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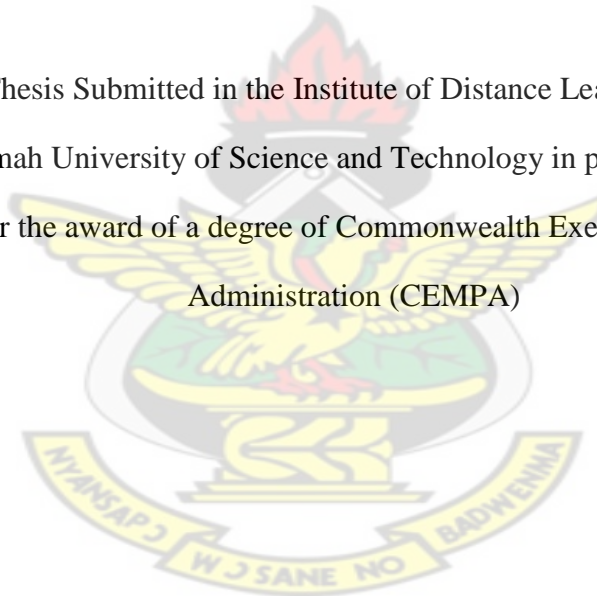
**E-BANKING AND PERFORMANCE OF HFC BANK IN GHANA**

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A Thesis Submitted in the Institute of Distance Learning of the  
Kwame Nkrumah University of Science and Technology in partial fulfillment of the  
requirements for the award of a degree of Commonwealth Executive Masters of Public  
Administration (CEMPA)



**JUNE 2011**

## DECLARATION

I Vida Awuku, author of this thesis, do hereby declare that the work presented here was done by me as a student of the Institute of Distance Learning Kwame Nkrumah Univesity of Science and Technology, 2010/2011 academic year under the supervision of Mr. Samuel Kwesi Enniful.

All references to other literature have been duly acknowledged. This work has never been submitted in whole or part for any degree of this University or elsewhere.

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## **DEDICATION**

This work is dedicated to the Almighty God who gave me knowledge and strength to carry out this work successfully. I will also like to thank my dynamic supervisor for his immense contributions.

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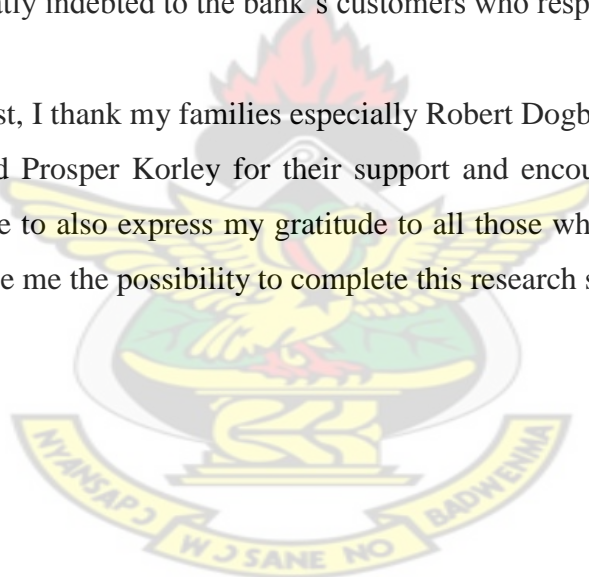
## ACKNOWLEDGEMENTS

It is always worth to appreciate ones contribution. It is due to this fact that I feel those who contributed in diverse ways "in making this work possible need to be commended.

First, I wish to express my profound gratitude to the Almighty God for giving me the strength, knowledge and guidance to carry out this research study. I also wish to acknowledge Mr. Enniful my supervisor, whose suggestions and encouragement helped me in writing this research.

Secondly, I wish to also acknowledge the contributions of officials of HFC banks I contacted for taking time out of their busy schedule to answer some pertinent questions concerning my work. I am also greatly indebted to the bank's customers who responded to our questionnaire.

Last, but not the least, I thank my families especially Robert Dogbey Fialeseshie my husband, Cynthia Bonsah and Prosper Korley for their support and encouragement in pursue of my interest. I would like to also express my gratitude to all those who have not been mentioned in this study but gave me the possibility to complete this research study.



## ABSTRACT

The study sought to examine electronic banking services activities and HFC bank performance. The study was aimed at finding and providing an understanding of the use of electronic banking services on the various banking activities and bank performance with regards to profitability, growth measures, and stability of the bank. The study was carried out using primary data. In arriving at the data for the study, Three hundred and eighty five participants were used. Questionnaires were administered. Appropriate frequency tables and charts were used, A simple regression analysis was used to explain the relationship of the present the findings. The present study found out that electronic banking services activities have positive results on staff working activities as it saves their time and energy. Again it found customer's response to electronic banking services of the bank to be positive as it encouraged some of them to bank with HFC and also found electronic banking services activities to have positive results on the performance of the bank which result in the profitability and growth of the bank ,Finally the study revealed that E- banking had a significant impact on performance .The study recommended **that more innovative ways of satisfying customers profitably should be employed to ensure a better delivery of service,** in order to increase the bank's profitability. It concludes that all technology advancement is inseparable to the growth and sustainability of the banking industry and that positive attitudes of management and staff towards this phenomenal trend is a necessary condition for developing appropriate procedures, process and resolution.

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## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 BACKGROUND TO THE STUDY**

The Banking Act 2004 (Act 673) Section 90 defines a bank as a corporate body which is issued with a licence in accordance with this Act to carry on banking business. The business of banking involves the acceptance of deposits of money from the public, repayable on demand and withdraw able by cheques, drafts, orders or by any other means; or the financing whether in whole or in part or by short, medium or long term loans or advances, of trade, industry, commerce or agriculture.

The banks perform these activities by acting as a financial intermediary between the surplus units and the deficit units. In other words, they tend to bridge the gap between the needs of lenders and borrowers by performing a transformation function to mobilise funds through the acceptance of deposits and granting of loans and advances.

The banks also create financial assets for their customers, by way of selling or trading with other financial institutions in the financial market. For instance, a customer with a mortgage (a real estate) may ask his bank to sell or exchange the financial asset for another asset like cash.

They offer investment advice to their customers and non-customers as well. The banks by reason of their existence after delegated monitoring, information production, commitment mechanisms etc. provide relevant information to individuals on how to invest into profitable securities, shares etc in order to earn higher returns with less risk (Ghana web,2005)

In the banking sector, several factors such as the organisation structure, socio-economic conditions, Information technology (IT), among others affect the banks performance. In this particular study, attention is drawn to electronic delivery channel, a form of IT innovations to unveil its performance at HFC bank.

According to the Federal Financial Institutions Examination Council (FFIEC) ( 2005) the electronic delivery channel collectively known as electronic banking (e-banking) is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic interactive communication channels.

The use of e-banking involves Personal Computer (PC) Banking, Automated Teller Machines (ATMs), Telephone Banking, Internet Banking, Branch Networking and Electronic Funds Transfer at Point of Sale (EFTPOS) to enable financial institution to transact business, access accounts or obtain information on financial products and services. That is banks access e-banking services using an intelligent electronic device, such as a personal computer (PC), personal digital assistant (PDA), automated teller machine (ATM), kiosk, or Touch Tone telephone to meet the demands of its customers.

With banks the establishment of e-banking has resulted into improvements of services in the banking sector. For instance, banks have come a long way from the time of ledger cards and other manual filing systems to;

- a) 24 hours, 7 days a week, 365 days a year bank availability.
- b) No time limit access into account, that is customers' access to savings or current account and others are always in progress.
- c) Immediate realization of payment operation orders.
- d) Monitoring accounts balance in different time periods.

- e) No additional commission for executed payments operations (Simpson ,2002)

## **1.2 STATEMENT OF THE PROBLEM**

New information technologies and emerging business forces have triggered a new wave of financial innovation electronic banking (e-banking) (Wu et al, 2006). Their study utilizes an innovation model to analyze the effect of e-banking on the incumbent banks. The results indicate that the nature of e-banking innovation is disruptive, leading to drastic changes in both technological knowledge and business model.

The development of e-banking services actually changed the distribution channel structure in the banking sector. (Mols,1999) states that e-banking is a new distribution channel that offers less waiting time and a higher spatial convenience than traditional branch banking and has significantly lower cost structure than traditional delivery channels. By offering e-banking services, banks can get notable cost savings, reduce their branch network and downsize the number of their service staff which will contribute to maximizing their profits.

E-banking creates unprecedented opportunities for the banks in the ways they organize financial product development, delivery, and marketing via the Internet. While it offers new opportunities to banks, it also poses many challenges such as the innovation of IT applications, the blurring of market boundaries, the breaching of industrial barriers, the entrance of new competitors, and the emergence of new business models (Saatcioglu et al, 2001).

Over the past decade, researchers in this field have either swayed their study of e-banking to be a beneficial and profitable endeavour ; other results indicate that the nature of e-banking

poses many challenges such as the innovation of IT applications, the blurring of market boundaries, the breaching of industrial barriers and the entrance of new competitors.(Sohail,& Shanmugham ,2003)

Against this background it seems that electronic banking services and performance is not clear cut since other studies have established it to bear both positive and negative on banking performance. The study therefore seeks to examine e-banking services activities on the HFC bank performance.

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### **1.3 OBJECTIVES OF THE STUDY**

Generally the study is designed to assess e-banking activities and performance.

But specifically it has the following objectives:

1. To find out the type of e-banking services commonly patronized by Ghanaians in the HFC bank.
2. To find out how e-banking services contribute to the performance of HFC bank.
3. To examine the challenges of e-banking services for the HFC bank.

### **1.4 RESEARCH QUESTIONS**

The research questions posed are:

1. Is e-banking services patronized by many Individuals in the HFC Bank?
2. Do e-banking services contribute to the bank performance?
3. Do staff and customers face challenges with the use of e-banking?

## **1.5 SIGNIFICANCE OF THE STUDY**

The research will serve as a reference to companies (especially banks), yet to implement the usefulness of information technology in their activities and to banks who are already involved but do not provide all the delivery channels for banking products and services.

It may also affect knowledge on employees, about the understanding of the use of e-banking on the various banking activities and its effect on banks performance with regards to profitability, credit quality, growth measures etc.

For customers to appreciate the level of influence made by electronic banking in making banking easier and also make customers aware of the electronic delivery services banks are offering currently and the benefits that come along with these services.

Lastly, to enlighten all readers about the contributions of e-banking services to the development of the Ghanaian banking industry.

## **1.6 SCOPE AND LIMITATION OF THE STUDY**

The study is limited to HFC Bank as it is involved in e-banking services like any other Ghanaian bank. However, in the case of evaluations and contrasts, other banks were involved.

The problem encountered in the successful execution of the research was the reluctance of the officials to release the necessary data for the study. I had to visit the bank on so many occasions before some of the information was made available to me. All efforts made to get

access to the rest of the information were in vain since officials of the bank treated this information as confidential.

## **1.7 ORGANIZATION OF THE WORK**

Organization of the study was carried out in five chapters as follows:

Chapter one looked at the background to the study, it defines the term electronic banking and the importance of e-banking. It also identifies the statement of the problem, research objectives, research question posed, significance of the study and scope and limitation of the study.

Chapter two dealt with a comprehensive review of available relevant literature. The researcher went ahead to look at the history and the evolution of banks in Ghana., Concentrated on how HFC bank came into the business of banking, when they started operations and where they have reached in terms of their provision of electronic banking services, Discussed briefly their products and services and the major electronic banking services being currently provided and finally concluded this chapter with the benefits and problems of electronic banking services.

Chapter three involved the methods used in arriving at my data. The simple random technique was use as a method of analysis to give a fair representation from respondents. Primary and Secondary data was use.

