Mobile Banking
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Abstract—Mobile banking refers to provision of banking services through mobile devices such as mobile phone or tablet. It is a natural evolution of Internet banking and a better digital alternative. It represents a breakthrough for remote banking services. It is providing banking services at any place and at any time. The purpose of this paper is to present a brief introduction to mobile banking.

Keywords—Mobile banking, Electronic banking, Internet banking

I. INTRODUCTION

Banking plays a key role in our economy and has become an integral art of our lives. Today, mobile users can conduct basic banking transactions such as checking balances, paying bills, and transferring money from anywhere anytime. Mobile phones are not only used for communication purposes, they are used for banking transactions.

Mobile banking (or m-banking) is an emerging branch of electronic or online banking. It is an application of mobile commerce based on wireless networks and mobile devices. It consists of banks, telecommunication companies and mobile devices. It uses software called an app, which can be downloaded to a mobile device. Since the apps handle sensitive personal information, their safety is important. The mobile user is connected to a mobile network through a SIM card.

Mobile banking has a unique competitive edge over traditional banking because it allows customers to perform banking transactions irrespective of place and time. Advantages of mobile banking for both banks and customers include easy access anywhere, control over your money, availability on 24-hour basis, and reduction in the cost of handling banking transactions. One does not need to have Internet connection; a mobile connection is all that is required. Right now, banks are not charging customers for their mobile banking services. But wireless carriers do charge some fees.

II. ADOPTION DIFFICULTIES

Mobile banking is still underused despite its advantages (such as ubiquity and immediacy) and the substantial investments in it. Its adoption rate is lower than expected. Researchers and practitioners are interested in the factors that delay or even prevent its widespread adoption. What factors affect customers’ decision to use mobile banking? Potential barriers to adoption of mobile banking include customers’ perception of its usefulness, its ease of use, its associated cost, e-literacy, and culture. Security, privacy, trust, and risk also raise concerns on adoption. Mobile banking needs to be secure, convenient, and competitive in charges [1]. Trust is important in customer loyalty because there is no face-to-face interaction in mobile banking and sensitive personal information is involved. Age is also an important factor in adoption behavior. Studies show that younger people tend to use mobile banking than older people [2].

Mobile banking in developing nations is still restricted. Factors that have direct impact on adoption and usability of mobile banking include cultural differences, convenience, and literacy. It is helpful and convenient to be able to access your bank at your fingertips while on the go. Non-literate population cannot handle complex devices such as smart phones and personal digital assistant (PDAs). Factors that hinder its adoption include perceived security risk and lack of trust. Technology anxiety affects the usage of self-service technologies. It prevents customers from mastering new technologies. Because mobile banking does not involve face-to-face interaction, it is hard to build trust. When the service providers have the trust of the customers, they readily satisfy the customers.

III. CHALLENGES

There are some unique challenges facing mobile banking. One problem is preventing fraud. The bank must ensure that transactions requests are made by legitimate mobile user. The personal identification number (PIN) is typically used for authenticating users.

There is no universal standard for mobile banking. Banking structures and systems vary from one country to another. Despite the advantages of mobile banking, it has failed to take off in most developing nations. The low penetration rate may be due to non-availability of smart phones and banks in rural areas of those countries. Security and trust are major barriers to mobile banking [3].
There is a perceived challenge of interoperability between mobile banking applications due to lack of common standards [4]. There are different platforms of smart phones: Andrios, iOs, and Windows phone.

Most mobile devices have smaller screen sizes and limited software and hardware capabilities. For this reason, mobile applications should be designed in such a way as to allow users to have effective interaction.

IV. SECURITY

Security is the major concern in mobile banking. It is the bank’s responsibility to provide security to protect information exchange between the bank and the customer. Main security issues that should be addressed include [5]: (1) data transmission must be secured, (2) application and data access must be controlled, (3) data integrity must be protected, and (4) loss of device must have limited impact. Wireless adaptations of PKI and TLS/SSL have been developed for mobile banking.

Cyber-attacks that may affect mobile banking include unauthorized use, hacking, eavesdropping, information loss, malware, PIN recovery attacks, and interference. Password authentication has been used to protect mobile devices from unauthorized user. This requires that a user gives the correct password before accessing the mobile device. Other authentication techniques include physical devices, one time passwords, transaction profile scripts, and biometric identification [6].

V. CONCLUSION

Mobile banking via smart phones and tablets is one of the technological wonders of recent times. It uses cell phones and PDAs to access banking services via a wireless application protocol. It is growing rapidly and is here to stay. It allows customers to take advantage of the latest advanced technologies. Mobile money has the potential of increasing the wealth of its users. Mobile banking is inevitable for the banks to stay competitive. It has not been adopted to its full potential, leaving plenty of room for improvement.

REFERENCES


AUTHORS

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