THE EFFECTS OF E-BANKING IN COMMERCIAL BANKS IN KENYA IN PROMOTING INTERNATIONAL BUSINESS

BY

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DECLARATION

This management research project is my original work and has not been presented for examination in any other University.

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D61/P/9043/2001

This management research project has been submitted for examination with my approval as the University Supervisor.

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To the Creator, who is to be honoured for the insight, strength and foresight in conducting this study.

May God bless all abundantly.

DEDICATION

To Almighty God, for taking care of me and for giving me strength to carry out the research project. To my father, mother, brothers & sister, for their support and encouragement.This project been a team effort. I don't know where I would have been without my literary agent, Mr. Mwenda and Dr Yabs who were always by my side when I needed them, teaching me the ropes and being my greatest encouragers.

ABSTRACT

The essential role of banks in international and national economies is to is to connect those who have capital (such as investors or depositors), with those who seek capital (such as individuals wanting a loan, or businesses wanting to grow) which is the general definition of banking (Macesich (2000)).Banks are a fundamental component of the financial system, and are also active players in the financial markets.

With continuing technological innovation and competition among existing banking organisations and new market entrants has allowed for a much wider array of electronic banking products and services for retail and corporate banking customers. Hence the introduction of E-Banking services which include telephone banking, online banking, SMS Banking, Mobile Banking and Interactive TV- Banking.

From the research project the Banks that were offering E-Banking Services only offered limited E-Banking services. The main benefits were also captured which included cost savings, reaching new segments of the population, efficiency, better customer service and satisfaction.

Basing on these facts the study's main objectives was to identify effects of E-banking services on the commercial banks in Kenya on promoting international business while establishing how its adverse effects are mitigated.

The study was conducted on all the commercial bank s operating in Kenya. The data was collected by use of questionnaires with both open and close ended questions. Descriptive statistics was used to analyse the data by way of tables, bar graphs and percentages.

Several risk factors such reputation risk, operation risk, and credit risk, were identified as the most risks faced by banks in providing E- banking services. These risk leads to losses in form of electronic frauds and recommendations to reduce the E- banking risks, such as security enhancement, technology infrastructure, reliable power supply, and proper registration were given.

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INTRODUCTION

1.1 Background of Study

International business is a term used to collectively describe all commercial transactions (private and governmental, sales, investments, logistics, and transportation) that take place between two or more nations (Daniels, Radebaugh & Sullivan (2007). Transaction of economic resources include capital, skills, people etc. for international production of physical goods and services such as finance, banking, insurance, construction etc. A multinational enterprise (MNE) is a company that has a worldwide approach to markets and production or one with operations in more than a country. An MNE is often called multinational corporation (MNC) or transnational company (TNC). Most of the largest corporations operate in multiple national markets. To undertake these operations they need to transfer funds from one market/country to another. To perform these transactions they need the services of international commercial banks. Until recently, in the developing countries most banking transactions were paper–based however with the introduction of electronic payment systems, for example SWIFT, transactions for multinationals have gone electronic. With the new innovations in the technology, both corporate and ordinary individuals can do banking transactions electronically through E-Banking. E-Banking delivery channels include telephone banking, online banking, SMS Banking, Mobile Banking and Interactive TV Banking which however expose the commercial banks and their customers to various risks though there are some benefits.

1.1.1 Promotion of International Business

International trade is the exchange of capital, goods and services across international borders as defined in the dictionary. There are several different models (Stewart 1989) that have been proposed to predict patterns of trade and to analyse the effects of trade policies. These include the Ricardian theory of international trade, Heckscher – Ohlin model, Specific factors theory, New Trade Theory and Gravity model which predicts trade based on the distance between countries and the interaction of the countries' economic sizes. Traditionally trade was regulated through bilateral treaties between two nations. After the Second World-War multilateral treaties like the General Agreement on Tariffs and Trade (GATT) and World Trade Organisation attempted to promote free trade while creating a globally regulated trade structure.

The most common instruments that governments use to promote trade are: subsidies, export financing, foreign trade zones and special government agencies (Procknow). As the world economy becomes more intertwined, international trade becomes increasingly important. As outdated practices, such as tariffs and quotas are re-evaluated, barriers to trade between nations continue to fall and the availability of goods and services from abroad increases, promoting international trade encourages a healthy overall economy.

The essential role of banks in international and national economies is to is to connect those who have capital (such as investors or depositors), with those who seek capital (such as individuals wanting a loan, or businesses wanting to grow) which is the general definition of banking (Macesich (2000)). Banks are a fundamental component of the financial system, and are also active players in the financial markets.

1.1.2 Types of E-Banking Delivery Channels

E- Banking can be referred to as “a viable channel of the delivery of financial services” by an American Banker. E-banking can be defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels. Other E-Banking definitions are systems that enable account access, transact business or obtain information. Access may be through personal computers, personal digital assistants, automated teller machines and telephone. Electronic fund transfer (EFT) refers to the computer- based systems used to perform financial transaction electronically. The term is used for a number of different concepts including electronic payments and card-holder –initiated transactions, where a cardholder makes use of a payment card such as a credit card or a debit card.

1.1.2.1. 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 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 (see below). 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 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, chequebook orders, debit card replacements, change of address, etc. Banks which operate mostly or exclusively by telephone are known as phone banks.

1.1.2.2. **Online Banking(Internet Banking**)

Online banking (or Internet banking), allows customers to conduct financial transactions on a secure website operated by their retail or virtual bank, credit union or building society. Online banking offers features such as: bank statements; electronic bill payment; funds transfer; loan applications and transactions and account aggregation that allows users to monitor all of their accounts in one place. It is widely recognized that online banking provides more revenue per customer and costs less per transaction than any other e-banking channel.

The Internet is a wide area network of computers connected around the world to facilitate data transmission and exchange. Due to the open nature of the Internet, all web-based services are inherently subject to risks such as online theft of your Access Code/User ID/Username, PIN/Password, virus attacks, hacking, unauthorized access and fraudulent transactions. While the Bank has put in place the necessary security practices and measures to safeguard against these risks, the Bank is still unable to guarantee the complete security of your transactions against any attacks from malicious programmers. As an Internet Banking customer, one plays an important role in safeguarding their account information.

1.1.2.3. SMS Banking

SMS banking is a technology-enabled service permitting banks to operate selected banking services over the customers' mobile phone 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 to 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, etc. Another type of push message is a One-time password (OTPs).

1.1.2.4. Mobile Banking

Mobile banking (also known as M-Banking, mbanking, SMS Banking or Wireless Application Protocol (WAP). is a term used for performing balance checks, account transactions, payments etc. via a mobile device such as a mobile phone. Mobile banking is most often performed via SMS or the Internet accessed through the mobile device, but can also use special programs downloaded to the mobile device.

1.1.2.5. Interactive-TV banking

Interactive television is a technique that allows viewers to interact with television content as they view it. It is sometimes called interactive TV, iTV or idTV.As long as the customer subscribes to a satellite or cable television service some banking facilities, such as, checking balances, moving money between accounts, paying bills and setting up overdrafts are made available through a television set. A handful of major banks in the UK have experimented with digital banking services through cable and satellite TV companies.

These new products under E-Banking have brought many implications to commercial banks , corporates and ordinary customers. These products have brought various different risks to commercial banks and customers, issues of costs arise, infrastructure, legal framework, security,computer literacy e.t.c

1.1.3 Commercial Banking in Kenya

The Banking Industry in Kenya is governed by the Companies Act, the Banking Act, the Central Bank of Kenya Act and various prudential guidelines issued by the Central Bank Kenya (CBK). The banking sector was liberalized in 1995 and exchange controls lifted. (PriceWaterhousesCoopers 2010).

As at June 30, 2009 the Kenyan banking sector comprised of 43 commercial banks, 2 mortgage finance companies and 123 foreign exchange bureaus. The sector witnessed an increase in the branch network from 887 branches in June 2008 to 930 in June 2009 representing a growth of 20.5 percent. The ATM outreach as at 2008 was 1335 while in June 2009 the number was 1827.

Players in this sector have experienced increased competition over the last few years resulting from increased innovations among the players and new entrants into the market. The dynamism in the Kenyan banking sector is expected to continue as banks seek new opportunities in the face of an anticipated subdued risk appetite. The reduction in the risk appetite will be a result of the uncertainty surrounding the global financial crises. Though the sector emerged unscathed from the first round effects, there are concerns that the "second" and "third" round effects of the crises could impact the real sector. This may then in turn affect the quality of the loan portfolio held by banks.

Banks are, however, expected to continue to explore new opportunities locally and regionally to maintain the growth momentum. Efforts to increase capital are therefore expected as banks consolidate their market niches and explore new opportunities particularly within the East African Community. Currently there is some documentation on Online Banking and Mobile Banking. Online Banking started earlier on with banks like Barclays Bank in 2006 while mobile banking started in 2009 with Safaricom. However we now have many entrants in mobile banking, online banking, telephone banking, SMS banking and Interactive TV Banking which will be analysed in this study.

1.2 Statement of the Problem

Banks are susceptible to many forms of risk which have triggered occasional systemic crises. These include liquidity risk (where many depositors may request withdrawals beyond available funds), credit risk (the chance that those who owe money to the bank will not repay it), and interest rate risk (the possibility that the bank will become unprofitable, if rising interest rates force it to pay relatively more on its deposits than it is receives on its loans).

