

**CONSUMERS' ATTITUDES, PERCEIVED RISK, TRUST AND  
INTERNET BANKING ADOPTION IN UGANDA**

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**DECLARATION**

This dissertation is my own original work and has never been presented for the award of the Degree/ Diploma to any University.

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## APPROVAL

This is to certify that this dissertation has been submitted for examination with our approval as University supervisors.

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## **DEDICATION**

To all my dear parents, wife and daughters Martha, Mellissa who have always been there to support me in anything i do.

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Let me start by thanking God for his continued blessings and guidance in accomplishing this work. May His name be glorified forever.

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# Table of Contents

Declaration.....	i
Approval.....	ii
Dedication .....	iv
Acknowledgement.....	iii
List of Tables.....	ix
Abstract .....	x
CHAPTER ONE:.....	1
INTRODUCTION.....	1
1.1 Background to the Study.....	1
1.2 Statement of the Problem.....	3
1.3. Purpose of the Study .....	4
1.4 Objectives of the Study.....	4
1.5 Research Questions.....	4
1.6. Scope of the Study .....	4
1.6.2 Subject Scope.....	4
1.6.2. Geographical Scope .....	5
1.7. Significance of the Study.....	5
1.8 Conceptual Frame work.....	6
CHAPTER TWO.....	8
LITERATURE REVIEW .....	8
2.0 Introduction.....	8
2.1 Internet Banking Adoption .....	8
2.2 Consumer Attitudes.....	9

2.3 Perceived Risk .....	12
2.4 Trust .....	15
2.5 Consumer Attitude and Trust.....	17
2.6 Consumer Attitude and Internet Banking Adoption .....	19
2.7 Customer Attitude and Perceived Risk .....	23
2.8 Perceived Risk and Internet Banking Adoption.....	24
2.9 Trust and Internet Banking Adoption .....	27
CHAPTER THREE: METHODOLOGY: .....	30
3.0 Introduction.....	30
3.1 Research Design.....	30
3.2 Survey Population.....	30
3.3 Sampling Method and Size .....	30
3.4 Data Sources .....	31
3.5. Data Collection Instruments .....	31
3.6. Validity and Reliability of Instruments.....	32
3.7. Measurement of Variables .....	32
3.8 Data Analysis.....	33
3.9.Limitations of the Study.....	33
CHAPTER FOUR:.....	34
DATA PRESENTATION, ANALYSIS AND INTERPRETATION .....	34
4.1 Introduction.....	34
4.2 Background information .....	35
4.21 Age Group of the respondents .....	35

4.22 Gender of the respondents .....	35
4.23 Marital Status .....	35
4.24 Level of Education .....	36
4.25 Occupation Status .....	37
4.3.0 Relationships between the Variables .....	37
4.3.1 An examination of the Relationship between Consumer Attitude and Trust. ....	38
4.3.2 Examining the Relationship between Consumer Attitude and Perceived Risk .....	38
4.3.3 Examining the Relationship between Trust and Internet Banking Adoption. ....	39
4.3.4. An Examination of the Relationship between the Perceived Risk and Internet Banking Adoption. ....	39
4.3.5 The relationship between the Consumer Attitude and Internet Banking Adoptio...39	39
4.4 Regression Model .....	40
CHAPTER FIVE: .....	41
DISCUSSION, CONCLUSION AND RECOMMENDATIONS .....	41
5.0 Introduction .....	41
5.1.0 Discussion of Findings.....	41
5.1.1 Relationship between Consumer Attitudes and Internet Banking Adoption .....	41
5.1.2 Relationship between Consumer Attitude and Trust .....	42
5.1.3 Relationship between Consumer Attitude and Perceived Risk.....	43
5.1.4 Relationship between Perceived Risk and Internet Banking Adoption .....	44
5.1.5 Relationship between Trust and Internet Banking Adoption.....	45
5.2 Conclusion .....	46
5.3 Recommendations.....	48

5.4 Areas for further study .....	49
References.....	50
Appendix	
Questionnaire .....	57

## LIST OF TABLES

Table 1: Reliability and Validity.....	32
Table 2: Age Group of the Respondents.....	34
Table 3: Gender of the Respondents.....	35
Table 4: Marital Status.....	36
Table 5: Level of Education.....	36
Table 6: Occupation Status.....	37
Table 7: Pearson Correlations.....	37
Table 8: Regression Analysis Model.....	39

## **ABSTRACT**

The purpose of this research was to establish the relationship between consumer attitudes, trust, perceived risk and internet banking adoption in Uganda.

A cross sectional, descriptive and analytical research design was used. A correlation matrix between the constructs of consumer attitudes, trust, and perceived risk against Internet Banking Adoption was carried out to test the direction and strength of relationships between the study variables. Primary data was collected using a self structured questionnaire from commercial bank customers. A regression analysis focusing on consumer attitudes, trust, and perceived risk was made to establish the extent to which they contribute internet banking adoption.

The findings indicate a positive relationship between Consumer attitudes, trust and internet banking adoption. This implies that if the customers have positive attitudes towards internet banking, they are bound to trust the transactions done in this fashion and therefore changing consumer attitudes should be given more emphasis by commercial banks that is should be informative when planning any new internet service for financial customers.

Findings further reveal that there was a negative relationship between perceived risk and internet banking adoption that is when the level of perceived risk is high, customers may not adopt internet banking and therefore a clear strategy to reduce the internet banking risk must be put in place.

The study concluded that consumer attitudes, trust, perceived risk significantly affect internet banking adoption and therefore recommended that Consumer Attitudes, Trust and Perceived risk reduction should be emphasized in commercial banks to improve internet banking adoption rate.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background to the Study**

Many commercial banks in Uganda have valued the importance of electronic banking in improving the profitability and the overall efficiency of their business, (Abaasa, 2007). They have similarly allocated substantial resources for internet banking adoption and begun to build infrastructures to support a more reliable and quicker transfer of information to reach their customers (Straub, 2007; Daniel, 1999; Thornton and White, 2001). The evolution of internet banking has altered the nature of personal-customer banking relationships and has enabled electronic channels to perform many banking functions that would traditionally be carried out over the counter (Giannakoudi, 1999). 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 (Pang, 1995). 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).

In Uganda, internet banking began in 1997 when Standard Chartered Bank introduced the first ATMs in Uganda and thereafter other banks followed (Daily Monitor 16<sup>th</sup> August, 2004). There was a growing optimism in the banking industry that VISA credit cards would ease clients' access to cash from their accounts, (Kakembo, 2001). In 2004, Bankom a local electronic financial transaction Services Company in Uganda introduced the use of ICT in which mobile phones could also be used to transact business, (Kanyegirire, 2004). In July 2007, Bank of Uganda introduced an electronic fund transfer (EFT) in a bid to improve the payment system and reduce cash transactions. Although

the proficiency of using internet is relatively low and electronic banking is still in its infancy (AC Nielsen Consult, 2002), with the advantages of being convenient, safe, efficient and economical, Ugandan domestic banks seem to be confident that electronic banking benefits might outweigh traditional banking services in the future (Daily Monitor 25<sup>th</sup>, February, 2010).

Ndiwalana, (2008) finds that the rate of adoption of internet banking has not risen as strongly as expected. Some researchers (Chiu, 2005; Schlosser, 2003) identify attitudes towards internet banking to be the consumer's positive or negative feelings related to accomplishing the banking behavior on the internet. It can therefore be inferred that customer attitudes can affect the adoption of internet banking. Nevertheless most customers in Uganda do not pick ATM cards and over 80% of the Centenary Rural Development Bank customers who are served at the counter have ATM cards and they make transactions which would have been done using internet banking. There is also increased queuing inside banks which wastes a lot of time and seems no different from the time before internet banking (Tabaza, 2006).

Attitude has affected trust and perceived risk towards internet banking adoption (Wong, 2004). An obstacle to internet banking adoption has been lack of security and privacy over the internet (Bhimani, 1996; Cockburn and Wilson, 1996; Quelch and Klein, 1996). This has led many to view internet banking as a risky undertaking. Trust and perceived risk reduction are very critical factors in electronic banking since they reduce the social complexity for the internet banking and drive to the achievement of electronic goals and without them, there is a failure of such goals and relations, (Morgan and Hunt, 1994).

However trust and perceived risk in Uganda have been affected by the problem of electronic bank fraud for example Bank of Uganda has warned the public against fraud in the Automated Teller Machines (East African Business Week, 29, 2010). In Stanbic bank, criminals hacked into the bank's records to create records showing that sh10b was deposited that very day into that account at the Iganga Stanbic Bank branch. Stanbic Bank could have lost sh5b, had they allowed one of their clients to withdraw it as he had requested. The account had been opened the day before and the money's origin could not be traced, (Namubiru, 2008). Poor attitude and security issues have caused the rate of internet banking adoption in Uganda to be low for example it was concluded that the predictive potential of internet banking in Kampala is still low at 30%, 40% less than the prediction by 2010, (Namirembe, 2009).

## **1.2 Statement of the Problem**

Although there has been a rapid diffusion of new mobile devices by commercial banks in Uganda, internet banking services have not been widely adopted by bank customers (Maurer, 2008). This may be due to lack of trust, poor customer's attitude and perceived risk towards the services. Customers have been complaining that reversing a transaction, stopping a payment after discovering a mistake, or a refund may not be possible (Bwonditi, 2010). Customers have also reported that there is no real need for mobile internet-based banking services because it is associated with e-bank fraud where only a username and password stand between your money and a fraudster (Luarn and Lin, 2005).