Chapter four entails the presentation and analysis of data collected.

Finally Chapter five deals with the summary of my findings, conclusion and recommendations of the study.

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## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

The past three decades has witnessed a lot of research in the electronic banking scheme. Some of these studies focused on the technological innovation or electronic delivery channels that have contributed positively to the provision of banking services and the growth of the Ghanaian banking industry. Appiah & Agyemang (2004) focused on the considerable change of electronic payment systems in Ghana, as electronic payment has gained increasing popularity, especially in the cities.

In Sub-Saharan Africa, developments in information and communication technology (ICT) are radically changing the way business is done. Electronic commerce is now thought to hold the promise of a new commercial revolution by offering an inexpensive and direct way to exchange information and to sell or buy products and services. This revolution in the market place has set in motion a revolution in the banking sector for the provision of a payment system that is compatible with the demands of the electronic marketplace (Balachandher *et al*, 2001).

Innovations in information processing, telecommunications, and related technologies – known collectively as “information technology” (IT) – are often credited with helping fuel strong growth in the many economies (Coombs *et al*, 1987). It seems apparent then that, technological innovation affects not just banking and financial services, but also the direction of an economy and its capacity for continued growth. IT is defined as the modern handling of information by electronic means, which involves its access, storage, processing, transportation or transfer and delivery (Ige, 1995). According to Alu (2002), IT affects

financial institutions by easing enquiry, saving time, and improving service delivery. In recent decades, investment in IT by commercial banks has served to streamline operations, improve competitiveness, and increase the variety and quality of services provided. According to Yasuharu (2003), implementation of information technology and communication networking has brought revolution in the functioning of the banks and the financial institutions. It is argued that dramatic structural changes are in store for financial services industry as a result of the Internet revolution; others see a continuation of trends already under way.

Many banks are making what seem like huge investments in technology to maintain and upgrade their infrastructure, in order not only to provide new electronic information-based services, but also to manage their risk positions and pricing. At the same time, new off-the-shelf electronic services such as online retail banking are making it possible for very small institutions to take advantage of new technologies at quite reasonable costs. These developments may ultimately change the competitive landscape in the financial services.

According to Malhotra et al (2006), empirical analyses have been conducted from a panel data of 88 banks for the period 1998-2005 to see the differences between the profiles of Internet and non-Internet banks and the effect of Internet banking upon bank's performance. The analysis indicates several significant differences in the profile of banks that offer Internet banking and banks that do not. Broadly speaking, Internet banks are larger banks but have lesser equity cushions as compared to non-Internet banks. Internet banks rely heavily on non-interest income and also on deposits for funding than non-Internet banks. Internet banks have better accounting efficiency ratios and higher returns on equity and returns on assets than non-Internet banks.

Also e-banking creates unprecedented opportunities for the banks in the ways they organize financial product development, delivery, and marketing via the Internet. While it offers new opportunities to banks, it also poses many challenges such as the innovation of IT applications, the blurring of market boundaries, the breaching of industrial barriers, the entrance of new competitors, and the emergence of new business models. Saatcioglu et al (2001).

In a whole a number of studies have concluded that IT has appreciable positive effects on bank productivity, cashiers' work, banking transaction, bank patronage, bank services delivery, customers' services and bank services. They concluded that, these have positive effects on the growth of banking Balachandher *et al*, (2001; Idowu *et al* (2002); Hunter (1991); Whaling, (1995); Yasuharu (2003).

## **2.2 BANKING OVERVIEW**

Banking is the business of providing financial services to consumers and businesses. The basic services a bank provides are checking accounts for payments and purchase goods and services; savings accounts and time deposits for the purpose of saving money for future use; loans for consumers and businesses- to purchase goods and services; and basic cash management services such as check cashing and foreign currency exchange. Four types of banks specialize in offering these basic banking services: commercial banks, savings and loan associations, savings banks, and credit unions.

A broader definition of a bank is any financial institution that receives, collects, transfers, pays, exchanges, lends, invests, or safeguards money for its customers. This broader definition includes many other financial institutions that are not usually thought of as banks but which nevertheless provide one or more of these broadly defined banking services. These

institutions include finance companies, investment companies, investment banks, insurance companies, pension funds, security brokers and dealers, mortgage companies, and real estate investment trusts.

Banking services are extremely important in a free market economy. Banking services serve two primary purposes. First, by supplying customers with the basic mediums-of-exchange (cash, checking accounts, and credit cards), banks play a key role in the way goods and services are purchased. Without these familiar methods of payment, goods could only be exchanged by *barter* (trading one good for another), which is extremely time-consuming and inefficient. Second, by accepting money deposits from savers and then lending the money to borrowers, banks encourage the flow of money to productive use and investments. This in turn allows the economy to grow. Without this flow, savings would sit idle in someone's safe or pocket, money would not be available to borrow, people would not be able to purchase cars or houses, and businesses would not be able to build the new factories the economy needs to produce more goods and grow. Enabling the flow of money from savers to investors is called financial intermediation, and it is extremely important to a free market economy. ([www.effiec.gov/financial\\_institution](http://www.effiec.gov/financial_institution))

### **2.3 THE EVOLUTION OF E-BANKING**

The first electronic banking product was money transferred via telegraph in the mid 1800's. Wire transfer remained the major electronic banking product for more than 100 years. In the 1970's, balance reporting came into being. Balance reporting involved use of a terminal and a modem to dial up a host where account balance information and transaction summary information could be printed on a terminal such as the Texas Instruments Silent 700 Thermal Printer. Advances in microprocessors led to the development of the personal computer which could retrieve both summary and detail bank account information. Further advances led to the

ability to download account transaction information which could be exported to the user's accounting system. The personal computer also allowed the user to move funds, which provided greater control of cash.

The growth of electronic banking has not been limited to advances in information reporting. Electronic payments have become a force majeure.

Electronic payments lower cost, improve cash forecasting and provide straight through processing to accounts payable or accounts receivable. With increased acceptance and advances in technology, the use of electronic banking products will continue to increase. For organizations to stay competitive and to grow, they must embrace electronic banking products (Gurau, 2002).

## **2.4 E-BANKING IN GHANA.**

In Ghana, the first information and communication technologies (ICTs) used in the banking sector were generally office automation devices such as telephone, telex, and facsimile. The adoption of these devices remained in use for years, to help speed up operations and efficiency in serving clients.

Over time, the importance of ICTs in changing the way business transactions are conducted and meeting the growing demands of customers increased in the late 1980s, as competition intensified. New technology introduced at the time was personal computer (PC). Most Ghanaian banks began to use PCs in back-office operations and later by tellers to service clients as well. Advancements in computer technology saw the banks networking their branches and operations thereby making the one-branch philosophy a reality. Barclays Bank (Gh.) and Standard Chartered Bank (Gh.) pioneered this very important electronic novelty, which changed the banking landscape in the country Abor (2004).

Afterwards, the existence of electronic delivery channels collectively known as e-banking followed subsequently. Many established banks in the country began with Automated Teller Machines (ATMs). For instance; in 1995, the Trust Bank Ghana installed the first ATM and in 2001, Ghana Commercial Bank started its ATM networks in collaboration with Agricultural Development Bank. Additionally, as at 2004, other banks such as Barclays Bank (Gh.), Standard Chartered Bank (Gh.) and Ecobank Gh. Ltd operate ATMs in Ghana. The most innovative electronic delivery channel in the country and worldwide has been the ATM. Observations from a study, in Abor (2004) reveals that customers consider it as important in their choice of banks, and banks that delayed the implementation of their ATM systems, have suffered irreparably. ATMs have been able to entrench the one-branch philosophy in this country, by being networked, so people do not necessarily have to go to their branch to do some banking.

Another electronic innovation was the electronic cards, developed over a period of time. The first was known as 'Sika Card' - a value a cash card loaded electronically, by Social Security Bank (now Soceite Generale SSB) in May 1997. Again in 2001, the first debit card in Ghana by Standard Chartered Bank was launched and that also have been recently integrated with ATM cards, as they are accessed in the same manner. The third was the 'E- Card' from Ecobank, Cal Merchant Bank and the Trust Bank in November 2001. The E-Card is online in real time; therefore any changes occurring in the account is automatically reflected.

In spite of the numerous benefits from the utilization of ATMs and electronic cards, the idea of improving in areas of competition, profits, performance and convenience to customers made it possible for the banking industry to develop another form of e-banking innovation called Personal Computer (PC) banking service. An ICT innovated to make home and office banking services a reality. PC banking services is provided to customers 'mainly to corporate



clients' with proprietary software to access their bank account, sometimes via the World Wide Web (WWW). Some banks offering PC banking includes Ghana Commercial Bank, Stanbic Bank (Gh.), Barclays Bank (Gh.), Ecobank (Gh.), and Standard Chartered Bank (Gh).

However, the idea of increasing the point of convenience and time, used in transacting business in the banking industry lead to the development of telephone banking services. This service aims at providing credible information about banks products and services, bank statements, cheque book request and complaints and inquires from clientele. Telephone banking was launched initially in August 28, 2002 by Barclays bank (Gh.) and immediately followed by SSB Bank in September 19, 2002 as 'Sikatel' or 'SSB Call Centre'.

In a while, the use of mobile phones as a medium for conducting banking transactions also emerged in the industry. It was as a result of the high patronage of mobile phones by individuals in Ghana for their personal and business communications that banks thought it wise to introduce mobile banking (or SMS banking) to perform some kind of financial services.(GhanaWeb2005).

According to Foley (2005), surveys of 9,000 Irish consumers were asked about their willingness to use mobile phones as a medium for conducting a variety of types of banking transactions. The findings reveal a clear set of trends that face firms in the banking industry if they are to successfully move forward with mobile banking as a viable consumer electronic banking option. The key findings are: mobile banking users are a very small minority – approximately 1%, interest is growing with a focus on basic services like the checking of one's balance and consumers are not yet ready for function-rich mobile banking. However, similar situations are likely to exist in Ghana. The prominent of them is the use of SMS banking to check an individual's account with a bank. There are quite a number of Ghanaian

banks such as Barclays bank (Gh.), Standard Chartered Bank (Gh.), HFC Bank (Gh.), Ecobank (Gh.) etc that uses SMS banking service.

Additionally, the identification of Internet banking as a new delivery channel for performing various banking transactions has gained acceptance in the country. It provides an opportunity to the customers to carry out banking transactions at their convenience. Banks have recognized the internet as representing an opportunity to increase profits and their competitiveness Abor (2004). As at 2004, no bank was offering internet banking (i-banking) in Ghana, even though some banks have well laid plans to start.

The exploitation of internet banking began in 2005 by Cal bank (Gh), Guarantee Trust-2006, Zenith bank (Gh.)-2007, Ecobank, Stanbic and Standard Chartered bank (Gh.) -2008, Intercontinental bank-2009 and among other Ghanaian banks. Again, internet banking model offers advantages for both banks and customers. The internet provides the banks with the ability to deliver products and services to customers at a cost that is lower than any existing mode of delivery. A survey conducted in US shows that of all the modes of transactions, internet banking is the cheapest for the banks Malhotra et al (2006).

Last of all is a Point-of-Sale Terminal known as E-zwich. This technological innovation is a name for the National Switch, initiated by the Bank of Ghana in collaboration with other banks in Ghana to bring the payment systems of goods and services up to the best international standards. Also it's being designed to help bring the purpose of banking closer to everyone. E-zwich participants includes major and rural banks, savings and loans companies, merchants, services providers, tax revenue collectors and individuals making or collecting payments for goods and services. The general public benefits from a more convenient, safer and easier way to spend and receive money by using the smart card.



