

**AN ASSESSMENT OF CUSTOMER RESPONSE  
TO ELECTRONIC BANKING PRODUCTS OF  
GHANA COMMERCIAL BANK LIMITED  
EVIDENCE FROM THE TAMALE MAIN BRANCH**

**Hamza Kasim** 

Department of Accountancy, Tamale Polytechnic, Tamale, Ghana

hamzaopa@gmail.com

**Stephen Kwadwo Antwi**

Department of Accountancy, Tamale Polytechnic, Tamale, Ghana

**Zulaiha Pamela Wuni**

Ghana Commercial Bank, Tamale Main, Tamale, Ghana

**Abstract**

*The main purpose of the study was to assess the responsiveness of customers to electronic banking products of Ghana Commercial Bank Ltd. The study population consisted of 36,648 customers of Ghana Commercial Bank Ltd, Tamale Main. Using a descriptive survey design, convenience sampling technique was used to sample a total of 100 customers. Questionnaires were used to collect data. The results suggest that the most popular e-banking products among customers of GCB Ltd are automated teller machine (ATM), master card, visa card, and mobile banking. Benefits of E-banking as enumerated by respondents include: convenience, time saving, quick services delivery, lower cost of transactions and increased access to accounts. Three challenges mentioned by respondents in relation to E-banking services of GCB limited are longer log on time, slow response time, and lack of training for e-banking usage. It is recommended that the management of Ghana Commercial Bank Ltd, Tamale main should intensify educational campaigns among customers to popularize electronic banking products of the bank. Also, efficient electronic equipment should be used to ensure speedy log on and response times of E-banking transactions.*

*Keywords: E-banking, Information Technology, Transactions, Customers, Banking services*

## INTRODUCTION

Electronic banking (e-banking) has been purported by academic and practitioner oriented literature as one of the means in which ICTs can and is impacting the banking sector (Gurau, 2002; Bradley & Stewart, 2003; Shih & Fang, 2004; Boateng & Molla, 2006). Electronic banking (e-banking) encompasses all kinds of commercial transactions conducted on an electronic medium. E-banking refers to several types of services through which a bank's customers can request information and carry out most retail banking services via automated teller machine (ATM), internet (or online), telephone or mobile phone without having to be physically present at the bank branch. E-banking links business to customers no matter their geographical location. It allows companies to make new business contacts from different global business alliances (Shin, 2008; Yang & Ahmed, 2009). In addition, transfer of funds, viewing and checking savings account balances, paying mortgages, paying bills and purchasing financial instruments and certificates of deposits processes have improved significantly as a result of e-banking (Mohammed, Siba & Sree, 2009).

E-banking reaps benefits for both banks and customers. On side of the banks, e-banking has enabled banks to lower operational costs through the reduction of physical facilities and staffing resources required, reduced waiting times in branches resulting in potential increase in sales performance and a larger global reach (Geetha & Malarvizhi, 2011). Grabner-Kraeuter & Faullant (2008) have stated that, e-banking allows customers to perform a wide range of banking transactions electronically via the bank's website anytime and anywhere. In addition, customers no longer are confined to the opening hours of banks, travel and waiting times are no longer necessary, and access of information regarding banking services are now easily available (Hamlet, 2000).

The e-banking business model started back in the early 1980's, in New York where it was offered by major banks in that city, such as Citibank and Chase Manhattan. The United Kingdom banks started to adopt the concept in 1983 when the Bank of Scotland first introduced it. Back then it required a computer terminal, a monitor, and a telephone line. It was also offered through a numeric keypad on a telephone enabling sending messages to the bank. The early services were very basic ones such as viewing your bank statements and paying your bills online. It was not a full transaction banking service; however, it paved the way for the more comprehensive and sophisticated e-banking services that we see today (Shannak, 2003).

In the 1990's, the use of the internet evolved when more people owned computers and were connected to the dial-up home internet. The first bank to offer the most comprehensive e-Banking services was the Stanford Federal Credit Union bank in 1994. This technological evolution and the spread of home internet usage meant customers enjoyed 24/7 e- Banking

services. On the other hand, many customers during the 1990's did not trust the concept enough to make serious and substantial monetary transactions and did not think that internet banking was safe enough. This triggered a massive effort and investment by the offering banks to develop more security features for their online banking services and promoting them in the market. The first bank to reach three million online banking customers was the Bank of America in 2001. Throughout the 2000's on-line banking started to grow and become more acceptable by customers. It covered most of the banking services range (Shannak, 2003).

The success of e-banking is not without its problems. Firstly the adoption of E-banking has not kept pace with that of internet usage (Geetha & Malarvizhi, 2011). They attributed this gap to the lack of trust among bank customers, particularly among internet users age 65 and older. Secondly, customers still prefer face to face interaction due to reasons such as fear of the online environment and lack of trust in the internet. This study seeks to assess the extent to which customers respond to electronic banking products of Ghana Commercial Bank Ltd. The study focuses on customer awareness of electronic banking products of GCB, the benefits derived by customers using electronic banking products of GCB and the challenges faced by customers using the electronic products of GCB Ltd Tamale main branch.