### **1.3. Purpose of the Study**

The purpose of the study was to examine the relationship between Consumer Attitude, Perceived risk, Trust and Internet Banking Adoption.

### **1.4. Objectives of the Study**

- i) To examine the relationship between Consumer attitude and Trust.
- ii) To examine the relationship between Consumer attitude and Perceived risk
- iii) To examine the relationship between Trust and Internet banking adoption.
- iv) To examine the relationship between Perceived risk and Internet banking adoption.
- v) To examine relationship between Consumer attitude and Internet banking adoption.

### **1.5 Research Questions**

- i) What is the relationship between Consumer attitude and Trust?
- ii) What is the relationship between Consumer attitude and Perceived risk?
- iii) What is the relationship between Perceived risk and internet banking adoption?
- iv) What is the relationship between Trust and internet banking adoption?
- v) What is the relationship between Consumer attitude and Internet banking adoption?

### **1.6. Scope of the Study**

- **Subject Scope**

The study concentrated on consumer attitude and online banking adoption. These variables were mediated by trust and perceived risk reduction.

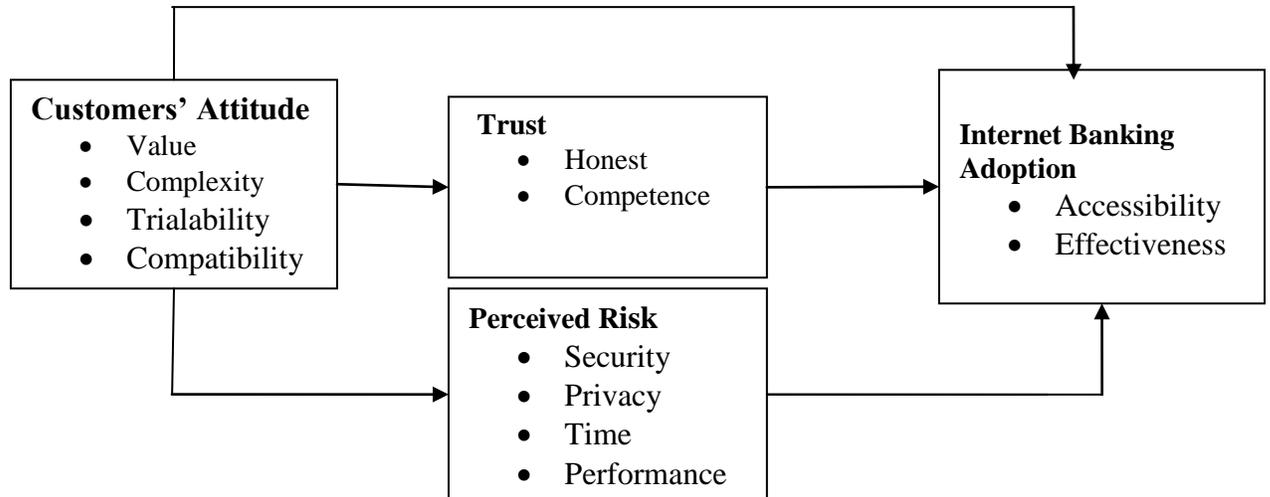
- **Geographical Scope**

The study was carried out in Kampala district. This area was chosen because most of the commercial banks are concentrated in Kampala.

### **1.7. Significance of the Study**

- i) The study will contribute to the existing knowledge on customer attitude, perceived risk, trust and online banking adoption in Uganda.
- ii) It will help the government to promote and preserve competition by introducing competition to monopoly phone markets, and ensuring interconnection at fair prices.
- iii) It will help in modernizing the operation of the Central bank to support automated clearing service and update supervisory and regulatory rules for absorbing ICT-based banking.
- iv) It will help commercial banks in creating an awareness campaign through workshop and seminar on the importance and business value of Internet banking in financial institutions
- v) It will help Central bank to form a “Center for Internet Banking Technology and Management” to support the banks with latest technological development in the banking world and provide expert support for ICT implementation.
- vi) It will help the Central Bank to work out an efficient information infrastructure for banks using different technology to ensure network connectivity among the commercial banks and financial institutions in Uganda.

## 1.8 Conceptual Frame work



**Source:** Modified from McKnight and Chervany, 2002, Lai and Li, 2005, Fishbein and Ajzen, 1975, Davis, 1986.

The above model explains the relationship between customer attitude and internet banking adoption as mediated by perceived risk, trust. Consumer attitude refers to the fundamental factors that influences one`s buying behavior towards internet banking usage, Fishbein and Ajzen (1975). Perceived risk is the consumers perception of the uncertainty and potential adverse consequences of buying the internet banking service (Littler and Melanthiou, 2006). Trust is the belief and confidence that consumers have about the other party i.e. about banks and the services they offer through the internet, (Pavlou,2003). Whereas Internet banking is the ability to transfer money between accounts, pay bills, see statements and perform other financial transactions over the internet,Anderson (2010). Internet banking is one of the newest approaches to the provision of financial services through information communication technology, made possible by the widespread adoption of mobile phones even in low income countries.

Customer attitude leads to perceived risk reduction which builds confidence and creates a striking influence on user willingness to engage in online exchanges of money and personal sensitive information thus leading to internet banking adoption. Changing customer attitudes in terms of online banking being fast, cheap, easy and reliable are said to develop overtime through a learning process affected by group influences, past experience and personality (Fishbein and Ajzen, 1975). This creates the long term relations with the bank leading to trust and thus resulting into internet banking adoption. Consumer trust is an important factor in practically all business-to-consumer interactions and a crucial aspect of internet banking. Internet trust enables favourable expectations that the internet is reliable and predictable and that no harmful consequences will occur if the online consumer uses the internet as a transaction medium for his/her financial transactions (Pavlou and Fygenson, 2006).

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This chapter presents the review of literature on the study variables of customers' attitude, perceived risk, trust and internet banking adoption. However, most of the reviewed literature presented is cited from the studies from developed countries.

#### **2.1 Internet Banking Adoption**

Internet banking is the provision of retail and small value banking products and services through electronic channels. Such products and services can include deposit-taking, lending, account management, the provision of financial advice, electronic bill payment, and the provision of other electronic payment products and services such as electronic money (Basel Committee Report on Banking Supervision, 1998).

According to Chou and Chou (2000), Internet banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels. Internet 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 the Internet. Customers access e-banking services using an intelligent electronic device, such as a personal computer, personal digital assistant, Automated Teller Machine (ATM), Kiosk, or Touch Tone telephone.

Although internet banking may have appeared and even behaved like a new product or service when it was initially introduced, e-banking is now most accurately portrayed as a relatively new, convenient, and technologically-oriented procedure whereby, consumers

can accomplish customary banking tasks more quickly and easily than before ( Rogers, 1983).

Organizations continue to substantially invest in Information Technology hoping that it will improve their business process and increase their productivity. However, for technologies to improve productivity, they must be accepted by intended users (Venkatesh, 2003). He also noted that research in understanding user acceptance of new technology has resulted in several theoretical models with roots in information systems, psychology and sociology.

Technology Acceptance Model is one of the most utilized models for studying Internet banking acceptance (Al-Gahtani, 2001; Venkatesh and Davis, 1996; Davis *et al.*, 1989).

Technology Acceptance Model involves two primary predictors for the potential adopter that is perceived usefulness and perceived ease of use of technology as the main determinants of the attitudes toward a new technology. Perceived Usefulness is the degree to which a person believes that using a particular system would enhance his or her job performance; while Perceived Ease of Use is the degree to which a person believes that using a particular system would be free of effort (Davis, 1989). These two beliefs create a favorable behavioral intention toward using the Information Technology that consequently affects its self-reported use (Davis *et al.*, 1989).

## **2.2 Consumers' Attitudes**

Attitude is one of the fundamental factors influencing consumers' buying behaviour and have, therefore, attracted considerable attention from researchers probing the behaviour of bank customers and their relationship with these institutions. According to Venkatesh *et al.*, 2003, attitude toward internet banking is defined as an individual's overall

affective reaction to using the internet for his/her banking activities. Fishbein and Ajzen (1975), argued that attitude towards behaviour is made up of beliefs about engaging in the behaviour and the associated evaluation of the belief. They defined attitude as an individual's positive and negative feelings (evaluative affect) about performing the target behaviour. The attitude theory suggests that the more favorable attitude a person has towards a given product or service, the more likely that person is to buy or use the product or service, (Ajzen and Fishbein, 1980). Attitudes are said to develop over time through a learning process affected by reference group influences, past experience and personality (Assael, 1981). Byers and Lederer (2001) concluded that changing consumer behaviour and attitudes rather than banks' cost structure determine the adoption of internet banking. Research on consumer attitude and adoption of electronic banking shows there are several factors predetermining a consumer's attitude towards online and mobile banking such as a person's demographic, motivation and behavior towards different banking technologies and individual acceptance of new technology (Howcroft, 2002).

Taylor and Todd (1995) suggested that the different dimensions of attitudinal belief toward an innovation could be measured using the five perceived attributes (relative advantage, compatibility, complexity, and trialability) of the innovation. These attributes were originally proposed in the diffusion of innovations theory (Rogers, 1983).