Electronic banking is in fact not a technology, but an attempt to merge several different technologies that are identified to be of high-quality when brought together to improve the performance of bank services.

## **2.5 THE EFFECT OF E-BANKING ON BANKS**

The evolution of electronic banking products has made day to day banking operations faster and more efficient. The increased productivity gained through the use of electronic banking products has allowed businesses to do more with less. Businesses that do not use some form of electronic banking products will not grow. With research, cost benefit analysis and appropriate security controls, practically leads businesses to benefit from electronic banking products.,

Internet technology has overturned the IT-infrastructure of branch-based networking and triggered changes in the knowledge about networking, data transmission, computing platform and system design. Next, the e-banking has also changed traditional payment mediums, physical transaction processes, service delivery channels, and security scheme into a virtual environment. The informational, customized, and self-service offerings enhance the existing functions of bricks-and-mortar banking. These online services are likely to be significant in differentiating e-banking from traditional retail banking.

E-banking makes obsolete the effects of bricks-and-mortar banking. In addition, the new value propositions of e-banking will trigger the fundamental changes in business model dimensions such as customer value, market segment, customer base, cost structure and revenue sources.

According to the Abernathy & Clark (1985) model, bricks-and-mortar banking and e-banking is indeed different. I can therefore classify the innovation from bricks-and- mortar

banking to e-banking as disruptive innovation. It implies that e-banking will change the route of the IT application and evolve a different business model and will strongly influence the existing technological and business capabilities of the incumbent bricks-and-mortar banks along with the progress of e-banking.

## **2.6 BENEFITS OF E-BANKING**

### **2.6.1 The banks' point of view**

The first benefits for the banks offering Internet banking services is better branding and better responsiveness to the market. Those banks that would offer such services would be perceived as leaders in technology implementation. Therefore, they would enjoy a better brand image. (Oliver, 1999).

The other benefits are possible to measure in monetary terms. The main goal of every company is to maximize profits for its owners and banks are not any exception. Automated e-banking services offer a perfect opportunity for maximizing profits. According to a survey by prominent researchers, an estimated cost providing the routine business of a full service branch in USA is \$1.07 per transaction, as compared to 54 cents for telephone banking, 27 cents for ATM (Automatic Teller Machine) banking and 1.5 cents for internet banking. In Barclays Bank, Ghana, one online transaction costs the bank less, compared to a transaction in the branch.

### **2.6.2. The customers' point of view**

The main benefit from the bank customers' point of view is significant saving of time by the automation of banking services processing and introduction of an easy maintenance tools for managing customer's money. The main advantages of e-banking for corporate customers according to Bank Away (2001) & Gurău (2002) are as follows:

- a) Reduced costs in accessing and using the banking services.
- b) Increased comfort and timesaving - transactions can be made 24 hours a day, without requiring the physical interaction with the bank.
- c) Quick and continuous access to information. Corporations will have easier access to information as, they can check on multiple accounts at the click of a button.
- d) Better cash management. E-banking facilities speed up cash cycle and increases efficiency of business processes as large variety of cash management instruments are available on internet sites of Ghanaian banks. For example, it is possible to manage company's short-term cash via internet banks (investments in over-night, short- and long term deposits, in commercial papers, in bonds and equities, in money market funds).

Private customers seek slightly different kind of benefits from e-banking. In the study on online banking drivers Aladwani (2001) has found, that providing faster, easier and more reliable services to customers were amongst the top drivers of e-banking development.

The main benefits from e-banking for private customers in BankAway (2001) are as follows:

- a) Reduced costs. This is in terms of the cost of availing and using the various banking products and services.

- b) Convenience. All the banking transactions can be performed from the comfort of the home or office or from the place a customer wants to.
- c) Speed. The response of the medium is very fast; therefore customers can actually wait till the last minute before concluding a fund transfer.
- d) Funds management. Customers can download their history of different accounts and do a “what-if” analysis on their own PC before affecting any transaction on the web. This will lead to better funds management.

## **2.7 PROBLEMS RELATED WITH E-BANKING**

E-banking, an element of IT, offers advantages such as improved efficiency, speed and convenience. But since the internet is a public network, it presents some privacy and security issues. Generally, online banking can pose significant risk to a financial institution as well as to an individual. Naturally, these risks can be mitigated by adopting comprehensive risk management program(Hansotia, 2002)

Electronic banking relies on a networked environment. As mentioned before, network access can be performed through a combination of devices such as personal computers, telephones, interactive television equipment, and card devices with embedded computer chips. The connections are completed primarily through telephone lines, cable systems, and in some instances wireless technology. These systems, whether informational or transactional, facilitate interaction between the bank and the consumer, often with the support of third-party service providers. However, not all networks carry the same degree of risk, and not all networks are equally vulnerable.

It is worth noting, that the internal attacks are potentially the most damaging because the bank's personnel, which can include consultants as well as employees, may have authorized access to critical computer resources. Combined with detailed knowledge relating to the bank's practices and procedures, an internal attacker could access value transfer systems directly, or exploit trusted relationships among networked systems to gain a level of access that allows him to circumvent established security controls. After that, the attacker could potentially transfer money or other assets inappropriately. That is why, the first thing a financial institution should do, is to review and evaluate the security of internal networks.(Liao & Cheung 2002).

Internet, as said, is a public network and an open system where the identity of the communicating partners is not easy to define. In addition, the communication path is non-physical and may include any number of eavesdropping and active interference possibilities.(Ghana web, 2005)

The three main problems, from the security point of view:

- a) **Spoofing** – "How can the bank reassure customers who come to its site that they are doing business with it, not with a fake setup to steal their credit card numbers?"
- b) **Eavesdropping** – "How can the bank be certain that its customers' account number information is not accessible to online eavesdroppers when they enter into a secure transaction on the Web?"

- c) **Data alteration** – "How can the bank be certain that its customers' personal information is not altered by online eavesdroppers when they enter into a secure transaction on the Web?"

A number of studies have concluded that IT has appreciable positive effects on bank productivity, cashiers' work, banking transaction, bank patronage, bank services delivery, customers' services and bank services. They concluded that, these have positive effects on the growth of banking (Balachandher *et al*, 2001; Idowu *et al*, 2002; Hunter, 1991; Whaling, 1995; Yasuharu, 2003).



## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 INTRODUCTION**

This section concentrated on the methods adopted throughout the study. A detailed account of the approaches adopted to obtain data for analysis is given. It therefore covers the research design, population from which the sample will be drawn from, sample and sampling method. Data collection instrument, administration procedure and analytical methods.

#### **3.2 RESEARCH DESIGN**

Because the focus of this study is on modern-day experience with some real-life context which includes direct observation and the case study method is the preferred method for this study.

Case study research design has multiple meanings in the study of social sciences. It can be used to describe a unit of analysis (a study of a particular organization) or to describe a research method. Yin (2002) defines case study as an empirical enquiry that looks into contemporary phenomenon within its real-life situation, more so when the boundaries between phenomenon and context are not clearly stated.

In this study, it was necessary to first examine the area of electronic banking and in the banking industry. Through in-depth case study of HFC bank, the researcher looked at how electronic banking has influenced the banking industry in Ghana.



### **3.3 POPULATION**

The total population for this study was HFC bank. This population includes customers and staff of the five selected branches in the Accra Metropolis.

### **3.4 SAMPLE SIZE AND SAMPLING METHOD**

Two hundred staff was selected on a random basis from the five banks. Again two hundred customers of the five branches were selected by convenience.

### **3.5 SOURCES OF DATA**

This study used both primary and secondary sources of data.

Primary data was used with the use of a survey questionnaire. This was supplemented with secondary data where data from the HFC bank, other banks, books, Internet, magazines, trade journals, were used. The secondary data were based on the various electronic banking methods being made available by the banks, user acceptability and how these have helped to improve the performance of banks in the Ghanaian economy.

### **3.6 DATA COLLECTION INSTRUMENT**

In respect to the cross sectional data used for the study, two set of questionnaires was distributed. One was given to the bank customers to know how the banks use IT to manage customer relations and another set for bank managers to know how the banks are employing technology in this regard. Respondents were asked to assess items of various constructs (such as customer value, customer behavior, customer satisfaction, technologically driven services and brand loyalty) on the basis of a five-point Likert scale. A closed end type of questionnaire was designed, the descriptors will range from I "strongly Agree", to "Agree",



"Neutral ", "Disagree", "Strongly Disagree", because the study is more of attitudinal, together with a combination of Yes or No answers to facilitate the achievement objectives of the study.

The use of this method made data handling and analysis easy. Secondary sources like journals and the internet was used to get the needed information for this work.

### **3.7 ADMINISTRATION PROCEDURE**

Four hundred questionnaires were administered to both staff and customers of HFC bank in the Accra Metropolis. Respondents were asked to use approximately 10 to 15 minutes to complete the questionnaires. This was done in a week. A total of Three hundred and eighty five out of the four hundred was collected for the analysis with staff respondents filling one hundred and ninety five (195) while customers of the bank filling one hundred and ninety (190). The approach used to gather data considered confidentiality by using the following procedure. Each of the respondents that participated in the study received a questionnaire, which bore no numbers and values to identify respondents. Assurance of strict confidentiality was indicated on each of the questionnaire participants received

### **3.8 DATA ANALYSIS**

Data from primary sources, as identified above, was analyzed using the Microsoft Excel software. Accuracy and precision is the main reason for the use of computers for data analysis. Quantitative results were analyzed using the software to produce frequencies to achieve the stated objectives of the study.

Views expressed by respondents were evaluated in the form of qualitative analysis. Codes were developed for each question on the questionnaires before being input into the computer. Coding was done to ease entry and to feed the right responses into the software.

### **3.9 LIMITATIONS OF THE STUDY**

The study is a case study but it may have something to do with the entire banking industry in the country. However, because the study focuses on only HFC bank, generalizations to the whole banking industry should be cautiously done.

The study did not have a 100% respond rate in the questionnaire administration since some of the bank staff was unable to return the questionnaires; some of the customers were also unable to answer some of the questions that were administered. The analysis in chapter four of the study looked at the banks performance before and after the introduction of e-banking services. Many factors might have accounted for the banks general improvement from the beginning of operations till now, however the main focus of the study was on the influence electronic services and the performance of the bank.

### **3.10 HISTORY AND PROFILE OF HFC BANK (GHANA)**

HFC Bank (Ghana) Limited has its beginnings in the former Home Finance Company, a mortgage finance institution which was incorporated on May 7, 1990 under the Companies Code, 1963 (Act 179, and commenced business on December 2, 1991. The company's vision at the time was to become the leading mortgage finance company in Ghana through the issue of bonds and other financial instruments. It was promoted by the Government of Ghana (GOG, Social Security and National Insurance Trust (SSNIT and Merchant Bank (Gh.) Ltd. To implement the IDA (World Bank and GOG/SSNIT- funded pilot housing finance project under the IDA (World Bank Urban II loan agreement.

HFC obtained its license as a non-bank financial institution from the Bank of Ghana on August 1, 1994, became a public company on October 5, 1994 and was subsequently listed on the Ghana Stock Exchange on March 17, 1995. The company obtained a Universal Banking License from the Bank of Ghana on November 17, 2003. Again the vision of the bank is to become a leading universal banking institution in the West Africa sub-region, providing world class financial services. Its mission is to create wealth and better life for customers.

By a special resolution of the Board of HFC and with the approval of the Registrar of Companies, Home Finance Company Limited changed its name to HFC Bank (Ghana Limited on December 1, 2003. Thus from a beginning as a purely mortgage finance institution, HFC added investment management and savings mobilization business to its operations and became a fully-fledged universal bank offering mortgage finance, investment banking services and a wide range of commercial banking products.