The significance of this study is to extend previous studies conducted in different parts of the world. It is hope that the findings of the study will not only inform the responsiveness of customers to electronic banking products, it will also bring to light the product that is mostly used by customers in Ghana Commercial Bank Ltd. This study might ultimately guide Management of the bank in appraising the electronic banking products. The study will also benefit other banks that are either yet to implement or already providing similar electronic banking products. Again, the study will make customers appreciate the level of influence made by electronic banking in making banking easier, and also raise customers' awareness of the electronic banking products that banks are offering currently and the benefits that come along with them. Furthermore, the study will enlighten the public about the contributions of electronic banking services to the development of the Ghanaian banking industry. In addition, the study will serve as a reference material for future research. This study is divided into the following sections; Introduction, Literature Review, Methodology, Results and Discussion, and Summary.

## **REVIEW OF RELATED LITERATURE**

### **Ghana banks and technological growth**

In Ghana, the growth in the use of technology in banks has been rapid in recent years. Focus has all along been on convenient service to clients at the most reasonable costs while making profit and staying competitive (Ofori-Dwumfuo & Dankwah, 2013). The days of office automation

devices lasted until the 1980s when the Personal Computer (PC) became popular and banking competition intensified. The Ghanaian banks began to use PCs in back-office operations and then later, tellers started to use them to serve clients.

Progress in computer technology followed with banks networking their branches and operations. The major international banks led this electronic novelty that revolutionaries banking in the country (Abor, 2004). The biggest change to the banking industry in Ghana came with the introduction of the ATM machine in 1995. Today, all the major banks operate ATMs. The current phase of development of the banking industry in the country, in line with the rest of the world, is the Internet banking which tends to provide bank clients with even more convenience. However, this technology is at a relatively infant stage as the banks only offer Internet banking services mainly to corporate clients.

Pikkarainen, Karjaluoto, and Pahlila, (2004) defines internet banking as an internet portal, through which customers can use different kinds of banking services ranging from bill payment to making investment'. With the exception of cash withdrawal, internet banking gives customer access to almost any type of banking transaction at the click of a mouse (De Young, 2001). Mia, Rahman and Debnath (2007) observed that the latest development in financial services by banks is electronic banking, where banks have now put themselves in the World Wide Web to take advantage of the Internet's power and access to cope with the accelerating pace of change of business environment.

### **Theoretical framework**

The Stages theory has been used as a tool for examining the adoption and progression of various aspects of electronic business in organizations. The Stages theory assumes that organizations progress towards electronic business through a number of clearly defined and successive stages or phases. Each adoption stage or phase is characterized by the existence of distinctive applications, benefits and problems, while it reflects a particular level of maturity in terms of the use and management of Information Systems and Technologies (Windrum & De-Berranger, 2002).

The Technology Acceptance Model (TAM) is another theory used in the literature to test how technology is being accepted by consumers over the years. TAM which was developed originally by Davis in 1989, is used to explain how a customer accepts or decline the use of a technology based upon "perceived ease of use" and "perceived usefulness" of a technology (Aldas-Manzano, *et al* 2009). Perceived ease of use is the level at which a potential consumer of a technology believes a technology or a potential system is effortless (David *et al*, 1989, cited in Pikkarainen *et al*, 2004). They progressed to state that Davis *et al* (1989) on the other hand

explained “perceived usefulness” to be the level at which a potential user of a technology perceived the use of the technology will enhance his or her performance. Perceived usefulness and perceived ease of use which are the main variables of TAM, have a direct influence on online banking adoption (Suping & Yizheng, 2010).

### **Benefits of Electronic Banking**

Indeed the use of the internet as a new alternative channel for the distribution of financial services has become a competitive necessity instead of just a way to achieve competitive advantage with the advent of globalization and fiercer competition (Flavián, Torres, & Guinalíu, 2004). Banks use online banking as it is one of the cheapest delivery channels for banking products (Pikkarainen et al., 2004).

As Karjaluo et al. (2002) argued ‘banking is no longer bound to time and geography. Customers over the world have relatively easy access to their accounts, 24 hours a day, and seven days a week’. He as well argued that, with internet banking services, the customers who felt that branch banking took too much time and effort are now able to make transactions at the click of their fingers. There are other numerous advantages to banks offered by e-banking such as mass customization to suit the likes of each user, innovation of new products and services, more effective marketing and communication at lower costs (Tuchilla, 2000).

Hiltz, Johnson, and Turoff (1986), for instance, found that computer mediated communication is less personal and socio-emotional than face to face exchanges. Tomiuk and Pinsoneault (2001) concurred that the lesser degree of ‘richness’ and ‘sound presence’ of banking environment will affect banks ability to create a trusting relationship between their customer and employees. On the other hand for those customers whose relationship is primarily based in efficiency services, e-banking is an attractive alternative. Interestingly as Doll, Raghunathan, Lim and Gupta (1995) also claimed that product information content on the web design and layout are also important factors that affect customer satisfaction. Ahmed and Islam (2008) observed that adopting e-banking services, banks in developing countries are faced with strategic options between the choice of delivery channels and the level of sophistication of customer services provided by these delivery channels. The relationship between banks and corporate customers is the most important factor in the success of new financial services (Easingwood & Storey 1993).

