation that is driven by the new information technology, and its speed and impact on existing disintermediaries.

In the traditional story of Disintermediaition, the new competitor attacks the established intermediary by offering information to the customers who are hard to reach or customers who place less value on the information provided by the traditional intermediary. This is different value proposition and not necessarily a superior one, it does not destroy the establishment intermediary, but it does re-segment the market. But the more radical form of Disintermediation occurs when the information technologies are displaced, allowing new player to offer an information to a large number of people investor at the same time.

According to French (2001), stock brokerage is a pure information business. The brokerage house offers access to financial markets and the ability to execute trades. The individual broker serves as an intermediary between the client and the
executioners capabilities pf his employer, in addition to talking trading instructions from the client, the broker provides financial advice and bring new investment opportunities to the client attentions.

Until 1975, brokerage commission was regulated. Since houses could not complete on price, they competed on personal service and the perceived quality of their investment advice. The individual broker was paid on commission and therefore had an incentive to generate as much trading volume as possible whether, that was in the client interest or not, but the best broker developed personal relationship with their clients.

The relationship natured by good brokers was so close, in fact, that when they switched from one house to another, they were able to take large portion of their clients list with them. For the brokerage houses, this drained a lot of the value out of the business; there for brokerage houses found themselves competing for brokers to the point where the broker, the intermediary- was effectively the customer.

In the early 1880’s, introducing cash management system, a revolutionary application of information technology enabled client to integrate different kind of assets and credit system, sweep funds automatically, and manage their affairs from a single integrate statement. It created a powerful incentive for clients to place all their assets with the brokerage house. It also created substantial switching costs for the client who wanted to move to another brokerage house. If thus locked in the relationship between client and brokerage house and weakened the leverage of the intermediating broker. Technology had been used to create on informational glue to
bind client, broker, and brokerage houses into a stable franchise, controlled by the latter.

The proliferation in the early 2001’s of personal computer with moderns allowed for a much richer interface than the twelve keys of the telephone, by pioneering on the lime operation was able to undercut the discount brokers because it did not have to support the cost of calls.

As Internet took off, the member of electronic brokers rose to over sixty. And investors were given access to high quality information services offering: brand name research reports, portfolio tracking, record management, and cash management service such as money market. But a universe of investment and advice was becoming available, investors can find, filter, and customizes on array of investment information. And point cost can tract a portfolio and provides alerts on specific companies of interest analysis. Investors can listen in an company earnings announcement with analysis. Infant has added features like college planner to it quicken financial management program to help users make long-term financial decisions. Standard and poor offers a site that makes stock and mutual fund recommendations based on an individual financial objectives and assets.

Today, an investor who trades electronically over the internet or over a private network can access world-class investment analysis and get tailored analyses and real time price quotes. Financial information standard will provide a universal way to order and confirms stock market transactions, enabling investors to keep account with multiple institutions and integrate their statement by using financial
management software. The quality of information and advice available on line is better than that compromised by any conflict of interest.

On line brokers, operating in seamless consort with Internet information providers can raise their service without apparent limit. But one critical aspect that technology cannot match: The human interface, many investors simply don’t want to deal with database and analytic. They don’t want to take control of their affairs and spend times staring at spreadsheets, (John 2004)

The want advice from a broker, their broker, who has above all, they gave emotional support when the market turns down, they need human reassurance when long term strategies face short term reversals. No intelligent agent can do that. These people may constitute a small segment, a shrinking segment, and one that cares little for price.

To keep them, the brokerage house will have to give them back the value that they generate. So the residual value of a personal relationship, the one part of the business that technology cannot deconstruct, will indeed survive, and will flourish, but it will flourish as cottage industry outside the control of the brokerage houses or within the houses but on the brokers terms, (Elias 1989)

The logic of deconstruction may fail to break the relationship between some clients and their advisers because there are kinds of information that technology cannot deliver.
2.4.3 DECONSTRUCTION OWNERSHIP, RISK BEARING AND CONTROL IN STOCK MARKET

According to Alile & Anao (2002), Information technologies have already enabled substantial deconstruction of investor’s relationship. Currently, deconstruction is beginning to reshape labour markets. Comprehensive deconstruction of employment, and investment is starting to result in more fluid business environments, and this comprehensive form poses a fundamental challenge to the entire logic of the large corporation.

The deconstruction of corporate ownership occurred over time, and its story is largely familiar. Stock market connected investors with enterprises, and financial instruments serve as the standards defining investment contracts.

They can enjoy a rich understanding of risks and potential returns without having to restrict their investments to a small number of proprietorship. Recent advance in connectivity and standards to push out the cooperate ownership.