The importance of the internet to users' banking needs relates to the advantages that accrue to the users of the technology in question. According to Tornatzky and Klein (1982) relative advantage is an important factor in determining adoption of new

innovations. In general, perceived relative advantage of an innovation is positively related to its rate of adoption (Rogers, 1983). Agarwal and Prasad (1998) showed that relative advantage of an innovation is positively related to its rate of adoption. Similarly, as internet banking services allow customers to access their banking accounts from any location and at any time of the day, it gives advantage to customers to be able to manage their finances properly and in a more convenient way.

Compatibility is another important dimension of the innovation diffusion theory. In Tornatzky and Klein's (1982) meta-analysis of innovation, they found that an innovation was more likely to be adopted when it was compatible with the individual's job responsibilities and value system. Internet banking has been viewed as a delivery channel that is compatible with the profile of modern day banking customer, who is likely to be computer literate and familiar with internet (The Straits Times, 1997).

Cheung (2000) defined complexity as the degree to which an innovation is considered relatively difficult to understand and use and found it to negatively influence the adoption of Internet. Complexity is also considered as the exact opposite of ease of use, which has been found to directly impact the adoption of the internet (Lederer *et al.*, 2000). Cooper and Zmud (1990) pointed out that a system that requires less technical skills and operational efforts will be more likely to be adopted and in turn generate better performance.

On the importance of trialability, Rogers (1983), Agarwal and Prasad (1998) stated that potential adopters of new technology, who are allowed to experiment with it, would feel comfortable with it and thus be more likely to adopt it. According to Tan and Teo (2000)

if customers are given the chance to try the innovation, it will minimize certain unknown fears, especially when customers found that mistakes could be rectified and thus providing a predictable situation.

### **2.3 Perceived Risk**

The concept of consumer-perceived risk has been widely dealt with in the literature and has been shown to influence consumer behaviour to varying degrees and in varying contexts (Cunningham *et al.*, 2005; Mitchell, 1998). Consumer behavior researchers most often define perceived risk in terms of the consumer's perceptions of the uncertainty and potential adverse consequences of buying a product or service (Littler and Melanthiou, 2006). Cunningham *et al.*, 2005; Pavlou, 2003; Salam *et al.*, 2003; Schlosser *et al.*, 2006 argued that perceived risk as an important factor influencing online consumer behavior. This is because in the online environment, criminal acts can be performed with extremely high speed, and without any physical contact (Cheung and Lee, 2006). If an unauthorized individual is able to get access to the online banking portfolio of a user, a considerable amount of financial information may be jeopardised and there might be considerable financial losses.

Previous research in countries with different levels of E-commerce adoption shows that perceived security risk is an important predictor of internet banking adoption. Sathye (1999) investigates internet banking adoption by Australian consumers and identifies security concerns and lack of awareness as the main obstacles to adoption. Gerrard and Cunningham (2003) found security concerns over internet banking high in both adopters and non-adopters in Singapore. Research by Lee, (2005) on USA consumers showed

greater concern among prospective adopters than current adopters over transaction security and monetary benefits when choosing an internet based banking service. Cheng, (2006) found perceived web security to be a significant determinant of customer's acceptance of online banking. Customers tend to increase purchases only if they perceive that credit card number and other sensitive information is safe.

The different types of perceived risk have a significant influence on the adoption of the channel, as they become a barrier to performing internet banking transactions (Gerrard and Cunningham, 2003; Hewer and Howcroft, 1999; Polatoglu and Etkin, 2001; Suganthi, 2001).

One of the important barriers to electronic transactions is consumer disappointment and frustration at violations of consumer privacy. Gerrard and Cunningham (2003) found that consumers worry that the bank may share customer profiles with other companies in the banking group and, thus, use the information to try and sell additional products. E-banking users want to control all aspects of their personal data collection (Pikkarainen *et al.*, 2004). User perceptions of the credibility of security and privacy may affect internet banking use intention (Mukherjee and Nath, 2003; Pikkarainen *et al.*, 2004). Aladwani's study (2001) found that potential online banking customers ranked internet security and customers' privacy as the most important future challenges facing banks. Therefore, perceived fears of divulging personal information and feelings of insecurity have a negative influence on internet banking services use (Howcroft *et al.*, 2002).

Performance risk is concerned with how well the product will perform relative to expectations. Consumers' evaluation of performance risk is based on their knowledge and

cognitive abilities in a certain product domain (Littler and Melanthiou, 2006). Asymmetry in online banking information and the lack of personal contact prevent the consumer from correctly evaluating the characteristics of the product, decreasing confidence (Ba, 2001). One of the problems with financial services is that customers are unable to try out them before adoption. Some banks have responded to this need by developing websites which allow potential users to try out internet banking services (Gerrard and Cunningham, 2003). The opportunity to conduct a trial may confirm how easy it is to use internet banking and provides the necessary confidence to consumers with high perceived performance risk.

Social risk is concerned with the possibility of attracting un favourable attention and response from purchasing a particular product. The social status of the consumer who uses online banking services may be affected because of the positive or negative perceptions of internet banking services by family, acquaintances or peers (Littler and Melanthiou, 2006). Consumers' attitudes to the different methods of purchasing depend on their characteristics, those who most value social relationships being the most reluctant to develop a positive attitude to internet banking. The lack of human interaction can be a barrier to the use of technology based services.

Perceived risk arises from the uncertainty that customers face when they cannot foresee the consequences of their purchase decisions. This uncertainty regards the value of services, concerns about the reliability of internet and related infrastructure and the spatial and temporal separation between users and bank personnel (Flavia'n, 2005). As

the perceived risk on the use of internet banking may impair customers' perception of the consequences of adopting internet banking and thus negatively influences the adoption of such technology.

Internet provides a lot of information on the products and services offered, and a variety of financial websites where the web-user can carry out transactions. Despite the fact that internet lowers the cost of acquiring information, consumers also incur time costs from using online banking: the time of learning how to buy on a certain banking website, the time to wait for it to respond and the additional cognitive effort expended in this expanded search process (Littler and Melanthiou, 2006). Moreover, in the case of internet banking the time risk may be related to the time involved in dealing with erroneous transactions. Furthermore, website download speed is another factor influencing online banking adoption (Jayawardhena and Foley, 2000). The use of extensive high resolution graphics and an inefficient host server can also increase the perceived waste of time risk for current and future users of internet banking. Moreover, speed is also dependent on the user's computing hardware and method of connection.

## **2.4 Trust**

In the organizational trust literature, trust is mostly defined as a belief or expectation about the other (trusted) party, or as a behavioural intention or willingness to depend or rely on another party, coupled with a sense of vulnerability or risk if the trust is violated (Mayer, 1995; Rousseau, 1998). Online trust is defined as the consumer expectations of how the site would deliver expectations, how believable the site's information is how much confidence the site commands (Bart, 2005). In essence trust is developed when

consumers form positive impressions on the electronic sites and are willing to accept vulnerability. (McKnight and Chervany, 1996; McKnight, 2002). In the context of internet banking, the trustor is typically a consumer who has to decide whether to adopt internet banking or stay with more traditional ways to undertake her/his financial transactions.

Trust is more crucial and complex in e-commerce environment than general and traditional commerce due to its uncertain environment and information asymmetry ((Lu, 2003; Cho, 2007). The buyers and sellers normally complete the transaction through internet technologies and will not necessary meet each other face to face. The buyers will thus be worried that their personal information and money will be transferred to third party without their knowledge (Luarn and Lin, 2005). Thus the existence of trust in a relationship is a kind of insurance against risks and unexpected behaviour.

Trust is a multifaceted construct, which may have different bases and phases depending on the context; it is also a dynamic construct that can change over the course of a relationship. There are at least five facets of trust that can be gleaned from the literature on trust and these benevolence, reliability competence, honesty and openness are all elements of trust (Wayne & Megan 2002).

Benevolence: This is perhaps the most common facet of trust is a sense of benevolence - confidence that one's well being or something one cares about will be protected and not harmed by the trusted party (Baier, 1986; Butter & Cantecell, 1984; Cummings & Bramily, 1996; Deutch, 1958 Frost, Stimpson & Maughan, 1978; Ganbetta, 1988; Hosner, 1995; Hoy & Kupersmith 1985; Mishra 1996).

Reliability: This at its most basic level trust has to do with predictability that is, consistency of behaviour and knowing what to expect from others (Butter & Cantrell, 1984; Hosmer 1995). In and of itself, however, predictability is insufficient for trust. We can expect a person to be invariably late, consistently malicious, inauthentic, or dishonest when our well-being is diminished or damaged in a predictable way, expectations may be met, but the sense in which we trust the other person or group is weak.

Competence: Good intentions are not always enough when a person is dependent on another but some level of skill is involved in fulfilling an expectation an individual who means well may nonetheless not be trusted (Baier 1986; Butter & Cantrell, 1984; Mishra, 1996). Competence is the ability to perform as expected and according to standards appropriate to task at hand, many organisational tasks rely on competence.

Honesty: Honesty is the person's character, integrity and authenticity. Rotter (1967) defined trust as "the expectancy that the word, promise, verbal or written statement of another individual or group can be relied upon". Statements are truthful when they confirm to "what really happened" from that perspective and when commitments made about future actions are kept. A correspondence between a person's statements and deeds demonstrates integrity.

## **2.5 Consumer Attitude and Trust**

The relationship between trust and Consumer attitude draws on the notion of perceived consequences (Pavlou and Fygenon, 2006). Internet trust enables favorable expectations that the internet is reliable and predictable and that no harmful consequences will occur if the online consumer uses the internet as a transaction medium for financial transactions (Krauter and Faillant, 2008).