According to Alu (2002), IT affects financial institutions by easing enquiry, saving time, and improving service delivery. In recent decades, investment in IT by commercial banks has served to streamline operations, improve competitiveness, and increase the variety and quality of services provided. According to Yasuharu (2003), implementation of information technology

and communication networking has brought revolution in the functioning of the banks and the financial institutions. It is argued that dramatic structural changes are in store for financial services industry as a result of the Internet revolution; others see a continuation of trends already under way.

Windrum and De-Berranger (2002) suggest that the commercial benefits of e-banking lie in five areas. Firstly, firms are able to expand their geographical reach. Secondly, important cost benefits lie in improved efficiency in procurement, production and logistics processes. Thirdly, there is enormous scope for gaining through improved customer communications and management. Fourthly, the Internet reduces barriers to entry for new market entrants and provides an opportunity for small firms to reorient their supply chain relationships to forge new strategic partnerships. And finally, e-banking technology facilitates the development of new types of products and new business models for generating revenues in different ways.

According to Basu and Muelle (2007), companies can gain two fundamental types of benefits from e-banking. These are generally described as value creation or value enhancement for one or more of a company's stakeholder groups and cost saving, increased market share, speed and efficiency of doing business and improvement in customer service. Value creation could also result in improvement in internal and external communication through effective e-marketing, increment of sales through e-commerce websites integrated with back office. It is evident that e-banking can act as a complement to the banking sector in Ghana. E-banking is a lower-cost delivery channel and a way to increase sales. Internet banking services lies in the increased retention of highly valued customer segments. With the help of e banking Ghana can create opportunities as this will help both banker and customer.

### **Challenges of Electronic Banking**

While many hold the view that Internet banking has many advantages for developing countries, there are a number of major challenges to overcome before it can fully exploit the benefits of e-banking (Liao and Cheung, 2003). A number of constraints, specific to doing e-banking in Africa, are also apparent (Akoh, 2001). These include low level of economic development and small per-capita incomes; limited skills with which to build e-banking services; the number of Internet users needed to build a critical mass of online consumers and the lack of familiarity with even traditional forms of electronic commerce, such as telephone sales and credit card use (Kose, 2009).

Perhaps one of the greatest challenges to the adoption of Internet banking is the cultural reluctance to interface with business electronically. Such challenges remain major obstacles, limiting the potential benefits of Internet banking. Other challenges are the cost of

implementation, security concerns, perceived customer readiness, lack of knowledge of ICT and e-banking, the relatively high costs associated with investments in ICTs, the lack of technical and managerial skills and reluctance on the part of companies to network with other enterprises, lack of executive support and concerns regarding the reliability of technology (Tan and Teo, 2000).

Gerrard, Cunningham and Devlin (2006) in a study sought to find out why some consumers shy away from using Internet banking. Common barriers they came up with include unsuitability for the type of business; enabling factors (such as availability of ICT skills, qualified personnel, network infrastructure); cost factors (ICT equipment and networks, software and re-organization); security and trust factors (security and reliability of e-commerce systems, uncertainty of payment methods, legal frameworks and Intellectual Property Rights); and challenges in areas of management skills, technological capabilities, productivity and competitiveness.

According to Chircu and Kauffman (2000), the lack of adequate information technology infrastructure remains a critical barrier in supporting the continual growth of online commerce. This position is supported by Akoh (2001) who asserts that the most critical barrier can be ascribed to the very limited information and communication infrastructure available in most countries, especially in Africa.

Hinson (2005) has advanced arguments that small firms in Ghana need to better strategize to take advantage of the Internet. Moorman, Deshpande, and Zaltman (1993) on their part have observed that lack of customer trust in the web system could restrict the opportunities from web technology. Min and Galle (1999), Lee and Turban (2001) argue that customers often do not trust Internet technology for three reasons: security of the system, distrust of service providers, and worries about the reliability of Internet services. Concern about security is one common factor related to unwillingness to use Internet channel for commerce. Security breaches can lead to numerous problems such as destruction of operating systems, or disruption of information access (Min and Galle, 1999). Stewart (1999) concurs with this by claiming that the failure of the internet in retail banking is largely attributable due to the lack of trust consumers have in the electronic channels.

## METHODOLOGY

Ghana Commercial Bank Ltd. started in 1953 as the Bank of the Gold Coast to provide banking services to the emerging nation for socio-economic development. The Bank was to provide special attention to Ghanaian traders, business people and farmers who could not elicit support from the expatriate banks. In 1957, when Ghana attained independence, Bank of Ghana was

established as the Central Bank while the Bank of the Gold Coast was renamed Ghana Commercial Bank to focus solely on commercial banking services. Since then GCB branches have been opened across the length and breadth of the nation tapping the potential of the 10 regions that make Ghana. GCB now has over 150 branches and 11 agencies throughout the country. GCB abounds in high quality human resource, which stands at 2,101 as at the end of 2009.

The design for this study is the descriptive survey design. A sample size of 100 customers was selected from the study organisation. This sample size was chosen because of budget and time limitations, as well as achieving statistical significance. The sampling technique employed in this study is convenience sampling. This type of sampling was used because the list of all customers is not readily available, and even so might contain ghost names. As a result, individuals who are selected from such a list may not have been accessible. In this study, customers who entered the banking hall were contacted and subsequently considered to be part of the sample. The process continued until the required sample size was obtained.