Initially, the enterprise was owned by a individual or perhaps a family-capital, risk power, and control all were vested in the same hands. With the explosion of industries scale, ownership grew in to partnerships, and then in to joint stock companies, allowing multiple people to have a stake in the company without actually controlling it, and those stakes could be bought and sold on stock markets. This was the first deconstruction of the ownership from control, allowing the development of the managerial class.
The corporation, and the legal system within it flourished, developed a set of mechanisms to provide its numerous and distant owners with the information they needed to make investment decisions. Outside directors, The annual report. Accounting standards. The independent audit. In a looser sense, financial journalism, stock analysis, and professional money managers evolved as navigators through the thicket of qualitative factors that influence investment decisions, (Bello, 2005)

Corporate debt evolved in similar way. Loans, and later bonds, market into a strutted risk of the lender or bondholder and the residual risk borne by the shareholder, thus allowing different investors to bear different kind of risk. Standard in the form of covenants, bankruptcy obligations and bond rating combined with the connectivity provided by stock markets to allow corporate debt ownership to deconstruct.

The securitazition and fragmentation of ownership appeared for a long time to be taking control of the corporation away from owners and placing it in the hands of a managerial hierarchy answerable enabling to one. However, the hostile takeover has deconstructed the fixed relation between the corporate assets and the managerial team. There is now a robust market for corporate control, and any management that fails to extract from a corporation its maximum value is valuable to summary displacement. So not only is ownership fragmented and risk desegregated, but even the entrepreneurial function itself is contingent on the ability of management to justify its performance.
Today, deconstruction continues to extend into ownership, risk bearing and control. Factoring, leasing, and the sale of receivables allow companies to move whole classes of assets and risk off their balance sheets and on to those of institutions better able to carry them. Securitization of financial asset such as mortgages and automotive and credit card receivable has allowed financial institution to concentrate on originating, processing, or holding the loan.

A deconstruction of the integrated leading business of thirty years ago. This deconstruction is facilitated by the liquidity of the market and standards that define risk and return for the various pools of loans.

Deconstruction is also materializing in the deliberate breaking of integrated ownership. The recognition of a conglomerate discount led many companies to spin off unrelated businesses so that investors could, own deconstructed pure plays. Companies believing that certain assets were undervalued because they were buried within a large corporation have performed partial spin-offs, sufficient to establish on independence stock price for those assets without losing control.

In the world of startups, the venture capitalist’s portfolio is a deconstructed alternative to the corporate structure venture capitalists specialized in evaluating plans and people. They broker technologies, make introductions, and help recruit the managerial team. They clean up the mess if business fail. Above all, and in contrast to corporations, they see ownership as transient and in no sense the essence of their business: a successful investment is liquidated as soon as it becomes more attractive to a corporate buyer or to the stock markets. These trends will continue. Capital
provision, risk beaming, and control are logically separable functions within, each function, we can distinguish different kinds of investment, different pools of risk and multiple facts of power. The world becomes more functions, in accordance with their competitive advantage. But deconstructing these functions require standards: for information exchange for contracts, and for the measurement of risk and return. And these standards, like all other standards, need critical mass. What in the financing world is called liquidity?

Bello (2005) Connectivity is one requirement for liquidity, and this connectivity already exists Participants in stock markets are connected by modern technology. But liquidity is really driven by the number of players evaluating a transaction, rather than the number actually and make decisions on orders of magnitudes more potential transactions today than was possible just ten years ago. The liquidity of stock market when measured by players evaluating transactions is growing at a rate proportional. Although this does not guarantee the evolution of standard or further demonstration of ownership and risk bearing, it makes them much more likely.

JOHN (2004) Deconstructed capital market and deconstructed labor market together challenge the idea that the cooperation really owns its competitive advantages. They suggest a view of the firm as a manifestation of competencies and competitive advantage whose true source is individuals of the eco system within which the firm is embedded. They further suggest that fluid; self-organizing
collaboration can succeed without the traditional infrastructure of hierarchy, control, and leadership.

2.4.4 SUMMARY OF THE CHAPTER

In this chapter we have reviewed the related literature thus bringing light to the development of Nigerian Security work in view of this, the compact of information technology on the security market had been disclose and discussed. I have discussed the explosion in connectivity and advent of universal standard, deconstructing ownership risk bearing and control, disinter mediation and on line trading had been explain in detail.
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter examines the methods and procedures employed by the researcher in obtaining data for the purpose of this study:-

A researcher is problem-induced activity. It is simply a way in which scholars investigate various problems with a view to understand and provide explanations. It is essentially based on the scientific inquiry, whose procedures include observation of the available facts relating to a particular problem followed by the formulation of hypothesis, or theoretical solution, which is used as a basis for experiment or practical testing of the theory to obtain evidence for a conclusion, or generalization, which may or may not validate the hypothesis.

A research methodology therefore is the plan by which a research activity is to be carried out. Each step in the plan, the materials or subjects to be used, the advantages of the particular plan are all summarized under the methodology. This is in line with the view that the methodology is a basic conceptual framework on which the whole research is based.
3.2 POPULATION OF THE STUDY

The study covers the floor of the Kano State exchange. Stock exchange is an organization where buyers and sellers meet through brokers to affect transaction in securities that have been listed. And with advent of technologies inventors transact their business directly. Therefore, Stock Exchange is many things in one, first it is place where securities (bond, stock and shares) of various types are traded openly and where one can purchase or sell any of such securities relatively easily. The finding collected in this study was advantage to generalize as related to the impact of information technology.

