

Electronic Banking in Ghana: A Case of GCB Bank Ltd

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Abstract

The introductions of electronic banking products and services have changed the nature and way of financial service delivery to customers in Ghana. The purpose of this study is to gain an insight or a deep understanding into electronic banking products and services that customers subscribe to and to find out from both the bank and its customers perspective the benefits they enjoy and the challenges they are faced with while providing and accessing the facilities respectively. The methodology used to conduct this research consisted of questionnaires and interviews to collect data. Non-probability sampling which this research adopted and used provided a range of alternative techniques based on researchers' subjective judgment. SPSS and Microsoft Excel were used for organizing, analyzing and interpreting the data collected. The population of interest was defined as retail customers of GCB Bank Ltd. The sample size for the study was 200 customers and 25 employees of GCB Bank Ltd. Data collection was conducted in four branches of GCB Bank Ltd in Kumasi. The study found out that ATM services were the most popular among users and constituted the main knowledge of customers as far electronic banking was concerned. It was followed by SMS or mobile banking. Similarly, that electronic banking was convenient and saves customers time was the major benefit for which reason most customers used the banks electronic products and currently persist. As a strategy, awareness of GCB electronic banking products and services is very essential to increase customer knowledge and usage since most of GCBs electronic banking products and services are new in Ghana and particularly to its customers. Effective presentations using all forms of media advertising such as leaflets, brochures, web pages etc will be useful to introduce the products and services to its customers and a wider audience. Finally, a high quality internet infrastructure and other systems support services and IT infrastructure should be provided by GCB since it is one of the primary requirements for electronic banking.

Keywords: E-banking, Internet banking, ATM, SMS, POS

1. Introduction

The banking industry is constantly responding to changes in customer preferences and needs; increasing competition from non-banks, changes in demographic and social trends, information technologies advances, channel strategies, and government deregulations of the financial service sector (Giannakoudi, 1999; Byers and Lederer, 2001). Success or failure of many retail banks is dependent upon the capabilities of management to anticipate and react to such changes in the financial marketplace. In the search for sustainable competitive advantages in the competitive and technological financial service industry, banks have recognized the importance to differentiate themselves from other financial institutions through distribution channels. This has resulted in banks developing, and utilizing new alternative distribution channels to reach their customers (Daniel, 1999; Thornton and White, 2001). Furthermore, information technological developments in the banking industry have sped up communication and transactions for customers (Giannakoudi, 1999). The evolution of electronic banking, such as internet banking from e-commerce, has altered the nature of personal-customer banking relationships and has many advantages over traditional banking delivery channels. These include increase in customer base, cost savings, mass customisation and product innovation, marketing and communications, development of non-core businesses and the offering of services regardless of geographic area and time (Giannakoudi, 1999).

The focus of the study were to;

- To identify the electronic banking products and services that customers subscribe at GCB Bank Ltd.
- To assess the benefits both the bank and its customers gain from the provision and use of electronic banking products or services at GCB Bank Ltd.
- To examine the challenges customers face in using electronic banking products or services at GCB Bank Ltd.

1.1 ELECTRONIC BANKING

Electronic banking is the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels. Electronic banking includes the systems that enable financial institution customers, individuals or businesses, to access accounts, transact business, or obtain information on financial products and services through a public or private network, including the internet (Federal Financial Institutions Examination Council, 2003). It should be noted that electronic banking is a bigger platform than just banking via the Internet. However, the most general type of electronic banking in our times is banking via the Internet, in other words Internet banking. The term electronic banking can be described in many ways. In a very simple form, it can mean the provision of information or services by a bank to its customers, via a computer, television, telephone, or mobile phone (Daniel, 1999). Burr (1996), for example, describes electronic banking as an electronic connection between bank and customer in order to prepare, manage and control financial transactions. 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 and Stewart, 2003; Shih and Fang, 2004; Boateng and Molla, 2006). Electronic banking has allowed banks and financial institutions to provide services by exploiting an extensive public network infrastructure (Ternullo, 1997).

1.2 HISTORY AND DEVELOPMENT OF ELECTRONIC BANKING

Banks are constantly on the search for solution which will help reduce their cost of operation and improve customer service and experience. In this continuous journey, the banking industry has seen several technology trends being adopted and several innovations delivered. The information technology revolution in the banking industry distribution channels began in the early 1970s, with the introduction of the credit card, the Automatic Teller Machine (ATM) and the ATM networks. This was followed by telephone banking, cable television banking in the 1980s, and the progress of Personal Computer (PC) banking in the late 1980s and in the early 1990s (Giannakoudi, 1999). Information Technology enables electronic channels to perform many banking functions that would traditionally be carried out over the counter (Giannakoudi, 1999). From ATMs came internet banking with its catch phrase anywhere banking. This afforded customers the opportunity to access their accounts at homes and offices. The problem that characterized the used of ATM and internet banking were high maintenance cost on ATM and security issues with internet banking respectively. Banking then contained to look for more innovative ways to delight their customers. This has led the mobile banking as banks want to tap into the potential of offering banking services through the mobile phone serving both old and new generation customers. Banking technology experts including Devlin (1995) and Devlin and Yeung (2003) agree, and explain how technology has tipped remote (anytime and anywhere) banking into the mainstream Western culture. According to Shreyan et al (2002), the evolution of the e-banking industry can be traced to the early 1970s. Banks began to look at e-banking as a means to replace some of their traditional branch functions, for two reasons. Firstly, branches were very expensive to set up and maintain due to the large overheads associated with them. Secondly, e-banking products/services were a source of differentiation for banks that utilized them. The fact is that technology does hold revolutionary potential for the delivery of banking products and services. Technology does not only have an absolute cost advantage in providing financial products and services, it has the potential for enhancing the value of these products and services by making them more convenient for consumers to acquire, empowering consumers to make better choices, and personalizing those products and services to their individual needs. (Jayamaha, 2008) Electronic banking can be defined as a variety of platforms such as Internet banking (or online banking), telephone banking, TV-based banking, mobile phone banking, and PC banking (or offline banking) whereby customers access these services using an intelligent electronic device, like a personal computer (PC), personal digital assistant (PDA), automated teller machine (ATM), point of sale (POS), or Touch Tone telephone. The definition of e-banking varies amongst researches partially because electronic banking refers to several types of services through which bank customers can request information and carry out most retail banking services via computer, television or mobile phone (Daniel, 1999; Mols, 1998; Sathye, 1999). Burr (1996), for example, describes it as an electronic connection between bank and customer in order to prepare, manage and control financial transactions. Electronic banking can also be defined as a variety of following platforms:

- (a) Internet banking (or online banking),
- (b) Telephone banking,
- (c) TV-based banking,
- (d) Mobile phone banking, and
- (e) PC banking (or offline banking).