The HFC Bank branch network has increased consistently over the years. Currently the bank has 14 branches spread over the country. These branches can be located in *some* areas such as Ebankese Head office, Ridge -Accra, Legon-University of Ghana, Tema-Harbour city, Kumasi, Tudu Bofo and Techiman.

The overall strategy of the bank is directed to achieving growth in profitability and branch operations, expanding its operations into the West African sub-region and North America, maintaining its leadership in home mortgage finance and regaining its leadership position in fund management. The bank is currently engaged in revising the requirements for mortgage products to make them more accessible for customers. It is also implementing a high-level electronic platform that provides customers with secured single-sign transactional capabilities.

### 3.10.1 Operations and subsidiaries of HFC Bank

The Bank's wholly-owned subsidiary company, HFC Investment Services Limited, continues to engage in investment banking, as a natural strategy fit to the core activities of the bank. It also has a wholly owned subsidiary, HFC Realty, which offers property related services.

The Bank has a 60% equity stake in UG-HFC Limited, a joint venture company established in 1998 with the University of Ghana to develop a commercial property at the Ridge Ambassadorial area in Accra, and a 51% equity stake in Bofo Micro Finance Service Company.

The bank is currently managed under three divisions, namely, Mortgage Banking, Commercial Banking, and Investment Banking.

### 3.10.2 Key products and Services

HFC Bank (Ghana) Limited offers the following financial products and services:

a) **Commercial banking**

- HFC Current Account
- HFC Savings Account
- HFC Money Transfer
- HFC Home save Account
- HFC Fixed Deposit Account
- HFC life Starter Account
- HFC Fastxt (SMS)

- HFC Fastcash (ATM)
- HFC Auto Loans
- HFC Consumer Loans
- HFC Educational Loans
- HFC Rent Advance Facility
- HFC Foreign Trade Services

**b) Corporate banking**

- HFC Small & Medium Enterprises Banking
- Relationship Management

**c) Mortgage banking**

- HFC Home Purchase Mortgage
- HFC Home Equity Mortgage
- HFC Home Improvement Mortgage
- HFC Home Completion Mortgage
- HFC Buy, Build & Own a Home

**d) Investment banking**

- HFC Bank (Ghana) limited, through its wholly owned subsidiary HFC Investment Services Ltd (HFC-ISL).
- It is licensed to provide a fully fledged investment services to all customers as follows:

e) **Funds management**

- HFC Unit Trust
- HFC Real Estate Investment Trust (HFC-REIT)
- HFC Equity Fund

f) **Asset management**

- Provident/ Pension fund management
- Fund management for collective investments, groups and institutions including investment clubs and churches
- Private client investment services.

g) **HFC brokerage services limited**

- Executing ingeniously all transactions on the Ghana Stock Exchange on behalf of clients and for its own portfolio.
- Providing in-depth research reports on all equities listed on the Ghana Stock Exchange
- Providing investment and financial advisory services to corporate bodies, institutional and individual investors
- Developing foreign investment links to enhance foreign direct investment
- Executing over-the-counter transactions
- Underwriting equity and debt capital for companies
- Management and sponsorship of new issues

**h) HFC Realty Limited**

HFC Realty offers Investment Advisory Services which includes:

- Project Management
- Estate Management

**3.10.3 FORMS OF E-BANKING SERVICES USED IN HFC BANK**

**Electronic banking** is an umbrella term for the process by which a customer may perform banking transactions electronically without visiting a brick-and-mortar institution. The following terms all refer to one form or another of electronic banking: personal computer (PC) banking, Internet banking (online banking), virtual banking, home banking, remote electronic banking, automated teller machines (ATM), phone banking and very recently e-zwich. PC banking and ATM's are the most frequently used. It should be noted, however, that the terms used to describe the various types of electronic banking are often used interchangeably. Some of the common forms of electronic banking being used by HFC Bank have been explained below.

**a. Automated Teller Machines (ATM's):** HFC Bank introduced Automated Teller Machines in two of its eight branches recently, namely Ridge and Legon branch. It is continuing its electronic banking expansion process to pass on convenience in service delivery. They have all branches networked offering real time on line banking services; customers can thus transact business at any branch nearest them. ATM'S are electronic terminals that allow the customer to access the bank at any time to withdraw cash, make deposits, or transfer funds between accounts. In Ghana, ATMs are mostly for



cash withdrawals, mini statement, cheque book request and fund transfer provided all the accounts are linked on the card.

**b. PC banking** is a form of online banking that enables customers to execute bank transactions from a PC via a modem. In most PC banking ventures, the bank offers the customer a proprietary financial software program that allows the customer to perform financial transactions from his or her home computer. The customer then dials into the bank with his or her modem, downloads data, and runs the programs on the customer's computer. Currently, many banks offer PC banking systems that allow customers to obtain account balances and credit card statements, pay bills, and transfer funds between accounts.

**c. Mobile SMS Banking** (HFC Fastxt SMS) Mobile banking is a term used for performing balance checks, account transactions, payments etc. via a mobile device such as a mobile phone. Mobile banking today is most often performed via SMS or the Mobile Internet but can also use special programs called clients downloaded to the mobile device. Mobile Banking Services:

- Account Information
- Payments, Deposits, Withdrawals, and Transfers
- Investments (Portfolio management services, Real-time stock quotes, personalized alerts and notifications on security prices)

**d. E-zwich**, a name for the National Switch, is an initiative by the Bank of Ghana Bank in collaboration with other banks in Ghana to bring the payment systems in Ghana up to the best international standards. The e-zwich smartcard is a pre-loaded Debit Card which works both On-line and Off-line, allowing cardholders to pay for



goods and services instantly from designated shops (merchants). The card is designed to provide holders the convenience of making purchases wherever the e-zwich smartcard poster/sign is displayed. It offers consumers an alternative to carrying large sums of cash for their day-to-day transaction and also provides them 24-hour access to their money. It is accepted at numerous business places (such as shops, restaurants, hotels, banks etc) throughout Ghana with a “money back” option from these outlets. After each transaction, the cardholder’s account is immediately debited and the amount involved credited to the merchant’s account. E-zwich participants includes major and rural banks, savings and loans companies, merchants, services providers, tax revenue collectors and individuals making or collecting payments for goods and services. The general public benefits from a more convenient, safer and easier way to spend and receive money by using the smart card. Its advantage over other electronic delivery services is that, it can be used in any other Ghanaian bank that operates E-zwich irrespective of where a customer opened his/her account.

**e. Internet banking/online banking** is an outgrowth of PC banking. Internet banking is one of the new e-banking services HFC Bank desires to introduce this year. It uses the Internet as the delivery channel by which to conduct banking activity, for example, transferring funds, paying bills, viewing checking and savings account balances, paying mortgages, and purchasing financial instruments and certificates of deposit. When introduced, it will enable customers’ access his or her accounts from a browser— software that runs Internet banking programs resident on the bank’s World Wide Web server, not on the user’s PC. Net Banker defines a “true Internet bank” as one that provides account balances and some transactional capabilities to retail customers over the World Wide Web. Internet banks are also known as virtual, cyber, net, interactive, or web banks.

## CHAPTER FOUR

### DATA ANALYSIS AND DISCUSSION OF RESULT

#### 4.0 Introduction

This chapter focused on the analysis of the responses received from respondents to the survey questionnaire administered. The appropriate analytical methods used include frequencies, percentages and charts. These methods were applied to data because of the descriptive nature of the research study. The research results have been presented below.

#### 4.1 Results from Questionnaires 1(for HFC staff)

The tables and figures below give a summary of the demographic data of the respondents from the study.

**Table 1 Gender of HFC staff respondents (n=200)**

	Frequency	Percent
<b>Gender</b>		
Male	100	51
Female	95	49
<b>Total</b>	<b>195</b>	<b>100</b>

Source: Field data, May 2011

The table above illustrate the gender of HFC staff Respondents The study showed one hundred males representing 51% and ninety five females representing 49 of gender for the study. This figure showed the dominance of male over female as in the table and figure above.

**Table 2. Marital Status of HFC staff respondents (n=200)**

	Frequency	Percent
<b>Marital Status</b>		
Single	70	36
Married	100	51
Divorced	25	13
<b>Total</b>	<b>195</b>	<b>100</b>

**Source: Field data, May 2011**

The table showed that for marital status those who were married were more with a percentage of 51% which was followed by those who were single with a percentage of 36% with those divorced being the least.

**Table 3 Educational Level of HFC staff respondents (n=200)**

	Frequency	Percent
<b>Educational Level</b>		
HND	15	8
Diploma	50	26
Degree	100	51
Masters	30	15
<b>Total</b>	<b>195</b>	<b>100</b>

**Source: Field data, May 2011**

Considering the level of education of the respondents from the table it was evident that employee who were degree holders dominated with 51% indicating that majority of the workforce of (HFC) were degree holders this was followed by those who had obtain diploma with a percentage scores of 26% while those with master had 15% and HND scoring 8% respectively.

**Table 4 Position of HFC staff Respondents (n=200)**

	Frequency	Percent
<b>Position</b>		
Senior Staff	75	38
Junior Staff	120	62
<b>Total</b>	<b>195</b>	<b>100</b>

**Source: Field data, May 2011**

Finally the percentage of job position found those who were junior staff scoring the highest percentage of 62% with senior staff scoring 38%. This indicates a high response rate of junior staff to the study.

#### **Results from Questionnaires 2 ( for HFC customers)**

The tables and figures below give a summary of the demographic data of the respondents from the study.

**Table 5 Gender of HFC Customers**

	Frequency	Percent
<b>Gender</b>		
Male	100	53
Female	90	47
Total	190	100

**Source: Field data, May 2011**

The table above illustrates the gender of HFC customers' respondents for the study. The study showed one hundred males representing 53% and ninety females representing 47% of gender for the study. This figure showed the dominance of male customers of the bank over their female counterparts.

**Table 6 Marital Status of HFC Customers**

	Frequency	Percent
<b>Marital Status</b>		
Single	80	42
Married	110	58
Divorced	0	-
Total	190	100

**Source: Field data, May 2011**

The table showed that for marital status those who were married were more with a percentage of 58% which was followed by those who were single with a percentage of 42%. However, customers recorded zero percent for divorced.

**Table 7 Educational Level HFC Customers**

	Frequency	Percent
<b>Educational Level</b>		
SHS	10	5
HND	20	11
Diploma	60	32
Degree	100	52
Total	190	100

**Source: Field data, May 2011**

Considering the level of education of the respondents from the table, it was evident that employees who were degree holders dominated with 52% indicating that the majority of the

workforce of (HFC) were degree holders this was followed by those who had were diploma holders with a percentage scores of 32% while those with HND scoring 11% and 5% respectively.

**Table 8 Occupation for HFC Customers respondents**

	Frequency	Percent
<b>Occupation</b>		
Civil Servant	20	11
Private	100	53
Self Employed	60	31
Other	10	5
Total	190	100

**Source: Field data, May 2011**

The table above showed the occupation of customers of the bank it was evident that customers who work in private business scored high with a percentage of 53% .This was followed by customers who were self employed scoring 31% with civil servant 11% and 5% for other occupation.