Banking crises have developed many times throughout history, when one or more risks have materialized for the banking sector as a whole. Prominent examples include the bank run that occurred during the Great Depression, the U.S Savings and Loan Crises in the 1980s and early 1990s, the Japanese banking crises during the 1990s, and the subprime mortgage crises in the 2000s. This led to a major overhaul of their banking systems (IMF, 1998).

Here in Kenya, we have experienced banking crises since 1986 when two institutions collapsed and a third one in January 1987. In 1989 seven institutions were found in financially distress and drastic corrective action was needed to be taken. A consolidated scheme was crafted whereby a new entity, known as the Consolidated Bank of Kenya Limited was formed to take over the assets and liabilities of the seven institutions include Jimba Credit, Citizen Building Society, Nationwide and Union Bank of Kenya, Kenya Savings and Mortgages Company, Estate Finance Company, Estate Building Society, Business Finance and Home Savings and Mortgages (Business Daily)(2010). The scheme was supervised by Ministry of Finance which also funded the seed capital for the new bank through the Deposit Protection Fund Board. In 1993 alone, eleven institutions were placed under liquidation. Since then seventeen more banks have collapsed and they were put under DPFB.

As commercial banks get into new areas of delivery channels like E-Banking they are very concerned of the new risks they are exposing themselves and their international business customers too as this can create a banking crises.

Many banks have some concerns when the prospects of introducing e-banking services are discussed. Most of these concerns revolve around security controls and e-banking. However, supporters of ebanking claim that while E-banking is not as secure as other conventional banking channels, the E-banking channels is not intended to be used for very high risk transactions. The convenience of executing simple transactions and sending out information or alerting a customer on the mobile phone is often the over-riding factor that dominates over the sceptics who tend to be overly bitten by security concerns (Sachin, 2005).

Studies that have been done on ebanking in Kenya have not concentrated on E-Banking. Otieno (2006) investigated the internet banking technology adaptation among commercial banks in Kenya. Otunya (2006) on the other hand did a survey on consumer adaptation of mobile phone banking in Kenya. Murugami (2008) did a survey on SMS Banking application in commercial banks in Kenya. There is no study so far that has investigated the effects of e-banking in Kenya due to the risks the commercial banks are exposed to and their customers. This study therefore intends to fill this knowledge gap. As such, the study sort to answer the following research questions.

a) The extent of use of E-Banking services by commercial banks in Kenya in promoting international business?

b) The effects of E-Banking products to commercial banks and their international business customers and how are the adverse effects handled?

c) Determine what the government and the regulator could do to reduce the challenges, especially in the technological environment, so as to assist commercial banks provide E-Banking services?

1.3 Research Objectives

This study had two objectives:

1. To identify the effects of E-Banking services on Commercial Banks in Kenya in promoting international business.
2. To establish how the adverse effects are mitigated.

1.4 Importance of the study

The study is important to bank managers, their customers, the researchers as well as academicians. The study highlights the extent of adoption and effects of E-banking services, this helps find out whether it is an acceptable practice in the banking industry. If confirmed this will remove the doubts among other banks and their international business companies and convince them to adopt the facilities and realize the benefits that come with it.

In relation to the customers of the bank, the study will investigate to what extent international business companies use the facilities, hence it will be a guide for other customers that are interested and the banking industry. For example mobile phones are already reaching the unbanked. In South Africa and Botswana, one third of the people who are poor do own a mobile phone or have access to one (Fin Mark Trust 2004; FinMark Trust 2005a).

To researchers and academicians, the study will provide reference material to future researchers on banking and information technology. It will also indicate other areas of possible research like the effectiveness of other IT applications in the banking industry.

The findings can also be used by the Central Bank and the Government of Kenya in policy formulation to control and regulate the operations of the commercial banks and other financial bodies operating in Kenya.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

International trade is the exchange of capital, goods and services across international borders as defined in the Webster dictionary. International trade is in principle not different from domestic trade as the motivation and the behaviour of parties involved in a trade do not change fundamentally regardless of whether trade is across a border or not. The main difference is that international trade is more costly than domestic trade. The reason is that a border typically imposes additional costs than domestic trade. The reason is that a border typically more costly such as tariffs, time costs due to border delays and costs associated with country differences such as language, the legal system or culture. Another difference between domestic and international trade is that factors of production such as capital and labour are typically more mobile within a country than across countries. There are common instruments that governments use to promote trade like subsidies, export financing, foreign trade zones and special government agencies.

Governments often assist new and current exporting firms by providing relief in the form of financing for their export side of the business. At sometimes the government will make loans to the company in question, offering a lower interest rate than what is offered in the market. One form of government financing is a loan guarantee, which provides for the government to guarantee payments to any companies exporting to a foreign purchaser, and only if the foreign buyer defaults on payment. In Canada, the Export Development Council (EDC) oversees government assistance in exporting.

Kenya is largely a trade deficit country. The negative balance of trade occurs because the country's exports are vulnerable to both international prices and the weather conditions. Since independence, Kenya has enjoyed close international relations, particularly with the western countries. It is also a member of several regional trade blocs, such as the COMESA (Common Market for Eastern and Southern Africa) and the EAC (East African Community). These blocs are a key components of **Kenya's trade** volumes. Below is a breakdown of Kenya's imports and exports from 2002 to 2009.

Exports: Selected Countries of Destination (Shillings billion)

	U.K	**Germany**	**USA**	**Netherland**	**Pakistan**	**France**	**Egypt**	**Belgium**	**Other**	**Total**
2002	19.6	4.4	3.4	11.0	8.3	2.3	6.8	2.3	65.6	169.3
2003	21.3	5.3	2.8	14.1	9.2	3.1	5.5	2.3	74.2	183.1
2004	22.2	4.5	4.2	16.9	11.1	3.6	6.8	2.5	88.5	212.6
2005	23.3	5.2	4.5	18.3	14.1	5.1	8.8	2.9	99.2	247.9
2006	27.2	4.6	17.7	19.6	14.5	3.8	9.9	2.1	102.4	247.6
2007	28.8	6	19.2	21.9	13.5	4	8.9	2.6	113.9	274.6
2008	37.9	6.1	20.5	26.2	13.9	4.8	15.5	2.8	143.8	342.9
2009	38.5	7.3	17.4	26.3	15.2	4.2	11.9	3.4	144.4	344.9

Exports. Selected countries of Destination (Africa) (Shillings billion)

	UG	**TZ**	**Zambia**	**Rwanda**	**Zimbabwe**	**Ethiopia**	**Somalia**	**SA**	**DRC**	**Others**	**Total**
2002	31.3	14.2	1.7	4.3	0.4	2	4.6	0.5	4.9	11	81.7
2003	30.7	14.6	1.6	6	0.24	1.6	3.7	0.9	5.4	14.3	84.6
2004	35.9	16.5	2.3	5.8	0.27	2.	3.2	1.5	7.4	16.6	98.6
2005	42.4	19.9	2.7	7.3	0.1	2.5	4.8	2.1	9.8	19.4	120
2006	27.8	18.3	3.8	4.8	0.12	3.6	7.5	2.4	7.6	22.1	107
2007	33.6	22.3	4.9	5.8	0.2	3.4	8.3	2.3	8.3	25.1	123
2008	42.3	29.1	5.5	9	0.18	4.4	12.9	3.6	9.9	30	162
2009	46.2	30.1	4.8	9.5	0.4	4.2	11.2	3.6	11.3	29.4	162.7

Direct Imports : Selected Countries of Origin (Shillings million)

	U.K	USA	Germany	Italy	U.A.E	Saudi Arabia	France	India	S.A	Japan	All Others	Total
2002	21,138	14,648	12,941	4,146	27,087	13,810	14,554	13,810	14,554	17,242	107,003	255,692
2003	19,621	14,388	10,961	5,840	31,917	24,305	8,957	14,811	23,303	18,610	109,108	281,824
2004	27,131	14,401	13,129	7,146	41,819	31,529	12,193	22,635	34,629	24,141	132,000	360,812
2005	56,016	42,582	15,734	7,857	62,129	27,591	13,935	24,287	42,301	23,008	149,054	464,495
2006	34,364	24,724	18,913	12,083	77,496	26,448	10,608	37,657	33,849	29,418	221,309	526,870
2007	29,423	44,527	22,172	13,229	89,468	17,597	16,491	56,851	35,361	41,143	238,859	605,121
2008	27,976	27,549	26,946	11,880	113,810	25,879	16,390	90,531	46,691	44,840	334,250	766,743
2009	36,885	50,054	22,728	13,888	89,710	27,522	15,886	83,241	70,560	48,857	328,760	788,096

Imports from African Countries (shillings million)

	UG	TZ	Zambia	Egypt	S.A	Zimbabwe	Others	Total
2002	664	803	345	2,865	14,554	1,511	5,599	26,341
2003	1,023	1,368	390	4,855	23,303	1,493	4,867	37,299
2004	999	1,745	645	6,426	34,629	478	7,214	52,136
2005	1,371	2,869	809	6,188	42,301	324	7,410	61,272
2006	996	4,449	1,349	8,205	33,849	205	14,279	63,333
2007	5,979	6,678	2,028	11,170	35,361	435	10,412	72,063
2008	5,221	7,265	1,854	10,851	46,691	156	14,679	86,716
2009	4427	7808	1571	9,598	70560	602	10,103	104672

Agricultural productivity is central to Kenya's export industry. More than 75% of the population is engaged in agriculture and allied activities, which contribute almost 25% to the national production. Horticultural produce and tea are the major items of export for

Kenya. In 2006, the combined share of these two products was 10 times higher than the share of the other export items. The country has subsistence petroleum production, which is consumed internally and exported to neighboring countries. Kenya has signed an MoU (Memorandum of Understanding) with China regarding oil exploration in the country. Till January 2010, no oil has been found.

