

**ELECTRONIC BANKING ADOPTION IN GHANA**  
**A CASE STUDY OF GUARANTY TRUST BANK (GHANA) LIMITED**

**By**

**KNUST**

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## DECLARATION

I hereby declare that this submission is my own work towards the Executive Masters of Business Administration and that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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## DEDICATION

I dedicate this work to my parents, Mr. Harry Mensah and Mrs.SelinaMensah, my sister Lorraine-Sally Mensah and to Hubert Tsatsu Ametefe. Thank you all for your support, love and care. You have been a great source of inspiration to me. God bless you all!

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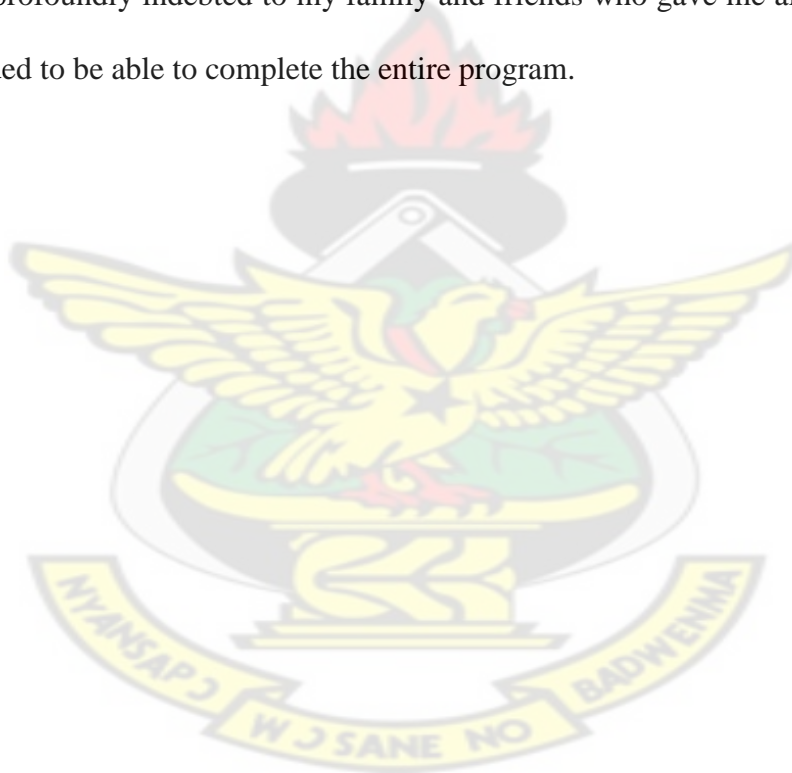


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## **ABSTRACT**

Electronic banking (e-banking) has brought about a revolution in the functioning of banks as it offers major opportunities to banks and their customers. This has made the transition to electronic banking a necessity for banks in order to be viable. Despite its benefits, developing countries still lag behind in the adoption of electronic banking. This study therefore seeks to examine the adoption of e-banking in the Ghanaian banking industry with Guaranty Trust Bank Ghana Limited (GTBank) as the case study to identify the benefits, challenges and critical success factors for the adoption of e-banking in the Ghanaian banking industry. The research made use of questionnaires and interviews to collect data from staff and customers of GTBank. The results of the study indicated that e-banking adoption was a business strategy taken by the bank in response to customer needs and the changing marketing trends in the banking industry. The benefits, challenges and critical success factors of e-banking are also identified and discussed. From the study it is obvious that tremendous benefits such as revenue generation, improvement in productivity and efficiency in service delivery and cost savings were derived from e-banking. The lack of a solid technology infrastructure was identified as a major challenge of e-banking adoption in the country. The study however revealed that there is a promising future for e-banking in Ghana. Some recommendations to enhance the adoption of e banking in country are made based on this study.

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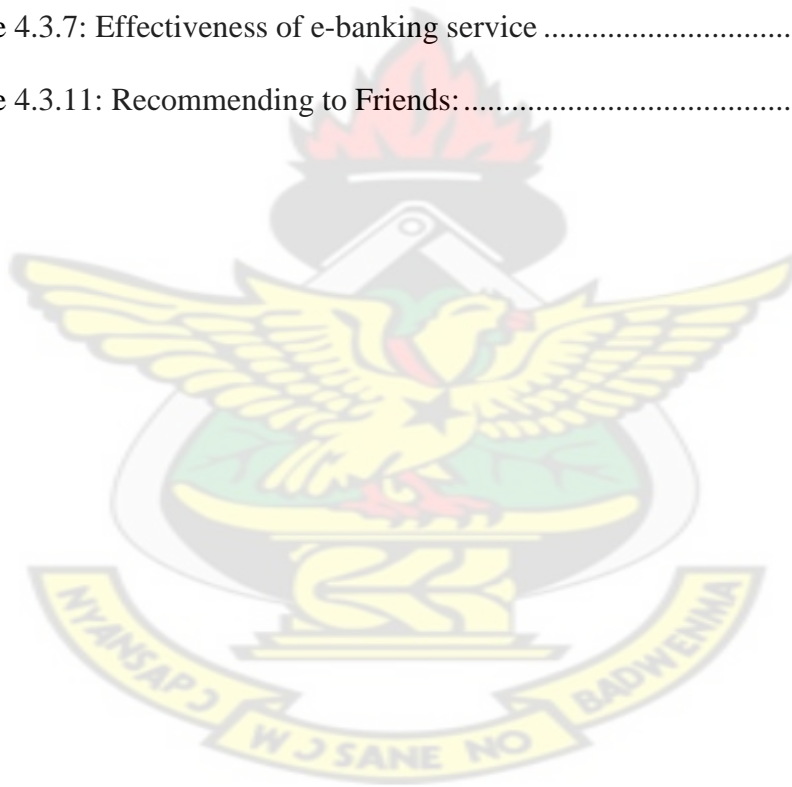
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## **CHAPTER ONE**

### **INTRODUCTION**

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

The Banking Industry is one of the areas of business that has been influenced the most by technology. Banking operations have evolved from the mere exchange of cash, cheques and other negotiable instruments to the application of Information and Communications Technology (ICT) to banking transactions. Through technology, banks are now able to offer convenience services to their customers. According to Molla (2005), Information and Communications Technologies (ICTs) have changed the way of conducting business transactions and meeting the growing demands of customers for most organizations. The promise of ICTs in the banking sector has been seen in terms of its potential to increase customer base, reduce transaction costs, improve the quality and timeliness of response, enhance opportunities for advertising and branding, facilitate self-service and service customization, and improve customer communication and relationship.

Business via the internet or electronic commerce is providing a competitive advantage for banks by lowering operational cost and providing best satisfaction of customer needs. A strong banking industry is important in every country and can have a significant effect in supporting economic development through efficient financial services. In Ghana the role of the banking industry needs to change to keep up with the globalization movement. This change will include moving from traditional distribution channel banking to electronic distribution channel banking. Given the almost complete adoption of e-banking in developed countries, the reason

for the lack of such adoption in developing countries like Ghana is an important research that needs to be addressed.

In the world of electronic commerce, it is very important that banks should provide electronic banking services in order to have the long-term survival (Burnham, 1996). Consequently, most banks in developed and some in developing parts of the world are now offering electronic banking services with various levels of sophistication. It is expected that banks that do not offer electronic banking services may lose their customers to their competitors (Orr, 1999).

Electronic banking is the automated delivery of new and traditional banking products and services directly to customers through electronic medium. This system allows customers to access their accounts, transact business, make enquiries and have prompt responses from banks (Parisa, 2006). Automated Teller Machines (ATMs), telephone banking, internet banking, mobile banking, debit cards, credit cards, online bill payment and many others are examples of how technology is changing traditional banking.

In a further development, Simpson (2002) contends that electronic banking has survived in a number of countries given its ability to increase banks market share and facilitation of business transaction. More linkage is therefore drawn on the importance of electronic banking to improve the business environment of any economy. Awareness, information, customer protection, response time, reliability, security, technology readiness all are considered to be important elements for electronic banking.

With the help of the internet, banks are providing benefits to their customers. From the customer's point of view, electronic banking is providing convenient and

valuable source to deal with funding because it provides convenience to access account 24/7 (Applegate *etal.*, 1996). Customers can use these services anywhere, that is homes, offices and so on and anytime without visiting the banks. The banks can use the electronic commerce technology for meeting the competitive advantage and gaining the best level of profitability while providing best services to its customers.

The banking system in developing countries is significantly different from that in developed countries such as the United State of America, Britain and South Africa. As with most developing countries, Ghana has been undergoing a process of financial sector restructuring and transformation as an integral part of a comprehensive strategy for sometime (Acquah 2006). According to Bawumia (2007) banks in Ghana will need to reinvest themselves in this new conducive but challenging environment. This is important because electronic transactions will continue to grow and only countries that make a move towards embracing electronic business will participate in this revenue generation (Akoh, 2001).

Harold and Jeff (1995) contend that financial service providers should modify their traditional operating practices to remain viable in the 1990s and the decades that follow. Woherem (2000) also claimed that only banks that overhaul the whole of their payment and delivery systems and apply ICT to their operations are likely to survive and prosper in the new millennium. He advises banks to re-examine their service and delivery systems in order to properly position them within the framework of the dictates of the dynamism of Information and Communication Technology.

Under these conditions, the transition to E-banking has become a necessity for banks as it offers major opportunities in terms of competitive advantage and allows

banks on one hand to improve efficiency and operational effectiveness and on the other hand to develop a stronger and more durable business relationship with its customers. However, the adoption of innovation within an organization in general and the adoption of E-banking specifically is not always an easy thing to bring about as it can be complex and expensive to implement.

## **1.2 STATEMENT OF THE PROBLEM**

The Banking industry in Ghana plays a significant role in the country's economy. Through borrowing, lending and related activities, banks facilitate the process of production, distribution, exchange and consumption of wealth. Banks also administer payment systems which are core to an economy. Competition and limitation of resources has placed banks under pressure to lower their transactional cost and improve their services and maintain quality of service.

According to Yasuharu (2003), implementation of information technology and communication networking has brought about a revolution in the functioning of the banks and the financial institutions. The transition to electronic banking has therefore become a necessity for banks as it offers major opportunities in terms of competitive advantage and it also allows banks to develop a stronger and more durable business relationship with its customers.

In developed countries, banks engage in vigorous e-banking and this had helped these banks to stay competitive through productivity gains, transaction cost reduction and customer service improvement. Despite its benefits, however,

developing countries still lag behind developed countries in the adoption of e-banking.

Guaranty Trust Bank Ghana Limited (GTBank) is a universal bank which began operations in Ghana on 13<sup>th</sup> of March 2006. GTBank has earned a name as being one of the top technology driven banks in Ghana. The Bank uses its expertise and knowledge in the financial services industry to provide its customers with world class value-adding financial services. In recognition of this, GTBank Ghana was awarded the Best Bank of the Year and Best Bank in Electronic banking in 2009 and 2010. What did the Bank do for it to have successfully adopted e-banking and be awarded Best Bank in Electronic Banking for two consecutive years?

It is against this background that the researcher seeks to describe the status of adoption of e-banking in GT Bank as a means of identifying the benefits, challenges and critical success factors for the adoption of e-banking in the Ghanaian banking industry.

### **1.3 RESEARCH OBJECTIVES**

The general objective of this study is to describe the status of e-banking adoption in GT Bank.

The specific objectives to be achieved are:

1. To identify the services that are being provided through e-banking by GTBank.
2. To identify the benefits GTBank and its customers derive from e-banking.
3. To identify the critical success factors for the introduction of e-banking by GTBank.



4. To identify the challenges encountered in the adoption of e-banking by GTBank.

#### **1.4 RESEARCH QUESTIONS**

The following are the research questions to be addressed by this study.

1. What are the services that are being provided through e-banking by GTBank?
2. What are the benefits that may be derived by GTBank and its customers in adopting e-banking?
3. What are the critical success factors for the adoption of e-banking by GTBank?
4. What are the challenges GTBank face in introducing e-banking in Ghana?

#### **1.5 SIGNIFICANCE OF THE STUDY**

The internet and internet based technologies have revolutionized the way banks operate and interact with their environment. The findings of this study would be useful to policy makers in the banking sector in the development of a national policy framework for electronic banking adoption in Ghana to facilitate economic and social growth. This study would also assist all stakeholders in the banking industry identify and formulate strategies that will promote e-banking. This study also seeks to address the lack of studies on e-banking adoption in developing countries such as Ghana and also help researchers in studies related to e-banking.

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

As stated above, this research will focus on describing the status of electronic banking adoption in Ghana as a means of identifying the benefits, challenges and critical success factors for the introduction of e-banking in Ghana by GT bank. The study is also centered on the various types of e-banking products that have been released onto the Ghanaian market.

Due mainly to time constraint and the attention needed from the officials and respondents of the bank this study is limited to only one bank which is Guaranty Trust Bank Ghana Limited. Questionnaires were administered to officials and customers of the bank.

## **1.7 BRIEF METHODOLOGY**

The research will be conducted among GTBank staff at the Electronic Channels, Cards Services and IT departments as well customers of the bank who use one or more of the e- banking services. The methodology used for the study will primarily be the use of questionnaires for respondents to answer and structured interviews. All questions will be close ended and arranged in proper order, in accordance with the relevance. This is to make interpretation a lot easier. The questionnaire will be designed in a straightforward manner for easy understanding to elicit the exact and appropriate responses required for the study.