1.2.1 THE AUTOMATED TELLER MACHINE (ATM)

Increasing labour costs in the 1960s placed pressure on labour intensive industries like banking to look towards automating some of their functions. Barclays Bank was the first to envisage the potential of ATMs, and introduced the first ever ATM in 1967. Initially, ATMs were not very sophisticated, and served only as cash dispensers. Originally, large banks offering an ATM service achieved an advantage over their competitors (O'Hanlon et al., 1993). There was scant understanding of the customers' needs or expectations and the role of ATMs in banks' retail delivery system was vague (Violano et al., 1992). Marcia Crosland of NCR Corp. (2010) indicated that aside from revenue generation and cost savings, ATMs are becoming the face of many financial institutions. For many consumers, ATMs are becoming the only interaction they have with their banks. In addition, ATMs are also becoming a competitive mark for many banks. Therefore, it is imperative to ensure that the customer's experience with the ATM is safe and secure.

1.2.2 INTERNET BANKING

Internet banking allows consumers to access their bank and accounts to undertake banking transactions on the internet. At an advanced level Internet banking is called transactional online banking, because it involves the provision of facilities such as accessing accounts, transfer of funds, and buying financial products or services online (Sathye, 1999). Nowadays the internet is the main channel for electronic banking. Internet Banking means that banking services such as services introduction, loan application, account balance inquiry, fund transfer and so forth are provided by a bank through the Internet. Internet banking has evolved into a "one step service and information unit" that promises great benefits to both banks and customers. It is important to remember that internet Banking is different from PC Home Banking. The obvious difference is that Internet Banking is browser-based, whereas PC Home Banking requires customers to install a software package assigned by the bank on their PC. Moreover, PC Home Banking allows customers to do their banking services only on PCs that have been installed the assigned software package.

1.2.3 SMS BANKING

SMS banking is a technology-enabled service offering from banks to its customers, permitting them to operate selected banking services over their mobile phones using SMS messaging. SMS banking services are operated using both push and pull messages. Push messages are those that the bank chooses to send out to a customer's mobile phone, without the customer initiating a request for the information. Typically push messages could be either Mobile marketing messages or messages alerting an event which happens in the customer's bank account, such as a large withdrawal of funds from the ATM or a large payment using the customer's credit card (Peevers, et al., 2008). Pull messages are those that are initiated by the customer, using a mobile phone, for obtaining information or performing a transaction in the bank account. Examples of pull messages for information include an account balance enquiry, or requests for current information like currency exchange rates and deposit interest rates, as published and updated by the bank. Barnes et al. (2003). The bank's customer is empowered with the capability to select the list of activities (or alerts) that he/she needs to be informed. This functionality to choose activities can be done either by integrating to the internet banking channel or through the bank's customer service call centre.

1.2.4 TELEPHONE BANKING

Telephone banking is a service provided by a financial institution, which allows its customers to perform transactions over the telephone. Most telephone banking services use an automated phone answering system with phone keypad response or voice recognition capability. To guarantee security, the customer must first authenticate through a numeric or verbal password or through security questions asked by a live representative.

With the obvious exception of cash withdrawals and deposits, it offers virtually all the features of an automated teller machine: account balance information and list of latest transactions, electronic bill payments, funds transfers between a customer's accounts, etc. Usually, customers can also speak to a live representative located in a call centre or a branch, although this feature is not always guaranteed to be offered 24/7. In addition to the self-service transactions listed earlier, telephone banking representatives are usually trained to do what was traditionally available only at the branch: loan applications, investment purchases and redemptions, cheque book orders, debit card replacements, change of address, etc. Banks which operate mostly or exclusively by telephone are known as phone banks. They also help modernize the user by using special technology. This makes it possible for a customer of the bank to know account related information over a telephone. "Tele-banking (telephone banking) 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" (Balachandheret *al*, 2001). According to Leow (1999), tele-banking 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.

1.3 ELECTRONIC BANKING IN GHANA

Some works such as the ones done by Abor (2004) and Boateng (2006) have highlighted the rate of diffusion of digital technology in the Ghanaian banking sector. Recent adoption of online banking services in the country brings the phenomenon into focus especially in the face of a new landscape in the banking industry. The banking industry in Ghana is undergoing rapid growth with the liberalization of the financial sector by the Bank of Ghana and positive economic environment. Not only has the bank introduced Universal Banking but has also introduced the Ghana Interbank Payment and settlement System enabling common electronic platforms for payments across financial institutions (Bank of Ghana 2008). One of these platforms, the National Switch and Smartcard Payments System dubbed 'E-Zwich', which currently, is vigorously being promoted by the Bank of Ghana. Banks in Ghana are vying, through many commercials and a range of products and services, for customers. Products and services, such as prestige account, cash passport, executive loan, child account, telephone banking, electronic cards and ATMs, which were hitherto offered by a few banks, are now offered by most of the banks. Many products and services are now a matter of competitive necessity rather a competitive advantage (William et al 2005). With many banks offering common products and services, the focus of competition is now moving towards speed, customization of products and services and the opening up of more branches (branch banking) to add value to the core banking products and service (Abor, 2004).