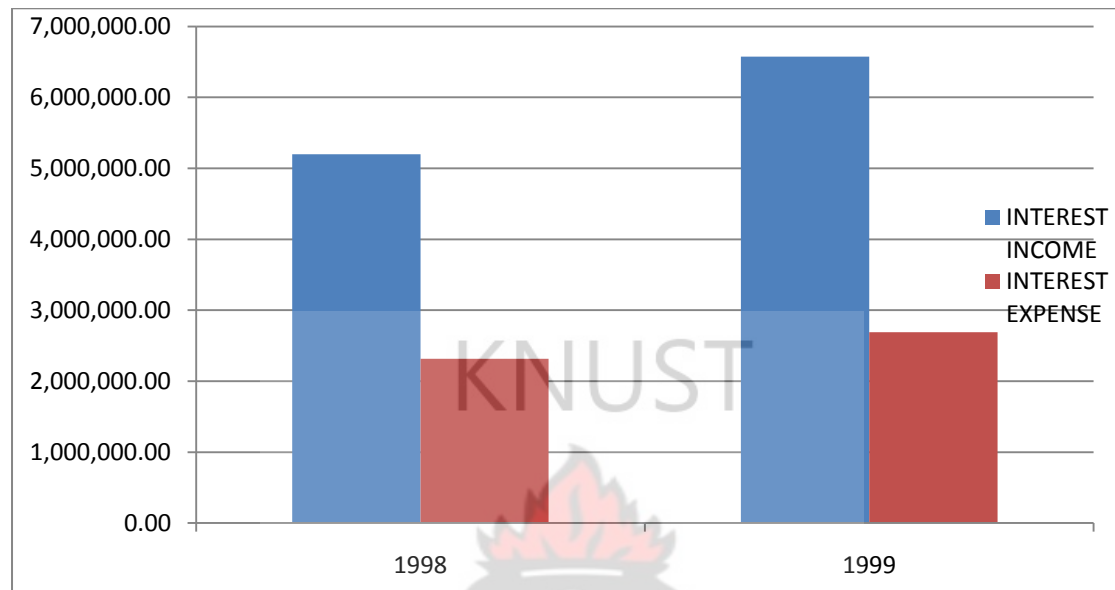
#### **Results for HFC performance before the use of e-banking services (1998-1999)**

This was aided with the use of financial statements for the year 1998-1999 to measure the bank's profitability, growth, stability and its general performance.



## Results from 1998-1999

**Figure1:Interest income and interest expense.**



**Source: Financial statement from 1998 to 1999**

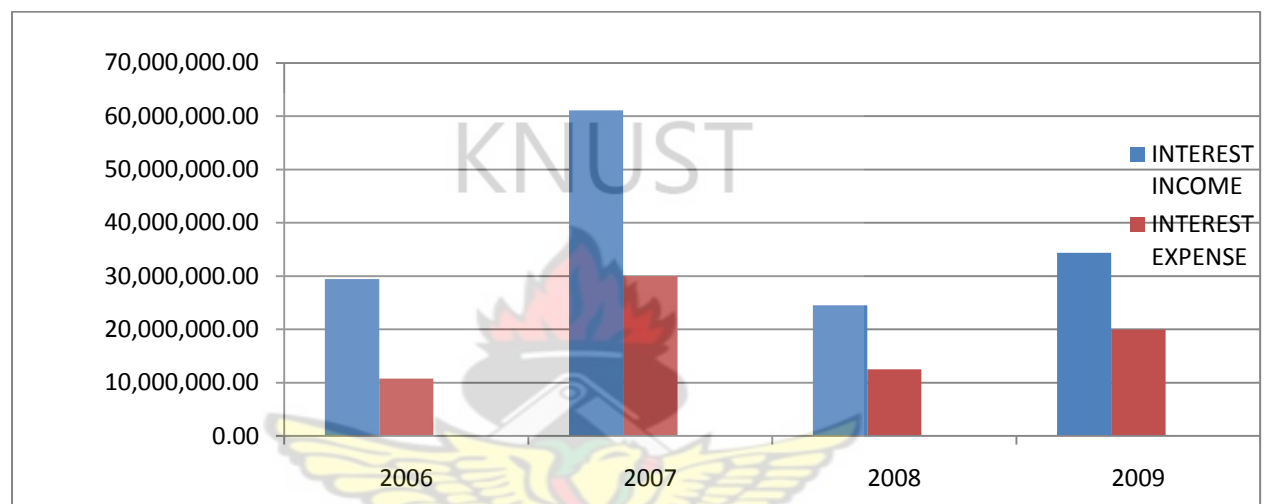
From the results the interest income before the introduction of E-banking for the year 1998 was GH¢ 5,199,800 it grew to GH¢6,575,900 in 1999. This indicates that cash placed by the bank in short term investment such as money market funds earned interest for both years respectively. Also for interest expense in 1998 was GH¢2,315,900 and 1999 GH¢ 2,691,700 respectively.

## Results of HFC Performance after the use of E-Banking services

### Results from 2006-2009

This was aided with the use of financial statements for the year 2006-2009 to measure the bank's profitability, growth, stability and its general performance.

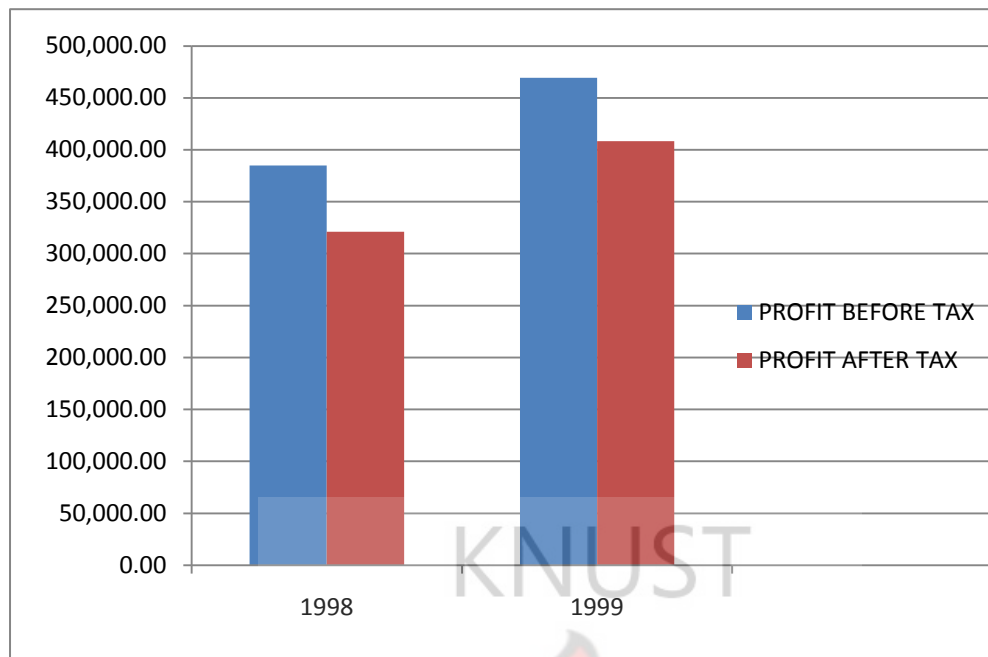
**Figure 2 Interest income and interest expense.**



**Source: Financial statement 2006 to 2009**

From the results the interest income after the introduction of E-banking for the year 2006 grew to GH¢ 29,473,000 there was continuous growth for interest income for the subsequent years 2007 GH¢(61,064,00), 2008 GH¢(24,508,273) with 2009 GH¢(34,350,130). Interest income expense also increased in the same years respectively.

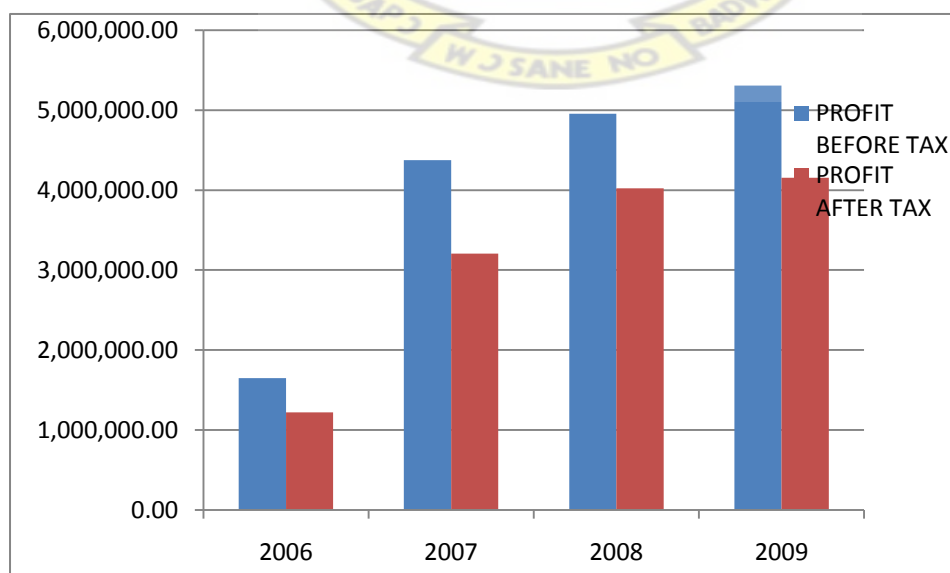
**Figure 3 Profit before and After tax**



**Source: Financial statement from 1998 to 1999**

Results from the figure above shows that in 1998 the banks profit before tax was GH¢384,995.00, the figure slightly increased to GH¢469,449 in 1999. This shows the profit earned by the bank after the deduction of corporate tax.

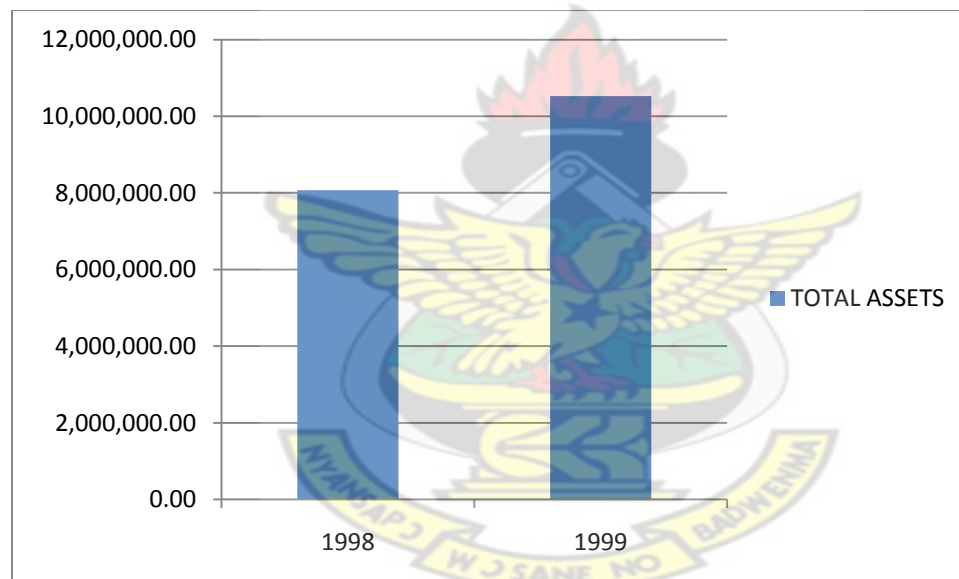
**Figure 4 Profit before and after tax**



**Source: Financial statement 2006 to 2009**

Results from the figure above shows that in 2006 the banks profit before tax increased to GH¢ 1,649,741, in 2007 ( GH¢4,375,292), 2008( GH¢4,956,480) and 2009(GH¢5,307'660). Also the bank profit after tax also increased from 2006(GH¢ 1,220,821), 2007(GH¢3,206,117), 2008(GH¢4,022,182) and 2009(GH¢4,153,815) respectively. This shows that e-banking attributed to the performance of the firm profitability in the long run although E-banking in the short –run could be negative due to capital investment by the banks on infrastructure and training.

