

# Chapter 42

## Security Policy Issues in Internet Banking in Malaysia

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### ABSTRACT

*As a continually growing financial services of electronic commerce, Internet banking requires the development and implementation of a sound security procedure. The existing literature highlights security as the primary factor which determines the adoption of Internet banking technology. The secondary information on Internet banking development in Malaysia shows a very slow growth rate. Hence, this study aims to investigate risk and security requirements factors which influence the adoption of Internet banking application through the information collected from an interviews with managers from Bank M, Bank C and Bank P. The results reveal that the customers have great concerns for security and privacy issues in adoption of Internet banking. Hence, several methods of ensuring a more secure Internet banking was suggested like a two factor authentication and three factor authentication. For future research directions biometric techniques, such as fingerprint verification, iris or face recognition, retina analysis and hand-written signature verification are increasingly becoming basic elements of authentication and identification systems in order to be privacy-friendly, minimize the social risks and prevent misuse of biometric data.*

### INTRODUCTION

Technological developments particularly in the area of telecommunications and information technology are revolutionizing the banking industry. With the proliferation of Internet expansion

and computer usage, the electronic delivery of banking service has become ideal for banks to meet customer's expectations. Compatible with the revolutionary components of the electronic marketplace, Malaysia has actively developed e-banking services since mid 2000.

On June 1, 2000, the Malaysian Central Bank gave the green light for locally owned commercial

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banks to offer Internet banking services. On June 15, 2000, Maybank, the largest domestic bank became the first bank to offer Internet banking services in Malaysia. On August 7, 2002, 8 Malaysian Commercial Banks started offering Internet banking services. They are the Alliance Bank Malaysia Berhad, Ambank Berhad, Bumiputra-Commerce Bank Berhad, Hong Leong Bank Berhad, Malayan Banking Berhad, Public Bank Berhad RHB Bank Berhad and Southern Bank Berhad.

In 2002, 25,000 Maybank's customers and 10,000 HSBC's customers were subscribed to Internet Banking (Yu, 2002; Bernama, 2002) and these two financial institutions are the leading banks in providing Internet banking.

In a recent study by Raju, Thiagarajan and Seetharaman (2007), it was discovered that Malaysian consumers strongly agreed that they refused to adopt Internet banking because of lack of security and reliability of transactions over the internet. This was clearly supported by statistics from household use of the Internet survey in 2008 by Malaysian Communications and Multimedia Commission (MCMC) which revealed that Internet banking usage in Malaysia was only 31.8 percent in 2008. Clearly, in order to grow consumer Internet banking demand, banks must make key improvements that address consumer concerns. The purpose of the chapter is to highlight what are the security issues concern in Internet banking in Malaysia and propose an Internet banking security mechanism framework which will help in the Malaysian Internet banking security implementation.

## **BACKGROUND**

The number of Internet banking users is growing not only in Malaysia, but throughout the world. The convenience of using Internet banking to perform banking facilities 24 hours of the day gives an edge over the delivery channels offered previously such as phone banking, fax banking,

kiosk and online banking through dedicated lines to the bank. Generally, Malaysians are accepting Internet banking with open hands. However, besides the advantages of Internet banking, there are issues that need to be dealt with. These issues are of great magnitude and the awareness about them among Malaysian banking customers is growing. The main issue is on trusting the Internet banking (Ooi, 2002) due to security reasons. There are also a lot more issues of Internet banking that are of great concern to Malaysian banking customers which will be explained in later section. Generally, this chapter will focus on security policy guideline in Internet banking in Malaysia and security issues that recently cropped up in the Internet banking environment. Finally, Internet banking security mechanism framework is proposed in order to deal with security issues which might occur.

## **INTERNET BANKING**

Internet banking adoption in Malaysia is relatively low and very little research has been done to shed light on key adoption determinants. Though, electronic revolution has commenced in Malaysia but Internet banking is still in infancy stage. So, it is very difficult for the banking industry to design interventions that would enhance the diffusion of Internet banking (Ndubisi & Sinti, 2006).

While numerous studies have been undertaken to examine issues in the wider context of e-banking and customer loyalty, comprehensive research in the area of e-banking issues and customer preferences in the specific context of Malaysia has been rather limited. A study conducted examined the evolution of e-banking in Malaysia and analyzed the various electronic delivery channels such as automated teller machines (ATM), telebanking and PC banking (Balachandher, Santha, Norhazlin & Rajendra, 2000). Another study investigated the factors that affect the adoption of e-banking in Malaysia (Suganthi, Balachander & Balachandran, 2001).

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