Self-administered structured questionnaire were used for data collection. These questionnaires were self -designed by the researchers taking the objectives of the study into consideration.

After the data was collected, it was edited, coded, and entered into a spreadsheet for analyses using relevant procedures. The results are presented in the form of figures and tables. Statistical tools employed in the analysis of the data are frequencies, percentages, pie chart, bar chart and other descriptive statistics. The data were analyzed using Microsoft Excel 2010, and Statistical Package and Service Solution (SPSS) 16.0.

## **EMPIRICAL RESULTS AND DISCUSSION**

### **Assessing the Responsiveness of Customers to E-Banking Products**

One of the objectives of this study was to assess the level of awareness of customers to E-banking products offered by Ghana Commercial Bank. In line with this, several variables were explored with the intention of satisfying the objective. Some of the variables explored in this section include customer awareness of E-banking, customer knowledge of the various types of E-banking products offered by Ghana Commercial Bank, sources of information about E-banking products available, whether respondents have subscribed for the various E-banking products on offer and the types of E-banking products respondents have subscribed to. The following sections present analysis of the data obtained from the field in relation to the variables examined.

### ***Customer awareness of E-banking services of GCB***

The study sought to determine whether respondents were aware that Ghana Commercial Bank limited offers E-banking services to its clients. Therefore respondents were asked to indicate whether they were aware or not of this. The results obtained are presented in Table 1. It can be noticed from Table 1 that, all the respondents are aware that the Bank offers E-banking services to its clients.

Table 1: Customers' Awareness of GCB's E-banking Products

Awareness	Frequency	Percent (%)
Yes	100	100.0

In Table 2, age distribution of respondents is displayed. It shows that three out of every five customers are between eighteen and thirty years old. There are few customers in the 'Under 18' and 'Over 50' age categories.

Table 2: Age Distribution of Respondents

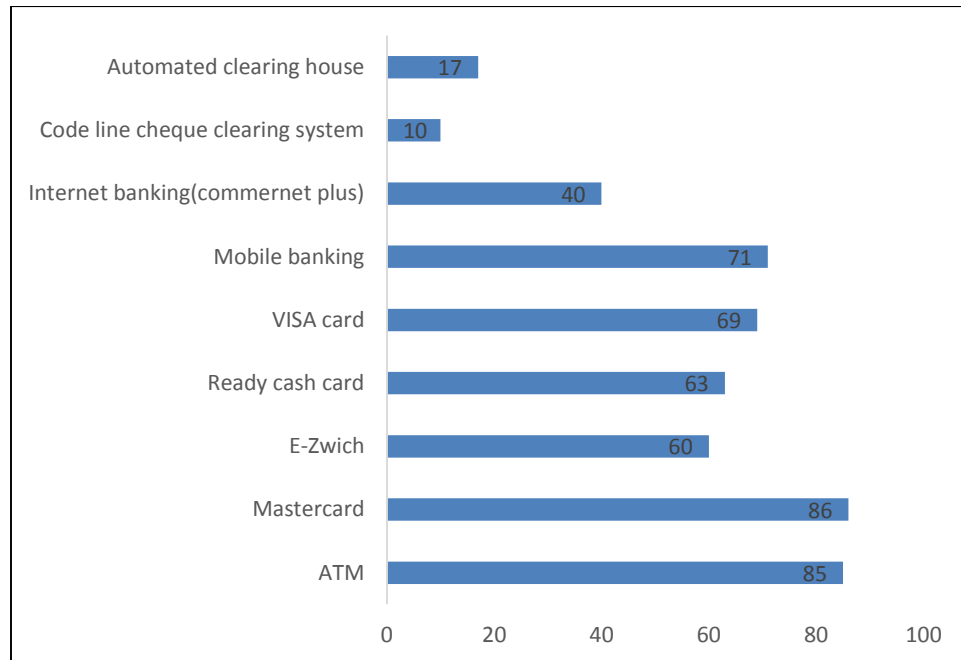
Age	Frequency	Percent (%)
Under 18	4	4.0
18-30	60	60.0
31-40	24	24.0
41-50	10	10.0
Over 50	2	2.0
Total	100	100.0

### ***Popular E-banking products among respondents***

Another issue in relation to customer awareness of E-banking products of GCB was to find out which E-banking products were popular among respondents. Respondents were therefore asked to indicate which E-banking product(s) of GCB they were aware of. The results are displayed in Figure 1.

Figure 1 indicates that, the most popular e-banking products are Automated Teller Machine (ATM) and Master card. It can be observed that 86% of respondents mentioned Mastercard as the E-banking product they are aware of, another 85% mentioned ATM. Other popular E-banking products among customers are mobile banking, VISA card, ready cash, E-Zwich and commernet plus. Least known E-banking products of GCB among respondents were automated clearing house and code line clearing system.