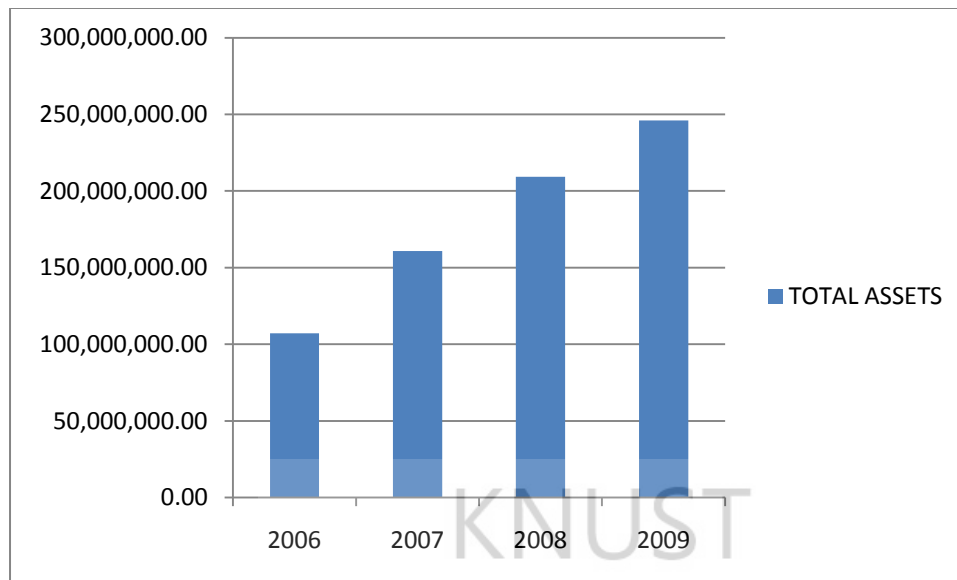
**Figure 5 Total Assets**



**Source: Financial statement from 1998 to 1999**

Total assets for the bank stood at GH¢8,073,856 in 1998, this figure increased to GH¢10,529,926 in 1999. This shows the current and long-term assets owned by the bank total asset.

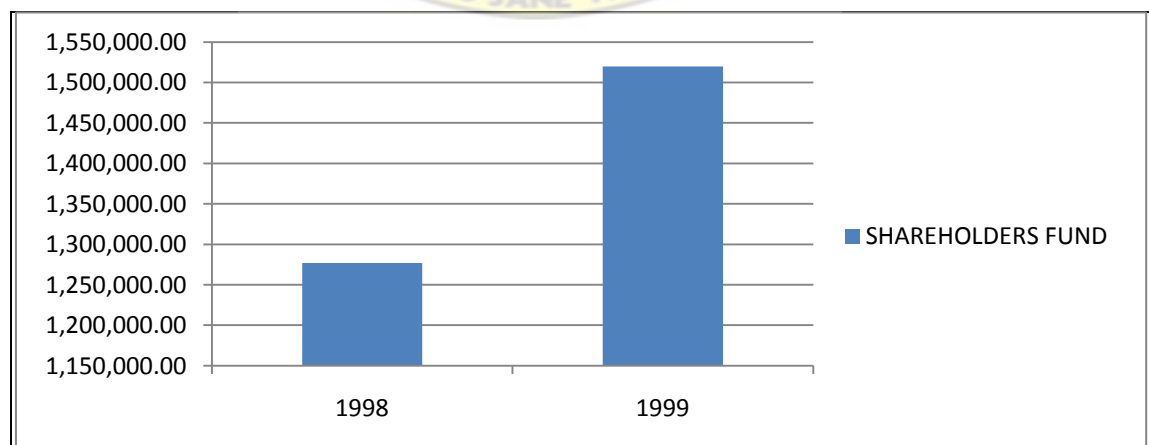
**Figure 6 Total Assets**



Source: Financial statement from 2006 to 2009

Total assets figure for the bank increased from 2006 (GH¢107,231,505), 2007(GH¢160,857,592) a further increased from to 2008 (GH¢209,193,020) and 2008(GH¢245,995,666) respectively this shows that with the inception of e banking the firms total assets has shown some major growth.

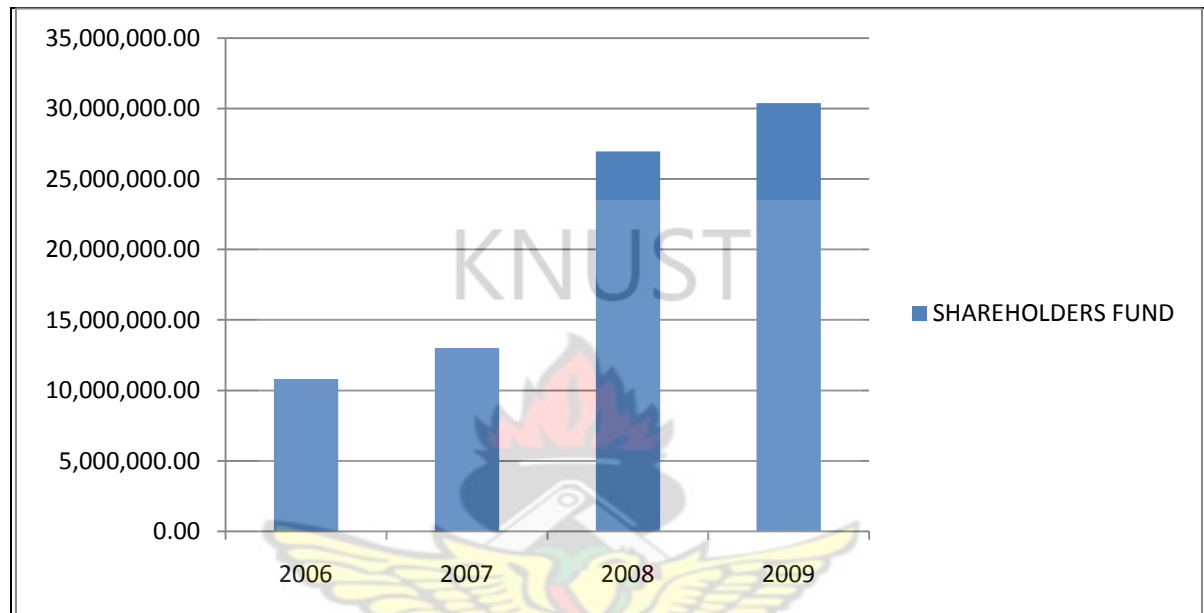
**Figure 7 Share holders Fund**



Source: Financial statement from 1998 to 1999

Share holders fund in the year 1998 was GH¢ 1,276,961 and in 1999 grew to GH¢1,519,831. This shows the value of shareholders interest in the company. And the stability of the bank

**Figure 8 Shareholders funds**

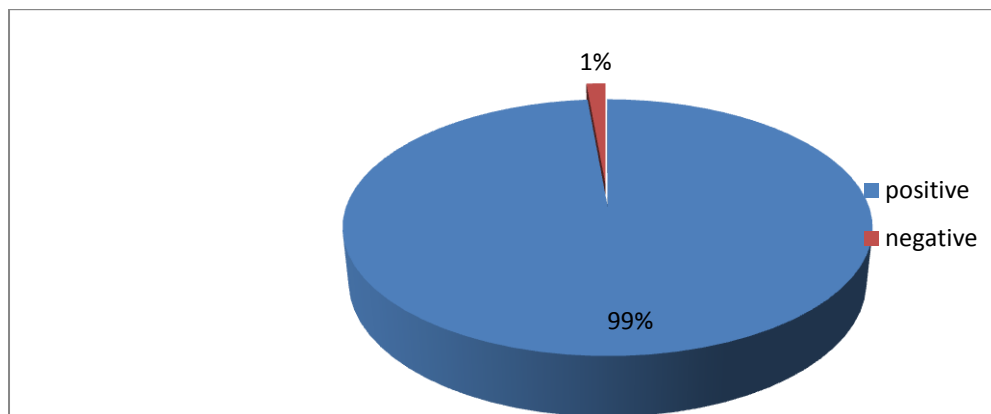


Source: Financial statement from 2006 to 2009

Share holders fund in the year increased from 2006 was GH¢(10,816,794), 2007 (GH¢13,006,311), 2008 (GH¢26,947,113), 2009 (GH¢30,387,106). This shows the value of shareholders interest in the company increased within these years.

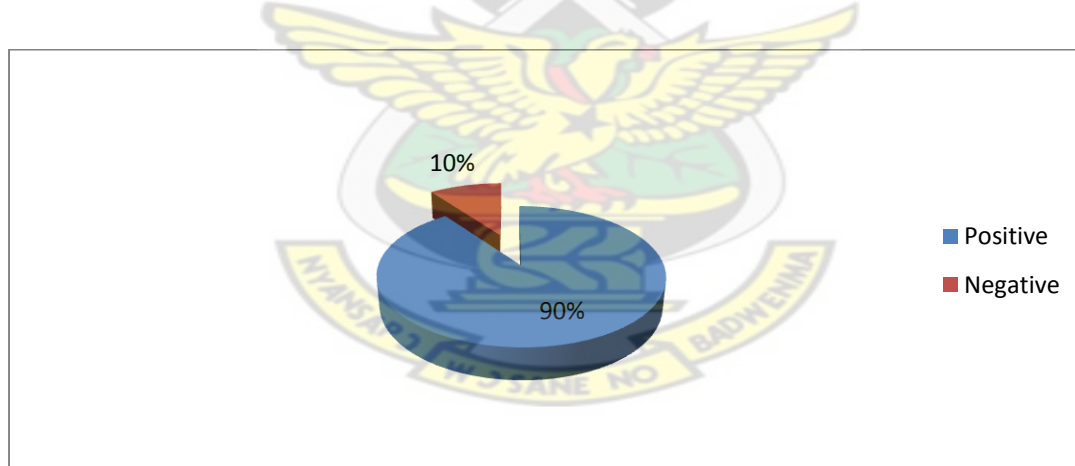
This results illustrates E-banking on performance

**Figure 9 E- banking on staff duties**



The results from the figure revealed about 99% of the staffs were of the view that electronic banking has had a positive influence on their working activities given that it helps to save time, money and effort.

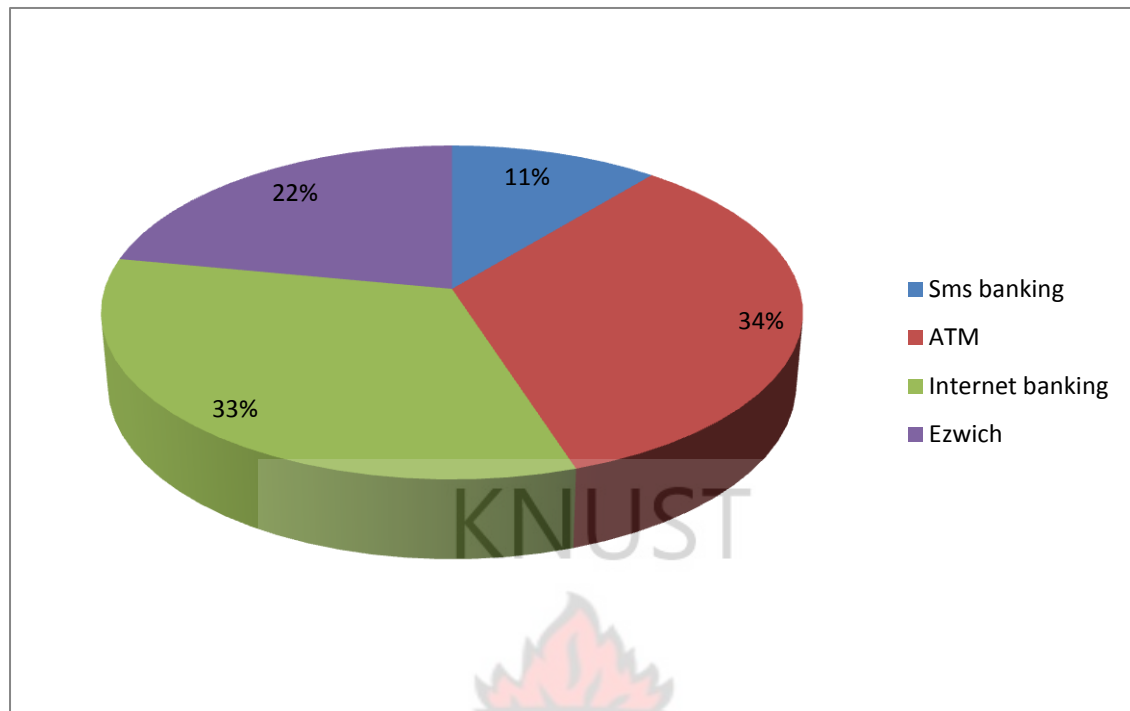
**Figure 10 E-banking on Customer Patronage**



The study showed that customers' response to electronic banking services of HFC was positive re It revealed that 90% of the customers believed that electronic banking on the bank has been really positive and has encouraged some of them to bank with HFC.