Apart from horticulture and tea, other major items of export are coffee, fish and cement. In 2009, Kenya's exports grossed over US$4.9 billion. The UK is the largest export partner of Kenya, accounting for more than 10% of the total export volumes. It is followed by the Netherlands, Uganda, Tanzania, the US and Pakistan.

Kenya's imports include machinery, transport equipments, motor vehicles, metals, plastics and electrical equipments. India and the UAE are the largest import partners for Kenya. In 2009, both countries accounted for more than 11% of the total import volume. Other major import partner countries are China, Saudi Arabia, South Africa, Japan and the US (source economic watch) Most commercial banks in Kenya serve different corporate customers in their various sectors. With the study we will be able to identify whether E-Banking has improved international business.

With improvement with the technological infrastructure globally banking organisations have been delivering electronic services to consumers and businesses remotely for years. Electronic funds transfer, including small payments and corporate cash management systems, as well as publicly accessible automated machines for currency withdrawal and retail account management, are global fixtures. However, the increased world-wide acceptance of the internet as a delivery channel for banking products and service provides new business opportunities for banks as well as service benefits for their customers.

Continuing technological innovation and competition among existing banking organisations and new market entrants has allowed for a much wider array of electronic banking products and services for retail and wholesale banking customers. These include traditional activities such as accessing financial information, obtaining loans and opening deposit accounts, as well as relatively new products and services such as electronic bill payment services, personalised financial portals, account aggregation and business to business market places and exchanges.

E- Banking has been referred to as “a viable channel of the delivery of financial services” by an American Banker. E-banking can be defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels. Other E-Banking definitions are systems that enable account access, transact business or obtain information. Access may be through personal computers, personal digital assistants, automated teller machines and telephone. Electronic fund transfer (EFT) refers to the computer- based systems used to perform financial transaction electronically. The term is used for a number of different concepts including electronic payments and card-holder –initiated transactions, where a cardholder makes use of a payment card such as a credit card or a debit card.

EFT transactions require authorisations and a method to authenticate the card and the card holder. Whereas a merchant may manually verify the cardholder’s signature, EFT transaction require the card holder‘s PIN to be sent online in an encrypted form for validation by the card issuer. EFT transactions are activated during e-banking procedures.

Various methods of e-banking include telephone banking, online banking (internet), short message service (SMS) banking, mobile banking and interactive TV banking.

Electronic banking can be defined as the automated delivery of new and traditional banking products and services to customers through electronic, interactive communication channels. E-banking includes the systems that enable institutions customers, individuals and businesses, to access accounts, transact business, or obtain information on products and services through a public or private network, including the internet. Customers access e-banking services through electronic device, such as a personal computer (PC), Personal Digital Assistant (PDA), automated teller machine or Touch Tone telephone. In order for customers to use their banks online services they need to have a personal computer and internet connection. Their personal computer becomes their virtual banker who will assist them in their banking errands. Examples of e-banking services that customers can get online are attaining information about accounts and loans, conducting transfers amongst different accounts, even between external banks, paying bills, buying and selling stocks and bonds by depot, buying and selling fund shares and electronic brochures.

2.2 Benefits of E-Banking Products/Services

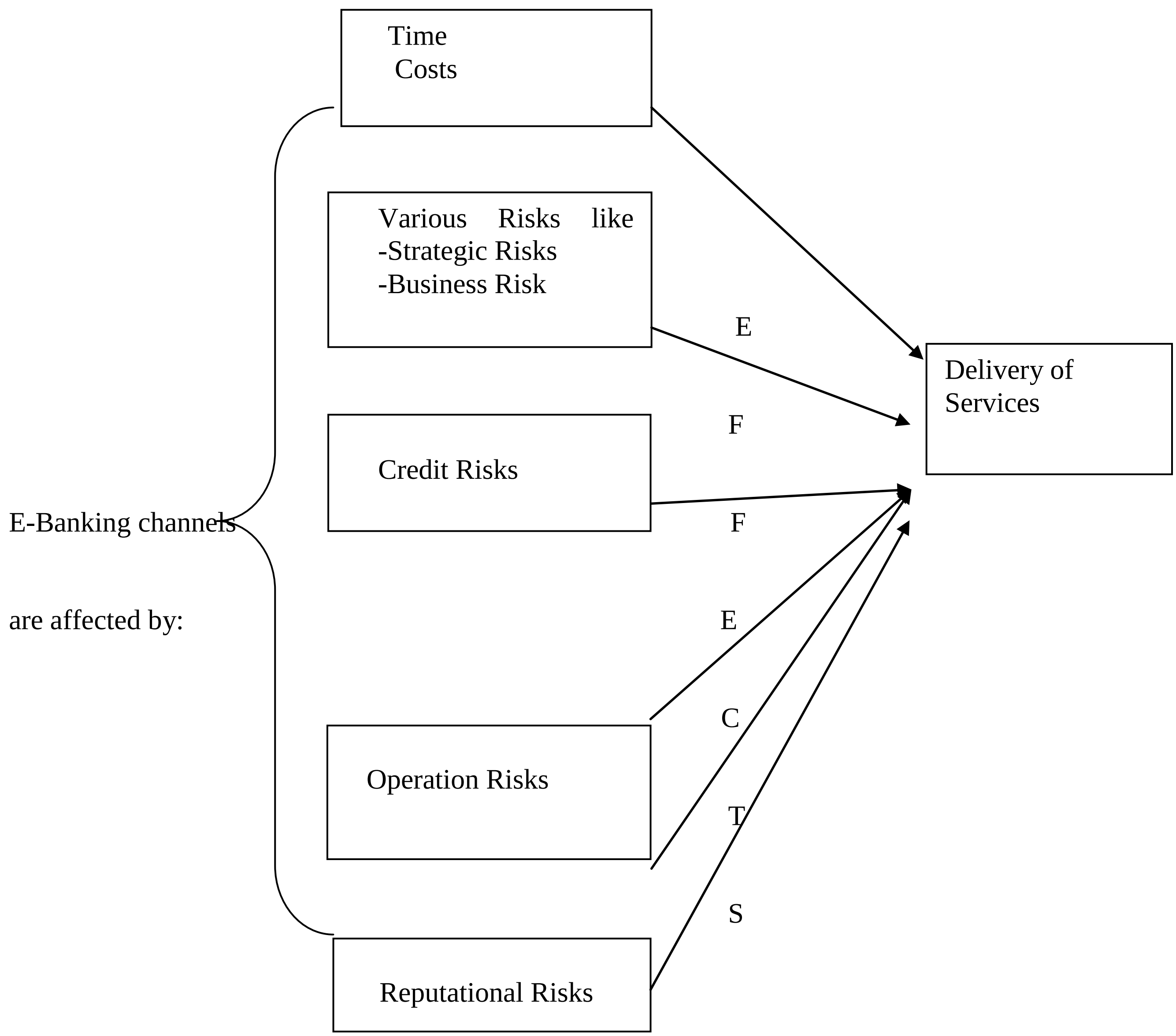
Internet banking offers many benefits to banks and their customers. The main benefits to banks are cost savings, reaching new segments of the population, efficiency, enhancement of the bank's reputation and better customer service and satisfaction. (Brogdon,1999; Jayawardhena and Foley, 2000).

Sheshunoff (2000) says further that the single most important driving force behind the implementation of full internet banking by banks is the need to create powerful barriers to customer existing. He argues that once a customer moves to full-service Internet banking, the likelihood of that customer moving to another financial institution is significantly diminished. The main reasons for this behaviour internet banking (transact wherever and whenever it suits you-24/7), access your account information and transactions, make electronic funds transfers, view, download and print statements, view upto date daily exchange rates, transfer funds between your personal accounts, easy set-up, user-friendly and secure (the system uses PIN and phone number combinations to ensure maximum security), 24- hour access-no more space and time constraints, user support from highly trained and experienced customer service teams, internet banking has the advantage that the customer avoids travelling to and from the bank branch.

2.3 Conceptual Framework

To avoid any banking crises commercial banks have to analyse all the new types of risks and costs they will be exposed to as they deliver services using new channels and how they will be able to control them. This can be better illustrated as below:

Independent Variables Dependent Variable



Liquidity, interest rate, price risks

The researcher would like to find out the effects of e-banking in terms of risks and costs to commercial banks and customers and whether there is any cost-saving. The Various Risks faced by Commercial Banks when they are involved in E-Banking include:

2.3.1 Strategic Risk

A financial institution ‘s board and management should understand the risks associated with e-banking services and evaluate the resulting risk management costs against the potential return on investment prior to offering e-banking services. Poor e-banking planning and investment decisions can increase a financial institution’s strategic risk.On strategic risk E-banking is relatively new and, as a result, there can be a lack of understanding among senior management about its potential and implications. People with technological, but not banking, skills can end up driving the initiatives. E-initiatives can spring up in an incoherent and piecemeal manner in firms. They can be expensive and can fail to recoup their cost. Furthermore, they are often positioned as loss leaders (to capture market share), but may not attract the types of customers that banks want or expect and may have unexpected implications on existing business lines.