Davis (1989) identified two beliefs (perceived usefulness and perceived ease of use) as the basic determining factors in information system acceptance. Perceived ease of use has a positive influence on trust as it promotes a favourable impression towards the initial adoption of the service. Research by Koufaris and Hampton-Sousa (2002), also evidences the role of trust as a consequence of perceived ease of use.

Gefen (2003) has demonstrated that perceived ease of use increases trust, because it increases the perception that e-vendors are investing in their relationship with customers. Ease of searching, transaction interaction, broken links and navigation have all been associated with changes in online trust (Igbaria, 1997; Nielsen, 2000).

Researchers warn that a lack of trust may be the most significant long-term barrier for realizing the full potential and attitude towards internet banking adoption (Keen 1997; Hoffman, 1999). Lack of trust is a critical issue that needs addressing pertaining to the internet banking adoption (CommerceNet, 1997). Gummerus *et al*, (2004) mentioned that lack of trust has been one of the most significant reasons for customer not adopting online services involving financial exchanges. Researchers have suggested that online customers generally stay away from vendors whom they do not trust (Reichheld and Schefter, 2000).

Customers' technology orientation and perception of the technological competency of the electronic communication system is very important in their information processing behaviour and trust. The customers' orientation towards the technology of electronic communication and the Internet is frequently a proxy for their trust in Internet banking. The extent to which they trust the electronic system is likely to correlate with their

overall trust when engaging in online banking (Lee and Turban, 2001). When customers are assessing this trust factor, several issues arise in their minds. One issue would be the expected competency of the electronic system. Customers use various performance measures such as network and download speed, navigability, reliability, connectivity and availability to evaluate electronic transactions (Lee and Turban, 2001). Of customers' main concern would be the reliability of the network. When customers are transmitting personal financial data over the electronic network, there are risks that unauthorized parties could intercept this information (Clay and Strauss, 2000).

## **2.6 Consumer Attitude and Internet Banking Adoption**

The Technology Acceptance Model (TAM), suggests that a prospective user's overall feelings or attitudes toward using a given technology-based system or procedure represent major determinants as to whether or not he/she will ultimately use the system (Davis, 1993).

Lockett and Litter (1997) presented a study of the adoption of direct banking services in the UK using a model of the perceived innovation attributes and the personal characteristics of adopters and non-adopters. Their results indicated that the most important perceived positive attribute of internet banking was its 24-hour-a-day availability, whereas complexity and risk of service were the two negative attributes. The main disadvantages associated with internet banking, however, included its complexity and the security risks involved in using it. The study also revealed that adopters of new technology generally earned higher incomes, worked longer hours, moved house more frequently and also possessed more favourable attitudes towards change than non-adopters. Daniel (1998) analysed the adoption of computer banking through in-depth

interviews with the bank personnel responsible for its implementation and development. The main factors influencing adoption included the convenience aspects of the service, ease of use and its compatibility with consumers' existing lifestyles.

Attitudes towards new technologies may also be linked to a set of personal characteristics. For instance, Howcroft (2002) revealed that younger consumers value the convenience or time saving potential of online and mobile banking more than older consumers. Younger consumers also regarded the lack of face-to-face contact as less important than older consumers. These authors further found the educational levels of respondents did not affect the use of telephone or online banking.

However, Karjaluoto (2002) found a typical user of online banking in Finnish market highly educated, relatively young and wealthy person with good knowledge of computers and, especially, the internet. The results of their study proposed that, demographic factors have an impact on online banking behaviour. He further found that attitude towards online banking and actual behaviours were both influenced by prior experience of computers and technology as well as attitudes towards computers.

The new technology acceptance, points out that unless the specific need of a consumer is fulfilled, consumers may not be prepared to change from present familiar ways of operating, (Sathye, 1999).

Attitudes towards electronic banking and actual behaviours were also influenced by factors such as satisfaction/dissatisfaction with current banking services, reference groups, that is influence from families and others and computer attitudes these would strongly affect attitudes and behaviours towards online banking. Lewis (1991) pointed out that the reasons consumers switched delivery channel from traditional to electronic

self-service was the dissatisfaction with their present services. These might include the slow speed of service in branches, inconvenient branch opening hours or places and the small number of branch staff available to serve customers. While a number of recent studies focusing on customer satisfaction with bank services, indicate that early adopters and heavy users of internet banking were more satisfied with this service compared to other customers, (Polatoglu and Ekin, 2001). Others also argued that the delivery of technology services appears to be correlated with high satisfaction where these services were most important to customers, (Joseph and Stone, 2003).

Research on consumer attitude and adoption of electronic banking showed there are several factors predetermining a consumer's attitude towards online and mobile banking such as a person's demographic, motivation and behaviour towards different banking technologies and individual acceptance of new technology. Similarly, it has been found that attitudes towards online banking and actual behaviours were both influenced by prior experience of computers and new technology and, other possible factors discussed below. With regard to demographics factor, Howcroft (2002) revealed that younger consumers value the convenience or time saving potential of online and mobile banking more than older consumers. Younger consumers also regarded the lack of face-to-face contact as less important than older consumers. These authors further found the educational levels of respondents did not affect the use of telephone or online banking.

However, the wide use of geographic, demographic, socio-economic and psychographic variables have not always been accepted as good predictors in predicting buying

behaviour in financial services by past and recent studies, which claimed that, the benefits customers seek for in banking services and/or the product attributes should be identified instead (Minhas and Jacobs, 1996; Lockett and Littler, 1997; Machauer and Morgner, 2001). For instance, Machauer and Morgner' study focused on segmenting the consumer in bank marketing by expected benefits and attitudes. Using cluster analysis, these authors separated customers into four groups the "transaction oriented" group, who have a strong technology but weak information attitude; the "generally interested", who have a positive technology and online and strong information attitude; "service oriented" who have both, weak information and technology attitudes; and the "technology opposed" group, have strong information but weak technology attitudes.

But this argument contradicts with a recent study by Sarel and Marmorstein (2003), showing that household income and education had a significant effect on the adoption of electronic banking among mature Finnish consumers.

Consumers' motives also predetermine consumers' attitudes and behaviours towards different banking technologies. Barczak (1997) studied consumers' motives in the use of technological-based banking services and found motivational clusters for people's money management philosophies: "security conscious", "maximisers", "and instant gratification" and "hassle avoiders". These four motivational segments had different attitudes and behaviours towards different banking technologies.

With regard to new technology acceptance, the literature points out that unless, the specific need of a consumer is fulfilled, consumers may not be prepared to change from present familiar ways of operating (Sathye, 1999). In the context of online and mobile banking in China banking and traditional retail branches, whether consumers would adopt

new technology-based delivery channels depends on their attitudes towards each of these channels. Research showed that consumers are not generally predisposed to change their behaviour radically and adopt widespread usage of telephone and online banking.

Thornton and White (2001) also noted that changes in the use of delivery channels would occur as the population matures as knowledge, confidence and computer usage increases. Karjaluoto (2002) showed that prior experience with computers and technologies and attitudes towards computers influence both attitudes towards online banking and actual behaviours. Their study revealed among these factors, prior computer experience had a significant impact on online banking usage while positive personal banking experience seemed to have had an effect on both attitudes and usage and satisfied customers tend to keep up with their current delivery channel.

## **2.7 Consumer Attitude and Perceived Risk**

The influence of risk perception on consumer attitudes and behaviour may be different in situations that are dominated by different types of risks, e.g. either by high social risk or high financial risk (Mandrik and Bao, 2005).

Previous research suggested perceived risk as an important factor influencing online consumer behaviour (Cunningham, 2005; Pavlou, 2003; Salam, 2003; Schlosser, 2006). To process economic transactions on the internet presents numerous risks for consumers, over and above the transaction process itself being perceived as risky (Einwiller and Will, 2001). In the online environment criminal acts can be performed with extremely high speed, and without any physical contact (Cheung and Lee, 2006). If an unauthorized individual is able to get access to the online banking portfolio of a user, a considerable

amount of financial information may be jeopardised and there might be considerable financial losses.

Perceived fears of divulging personal information and feelings of insecurity have a negative influence on internet banking services use, (Howcroft, 2002). This is because user perceptions of the credibility of security and privacy may affect internet banking use intention, (Mukherjee and Nath, 2003; Pikkarainen, 2004). Aladwani (2001) found that potential online banking customers ranked internet security and customers' privacy as the most important future challenges facing banks and thus concluded that customers attitude towards internet banking adoption has been affected by the perceived security risk.

Performance risk has to do with concerns that products and/or services will not perform as anticipated. Consumers' evaluation of performance risk is based on their knowledge and cognitive abilities in a certain product domain, (Littler and Melanthiou, 2006). Asymmetry in online banking information and the lack of personal contact prevent the consumer from correctly evaluating the characteristics of the service, thereby decreasing confidence, (Ba, 2001).

## **2.8 Perceived Risk and Internet Banking Adoption**

The issue of perceived risk adoption arises because economic transactions involve risk, (Humphrey and Schmitz, 1998). This is particularly true in the case of online banking, where the bank and the customer are physically separated, contingencies are difficult to predict and incorporate into terms and conditions, relationships are difficult to monitor, and cyber-laws are not well-defined. The heightened risk perceptions of customers affect the level of internet banking adoption. When processing online information, customers may often perceive that there is a high level of risk even though the risk level may be

actually low. More experienced online customers have more information about online banking, and therefore they perceive the risk to be less and thus have more trust in online transactions, (Ba, 2001).