3.3 SAMPLE AND SAMPLING TECHNIQUE

A sample is a sub-set of a population. A random of ‘N’ observation (where ‘N’ observation constitute the whole elements of the population) Is one that is ‘chosen’ in such a way that each sub-set of ‘N’ observation of the population has the same probability of being selected (Walpole 2001).

The organization were first stratifies into sectors as per their types of operations as shown above. The sample sizes in each stratum were arrived at on proportionate basis depending on the relative number of respondent. After determining this, the fishbowl was then employed in random selecting each size. With this method, the organizations in each stratum were numbered serially on pieces
of papers. The papers were the folded and thoroughly mixed up in a basket. Using a blindfold a pies of paper was then picked up from the basket. Recorded and returned until the required sample size in each stratum was met. Data collected from the organizations based on the questionnaire administer are shown in chapter (4).

3.4 RESEARCH INSTRUMENT

Data are not truth, in themselves but a manifestation of a given situation. In this work the research use both primary and secondary source of data to gather the information, which are relevant for the purpose of the study.

Primary data re original data gathered by the research, which had not been gathered by anybody previously. In order to affectively gather adequate primary data for the purpose of this study, the following method of data collection were used:

(i) Interview method, and

(ii) Questionnaire method.

INTERVIEW METHOD

The interview method is one of the most widely used methods of gathering data. The interview method consists of the researcher asking the respondents series of question in a face-to-face manner. It is used when a research wants to obtain reliable and valid exchange information in order to confirm issues he is not clear with a find information or solution to question not in the questionnaire. The researcher conducted interview with some member of the Nigeria stock secondary data are very important in any research work, thus Mcgrow (1969) and that ‘The first type of data
a researcher should look for when carrying out any research is the secondary data’. The secondary data used in this work are gotten mostly from journals, bullion, Nigeria Stock exchange fact yearbook, other publication, some unpublished works and some comprehensive texts. Exchange Kano, member of the finance house (agents) and some of the principle officers of the quoted and un-quoted companies owners here in Kano.

QUESTIONNAIRE METHOD

The questionnaire method is the process of obtaining specific information about a defined problem so that data collected after being subjected to analysis and interpretation result in a better appreciation for the problem. In this study a total of sixty questionnaire were distributed to organization Kano which where picked through random sampling. In sampling, the member of individual and organization picked on their nature of operation were as follows:

| Investors (quoted and Un-quoted companies) | 25 |
| Finance houses (Agent)                     | 20 |
| Kano State Nigerian Stock exchange members | 15 |

The questionnaire was divided into three sections – A, B and C section, ‘A’ deals with traditional trading processes, section ‘B’ concentrates on the used of...
modern information technology on trading efficiency while section ‘C’ deals with the impact of needed technology on the efficiency of capital market.

Secondary data is the information collected by other person(s) or agencies. In other words, it is the information collected from already existing work, which is not purposely for the current research or work but has utility for the current work.

3.5 DATA ANALYSIS TECHNIQUES

Data analysis techniques are the categorizing ordering manipulating and summarizing of data obtains answers to research questions. According to Kerlinger (2004) the purpose of the analysis is to reduce data to interpretable form so that the relation of research problem can be studied and tested.

In these piece of work statistical techniques is used in analyzing the data collected.

THE CHI-SQUARE ($X^2$)

In analyzing our data chi-square ($X^2$) test will be employed. Chi-square ($X^2$) test is one of the techniques for analyzing associate data. According to Howkins and Tull, (1970) the chi-square test is a useful technique for achieving the following objectives:
1. Determining the sample deviation from assured theoretical distribution (expected frequency) that is, finding out whether certain models fit the data. This application is typically called goodness of fit.

2. Determining the significance of the relationship between two or more sample classifications. This is testing whether set of data is associated with respect to specific attributes.

Chi-square therefore, is a measurement of variation between actual and theoretical frequencies.

The formulas for computing chi-square ($x^2$) value is as follows:

$$x^2 = \frac{(F_0 - F_e)^2}{F_e}$$

Where:

- $F_0$ = Observed frequency
- $F_e$ = Theoretical or expected frequency
- $S$ = Summation
- $X^2$ = the value of Chi-square

The responses of the questionnaire will from the observed frequencies ($F_0$) while the expected frequencies ($F_e$) will be calculated using the following formula.

$$F_e = \frac{Er \times Ek}{N}$$
Where:

\[ E = \text{Summation of row} \]
\[ E_k = \text{Summation of columns} \]
\[ N = \text{Total number of respondent} \]

**LEVEL OF SIGNIFICANCE**

The level of significance, which a researcher will accept is always set by him before, recollects his data. So that result will not in anyway influence his choice. According, the level of significance chosen for this study is 95% or 0.05.