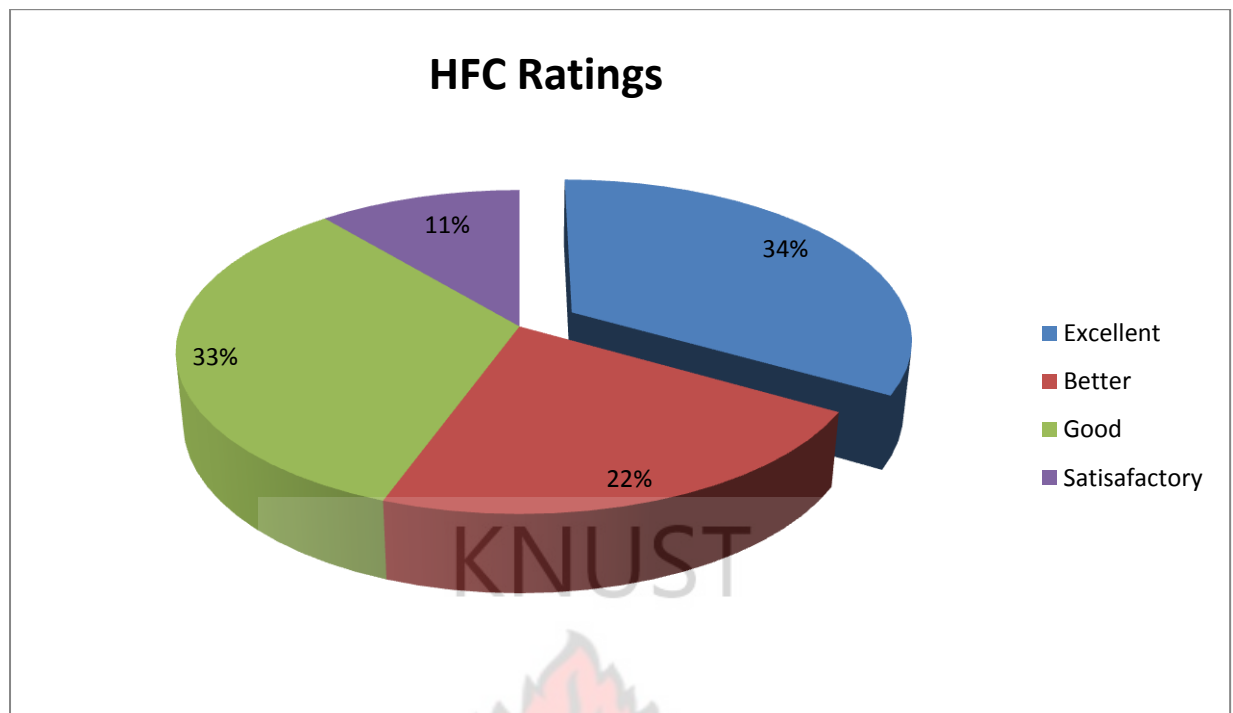


**Figure 11 E-banking on Patronage**



The results showed HFC bank customers patronized the various forms of electronic banking services. This could be attributed to affordability, Time saving and easy and safe payment. The study revealed that majority of customers made use of ATM cards with a percentage of 34% which means they pay less frequent visits to the bank and as a result spend less time in the banking hall. Also not so many customers make use of the SMS banking services. Customers withdraw from the use of these services because of the cost involved.

**Figure 12 HFC ratings on E-banking**



The results also showed the rate of electronic banking services of HFC in relation to other banks in the country. The results are provided in the chart above the study revealed 34% believed their services was excellent. 22% were of the view that their services was better, 33% believed it was good and finally the remaining 11% thought it was satisfactory.

**Table 9: Summary of Regression Model**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					RSquare Change	F Change	df1	df2	Sig.F Change
1	.552 <sup>a</sup>	.304	.294	6.1327	.304	29.724	1	68	.000

**a. Predictors: (Constant), E-banking**

Results from table 12 show Rsquare is .304 This indicate that 30% explain the variation in performance which is the criterion variable.

**Table 10:Regression ANOVA<sup>b</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1117.906	1	1117.906	29.724	.000 <sup>a</sup>
	Residual	2557.465	193	37.610		
	Total	3675.371	194			

**a. Predictors: (Constant), E-banking**

**a.Dependent Variable: Performance**

From the regression table results revealed that E-banking had a significant impact on performance .(F= p< 29.72,p<000)

**Table 11 Regression Coefficient**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.446	2.637		4.340	.000
	Signs Symbols and Artifacts	.144	.026	.552	5.452	.000

**a. Dependent Variable: Performance**

From table 14 results indicate that Ebanking is positively related to performance

(Beta=.552,p<.000) This means that an improvement in E-banking leads to an improvement in performance.

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

In this chapter gives summary of all the information arising from the study, conclusion drawn on the findings and recommendation made summary of the study is given.

#### 5.2 Summary of findings

The study, research into E-banking and performance of HFC Bank in Ghana. The essence of the study was to find out E-banking and Bank performance with regards to profitability and growth measures.

**The findings from the analysis made in chapter four revealed that:**

Electronic banking has positive results on staff working activities given that it helps to save time and effort. This can be seen from Figure 4.13 as per the analysis from chapter four.

The study also revealed that customers of the bank who were working in private institutions and self employed preferred the use of E- banking services as to those in the Public service.

This can also be seen from Table and Figure 4.8 respectively.

The study also revealed that customers' response to electronic banking services of HFC bank was positive and has encouraged some of them to bank with HFC. This again can be seen from Figure 4.14 as per the analysis from chapter four.

The results revealed HFC bank customers patronized the various forms of electronic banking services. With majority of customers making use of ATM cards. This can also be seen from Figure 4.15 as per the analysis from chapter four.

The findings also revealed that both staff and customers who had obtain higher level of education preferred using electronic banking services. Again this findings can be seen from Table and Figure 4.3 and 4.7 as per the analysis from chapter four.

The study revealed that e-banking of the bank's profitability in the long run to yield positive results whiles in the short run is negative due to the costs and investments the bank carries out through technical and electronic infrastructure and training. The final finding can also be seen from Figure 4.10b as per the analysis from chapter four.

Finally E- banking had a significant impact on performance in other words E-banking accounted for 30% variation in performance.

### 5.3 CONCLUSIONS

The study was aimed at E-banking activities and performance of the banking sector in Ghana. The study provided some evidence that investment in e-banking is a gradual process. The electronic banking variable has had a positive response on the performance of the banking system.

Believing in technology in banking does not require faith; it is part of the larger economic context in which banks operate. Banking in an era of technological advancement offers a lot of opportunities and challenges as well. All the network systems are closely monitored though there may be instances of unauthorized access. Banks are heavily regulated but there

are no restrictions on the use of electronic delivery channels. Banks through electronic delivery channels are able to monitor accounts very well and thus are able to cut down on cost. Undeniable, internet banking has come to stay and offers so many prospects for growth and development for the banking industry. All banks must tap into this and make a lot of gains. Both banks do not differ in terms of their respective responses.

The performance of internet banking can be enhanced through capacity building for members of staff. Overall technological advancement is inseparable to the growth and sustainability of the banking industry.

Positive attitudes of management and staff of banks towards this phenomenal trend is a necessary condition for developing appropriate procedures, process and resolutions. The importance of technology in enhancing customer service and reducing the incidence of customer dissatisfaction and complaints cannot be overemphasized. It was realized that the essence of IT innovations has brought about efficiency and effectiveness in the areas of credit appraisal, bank transfers, customer statement processing and bank reconciliation and consolidation. The rest are payroll accounting, loan processing, human resource management, fixed assets management, quality of management information system and the bank's procurement systems. These areas are very crucial to the success of the bank's short-term and long-term developments.

#### **5.4 RECOMMENDATIONS**

On the basis of the findings drawn on the study of E-banking and performance the following recommendations are made.

It is recommended that more innovative ways of satisfying customers profitably should be employed to ensure a better delivery of service, in order to increase the bank's profitability.

Due to the difficulty customers encounter when using electronic banking applications, it is recommended that the bank increase and propagate awareness of electronic banking services.

Consequently the banks are requested to carry out awareness and promotion campaigns to educate clients and create awareness of electronic banking dealings, advantages and feasibility through reducing time, effort and reducing cost for achieving distinctive and competitive position.

Management should expand electronic bank establishing to widen dealer's base and to enhance banks ability in providing executive banking services under the phenomena of banking merge and comprehensive banks.

Management should hold training courses for bank's employees to understand electronic banking business to achieve the desired objectives. Universities and academic institutions are requested to link higher education with market needs of skilled and professional man power having the ability to deal with electronic software under the challenges. There is the need to teach courses that have direct relation with digital world, electronic software in electronic business field in banking and financial institutions.

ATMs must be set up at Third Party Sites in order to enhance customer accessibility to the ATMs and thereby reduce long queues at banking halls.



All the banks should be cautious of the security of their networks to prevent unauthorized access to them by employees, customers and criminals as well. Ensuring that customers' expectations are met is a key route to achieving organizational objectives. An important means of ensuring this is by taking advantage of the opportunities offered by technology.

Appropriate skills and expertise should be developed to meet challenges offered by internet banking as well as exploiting the opportunities it offers.

Systems designed must take the changing needs of sophisticated Customers in to consideration so that the focus is not too much on technology to the detriment of customer needs. Designers of such systems must also bear in mind regulatory issues the process in order not breach them.

Government needs to ensure that the cost of telecommunications, hardware and software are made cheap, which will involve examining existing taxes and import duties. New technology and changes in the banking laws can produce change. Therefore, there is the need for the government to remove barriers to innovation, including regulatory barriers to pave way for rapid development of the electronic banking systems in Ghana.

The emergence of electronic banking systems raises a whole range of both legal and regulatory issues that needs to be taken a look at. An effective national low value electronic payment system will certainly remove what is currently a major obstacle to the expansion of general business activities. The emergence of an electronic payment system which is easy to use, cheap to process, and boost trade, is likely to have a range of only partly anticipated side effects. For example, it could result in the creation one currency for the Economic community of West African States (ECOWAS) which the countries are yearning for.

There is the need for banks to educate employees about all of forms of electronic banking system, options and the pro and cons of each. Consumers will need to be informed about the potential liability for the use of new types of electronic payment, so they can understand how it differs from cash.