Banks should respond to these risks by having a clear strategy driven from the top and should ensure that this strategy takes account of the effects of e-banking, wherever relevant. Such a strategy should be clearly disseminated across the business, and supported by a clear business plan with an effective means of monitoring performance against it. Strategies can be identified using the BCG Matrix, the Ansoff Model which suggests strategies like market penetration, product development, market development and diversification.

Management should understand the risks and weigh costs against potential investment returns. This involves adequate management information systems, cost involved in monitoring and vendor management, design, delivery and pricing to attract customer's demand, retention of documents-admissible and enforceable in litigation, staffing-levels and expertise, competition and adequacy of technical, operational, compliance or marketing support

2.3.2 Business Risks

Business risks are also significant. Given the newness of e-banking, nobody knows much about whether e-banking customers will have different characteristics from the traditional banking customers. They may well have different characteristics e.g."I want it all and I want it now." This could render existing score card models inappropriate, thus resulting in either higher rejection rates or inappropriate pricing to cover the risk. Banks may not be able to assess credit quality at a distance as effectively as they do in face to face circumstances. It could be more difficult to assess the nature and quality of collateral offered at a distance, especially if it is located in an area the bank is unfamiliar with (particularly if this is overseas). Furthermore as it is difficult to predict customer volumes and the stickiness of e-deposits (things which could lead either to rapid flows in or out of the bank) it could be very difficult to manage liquidity.

Of course, these are old risks with which banks and supervisors have considerable experience but they need to be watchful of old risks in new guises. In particular risk models and even processes designed for traditional banking may not be appropriate.

2.3.3 Operation Risk

Banks face three main types of operations risk include volume forecasts, management information systems and outsourcing. Accurate volume forecasts have proved difficult - One of the key challenges encountered by banks in the Internet environment is how to predict and manage the volume of customers that they will obtain. Many banks going on-line have significantly misjudged volumes. When a bank has inadequate systems to cope with demand it may suffer reputational and financial damage, and even compromises in security if extra systems that are inadequately configured or tested are brought on-line to deal with the capacity problems.

The second type of operations risk concerns management information systems. Again this is not unique to E-banking. Banks venture into new areas without having addressed management information issues. Banks may have difficulties in obtaining adequate management information to monitor their e-service, as it can be difficult to establish/configure new systems to ensure that sufficient, meaningful and clear information is generated. Such information is particularly important in a new field like e-banking. Banks are encouraged to ensure that management have all the information that they require in a format that they understand and that does not cloud the key information with superfluous details.

Finally, a significant number of banks offering e-banking services outsource related business functions, e.g. security, either for reasons of cost reduction or, as is often the case in this field, because they do not have the relevant expertise in-house. Outsourcing a significant function can create material risks by potentially reducing a bank's control over that function. Risks increase with an increase in the complexity of the product or service. Hence the need for effective policies and procedures, Internal controls through segregation of duties, dual controls and reconcilements increasing security controls.

Security issues are a major source of concern for everyone both inside and outside the banking industry. E-banking increases security risks, potentially exposing hitherto isolated systems to open and risky environments. Security breaches essentially fall into three categories; breaches with serious criminal intent (e.g. fraud, theft of commercially sensitive or financial information), breaches by 'casual hackers' (e.g. defacement of web sites or 'denial of service' - causing web sites to crash), and flaws in systems design and/or set up leading to security breaches (e.g. genuine users seeing / being able to transact on other users' accounts). All of these threats have potentially serious financial, legal and reputational implications.

2.3.4 Reputational Risks

Reputational risk is considerably heightened for banks using the Internet. For example the Internet allows for the rapid dissemination of information which means that any incident, either good or bad, is common knowledge within a short space of time. Internet rumors can easily become self-fulfilling prophecies. The speed of the Internet considerably cuts the optimal response times for both banks and regulators to any incident. Banks must ensure their crisis management, particularly PR, processes are able to cope with Internet related incidents (whether they be real or hoaxes).

Any problems encountered by one firm in this new environment may affect the business of another, as it may affect confidence in the Internet as a whole. There is therefore a risk that one rogue e-bank could cause significant problems for all banks providing services via the Internet. This is a new type of systemic risk and is causing concern to e-banking providers. Overall, the Internet puts an emphasis on reputational risks. Never before has the bank's shop window (i. e its site) been so important.

One last reputational risk will be familiar to us all. That is whether the products being sold over the internet are being marketed in such a way that the bank will be protected against future charges of mis-selling. As in the physical, so in the virtual world. Banks need to be sure that customers' rights and information needs are adequately safeguarded and provided for. Regulatory and legal challenges include uncertainty over legal jurisdiction, delivery of disclosures/notices required by law, retention of required compliance documentation for online advertising, establishment of legally binding electronic agreements, loss of trust due to unauthorized access, disclosure or theft of confidential information, identity theft, failure to deliver on marketing claims, insufficient availability, customer complaints and inability of help-desk to resolve and confusion related to web linking.

2.3.5 Credit Risk

Generally, a financial institution's credit risk is not increased by the mere fact that a loan is originated through an e-banking channel. However, management should consign additional precautions when originating and approving loans electronically, including assuring management information systems effectively track the performance of portfolios originating through e-banking channels. The following aspects of on-line loan origination and approval tend to make risk management of the lending process more challenging. If not properly managed, these aspects can significantly increase credit risk.

Verifying the customer's identity for on-line credit applications and executing an enforceable contract, monitoring and controlling the growth, pricing, underwriting standards, and ongoing credit quality of loans originated through e-banking channels, monitoring and oversight of third parties doing business as agents or on behalf of the financial institution(for example ,an internet loan origination site or electronic payment processor), valuing collateral and perfecting liens over a potentially wider geographic area, collecting loans from individuals over a potentially wider geographic area and monitoring any increased volume of, and possible concentration in, out of area lending.

2.3.6 Liquidity, Interest Rate, Price/Market Risks.

Funding and investment – related risks could increase with an institution's e-banking initiatives depending on the volatility and pricing of the acquired deposits. The Internet provides institutions with the ability to market their products and services globally. Internet-based advertising programs can effectively match yield-focused investors with potentially high yielding deposits. But Internet- originated deposits have the potential to attract customers who focus exclusively on rates and may provide a funding source with risk characteristics similar to brokered deposits. An institution can control this potential volatility and expanded geographic reach through its deposit contract and account opening practices, which might involve face- to –face meetings or the exchange of paper correspondence. The institution should modify its policies as necessary to address the following e-banking funding issues:

Potentially increase in dependence on brokered funds or other highly rate-sensitive deposits, potential acquisition of funds from markets where the institution is not licensed to engage in banking, particularly if the institution does not establish, disclose, and enforce geographic restrictions, potential impact of loan or deposit growth from an expanded Internet market, including the impact of such growth on capital ratios and potential increase in volatility of funds should e-banking security problems negatively impact customer confidence or the market's perception of the institution.

For the bank customer they are exposed to the following risks like online theft of their access code/user ID/Username, PIN/Password, virus attacks, hacking, unauthorised access and fraudulent transactions.

2.4 Impact of E-Banking on Traditional Services.

One of the issues currently being addressed is the impact of e-banking on traditional banking players. After all, if there are risks inherent in going into e-banking there are other risks in not doing so. It is too early to have a firm view on this yet. Even to practitioners the future of e-banking and its implications are unclear. It might be convenient nevertheless to outline briefly two views that are prevalent in the market. The view that the Internet is a revolution that will sweep away the old order holds much sway. Arguments in flavor are as follows:

E-banking transactions are much cheaper than branch or even phone transactions. This could turn yesterday’s competitive advantage - a large branch network - into a comparative disadvantage, allowing e-banks to undercut bricks-and-mortar banks. This is commonly known as the "beached dinosaur" theory.

E-banks are easy to set up so lots of new entrants will arrive. ‘Old-world’ systems, cultures and structures will not encumber these new entrants. Instead, they will be adaptable and responsive. E-banking gives consumers much more choice. Consumers will be less inclined to remain loyal.

E-banking will lead to an erosion of the ‘endowment effect’ currently enjoyed by the major UK banks. Deposits will go elsewhere with the consequence that these banks will have to fight to regain and retain their customer base. This will increase their cost of funds, possibly making their business less viable. Lost revenue may even result in these banks taking more risks to breach the gap.

Portal providers, are likely to attract the most significant share of banking profits. Indeed banks could become glorified marriage brokers. They would simply bring two parties together – e.g. buyer and seller, payer and payee.

Traditional banks will find it difficult to evolve. Not only will they be unable to make acquisitions for cash as opposed to being able to offer shares, they will be unable to obtain additional capital from the stock market. This is in contrast to the situation for Internet firms for whom it seems relatively easy to attract investment.

There is of course another view which sees e-banking more as an evolution than a revolution. E-banking is just banking offered via a new delivery channel. It simply gives consumers another service (just as ATMs did). Like ATMs, e-banking will impact on the nature of branches but will not remove their value. Experience in Scandinavia (arguably the most advanced e-banking area in the world) appears to confirm that the future is 'clicks and mortar' banking. Customers want full service banking via a number of delivery channels. The future is therefore 'Martini Banking' (any time, any place, anywhere, anyhow).

Traditional banks are starting to fight back by arguing that t he start-up costs of an e-bank are high. Establishing a trusted brand is very costly as it requires significant advertising expenditure in addition to the purchase of expensive technology (as security and privacy are key to gaining customer approval).