**DEGREE OF FREEDOM**

This is defined as the number of ‘N’ independent observation in the sample (that is size N – minus the number of universe parameter that must be obtained from the sample). Usually it is the mean of n-1.

\[ F_o = \text{Observed frequency} \]
\[ F_e = \text{Theoretical or expected frequency} \]
\[ S = \text{Summation} \]
\[ X^2 = \text{The value of chi-square} \]

The responses of the questionnaire will from the observed frequencies (F_o) while the expected frequencies (F_e) will be calculated using the following formula.

\[ D/F = (r - 1) (c - 1) \]
Where:

\[
\begin{align*}
\text{D/F} & \quad = \quad \text{Degree of freedom} \\
R & \quad = \quad \text{Number of rows (in the respondent contingency table)} \\
C & \quad = \quad \text{Number of columns (in the respondent contingency table)}
\end{align*}
\]

After the level of significance and degree of freedom are determined, we can then compare the value of $X^2$ observed (calculated) with the $X^2$ critical value (from $X^2$ table) before any decision can be initiated.

**DECISION RATE**

This is the crucial stage in these statistical techniques. Infant, it is the final step in the research where such tests are applied.

Decision rule addresses itself to the fact that statistical hypothesis are formulated with the fundamental aims of either accepting or rejecting them (on the basis of evidence(s) collected).

The criterion is that when the computed $x^2$ value is less than or equal to ($\leq$) the table value we accept the null hypothesis (Ho), but when the computed value is greater than ($>\$) the table value we reject the null hypothesis and accept the alternative hypothesis (Hi). This rule will be applied in the decision making of the three hypothesis of this research work.
CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 INTRODUCTION

Sixty questionnaires were distributed to organizations in Kano. Out of this figure, 25 were to individuals concerned, 20 to finance houses (agent) and 15 to Kano State Nigeria Stock Exchange. Forty-five (45), fifteen (15) were unfilled and thirty (30) were duly completed (except for few questions in which case raw statistical data were requested for the number of returned filled questionnaires account for 50% rate.

The 50% return is impressive and indeed, it is against this background that relevant statistical techniques have to be applied to prove whether the hypothesis be accepted or rejected. This is to say that it is in this chapter that the data collected are presented, analyzed and discussion of the findings are also given. This is carried out through the application of chi-square ($x^2$) and percentage in some instances.

4.2 DATA PRESENTATION

The data collected is tabulated below, the arrangement is based on the decision of the questionnaire, into sections. Each response of either ‘yes’ or ‘No’ is score (I). As for other kind of options, the score depends on the number of people that tick a particular option.

It is pertinent to mention that in the tabulation of data, some question responses may not be up to the thirty (30) questionnaires duty completed and
returned. This is already explained in the introduction. Another reason is that most of the respondents have the idea of an I don’t care attitude as such, these remarks were passed verbally by most of them on why some information were not provided when responding to the questionnaires.

4.3 DATA ANALYSIS

As mentioned in chapter three, for a research of this nature to be reliable, interview should be conducted with company officers and other organizations in addition to questions raised in the questionnaire. This serves to clarify areas where there could be bias in the people’s responses, and also to clarify some misunderstandings that can possibly arise from the questions in the questionnaire. This has made it possible to divide the analysis into phases, the first phase deals with descriptive analysis and the second phase deals with statistical analysis.

a. Descriptive Analysis: Like the statistical analysis, the descriptive analysis will help to confirm or otherwise the theoretical assertions contained in the study. Some of these assertions include the predominant made of ownership, the knowledge of individual investor, the probability revealed that 23 respondents were in lack of knowledgeable, experienced, and skilled personnel while 7 are fairly okay. This represents 76.67 as facing lack of knowledge, experience, and skillful personnel against 23.33.

We further stated that despite the knowledgeable, experienced, and skillful personnel/investors being encountered, some investors and the stock
market are in lack of modern and sophisticated technological machine, naturally, one would have expected that investors and the stock market would go to any length to have these modern machines.

Also asserted was that most investors are more of family business and otherwise (sole-proprietor) make it difficult for them to else same facilities for more information especially those of self-computer or going to the stock exchange trading floor. Despite the fact that 21 despondence involve their awareness of the stock exchange. In question of section B only 6 indicate that they patronize stock exchange trading floor. In question 11 representing only 20% there is non-usage of modern technology by our investors.

This is also the case with the use of stock exchange market where the responses in question 10 in section b revealed that only 10 respondent out of 30 have benefited for day to day activities of the stock exchange and their services representing 33.33% of the total responses.

Having seen that the indigenous investors have been retaining from the use of modern machines despite it is necessity for the development of the economy, We went assent that these investors are mainly depending as family business as sole proprietorship that does not help. Responses to Q4 of section C confirm this assertion of over dependence on family contribution. In a more clearly way, question q shows that 19 responses depend more on family business for their day to day
As regard the use of modern machine by our investors, the findings in Q8 and Q5 of section B revealed that only a small proportion of the responses used some of these modern machines for example no responses shows the uses of internet,

Verbal interview with most of the investors and member of the stock exchange revealed that they are not willing to adopt the use of most of the tools. On the whole it is revealed by the above analysis, that our investors and members of the stock exchange are retrained from using these tools because of NEPA instability in the country.