Figure 1: Customers' Awareness of E-banking products of GCB



### ***Sources of respondent awareness of E-banking products on offer***

Also, the study attempted to find out how customers got to know about the various E-banking products offered by the Bank. Therefore respondents were asked to indicate their source(s) of information of the various E-banking products offered by Ghana Commercial Bank. The results are presented in Table 3.

Table 3: Source of Awareness of GCB's E-banking Products

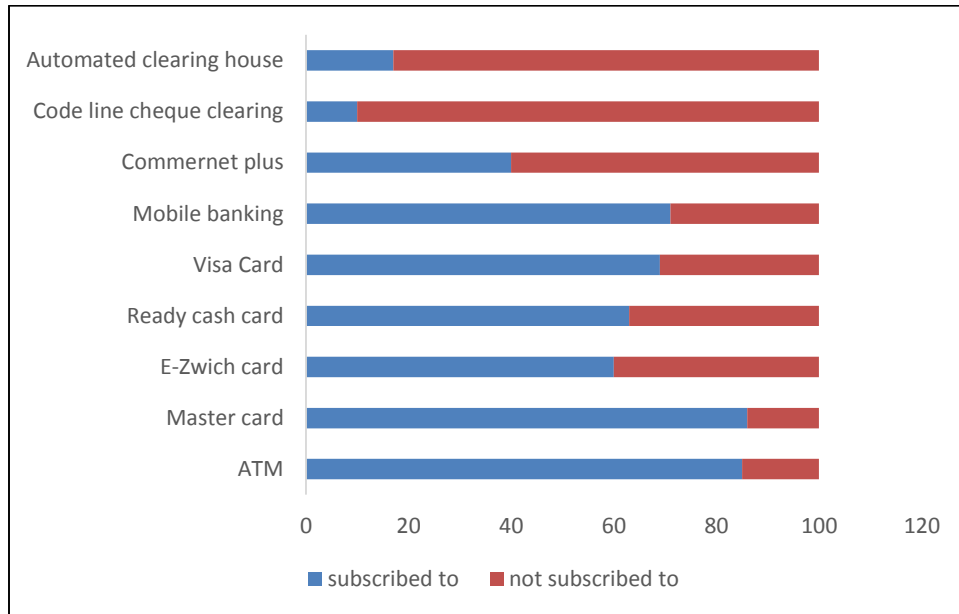
Source of Awareness	Frequency	Percent (%)
GCB's Posters	48	48.0
Internet	2	2.0
Radio/ TV	8	8.0
Friends/ Family	42	42.0
Total	100	100.0

It can be observed from Table 3 that GCB's posters and Friends/ Family are the major sources of awareness of GCB's e-banking products. 48% of respondents got to know about GCBs E-banking products through GCB posters, 42% through family and friends, 8 percent though the radio and television whiles 2 percent got to know through the internet.

### ***Level of respondent subscription to the various E-banking products of GCB***

This part of the study was dedicated to finding out the level of subscription of respondents to the various E-banking products of GCB. The intent of this section was to determine which E-banking products respondents mainly use. The results are presented in Figure 2.