The questionnaires will be self-administered to staff and customers of GT Bank and this will help to explain to respondents the essence of the research. The study will



make use of Microsoft Excel 2010 and Statistical Package for Social Science version 19 for the data analysis.

The information gathered will be tabulated and then presented in both bar and pie charts for interpretation and analysis.

## **1.8 STRUCTURE OF THE STUDY**

The entire research was organized into five parts and the outline of each chapter is given as follows:

**Chapter One:** This chapter discussed the Introduction, Background of the Study, Objectives of the Study, Statement of the problem, Objective of the Study, Significance of the Study and Research Problem.

**Chapter Two:** This was on Literature reviewed from relevant textbooks, journals, websites and other referenced sources. It also included the theoretical framework used for the study.

**Chapter Three:** This chapter covered the company profile and research methodologies used for the study.

**Chapter Four:** This chapter covered the presentation and analysis of data by way of figures, graphical presentation and statistics.

**Chapter Five:** This chapter comprised a summary of the research, conclusion and recommendation on how e-banking may be integrated into Ghanaian banking activities with GTBank as the case study.

## **CHAPTER TWO**

### **LITERATURE REVIEW AND THEORETICAL FRAMEWORK**

#### **2.1 INTRODUCTION**

This chapter appraises previous research by accredited scholars and researchers. A literature review is a body of text that aims to review the critical points of current knowledge on a particular topic. Its ultimate goal is to bring the reader up to date with current literature on the topic and forms the basis for another goal, such as the justification for future research in the area. The chapter starts with introduction of electronic banking, its adoption, the different E-banking service delivery channels, E-banking benefits, its challenges and Critical Success Factors. A brief history of how electronic banking was introduced in Ghana has also been discussed.

#### **2.2 DEFINITION OF E-BANKING**

Vilattes (1997) defines E-banking as a distance banking that not only handles the flow of information between customers' "living spaces" (e.g. homes, offices, etc) and the physical facilities of the bank, but also deals with solicitation, sales, distribution and access to services, all without requiring the customer and the financial institution representative to be in the same physical place at the same time.

According to Mols (1998), electronic banking is the automated delivery of new and traditional banking products and services directly to customers through electronic medium. This system allows customers to access their accounts, transact business, make enquiries and have prompt responses from banks.

Daniel (1999) described electronic banking as the provision of banking services to customers through Internet technology. Other authors (Mols, 1998; Karjaluoto et al., 2002) indicated that banks have the choice to offer their banking services through various electronic distribution channels technologies such as Internet technology, video banking technology, telephone banking technology, and Wireless Application Protocol technology (WAP). Karjaluoto et al. (2002) also indicated that Internet technology is the main electronic distribution channel in the banking industry. In more detail the author described E-banking as an online banking that involves the provision of banking services such as accessing accounts, transferring funds between accounts, and offering an online financial service.

Most electronic business specialists agree that E-banking ensures 24-hours-a-day, seven-days-a-week accessibility, through any type of advanced information system (Automated Teller Machines, Personal Computers, Internet, mobile phones etc.) and for all types of financial transactions (Daniel, 1999; Mols, 1998; Sathye, 1997).

### **2.3 THE ADOPTION OF ELECTRONIC BANKING**

Wang et al. (2003) claim that in the 1990s, E-banking was under-utilised as business organisations used it only to market their products and services. Thornton and White (2001), who examined customer orientations and usage of financial distribution channels in the Australian financial industry, found that more recently most financial institutions, faced with competitive pressure after the introduction of deregulation in 1983, had rethought their strategies to take full advantage of Internet technology. Tan and Teo (2000) note that the challenge to expand and maintain banking market share has influenced many banks to invest more in making

better use of the Internet. The emergence of E-banking had made many banks rethink their Information Technology (IT) strategies in competitive markets. They suggest that the banks that fail to respond to the emergence of E-banking in the market are likely to lose customers and that the cost of offering E-banking services is less than the cost of keeping branch banking. This notion was also confirmed in a study conducted by Jasimuddin (2004) who examined the role of E-banking in Saudi Arabia. Jasimuddin indicated that the majority of Saudi banks had taken advantage of Internet technology to establish web sites but few offered E-banking services. He suggested that if the Saudi Arabian banking industry wished to be successful in the global economy it would need to integrate Internet technology into its banking strategy. Despite the fact that Internet technology acceptance is growing worldwide, the Ghanaian banking industry is yet to adopt fully Internet technology.

Information Technology (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, investments in IT by commercial banks have served to streamline operations, improve competitiveness, and increase the variety and quality of services provided.

Over time, technology has increased in importance in Ghanaian banks. Traditionally, banks have always sought media through which they would serve their clients more cost-effectively as well as increase the utility to their clientele. Their main concern has been to serve clients more conveniently, and in the process increase profits and competitiveness. Internet, electronic and communications

technologies have been used extensively in banking for many years to advance the agenda of banks.

In recent years, the adoption of E-banking began to occur quite extensively as a channel of distribution for financial services due to rapid advances in IT and intensive competitive banking markets.

Automated Teller Machines (ATMs) were the first well-known machines to provide electronic access to customers. With the advent of the ATM, banks are able to serve customers outside the banking hall. The ATM is designed to perform the most important function of the bank. It is operated by a plastic card with its special features. The plastic card is replacing the cheque, personal attendance of the customer, banking hour's restrictions and paper based verification. ATMs have made hard cash just seconds away all throughout the day at every corner of the globe. ATMs allow the Bank's customers to do a number of banking functions – such as withdrawing cash from one's account, making balance inquiries and transferring money from one account to another, purchase prepaid mobile phone a credits using a plastic, chip or magnetic-stripe card and a Personal Identification Number (PIN) issued by the financial institution.

The adoption of electronic banking is often credited with helping fuel strong growth in the many economies (Coombs et al, 1987). It seems apparent then that, electronic banking affects not just banking and financial services, but also the direction of an economy and its capacity for continued growth.

The idea of Internet banking according to Essinger (1999) is: “to give customers access to their bank accounts via a web site and to enable them to enact certain transactions on their account, given compliance with stringent security checks”. To

the Federal Reserve Board of Chicago's Office of the Comptroller of the Currency (OCC) Internet Banking Handbook (2001), Internet Banking is described as "the provision of traditional (banking) services over the internet".

Internet banking by its nature offers more convenience and flexibility to customers coupled with a virtually absolute control over their banking. Service delivery is informational (informing customers on bank's products, etc) and transactional (conducting retail banking services).

As an alternative delivery conduit for retail banking, it has all the impact on productivity imputed to Tele-banking and PC-Banking. Aside that it is the most cost-efficient technological means of yielding higher productivity. Furthermore, it eliminates the barriers of distance / time and provides continual productivity for the bank to unimaginable distant customers.

## **2.4 BANKING DEVELOPMENTS IN GHANA**

Banking in Ghana has undergone many changes in service delivery with the aim of improving the quality of service being provided to the customers. Banks were serving their customers through the manual system, which resulted in long queues to transact the business. The other problem faced by many companies in Ghana is that, many people including companies do not accept cheques as a payment method. This is because of the time and the inconveniences involved in accepting and depositing cheques company accounts. For decades, the banking sector was dominated by Barclays and Standard Chartered banks. Barclays Bank (formerly known as the Colonial Bank) in February of 2006 celebrated ninety years of its



operations in Ghana and Standard Chartered bank (formerly known as the Bank of British West Africa) has been operating in Ghana since 1896.

Commercial banks began to operate in Ghana in 1874. The first commercial bank to operate in Ghana was the Bank of British West Africa (BBWA) now the Standard Chartered Bank (Ghana) Limited. It was established in 1874 with only one branch in Accra. In 1917, Barclays Bank, D.C.O (now Barclays Bank of Ghana Limited) started operations mainly to finance the booming foreign trade, mainly between Ghana and Britain. These two banks were overseas branches of large international banks incorporated in Britain. They handled all the commercial banking business in the country until 1953 when the state-owned Bank of the Gold Coast (the parent bank of both the Bank of Ghana and the Ghana Commercial Bank was inaugurated.

After Ghana attained its independence in 1957, the enactment of a legislative instrument of Parliament separated the Bank of the Gold Coast into the Bank of Ghana (the Central Bank) and the Ghana Commercial Bank (GCB). The two expatriate banks mentioned above and the GCB therefore, constituted the primary commercial banks in the country and have since dominated the commercial banking system, handling over 70% of all banking business in Ghana (Andoh, 1988). These three banks also constituted the commercial banking system before the 1970s; their main business being to finance foreign trade, while domestic lending in other sectors was minimal. Today, however, the credit distribution system has changed dramatically. The proportion of bank credit directed to the import trade sector, which averaged about 80% until 1960 have now declined to less than 30%. As of the end of December 1984, the number of branches of these three banks was two hundred and ten (210). GCB had the greatest number, one hundred and forty-nine

(149), followed by Barclays bank with thirty-three (33) and Standard Chartered Bank with twenty-eight (28) branches scattered over the country.

As of December 1984, there were twelve (12) banks in Ghana: Ghana Commercial Bank, Barclays Bank of Ghana Limited, Standard Chartered Bank Ghana Limited, Agricultural Development Bank, Social Security Bank, Merchant Bank of Ghana Limited, National Investment Bank, Cal Merchant Bank, Ecobank Ghana Limited, Bank for Housing and Construction, Bank of Credit and Commerce and Ghana Cooperative Bank.

From that period to May 2012, several other banks been incorporated into the Ghanaian banking sector. These are: Guaranty Trust Bank Ghana Limited, Stanbic Bank, Zenith Bank, United Bank for Africa, Bank of Africa, Bank of Baroda, Energy Bank, Fidelity Bank Ghana Limited, International Commercial Bank, Access Bank Ghana, UniBank and Unique Trust Bank.

There have been some other changes in the sector mainly in terms of ownership. A large number of these new banks are now owned and managed by Africans, and the sector boasts a number of highly skilled and experienced bankers. Bank branches in Ghana increased by 11.3% from 309 to 344 between 2002 and 2004 with 81 new branches springing, from 2004 and 2006 indicating an increase of 23.5%. The total banking system assets at the end of October 2006 were ₵48,353.0 billion, representing an annual growth of 35.5%, as against 16.6% as of the end of October 2005 (Daily Graphic, December 19, 2006).



## **2.5 HISTORY OF ELECTRONIC BANKING IN GHANA**

In Ghana, the earliest forms of internet, electronic and communications technologies used were mainly office automation devices. Telephones, telex and facsimile were employed to speed up and make more efficient, the process of servicing clients. For decades, they remained the main information and communication technologies used for transacting bank business.

Later in the 1980s, as competition intensified and the PC got proletarian, Ghanaian banks began to use them in back-office operations and later tellers used them to service clients. Advancements in computer technology saw the banks networking their branches and operations thereby making the one-branch philosophy a reality. Barclays Bank Ghana Limited and Standard Chartered Bank Ghana Limited pioneered this very important electronic novelty, which changed the banking landscape in the country.

Probably, the most revolutionary electronic adoption in Ghana and the world over has been the ATM. In Ghana, banks with ATM offerings have them networked and this has increased their utility to customers. The Trust Bank, Ghana (now a member of the ECOBANK), in 1995 installed the first ATM. Not long after, most of the major banks began their ATM networks at competitive positions. Ghana Commercial Bank started its ATM offering in 2001 in collaboration with Agricultural Development Bank. Currently, almost all banks in the country operate ATMs. The ATM has been the most successful delivery medium for consumer banking in this county. 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

county, by being networked, so people do not necessarily have to go to their branch to do some banking.

Though ATMs have enjoyed great success because of their great utility, it has been recognized that it is possible for banks to improve their competitive stance and profitability by providing their clients with even more convenience. Once again Information Communication Technology (ICT) was what saved the day, making it possible for home and office banking services to become a reality. In Ghana, some banks started to offer Personal Computer PC banking services, mainly to corporate clients. The banks provide the customers with the proprietary software, which they use to access their bank accounts, sometimes the internet via the World Wide Web (www). This is however on a more limited scale though, as it has been targeted largely at corporate clients. Banks have recognised the internet as representing an opportunity to increase profits and their competitiveness. Currently, many banks are offering internet banking (i-banking) in Ghana.

Historically, businesses interested in obtaining high levels of customer satisfaction have focused on using knowledgeable, pleasant servers to deliver high quality products and services to their target markets. Today's consumer not only demands quality, but also demands that products and services be delivered quickly. Hence, firms must respond to these changes if they wish to remain competitive. As customers experience a greater squeeze on their time, short waits seem longer than ever before. If firms can improve customers' perceptions of time they spend waiting to be served, then customers will experience less frustration and may feel more satisfied with the service encountered. Furthermore, as the service sector of the national economy expands, the structure of the traditional forty hours work week is

eroding. Today, weekends are workdays and 24 hour service operations are commonplace with the supplement of internet banking on customers.

Over the last decade, the Ghanaian Government has made a serious effort to pursue a ‘knowledge-based economy’ agenda to make Ghana a preferred ICT destination. The use of the Internet in Ghana has also seen significant increases since the liberalization of the telecommunication industry in 1990s. The country had 18.1 Internet users per 1,000 people in 2005 as compared to 1 Internet user in 1999 (ITU, 2007). The number of PC ownership doubled to 52 owners per 1,000 people between 1999 and 2005. A National ICT for Accelerated Development policy was introduced in 2003 with the objective of engineering an ICT-led socioeconomic development process. The impact of these initiatives is evident in the November 2005 edition of African Business. The article on the Ghana profile page, entitled “Cake is bigger but the slices are smaller”, claimed interestingly “Ghana has the most developed IT sector in West Africa”. For a country which hitherto could clearly be described as sitting at the disadvantaged end of the global digital divide, it becomes important to ascertain how ICT is affecting the Ghanaian banking business, which also tends to contribute substantially to Ghana’s service sector revenues (ISSER, 2005).