1.4 BENEFITS OF ELECTRONIC BANKING TO THE BANK

The main benefits to banks are cost savings, reaching new segments of the population, efficiency, enhancement of the bank's reputation and better customer service and satisfaction (Jayawardhena et al., 2000). Besides, electronic banking removes geographical limitations for small and medium size banks, thereby international operations without limits can be operated. E-banking has enabled banks to increase their data collection, and management, efficient financial engineering that have improved the ability of assessing potential creditors, measuring the creditworthiness of potential borrowers and to price the risk associated with those borrowers through standardized mechanisms such as credit scoring (Zigi et al., 2003). Kiang et al (2000) is of the view that disputes can be minimised between the employees as there is a clear flow of processes. Conducting business outside the normal branch working hours has also been a factor that has been considered convenient for bankers. According to Jayawardhena et al., (2000) each ATM has the capacity to carry out the same, essentially routine, transactions as do human tellers in branch offices but at half the cost and with a four to one advantage in productivity. Thus banks can provide customers convenient, inexpensive access to the bank 24 hours a day and seven days a week. Banks just like other businesses are tuning to information technology to improve business efficiency, service quality and attract new customers (Nath et al, 2001). Increased availability and accessibility

of more self-service distribution channels help bank administration in reducing the expensive branch network and associated staff overheads (Birch et al., 1997). A reduction in the percentage of customers visiting the banks with an increase in alternative channels of distribution will also minimise the queues in branches (Thornton et al., 2001). According to Thornton et al., (2001) this ultimately leads to improved customer satisfaction. Jayawardhena et al., (2000) observe that electronic banking increases competition within the banking system and also from non-bank financial institutions. Other benefits that have accrued because of the adoption of electronic banking in developed countries include the ability to attract new customers and widening the customer database, improving bank marketing and communication, and having the ability to retain high profit customers (Al-Sukkar et al., 2005). Kerem (2003) observes that banks are responding to electronic banking differently and that those which see electronic banking as a complement and substitute to the traditional channels achieved better communication and interactivity with the customers. Online banking extends the relationship with the customers through providing financial services right into the home or office of customers (Robinson, 2000). Al-Sukkar and Hassan (2005) support the view that technology can improve service quality for banks and enhance customer satisfaction and loyalty. According to Nath et al (2001) provision of high quality services may also lead to high profit consumers for the bank, Polatoglu et al., (2001) argue that early adopters and heavy users of internet banking services are more satisfied with the services compared to the other customer groups. According to Joseph et al., (2003) the ability to deliver services via technology is positively correlated with satisfaction. Financial firms are using latest technological support to increase transactional security and provide maximum number of mediums for serving consumers (Bock, 2000). According to Robinson (2000) the cost of an electronic transaction is dramatically less when done online compare to at a branch.

1.5 BENEFITS OF ELECTRONIC BANKING TO THE CUSTOMER

No or few time limitations for banking transactions are valid as users can perform most of the banking transactions throughout the day, week and from any place they can have access to Internet. Following and managing the cash position for individuals and firms for interest optimization is possible via e-banking. It provides convenience in terms of the capital, labour, time and all the resources needed to make a transaction. Technological developments in banking make it much easier and cheaper for customers to compare and contrast products and to establish multiple banking connections (Carlson, 2000), which could alter the purchasing, decision making process of the customer. Electronic banking saves time and money, provides convenience and accessibility, and has a positive impact on customer satisfaction (Karjauloto, 2003). Customers can manage their banking affairs when they want, and they can enjoy more privacy while interacting with their bank. It has been claimed that internet banking offers the customer more benefits at lower costs (Mols, 1998). Electronic banking also increases the power of the customer to make price comparisons across suppliers quickly and easily and as a consequence this pushes prices and margins downward (Devlin, 1995). Al-Sukkar et al., (2005) aver that the most important factors encouraging consumers to use online banking are lower fees followed by reducing paper work and human error. Smith (2006) emphasizes the importance of human and technology based delivery channels in improving the level of bank customer satisfaction, retention, and switching. E-banking customers do not face problems of handling a lot of money, submission of utility bills and waiting in a long queue for services. Turban et al. (2000) indicated that internet banking is extremely beneficial to customers because of the savings in costs, time and space it offers, its quick response to complaints, and its delivery of improved services, all of these benefits makes banking easier. Thornton et al., (2001) compared several electronic distribution channels available for banks in the USA and concluded that customer orientation – towards convenience, service, technology, change, knowledge about computing and the internet – affected the usage of different channels. Howcroft et al. (2002) found that the most important factors encouraging consumers to use online banking are lower fees, less paperwork, and reduced human errors, which subsequently minimize disputes. Recent research also suggests that increased use of online banking and bill paying can actually decrease the occurrence of identity theft by taking personal information outside the mailbox and eliminating a paper trail (Stafford, 2004). E-banking does not only encompass the way one shops over the internet, but also the ways one carries out banking transactions. This allowed customers, more independence in the choice on where and when to bank. It is an obligation for banks to apply better strict security levels due to the many kinds of threats that are recently identified with these alternative channels (Smith, 2006). The main benefit from the bank customers' point of view is significant saving of time by the automation of banking services processing and introduction of an easy maintenance tools for managing customer's money. The main advantages of e-banking for corporate customers are as follows (BankAway! 2001; Gurău, 2002):

- Reduced costs in accessing and using the banking services.

- Increased comfort and timesaving - transactions can be made 24 hours a day, without requiring the physical interaction with the bank.
- Quick and continuous access to information- Corporations will have easier access to information as, they can check on multiple accounts at the click of a button.
- Better cash management- E-banking facilities speed up cash cycle and increases efficiency of business processes as large variety of cash management instruments are available on Internet sites of Estonian banks. For example, it is possible to manage company's short-term cash via Internet banks in Estonia (investments in over-night, short- and long term deposits, in commercial papers, in bonds and equities, in money market funds).
- Reduced costs- This is in terms of the cost of availing and using the various banking products and services.
- Convenience- All the banking transactions can be performed from the comfort of the home or office or from the place a customer wants to.
- Speed - The response of the medium is very fast; therefore customers can actually wait till the last minute before concluding a fund transfer.
- Funds management- Customers can download their history of different accounts and do a "what-if" analysis on their own PC before affecting any transaction on the web. This will lead to better funds management.