Figure 2: Types of E-banking Products Subscribed by Customers

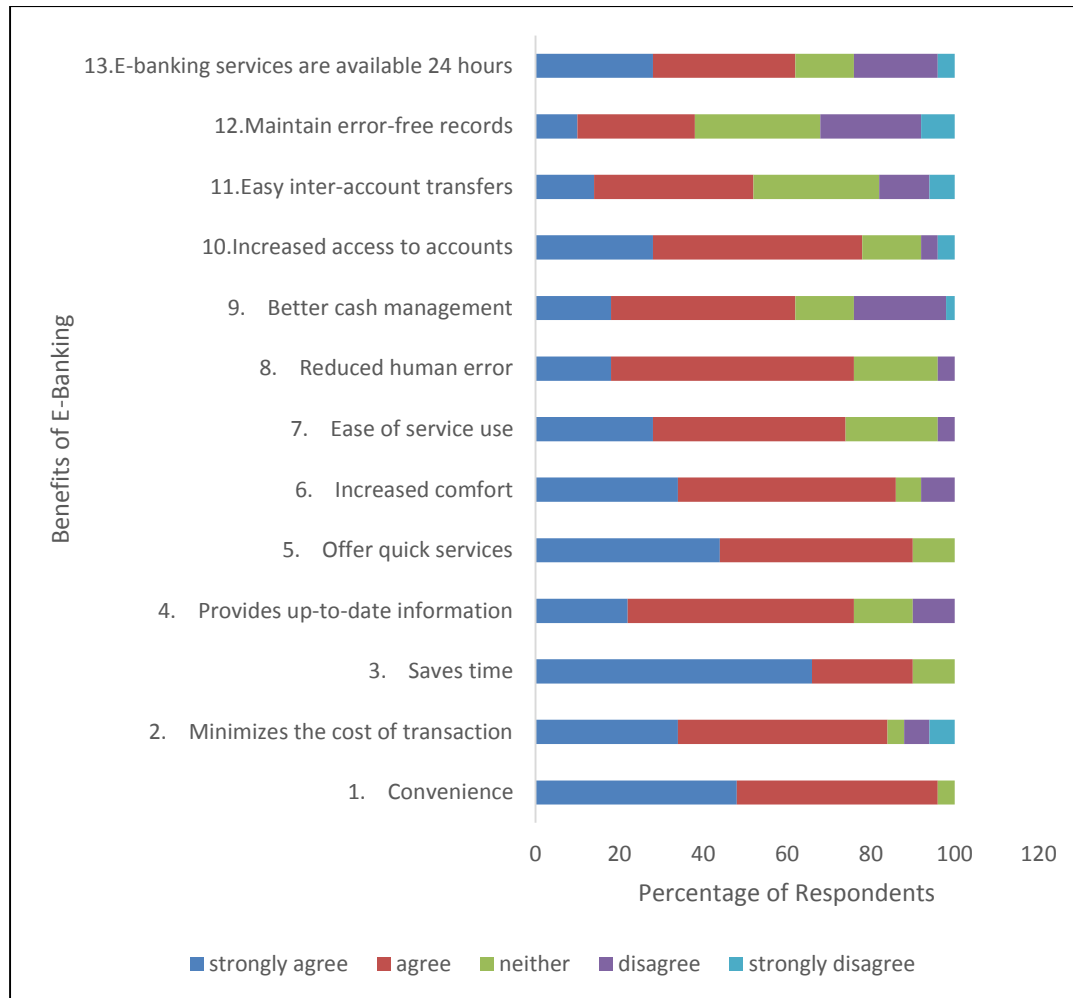


It can be observed from Figure 2 that, the three most subscribed e-banking products are Automated Teller Machine (ATM), Master card and Mobile banking. Sixty-four percent (64%) of the customers subscribe to Mobile banking as compared with 44% who are not subscribed. 86% of respondents are subscribed to master card as compared to 14% who are not subscribed, 85 % are subscribed to ATM as compared to 15 percent who are not subscribed. It can also be observed that, only 17% of respondents are subscribed to automated clearing house as compared to 83% who are not subscribed, also, 10% are subscribed to the codeline clearing system as compared to 90% who are not.

### **Benefits Derived by Customers using E-Banking Products**

The second objective of this study was to determine the benefits derived by users of E-banking products of Ghana Commercial Bank, Tamale main branch. To achieve this objective, a five point Likert scale was provided to respondents to indicate their approval or otherwise of certain perceived benefits of E-banking. These are the benefits that run through the literature. Data in relation to this is presented in Figure 3.

Figure 3: Benefits Derived by Customers Using E-banking Products



From Figure 3, the three most important benefits that customers derived from using e-banking products are: convenience, time saved, and the quick services provided. 98% of respondents agreed that E-banking services of GCB were convenient, 85% agreeing that E-banking minimizes the cost of transactions, 90% of the opinion that it saves time and about 76% opining that it provides up to date information. Also 90% agreed that E-banking products of GCB offer quick service, 86% of the opinion that it provides them with comfort, 74% pointed to the ease of use, with 76% alluding to the fact that E-banking products of GCB help in reducing human errors. Significant percentages of respondents talk about benefits like better cash management, increased access to accounts, easy inter account transfers and ready availability of service. However, most respondents (62%) did not agree to the assertion that E-banking products of GCB help in maintaining error free records.

### Challenges Faced by Customers using E-Banking Services of GCB

As with every service there are certain challenges that are likely to pose impediments for providers and users. With this objective therefore, the research attempted to enumerate various challenges of the E-banking system as it is being run by GCB from the perspectives of respondents. Respondents were therefore tasked to indicate the various challenges the encountered in their use of the E-banking service of GCB. The respondents enumerated several challenges they often encountered and these are presented in Table 4.

Table 4: Challenges Faced by Customers when Accessing GCB's E-banking Products

Challenge	Frequency	Percent (%)
Security	14	14
Privacy	16	16
Longer log on time	34	34
Slow response time	50	50
User unfriendliness	4	4
Fee charges	14	14
Lack of training for e-banking usage	50	50

From Table 4 longer log on time, slow response time, and lack of training for e-banking usage are the three main challenges faced by customers when accessing GCB's e-banking products. Only one or two out of every ten customers faced security, privacy and fee charges challenges when accessing e-banking products.

### SUMMARY AND CONCLUSIONS

The study explored the responsiveness of customers to electronic banking products of Ghana Commercial Bank Ltd. Based on the analyses of the data obtained from the field, the study found out that all the customers are aware of at least one e-banking product of GCB Ltd. The most popular e-banking products are Automated Teller Machine (ATM) and Master card. The study discovered that eight out of every ten customers are aware of both products. The next most popular e-banking products are Visa card and Mobile banking. GCB's posters and Friends/Family are the major sources of awareness of GCB's e-banking products. All the respondents subscribe to at least one of GCB's e-banking products. The three most subscribed e-banking products are Automated Teller Machine (ATM), Master card and Mobile banking. The study discovered that the three most important benefits that customers derived from using e-banking products are: convenience, saves time, and offer quick services. About half the number of

customers agrees that e-banking products are convenience, minimizes the cost of transaction, provides up-to-date information, offer quick services, increased comfort, ease of service use, reduced human error, and increased access to accounts. Longer log on time, slow response time, and lack of training for e-banking usage are the three main challenges faced by customers when accessing GCB's e-banking products.