## **2.6 ELECTRONIC BANKING ADOPTIONS IN GHANAIAN BANKING SECTOR**

In the Ghanaian banking industry, IT investments and adoption have become a very important component in achieving organizational goals due to competition. In recent past therefore, electronic and communications technologies have been used

extensively in banking for many years to advance the agenda of banks. The earliest forms of electronic and communications technologies used by the banks were mainly office automation devices. Telephones, telex and facsimile were employed to speed up and make more efficient, the process of servicing clients.

However, with coming of new partners in banking industry, as competition intensified and the PC got proletarian, Ghanaian banks began to use them in back-office operations and later tellers used them to service clients. The advancements in computer technology have led to application and adoption of new IT investments that have changed the banking landscape in the country.

Arguably, the most revolutionary electronic innovation in this country has been the ATM. In Ghana, banks with ATM offerings have them networked and this has increased their utility to customers. Other technological innovations in banking sector include internet banking, telephone banking, Electronic funds transfer, among others.

## **2.7 FORMS OF E-BANKING SERVICE DELIVERY CHANNELS**

The following are the different forms of IT in the banking sector:

### **2.7.1 Automated Teller Machines (ATMs)**

Rose (1999) cited by Abor, describes ATMs as follows: “an ATM combines a computer terminal, database system and cash vault in one unit, permitting customers to enter the bank’s book keeping system with a plastic card containing a PIN or by punching a special code number into the computer terminal linked to the

bank's computerized records 24 hours a day". Once access is gained, it offers several retail banking services to customers. They are mostly located outside of banks, and are also found at airports, malls, and places far away from the home bank of customers. They were introduced first to function as cash dispensing machines. However, due to advancements in technology, ATMs are able to provide a wide range of services, such as making deposits, funds transfer between two or more accounts and bill payments. Banks tend to utilize this electronic banking device, as all others for competitive advantage.

The combined services of both the automated and human tellers imply more productivity for the bank during banking hours. Also, as it saves customers time in service delivery as alternative to queuing in banking halls, customers can invest such time saved into other productive activities. ATMs are a cost-efficient way of yielding higher productivity as they achieve higher productivity per period of time than human tellers (an average of about 6,400 transactions per month for ATMs compared to 4,300 for human tellers (Rose, 1999). Furthermore, as the ATMs continue when human tellers stop, there is continual productivity for the banks even after banking hours.

### **2.7.2 Telephone Banking**

"Telephone Banking (Telebanking) can be considered as a form of remote or virtual banking, which is essentially the delivery of branch financial services via telecommunication devices where the bank customers can perform retail banking transactions by dialing a touch-tone telephone or mobile communication unit, which is connected to an automated system of the bank by utilizing Automated Voice Response (AVR) technology" (Balachandher et al, 2001).



According to Leow (1999), telebanking has numerous benefits for both customers and banks. As far as the customers are concerned, it provides increased convenience, expanded access and significant time saving. On the other hand, from the banks' perspective, the costs of delivering telephone-based services are substantially lower than those of branch based services. It has almost all the impact on productivity of ATMs, except that it lacks the productivity generated from cash dispensing by the ATMs. For, as a delivery conduit that provides retail banking services even after banking hours (24 hours a day) it accrues continual productivity for the bank. It offers retail banking services to customers at their offices/homes as an alternative to going to the bank branch/ATM. This saves customers time, and gives more convenience for higher productivity.

### **2.7.3 Personal Computer Banking**

Personal Computer (PC) Banking is a service which allows the bank's customers to access information about their accounts via a proprietary network, usually with the help of proprietary software installed on their personal computer". Once access is gained, the customer can perform a lot of retail banking functions. The increasing awareness of the importance of computer literacy has resulted in increasing the use of personal computers. This certainly supports the growth of PC banking which virtually establishes a branch in the customers' home or office, and offers 24-hour service, seven days a week. It also has the benefits of Telephone Banking and ATMs (Abor, 2005).

#### **2.7.4 Internet Banking**

The idea of Internet banking according to Essinger (1999) is: “to give customers access to their bank accounts via a web site and to enable them to enact certain transactions on their account, given compliance with stringent security checks”. To the Federal Reserve Board of Chicago’s Office of the Controller of the Currency (OCC) Internet Banking Handbook (2001), Internet Banking is described as “the provision of traditional (banking) services over the internet”.

Internet banking by its nature offers more convenience and flexibility to customers coupled with a virtually absolute control over their banking. Service delivery is informational (informing customers on bank’s products, etc) and transactional (conducting retail banking services). As an alternative delivery conduit for retail banking, it has all the impacts on productivity imputed to Telebanking and PC-Banking. Besides,, it is the most cost-effective technological means of yielding higher productivity. Furthermore, it eliminates the barriers of distance or time and provides continual productivity for the bank to unimaginable distant customers.

#### **2.7.5 Branch Networking**

Networking of branches is the computerization and inter-connecting of geographically scattered stand-alone bank branches, into one unified system in the form of a Wide Area Network (WAN) or Enterprise Network (EN); for the creating and sharing of consolidated customer information or records (Abor, 2005).

It offers a quicker rate of inter-branch transactions as the consequence of distance and time are eliminated. Hence, there is more productivity per time period. Also, with the several networked branches serving the customer populace as one system,

there is simulated division of labour among bank branches with its associated positive impact on productivity among the branches. Furthermore, as it curtails customer travel distance to bank branches it offers more time for customers' productive activities.

## **2.8 BENEFITS OF E-BANKING**

The service industries are mostly customer driven and the banking sector is one of the competitive industries with continuous upgrading of skills, products and technology all in the interest of retaining and winning customers. Given the nature of competition, survival and profitability is highly dependent on quality of service and efficiency Mols (1998).

Electronic banking service has provided numerous benefits for both banks and customers. The first benefits for the banks offering electronic banking service 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. 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.

Several arguments have been expanded in favour of E-banking having the ability to sweep away the old laborious and non-effective means of banking. According to views expressed by Mols (1998) it was indicated that the Internet is a revolution that will sweep away the old order holds much sway. The internet revolution in E-banking transaction is much cheaper than branch or even phone transactions. This



could spur yesterday's competitive advantage - a large branch network, into a comparative disadvantage, allowing e-banks to undercut bricks-and-mortar banks.

Jen and Michael (2006) indicate that E-banking has created unprecedented opportunities for banks and businesses globally, 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 (Liao and Cheung 2003).

Studies by Rikya (2007) and Han (2008) on the introduction of internet banking and prospects for Bangladesh concludes that the advent of technologies have really brought information revolution in the society and that Internet Technology is rightly regarded as the third wave of revolution after the agricultural and industrial revolutions. The advent and adoption of the internet by industries has removed the constraint of time, distance and communication making the globe truly a small village.

Rikta (2007) mentioned that in Bangladesh, Small Medium Enterprise (SMEs) owners had to visit their lender an average of 15 times for a single loan. Han (2008) also found the favourable impact of the application of informational technology on SME finance. He mentioned that online SME businesses are more profitable and produce higher revenues, than SMEs that use only traditional channel. Using E-banking reduces the required visits a client has to make to a bank for transaction.

According to Rotchanakitumnuai and Speece (2003) electronic banking offers numerous benefits to both banks, investors and individual bank clients ; can check

account balances, transfer money, pay bills, collect receivables and ultimately reduce transaction costs and establish greater control over bank accounts. Customers need not visit banks for banking transactions, providing round the clock services (Cheng et al., 2006). Customers can apply for loans and do other banking services online (Smith and Rupp, 2003).

E-banking plays a major role in the economy by enabling sellers and buyers to create economic value through the exchange of information, goods/services, and payments by avoiding physical contacts (Bakos, 1998). Also, E-banking enables banks to attract mobile customers and this offers tremendous profit potential by providing mobile financial services. As indicated by Wind (2001) many banks are motivated to implement E-banking by forces relating to the maximization of their earnings through increased market scope and improved customer relationship due to product delivery convenience and service customization.

The growth in credit card usage is attributable to E-banking. Now a customer can shop worldwide without any need of carrying paper money with him. Banks are available 24 hours a day, seven days a week and they are only a mouse click away. The Cedar group consulting firm (2004) survey reported that the Internet could play a major role in transforming the workplace to enhance productivity by reducing operational cost and improving employee relationships through improved service delivery. The investigators noted that as the transformation progressed in the workplace the level of sophisticated services also increased.

## **2.9 CRITICAL SUCCESS FACTORS OF E-BANKING**

Critical success factors with regard to the introduction of E-banking approach represent an accepted top-down methodology for corporate strategic planning, and while it identifies few success factors, it can highlight the key information requirements of top management (Rockart, 1979). In addition, if the critical success factors are identified and controllable, management can take certain steps to improve its potential for success (Chen, 1999).

All over the world, there is an increasing demand for the services of E-banking, while some banks have been able meet the required needs for the introduction of E-banking in their host countries; it has not worked so well in other places. As Emor (2002) noted, although countries like USA, Canada and other leading European countries stand tall in this development, other success stories have also been recorded in less developed countries like India, Malaysia, South Africa etc. despite the perceived hampering difficulties in other less developed countries, some banks have been successful in countries like Ghana, Nigeria, Kenya and many others. The contention expressed by (Regan and Macaluso, 2000) indicated that the basic factor for a successful implementation of E-banking is to focus on the characteristics of the country in question.

Another study conducted by Khan (2001), revealed that factors that ensured successful introduction of E-banking were what consumers consider better prices, privacy of information and better service. Two least factors considered for the adoption of E-banking were banks' marketing initiatives and personal recommendations from friends and colleagues. Clients demand a minimum relative

advantage in order to switch channels. It means that the new innovative service should be perceived to be better than its predecessor.

According to Janice (2002) issues related to customers, development choices and potential channel conflict need special attention. A critical assessment of these issues can enable a bank to formulate the objectives of entering E-banking services, make strategic decisions on the services to be provided and the appropriate delivery channels to deploy and manage these services efficiently.

Security, which may include protection of consumers' personal data and safe transactions to prevent fraud, is paramount for the growth of any sort of online trade, including E-banking (Enos, 2001). Security in this context includes secure transactions as well as secure front end and back end systems. Security also demands improvement of trust, simplifying and integrating basic services such as banking and lending, personalisation and customisation capabilities in order to provide each customer with unique offerings.

Other equally renowned researchers like Owens and Robertson (2000) have confirmed that effectiveness of collaboration increases when stakeholders 'have a shared purpose which eventually opens up information sharing. By this, the product designed must take into consideration the culture of the people especially the beliefs and the best ways they can easily associate the product without much questioning and doubts.

Besides giving internal consideration on learning processes, other scholars have recognized that inter-organizational learning is critical to competitive success, noting that organizations learn by collaborating with other firms as well as by observing and importing their practices (Shah et al, 2010). Additionally, Von

Hippel (1988,) argues that a production network with superior knowledge transfer mechanisms among users, suppliers, and manufacturers will be able to 'out-innovate' networks with less effective knowledge-sharing routines.

Other scholarly works look at adoption from critical points of customer perspectives. By this perspective, Ghobadian (1994) indicates that the customer sought for quality with less emphasis on cost and perceived quality and these two rather facilitate adoption process. Sought quality is the level of quality customers explicitly or implicitly demand and expect from service providers. The sought quality (customer expectations) is created due to several factors – primarily, the expectations are formed during a previous personal experience of a customer with a service, and the customer is influenced by the experiences of the other users and by the image of an organization. Accordingly, Ghobadian posited that the perceived quality emphasis on the overall impression a customer has and experiences about the level of quality after service realization. By extension, Khan (2001) indicates that the potential difference between the sought quality and the perceived quality gives the service provider an opportunity to measure customer satisfaction based on formulating the precise and actual criteria according to which the customers are assessing the service.

Another critical point needed to be looked at involves issues relating to customers awareness, customer readiness, the specific nature of ICT diffusion in the wider market, and experience with electronic based transactions can also influence this path (Jasimuddin, 2001). In addition, issues related to customers, development choices and potential channel conflict need special attention (Janice 2002). A critical assessment of these issues can enable a bank to formulate the objectives of entering E-banking services, make strategic decisions on the services to be provided



and the appropriate delivery channels to deploy and manage these services efficiently.

## **2.10 CHALLENGES OF E-BANKING**

An extended study conducted by Daft (1982) revealed that the introduction of E-banking may be a good idea but on the part of customers, they are keener to risk associated with the particular type of innovation. Daft identified what he described Strategic Risk by inference a financial institution's board and management should understand the risks associated with E-banking services and evaluate the resulting risk management costs against the potential return on investment prior to offering E-banking services.

Poor E-banking planning and investment decisions can increase a financial institution's strategic risk. On strategic risk E-banking is relatively new and, as a result, there can be a lack of understanding among senior management about its potential and implications. People with technological, but not banking, skills can end up driving the initiatives. E-initiatives can spring up in an incoherent and piecemeal manner in firms. They can be expensive and can fail to recoup their cost.

The start-up costs of an e-bank are high. Establishing a trusted brand is very costly as it requires significant advertising expenditure in addition to the purchase of expensive technology (as security and privacy are key to gaining customer approval).