Aladwani (2001) has found that providing faster, easier and more reliable services to customers were amongst the top drivers of e-banking development. The main benefits from e-banking for private customers are as follows (BankAway! 2001):

- Reduced costs. This is in terms of the cost of availing and using the various banking products and services.
- Convenience. All the banking transactions can be performed from the comfort of the home or office or from the place a customer wants to.
- Speed. The response of the medium is very fast; therefore customers can actually wait till the last minute before concluding a fund transfer.
- Funds management. Customers can download their history of different accounts and do a "what-if" analysis on their own PC before affecting any transaction on the web. This will lead to better funds management.

1.6 CHALLENGES OF ELECTRONIC BANKING TO THE BANK AND THE CUSTOMER

It is not enough for a bank to think about the benefits of electronic banking nor is it sufficient for a bank to address electronic banking development issues. Some researchers (Nath et al., 1998) mention multitudes of issues relevant to post developing a site for online banking purposes such as security concerns, customer distrust, cost and difficulty of maintaining the site, legal concerns, and privacy of customer information. Furthermore, online banking is subject to the dependability of other computers or web servers. In case of any problem regarding safety or usage, a customer cannot have access to his/her account. Online users have to know how to use a computer before he/she can carry out a transaction. The customers need to be aware and up-to-date with the latest safety programmes such as firewalls, virus programmes. Hackers are still able to hack into the accounts and transactions of account holders to perpetrate atrocious activities. It is not 100% safe, thus there is the need to exercise caution (Kephart, 2007). CIA Triad states that there are set of people e.g. older ones who don't want to follow the technological trend and continue traditional conventional branch banking, thus ignore to learn the new technologies due to lack of confidence and personal capability. In some ways they are right as the governmental policies that guide Internet banking operations across international border are not always efficient (Fojt, 1996). There is a very real possibility for fraud when SMS banking is involved, as SMS uses insecure encryption and is easily spoolable. Supporters of SMS banking claim that while SMS banking is not as secure as other conventional banking channels, like the ATM and internet banking, the SMS banking channel is not intended to be used for very high-risk transactions. Most of the attacks on online banking used today are based on deceiving the user to steal login data and valid TANs. Two well-known examples for those attacks are phishing and pharming. Cross-site scripting and key logger/Trojan horses can also be used to steal login information. A method to attack signature based online banking methods is to manipulate the used software in a way, that

correct transactions are shown on the screen and faked transactions are signed in the background. As good as ATMs are, many bank customers fear losing their cards and pins to fraudsters while a few other also complain about services charges. Again illiterate customers had problems learning how to use the ATMs and still preferred to visit the brick and mortar bank building. Besides its benefits, electronic banking has its own draw backs as well. Another disadvantage of electronic banking applications internationally is the lack of governmental policies that guides internet banking operations across international borders (Kannan, 2004). While electronic banking can provide a number of benefits for customers and new business opportunities for banks, it exacerbates traditional banking risks. Even though considerable work has been done in some countries in adapting banking and supervision regulations, continuous vigilance and revisions will be essential as the scope of E-banking increases. In particular, there is still a need to establish greater harmonization and coordination at the international level. To understand the impact of E-banking on the conduct of economic policy, policymakers need a solid analytical foundation. Without one, the markets will provide the answer, possibly at a high economic cost. Further research on policy-related issues in the period ahead is therefore critical (Al adwani, 2001).

2.0 METHODOLOGY

2.1 Research design and approach

Cresswell (2007) admitted the significance of demonstrating research design and approach as an effective and efficient strategy to augment the reliability and validity of social research. Research approach refers to the procedures and plans for that study beginning with wide claim to detailed methods of data collection, analysis of data, summarizations and interpretations. In research approach and design, descriptive research can be used in ascertaining information with respect to current status of a particular phenomenon to address “what exist” thus conditions or variables in a particular situation. (Yin, 2002). The study embarked on descriptive and exploratory approaches to find information about a particular phenomenon. Description research focuses on individual variables and on relations between variables. In principle, descriptive research is not aiming at forming hypotheses or development of theory. It is about describing how reality *is* (Jong and Voordt 2002). Burns et al., (2003) define exploratory research as research conducted to gain new insights, discover new ideas and/or increase knowledge of a phenomenon. Descriptive and exploratory research approaches were adopted because these approaches further clarified and gave informative understanding the state of the chosen topic. The study then adopted and used the deductive and qualitative approaches to the research. This became necessary because the study employed interviews and questionnaires to decode, describe, translate or generate meaning from a phenomenon. That aside the study made use of a case study. The use of case study is a technique of enquiry through which the researchers delve deep on issues surrounding an event, a programme, process, phenomenon, activity, one or more individuals, institutions etc. Cases are usually faced with activities and time through which the researcher is expected to obtain information that are detailed by employing varied procedures in data collection over given period of time (Stake, 1995). Qualitative research refers to the process of employing procedures case studies and observation of participant that end up in descriptive, narrative account of a practice or setting. Qualitative research methods are mostly reject positivism which basically accept the form of an interpretative sociology. (Parkinson et al., 2011). Deductive approach in research is used in situation where the researchers have lots literature on the subject being researched to the extent that a good theoretical framework can be established, Cooper and Schindler (2006). Owing to the fact that theories have been propounded within the same area of study by various writers this research was deductive. Conclusions were also drawn based on these theories. Again, the deductive approach of research was selected as appropriate owing to the fact that the researchers were faced with constraint of time coupled with low risk when deductive approach not inductive approach to research is used.