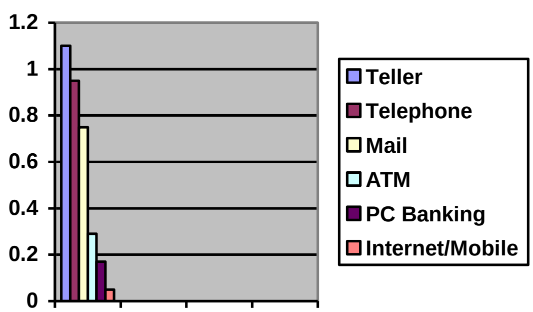
E-banks have already found that retail banking only becomes profitable once a large critical mass is achieved. Consequently many e-banks are limiting themselves to providing a tailored service to the better off.

Nobody really knows which of these versions will triumph. This is something that the market will determine. However, bank supervisors will need to pay close attention to the impact of e-banking on the traditional banks, for example by surveillance of strategy, customer levels, earnings and costs, advertising spending, margins, funding costs and merger opportunities and threats both locally and abroad.

The drive towards e-banking is due to rapidly changing customers' needs and preferences, competitive forces and product differentiation strategies, enhancement of customer relationship management and pressure to reduce transactional and operation costs and pass the benefits to customers.

2.3.1 Costs and Time

Transaction cost per distribution channel according to Awuoundo (2006) for Commercial Bank of Africa is as shown below:



The huge potential of technological innovation can be analysed by analysing the cost of the distribution channel in US Dollars. Internet /Mobile is the cheapest distribution channel as per the diagram. E-Banking services are more time efficient.

According to Waterfied (2004) the following factors limit the growth of E-Banking channels. Majority of the customer shy away from E-Banking services due to security concerns, Human face- According to some analyst, customers still value personalized and responsive services from their bankers, Ignorance- On average 30% of bank customers do not even know whether their bank provide online services, Computer illiteracy among majority of the population is still significantly high especially in Africa, Lack of trained staff- As banks use these e-banking channels they need to train their staff on these new services, Poor and /or lack of technological infrastructure and reliable power supply, Lack of proper legislation governing e-transactions and Preference to paper money, as opposed to “virtual” cash in transactions.

This study seeks to identify whether it is cost effective for commercial banks and bank customers to get involved in E-Banking products vis a vis the risks exposures especially in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

The study was carried out through a survey. A survey is the collection of data from a given population for the purpose of analysis of a particular issue. Data is often collected from only a sample of a population and is known as a sample survey (Kibera and Waruingi, 1998). This research design is of descriptive nature because of the nature of data that is collected. It was most appropriate for the study because of the number of commercial banks involved in E-Banking channels of providing banking services are few and standardized questionnaire was administered to them.

3.2 Population of study

The population of study was all the commercial banks operating in Kenya. According to the Central Bank of Kenya, the industry's regulator, there are 43 commercial banks as at June, 2009 (appendix ll). However, some of the commercial banks were not considered for the study because they were not involved in E-Banking channels of providing banking services as per the list attached. The questionnaire was addressed to risk managers of commercial banks since they were the ones who were the aware of the various risks the bank is exposed to.

3.3 Data Collection

The data to be collected was mostly quantitative data. This data was collected using semi-structured questionnaire organized in three parts. Part A focused on the general organizational bio data. Part B focused on e-banking services in Kenya while part C focused on the risks faced by commercial banks for undertaking e-banking services. The questionnaires were administered through mail or the “drop and pick” method where applicable. The study targeted risk managers of the commercial banks. They were considered to be useful in availing sufficient information regarding the banks’ risk management techniques and sustaining their technological innovation. The study also used secondary information from previous reports from the Central Bank about E-Banking risks affecting commercial banks.

3.4 Data Analysis

The data collected from the field was analyzed and processed into meaningful and relevant information. Analysis of data was guided by the objectives of the study. Because of the descriptive nature of the data collected, the study used descriptive statistics to analysis the data by way of tables, bar graphs and percentages. The tables were used for organizing data obtained and facilitate working out percentages. Content analysis technique was used to process secondary and qualitative data for the study. Qualitative data was analyzed by comparison to findings already known and conclusions made depending on how the findings relate to the research questions.

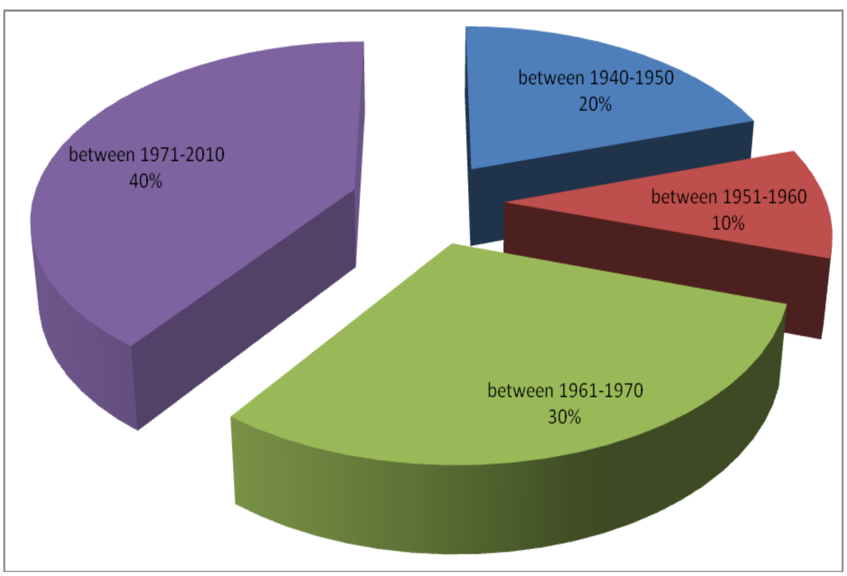
CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.0 Introduction

This chapter discusses data analysis and interpretation. The analysis was of 10 commercial banks who responded by filling in the questionnaires out of the 12 commercial banks that uses internet banking in Kenya. This makes 83% response rate. Data has been presented using the frequencies and percentages while the open ended questions have been analyzed basing on their content. Secondary data has also been analyzed.

Figure 1: Year of the Bank's Incorporation



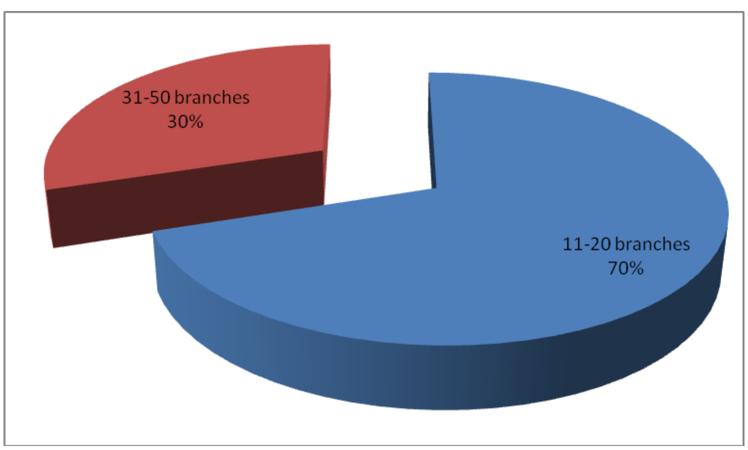
The study in this area sought to find out the year when the bank started or rather the year of incorporation. From the study it is noted that 40% of the banks from which the study was conducted were started in the years between 1971-2010, 10% i.e. only one bank was started in the years between 1951-1960.

Table 1: Ownership Structure

	Frequency	Percentage
Privately owned	5	50.0
Both government and privately owned	3	30.0
Both foreign and locally owned	2	20.0
Total	**10**	**100.0**

From table 1, on the ownership of the banks, it is noted that a majority that is 50% of the banks in study, were privately owned. This was followed by a response of 30% o0f those owned by both the government and private investors in Kenya. A lower but a considerable percentage of 20% was a response for the banks which are both foreign and locally owned.

Figure 2: Size of The Bank In Terms Of The Number Of Branches



The study in this area as indicated by table 3 shows that 70% of the banks analyzed in the study had between 11 and 20 branches. However 30% was an indication of the banks that had 31-50 branches.

Table 2: Size of the Bank in Terms of the Number of ATMs

	Frequency	**Percentage**
0-10 branches	2	20.0
11-20 branches	3	30.0
31-50 branches	2	20.0
above 50	3	30.0
Total	**10**	**100.0**

From table 2, it is deduced that out of the 10 surveyed banks, 30% had 11-20 ATM branches which can offer ATM services. The table also indicates another 30% of the bank with above 50 braches offering ATMs.20% of the banks had below ATMs branches, which was similar percentage o r an equal number of those having between 31-50 braches with those machines

Table 3: Size of the Bank in Terms of the Number of Employees

	Frequency	**Percentage**
Below 1500	8	80.0
Between 1501-3000	2	20.0
Total	**10**	**100.0**

The size of the bank in terms of the number of employees, indicated that a great majority 80% of the bank surveyed had the number of employees below 1500, while the rest of the percentage i.e. 20 indicated the banks with the number of employees between 1501-3000.This is indicated by table 3.