Clay and Strauss, (2000) said one of the customers' main concerns would be reliability of the network. When customers are transmitting personal financial data over the electronic network, there are risks that unauthorized parties could intercept this information. Therefore, customers' technology orientation and perception of the technological competency of the electronic communication system is very important in their information processing behavior and perceived trust.

The reputation of the bank is a very important factor of trustworthiness. Ba (2001) concluded that when customers feel that an online bank has a poor or bad reputation, they would be discouraged from using that Web site. While assessing the reputation, customers also assess the innovative abilities of the bank, which is based on the customers' expectations of the skills and competencies that the bank possesses in electronic transactions, (Lee and Turban, 2001).

Perceived risk reduction proves critical in an uncertain and risky environment, (Mayer , 1995) and, as pointed out by Krauter and Kaluscha (2003), online transactions always take place in that risky environment where anonymity, lack of control and potential opportunism are always involved. Online trust can reduce the levels of perceived risk associated with transaction processes, (Pavlou, 2003; Koufaris and Hampton-Sosa, 2004). In terms of perceived security, web sites could increase consumers' online trust by decreasing perceived environmental risks or by raising security (Warrington, 2000). Also

consumers may disclose their private information to web sites when reliability and credibility are recognized; this subsequently reduces consumers' concerns of privacy and security and helps to build online trust toward the web sites, (Culnan and Armstrong, 1999).

Perceived risk can also cause customers to reject new technology-based service delivery. Perceived risk is related to reliability and system failure (Mols, 1998; Walker, 2002). Customers are also worried that technology-based service delivery systems will not work as expected, and lack confidence that problems can be solved quickly (Walker, 2002). Westland (2002) found that transaction risk occurs when online markets fail to assure that service will be delivered with adequate quality. Frequently, slow response time after the Internet interaction leads to a delay of service delivery and causes customers to be unsure that the transaction was completed (Jun and Cai, 2001).

Bradley and Stewart, 2002; Mukherjee and Nath, 2003; Wang, 2003 found the risk associated with possible losses from the online banking transaction is greater than in traditional environments. Although studies showed perceived risk as an important factor that influences online banking adoption (Gerrard and Cunningham, 2003; Hewer and Howcroft, 1999; Polatoglu and Etkin, 2001), only limited work has been carried out to identify risk dimensions in this context (Littler and Melanthiou, 2006). Moreover, it is also crucial for managers to understand the barriers to internet banking adoption in order to assign resources effectively to obtain competitive advantages and increase efficiency in the banking system.

Accepting the key role of perceived risk in online banking adoption, finding an operational segmenting variable that could both reduce consumers risk perception and

positively influence internet banking adoption, would be of great managerial interest (Lassala-Navarr, 2008).

## **2.9 Trust and Internet Banking Adoption**

Many studies have proved the significant relationship between trust and electronic banking or any e-commerce adoption. Trust occurs when one party has confidence in an exchange partner's reliability and integrity, (Morgan and Hunt, 1994). For example, Chen and Barner, (2007) found that trust significantly important on online purchasing intention, web site loyalty (Flavian and Guinaliu, 2006), online banking commitment (Mukherjee and Nath, 2003), electronic banking adoption (Rexha, 2003) and behavior intention to adopt online information service, (Chen and Corkindale, 2008). Yousafzai, (2003) concluded that trust in electronic banking and its infrastructure reduces customers' transaction-specific uncertainty and related risks associated with the possibility that a bank might behave opportunistically. When people trust others, they assume that those they trust will behave as they are expected to, reducing the complexity of the interaction. Studies of online banking (Kassim and Abdulla, 2006; Kim and Prabhakar, 2000; Mukherjee and Nath, 2003) have shown that trust is a critical factor in stimulating online banking operations. The uncertainty that an individual often assumes makes trust a necessary component (Gerrard and Cunningham, 2003; Pikkarainen, 2004). Otherwise the consumer is reluctant to use online banking services (Kassim and Abdulla, 2006; Mukherjee and Nath, 2003).

Ratnasingham (1999) proposes the term technology trust and suggests that dimensions of security services such as confidentiality mechanisms, authentication mechanisms, and

access control mechanisms contribute to the enhancement of technology trust from a capability process that serves to support the privacy, accuracy, authenticity of authorized parties, and accountability of e-commerce transactions. Mukherjee and Nath, (2003) view the customers' orientation towards e-commerce technology and the extent to which they trust the electronic system as a proxy for their trust in internet banking. Stell and Paden (2002) suggested that inexperience may lead to concern about, or avoidance of, using the internet and hence to a lack of trust. Houston (2001) suggests that organisations doing business online must forge trust swiftly in order to succeed.

Kassim and Abdulla (2006); Mukherjee and Nath (2003) observed that trust play a significant role in developing and maintaining successful relationships in the financial services sector because many of the products are complex and there is physical separation between the bank advisor and the consumer. Transactions are normally completed through these technologies and parties will not necessary meet each other face to face. The parties will thus be worried that their personal information and money will be transferred to third party without their knowledge (Luarn and Lin, 2005).

Customer attitudes towards Internet banking are driven by trust, which plays an important role in increasing usability within the internet banking environment. The issue of trust is more important in online as opposed to offline banking because transactions of this nature contain sensitive information and parties involved in the financial transaction are concerned about access to critical files and information transferred via the Internet (Alsajjan and Dennis, 2006; Suh and Han, 2002).

The role of trust in the development and maintenance of successful relationships is likely to be of particular significance in the financial services sector because of the complexity

of many of the products (Bejou, 1998; Diacon and Ennew, 1996). The degree to which a customer trusts the internet banking will be negatively influenced by the belief that he/she is operating in a high level of risk even though the risk level may be actually low (perceived risk). The existence of trust in a relationship is a kind of insurance against risks and unexpected behaviour.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.0 Introduction**

This section gives details of the research design that was adopted, survey population, sampling procedure, data sources, data collection procedures, measurement of variables, validity and reliability of data and the final data analysis techniques that were applied.

#### **3.1 Research Design**

A cross sectional research design was used. Correlational design was adopted to establish the relationship between customers' attitude, risk perception and internet banking adoption. A regression analysis focusing on consumer attitudes, trust, and perceived risk was made to establish the extent to which they contribute internet banking adoption. The study was both descriptive and analytical, in that it described and analyzed the relationship between the study variables.

#### **3.2 Survey Population**

The study population comprised of 3,563,753 account holders in the major commercial banks in Uganda. Population was targeted from 19 out of 23 registered commercial banks operating in Uganda (Bank of Uganda Report, 2008).

#### **3.3 Sampling Method and Size**

The sample size of the respondents was 384 respondents selected basing on the table for determining sample size by Krejcie and Morgan, (1970). Mc Call (1994) supports this by stating that a researcher needs to get the appropriate sample size in terms of accuracy and cost putting into consideration the subject matter of investigation. Simple random sampling design was used to select respondents from 19 commercial banks in Kampala.

Simple random sampling minimizes bias and simplifies analysis of results, Hand, (2008). Convenient sampling was also used to select the respondents from the commercial banks since it is easy to access clients and a sample population was selected because it was readily available (Bryant, 2003). Judgment was based on the consensus among clients from different banks.

### **3.4 Data Sources**

- **Primary Data**

Primary data was obtained through the use of self administered questionnaires following the systematic and established procedures as suggested by (Churchill, 1979; Garbing and Anderson, 1988).

- **Secondary Data**

Secondary data was obtained through the already existing literature from journals, newspapers, textbooks, articles.

### **3.5. Data Collection Instruments**

Data was collected using well formulated questionnaires. The questionnaires were self adjusted, validated and pre tested. The self-administered questionnaire was used as a tool for data collection because it is quicker in getting data from the respondents (Bakkabulindi, 2004). The researcher held discussions with the respondents and information obtained through discussions were compared with the data from instruments to ascertain correctness.

### 3.6. Validity and Reliability of Instruments

Validity of instruments was obtained using the Content Validity Index (CVI). It was performed on the constructs to ensure that the scale items are meaningful to the sample and capture the issues that were measured.

Reliability of the instruments was ascertained using the Cronbach's coefficient alpha (Cronbach, 1946) to test for the internal consistency of the scales used to measure the variables. Alpha coefficient of above 0.5 for individual test variables was accepted meaning the instrument was valid (Nunnally, 1978). The results in the table below show the validity and reliability values of the variables that the researcher set out to study

**Table 1: Reliability and validity**

<b>Variables</b>	<b>Anchor</b>	<b>Cronbach Alpha</b>	<b>Content Validity Index</b>
Consumer Attitudes	5 Point	0.630	0.783
Trust	5 Point	0.782	0.769
Perceived Risk	5 Point	0.710	0.800
Internet Banking Adoption	5 Point	0.845	0.692

The Reliability and Validity results in the table showed that the instrument was both reliable and valid since the variable coefficients were above 0.6 in both cases.

### 3.7. Measurement of Variables

Scales from previous studies was used to measure the study variables.

Customer attitude: Customer attitude was measured basing on the scales developed by (Lai and Li, 2005), (Wu and Chen, 2005) and (Chau and Lai, 2003), Fishbein and Ajzen, 1975, Taylor and Todd (1995).