2.2 Population

Polit and Hungler (1999) refers to a target population to be the totality of all the subjects who conform to a set of stipulations or specification, that make up the whole group of people that are of interest to the researchers. The target population of this study included the GCB Bank Ltd retail customers and management of the bank’s Electronic Banking Division. The population of interest for the questionnaires was defined as the retail customers whereas the management was targeted for the interview. The spread of the branches of the bank in the country are zoned. To this end they have ten (10) zones. For example the branches in Ashanti Region are zoned as the Kumasi zone which has 22 branches and one (1) agency. In each zone, the bank per the size of the various

branches has classified them into class A branches, class B branches, class C branches and lastly class D branches. A branch was picked from all the classifications to give the study the balance it deserved. Data collection was conducted from ending of May 2014 to the ending of June 2014, in four branches of GCB Bank Ltd in Kumasi which were KNUST branch, Ahinsan branch, Kumasi Main branch and Ejisu branch based on branches performance which is a basis for categorization of branches in GCB. The electronic banking division of the GCB Bank Ltd furnished the researchers with the total number of customers (5,251) at the selected branches who use one or more of the electronic product or service of the bank. Based on the information provided by GCB Bank Ltd E-banking division at the end of collecting data for this research, the number of ATM, Internet banking, SMS banking, Point of Sale etc users in the selected branches were 5,251.

2.3 Sample

According to Williamson (2008), a sample is a subset of the population which comprises members selected from it. A sample size of 200 was chosen from the total number 5,251 customers (thus those on electronic products and services) to answer the questionnaires, that is, 5 respondents each from the chosen branches thus KNUST branch, Ahinsan branch, Kumasi Main branch and Ejisu branch. Yamane (1967) came up with a formula for calculating for the sample size from a statistical population selected: thus

$$n = \frac{N}{1 + N * (e)^2}$$

n= sample size

N= the total number of customers at the four selected branches who use one or more electronic product or service

e= the acceptable sampling error

The acceptable sampling error in this case was 7 per cent (error margin 0.07). Therefore 93 per cent confidence level was assumed. The calculation for our expected sample was then done as follows.

$$n = \frac{5,251}{1 + 5,251 (0.07)^2}$$

$$n = \frac{5,251}{1 + 5,251 \times 0.0049}$$

n = 196.44 Therefore: n = 200

Therefore out of the total number 5,251 customers who use one or more electronic products and services from the four selected branches 200 customers were selected for the questionnaires and five (5) top management staff of the Electronic Banking Division of GCB Bank Ltd with five (5) members of staff from each of the four selected branches were interviewed. The total number of GCB Bank staff interviewed was twenty-five (25).

2.4 Data collection procedure

Data analysis is defined as all the statistical procedures or methods that simultaneously examine data collected on each individual, object, and institution under investigation through a research (Hair et al., 1995). LeCompte et al., (1999) explains the analysis of data to the conscious efforts of a researchers rigorously process raw facts and figures to make meaning and interpret such findings. Analysis of data implies the procedure of reducing or splitting large data in order to make sense out of them Patton (1987) moves that data analysis go through three facets; thus organisation of data, reduction of data by summarizing and finally categorising and linking them up to make meaning. The primary data collected were edited to give it a meaning. Editing collected data consisted of sorting and examining the data to see whether all the questions have been answered properly and as desired. After editing the collected data, the edited data were coded, that is, numbers were used to symbolize words, and directly entered into a database from the self-administered questionnaire. The information obtained from respondents were presented in tables and in columns with cylindrical shape and conical shape for easy

interpretation and analysis with the use of software called Statistical Package for Social Scientists (SPSS).

3.0 RESULTS

3.1 ELECTRONIC PRODUCTS AND SERVICES CUSTOMERS SUBSCRIBE AT GCB

In the questionnaire administered to respondents, a question was asked to test customers' responses from a set of responses that best describes their usage of products and services available through electronic banking. This question was aimed at identifying, which electronic product or service that customers subscribe to in GCB. Customer usage was construed to mean ones' knowledge of the existing electronic products and services. From the Product frequencies out of 200 surveyed customers the following counts were registered for the following electronic banking products and services: 26 were internet banking users, 86 used the banks SMS or mobile banking facility, a highly significant 156 customers were ATM users, 5 customers were Debit cards users, 1 customer was a Telephone banking user and 2 customers were POS-Point of Sale users. NOTE: The total count is 276 and not 200 because some respondents subscribe to one or more products. In terms of percentage, ATM users scored the highest percentage of 56.50 accounting more than half of the banks electronic banking products or services usage. SMS banking or mobile banking accounted for 31.20% of the total percentage of electronic banking users in the bank. Quite impressive was the 9.40% usage of the internet banking facility. Not very popular among users were point of sale devices and telephone banking. It represented 0.70% and 0.40% respectively.

3.1.1 PRODUCTS FREQUENCIES

	Responses		Percent of Cases
	Count	Percent	
Internet Banking	26	9.40%	13.30%
POS-Point of Sale Device	2	0.70%	1.00%
SMS or Mobile Banking	86	31.20%	43.90%
Products Usage ATMs	156	56.50%	79.60%
Telephone Banking	1	0.40%	0.50%
Debit Cards	5	1.80%	2.60%
Total	276	100.00%	140.80%

*NOTE: The total count is 276 and not 200 because some respondents subscribe to one or more products. Products frequencies; Source: Field, 2015

3.2 BENEFITS OF E – BANKING PRODUCTS AND SERVICES TO CUSTOMERS

There was a portion of the questionnaire that required of respondents to select from a group of responses the appropriate response that best describes the benefit they derive from electronic banking products and services. This question was aimed at finding out the various benefits or advantages for which reasons GCB Bank Ltd customers still keep faith with the various electronic banking products and services they use.

3.2.1 Electronic banking saves time

110 out of 200 surveyed customers, who represented 55% of the total surveyed customer strongly, agreed that electronic banking saves them time even though 7 respondents were indifferent on how electronic banking saves them time. Those 7 respondents represented only 4% of the total surveyed population. This comes to confirm the literature that most users of electronic banking products and services use them because of the savings they get in terms of time. Since majority of respondents use GCB's electronic banking products because it saves them time all efforts should be made by GCB Bank Ltd to enhance the service in that regard. The implication that can be

drawn here is that, if by any reason GCB Bank Ltd electronic banking customers begin to think that these products or services are no longer saving their time, majority will move away from the products or services.