Perhaps one of the greatest bane to customers by embracing to electronic businesses has to do with risk arising from fraud, processing errors, system disruptions, or

other unanticipated events resulting in the institution's inability to deliver products or services. This risk could exist in each product and service offered (Earl, 2000).

Earl further commented that banking activities has the likelihood of increasing the complexity of the institution's activities and the quantity of its transaction/operations risk, especially if the institution is offering innovative services that have not been standardized. Since customers expect E-banking services to be available 24 hours a day, 7 days a week, financial institutions should ensure their E-banking infrastructures contain sufficient capacity and redundancy to ensure reliable service availability. Even institutions that do not consider E-banking a critical financial service due to the availability of alternate processing channels, should carefully consider customer expectations and the potential impact of service disruptions on customer satisfaction and loyalty.

Another security issue associated with E-banking as introduced by the Economist journal (1999) recounts that E-banking potentially expose hitherto isolated systems to open and risky environments. Security breaches essentially fall into three categories; breaches with serious criminal intent (fraud, theft of commercially sensitive or financial information), breaches by 'casual hackers' (defacement of web sites or 'denial of service' - causing web sites to crash), and flaws in systems design and/or set up leading to security breaches (genuine users seeing / being able to transact on other users' accounts). All of these threats have potentially serious financial, legal and reputational implications.

Other challenges in E-banking spans from technology selection, adoption, implementation and lack of knowledge, also, Earl, (2002) furthermore identified that while managers typically have a high-level understanding of their business and

operational processes, they often lack employees with the experience and skills necessary to adopt software technologies and educate customers.

# KNUST





## **CHAPTER THREE**

### **ORGANIZATIONAL PROFILE AND RESEARCH METHODOLOGY**

#### **3.1 COMPANY PROFILE**

Guaranty Trust Bank Ghana Limited (GTBank) was registered in Ghana in October, 2004 and obtained its universal banking license from the Bank of Ghana on 23rd February, 2006; thereby paving the way for the commencement of operations. The Bank is a subsidiary of Guaranty Trust Bank Plc. One of the foremost banks in Nigeria with a 'Triple A' rating. It is the first indigenously owned sub-Saharan bank to be quoted on the London Stock Exchange. In 2008, it became the first new generation indigenous African bank to obtain a banking license to carry out fully fledged commercial banking activities in the United Kingdom.

GTBank Plc, Nigeria, currently owns 95.72% of the issued share capital of the Bank with Nederlandse Financierings-Maatschappij Ontwikkelingslanden N.V. (FMO) holding 2.14% and Alhaji Yusif Ibrahim, a Ghanaian business entrepreneur, holding the remaining 2.14%.

The Bank increased its paid up capital from GH¢10 million to over GH¢76 million well ahead of the Bank of Ghana's deadline of December 31, 2009. Apart from giving the Bank a competitive advantage in terms of business capacity, meeting the new capital requirement early is a reflection of the Bank's belief in the Ghanaian environment and its readiness to contribute meaningfully to the country's development.

Within the six years of its operations in Ghana, it has also become a reference point for good business practice and a role model in the financial services industry. The Bank also has an open door policy. This reinforces the informal atmosphere and breeds a feeling of equality. Everyone is accessible and approachable, working in open offices alongside their colleagues. In addition, the bank has a flat organizational structure that engenders effective communication and prompt decision-making. In 2010 and 2011, the Bank won the highly coveted Bank of the Year 2009 and Bank of the Year 2010 Awards respectively in Ghana, together with the following eight other major category Awards:

1. Best Bank, IT / Electronic Banking
2. Best Bank, Product Innovation
3. Best Bank, Short Term Loan Financing
4. Best Bank, Medium Term Loan Financing
5. Best Bank, Retail Banking
6. Best Bank, Advisory Services
7. Best Growing Bank, and
8. 1st Runner Up, Best Bank – Customer Care

## **Board of Directors**

The Board of GT Bank Ghana comprises seven members made up of both Nigerian and Ghanaian directors possessing diverse experience, a combination of business entrepreneurship and unparalleled expertise in banking and finance. The Directors possess integrity, skills and requisite experience to bring independence and quality to the board during deliberations.

### **3.11 CORPORATE GOVERNANCE**

Guaranty Trust Bank Ghana Limited adheres to the principles of Code of Practices and Conducts that determines the standards for the bank's corporate governance framework and practices. Among these are the existences of the following committees that render reports to the Board at its quarterly meetings.

#### **Audit Committee**

This is a statutory Committee. The primary role of the audit committee is to ensure that the integrity of the audit process and financial reporting and to maintain a sound risk management and internal control.

#### **Credit Committee**

This Committee is responsible for the approval of loans above the Management Credit Committee's authority limit as may be defined from time to time by the Board of Directors. This Committee is also to ensure that the quality of the bank's internal control procedure in the area of risk assets remains high to safeguard the quality of the bank's risk assets.

### **Risk Management Committee**

This Committee is tasked with the responsibility of setting and reviewing the bank's risk policies. Its major responsibility includes setting policies on the Bank's risk profile and limits, determining the adequacy and completeness of the bank's risk measurement systems, assessing the adequacy of the mitigates to risk, reviewing and approving contingency plans for specific risks and ensuring that all departments are fully aware of the risk involved in their functions.

### **Management Committees**

These are Committees comprising of senior management, unit and Branch Heads. The committees are basically set up to identify, analyze, synthesize and make recommendations on risk arising from day to day issues. The main management committees are: the Management Credit Committee, Asset and Liability Committee and the Criticized Asset Committee.

### **Management Credit Committee**

This is the Committee responsible for ensuring that the bank complies fully with the credit policy guide as laid down by the Board. The committee also provides input for the Board credit committee. The Secretary of this committee is the head of Credit Administration. The committee meets at least once a week depending on the number of applications laid before it

### **Criticized Asset Committee**

The Committee is responsible for the assessment of the bank's risk assets portfolio. Its highlight includes the status of the bank assets in line with internal and external

regulatory framework, and ensures that triggers are sent with respect to delinquent assets.

### **Asset and Liability Management Committee**

This Committee is responsible for the management of a variety of risks arising from the bank business. its responsibilities including market and liquidity risk management, loan to deposit ratio analysis, cost of funds analysis and establishing guidelines for the pricing of deposits and credit facilities, exchange rate risk analysis, balance sheet structuring, regulatory considerations and monitoring of status of implemented assets and liability strategies.

### **3.12 BANKING PRODUCTS AND SERVICES**

GTBank provides the following banking products and services to its customers.

1. Current & Savings Account
2. Foreign Currency Account
3. Call Account
4. Smart Kids Save (SKS)Account
5. Smart Teens Save (STS)Account
6. Target Savings Account
7. Easy Savers Account
8. Fixed & Tenured Deposits
9. Foreign Currency Draft Issuance.
10. Financial Advisory Services.
11. Foreign Currency Transfer.

12. Loan Syndication

13. E-Banking Services such as Internet Banking, ATM/POS services, Cards services, Mobile Money, Slip-free banking, SMS Banking, Electronic transaction Notification system, Statement by email and many others.

### **3.2 RESEARCH METHODOLOGY**

The research methodology outlines the approach used to collect data from respondents such as target population, main variables from questionnaire administered as well as the limitations of the data collection used as basis for inference and interpretation, for explanation (Panneerselvam, 2007; Kumar, 1996). The research methodology used for a study can be classified by means of the purpose for which the research is conducted (Cooper and Schindler, 2006). The main classifications of research purposes are exploratory, explanatory and descriptive (Saunders, Lewis and Thornhill, 2003).

In exploratory research, a researcher examines a new area to formulate precise questions that he or she can address in future research (Neuman, 2007). Exploratory researchers tend to use qualitative data and not be wedded to a specific theory or research question. It involves finding out and understanding new discoveries and phenomena that may have little or no theoretical literature to back up. Three main principles to follow are a search for available literature, talking to experts on the subject and conducting focus group interviews (Saunders et al, 2003).

Descriptive research presents a picture of the specific details of a situation, social setting or relationship, it focuses on “how?” and “who?” questions: “How did it



happen?” “Who are involved?” descriptive researchers use most data gathering techniques including surveys, field research, content analysis and historical-comparative research (Neuman, 2007).

Explanatory research identifies the sources of social behaviors, beliefs, conditions and events; it documents causes, tests theories and provide reasons. It builds on exploratory and descriptive research (Cherlin et al 2004). Explanatory research according to Neuman (2007) tests a theory's principles or predictions, elaborate on a theory's explanation, relate the theory to new or similar issues, support or refute explanation and predictions, link issues with general principles and deduce or formulate the best possible explanation. Its main aim is to establish causal relationship variables with emphasis on studying the problem at hand in order to explain the relationship between variables (Saunders et al, 2003).

Hence, the research methodology used for the study has been assessed to be both exploratory and descriptive because the subject of the research is fairly new to this environment and knowledge is limited in respect of the revision of literature on electronic commerce in Ghana. Given the exploratory and descriptive nature of the research, a qualitative approach was considered to be appropriate in gaining insight understanding in the Ghanaian market. According to Sarantakos (1998) the use of qualitative approach in a study brings the researcher closer to reality thus, there is close interactions between researcher and respondent. Furthermore, Macmillan and Schumacher (1997) contend that qualitative approach enables the researcher to capture the richness and complexity of behaviour that occurs in natural setting and analyses inductively the data to generate findings. This would give the researcher valuable insight of the problem and the results drawn from this study will be in firm grasp of essential characters.

### **3.2.1 Research Design**

This work examined electronic banking adoption in Ghana; with GT Bank, Ghana, as case study. A case study is chosen for this study because it affords the researcher the opportunity of discovering a complete description of the phenomenon under study and provides objectivity and in-depth study within a limited time frame. This is in line with views of McMillan and Schumacher (1997) who stated that case studies can provide a detailed description and analysis of processes or themes voiced by participants in a particular situation. In this study, a single case study approach was employed to explore and gain an initial, in-depth understanding of the e-banking adoption in Ghana from the perspective of Guaranty Trust Bank Ghana Limited. This approach allows a contemporary issue to be examined in a great detail and requires no control over the phenomena under investigation. The case organization is one of the top Information Technology inclined banks in Ghana and therefore, its experience with e-banking adoption is likely to be representative of the adoption situation among the other banks in Ghana.

### **3.2.2 Population**

Population is a group of people or objects from which the sample for statistical measurement is going to be taken.

The population for this study was a cross-section of customers and selected staff and of GT Bank, Ghana. A sample of 20 members of staff was purposively selected from the population and a cross section of 100 customers of GTBank was randomly selected. The staff comprised the Group Head of the Electronic Banking department, the Head of the Card Centre, the IT Manager, the E-business Manager and 16 staff from the Electronic Banking and IT departments. These constituted a

fair representation of the organization being studied and whose perception and orientation affects the adoption of E-banking in GTBank.

### **3.2.3 Survey Instrument: Design and Administration**

In this research study, semi structured interviews and questionnaires were the main instruments used for the data collection. The main reason for using these instruments was to collect enough firsthand information from respondents. Drawing an understanding from Corbetta (2003) it is argued that with a semi-structured interview, the interviewer has more freedom to pursue hunches and can improvise the questions. Best and Khan (1995), Schalock, (1985) confirmed the use of the interview by stating that it is a face to face questioning of respondents to obtain information. Cresswell (2005) also maintained that in qualitative interview, the researcher asks open-ended questions without response option, listens to and records the comments of the interviewee. Avoke (2005) further suggests that interviews are a form of conversation between two people in which verbal interaction takes place.

For the staff of GTBank semi-structured interviews were used, and interview questions were drawn in conformity with the research questions. The questionnaires were distributed to customers of GTBank in a random manner with no discrimination as to sex, qualification or position.

A well-defined questionnaire that is used effectively can gather information on both overall performance of the test system as well as information on specific components of the system. A closed ended questionnaire was carefully prepared and specially numbered. The questions were arranged in proper order, in accordance with the relevance. This was to make interpretation a lot easier.

The questionnaire was self-administered. It helped to explain to respondents the essence of the research and to assure them that it was purely for academic purpose. Respondents were assured that all information provided by them would be confidential and not used for any other purpose except that which was stated and also assured the respondents of anonymity.

Questionnaires were mainly adopted for this study because:

1. It enables the respondents fill them at their own convenience and in a relaxed manner where relevant information could be checked before data was provided. Hence, giving more accurate answers to questions.
2. The respondents might be confident due to anonymity assured them and thus, feel free to express views they fear may be disapproved of.
3. It is an efficient way to collect statistically quantifiable information.

### **3.3 SOURCES OF DATA GATHERED**

The study was based on primary and secondary sources of data. The primary source of data was obtained from interviews and questionnaires which were administered to twenty (20) officials of GTBank and hundred (100) clients who are using one or more e-banking service of the bank.

### **3.4 SAMPLING TECHNIQUE**

Purposive sampling method which allows the researcher to select particular participants needed for specific information was adopted for selection of the bank officials who have direct relation with electronic banking services of GT bank. Twenty (20) officials of the bank which included the Group Head of the Electronic Banking, the Head of the Card Centre, the IT Manager, E-Business Manager and 16 staff from the Electronic Banking and IT departments as main respondents. Random sampling was adopted for the selection of 100 customers of GTBank.