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## REFERENCES

- Abor, J. (2004). Technological innovation and banking in Ghana: An evaluation of customers' perceptions, *American Academy of Financial Management*.
- Acquah, P. A. (2001). The payments system and monetary policy (online) from <http://www.bog.gov.gh/gspeeches/speech3.htm> .
- Aladwani, A. (2001) "Online Banking: A Field Study of Drivers, Development Challenges, and Expectations," *International Journal of Information Management*, 21, 2001, pp. 213-225.
- Alu, A. O. (2002). Effects of Information Technology on Customer Services in the Banking Industry in Nigeria.
- Appiah-Adu, K .(2004) "Marketing Effectiveness and Customer Retention in the Service Sector" *The Service Industry Journal* 19, pp 26-41.
- Appiah and Agyemang, K. (2004) " Electronic Retail Payment Systems: User Acceptability and Payment Problems in Ghana"
- Balachandher K.G., Santha, V., Norhazlin I., and Rajendra P., (2001) "Electronic Banking in Malaysia: A Note on Evolution of Services and Consumer Reactions"
- BankAway! (2001). *Net Banking Benefits! Sheer Acceleration*. Electronic Banking: The Ultimate Guide to Business and Technology of Online Banking, Edited by SCN Education B.V.
- Cheung, M.T. and Z. Liao (2002) "Challenges to Internet E-Banking," *Communications of the ACM*, Vol. 46, and No.12: 248-250.
- Estonian Banking Association, History of Estonian Commercial Banking <http://www.pangaliit.ee/history.htm>.
- Ghana Web (2004). *Internet fraud on the ascendancy in Accra* from:<http://www.ghanaweb.com/GhanaHomePage/NewsArchive/artikel.php?ID=65086>
- Ghana W eb (2004) The banking Act (Act 673) from:[http:// www.ffiec.gov/financial](http://www.ffiec.gov/financial) institutions.
- Ghana W eb (2005) ,Banking Overview from:[http:// www.ffiec.gov/financial](http://www.ffiec.gov/financial) institutions.
- Gurău, Catalin. "E-banking in Transition Economies: the Case of Romania," *Journal of Financial Services Marketing*, 6, 4, 2002, pp. 362 -379.
- Herzog, T. (1996). *Research methods in the social sciences*, Harper Collins, New York.
- Hunter, W. C. and Stephen G. T. (1991), "Technological Change in Large Commercial Banks." 64, no. 3 *Journal of Business*. 331-362.

Kerem, K, O. Lustsik, M. Sörg and V. Vensel. *E-banking in Estonia: Development, Driving Factors, and Effects*, In: Chadraba, P and R. Springer, Eds. Proceedings of the 10th annual conference on Marketing and business strategies for Central & Eastern Europe, Vienna: Wirtschaftsuniversität Wien; Chicago, DePaul University, 2002, pp 293-312

Idowu, P. A., Alu. O. A, Adagunodo,E.R. (2002), The Effect of Information Technology on the Growth of the Banking Industry in Nigeria.

“Internet Banking Handbook” Federal Reserve Board of Chicago’s Office of the Comptroller of the Currency (OCC), (2001).

Malhotra, K.N (2006) “Marketing research: An Applied Orientation, Pearson Education, and India.

Mols, N.(1999&2001) “The Behavioural Consequences of PC banking,” *International Journal of Bank Marketing*, 16, 5, pp. 195-201.

Saatcioglu, K., Stallaert, J. and Whinston A.B (1999&2001) "Design of a Financial Portal," *Communications of the ACM*, Vol. 44, No. 5: 33-38.

Sarpong,S.(2003). *Banking system fails the test.* From [http://africa.peacelink.org/newsfromafrica/articles/art\\_781.html](http://africa.peacelink.org/newsfromafrica/articles/art_781.html) (04-12-15)

SG-SSB (undated). *Sikatext* from <http://www.sg.ssb.com.gh/bank/prodetail.asp?proid=1> (2004-08-17)

Yasuharu U.(2003), the Effects of Information System Investment in Banking Industry.

Yin, R. K. (1994) case study research, Design and Methods, Thousand Oaks: Sage Publications, Inc.

Yin, R. (2002). *Case Study Research, Design and Methods* (3rd ed), Newbury Park, Sage Publications.

## APPENDIX 1

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI**

**INSTITUTE OF DISTANCE LEARNING**

### **STRUCTURED QUESTIONNAIRE FOR HFC STAFF**

Dear Respondent:

I am very grateful to you for taking time off your 'schedules to answer these questions.

I am conducting a research study on Electronic Banking and Performance of the Banks. Your views are being sought for the completion of my long essay for the common wealth executive masters in Public Administration. You are assured that your views will be used for academic purpose only and that it will be held with utmost confidentiality.

Thank you.

#### Section A

Please tick and state where applicable

Age: 20-29( ), 30-39 ( ), 40-49 ( ), 50-59 ( ), 60 and above ( )

Gender:

☐ Male

☐ Female

Marital status

- ☐ Single
- ☐ Married
- ☐ Divorced

Level of education

- ☐ HND
- ☐ Diploma
- ☐ Degree
- ☐ Masters/PhD

Section B

Please tick and state where applicable

1. Current Position in the bank .....

2. How long have you been working in this position?

- a. 1-3 years ( )    b. 4-6 years ( )    c. 7-9years ( )    d. 10 and  
above ( )

3. Which forms of electronic banking services do you provide? Please list them

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_.

4. Do you offer interactive banking services through the Internet?

- a. Yes ( )      B. No ( )

5. What is the main motive for the banks provision of electronic banking services?

- ☐ Enhancing competition
- ☐ Profit creation
- ☐ Attracting more new clients

6. Do you agree with the statement that Electronic and Communication Technology (ECT) is an integral part of modern day banking?

- a. Yes ( ) B. No ( )

7. Has electronic banking had any affirmative effect on your duties to the bank?

- a. Yes ( ) B. No ( )

8. If yes how has it influenced you in your duties to the bank? State one reason

.....

.....

9. Do you agree that electronic banking services helps to save time, money and effort?

- A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )

10. Do you believe that banking should be in such a way that customers can telephone, use the internet, fax and mobile to transact a transaction at one's bank?

- A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )



11. Do you agree that banks that provide electronic banking services reduce operation cost?

A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )

12. Should there be a system in banking where the client can communicate any service needed

without being physically present at the bank, through Information Technology (IT)?

A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )

13. The customer should pay for services rendered to them through IT.

A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )

14. Customers still prefer to queue in the banking hall and make less use of these electronic delivery channels

A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )

15. Electronic cards like ATM, Ezwich charges are costly compared to the time spent in the

banking hall. A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )

16. Do you agree that Electronic Banking services have a positive effect on banks profitability?

A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree

17. Banks can use technology to efficiently manage customer service.

A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )

18. Complaints about the bank should be made through an electronic service like the telephone, internet and others.

A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )

19. E-banking innovations are still very new to Ghanaian Banks.

A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )

20. Do you agree with the notion that the nature of e-banking innovation is very expensive to acquire and that the effect of electronic banking services on banks profitability is negative in the short run?

A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )

A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )

22. What recommendation (s) will you make to fully exploit the opportunities that e-banking innovations bring to banking?



## **APPENDIX 2**

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI**

**INSTITUTE OF DISTANCE LEARNING**

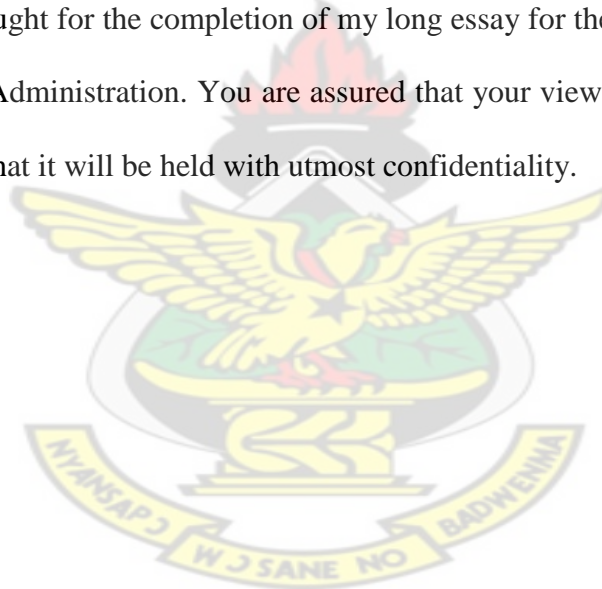
### **STRUCTURED QUESTIONNAIR FOR HFC CUSTOMERS**

Dear Respondent:

I am very grateful to you for taking time off your 'schedules to answer these questions.

I am conducting a research study on Electronic Banking and Performance of the Banks. Your views are being sought for the completion of my long essay for the common wealth executive masters in Public Administration. You are assured that your views will be used for academic purpose only and that it will be held with utmost confidentiality.

Thank you.



## Section A

Please tick and state where applicable

Age:

20-29( ), 30-39 ( ), 40-49 ( ), 50-59 ( ), 60 and above ( )

Sex:

- ☐ Male
- ☐ Female

Marital status

- ☐ Single
- ☐ Married
- ☐ Divorced

Level of education

- ☐ Senior high school
- ☐ HND
- ☐ Diploma
- ☐ Degree
- ☐ Masters/PhD

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Occupation Status:

- ☐ Civil /Public servant
- ☐ Private
- ☐ Self-employed
- ☐ Others

Section B

Please tick and state where applicable

1. Do you have any account with the bank?

A. Yes ( )

B.No ( )

2. Do you have any other business transaction with the bank?

A. Yes ( )

B.No ( )

3. How often do you come to the banking hall?

Daily ( )

Weekly ( )

Monthly ( )

Occasionally ( )

4. How many minutes do you spend at the banking hall when transacting business with the bank?

1-10mins ( ), 10-20mins ( ), 20-30mins ( ), 30mins and above ( )

5. Do you think Information technology (IT) has improved the speed with which you are served?

A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )

6. Do you agree with the statement that *electronic banking is an essential element of modern Banking?*

A. Yes ( ) B. No ( )

7. Do you use any of the banks electronic banking services?

A. Yes ( ) B. No ( )

8. If yes which of these electronic banking services do you currently use?

- ☐ SMS banking
- ☐ ATM
- ☐ Internet banking
- ☐ Ezwich

9. What are your reasons for using these electronic banking services?

- ☐ Affordability
- ☐ Saves time

☐ Easy and safe payment

10. If you don't make use of any of the electronic banking services, what are your reasons?

☐ Uncertain of the benefit of E-banking

☐ Do not need instant 24 hours access to accounts

☐ Unsure about the security of transactions

☐ Not sure how it works

11. The cost involved in using these technologies is higher than that of the time spent at the banking hall

A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )

12. Do you agree that electronic Banking services have a positive effect on banks profitability?

A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )

13. Banking should be in such a way that customers can telephone, use the internet, fax and mobile to transact business with a bank.

A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )

14. Have you ever visited the web site of this Bank (HFC Bank)?

A. Yes ( ) B. No ( )



15. The customer should pay for services rendered to them through IT.
- A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )
16. Customers still prefer to queue in the banking hall and make less use of these electronic delivery channels
- A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )
17. Bank customer transaction should be possible even after banking hours and weekends.
- A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )
18. Customers should be able to open and operate bank account through the internet.
- A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )
19. The banks' state of technological usage in service delivery example, ATM is satisfactory.
- A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )
20. The customer should be able to instruct the bank to undertake a transaction on his / her behalf through the internet, email, telephone or ATM card.
- A. Strongly Agree ( ) B. Agree ( ) C. Neutral ( ) D. Disagree ( ) E. Strongly Disagree ( )
21. How do you rate HFC bank to its competitors in terms their electronic delivery services
- Excellent ( ) Better ( ) Good ( ) Satisfactory ( ) Not satisfactory ( )
22. Did the IT services of HFC bank influence you in doing business with the bank?
- A. Yes ( ) B. No ( )