This is accountable for the low knowledgeable, experience and skillful personnel and investors. As seen those having up to 30 modern technology skilled workers are only 13 between 11-20 are 7 while between 1-10 are 10 responses.

Inspite of the fact that our security market is in lack of knowledgeable, experience and skillful workers in modern technology machine contrary to the expectation. Therefore, they are must be reasons characterizing this phenomenon. This next section of statistical analysis will reveal.

4.3.1 STATISTICAL ANALYSIS

This section will test the hypothesis proposal in chapter one. As already mentioned in the methodology, the chi-square ($x^2$) test will be employed.
We have already seen above that most of our modern technology in the security market and for efficient investment decision making are either being under utilized or not used at all by our capital market and investors. As already established in the descriptive analysis only few investors patronized our stock market trading floor, no investor in the sample has internet for home trading transaction with stock market. now that it has been established firmly that our investors need modern and sophisticated machines, why should they not buy the machine in every legitimate source. The first (1st) hypothesis tries to find out whether they lack these modern and sophisticated machines.

**HYPOTHESIS 1**

Ho: Lack of modern and sophisticated technology by our investors and stock exchange is not responsible for the market in efficiency.

Hi: Lack of modern and sophisticated technology by our investors and stock exchange is responsible for the efficiency of the Nigerian security market.

Question 3 and 9 of section B provide answers for the test of the hypothesis, thus:

Q9 : Are you aware the function of our security market (stock market).

The responses that were Yes is 21 and No is 9 representing 70% and 30% respectively.
Q3: Are you aware of the function of the modern technological machine? Here the responses are Yes 22 and No 8 representing 73.33% and 26.6% respectively.

These two questions in section B provide us with information with which to test the stock exchange and investors used of modern machines. Thus, their responses can be presented in a contingency table as follows:

**Table 4.1 CONTIGENCY TABLE SHOWING RESPONSES ON THE LACK OF MODERN TECHNOLOGICAL MACHINE**

<table>
<thead>
<tr>
<th>Question No. Section B</th>
<th>Response</th>
<th>Total</th>
<th>% of Responses</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>21</td>
<td>9</td>
<td>30</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>3</td>
<td>22</td>
<td>8</td>
<td>30</td>
<td>73.33</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>30</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>17</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td></td>
<td>73.33</td>
<td>26.67</td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

Computation of chi-square ($\chi^2$)

Formula \( \sum(fo - fe)^2 \)

\( fe \)
### Table II COMPUTATION OF CHI – SQUARE (HYPOTHESIS 1 – INSTITUTION)

<table>
<thead>
<tr>
<th>FO</th>
<th>FE</th>
<th>FO – FE</th>
<th>(FO – FE)²</th>
<th>(FO – FE)² / FE</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>21.5</td>
<td>-0.5</td>
<td>0.25</td>
<td>0.012</td>
</tr>
<tr>
<td>9</td>
<td>8.5</td>
<td>0.5</td>
<td>0.25</td>
<td>0.029</td>
</tr>
<tr>
<td>22</td>
<td>21.5</td>
<td>0.5</td>
<td>0.25</td>
<td>0.012</td>
</tr>
<tr>
<td>8</td>
<td>8.5</td>
<td>-0.5</td>
<td>0.25</td>
<td>0.029</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>X²</td>
<td>0.082</td>
</tr>
</tbody>
</table>

Thus: \[ x^2 = \sum \frac{(fo – fe)^2}{Fe} \]

Degree of freedom

Formula D/F = (C – 1) (R – 1) (Already define in chapter 3)

D/F = (2 – 1) (2 – 1) = 1 df

Table value of \( x^2 \) at 0.05 level of significance with 1 df is 3.841

### DECISION

The rule stated that if the calculated value of \( x^2 \) is less than the table value, we accept the null hypothesis and vice-versa.

Thus, here the null hypothesis is accepted in term of the lack of modern and sophisticated technology in the security market.

For the null hypothesis to be completed, accepted or rejected, we need to test the stock exchange use of modern and sophisticated machine.
### Table 4.3

<table>
<thead>
<tr>
<th>Question No.</th>
<th>Response</th>
<th>Total</th>
<th>% of Responses</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section C</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>18</td>
<td>12</td>
<td>30</td>
<td>73.33</td>
</tr>
<tr>
<td>2</td>
<td>17</td>
<td>13</td>
<td>30</td>
<td>66.67</td>
</tr>
<tr>
<td>3</td>
<td>20</td>
<td>10</td>
<td>30</td>
<td>80.00</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>35</td>
<td>90</td>
<td></td>
</tr>
</tbody>
</table>