### **3.5 TEST-INSTRUMENT**

The instrument was pre-tested in all the relevant departments and units using twenty percent of their respective sampled sizes. This was to ascertain reliability of the instrument, verification of techniques adopted for instrument administration as well as the general nature of the research sample's grounds. The insight into language, structure of statements and sample techniques appropriateness to the research was gained; therefore the necessary remedies were made for correctness of response.

### **3.6 PROBLEMS ENCOUNTERED**

A number of problems were encountered in the collection of data for the study. But it should be noted that, it was expected in such a study.

Respondents took a long time in filling and returning questionnaires immediately because they wanted more time.

### **3.7 DATA ANALYSIS TECHNIQUE**

According to Holsti (1969), analysis is “the process of evaluating data using analytical and logical reasoning to examine each component of the data provided.” Data from various sources is gathered, reviewed, and then analyzed to form some sort of finding or conclusion.

Analysis for the study was based on the data gathered from respondents and official documentation collected from the organization under study. The mode of analysis was tabulated to make it simple for anyone to analyze and was converted into percentages to make it more meaningful for interpretation and then presented through diagrams and tables.

The data was tabulated according to the response from the questionnaire administered. This enhanced the understanding of the findings and made it more relevant.



## **CHAPTER FOUR**

### **PRESENTATION AND DISCUSSION OF FINDINGS**

#### **4.1 INTRODUCTION**

This chapter examines the findings gathered from the field. Data was collected through questionnaires and personal interviews. The findings have been presented in two parts; one representing data gathered from officials of GTBank and the other part depicting responses from customers of GTBank. In all one hundred and twenty questionnaires were administered to the respondents. One hundred questionnaires were administered to customers of GTBank while twenty questionnaires were administered to officials of GTBank at the Card Centre, Electronic Channels, Electronic Business and Technology departments. The researcher received all the questionnaires administered. The technique used for the presentation of the findings was statistical description of the respondents.

Microsoft Office Excel package was used for tables, graphs, pie charts and word processing of the research report.

## 4.2 FINDING FROM OFFICIALS OF GTBANK

### 4.2.1 Gender Profile of Respondents

**Table 4.2.1: Gender Profile of Respondents**

Gender	Number Of Respondents	Percentage (%)
Male	12	60
Female	8	40
<b>Totals</b>	<b>20</b>	<b>100</b>

(Source: Field Data, 2012)

Table 4.2.1 above shows the number of males and females officials who were given questionnaires. Out of twenty questionnaires retrieved, twelve (12) respondents representing sixty percent (60%) were males and eight respondents representing forty percent (40%) were females. This indicated that males were in the majority of the population studied and females were in the minority

### 4.2.2 Age Profile of Respondents

**Table 4.2.2: Age Profile of Respondents**

Age (In Years)	Number Of Respondents	Percentage (%)
20 – 30	6	30
31 – 40	12	60
41 – 45	2	10
46 Years and Above	0	0
<b>Totals</b>	<b>20</b>	<b>100</b>

(Source: Field Data, 2012)

The frequency distribution of the age profile of respondents is given in Table 4.2.2. The table shows that 6 of the respondents, representing 30% are between the ages of 20 – 30 years, 12 of the respondents, representing 60% are between the ages of

31 – 40 years, 2 of the respondents, representing 10% are between the ages of 41 – 45 years and no employee was 46 years and above. This is an indication that the employees of GT bank are young and youthful.

#### 4.2.3 Educational Background of Respondents

**Table 4.2.3: Educational Background of Respondents**

<b>Educational Background</b>	<b>Number Of Respondents</b>	<b>Percentage (%)</b>
Post Graduate Degree	8	40
Graduate Degree	12	60
Higher National Diploma	0	0
Other Levels of Education	0	0
Senior High School	0	0
<b>Totals</b>	<b>20</b>	<b>100</b>

(Source: Field Data, 2012)

This section gave the educational attainments of the respondents within the studied population. From *Table 4.2.3*, out of the 20 respondents, 8 of the respondents, representing 40% have Post Graduate Degrees (Master's Degree); 12 of the respondents, representing 60% have Graduate Degree and no employee was employed with Higher National Diploma (HND) or Senior High School Certificate. The table shows that all the respondents have at least a Graduate Degree.

#### 4.2.4 Years of Service With GT Bank

**Table 4.2.4: Respondents Years of Service with GT Bank**

<b>Years Of Service</b>	<b>Number Of Respondents</b>	<b>Percentage (%)</b>
1 – 3	6	30
4 – 6	14	70
<b>Totals</b>	<b>20</b>	<b>100</b>

Source: Field Data, 2012

As shown in **Table 4.2.4**, 14 of the respondents, representing 70% have worked at GTBank between 4 – 6 years and 6 of the respondents, representing 30% have worked at GT Bank between 1 – 3 years. It is obvious from the table that most of the respondents (70%) have worked with the Bank for quite a long time (4 – 6 years), enough to be conversant with the bank's electronic banking adoption. This also implies that their responses were based on experiences with e-banking services rather than theory.

#### **4.2.5 GTBank's E-banking Adoption**

The respondents gave several reasons which they perceived to have influenced the bank's decision to adopt e-banking strategies in their banking business.

According to the respondents, GTBank adopted e-banking over the past six years as a business strategy in response to customer needs and the changing marketing trends in the banking industry.

Also, the respondents indicated that the bank adopted e-banking due to the tremendous benefits e-banking provides which is detailed under section 4.2.7.

#### **4.2.6 E-Banking Services offered by GTBank**

Officials of GTBank from the responses in the questionnaires indicated the e-banking services below as being offered by the bank.

1. Internet Banking
2. SMS Banking
3. ATM Banking Service
4. VISA/ MasterCard Debit Cards

5. MasterCard Point of Sale Terminal Service
6. E-zwich Cards & Points of sale
7. Slip-Free Banking
8. Guaranty Trust Money Transfer (GTMT)
9. Statement by Email
10. Guaranty Trust Electronic Notification System (GeNS)
11. GTBank Automated Payment System (GAPS)
12. E-Teller
13. Cheque Writer

*(List of the functions of the of GTBank's e-banking products/services is listed in Appendix 3)*

#### **4.2.7 Benefits of E-Banking Adoption**

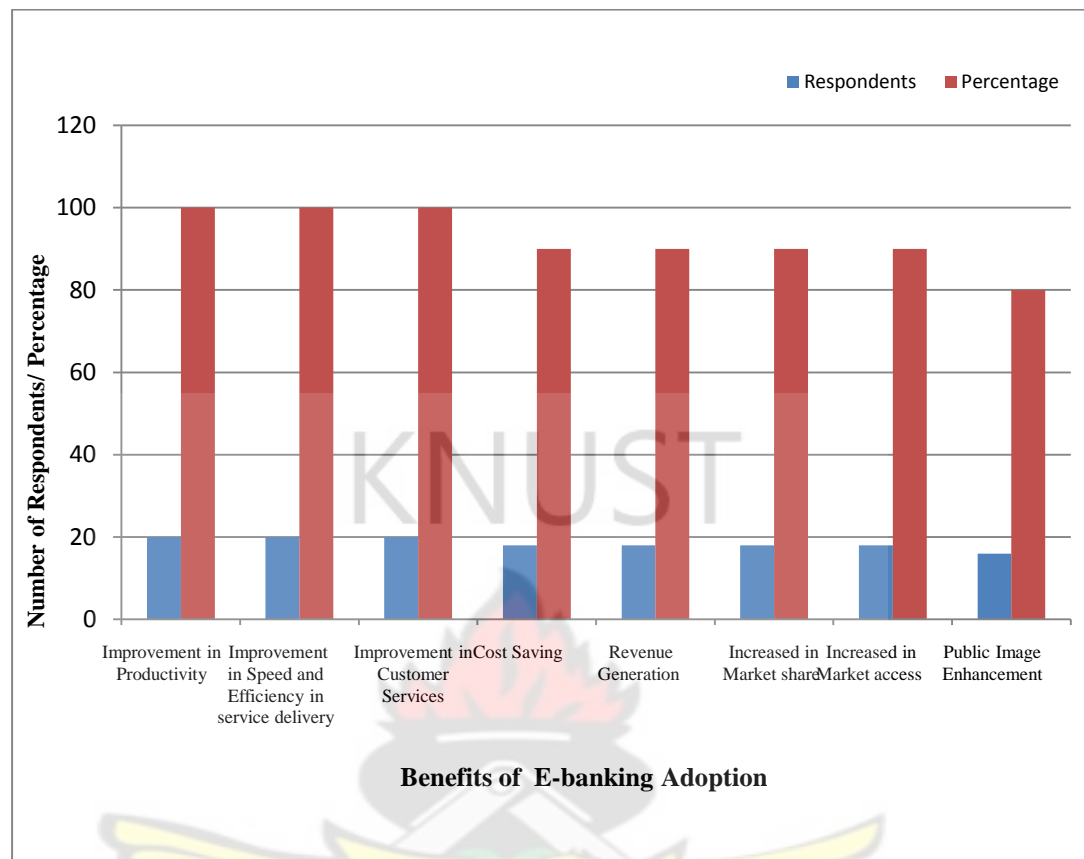
The respondents were questioned on the benefits GTBank has derived from its adoption e-banking. The responses have been tabulated below.

**Table 4.2.7: Benefits of E-Banking Adoption**

<b>Responses</b>	<b>Respondents</b>	<b>Percentage (%)</b>
Improvement in Productivity	20	100
Improvement in Speed and Efficiency in service delivery	20	100
Improvement in Customer Services	20	100
Cost Saving	18	90
Revenue Generation	18	90
Increased in Market share	18	90
Increased in Market access	18	90
Public Image Enhancement	16	80

**Source: Field Data, 2012**

**Figure 4.2.7: Benefits of E-Banking Adoption**



**Source: Field Data, 2012**

From Table 4.2.7 and Figure 4.2.7 above, all respondents representing 100% of the sample population indicated that GTBank has benefited from its e-banking adoption in terms of improvement in productivity, speed and efficiency in service delivery and improvement in customer service. Eighteen (18) of the respondents representing 90% of the sample population also stated increase in market share, increase in market access, cost saving and revenue generation as some benefits derived from e-banking. Sixteen (16) of respondents representing 80% stated that the Bank's public image is enhanced through its adoption of E-banking.

#### **4.2.8 Critical Success Factors**

Result from Table 4.2.8 below shows that 100% of the respondents believe that 24/7 Availability of services, Information Security and Efficient and Effective



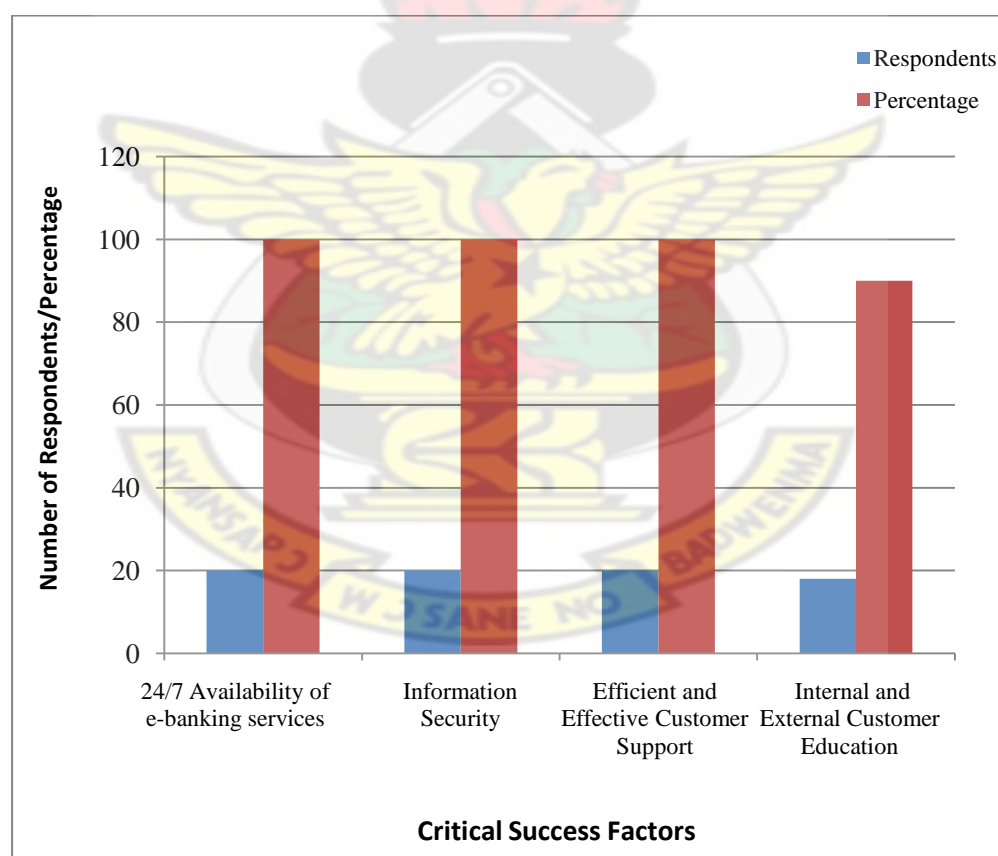
Customer Support are critical success factors for electronic banking adoption. 18 respondents representing 95% also listed Internal and External Customer Education has a critical success factor.