3.2.2 Electronic banking is convenient

Even though one person strongly disagree with the position that electronic banking is convenient to him, a significant 45% of respondents numbering 88 in each case strongly agreed and agreed respectively with position that electronic banking was convenient to them. Convenience as cited in the literature review was often the main reason why customers sign on to electronic products. The luxury it affords customers should not be sacrificed on any alter by GCB Bank Ltd if the bank wants to maintain its electronic banking customers and use convenience as a bait to win prospective ones. The possible reason that can be gleaned from this observation is that, because more often than not GCB's banking hall are crowded, electronic banking customers use the services to save themselves the time of queuing and the inconvenience of the delays.

3.2.3 Electronic banking service charges are relatively cheaper

On the issue of whether or not electronic banking service charges were relatively cheaper, 51, 92 and 26 representing 27%, 48% and 14% respectively Strongly Agreed, Agree and indecisive. Disagreement sentiment here was significant as 17 users who represented 9% to the total surveyed population disagreed. Even though majority of respondents may not care much about charges as per the table above in so far as the electronic service is convenient to use and saves time, GCB Bank Ltd should not go to bed over charges as complainers of high charges are significant enough to cause a surprise.

3.2.4 Quick response on complaint

Where the distribution of responses were mixed was when the questionnaire sought to find out whether quick responses on complaints were actually forthcoming from the bank. Again, 88 respondents representing 46% agreed with this position. GCB Bank Ltd should build strongly on this issue because no system is perfect there will be few hiccups occasionally the swiftness of the bank to respond to such customer complaints will really afford customers convenience and save them time.

The answer to this question holds the key to customer loyalty to GCB's electronic banking products and services.

3.2.5 Electronic banking gives 24/7 access to account

Unanimously all respondents agreed to the fact that electronic banking gives them 24/7 access to their accounts. This answer was not surprising to know mainly because of the availability of ATMs, SMs and internet banking services all day. What GCB Bank Ltd have to do to maintain this position is to make sure there are no or very limited service downtimes on the bank website and ATM breakdowns.

3.2.6 Electronic banking gives privacy on account

When the issue of whether or not electronic banking gives privacy on account was raised, there were no disagreements from respondents. This then becomes a strong selling power for GCB Bank Ltd to use to disabuse the minds of their critics who shy away from electronic banking products and services because of no privacy. Indeed, privacy on electronic banking is higher than when you visit the brick and mortar branch for a transaction.

3.2.7 Ability to transfer money online

Lastly, another quite distributive response from respondents was when the question of whether users were able to transfer money online using electronic banking product and services from GCB. Though 27 and 15 users representing 15% and 8% respectively disagreed and strongly disagreed, majority of respondents constituting 32 and 60 users accounting for 17% and 32% strongly agreed and disagreed respectively. As many as 51 users representing 28% of the total survey population was indecisive on this particular subject. This was because users of ATM services barely use the ATM facility to transfer money unlike their colleagues who use the Internet

banking facility where that functionality is commonly used. The ATM story could be told of SMS banking hence that distributive response.

	Strongly Agree		Agree		Indecision		Disagree		Strongly Disagree		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
	Electronic Banking Saves Time	110	55%	83	42%	7	4%	0	0%	0	0%	200
Electronic Banking is Convenient to Me	88	45%	88	45%	8	4%	10	5%	1	1%	195	100%
Electronic Banking Service Charges are Relatively Cheaper	51	27%	92	48%	26	14%	17	9%	5	3%	191	100%
I Get Quick Response on Complaint	30	16%	64	34%	35	19%	43	23%	14	8%	186	100%
Electronic Banking Gives Me 24/7 Access to my Account	40	21%	88	46%	24	13%	28	15%	10	5%	190	100%
Electronic Banking Gives Me Privacy on my Account	56	30%	115	62%	15	8%	0	0%	0	0%	186	100%
I am Able to Transfer Money Online	32	17%	60	32%	51	28%	27	15%	15	8%	185	100%

Benefits of E-banking to customers; Source: Field, 2015

3.3 CHALLENGES OF ELECTRONIC BANKING TO CUSTOMERS

To find out the real problems and challenges users of GCB Bank Ltd electronic banking products and services face in assessing and using these products or services, the questionnaire extracted responses in this regard from respondents.

3.3.1 E-banking products are not user friendly and understandable

Because of the relatedness of the issues that E-banking products are not being user friendly and difficult to use and that E-banking instructions are not clear and understandable they would be treated together. The bank had strength when it came to the fact that the banks E-banking products were not user friendly or difficult to use and that the banks E-banking instruments are not clear and understandable. To this end, this was no challenge at all for bank and its customers as far as using and accessing the e facilities are concerned. Whiles 46 respondents representing 24% Strongly Disagreed with the former, 30 respondents accounting for 30% Strongly Disagreed with the later. This puts the bank in a strong competitive stead to sell these attribute of their electronic products

and services to increase product or service usage and patronage.

3.3.2 Bank response to customer complaints are not rapid enough

One big challenge for most e-banking customers is the time it takes for complaint resolution by banks, for example, a double deduction on an ATM transaction or duplication of service charges or non-response from the bank for restoration of a lost product or services and it takes days for the bank to resolve such issues. Such bitter customers were 38 in number and they represented 20% of the total respondent. The bank then becomes the final loser because a dissatisfied customer has a high tendency of running the e product or service down to his or her friends. As was unanimously accepted by most respondents that e-banking products and services saves them time and was convenience to them. One cannot hold back but say no response and delays in complaints resolutions will be a big blow to GCB Bank Ltd in terms of customers' loyalty. The implication here is that, GCB Bank Ltd will lose most of such frustrated customers to competitor banks and may even pay a bigger price when such frustrated customers go round spreading such bad news about the bank. This will in a long run drive away potential users and discourage current users of the products and services.