Table 4: Scope of the Bank Operation

	Frequency	Percentage
local (within Kenya)	5	50.0
Regional (within East Africa)	3	30.0
Global (Africa and beyond)	2	20.0
Total	**10**	**100.0**

Out of the response, it is indicated in the table 4 that a majority of the banks 50% carries their business within Kenya or rather they are locally based. This is followed by 30% indication of those whose operation is within East Africa, while 20 % indicated those whose operation was globally based-(Africa and beyond)

Table 5: E-Banking Services

Service	Yes	No	Total
Whether online banking as E-banking service is offered by the Bank	100%	0	100
Whether Mobile Banking as E-banking service is offered by the Bank	100%	0	100
Whether SMS Banking as E-banking service is offered by the Bank	100%	0	100
Whether TV- interactive as E-banking service is offered by the Bank	100%	0	100
Whether Telephone Banking as E-banking service is offered by the Bank	80%	20%	100
Whether ATMs as E-banking service is offered by the Bank	100%	0	100

From table 5 all the respondents agreed that online banking, mobile banking, SMS banking TV-interactive banking and ATMs were offered by the banks;80% of the respondents indicated that telephone banking was being offered, while its only in 20% where the service was not being offered.,

Table 6: Use of Other Agents Other Than Banking Services

	Yes	**No**	**Total**
Whether the bank uses mobile service providers to conduct any of its services	100	0	100
Whether the bank uses of chain stores to conduct any of its services	20	80	100
Whether the bank uses retailers to conduct any of its services	100	0	100

From table 6, all the respondents agreed that mobile service providers, and retailers aided the banks in conducting its services, however, only 20% of the respondents agreed that chain stores are being used by the bank to conduct is operation

Table 7: The number of international business companies (customers) transacting using E-Banking

	Frequency	**Percentage**
Between 1000-5000	7	70.0
Over 20000	3	30.0
Total	**10**	**100.0**

From table 7, 70% of the respondents indicated that their respective banks had between 1000-5000 number of the international business companies (customers) transacting using E-banking, The rest of the respondent 30% indicated that they had over 20000 customers

Table 8: Volume of Transactions in Ksh Using E-Banking

	Frequency	**Percentage**
Between 50-100 million	5	50.0
Between 100-200 million	2	20.0
Between 200-500 million	1	10.0
Over 500 million	2	20.0
Total	10	100.0

From table 8, it is indicated that the majority of the respondents -50% stated that their respective banks handle's between 50-100 million in Ksh in the transaction using E-banking delivery channels. How ever 10% indicated a volume of between 200-500 million and another 20% indicating a volume of over 500 million in the transaction using E-banking channels.

Table 9: How the cost of providing banks using E-Banking channels has reduced the transaction costs when compared to tradition methods

	Frequency	**Percentage**
Between 0.1M to 0.5M	2	20.0
Between 0.5M to 1.0M	3	30.0
Between 1.0 to 2M	4	40.0
Between 2 to 4 .0M	1	10.0
Total	**10**	**100.0**

This table gives the result on the response on how the cost of providing banks using E-Banking channels have reduced the transaction costs when compared to tradition methods.40% of the respondents from the surveyed banks indicated that these costs had reduced to between 1 to 2million.30% indicated that the volume had reduced to between 0.5 to 1 million while 20% and 10% indicating that the cost had reduced to between 0.1 to 0.5 million and to between 2 to 4 million n respectively, Hence they all agreed that charges especially to customers using E-banking channels have reduced

Table 10: The Level Of Staff Knowledge About E-Banking Services That Have Been Developed

	Frequency	**Percentage**
Know how it functions	4	40.0
can sell it	6	60.0
Total	**10**	**100.0**

The table (10) gives the results of the respondents on the level of staff knowledge about e-banking services that have been developed.60% of the respondents indicated that indeed the staff was aware of this service that, they can sell it. However 40% of the respondents said that the know how the service functions

Table 11: Awareness Creation about E-Banking

	Yes	**No**	**Total Percentage**
Whether flyers create awareness to customers about the E-banking services that the bank is offering	100	0	100
Whether TV/Radio create awareness to customers about the E-banking services that the bank is offering	80	20	100
Whether Newspaper create awareness to customers about the E-banking services that the bank is offering	100	0	100
Whether social Events create awareness to customers about the E-banking services that the bank is offering	70	30	100

The respondents as indicated by table 11 agreed that flyers and News paper create awareness to customers about E-banking. This is indicated by a percentage of 100.However 80percent and 70% said that TV/radio and social events create respectively awareness to, customers on E-banking.

Table 12: Factors on Customer Satisfaction Improvement due to the use of E-Banking

	Not at All	Less Extent	Moderate Extent	Large Extent	Very Large Extent	Mean	STDEV
How efficiency has improved customer satisfaction due to the use of E-banking	0	0	0	90	10	4.1	0.300
How convenience has improved customer satisfaction due to the use of E-banking	0	0	0	40	60	4.6	0.490
How communication on complaints has improved customer satisfaction due to the use of E-banking	0	10	20	70	0	3.6	0.663
How personalized service has improved customer satisfaction due to the use of E-banking	0	0	0	50	50	4.5	0.500
How cost-benefit analyses has improved customer satisfaction due to the use of E-banking	0	10	0	80	10	3.9	0.700
The extent in Kenya Shillings to which the E-banking products has cut down the bank transaction cost	0	0	0	60	40	4.4	0.490

From, table 12, it is noted that the level of customer satisfaction has greatly improved due to use of E-banking service in convenience category. This is; indicated by a mean score of 4.6.The respondents also feels that the level; of satisfaction in personalized service, efficiency, cost-benefit analyses, and communication on complaints have also been improved due to the use of E-banking in that order. This is indicated by mean scores of 4.5, 4.1, 3.9 and 3.6 respectively. The respondents felt that E-banking products have to a large extent cut down the banks transaction costs as compared to other service delivery channels. This factor gave a mean score of 4.4 according to the respondent's response.

Figure 3: Factors on Customer Satisfaction Improvement due to the use of E-Banking

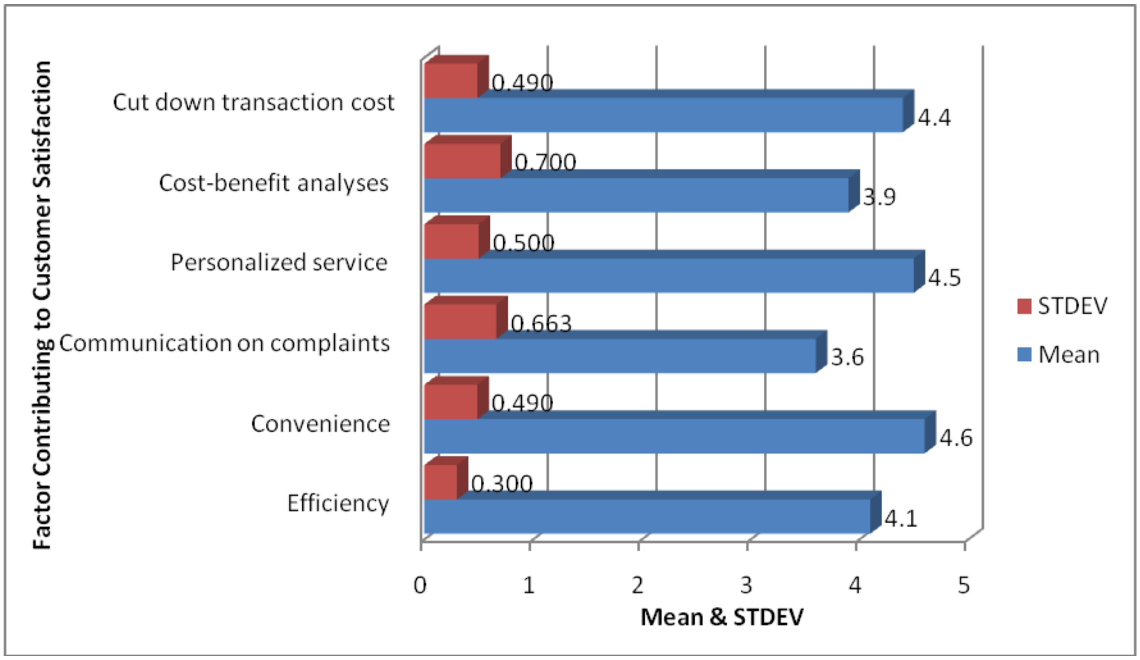


Table 13: whether the Use of the E-banking has reached the Level of International Business

	Frequency	Percentage
Yes	8	80.0
No	2	20.0
Total	**10**	**100.0**

This table shows that half of the people 80%agreed that the use of the E-banking has reached the level of international business while the rest 20% denies this

Table 14: Risks Exposures Faced by the Bank in Providing E-Banking Services

	Yes (%)	**No (%)**	**Total percentage**
Whether the bank faces strategic risk in providing E-banking services	20	80	100
Whether the bank faces legal risk in providing E-banking services	60	40	100
Whether the bank faces reputation risk in providing E-banking services	90	10	100
Whether the bank faces operation risk in providing E-banking services	90	10	100
Whether the bank faces credit risk in providing E-banking services	90	10	100
Whether the bank faces liquidity, interest rates, price/market risks in providing E-banking services	50	50	100

The table (14) depicts that reputation risk, operation risk and credit risk, as the most risks faced by the bank in providing E-banking service. Each of these had a response of 90% from various banks. However strategic risk had a response of 20% (agreement) while the percentage of the respondents who disagreed was 80%

Table 15: Extent to which the Government Regulations Influence Provision Of Banking Services

Extent	**Frequency**	**Percentage**
Not at all	0	0
Less Extent	0	0
Moderate Extent	2	20
Large Extent	4	40
Very Large Extent	4	40
Total	**10**	**100**

This table indicates that the respondent from various banks believes to a large extent and to a very large extent that government regulations influences provision of bank services. This is indicated by 40% on each factor. However only 20 percent of the respondents stated that government regulations; to a moderate extent influences provision of banking services.