**Computation of chi-square ($x^2$)**

**Formula** \( \sum (fo - fe)^2 \)

\[ Fe \]

\[ Fo = \text{observed frequency} \]

\[ Fe = \text{expected frequency} \]
Table 4.4  COMPUTATION OF X² VALUE

<table>
<thead>
<tr>
<th>FO</th>
<th>FE</th>
<th>FO − FE</th>
<th>(FO − FE)²</th>
<th>(FO − FE)² / FE</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>18.33</td>
<td>-0.33</td>
<td>0.11</td>
<td>0.006</td>
</tr>
<tr>
<td>12</td>
<td>11.00</td>
<td>1.00</td>
<td>1.00</td>
<td>0.091</td>
</tr>
<tr>
<td>17</td>
<td>18.33</td>
<td>-0.33</td>
<td>1.77</td>
<td>0.097</td>
</tr>
<tr>
<td>138</td>
<td>11.00</td>
<td>2.00</td>
<td>4.00</td>
<td>0.36</td>
</tr>
<tr>
<td>20</td>
<td>18.33</td>
<td>1.67</td>
<td>2.79</td>
<td>0.15</td>
</tr>
<tr>
<td>10</td>
<td>11.00</td>
<td>-1.00</td>
<td>1.00</td>
<td>0.091</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td>0.795</td>
</tr>
</tbody>
</table>

\[ x^2 = \sum_{i=1}^{n} (fo − fe)^2 = 0.795 \]

Fe

Degree of freedom

\[ D/F = (C − 1) (R − 1) \]

\[ (3 − 1) (2 − 1) = 2\text{df} \]

Table value of \( x^2 \) at 0.05 level of significance with 2df is 5.991

**DECISION**

Computed \( x^2 \) value is less than the table value rejected Ho and accept Hi.

Thus, the null hypothesis \( x^2 \) is accepted and the alternative (Hi) hypothesis is rejected. In conclusion to the hypothesis are:
(i) It is clearly seen that investors and agents are aware of the function of modern and sophisticated machine.

From the foregoing, it can be generally interpreted that though our investors are not utilizing some of these modern machine, this does not mean that they are unaware of them.

Now if the indigenous investors are aware of the modern sophisticated machine, and actually need knowledgeable experience and skillful personnel, the question us; What hold them from seeking these knowledge.

**HYPOTHESIS 2**

Ho: Lack of knowledgeable, experience, skillful personnel and investors is not responsible for market inefficiency.

Hi: Lack of knowledgeable, experience and skillful personnel and investors is responsible for market inefficiency.

Just as the procedure applied in the testing of hypothesis 1 (one), the same rule will be applied here in question 6 of Section B provides answer for the analysis of this hypothesis Q4 followed Q8 where 24 out of the 30 despondence accept that they are not literate on these modern machine.
Q6: Can you operate, retrieve and send information through this modern machine?

<table>
<thead>
<tr>
<th></th>
<th>FO</th>
<th>FE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>No</td>
<td>23</td>
<td>15</td>
</tr>
</tbody>
</table>

This shows that 23 are not literate on modern information technological machine. While seven (7) said they are literate.

Computation of $x^2$

$$x^2 = \sum \frac{(fo - fe)^2}{fe}$$

Where:

$fo = \text{Observed frequency}$

$fe = \text{Expected frequency}$

**Table 4.5**

<table>
<thead>
<tr>
<th></th>
<th>FO</th>
<th>FE</th>
<th>FO – FE</th>
<th>$(fo – fe)^2$</th>
<th>$(fo – fe)^2$</th>
<th>$(fo – fe)^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16</td>
<td>10</td>
<td>6</td>
<td>36</td>
<td>3.60</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>10</td>
<td>4</td>
<td>16</td>
<td>1.60</td>
<td></td>
<td>5.20</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.20</td>
</tr>
</tbody>
</table>

$$x^2 = \sum \frac{(fo – fe)^2}{fe}$$

Degree of freedom

Table value $x^2$ at 0.05 level of confidence = 3.841
DECISION

Computed $x^2$ value $> \text{Table } x^2$ value

= Reject Ho and accept Hi

In this regard, we reject Ho and accept Hi, which is responsible for the market inefficiency, this evidence by the fact those out of the 30 despondence only seven (7) are using these modern information technological machines.

The final hypothesis to be tested is hypothesis number three (3) which seek to reveal whether the poor or non used of these modern machine is due to rationed behind our investors. This is to the effect that respondent may view listing in the stock exchange divide their contract a result of connectivity.

Ho: Rational level of our investors in not responsible for the market inefficiency.
Hi: Rational level of our investors is responsible for the market inefficiency.

Here, responses of Question 11 of Section B shall be used to test the hypothesis.

Q12: If no to 11, is it because you consider attending stock exchange floor is a too boring and demanding?

Responses: Yes 19  No 11

Computation of $x^2$
Table 4.6

**COMPUTATION OF X² VALUE**

<table>
<thead>
<tr>
<th>FO</th>
<th>FE</th>
<th>FO – FE</th>
<th>(FO – FE)²</th>
<th>(FO – FE)² / FE</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>10</td>
<td>7</td>
<td>49</td>
<td>4.9</td>
</tr>
<tr>
<td>13</td>
<td>10</td>
<td>3</td>
<td>9</td>
<td>0.9</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>X²</td>
<td>5.80</td>
</tr>
</tbody>
</table>

X² value computed = 5.80

X² table value = 3.841

**DECISION**

x² computed > x² table value

= Reject Ho and Accept Hi

The null hypothesis is hereby rejected and the alternative hypothesis is accepted.