3.3.3 Frequent bank site downtimes

Another issue the bank has to tackle head-on had to do with bank site downtimes. Internet banking, for example, is transacted only at the banks website. If the banks site breaks down as often as complained by 31 respondents representing 18% of total respondents, then, there is a big issue. The bitter implication for the bank would be frustration for its customers. Frequent and persistent frustration will let customers change their bankers.

3.3.4 Frequent service interruptions and system failures

The greatest challenge that most respondents complained of was that of frequent service interruptions. This represented 41% of the views of total respondents with a count of 77. Similarly 75 respondents representing 40% of total respondents couldn't but strongly agree that system failures at GCB Bank Ltd was a serious headache to them in their quest to use the banks electronic banking services. The possible reasons that could lead respondents to hold such opinions were varied. The negative implication for the bank would be that customers will start withdrawing from the use of these products and services making the bank the ultimate loser.

3.3.5 Many security features delaying access to e-banking services

The results presented 82 and 26 respondents representing Disagree and Strongly Disagree respectively thus 42% and 13% of the surveyed sample who think that there are no too many security features which delays access to E-banking service. Even this is a plus there still remains 15 respondents representing 8% who believe the there are many security features that delay or inhibit their access to E-banking service. GCB Bank Ltd should therefore work assiduously to reduce the features that delay access to their E-banking services because to the customer if there is so much delay in accessing the electronic product or service then there is no point subscribing to such products and service. Such customers would rather opt for the brick and mortar banking.

	Strongly Agree		Agree		Indecision		Disagree		Strongly Disagree		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
E Banking Products are not user Friendly and Difficult to use.	8	4%	40	21%	16	8%	81	42%	46	24%	191	100%
Bank Response to Customer Complaints are Not Rapid Enough	38	20%	66	35%	44	24%	39	21%	0	0%	187	100%
Frequent bank site Downtimes	31	18%	71	40%	32	18%	35	20%	7	4%	176	100%
Frequent service Interruptions	27	14%	77	41%	31	18%	41	22%	11	6%	190	100%
So Many Security Features Delaying Access to Service	15	8%	47	24%	23	12%	82	42%	26	13%	193	100%
System Failure	75	40%	60	32%	20	11%	27	14%	7	4%	189	100%
E banking Instructions are Not Clear and cumbersome	39	21%	18	9%	26	14%	77	41%	30	16%	190	100%

Challenges of e-banking to customers; Source: Field, 2015

3.4 INTERVIEW CONDUCTED ON THE STAFF BOTH AT E-BANKING DEPARTMENT AND BRANCHES OF GCB

To better answer the research question on the benefits the bank enjoys as well as challenges the bank faces in its provision of electronic banking products and services to its customers, the five management staff of the Electronic Banking Division of GCB Bank Ltd were interviewed to ascertain the benefits the bank enjoys in its provision of these electronic products and services and as well find out the challenges the bank is faced with if any on its provision of these electronic banking products and services. That aside the five members of staff of each the four branches selected were interviewed for the same purpose. The views of these staff were taken as the representative view of the bank. The following views were amassed from the interviews conducted.

3.5 ELECTRONIC BANKING PRODUCTS AND SERVICES OF GCB

GCB Bank Ltd provides a wide range of electronic products to individual account holders and corporate account holders. The bank has internet banking services for both its retail and corporate customers. This product helps customers to check their balances, generate and print their bank statements, transfer funds to third party accounts, effect standing order instructions on their accounts etc. The bank also has for the convenience of its customers a wide range of debit cards. It ranges from ready cash cards, master cards, e-zwich cards to mention but a few. It is important to note here that GCB Bank Ltd master cards could also be used by corporate customers on their corporate accounts. This gives 24/7 access to customer accounts. In addition to the above products, GCB Bank

Ltd has mobile or SMS banking facility for its customers. This facility gives alerts to customers on account transaction that hit their accounts and also affords customers the luxury of topping up their mobile phone credit. Customers could pay bill by SMS and check their balances at any time. Again, the bank has E-alert facility which enables customers to get transactional alerts through their emails in real time. Also the E-alert facility allows the system to automatically generate monthly account statement to customers who subscribe. There is also a product we call Smart Pay which was specifically developed for bill payments. With this product, customers can pay all school fees and utility bills from anywhere provided there is internet access to the customer. GCB Bank Ltd also has Point of Sale devices spread across all leading shops, restaurants, hotels, cinema halls, markets, airports etc. These devices allow customers to transact business at any of these sales points without dispensing with physical cash. Customers pay just by swiping their cards into these points of sales devices.

3.6 BENEFITS GCB BANK LTD GETS FROM THE E-PRODUCTS AND SERVICES

It saves the bank time and cost. Many man hours that could have used to serve internet banking customers are all directed to doing something else. Again, it has drastically decongested our banking halls. Customers are spared joining long queues in the banking halls and the trouble they have to take in going through heavy traffic and long distances to reach their branches. Correspondently, the pressure on our traditional banking outlets have reduced thereby improving services for the few numbers who still call on the brick and mortar building. Internet banking has brought a great deal of intimacy between the bank and its cherished customers. Our customers call or send e-mails of complaints to the bank now instead of walking to the bank. Our customers are constantly using these services minutes by minutes which never existed before; hitherto, most of our customers come to pick their salaries only and were gone.

3.7 CHALLENGES GCB BANK LTD FACES WITH THE E-PRODUCTS AND SERVICES

We have a few challenges, such as,

3.7.1 Access to internet connection

The limited access to internet is a major setback to the growth of internet banking which require system support infrastructure and equipment for both bank and customer. Many customers have expressed interest in accessing online services but are constrained by access or cost to internet connectivity. Again, telecommunication networks sometimes fail to deliver when customers want to access their accounts through SMS or mobile banking on their phones.

3.7.2 Website problem

Sometime poor ISP (Internet Service Protocol) services make customer access to the internet banking portal very slow resulting in customer complaints.