Qualitative Analysis

The study identified lack of data on the various figures where E-banking services were not available. Another response indicated very low figures of less than Ksh 20 million. The study displays different tariffs for E-banking services ranging from ksh25 for SmS banking, Ksh25 for mobile banking, Ksh100-120 for online banking; while other figures such as Ksh 100 for telephone banking Ksh15 for Sms banking and Ksh 5 for mobile banking were stated. Other results indicated charges for SmS banking to low as up to Ksh 1.The respondents indicated a range of 30-60% transaction cut down when using E-banking. A range of figures on the level of international business for the years between 2007 to 2009 was given as 5 to 10 million in a periodical order. The results indicated a response of between 1- 10 million losses due to the various risks, hence citing of measures varied from securing banks websites, training and efficiency in improving security issues.

Challenges such as trained personnel, lack of technology providers, and lack of awareness, poor infrastructure, and fear of technology were cited due to provision of E-banking services.

Measures suggested to the bank regulatory/government to reduce the E- banking risks and challenges with regard to

Security

Improve security in rural areas for technology investment, specific soft ware recommendation, incorporate laws to protect, banks,

Technological infrastructure

Install hand wares; optic fiber for internet connectivity, ensuring efficient environs for efficient trading.

Proper registration

Creation of laws, recognize electronics transaction, enactment of laws to equalize internet access

Reliable power supply

Development of other power supply like nuclear energy, rural electrification

Commercial banks need to create awareness, campaigns on benefits of E banking, and reduce cost as a way of encouraging use of E-banking products. This is according to the responses by various respondents from the various banks

Secondary data was obtained from Central Bank of Kenya Banking Fraud Unit as highlighted by Cyrus Ombati (Standard Newspaper).From the findings it is noted that commercial banks lost Ksh 761 million from January 2010 to June 2010.Loss from electronic fraud contributed to Ksh 269.7 million, This was followed by embezzlement with 45 million, card fraud (ATM both debit and credit)Ksh 31 million, The loss from the cheques was 23million, loan Ksh 12.5 forgery Ksh 5.7 identity theft Ksh 1.5 million and counterfeiting Ksh 110,800.In the month of August the bank industry lost 297 million through fraud. On the existence of various E-banking services, the finding indicated that most of the banks had none of these services. Others were offering a limited number of these services while as were doing pilot projects.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings, conclusions and recommendations based on the results in chapter four.

5.2 Summary of findings

The study had two objectives which were;

i. To identify the effects of E-Banking services on Commercial Banks in Kenya in promoting international business.

ii. To establish how the adverse effects are mitigated

. What emerged from the study can be summarized into the following;

5.2.1. Year of incorporation and the ownership structure

From the findings it is noted that majority of the banks-40% were formed between the years 1971 and 2010.The findings also indicates that majority of the surveyed banks were privately owned (50%).The year of incorporation is vital in this study as it indicates the apprehension and adaption of E-banking

5.2.2. Size of the bank in terms of its Branches, ATMs and Employees

The majority of the banks as indicated by the findings have the number of branches between 11 to 20.This was indicated by a response of 70%.A relatively 30% of the sampled banks had the number of ATMs branches above 50.80% of the sampled banks displayed the number of the employees as 1500.These are the factors which were important in the study as they in a way determine the installation and operation of E-banking services

5.2.3. Scope of the bank operation and E-banking services

The findings from the study indicated that 50% of the sampled banks had their operations/business based within Kenya i.e. local operation. This was significant factor for analysis as it would indicate the level of expansion and attainment of E-banking by the banks and its effects either at local regional or global. In terms of the E-banking services offered by the bank the findings as indicated by table clearly shows an agreement from all the respondents that, online banking, mobile banking, SMS banking TV-interactive, Telephone banking and ATMs were the services offered by their respective banks. This area of the study was significant as it displays the services are necessary for commercial banks in Kenya in promoting international business.

Mobile service agents/ providers and retailer agents are both used by the banks to conduct banking services. This is according to the respondents who all agreed on these agents as applicable in their respective banks. However a great number of the respondents 80% from table 8 indicated that chain stores were not part of the agents which conduct banking services.

5.2.4 The number of international business companies (customers) transacting using E-Banking and the volume of transactions in Ksh using E-Banking

The number of the international business companies (customers) transacting using the E-banking according to the respondents was between 1000 and 5000. (70% response as in table 9) while according to some banks this number was 20000.On the volume of the transaction in Kenya Shillings conducted using E-banking, majority of the banks indicated a volume of between 50-100 million (table 10).The increased number of the international business companies transacting using E-banking and the rise in the volume of transaction are indications that there was an apprehensive acquisition and operation at international level of the E-banking services within the commercial banks in Kenya.

The costs of providing banks using E-banking channels when compared with tradition methods had greatly reduced to between one to two million according to table 11.The traditional costs had been indicated by some responses as being between 20 to 100 million. This reduction indicates the positive impact due to the use of E-banking in the commercial banks operations in Kenya.

5.2.5. The level of staff knowledge about E-banking services that have been developed

An indication of 60% from table 12 on the level of staff knowledge about the various e-banking such as online banking ,telephone banking Sms banking and mobile banking to an extent that one can sell indicates a positive apprehension, use and growth of this service in the commercial banks in Kenya. An Indication of 40% by the respondents on the staff knowledge about these E-banking functioning also shows that the service has developed.

5.2.6 Awareness creation about e-banking

All the respondents as indicate by table 13 agreed that the newspapers and the flyers are the forms of communication mostly used by the banks to create awar5eness on the E-banking services here in Kenya. However majority of the respondents with, a considerable responses of 80, and 70% respectively, stated that TV/Radio and social events also cerat7e awareness about E-banking.

5.2.7 Factors on customer satisfaction improvement due to the use of E-banking

Table 14 indicates a mean score of 4.6 on convenience as a level of customer satisfaction which has greatly been improved due to the use of E-banking., personalized service, efficiency, cost-benefit analyses, and communication have also been improved due to the use of E-banking in that order. This is indicated by mean scores of 4.5, 4.1, 3.9 and 3.6 respectively. This improvement indicates an impact to the customers which is of great importance in the commercial banks of Kenya in promotion of international business.

In the table 15 it is noted that a great majority of the respondents (80%) agreed to the fact that the use of E-banking has reached the level of international business. This was significant as it would act, as a reference factor in determination of the effects of E-banking in promoting this business.

5.2.8 Risks factors faced by the bank in providing E-banking services

Majority of the respondents from the various banks agreed that reputation risk, operation risk, and credit risk, are the most risks faced by banks in providing E- banking services .Each of these had a response percent of 90 as in table 16.These risk act as determinants in E- banking services provision in promotion of international business.

In the table 17 it is noted that government regulations to a very great, and large extent (each indicated by 40%)and moderate extents (20%) influences the provision of banking services **.** These can be argued also that these regulations will have an impact to the banks operation and offering of the E-banking services.

The study identified provision of E- banking services at various figures ranging from ksh25 for Sms banking, Ksh25 for mobile banking, Ksh120 for online banking; while other figures such as Ksh 100 for telephone banking Ksh15 for Sms banking and Ksh 5 for mobile banking an indication the charges have greatly reduced especially to those using E-banking services.

Challenges such as trained personnel, lack of technology providers, and lack of awareness, poor infrastructure, and fear of technology were cited due to provision of E-banking services.

There were suggested to the bank regulatory/government to reduce the E- banking risks and challenges with regard to security as in improvement of security, in rural areas, incorporation of laws. On basis of technology infrastructure, installation of efficient hand wares (optic fibers) was cited. Creation of laws and recognition of electronic transaction were suggested on proper registration factor, while development of other power supply like nuclear energy was suggested on reliable power supply factor.

From the findings of Central Bank of Kenya Banking Fraud Unit highlighted by Cyrus Ombati (Standard Newspaper), it is noted that commercial banks lost Ksh 761 million from January 2010 to June 2010.Loss from electronic fraud contributed to Ksh 269.7 million, This was followed by embezzlement with 45 million, card fraud (ATM both debit and credit)Ksh 31 million, The loss from the cheques was 23million, loan Ksh 12.5 forgery Ksh 5.7 identity theft Ksh 1.5 million and counterfeiting Ksh 110,800.Inthe month of August the bank industry lost 297 million through fraud.

On the existence of various E-banking services, the finding indicated that most of the banks had none of these services. Others were offering a limited number of these services.

5.3 Conclusion

The focus of this study was on the E-banking services ; identifying its effects on the commercial banks in Kenya on promoting international business while establishing how its adverse effects are mitigated

To a level of customer satisfaction, convenience, personalized service, efficiency, cost-benefit analyses, and communication on complaints have been identified as factors which have been improved due to the use of E-banking.

E-banking adoption and use has enhance increase in international business transaction, This is due to creation of awareness to customers through newspapers, flyers, TV/Radio and the marketing of these services by the bank staff who are aware of these services.

A great number of international business companies have appreciated this service meaning that the volumes of transaction have also gone up; while the transaction costs have gone down as compared to the previous years when E-banking services were not available. The charges to customers have greatly reduced especially to those using E-banking channels.