**Table 4.2.8: Critical Success Factors**

Responses	Respondents	Percentage (%)
24/7 Availability of e-banking services	20	100
Information Security	20	100
Efficient and Effective Customer Support	20	100
Internal and External Customer Education	18	90

*Source: Field Data, 2012*

**Figure 4.2.8: Critical Success Factor**



*(Source: Field Data, 2012)*

#### 4.2.9 Challenges of E-banking Adoption

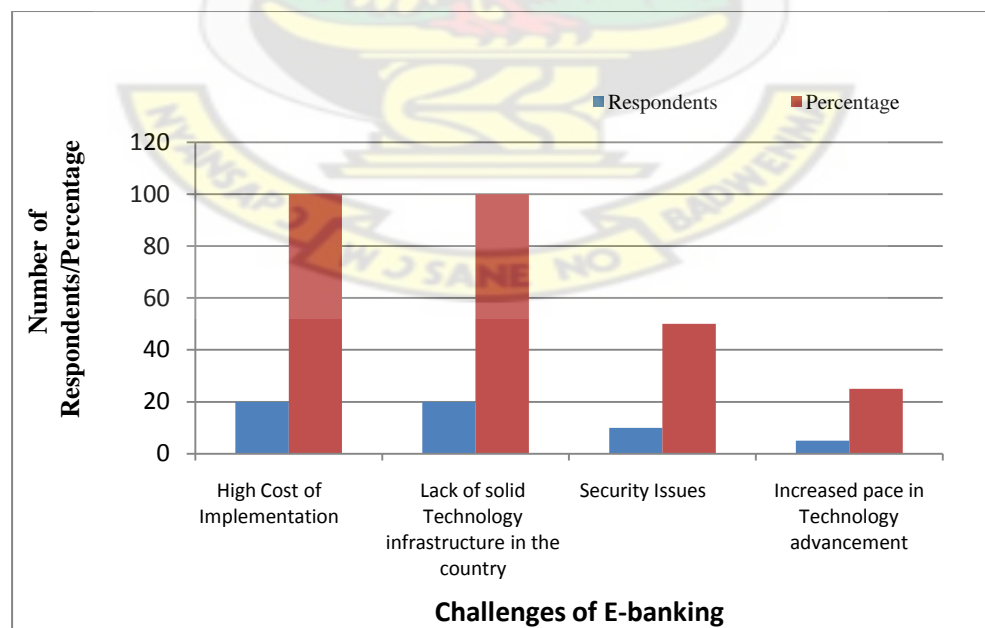
Despite the benefits of e-banking, the respondents agreed that there were challenges as GTBank adopted e-banking. These challenges have been discussed in two folds; challenges the bank face in its e-banking adoption and challenges customers who patronize the services faced. The challenges GTBank faced in its implementation are tabulated below in Table 4.2.9.

**Table 4.2.9: Challenges of E-Banking Adoption**

Responses	Respondents	Percentage (%)
High Cost of Implementation	20	100
Lack of solid Technology infrastructure in the country	20	100
Security Issues	10	50
Increased pace in Technology advancement	5	25

*Source: Field data, 2012*

**Figure 4.2.9: Challenges of E-Banking Adoption**



*Source: Field Data, 2012*

As shown in Table and Figure 4.2.8 above, all the respondents representing 100% listed high cost of implementation, lack of solid technological infrastructure in the country and security issues as challenges GTBank faced in its e-banking adoption. The lack of solid technological infrastructure in the country has made GTBank outsource some of its banking processes to external service providers. GTBank currently uses the service of Mediterranean Smart Card Company (MSCC) in Egypt for processing Visa and MasterCard transactions as local processing companies are virtually non-existent for payment solutions such as Visa and MasterCard. 75% of the respondents indicated increased pace in Technology advancement as a challenge. Only 5 respondents representing 25% listed security issues as a challenge. This low percentage is an indication that GTBank in its e-banking implementation incorporated security features in its e-banking infrastructures hence the bank is considered as one of the top IT security conscious banks. For example all smart cards issued by the bank are Chip and PIN protected. Again GTBank has provided Secure Token devices for its customers who patronize its internet banking services and all GTBank ATMs and POS devices have encrypted PIN pads.

## 4.3 FINDING FROM OFFICIALS OF GTBANK

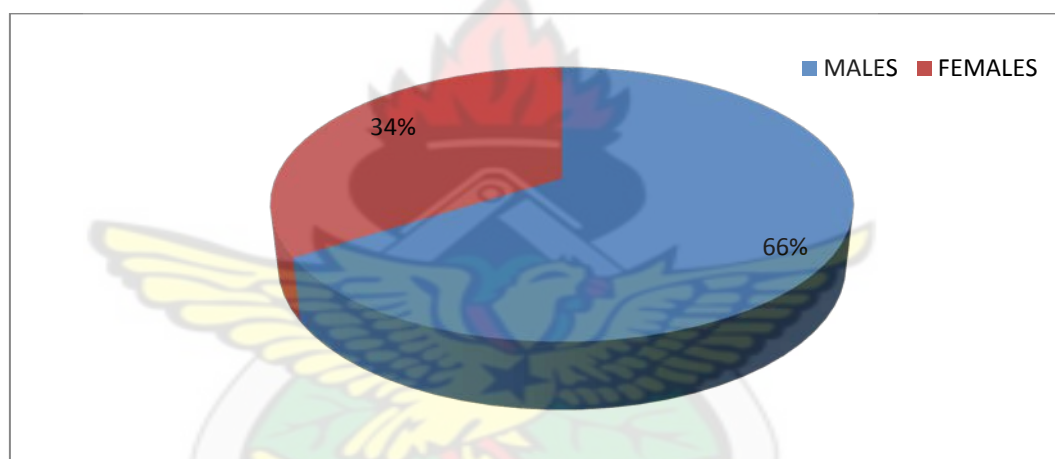
### 4.3.1 Gender Profile of Respondents

**Table 4.3.1: Gender Profile of Respondents**

	Frequency	Percentage (%)
<b>Males</b>	66	66
<b>Females</b>	34	34
<b>Total</b>	100	100

*(Source: Field Data, 2012)*

**Figure 4.3.1: Gender Profile of Respondents**



*(Source: Field Data, 2012)*

Table 4.3.1 and Figure 4.3.1 above show the number of males and females who were given questionnaires. Out of hundred questionnaires retrieved, sixty six (66) respondents representing sixty six percent (66%) were males and thirty four (34) respondents representing thirty four (34%) were females. This indicated that males were in the majority of the population studied and females were in the minority.

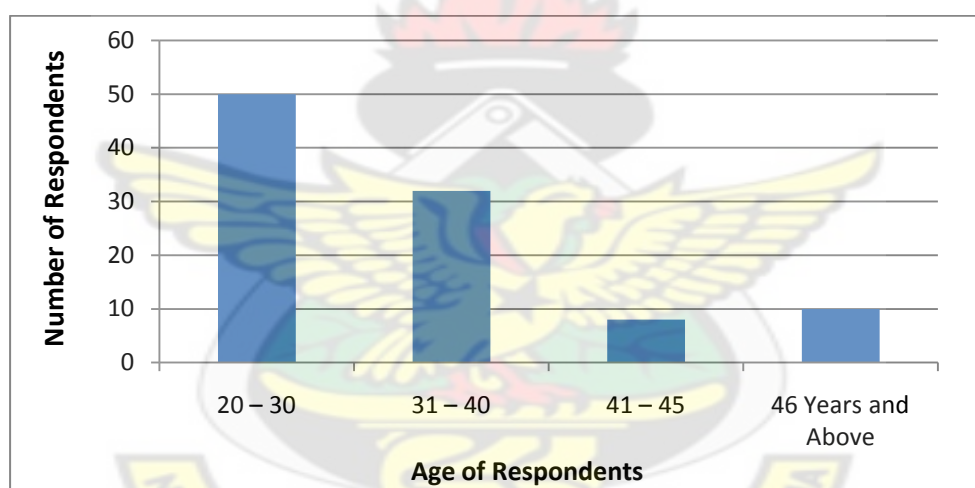
### 4.3.2 Age Profile of Respondents

**Table 4.3.2: Age Profile of Respondents**

Age (In Years)	Number Of Respondents	Percentage (%)
20 – 30	50	50
31 – 40	32	32
41 – 45	8	8
46 Years and Above	10	10
<b>Totals</b>	<b>100</b>	<b>100</b>

*(Source: Field Data, 2012)*

**Figure 4.3.2: Age Profile of Respondents**



*(Source: Field Data, 2012)*

Age distribution, in years was considered as an important demographic indicator. The frequency distribution of this given in Table 4.3.2 and Figure 4.3.2 show that, 50 of the respondents, representing 50% are between the ages of 20 – 30 years, 32 of the respondents, representing 32% are between the ages of 31 – 40 years, 8 of the respondents, representing 8% are between the ages of 41 – 45 years and 10 of the respondents, representing 10% are between the ages of 46 years and above. This is

an indication that majority of the customers of GTbank are young and as such more in tune with technological advancements.

#### 4.3.3 Doing business with the bank

The researcher wanted to know how long each respondent had been doing business with the bank, as this could have a relationship with how conversant they are with the Bank in general and its electronic products on offer. Below were the responses:

**Table 4.3.3: Doing Business with the Bank**

Responses	Respondents	Percentage (%)
Less than 1 year	18	18
1 to 2 years	36	36
3 years and above	46	46
<b>Total</b>	<b>100</b>	<b>100</b>

*Source: Field Data, 2012*

From the above table, 46% of respondents have had account with the bank for more than three (3) years, whilst 36% percent of respondents have been doing business with the bank between one (1) and two (2) years. Only 18% of respondents are fairly new to the bank. It is obvious from the table that most of the respondents (82%) have operated accounts with the bank for quite a long time enough to be conversant with the bank's electronic banking products. This also implies that their responses were based on experiences with e-banking services rather than theory.

#### 4.3.4 Subscription to E-banking products

The researcher wanted to know whether the respondents subscribe to any of the electronic banking products available, in order to be assured of responses from practical experiences of respondents. The responses are shown below:



**Table 4.3.4: Subscription ToE-Banking Products**

<b>Responses</b>	<b>Respondents</b>	<b>Percentage (%)</b>
Yes	100	100
No	0	0
<b>Total</b>	<b>100</b>	<b>100</b>

*Source: Field Data, 2012*

It is obvious from the table above that all the respondents subscribe to one form of e-banking product or the other. This is so because GTBank offers some of these products at no cost to customers, these include Internet Banking, SMS banking Statement by E-mail and Guaranty Trust E-mail Transaction Notification (GeNS). Subscription to some of these products (e.g. Statement by e-mail), are automatic as one opens an account with the bank. This explains the 100% enrollment recorded from the survey.

#### **4.3.5 E-Banking Services Subscribed**

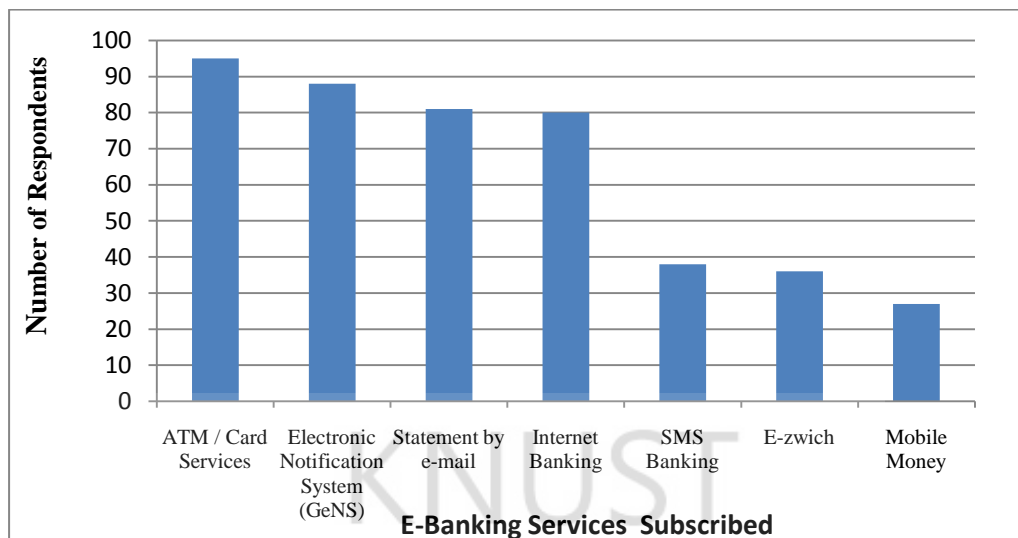
The respondents were asked to indicate the electronic banking services they subscribe to in order to determine the popularity and patronage of products available. Table 4.3.5 below depicts the responses obtained.

**Table 4.3.5: Banking Services Subscribed**

<b>Responses</b>	<b>Respondents</b>	<b>Percentage (%)</b>
ATM / Card Services	95	95
Guaranty Trust electronic Notification System (GeNS)	88	88
Statement by e-mail	81	81
Internet Banking	80	80
SMS Banking	38	8
E-zwich	36	6
Mobile Money	27	27

*Source: Field Data, 2012*

**Figure 4.3.5: Banking Services Subscribed**



*Source: Field Data, 2012*

From the above Table 4.3.5 and Figure 4.3.5, it is clear that ATM and Card usage ranks top of the electronic products patronized by the respondents, recording 95% of the responses. This is followed by Electronic notification (GeNS), Internet Banking and Statement by e-mail recording 88%, 81% and 80% respectively in that order. SMS Banking, E-zwich and Mobile Money recorded 38%, 36% and 27% respectively.