The conclusion is that Dilution of ownership underlying the efficiency of security market of some of these modern information technological machines.

Response = Yes 16 No 14

Computation of x²

\[ X² = \sum (fo – fe) \div fe \]
Where:  
fo = Observe  
fe = Expected frequency

Table 4.7

**COMPUTATION OF X^2 VALUE**

<table>
<thead>
<tr>
<th>FO</th>
<th>FE</th>
<th>FO – FE</th>
<th>(FO – FE)^2</th>
<th>(FO – FE)^2 / FE</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>10</td>
<td>6</td>
<td>36</td>
<td>3.60</td>
</tr>
<tr>
<td>14</td>
<td>10</td>
<td>4</td>
<td>16</td>
<td>1.60</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>5.20</td>
</tr>
</tbody>
</table>

Computed x^2 value = 5.20

Table value of x^2 = 3.341

**DECISION**

i. Computed x^2 value > Table x^2 value = Accept Ho

ii. Computed x^2 value > Table x^2 value = Reject Ho and Accept Hi

Once again, the null hypothesis is rejected, as the calculated x^2 value is greater than the table value of the x^2. Therefore the alternative hypothesis is accepted. This confirms that the method/technicalities of using those machines and outside the stock market is too demanding. Therefore, technologies are moving in order of magnitude faster, the incumbent no longer has the simple option of gracefully retreating the high
margin segment. And by becoming “object oriented” the organization is able to operate at a high level of complexity, preserve a culture of collaboration, and achieve degrees of adaptability available only to market.

4.4 SUMMARY OF THE CHAPTER

This chapter deals with the presentation of the data collected and it’s analysis using the various tools discussed in chapter three (3), it is here hypothesis are equally treats to determine their acceptance and/or rejection.
CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY

It has been established empirically that evolution of technology will dramatically alter the basis of competitive advantage, because information technology will diminished the value have establish business relationships. And these will allow investors who want the best security to find the company/industry who offers the best security in the market.

And the finding shows that, the channel choices for marketers, the inefficiencies of investors search, the hierarchical structure of security supply or transaction, the organizational pyramid, asymmetries of information and the boundaries of the corporation itself will all be thrown into questions.

This chapter I of the research addresses these topics as well as the historical roots. While chapter II address the literature review, the collection of essays from different author those are relevant to my study.

The third chapter, it concerned with research methodology, which described the method of data collection iv deals with data presentation and analysis, which brings the clear testing of the three hypothesis tasted in chapter 1. The final chapter deals with, summary, conclusion and recommendation of the research work.
5.2 CONCLUSIONS

Undoubtedly, the modern information technologically machines has role to play in our march towards sustained economic growth and development by helping the investors to know every activities gain in the stock market and to take a quick decision for the expansion purposes.

This is only possible however, if the stock market is taken into consideration, the reality of the ever changing of the world and the Nigerian economy in its operational practices.

Therefore, it is hope that in near future, the security market become so efficient that promoter/investor resort it rather than more of family business or even the counter security trading. However, given the level of activities so far in the market, there is no doubt that if future prospects are bright with positive implication for the economy.

5.3 RECOMMENDATIONS

The security market in Nigeria face many challenges, one of them has continue to improve quality of service that prompt courteous service is ensured by having well trained staff and by awaiting ourselves of modern tools to assist efficiently. Automation is at the core of these modern tools. When acknowledged fore-reading and rapid changes now taking place in the security market, it is
appropriate if not imperative that those who in it at the executive and bore levels should not only be very conversant with these changes but also that they understand their implication for the performance and indeed the survival of securities. Failure to have such sound understanding would imply less than adequate or optimal response and could spell disaster for the negligent securities.

Moreover, these changes should be matter of special interest not only to those who use the services and those who monitor and supervise their operation but also functions and sources of livelihood is to report on them in the print and electronic media.

The point here is security market is the hub of the economy and changes, there in deserve special attention that we can ill-afford to neglect.

To ensure that the social welfare criterion for technological changes is satisfied, there is need for appropriate intervention. Deregulation and liberalization should be guided and monitored to ensure for instance, that competition is fair and on more level ground, that the rules of the game are observed both in the letter and spirits and that culprits are identified and removed. In this regard it might be argued that hither to there have been a failure of sanctions a matter that is now being seriously addressed. For security market, that is based largely on confidence and trust.

There is an urgent need not only to observe legality but also to have a system of self-regulation. And as further deregulation and liberalization engender intense competition and create more opportunities for profit through market imperfection, it
can not be urged too strongly that operators must ensure securities are well price and fairly treated at all times. In recent time, the unfortunate negative impression has been created in the security market to the effect that “only the smart guys finish first” that is moral inversion that needs urgent rectification.