Several risk factors such reputation risk, operation risk, and credit risk, are the most risks faced by banks in providing E- banking services. These risk leads to losses in form of electronic frauds.

5.4 Recommendations

From the findings and basing on the objectives of the study several recommendations hence emerges;

To reduce the E- banking risks and challenges, security should be improved in rural areas for technology investment, incorporation of laws to protect banks and development of special soft wares. On basis of technology infrastructure installation of efficient hand wares (optic fibers) for internet connectivity, ensuring efficient environment for trading should be emphasized. Creation of laws, recognition of electronic transaction and enactment of laws to govern equal internet service should be implemented on proper registration factor, while development of other power supply like nuclear energy and rural electrification should be developed to enhance reliable power supply.

5.5 Areas for further studies

The study suggests the following areas for further research;

- What government regulations have been implemented to reduce E-banking risks to enhance international business.

- What are the challenges meet by users of of SWITF money transfer system.

- How is swift money transfer system mitigating its challenges against other new entrants in the market like western union, moneygram. Mpesa and the many others.

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APPENDICES

Appendix I: Lists of Commercial Banks

LISTS OF COMMERCIAL BANKS LICENSED BY THE CENTRAL BANK OF KENYA AS AT 2009

1	Kenya Commercial Bank Ltd
2	Standard Chartered Bank (K) Ltd
3	Barclays Bank of Kenya Ltd
4	Bank of India
5	Bank of Baroda (K) Ltd
6	Commercial Bank of Africa Ltd
7	Habib Bank Ltd
8	Prime Bank Ltd
9	Co-operative Bank of Kenya Ltd
10	National Bank of Kenya Ltd
11	Oriental Commercial Bank Ltd
12	CITIBANK N.A
13	Habib Bank A.G. Zurich
14	Middle East Bank (K) Ltd
15	Bank of Africa (K) Ltd
16	Dubai Bank (K) Ltd
17	Consolidated Bank of Kenya Ltd
18	Credit Bank Ltd
19	Transnational Bank Ltd
20	Chase Bank (K) Ltd
21	Stanbic Bank (K) Ltd
22	CFC Bank Ltd
23	African Banking Corporation Ltd
24	Equity Bank
25	Imperial Bank Ltd
26	National Industrial Credit Bank Ltd
27	Giro Commercial Bank Ltd
28	Equatorial Commercial Bank Ltd
29	City Finance Bank Ltd
30	Fina Bank Ltd
31	Victoria Commercial Bank Ltd
32	Guardian Bank Ltd
33	Investments & Mortgages Bank Ltd

34	Southern Credit Banking Corporation Ltd
35	Development Bank of Kenya Ltd
36	Fidelity Commercial Bank Ltd
37	Diamond Trust Bank (K) Ltd
38	Charterhouse Bank Ltd
39	K-Rep Bank Ltd
40	Family Bank Ltd
41	EcoBank Ltd
42	Gulf Bank
43	Paramount Universal Bank Ltd

Appendix II: Introduction Letter

TO: RISK MANAGERS IN COMMERCIAL BANKS

Dear Sir/Madam,

RE: RESEARCH INFORMATION FOR MY MBA PROJECT

I am a postgraduate student undertaking a Master of Business Administration in International Business at the School of Business, University of Nairobi. As a partial fulfilment of the requirements for the award of the MBA degree, I am conducting a survey on "the effects of E-Banking in Commercial Banks in Kenya in Promoting international Business."

The information you provide in this study will not be used for any other purpose apart from its intended academic use. I hereby undertake not to make any reference to your name in any presentation or report resulting from this study.

I am aware that filling the questionnaire is time consuming, but I will greatly appreciate your valuable time and support in this important matter. Any additional information in form of suggestions and comments that you may feel may add value to my research findings particularly regarding this area of study will be highly appreciated.

Thank you in advance.

Yours faithfully,

Mary Maitha

Appendix III: Research Questionnaire

Kindly answer the following questions as accurately as possible. Your answer will be treated in confidence and used strictly for academic purposes only. In no instance will your name or that of your company be divulged.

Part A: Organisational Bio data

1. Name of your Bank ....
2. Year of incorporation ....
3. Ownership structure (tick as appropriate)
   a) Privately owned (local) [ ]
   b) Government owned [ ]
   c) Both government and privately owned [ ]
   d) Foreign owned [ ]
   e) Both foreign and locally owned [ ]
4. Size of the bank (No. of Branches) ....

   (No. of ATMS) ....
5. Size of the bank (No. of employees) (Tick)
   a) Below 1500 [ ]
   b) Between 1501 – 3000 [ ]
   c) Between 3001 – 6000 [ ]
   d) Over 6000 [ ]
6. Scope of operations (tick)
   a) Local (within Kenya) [ ]
   b) Regional (within East Africa) [ ]

c) Global (Africa and beyond) [ ]

Part B: E-Banking Services

7. What E-banking services do you offer?(tick)

    a) Online Banking [ ]

    b) Mobile Banking [ ]

    c) SMS Banking [ ]

    d) TV-interactive banking [ ]

    e) Telephone Banking [ ]

    f) ATMS [ ]

8. Is the bank using any agents to conduct any of its banking services other than its branches and its employees?

    a) Use of mobile service providers [ ]

    b) Use of chain stores [ ]

    c) Use of retailers [ ]

9. What are the number of international business companies transacting using E-Banking services?

    a) Between 1000-5000 customers

    b) Between 5001 – 10000 customers

    c) Between 10,000 – 20,000 customers

    d) Over 20,000

10. What are the volumes of these transactions in Kshs using E-Banking delivery channels?

a) Between 50 -100 million

b) Between 100-200million

c) Between 200-500 million

d) Over 500 million

11. What were the various figures in KSHS for the previous years when E-Banking services were not available?

…………………………………………………………………………………………

…………………………………………………………………………………………

11. Have the costs of providing banks using E-Banking channels reduced the transaction costs when compared to the traditional methods?

a) Between 0.1m to 0.5m

b) Between 0.5m to 1.0m

c) Between 1.0m to 2.0m

d) Between 2.0m to 4.0m

e) Above 5m

12. Have the charges to customers reduced especially those who are using E-Banking channels ?

Yes ……………………………….

No…………………………………

If yes, what are the different tariffs for E-Banking Services?

Online Banking ------------------

Telephone Banking --------------

SMS Banking ------------------

Mobile Banking -----------------

Interactive –TV Banking --------

13. Staff knowledge about these E-Banking services that have been developed. Indicate their knowledge concerning them by ticking as appropriately.

    a) Do not know about them
    b) Heard about it
    c) Read about it
    d) Know how it functions
    e) Can Sell it

14. How do you create awareness to customers about the E-Banking services that the bank is offering?

    a) Flyers
    b) TV/ Radio
    c) Newspapers
    d) Social Events
    e) Never

15. In what terms has the level of customer satisfaction improved due to use of e-banking services in the following categories? Use the key below to tick as appropriate.

    1. Not at all; 2. To a less extent; 3. To a moderate extent; 4. To a large extent; 5. To a very large extent

i. Efficiency [1] [2] [3] [4] [5]

ii. Convenience [1] [2] [3] [4] [5]

iii. Communication on complaints [1] [2][3] [4] [5]

iv. Personalized Service [1] [2] [3] [4] [5]

v. Cost –benefit analyses [1] [2] [3] [4] [5]

16. To what extent in Kenya Shillings has E-Banking products cut down the banks transaction costs if at all when compared to the other service delivery channels?

    ………………………………………………………………………………….

17. Has the use of E-Banking services the level of international business and what are the figures for the following years?

    - Year 2007 …………….
    - Year 2008 ……………
    - Year 2009 ………………..

Part C: Risks, Challenges and Strategies in E-Banking

18. Which risk exposures has the bank faced in providing E-Banking services? (Tick as appropriate)

    a) Strategic risk [ ]

    b) Legal Risk [ ]

c) Reputational Risk [ ]

d) Operational risk [ ]

e) Credit Risk [ ]

f) Liquidity, interest rate, price / market risks [ ]

19. How much has the bank lost because of the above mentioned risks in terms of KSHS?

……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………

20. What measures has the commercial bank taken to reduce the various risks their international business companies who use E-Banking products?

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……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………

21. What other challenges are Banks facing due to providing E-banking services?

....
....
....
....
....
....

22. To what extent do you suppose the Government regulations influence provision of banking services? And is it helpful?

a) To a very large extent { }

b) To a large extent { }

c) A limited extent { }

d) To a very limited extent { }

e) Not at all { }

23. What other measures can you suggest to the bank regulator/Government to put in place to reduce the E-Banking Risks and challenges with regards to:

- Security
  ………………………………………………………………………………
  ………………………………………………………………………………
- Technological infrastructure

  ………………………………………………………………………………
  ………………………………………………………………………………
- Reliable Power Supply

  ………………………………………………………………………………
  ………………………………………………………………………………
  ………………………………………………………………………………
- Proper Legislation

  ……………………………………………………………………………
  ……………………………………………………………………………
  ……………………………………………………………………………

  Any other

  ……………………………………………………………………………
  ……………………………………………………………………………
  ……………………………………………………………………………
  ……………………………………………………………………………

24. What can commercial banks do to encourage use of E-Banking products?

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………………………………………………………………………………
………………………………………………………………………………

Thank You for Your Co-Operation