Risk perception: This was measured basing on a five item scale adapted from (Awamleh and Fernandes, 2006) and Meuter (2005), Cheung and Lee (2001); Flavian and Guinaliu (2006); Janda (2002); Littler and Melanthiou (2006)

Trust: This was measured basing on a five item scale adapted from Donney and Canon (1997), Kumar (1995), Roy (2001) and Morgan and Hunt (1994), Moorman et al. (1993), Hewett and Bearden (2001), McKnight and Chervany, 2002).

Internet Banking Adoption. The adoption scale was developed according Eastlick and Lotz, 1999; Venkatraman, 1991; Shimand Drake, 1990) and Tan and Teo (2000).

### **3.8. Data Analysis**

Data from the field was compiled, sorted, and coded to have the required quality, accuracy and completeness. Data was entered into the computer system using the Statistical Package for Social Sciences (SPSSv16.0) for analysis. Correlation analysis was carried out to establish the strength of the relationship between variables. Multiple regression analysis was also carried out to determine extent to which independent variables influence the dependent variable.

### **3.9. Limitations of the Study**

- i. Measurements that were used are adopted from previous studies and therefore any limitations that are embedded in them will equally affect this study.
- ii. Since little research on internet banking adoption has been carried out here in Uganda, there was limited literature and scarcity of local secondary data hence foreign data was used in lieu.

## CHAPTER FOUR

### DATA PRESENTATION, ANALYSIS AND INTERPRETATION

#### 4.1 Introduction

This chapter presents the results of data analysis and findings compiled from the field. It is divided into three main sections. The first section deals with the background information of the respondents. The second section analyses and discusses the relationship between the various variables in the study. The third section analyses the degree to which the Consumer Attitudes, Trust and Perceived Risk impact on the Internet Banking. Primary data collection focused on 384 commercial bank clients in Kampala. The findings are presented in line with the study objectives.

#### 4.2 Background Information

The background information of the respondents includes the gender, age, level of education, marital status and occupational status.

##### 4.2.1 Age Group of the Respondents

The results in the table below show the age group of the persons who participated in the study.

**Table 2: Age Group**

		Frequency	Valid Percent	Cumulative Percent
Valid	18 - 25 yrs	122	43.0	43.0
	26 - 30 yrs	64	22.5	65.5
	31 - 35 yrs	52	18.3	83.8
	36 - 40 yrs	20	7.0	90.8
	40 yrs & Above	26	9.2	100.0
	<b>Total</b>	284	100.0	

**Source. Primary Data**

The majority of the respondents were in the 18-25 year age bracket (43.0%) while on the other hand, those in the 36-40 year age group comprised 7.0% of the sample. In addition, those in the 26-30, 31-35 and 40 years and above age brackets, constituted 22.5%, 18.3% and 9.2% respectively. This implies majority of the commercial banks' clients are in a dynamic age that can easily learn and understand the internet banking infrastructures put in place by commercial banks.

#### 4.2.2 Gender of the Respondents

The results in the table below show the gender of the persons who participated in the study.

**Table 3: Gender of Respondents**

		<b>Frequency</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
<b>Valid</b>	Male	134	47.2	47.2
	Female	150	52.8	100.0
	<b>Total</b>	284	100.0	

#### **Source. Primary Data**

The majority of the respondents were female totaling to 150 comprising of 52.8% while the male respondents were 134 comprising of 47.2%. The results imply that this rate is likely going to affect internet banking adoption as females are likely to welcome new innovations in the banking industry than male counterparts.

#### 4.2.3 Marital Status

The results in the table below show the marital status of the persons who participated in the study.

**Table 4: Marital Status**

		<b>Frequency</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
<b>Valid</b>	Single	159	56.0	56.0
	Married	125	44.0	100.0
	<b>Total</b>	284	100.0	

**Source. Primary Data**

The majority of the respondents were single totaling to 159 comprising of 56.0% while the married respondents were 125 comprising of 44.0%. This implies that the majority of the bank clients are free that is without much family bondage to join any financial institution that practice internet banking.

**4.2.4 Level of Education**

The results in the table below show the level of education of the persons who participated in the study.

**Table 5: Level of Education**

		<b>Frequency</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
<b>Valid</b>	Secondary	19	6.7	6.7
	Diploma	65	22.9	29.6
	Bachelors Degree	161	56.7	86.3
	Masters	34	12.0	98.2
	PhD	5	1.8	100.0
	<b>Total</b>	284	100.0	

**Source. Primary Data**

The majority of the respondents were 161 with Bachelors' degree (56.7%) while on the other hand, those with PhD were 5 comprising of 1.8% of the sample. In addition, those with Secondary, Diploma and Masters Level constituted 6.7%, 22.9% and 12.0%

respectively. This implies that most bank customers can easily understand the functioning of the infrastructures put in place by commercial banks such as ATM operations.

#### 4.25 Occupation Status

The results in the table below show the occupation status of the persons who participated in the study.

**Table 6: Occupation status**

		Frequency	Valid Percent	Cumulative Percent
<b>Valid</b>	Government	52	18.3	18.3
	Private Sector	72	25.4	43.7
	Self Employed	113	39.8	83.5
	Other	47	16.5	100.0
	<b>Total</b>	284	100.0	

**Source. Primary Data**

The majority of the respondents were self employed comprising of 39.8% while on the other hand, those employed in other sectors not mentioned in table were the minority comprising of 16.5% of the sample. In addition, those employed in government, private sector constituted 18.3%, and 25.4% respectively. This implies that the majority of the bank clients are free to join any financial institution that practice internet banking.

#### 4.3 Relationships between the Variables

The objectives of the study were based on the relationships between the different variables which were: Consumer Attitudes, Trust, Perceived risk and Internet Banking Adoption. In order to achieve, the Pearson (r) correlation coefficient was computed given

the interval nature of the data and the need to test the direction and strength of relationships between the study variables.

**Table 7: Pearson Correlations**

	1	2	3	4	5	6	7	8
Complexity-1	1.000							
Value towards Banking needs-2	.267**	1.000						
Compatibility-3	.321**	.421**	1.000					
Trialability-4	.182**	.261**	.345**	1.000				
<b>Consumer Attitudes-5</b>	.390**	.716**	.748**	.700**	1.000			
<b>Trust-6</b>	.248**	.367**	.303**	.243**	.407**	1.000		
<b>Perceived Risk-7</b>	-.276**	-.225**	-.261**	-.244**	-.372**	-.305**	1.000	
<b>Internet Banking Adoption-8</b>	.379**	.548**	.478**	.309**	.608**	.495**	-.387**	1.000

\*\* Correlation is significant at the 0.01 level (2-tailed).

**Source. Primary Data**

**4.3.1 The Relationship between Consumer Attitude and Trust.**

The results revealed that Consumer attitudes are positively related to the Trust that individuals have towards Internet Banking Adoption ( $r = .407^{**}$ ,  $p < .01$ ). The results further show that the components of Consumer Attitudes i.e. Complexity, Value towards Banking needs, Compatibility and Trialability were all positively related to Trust with the following parameters ( $r = .248^{**}$ ,  $p < .01$ ), ( $r = .367^{**}$ ,  $p < .01$ ), ( $r = .303^{**}$ ,  $p < .01$ ) and ( $r = .243^{**}$ ,  $p < .01$ ) respectively. These results imply that if the customers have positive attitudes towards internet banking, they are bound to trust the transactions done in this fashion.

**4.3.2 The Relationship between Consumer Attitude and Perceived Risk**

The results revealed that Consumer attitudes are negatively related to the level of perceived risk that is the consumer's perception of the uncertainty and potential adverse consequences of buying the internet banking service ( $r = -.372^{**}$ ,  $p < .01$ ). The results

further show that the components of Consumer Attitudes i.e. Complexity, Value towards Banking needs, Compatibility and Trialability were all negatively related to perceived risk with the following parameters ( $r = -.276^{**}, p < .01$ ), ( $r = -.225^{**}, p < .01$ ), ( $r = -.261^{**}, p < .01$ ) and ( $r = -.244^{**}, p < .01$ ) respectively. These results imply that if the consumers have positive attitudes towards internet banking, they are bound to trust the internet banking transactions when the perceived risk is low.

#### **4.3.3 The Relationship between Trust and Internet Banking Adoption.**

The results revealed that Trust is positively related to Internet banking adoption ( $r = .495^{**}, p < .01$ ). These results imply that trust in internet banking and its infrastructure reduces customers' transaction-specific uncertainty and related risks associated with it. It also implies that when customers trust internet banking, they assume that it will behave as expected thus reducing the uncertainty of the internet banking transactions.

#### **4.3.4 The Relationship between the Perceived Risk and Internet Banking Adoption.**

The results revealed that Perceived risk is negatively related to Internet banking adoption ( $r = -.387^{**}, p < .01$ ). These results imply that when the level of perceived risk is high, customers will not adopt internet banking. This means that higher risk perceptions of customers affect the level of internet banking adoption.

#### **4.3.5 The Relationship between the Consumer Attitude and Internet Banking Adoption.**

The results revealed that consumer attitudes is positively related to Internet banking adoption ( $r = .608^{**}, p < .01$ ). The results further show that the components of Consumer Attitudes i.e. Complexity, Value towards Banking needs, Compatibility and Trialability

were all positively related to perceived risk with the following parameters ( $r = .379^{**}, p < .01$ ), ( $r = .548^{**}, p < .01$ ), ( $r = .478^{**}, p < .01$ ) and ( $r = .309^{**}, p < .01$ ) respectively. These results imply that if the customers have positive attitudes towards internet banking, they are bound to believe the transactions done in this fashion.

