



Circular No. SRD TR 02/2005

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The Chief Executive Officers of All Banks/ Merchant Banks

Dear Sir / Madam

TWO-FACTOR AUTHENTICATION FOR INTERNET BANKING

Internet banking has become a mainstream and even a primary electronic delivery channel for a large number of banks. Bank customers regularly log into banks' websites to access their accounts to conduct a wide range of banking transactions for personal and business purposes. However, the popularity and world-wide accessibility of internet banking have attracted a growing list of internet hacking threats and exploits.

2 In past years, internet security threats were usually of a passive nature involving mainly eavesdropping and password guessing. In recent years, direct attacks on banking systems and customer PINs have become increasingly widespread. Through targeted attacks such as phishing, fake websites, spamming, viruses, worms, trojan horses, trapdoors, keystroke loggers and spyware, customer PINs are under constant threats from various types of systems vulnerabilities, security flaws, exploits and scams.

3 Since 2003 MAS has been encouraging banks to adopt two-factor authentication for internet banking. Given the surge in security incidents involving the capture or misappropriation of customer PINs by cyber hackers, criminals and terrorists, there are serious doubts about the security of single-factor PINs. To further enhance internet banking security, MAS expects banks to implement two-factor authentication at login for all types of internet banking systems by December 2006. Banks should also consider requiring the repeated use of the second authentication factor by the customer for high risk transactions or for changes to sensitive customer data during a login session.

4 For further information on internet banking security, please refer to the Internet Banking Technology Risk Management Guidelines, which is available on the MAS website at <http://www.mas.gov.sg/regulations/download/IBTRM.pdf>.

Monetary Authority of Singapore

5 Should you have any questions or comments, please contact Mr Tony Chew, Director, Technology Risk Supervision at 62299109 or tonychew@mas.gov.sg.

Yours sincerely

(via MASNET)

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