Based on the findings of the study, it is evident that the most popular e-banking products of GCB Ltd are automated teller machine (ATM), master card, visa card, and mobile banking. The most important benefits that customers derived from using e-banking products are: convenience, saves time, offer quick services, minimizes the cost of transaction, provides up-to-date information, offer quick services, increased comfort, ease of service use, reduced human error, and increased access to accounts. Some customers strongly agreed that e-banking has satisfied most of their customer needs, easy to check their account balance using e-banking, and truly enjoy e-banking. The three main challenges faced by customers when accessing GCB's e-banking products are longer log on time, slow response time, and lack of training for e-banking usage. Majority of the customers who made complaints about service failures they encountered to the authorities of GCB Ltd, Tamale Main are satisfied with the way their complaints were handled.

## RECOMMENDATIONS

Base on the findings of the study, the following recommendations are made.

- The management of Ghana Commercial Bank Ltd, Tamale main should intensify sound advertisement to popularize the e banking products on offer.
- The management of the bank should educate customers on the usage of the various e-banking products of the bank immediately they subscribe for the service.
- Efficient electronic equipment should be used to ensure speedy log on and response times of e-banking transactions.
- Regular maintenance of the automated teller machines (ATMs) and other e banking equipment is also recommended in order to reduce breakdowns.
- The bank's customer representatives of e-banking services should appropriately notify customers about problems with e-banking system promptly when those problems occur.

## LIMITATIONS OF THE CURRENT RESEARCH

Practical limitations of the current research stem from the fact that simple descriptive statistics were used in analysing the data collected. It is therefore recommended that other researchers may use more detailed and robust methods in analyzing data.

Also self- designed research instrument based on the objectives of the study were used for data collection. This may lead to a compromise of the integrity of the data collected since the questionnaire was designed based on researcher expertise and not based on any specific theory. Other researchers may therefore consider using questionnaires based on a particular theoretical framework.

Lastly the use of data from the Tamale main branch only for generalisation for the whole bank may not be valid. This is because customer of the Tamale main branch may exhibit certain demographic characteristics not associated with customers of other branches of the bank. It is in the light of this that the study suggests that subsequent researches should use more than one branch of the bank.

## REFERENCES

- Abor, J. (2004) *Technological Innovations and Banking in Ghana: An Evaluation of Customers' Perceptions*, School of Administration, Legon: University of Ghana
- Ahmed, Feroz and Islam, Md. Tarikul (2008): "E-Banking: Performance, Problems and Potentials in Bangladesh", *Business Review*, Vol.06, No.1&2, January to December.
- Akoh, B (2001). E-Business in the Development World: Africa and Ethiopia Unpublished report.
- Aldás-Manzano J, Lassala-Navarré C, Ruiz-Mafé C, & Sanz-Blas S, 2009. Key drivers of internet banking services use. *Online Information Review*, 33(4): pp.672-695. [online] Available from: [summon http://rc4ht3qs8p.search.serialssolutions.com](http://rc4ht3qs8p.search.serialssolutions.com)
- Alu, A. O. (2002). Effects of Information Technology on Customer Services in the Banking Industry in Nigeria, *Information Technology Review*, Vol. 3, No. 1, pp. 5-19. and/or skill based?" *Marketing Management Journal*.
- Basu, A. & Muylle, S. (2007). How to plan e-business initiatives in established companies. *MIT Sloan Manage. Rev.*, 49 (1), 28-36.
- Boateng, R., and Molla, A. (2006). Developing E-banking Capabilities in a Ghanaian Bank: Preliminary Lessons, *Journal of Internet Banking and Commerce*, Vol. 11, No. 2.
- Bradley, L., and Stewart K. (2003). A Delphi study of Internet banking, *Marketing Intelligence and Planning*, Vol.21, No. 6.
- Chircu A., and Kauffman, R. (2000). Limits to Value of Electronic commerce-Related IT Investments, *Journal of Management Information Systems*, Vol. 17, No. 2, pp. 59-80.
- Davis FD, Bagozzi RP, & Warshaw PR, 1989. User acceptance of computer technology: A comparison of two. *Management Science*, 35(8), p.982. [online] Available from: [summon http://rc4ht3qs8p.search.serialssolutions.com](http://rc4ht3qs8p.search.serialssolutions.com)
- DeYoung, J. 2001 „The Internet's place in the banking industry“, *Chicago Fed Letter*, No.163, pp.1-4
- Doll, W., Raghunathan, T., Lim, J., & Gupta, Y. (1995). A confirmatory analysis of the user information satisfaction instrument. *Information Systems Research*, 6(2), 177–188.
- Easingwood, C. J. and Storey, C. D. (1993). Marketplace success factors for new financial services. *Journal of Services Marketing*, 7 (1), 41-54.
- Flavian, C., Torres, E., & Guinalíu, M. 2004. Corporate image measurement a further problem for the tangibilization of Internet banking services, *International Journal of Bank Marketing*, 22(5), 366-384.