The on-going technological development and changes in innovation should be matched by qualitative improvement in ethical standard such that a happy combination between business and corporate and executives integrity is regarded, not as an unrealistic, irrelevant ideal-world construct, but as highly desirable and realistic in our time in Nigeria.
REFERENCES


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Osuala, E.C. (2005): Introduction to Research Methodology,
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Dear Respondent,

I am a student of Ahmadu Bello University Zaria, Carrying out a research on : A study of the impact of information technology on the efficiency of security market in Nigeria” in partial fulfillment of the award of a Master’s Degree in Business Administration.

You are please requested to provide answers to the following questions. It will be appreciated if correct information supplied. All information provided will be treated as highly confidential as possible and would be used for “Research purpose only”.

Thank you

Yabagi Bala Ahmed

Section A

1. Specify the category of limited liability your falls into:
   (a) Private limited liability company
   (b) Public limited liability company
   (c) Company limited by Guarantee
2. Types of business undertaking
   (a) Intermediary (Agent)
   (b) Investor
   (c) Principle officer

3. Year of commencement of business

4. Number of your employees

5. How many people are literate on computer and other modern technological information machines.

Section B

1. Is lack of knowledge on modern technological machine one of your problem? Yes [ ] No [ ]

2. Do you solve this problem through training and development? Yes [ ] No [ ]

3. Are you aware of the function of modern information technological machine? Yes [ ] No [ ]

4. Do you have or access to any of the modern information technological machine? Yes [ ] No [ ]

5. If Yes (4), kindly specify:
   a) Computer
   b) Internet
c) E-mail  
d) Fax-machine  
e) All of the above  

6. Can you operate, send and retrieve information (date) by using those machines?  
   Yes [   ] No [   ]  

7. Are the operation too difficult and demanding for you.  
   Yes [   ] No [   ]  

8. Tick if you have any of the following as your source of stock information  
   a) Agent  
   b) Newspapers  
   c) Modern machines  

9. Are you aware of the function of stock exchange?  
   Yes [   ] No [   ]  

10. Are you listed in the stock exchange?  
     Yes [   ] No [   ]  

11. If Yes, are you attending stock exchange trading floor?  

12. If No to question 11 is it because you consider attending is too baring and demanding.  
     Yes [   ] No [   ]  

13. Do you feel listing in the stock exchange will consequently dilute your control power?  
     Yes [   ] No [   ]
Section C

1. Is the Nigerian Stock Market efficient? Yes [ ] No [ ]

2. How efficiency of the security market?

3. Do they have modern information technological machine? Yes [ ] No [ ]

4. Do you consider modern machine are costly to acquire and maintain? Yes [ ] No [ ]

5. How do you finance your business, is it through:
   Security Market [ ]
   Commercial Bank [ ]
   Leasing [ ]
APPENDIX II

TABULATION OF DATA COLLECTED

Below are the responses of companies to the questionnaires. The questionnaire is divided into Section A, B and C. Section A seeks the organizational background and current status.

Section B focuses attention on modern technology of information while Section C address the efficiency of the security market.

Section A:

1. Specify the category of limited liability your falls into:
   (d) Private limited liability company
   (e) Public limited liability company
   (f) Company limited by Guarantee

2. Types of business undertaking
   (d) Agent
   (e) Investor
   (f) Principle officer

3. Year of commencement of business
   (a) 1970 – 1979
   (b) 1980 – 1989
   (c) 1990 – 2001

4. Number of employees
   * Number of people 20 – 50  50 – 100  100 – 200
5. How many employees are computer literate and other modern information technological machines.
* Number of literate 1 – 10  11 – 20  up to 30
- Number of Despondence

Section B:

1. Lack of knowledge on modern and technological machine one of your problem?
   Yes 23  No 7

2. Do you solve this problem through training and development?
   Yes 18  No 12

3. Are you aware of the function of modern information technological machine?

4. Do you have or across to any of the modern technological machine?

5. If Yes to (4) kindly specify.
   (a) Computer
   (b) E-mail
   (c) Internet
   (d) Fax machine
   (e) All of the above

6. Can you operate, send and retrieve information (data) by using any of those machine?

7. If No to (6) are the operation too difficult and demanding for you?
8. Tick if you have any of the following as your source of stock market information.
   (a) Agent
   (b) News papers
   (c) Modern machines

9. Are you aware the function of stock exchange?

10. Are you listed in the stock exchange?

11. If Yes, do you attend stock exchange training floor

12. If No to question 11, is it because you consider attending stock market to boring and demanding?

13. Do you feel listing in the stock exchange will quencequently dilute your control power?

Section C:

1. In the Nigerian stock market efficient

2. How efficient of the Nigerian stock market?
   (a) Week form
   (b) Semi-strong form
   (c) Strong form

3. Does the security market have modern information technological machine.

4. If No to question 3, do you consider the modern machine are costly to acquire and maintain?
5. How do you finance your business?
   (a) Through security market
   (b) Through commercial bank loan
   (c) Through leasing