#### **4.3.6 Benefits of E-Banking to Customers**

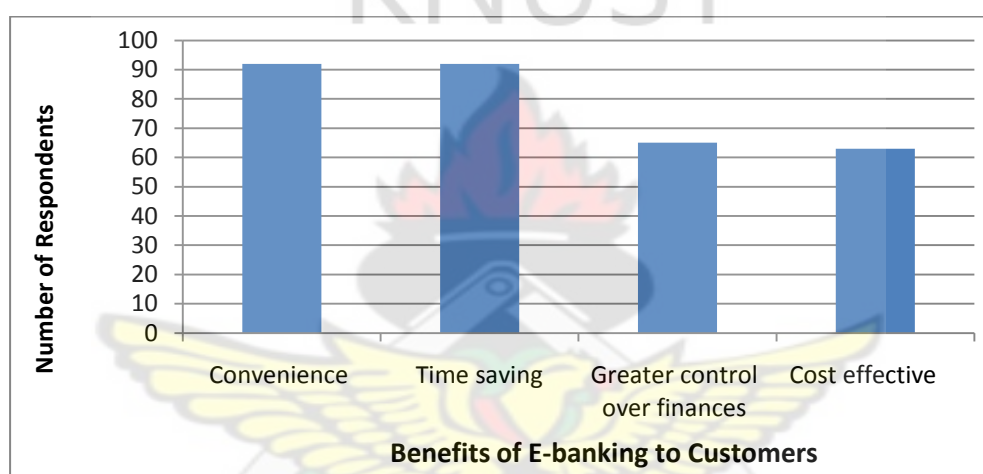
The respondents were questioned on the benefits GTBank has derived from its adoption e-banking. The responses have been tabulated below.

**Table 4.3.6: Benefits of E-Banking Adoption**

Responses	Respondents	Percentage (%)
Convenience	92	92
Time saving	92	92
Gives greater control over finances	65	65
Cost effective way of conducting banking transactions	63	63

**Source: Field Data, 2012**

**Figure 4.3.6: Benefits of E-Banking Adoption**



**Source: Field Data, 2012**

From Table and Figure 4.3.6 above, 92 respondents representing 92% of the sample population stated convenience and time saving as benefits they derive from using GTBank's e-banking services. Sixty five (65) of the respondents representing 65% of the sample population also stated e-banking services gives them greater control over their finances and sixty three (63) of respondents representing 63% stated cost effectiveness as another benefit derived from e-banking.

#### 4.3.7 Effectiveness of e-banking services

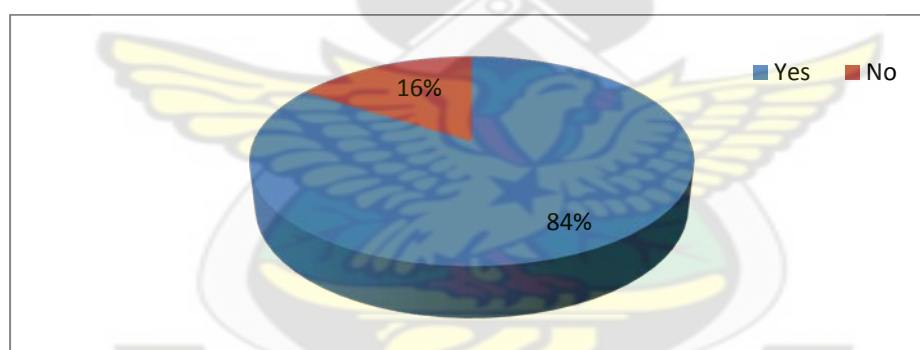
The researcher enquired about the effectiveness of the services subscribed by respondents, in a bid to know if respondents actually experience the services or do not make use of them. The following responses were obtained.

**Table 4.3.7: Effectiveness of E-Banking Service**

Responses	Respondents	Percentage (%)
Yes	84	84
No	16	16
<b>Total</b>	<b>100</b>	<b>100</b>

**Source: Field Data, 2012**

**Figure 4.3.7: Effectiveness of e-banking service**



**Source: Field Data, 2012**

Eighty nine (89) of the respondents representing 89% of the sample population claimed the e-banking services they subscribe to are effective whilst 11 respondents representing 11 % responded in the negative. This later group cited reasons like system failures and unresolved issues as reasons for their choice of services as not being effective.

#### 4.3.8 Dealing with system challenges

The researcher enquired about action usually taken by respondents' when they encounter challenges or system failures. This was to test respondents' need for the e-products and how much these have become integrated as part of their daily business dealings. Table 8 below shows the responses obtained.

**Table 4.3.8: Dealing with system challenges**

Responses	Respondents	Percentage (%)
Report to Bank	80	80
Access Service Later	11	11
Use Other alternative	9	9

**Source: Field Data, 2012**

The Table 4.3.8 above shows that 80% of respondents report their challenges in accessing e-banking services to the bank, whilst 11% of respondents wait for the bank to restore services before transacting. In effect a total of about 91% of the respondents wait on the bank to restore services for them to use rather than resorting to alternative means (which may include transacting with cash). This portrays a developing phenomenon whereby people seem to be getting used to e-banking and would rather have that than the traditional way of banking. Only 9% of the respondents indicated they resort to traditional means of banking when they experience system failure.

#### 4.3.9 Banks response to system challenges and failures

The researcher wanted to know how responsive the bank is to challenges and system failures reported by customers as this could have effect on the patronage of the e-banking products. Table 4.3.9 below show the responses obtained.

**Table 4.3.9: Banks Response to System Challenges And Failures**

<b>Responses</b>	<b>Respondents</b>	<b>Percentage (%)</b>
Quickly	85	85
Slowly	10	10
Indifferent	5	5
<b>Total</b>	<b>40</b>	<b>100</b>

*Source: Field Data, 2012*

85% of the respondents indicated that the bank responds quickly with solutions to their challenges while 10 % of the respondents claimed the bank is slow in addressing issues. Interviewing staff, it turned out that the bank has dedicated hotlines and e-mail address for customer complaints which helped in achieving this rate of responsiveness as customers are informed about the hotline numbers and e-mail address.

#### **4.3.10 Level of Satisfaction**

The respondents were asked to indicate whether they are satisfied with solutions provided in meeting their challenges. The outcome has been discussed below.

**Table 4.3.10: Level of Satisfaction**

<b>Responses</b>	<b>Respondents</b>	<b>Percentage (%)</b>
Yes	87	87
No	13	13
<b>Total</b>	<b>100</b>	<b>100</b>

*Source: Field Date, 2012*

From the table above 87% of respondents were satisfied with how their concerns were addressed by the bank, whilst 13% were not. These respondents (13%) claimed they expect the bank to be more proactive in addressing their challenges, without having to call or send mails on issues before they were addressed. They



also believed some of the challenges were avoidable and the bank can take proactive steps to avoid them.

#### 4.3.11 Recommending to Friends

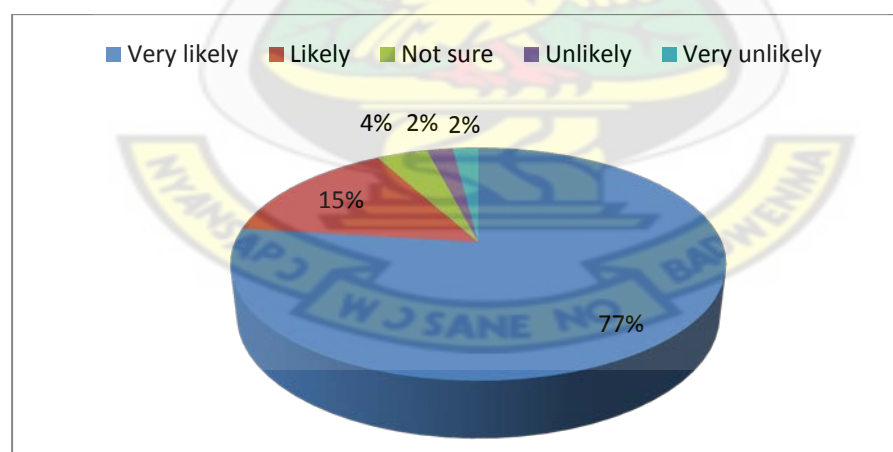
The researcher wanted to know if respondents will recommend the services to their friend. The responses were as follows:

**Table 4.3.11: Recommending to Friends**

Responses	Respondents	Percentage (%)
Very likely	77	77
Likely	15	15
Not sure	4	4
Unlikely	2	2
Very unlikely	2	2
<b>Total</b>	<b>100</b>	<b>100</b>

Source: Field Data, 2012

**Figure 4.3.11: Recommending to Friends:**



Source: Field Data, 2012

The responses given showed a total of ninety two (92) respondents representing 92% of the sample population indicating their willingness to recommend the services to friends, meaning they were happy with the e-banking services provided

by the bank. The remaining eight (8) respondents representing 8% were obviously not happy with the e-banking services provided and will not recommend the Bank services to friends. Some of the reasons given by this group include unresolved challenges encountered such as refunds expected from unsuccessful card transactions, while others do not really appreciate or make much use of the available services offered by the bank.

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## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION**

#### **5.1 INTRODUCTION**

This chapter gives a summary of the findings of the study, the conclusion drawn from the study and the recommendations made to address the issues raised.

#### **5.2 SUMMARY OF FINDINGS**

The study adopted a case study approach and an exploratory analysis on electronic banking adoption in Ghana with specific emphasis on GTBank. The study aimed at providing policy makers and stakeholders in the banking industry with information to identify and formulate strategies that will promote e-banking. GTBank was chosen for the study because of its yearly success in the banking industry. GTBank won the prestigious Bank of the Year 2009 and 2010 Awards organized by Corporate Initiative Ghana. The bank's overwhelming performance in 2009 and 2010 fetched numerous awards including Best Bank in Electronic banking and Best Bank in Product Innovation. Such a pedigree influenced the researcher to have a qualitative exploratory study into GTBank's adoption of e-banking service in Ghana.

The study emphasized on four main objectives: to identify the services that are being provided through e-banking by GTBank; to identify the benefits GTBank and its customers derive from e-banking; to identify the Critical Success Factors for the

introduction of e-banking by GTBank and finally discuss the challenges facing both customers and the bank with the introduction of e-banking.

Findings from the study indicated that GTBank has adopted e-banking over the past six years as a business strategy in response to customer needs and the changing marketing trends in the banking industry. Also the bank adopted e-banking due to the tremendous benefits e-banking provides. GTBank offers numerous e-banking services to its customers. GTBank offers e-banking services such as ATM, POS, Visa Cards, MasterCards, Internet Banking, SMS Banking, Email Transaction Notification, Statement by email, GTBank Automated Payment System, Check Writer and Mobile Money.

From the study 100% of the respondents subscribed to one form of e-banking product or the other. This is so because GTBank offers some of these products at no cost to customers, these include Internet Banking, Statement by E-mail and Guaranty Trust E-mail Transaction Notification (GeNS). Subscription to some of these products (e.g. Statement by e-mail), are automatic as one opens an account with the bank. This explains the 100% subscription to e-banking services recorded from the survey.

Findings from the study revealed that factors such as Cost Saving, Improvement in Productivity, Improvement in Speed and Efficiency in service delivery, Revenue generation and Increase in Market share and Market access were benefits GTBank derived from its adoption of e-banking while customers mentioned convenience,

Time Saving, control over finances and cost effective way of conducting banking transactions as benefits.

The Study also revealed challenges that impede the successful introduction of e-banking in Ghana as high cost of implementation, lack of solid technology infrastructure in the country and Security Issues. The high cost of implementation is said to be more so in a country where the appetite for the electronic products is quite low due to ignorance and large “unbanked” population. This compels banks to offer most e-banking services free of charge to customers culminating in low investment returns. The lack of solid technological infrastructure in the country has made GTBank outsource some of its banking processes to external service providers. GTBank currently uses the service of Mediterranean Smart Card Company (MSCC) in Egypt for processing Visa and MasterCard transactions as local processing companies are virtually nonexistent for payment solutions such as Visa and MasterCard. From the study however, only 5 respondents representing 25% listed security issues as a challenge for GTBank. This low percentage is an indication that GTBank in its e-banking implementation has incorporated security features in its e-banking infrastructures to mitigate issues boarding on security. Hence the bank is considered as one of the top IT security conscious banks. For example all smart cards issued by the bank are Chip and PIN protected. Again GTBank has provided Secure Token devices for its customers who patronize its internet banking services and all GTBank ATMs and POS devices have encrypted PIN pads.

It was also discovered from the study that 100% of the respondents believe that 24/7 Availability of services, Information Security and Efficient and Effective Customer Support are critical success factors for electronic banking adoption. 95% of the respondents also listed Internal and External Customer Education as another critical success factor.

From the study 85% of customers find the use of e-banking service as efficient and effective ensuring faster means of transaction. Only 15% cited reasons like system failures and unresolved issues as reasons for their choice of services as not being effective. Interviewing staff, it turned out that the bank has dedicated hotlines and e-mail address for customer complaints which helped in achieving this rate of responsiveness. However, the study also indicated that customers expect the bank to be more proactive in addressing their challenges, without having to call or send mails on issues before they were addressed. They also believed some of the challenges were avoidable and the bank can take proactive steps to avoid them.

The study also revealed that whenever the bank encounters challenges or system failures with the e-banking services, majority of respondents (91%) wait on the bank to restore services for them to use rather than resorting to alternative means which may include transacting with cash. This portrays a developing phenomenon whereby people seem to be getting used to e-banking and would rather have that than the traditional way of banking as only 9% of the respondents indicated they result to traditional means of banking when they experience system failure.