- Geetha, K. T. & Malarvizhi, V. (2011). Acceptance of e-banking among customers: An empirical investigation in India. *Journal of Management and Science*, 2 (1).
- Gerrard, P., J.B. Cunningham and J.F. Devlin, (2006). Why consumers are not using Internet banking: A qualitative study. *J. Serv. Market.*, 20(3): 160-168.
- Grabner-Kraeuter, S. & Faullant, R. (2008). Consumer acceptance of internet banking: The influence of internet trust. *International Journal of Bank Marketing*, 26 (7) 160-168.
- Gurau, C. (2002). Online banking in transition economies: the implementation and development of online banking
- Hamlet, C. (2000). Community banks go online. *American Bankers Association Journal*, 92 (3).
- Hiltz, S. R., Johnson, K. and Turoff, M. (1986). Experiments in group decision making: communication process and outcome in face to face vrs computerized conferences. *Human communication Research*, vol. 13 2, 225-252.
- Hinson, R. (2005). Internet Adoption among Ghana's SME Non Traditional Exporters: Expectations, Realities and Barriers to use, *Africa Insight*, Vol. 35, No. 1, pp. 20-27.
- Karjaluoto, H., Mattila, M., & Pento, T., (2002) "Factors underlying attitude formation towards online banking in Finland", *International Journal of Bank*
- Kose, A., (2009). Determination of reasons affecting the use of internet banking through logistic regression analysis. *J. Glob. Strateg. Manage.*, 6: 1-10.
- Lee, E., and Lee, J., (2001) "Consumer adoption of Internet banking: Need-based
- Lee, M., and Turban, E. (2001). A Trust model for Consumer Internet Shopping, *International Journal of Electronic Commerce*, Vol. 6, No. 1, pp. 75-91.
- Liao, Z. and Cheung, M.T. (2003) "Challenges to Internet E-banking," *Communications of the ACM*, Vol. 46, No. 12: 248-250.
- Mia, M. Hannan, R., Mohammad, A. and Debnath, N. C. (2007). "Consumer behavior of Online Banking in Bangladesh", *Journal of Business Studies*, Vol. XXVII, No. 2, December.
- Min, H., and Galle, W. (1999). Electronic Commerce Usage in Business Purchasing, *International Journal of Operations and Production Management*, Vol. 19, No. 9, pp. 909-921.
- Mohammed, S. K., Siba, S. M. & Sree, K. (2009). Service quality evaluation in internet banking: an empirical study in India. *International Journal of India Culture and Business Management*, 2 (1), 11-36.
- Moorman, C., Deshpande, R., and Zaltman, G. (1993). Factors Affecting Trust Marketing Research Relationships, *Journal of Marketing*, Vol. 57, pp. 18-101.
- Ofori-Dwumfuo, G.O. and Dankwah, B. A. (2013) Adopting Internet Banking in Ghana Current Research *Journal of Social Sciences* 5(4): 143-151, Maxwell Scientific Organization.
- Pikkarainen, T., Pikkarainen, K., Karjaluoto, H. and Pahnla, S. (2004). Consumer acceptance of online banking: An extension of the technology acceptance model, *Internet Research: Electronic Networking Applications and Policy*, Vol. 4, No. 3.
- Rose, Peter S., (1999) "Commercial Bank Management", 4th ed., Irwin / McGraw-Hill, Boston, USA.
- Shannak, R. O. (2013). Key issues in e-banking strengths and weaknesses: The case of two Jordanian Banks. *European Scientific Journal*, 9 (7), 239-263.
- Shih, Y., and Fang, K. (2004). The use of a decomposed theory of planned behaviour to study Internet banking in Taiwan, *Internet Research: Electronic Networking Applications and Policy*, Vol. 14, No. 3.
- Shin, K. H. (2008). Is e-banking a competitive weapon? A causal analysis. *Int. J. of Electronic Finance*, 1 (1), 5-17.
- Stewart, K. 1999. Transference as a means of building trust in World Wide Web Sites. *Proceedings of the 20th ICIS*, Charlotte, North Carolina. 32

Suping H, &Yizheng S, (2010).Factors influencing user acceptance of online banking. 1: pp.315-318 Available from: IEEEExplore<http://ieeexplore.ieee.org.libaccess.hud.ac.uk/stamp/stamp.jsp?tp=&arnumber=5461412> systems in Romania, *International Journal of Bank Marketing* , Vol. 20, No. 6.

Tan, M. and T.S.H. Teo, (2000) "Factors influencing the adoption of Internet banking", *Journal of Association of Information Systems*, Vol. 1, No. 5: 1-42.

Tomiuk, D., Pinsonneault, A., & Alain, (2001). Customer loyalty and electronic-banking: A conceptual framework. (Industry trend or event).*Journal of Global Information Management*, 9(3), 4.

Tuchila, R. 2000, „Serviciibancareprin Internet“, E-finance Romania, Vol 3, No3, pp23-

Windrum, P. & De-Berranger, P. (2002).The adoption of e-business technology by SMEs.*Infonomics Research Memorandum Series*.Retrieved February 28, 2014 from <http://arno.unimaas.nl/show.cgi?fid=205>.

Yang, J. & Ahmed, K. T. (2009).Recent trends and developments in e-banking in an underdeveloped nation – An empirical study.*Int. J. of Electronic Finance*, 3 (2), 115-132.

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