3.7.3 Security concerns

Often times, some of our customers carelessly lose their ATM cards together with their pains even though they are instructed to memorize the pin and destroy the pin mailers. Others somehow give their internet banking information to hackers online. Some customers also fail to delete their transaction passwords from their phones etc. In effect, all these make our customers vulnerable to unscrupulous individuals who take unwarranted advantage of these customers. In the long run makes customers lose interest in the product or service. Note here that, our cards are debits and transaction values hit cardholder accounts in real time. It is therefore very important that the accounts are protected from unscrupulous persons (fraudsters) in the interest of both the customers and the Bank.

4.0 CONCLUSION

This study was conducted to identify the electronic products and services that customers subscribe and to find

out the benefits and challenges that both the bank and its customers derive from the provision and use of electronic banking products and services respectively. The research first objective was to identify the electronic products and services that customers subscribe to at GCB Bank Ltd. It was revealed that customers subscribe to Internet Banking (Commernet Plus), POS-Point of Sale Device, SMS (Mobile Banking), Automatic Teller Machine (ATM), Telephone Banking, and Debit Cards. The research also brought to light that ATM is the most subscribed to among the electronic products and services as it registered a total of 156 counts. This was followed by SMS (Mobile Banking) with 86 counts and Internet Banking with 26 counts etc. The second objective of the research was to assess the benefits of electronic banking and services to the bank and its customers. On the benefits to the customers in descending order, "Electronic banking saves time" received the maximum number of 110 counts thus 55%, "Electronic banking is convenient to me" registered 88 counts thus 45%, "Electronic banking gives me privacy on my account" had 56 counts thus 30%, "Electronic banking service charges are relatively cheap" had 51 counts representing 27%, "Electronic banking gives me 24/7 access to my account" received 40 counts representing 21%, "I am able to transfer money online" had 32 counts representing 17% and "I get quick response on complaints received had 30 counts representing 16%. The benefits of electronic banking products and service to GCB Bank Ltd were also gathered in the interviews conducted by the study. Management and staff of GCB Bank Ltd admitted that electronic banking products and services save time and cost. This they explained that man-hours which could have been used in serving customers at the banking halls are now used sales prospecting. Also, the banking halls have now been decongested as most customers now wish to transact through electronic means. Admittedly, the pressure on GCB's traditional banking outlets have reduced thereby improving services for the few numbers who still call on the brick and mortar building. The last objective of the study was to find out the challenges that GCB Bank Ltd and customers face by providing and using electronic banking products and services. On the challenges to customers in descending order, "System failure" received 75 counts representing 40%, "Electronic banking instructions are not clear and understandable" had 39 counts representing 21%, "Bank response to customer complaints are not rapid enough" received 38 counts thus 20%, "Frequent bank site downtimes" received 31 counts thus 18%, "Frequent service interruptions" received 27 counts representing 14%, "So many security features delaying access to service" and "Electronic banking products are not user friendly and difficult to use" received 8 counts representing 4%. The challenges and problems the GCB Bank Ltd faces starts with system downtimes due frequent breaks in internet connectivity. Again, telecommunication networks sometimes fail to deliver when customers want to access their accounts through SMS or mobile banking on their phones. Sometimes customers carelessly lose their ATM cards with their PINs while others unknowingly give their internet banking information to hackers online. Again, some customers fail to delete their transaction passwords from their phones. These and more pose great challenge to GCB Bank Ltd as it provides electronic banking products and services. In the end, the study has done enormous justice to the research objectives and admits without reservation that electronic banking forms the new trend of banking in Ghana. The implication of these findings and conclusions are that, GCB Bank Ltd needs to pay attention to influencing positively the negative perceptions customers have about electronic banking products and services especially security issues there by changing the attitudes and behaviours of current and potential users of GCB's electronic products and services. Awareness of GCB Bank Ltd electronic banking products and services is very essential to increase customer knowledge and usage. Since most of the GCB Bank Ltd electronic banking products and services are new in Ghana and particularly to its customers, effective presentations using all forms of media advertising such as leaflets, brochures, web pages etc will be useful to introduce the products and services to its customers and a wider audience. Such advertisement will educate potential users; give information to users about the banks electronic banking products and services etc. These products and services selling and cross selling should be provided by bank front line officers such as tellers, customer service representative and other branch staff at the various branches of the bank. The information should include references to "time saving", "convenience" at anywhere any time, "low cost" as in lower charges and "information availability" in real time. In addition, GCB Bank Ltd should design its web site as an effective delivery channel and offer information beyond banking services to attract other users. It is also essential to provide a well-designed and user friendly electronic banking products and services to attract potential users. The customer should not be required to expend a lot of time, or undergo too great a change in behavior to know and use GCB's electronic banking products and services. A wide publicity underscoring the benefits and ease of use by demonstrating some of the electronic banking products and services should be provided. Regular surveying of customers' responses and opinions of the products and services should be conducted to ensure continuous improvement. Reliability of access when needed is one of the key encouragement factors. Although this reliability partly depends on customers internet availability in the case of the banks' internet banking and mobile phones when it comes to SMS banking, which are excluded from this study, GCB Bank Ltd can enhance

reliability and accessibility by co-operating with ISP's and other service providers to provide good quality internet access or product access. GCB Bank Ltd should also give priority its external users and to separate these external users, that is, those who do not visit the brick and mortar bank building from internal users. Just as reliability is a key element from the customer's perspective, so it is for the security on the product or service and of the systems. A high quality internet infrastructure and other systems support services and IT infrastructure should be provided by GCB Bank Ltd since it is one of the primary requirements for electronic banking. In addition to the lobbying Bank of Ghana, GCB Bank Ltd should also proactively improve its electronic banking products and services in order to increase customer knowledge and usage. For example, electronic banking laws should be promoted by GCB Bank Ltd through Bank of Ghana in order to reduce customer perception of risk. GCB Bank Ltd should target the right customers; persuade people in a good position to use the banks electronic banking products and services. GCB Bank Ltd should widen the features of its debit cards to enable customers to do online transactions on the internet. This would further ease plight of customers of having to visit bank outlets complete their transactions. GCB Bank Ltd Bank Ltd should endeavour to provide value to customers; monitor the historical product and service usage of customers to know their needs, and provide customized products and services to customers.

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