#### 4.4 Regression Model

The regression model was used to determine the degree to which Consumer Attitudes, Trust and Perceived Risk impact on the Internet Banking Adoption. The model shows the extent to which independent variables influence the dependent variable. This was done since there was more than one predictor variable impacting on the dependent variable.

**Table 8: Regression Analysis Model**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.772	.204		8.679	.000
Consumer Attitudes	.388	.044	.461	8.887	.000
Trust	.190	.038	.257	5.035	.000
Perceived Risk	-.069	.025	-.140	-2.826	.005
<b>Dependent Variable: Internet Banking Adoption</b>					
R Square	0.467		F Change		75.939
Adjusted R Square	0.461		Sig.		.000

#### Source. Primary Data

The results showed that Consumer Attitudes, Trust and Perceived Risk if well managed can improve the rate of Internet Banking Adoption by 46.1% (Adjusted R Square = .461). Among the three variables, it was noted that addressing Consumer Attitudes (Beta = .461) should take priority over Trust (Beta = .257) and Perceived Risk (Beta = -.140) if the Internet Banking is to be successfully adopted. The regression model was significant ( $\text{sig.} < .01$ ).

## **CHAPTER FIVE**

### **DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents a discussion of findings observed and inferred from the data presented in chapter four. The discussion of findings is based on the literature available in chapter two. This chapter also provides the conclusions, recommendations and suggested areas for further study.

The findings are discussed in terms of the research objectives in relation to literature in chapter two. The level of constructs of Consumer attitudes, Trust, Perceived Risk and Internet Banking Adoption and relationship between these variables are discussed.

#### **5.2 .Discussion of Findings**

##### **5.2.1 Relationship between Consumer Attitudes and Internet Banking Adoption**

The Pearson ( $r$ ) correlation coefficient shows that there is a significant positive relationship between Consumer Attitudes and Internet Banking Adoption. This implies that when the consumer attitude is good, the rate of internet adoption is likely to be high. For example when customers believe that internet banking is the easiest, convenient, flexible and efficient way of conducting banking transactions, they are likely bound to adopt it.

This is in consistent with Davis (1993) who suggested that a prospective user's overall feelings or attitudes toward using a given technology-based system or procedure represent major determinants as to whether or not customers will ultimately use the system.

This is also consistent with Lockett and Litter (1997) study which indicated that the most important perceived positive attribute of internet banking was its 24-hour-a-day availability, whereas complexity and risk of service were the two negative attributes.

The results also are in agreement with Daniel (1998) who found out that the main factors influencing internet banking adoption included the convenience aspects of the service, ease of use and its compatibility with consumers' existing lifestyles.

Also results are consistent with Karjaluoto (2002) who found out that attitude towards internet banking and actual behaviours were both influenced by prior experience of computers and technology.

The above finding is further in line with Sathye (1999) in the new technology acceptance, which points out that unless the specific need of a consumer is fulfilled, consumers may not be prepared to change from present familiar ways of operating.

However Howcroft (2002) pointed out that attitude towards new technologies may also be linked to a set of personal characteristics for example he found out that younger consumers value the convenience or time saving potential of online and mobile banking more than older consumers. Younger consumers also regarded the lack of face-to-face contact as less important than older consumers.

### **5.2.2 Relationship between Consumer Attitude and Trust**

The Pearson (r) correlation coefficient shows that there is a significant positive relationship between relationship between Consumer Attitude and Trust. This implies that when customers believe that Internet banking fulfils the commitments and promises it assumes and that it is reliable, sincere, confidential and has the necessary abilities to carry out its work, they are likely bound to adopt it.

This finding is consistent with Krauter and Faullant (2008) who found out trust enables favorable expectations that the internet is reliable and predictable and that no harmful consequences will occur if the online consumer uses the internet as a transaction medium for his financial transactions. The study done by Davis (1989) found out that Perceived ease of use and perceived usefulness have a positive influence on trust as it promotes a favourable impression towards the initial adoption of the service. It is also in line with Lee and Turban, 2001 who found out that various performance measures such as network and download speed, navigability, reliability, connectivity and availability to evaluate electronic transactions influence internet banking adoption.

However, Igbaria (1997); Nielsen (2000) found out that ease of searching, transaction interaction, broken links and navigation have all been associated with changes in online trust.

The result is also consistent with Keen (1997); Hoffma (1999) who found out that a lack of trust has been the most significant long-term barrier for realizing the full potential and attitude towards internet banking adoption. Gummerus, (2004) also found out that lack of trust has been one of the most significant reasons for customers not adopting online services involving financial exchanges.

### **5.2.3 Relationship between Consumer Attitude and Perceived Risk**

The findings of the study indicate that there is a negative relationship between Consumer Attitude and Perceived Risk. This implies that consumer attitudes are negatively affected by the level of perceived risk. For example when customers are not sure of the security, privacy of the internet banking transactions, it is most likely bound to affect the rate of internet banking adoption.

The result is consistent with Cunningham, 2005; Pavlou, 2003; Salam, 2003; Schlosser, 2006 who found out that perceived risk is an important factor influencing online consumer behaviour. Cheung and Lee, 2006 found out in the online environment criminal acts can be performed with extremely high speed, and without any physical contact.

The study done by Howcroft (2002) found out that Perceived fears of divulging personal information and feelings of insecurity have a negative influence on internet banking services use. This is because user perceptions of the credibility of security and privacy may affect internet banking use intention.

Finally the result is in agreement with Aladwani's (2001) who found that potential online banking customers ranked internet security and customers' privacy as the most important future challenges facing banks and thus concluded that customers attitude towards internet banking adoption has been affected by the perceived security risk.

#### **5.2.4 Relationship between Perceived Risk and Internet Banking Adoption**

The Pearson (r) correlation coefficient shows that there is a negative relationship between Perceived Risk and Internet Banking Adoption. This implies that the higher the perceived risk, the lower the rate of internet banking adoption. For example when the security, performance and privacy risks about internet banking transactions are high, the rate of internet banking adoption is likely to be low.

The finding is in line with Ba (2001) who found that when customers feel that an online bank has a poor or bad reputation, they would be discouraged from using that service.

The finding is also in agreement with Culnan and Armstrong (1999) found out that consumers may disclose their private information to web sites only when reliability and

credibility are recognized; this subsequently reduces consumers' concerns of privacy and security and helps to build online trust toward the web sites.

Previous research in countries with different levels of Internet banking adoption shows that perceived security risk is an important predictor of internet banking adoption. Sathye (1999) investigates internet banking adoption by Australian consumers and identifies security concerns and lack of awareness as the main obstacles to adoption. Gerrard and Cunningham (2003) found security concerns over internet banking high in both adopters and non-adopters in Singapore. Research by Lee (2005) on USA consumers showed greater concern among prospective adopters than current adopters over transaction security and monetary benefits when choosing an internet based banking service. Cheng et al. (2006) found perceived web security to be a significant determinant of customer's acceptance of online banking. Customers tend to increase internet banking only if they perceive that ATM number and other sensitive information is safe.

### **5.1.5 Relationship between Trust and Internet Banking Adoption**

The Pearson ( $r$ ) correlation coefficient shows that there is a significant positive relationship between Trust and Internet Banking Adoption. This implies that when consumers trust the security, privacy of internet banking, they are likely bound to adopt it.

The finding is in line with Yousafzai, (2003) who found out that trust in electronic banking and its infrastructure reduces customers' transaction-specific uncertainty and related risks associated with the possibility that a bank might behave opportunistically.

The result is also consistent with Krauter (2008) who found out that internet trust has a strong and positive impact on attitude toward internet banking where internet trust was

defined as the trusting beliefs in the reliability and predictability of the internet and the willingness of the consumer to depend on the internet with regard to economic transactions.

The result is also in line with Bejou (1998); Diacon and Ennew (1996) who argued that the existence of trust in a relationship is a kind of insurance against risks and unexpected behavior thus the role of trust in the development and maintenance of successful relationships is likely to be of particular significance in the financial services sector because of the complexity of many of the products.

## **5.2 Conclusion**

It is observed from the study that there is a significant positive relationship between Consumer Attitudes and Internet Banking Adoption. It was found out that four attitudinal factors have strong influences on Internet Banking Adoption namely value to banking needs, compatibility, complexity, and trialability. For example value of the internet to banking needs significantly predicts internet banking adoption. Individuals who deem internet banking useful in fulfilling their banking needs such as, the need to have better control of their own financial accounts, and those seeking for the most convenient channel to have close monitoring of these accounts, have more promising prospects.

The study shows the significant positive relationship between Consumer Attitude and Trust. This means that when consumers believe that internet banking is safe, efficient, confidential, convenient, easy to use, reliable, and fulfils the commitments and promises it assumes, they are likely bound to trust the system. This study argues therefore that consumer attitude and trust can help in creating internet banking acceptance among

Ugandan Bank customers. The study shows that there is a positive relationship between Trust and Internet Banking Adoption. This is because internet users complete the transactions through internet technologies without face to face interaction. The users will thus be worried that their personal information and money will be transferred to third party without their knowledge. Thus the existence of trust in a relationship is a kind of insurance against risks and unexpected behaviour.