Finally, majority of the sample population respondents representing 92% indicated their willingness to recommend the services to friends, meaning they were happy



with the e-banking services provided by the bank. The remaining eight (8) respondents representing 8% were not happy with the e-banking services provided and will not recommend to friends. Some of the reasons given by this group include unresolved challenges encountered such as refunds expected from unsuccessful card transactions, while others do not really appreciate or make much use of the available services offered by the bank.

### **5.3 CONCLUSION**

Although Ghana is in its fundamental stages of technology advancement, GTBank has been successful with its adoption of e-banking. The study revealed that GTBank made extensive focus on System availability, Information security, Efficient and Effective Customer support and Customer education as key factors to the successful operation of e-banking in Ghana.

The benefits derived from e-banking adoption cannot be over emphasized. From the study it is obvious that GTBank derived tremendous benefits from e-banking such as revenue generation, improvement in productivity and efficiency in service delivery, increase in market share and market access and cost savings. E-Banking with its automation leads to reduction of manual processes and related operating costs while service delivery becomes much quicker. E-banking also offers convenience to customers, having to access banking services anytime, anywhere with speedy delivery. Some customers give credit to e-banking for offering them absolute privacy, not having to go through any individual to access account

information. Tied to the privacy advantage, customers also believe it offers great security that way.

However challenges such as high cost of implementation, lack of solid infrastructure in the country and security issues have impeded the smooth operation of e-banking in the country. Customers experience system failures that create unexpected inconveniences for them. This obviously is a result of the weak technology infrastructure in the country.

Regardless of the these challenges, from the study it is obvious that customers are ready to embrace e-banking, provided the benefits are well promoted to them and banks are able to resolve system failure issues promptly. It can therefore be concluded from this study that there is a promising future for e-banking in Ghana.

A further study with in-depth analysis on the critical success factors for the introduction of e-banking products in the Ghanaian banking industry is required.

#### **5.4 RECOMMENDATIONS**

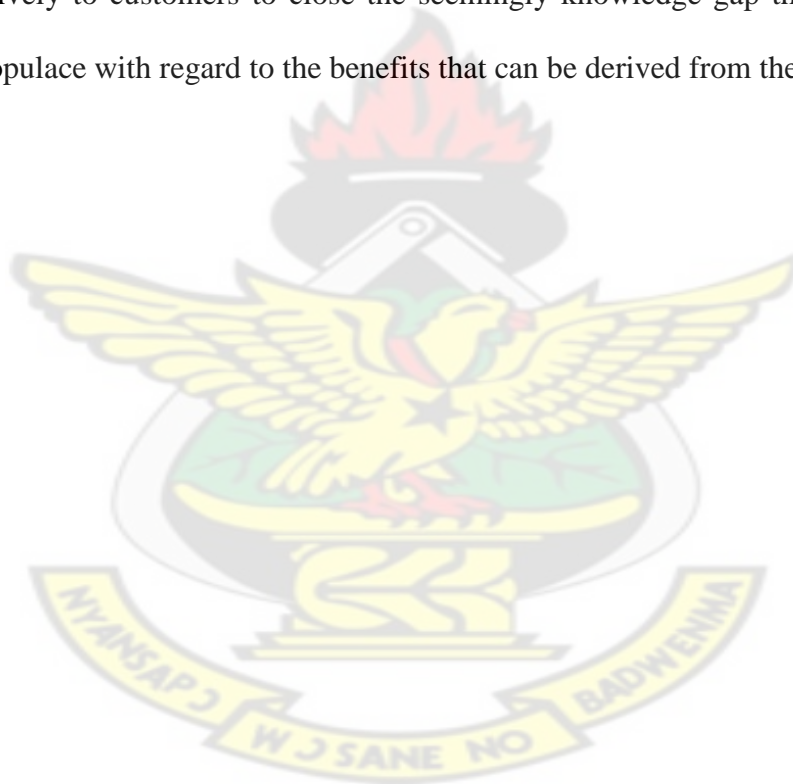
The suggestions for the findings from the study are as follows:

Banks investment in technology solutions should not be “half-hearted”. The banks have a duty to ensure customer confidence in the electronic banking services they provide and assure them of the security and privacy they need to patronize these services. For instance banks issuing Magnetic Stripe Cards need to migrate to Chip technology in order to protect themselves as well as their customers from fraudulent skimming and usage of their cards.

Government support by way of legislations and infrastructure provision is essential for creating the enabling environment for electronic banking to thrive in the country.

Banks' staff and officials should be adequately trained in e-banking products and services to be able to address customers' needs and challenges.

Banks need to well package and market E-banking Products and services effectively to customers to close the seemingly knowledge gap that exists among the populace with regard to the benefits that can be derived from the services.



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## APPENDIX

### 1.0 STAFF QUESTIONNAIRE

QUESTIONNAIRE ON THE ADOPTION OF ELECTRONIC BANKING IN  
GHANA: A CASE OF GUARANTY TRUST BANK (GHANA) LTD

**THIS IS PURELY AN ACADEMIC EXERCISE, HENCE ANY  
INFORMATION GIVEN WOULD BE STRICTLY TREATED AS  
CONFIDENTIAL**

**INSTRUCTION:** Please fill the spaces provided. Mark (✓) where applicable  
and specify where necessary.

1. Sex:

a. Male [   ]                      b. Female [   ]

2. Age:            a. 20 – 30 years [   ]   c. 31 – 40 [   ]

b. 41 – 45 years [   ]   d. 46 years and above [   ]

3. What is your higher level of education? Please select the most appropriate.

a. Senior High [   ]                      b. HND [   ]

c. Graduate Degree [   ]                      d. Post Graduate Degree [   ]

e. Other (Please Specify) .....

4. How long have you worked with GT Bank?

a. Less than 5 month [   ]                      b. 6 to 12 months [   ]

c. 1 year to 2 years [   ]                      d. More than 2 years [   ]

5. How long had the bank adopted E-banking?

a. 1 year to 2 years [   ]

b. 2 year to 3 years [   ]

c. 3 year to 4 years [   ]

d. 4 year to 5 years [   ]

e. 6 year to 7 years [   ]

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6. Why was E-banking adopted?

.....

.....

7. What are some of your e-banking products?

.....

.....

8. What benefits have GTBank derived from adopting E-Banking?

a. Improvement in Productivity [   ]

b. Cost Saving [   ]

c. Revenue Generation [   ]

d. Speed and Efficiency in service delivery [   ]

e. Increased in Market share [   ]

f. Increased in Market access [   ]

- g. Improvement in Customer Services [   ]
- h. Public Image Enhancement [   ]

9. What challenges have GTBank faced in its adopting of E-Banking?

- a. Security Concerns [   ]
- b. High cost of ICT investment [   ]
- c. Lack of Technical and managerial skills [   ]
- d. Cultural Reluctance [   ]
- e. Perceived customers readiness [   ]
- f. Availability of information and communication infrastructure [   ]
- g. Limited knowledge of IT and e-banking [   ]

12. What are the critical success factors for adopting e-banking?

- a. Reliability of network [   ]
- b. Secured Systems [   ]
- c. Support from top management [   ]
- d. Fast and responsive customer service [   ]
- e. Promotion of e-banking within the organization [   ]

**Thank you very much for filling out this questionnaire, your help is appreciated.**



## 2.0 CUSTOMERS QUESTIONNAIRE

QUESTIONNAIRE ON THE ADOPTION OF ELECTRONIC BANKING IN  
GHANA: A CASE OF GUARANTY TRUST BANK (GHANA) LTD

**THIS IS PURELY AN ACADEMIC EXERCISE, HENCE ANY  
INFORMATION GIVEN WOULD BE STRICTLY TREATED AS  
CONFIDENTIAL**

**INSTRUCTION:** Please fill the spaces provided. Mark (✓) where applicable  
and specify where necessary.

1. Sex:

a. Male [    ]                      b. Female [    ]

2. Age:              a. 20 – 30 years [    ]    c. 31 – 40 [    ]

b. 41 – 45 years [    ]    d. 46 years and above [    ]

3. What is your higher level of education? Please select the most appropriate.

a. Senior High [    ]                      b. HND [    ]

c. Graduate Degree [    ]                      d. Post Graduate Degree [    ]

e. Other (Please Specify) .....

4. How long have you banked with GT Bank?

a. Less than 5 month [    ]                      b. 6 to 12 months [    ]

c. 1 year to 2 years [    ]                      d. More than 2 years [    ]

5. Do you use any of GTBank's electronic banking products?

a. Yes [ ]      b. No [ ]

6. If Yes, which of the electronic banking services do you use?

a. ATM/Debit cards Services [ ]

b. SMS Banking Services [ ]

c. Internet Banking Services [ ]

d. Email notification services [ ]

e. Slip free banking services [ ]

7. How frequently do you use any of the e-banking services in a month?

a. Less than 1 [ ]      c. 6 to 9 times [ ]

b. 2 to 5 times [ ]      d. 10 times or more [ ]

8. Which of the following factors in order of priority do you think is the benefit of using GTBank's electronic banking services? Assign 1, 2, 3, 4. [Where 1 is the highest order of priority and 4 being the least]

a. Faster way of conducting banking transactions [ ]

b. Gives greater control over finances [ ]

c. Convenient way to manage finances [ ]

d. Cost effective way of conducting banking transactions

9. Are you confident over the security aspects of using GTBank's electronic banking services?

Yes [ ]

No [ ]

10. Are the staff of GTBank able to provide assistance when you are having difficulties with the e-banking services.

Yes [    ]

No [    ]

11. Would you recommend GTBank's electronic banking services to another person?

Yes [    ]

No [    ]

12. If Yes, why?

.....

.....

13. If No, why not.

.....

.....

**Thank you very much for filling out this questionnaire, your help is appreciated.**

### **3.0 E-Banking Services offered by GTBank**

#### **i. Internet Banking**

Internet banking is an online solution that allows customers to conduct financial transactions on a secure website operated the bank. It is a reliable and flexible way to manage customer's finances efficiently and conveniently. Customers are able to check their account balance, transfer money between GTBank accounts and also view their account statement online.

#### **ii. SMS Banking**

SMS (Short Message Service) Banking is an e-banking service that allows customers operate selected banking services over their mobile phones using SMS messaging. Customers can therefore monitor their account with their phones anytime and anywhere. This service is secure and safe because transactions can only be performed with registered phones.

#### **iii. Guaranty Trust Electronic Notification System (GeNS)**

GeNS is a notification system, which provides customers with details of transactions on their account(s) via electronic mail and SMS (Short Message Service) messaging. This new innovation in customer service delivery is available to customers free of charge. One of the benefits of this service is that it gives customers prompt knowledge of transactions on their account(s), thereby enhancing their personal finance management and aids them in making their business and financial decisions. Customers are notified via email and SMS when deposits, withdrawals and transfers are made on their account.

#### **iv. ATM Service**

The GTBank Automated Teller Machines (ATM) Service is a self-service electronic channel that allows customers to access their account information from ATM's and performs basic banking transactions quickly, safely, and conveniently without visiting the banking halls. The Services is available for 24 hour cash withdrawals (with daily limits set by the bank), account balance enquiries, mini-statement printing (for last ten transactions), funds transfers (between own accounts) and PIN change (only available at Guaranty Trust ATMs).

#### **v. VISA/ MasterCard Debit Cards**

Guaranty Trust Bank provides customers with Visa Gold, Visa International, Visa Domestic, Visa Students, Visa Prepaid and MasterCard debit cards. The Visa Gold Card is one of Visa International's premium cards issued to High Net worth Individuals with exclusive life styles. GT Bank's Visa International Card is a Visa Electron chip Card issued to professionals and business executives who travel outside the country. Payment for hotel bills, air tickets and general purchases can be made by the Visa Gold, International, Student and Prepaid cards. The GT Bank Visa Electron Domestic Card is a debit card uniquely designed for usage only in Ghana. Students Discount Visa Card are discount cards with Visa enabled functions which allows for usage on all Visa ATMs and POS in the country. Holders of the Student Discount Card are entitled to great discounts at a number of merchant outlets including clubs, clothing shops, eateries, bus terminals, and supermarkets.

#### **vi. MasterCard Point of Sale Terminal Service**

The GTBank Point of Sale(POS) Terminal is an electronic payment device that are deployed at shops, hotels, restaurants, airline offices, travel agencies and many more for the payment of goods and services using MasterCards.

#### **vii. E-zwich Cards & Points of sale**

All Guaranty Trust Bank (Ghana) Limited branches are on the e-zwich platform and have performed various associated functions from enrolment to card transactions. The bank has deployed a number of its e-zwich Point of Sale terminals at various merchants' locations such as supermarkets, eateries, clinics and hotels for easy use.

#### **viii. Slip-Free Banking**

The Guaranty Trust Slip-free banking is service that offers convenience. It is an innovative process that takes the burden of filling withdrawal or deposit slips away from the customer, reduces the time customers spend in the banking hall and makes it possible for a customer to spend less time in the banking hall.

#### **ix. Guaranty Trust Money Transfer (GTMT)**

The GTMT is a web based platform on which customers and non - customers can receive or send money from GT Bank subsidiaries in Ghana, Nigeria, Sierra Leone and The Gambia

#### **x. Statement by Email**

The Guaranty Trust Bank statement by email service provides a quick access to the statement of a customer. The customer's statement is emailed to him/her on a monthly basis or upon request cutting out the long delay in requesting for a hardcopy statement.



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