The study shows the negative relationship between Consumer Attitude and Perceived risk. This is because when customers are not sure of the privacy and security aspects of internet banking, they are bound not adopt the system. The study shows that there is also a negative relationship between Perceived Risk and Internet Banking Adoption. The higher the perceived risk, the lower the rate of internet banking adoption. This is because in the online environment, criminal acts can be performed with extremely high speed, and without any physical contact. If an unauthorized individual is able to get access to the online banking portfolio of a user, a considerable amount of financial information may be jeopardised and there might be considerable financial losses.

### **5.3 Recommendations**

- i) Trust building among the customers should be a major concern for the service providers while improving the usefulness of the system. In order to enhance trust in internet banking, trust-creating activities must be continuously pursued.
- ii) Commercial banks should ensure security and privacy. Security features should be considered an important issue by banks because internet banking users are more favorably inclined toward using it when they perceive that the information provided during the banking transactions is secure, and third parties will not have access to it.
- iii) Bank managers should develop a system that provides up to date and relevant financial information with good user interface consistency in order to enhance trust.
- iv) Bank managers should monitor and evaluate the usage of the implemented technologies. This can be done by identifying the number of customers using a given technology and how often it is used, with such a measure in place. Information Technology bank managers should therefore get feedback on which technology that should be improved and then later plan for their business without wastage of resources.
- v) Changing consumer attitudes towards internet banking should be put into consideration. Bank managers should place more emphasis on the awareness of Internet banking adoption while educating individual customers on its existence and benefits. User awareness of Internet banking services can be increased through putting in place community based workshops and through various social networks

and channels, such as word of mouth and informal seminars before introduction of new technology.

- vi) Commercial banks should make the internet banking interface for the customer more attractive and easier to navigate in order to increase the adoption rate of internet banking.

#### **5.4 Areas for Further Study**

- i) The future research should follow the longitudinal approach to predict beliefs and behaviour over time since the model in this study is cross-sectional, which measures the intention only at a single point in time.
- ii) There is a need to examine the relationship between culture and internet banking adoption in Uganda.
- iii) More research should be carried out on the effect of Consumer innovativeness and internet banking adoption in Uganda.

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**Appendix 1**  
**Makerere University**  
**Questionnaire**

Dear respondent,

This study is about **Consumer attitudes, Perceived risk, Trust and Internet banking adoption in Uganda**. Consumer attitude refers to the fundamental factors that influences one`s buying behavior towards internet banking usage, Perceived risk is the consumers perception of the uncertainty and potential adverse consequences of buying the internet banking service whereas trust is the belief and confidence that consumers have about the other party i.e. about banks and the services they offer through the internet.

You have been identified as a respondent and I therefore request u kindly that you spare a few minutes of your busy schedules to fill this questionnaire. The responses will be aggregated to the organization and used for academic research. Your honest and sincere responses are highly appreciated and shall be treated with utmost confidentiality.

**SECTION: A. Personal information**

**Age:** 18-25  26-30  31-35  36-40  40 and above

**Gender**

Male  Female

**Marital status**

Single  Married

**Level of education**

Secondary  Diploma   
Bachelor`s degree  Masters  PHD

**Occupation status**

Governmental  Private sector  Self employed   
Other.....

**SECTION: B Consumer Attitudes**

**Guidelines:** The table below shows alternative responses; evaluate each statement and tick in the appropriate box basing on the following scale.

I strongly disagree	I disagree	I am not sure	I agree	I strongly agree
1	2	3	4	5

	<b>Value towards the banking needs</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>1</b>	I find Internet Banking an easier way to solve my banking needs	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>2</b>	Internet Banking gives me greater control over my finances	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>3</b>	Internet Banking allows me to manage my finance effectively	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>4</b>	I find Internet Banking a convenient way to manage my finance	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>5</b>	Internet Banking allows me to manage my finance efficiently	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>6</b>	Internet banking services are fast to use	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

7	The use of internet banking services is convenient	1	2	3	4	5
	<b>Complexity</b>					
1	Internet Banking requires a lot of knowledge to use	1	2	3	4	5
2	Internet Banking is difficult to use	1	2	3	4	5
3	I am reluctant to use internet banking service unless it has been tried and tested by others first.	1	2	3	4	5
4	Internet banking is an easy way to conduct banking transactions.	1	2	3	4	5
5	I always find it easy to remember the password of my ATM card.	1	2	3	4	5
6	Internet banking is technologically easy to get started	1	2	3	4	5
	<b>Compatibility</b>					
1	Internet Banking is well suited to my lifestyle	1	2	3	4	5
2	Internet Banking fits well in the way I like to manage my finances	1	2	3	4	5
3	I am happy with my old way of banking operations	1	2	3	4	5
4	I am knowledgeable about the various methods for accessing my account	1	2	3	4	5
5	Automated banking services make me uncomfortable	1	2	3	4	5
6	I believe that many transactions can be done by Internet banking	1	2	3	4	5
7	Using internet banking for me is the same as paying by cash	1	2	3	4	5
	<b>Trialability</b>					
1	Before I use Internet banking, I need to try it for at least one month.	1	2	3	4	5
2	There are many opportunities about internet banking available for us to use.	1	2	3	4	5
3	Internet Banking is available to me to adequately try it	1	2	3	4	5

### SECTION: C Trust

**Guidelines:** The table below shows alternative responses; evaluate each statement and tick in the appropriate box basing on the following scale.

I strongly disagree	I disagree	I am not sure	I agree	I strongly agree
1	2	3	4	5

	<b>Honesty</b>	1	2	3	4	5
1	Internet banking fulfils the commitments and promises it assumes.	1	2	3	4	5
2	The information offered by internet banking is sincere and honest.	1	2	3	4	5
3	Internet banking is characterized by the frankness of the services that it offers to the consumer.	1	2	3	4	5
4	Internet banking services provide false statements.	1	2	3	4	5
5	Internet banking is characterized by the clarity of the services that it offers to the consumer.	1	2	3	4	5
6	My personal information is kept confidential while using internet banking	1	2	3	4	5
7	Transactions conducted through internet banking are secure	1	2	3	4	5
8	Internet banking carries out transactions as is intended by the user	1	2	3	4	5

9	The design and commercial offerings of internet banking take into account the desires and needs of its users	1	2	3	4	5
	<b>Competence</b>					
1	I believe Internet banking has the necessary abilities to carry out its work	1	2	3	4	5
2	I believe internet banking has the necessary resources to successfully carry out its activities.	1	2	3	4	5
3	I believe when performing a transaction on the internet I know exactly what will happen.	1	2	3	4	5
4	I believe Internet banking functions as expected	1	2	3	4	5

### SECTION: D Perceived Risk

**Guidelines:** The table below shows alternative responses; evaluate each statement and tick in the appropriate box basing on the following scale.

I strongly disagree	I disagree	I am not sure	I agree	I strongly agree
1	2	3	4	5

	<b>Security</b>					
1	I worry about giving my ATM number or log in to banking website	1	2	3	4	5
2	Internet banking transactions are intercepted by unauthorized third parties	1	2	3	4	5
3	I am confident over the security aspects of Internet banking in Uganda.	1	2	3	4	5
4	Internet banking transactions can be modified by unauthorized third parties					
5	There is a great risk of error in paying by internet banking than paying by cash	1	2	3	4	5
6	I generally see myself as a risk taker rather than being conservative on the decisions I take	1	2	3	4	5
	<b>Privacy</b>					
1	Internet banking may provide my personal information to other people without my consent	1	2	3	4	5
2	I am confident over the privacy aspects of internet banking	1	2	3	4	5
3	Banking institutions keep customers information private and confidential	1	2	3	4	5
4	Customers financial details may be passed on to other banks	1	2	3	4	5
	<b>Time</b>					
1	I find it hard to choose a the banking operation I need	1	2	3	4	5
2	Much time is needed for additional procedures when using internet banking.	1	2	3	4	5
3	Too much time is wasted when performing internet banking operations.	1	2	3	4	5
4	Much time is required in learning to use online banking services	1	2	3	4	5
	<b>Performance</b>					
1	The Internet enables me to handle online financial transactions accurately.	1	2	3	4	5
2	Using the Internet for handling online financial transactions is efficient.	1	2	3	4	5
3	The Internet guarantees that all transactions to the bank have been completed.	1	2	3	4	5
4	The Internet enables customers to access the accounts 24 hours and 7 days.	1	2	3	4	5
5	Internet banking operations provide the financial advantages expected.	1	2	3	4	5
6	The connection may be lost when using internet banking services	1	2	3	4	5

**SECTION E. Internet Banking Adoption.**

**Guidelines:** The table below shows alternative responses; evaluate each statement and tick in the appropriate box basing on the following scale.

I strongly disagree	I disagree	I am not sure	I agree	I strongly agree
1	2	3	4	5

	<b>Accessibility</b>					
<b>1</b>	I find it easy to do what I want to do in online banking	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>2</b>	My interaction with an online bank is clear and understandable	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>3</b>	Learning to use an online bank is easy for me	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>4</b>	The bank provides enough security for account holder	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>5</b>	I find an online banking flexible to interact with	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>6</b>	Thieves cannot easily access my account	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
	<b>Effectiveness</b>					
<b>1</b>	Using an online bank enhances my effectiveness of utilizing banking services.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>2</b>	Using an online bank makes it easier for me to utilize banking services	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>3</b>	Using an online bank enables me to utilize banking services more quickly	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>4</b>	Using an online bank for my banking services increases my productivity	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>5</b>	Using an online bank improves my performance of utilizing banking services	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>6</b>	Internet banking is cost effective	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>7</b>	Internet banking reduces customer-banker relationship	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

**Thank you for your cooperation**