

THE EFFICIENCY OF THE ICAS SYSTEM

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ABSTRACT

During the last decade, the central clearing industry has experienced a large number of changes, which have profoundly affected both its role in the broader financial infrastructure and its own market structure. The development of ICAS system aims to reduce the time taken for realization of outstation cheques. This system is cleared cheques using an image instead of physical paper as before. This system will also allow for the storage of electronic data and images. Moreover, this system can cut expenses for delivering physical cheques and reduce the cheque-clearing cycle. Finally, this system can be used as legal evidence without physical paper.

Keywords: Cheque Clearing System, Electronic Cheque Clearing System and Thai payment system

INTRODUCTION

The ICAS is known as the Imaged Cheque Clearing and Archive System. This system had development by the Bank of Thailand (BOT) in order to support the one-system, one-clearing house and one-clearing process. It consists of 2 sub-systems, namely, Image Cheque Clearing System (ICS) and Image Archive System (IAS). The former is an image based cheque clearing while the latter is responsible for the storage of electronic data and image.

The aim of developing the ICAS system is to allow the Thai authorities of clearing system for integrating the three existing systems such as Electronic Cheque Clearing system (ECS), Provincial Cheque Clearing System (PCS) and Bill for Collection system (B/C) into single system. It began to operate in Bangkok and Metropolitan area on February 3, 2012. The BOT will implement this system throughout the country by 2013. This system can be provided for the banks (providers) which can reduce timing of cheque clearing process and save transaction costs and labor costs. It can be also provided the benefits for the customers (users) who can get the funds the next working day after depositing the cheques in the banks. Before the Bank of Thailand used the ICAS system, the cheque clearing process in the Bangkok and Metropolitan area is processed through the Electronic Cheque Clearing system while the clearing process in upcountry is processed through the Provincial Cheque Clearing system and Bill for Collection system. The B/C system takes 3-5 working days for cheque clearing process. As the development of new technology, the new modernized payment system will improve to support the growth of economics. This study aims to study the conceptual of the ICAS system.

This study started by introduction with overall review of the ICAS system, following by the explanation of its objective, the description of review literature, the elucidation of the

methodology, the background of the payment system in Thailand and analysis and result. The last section presents a conclusion.

OBJECTIVE

The aim of this study is to study the conceptual of the ICAS system in Thailand. This study also compares the ICAS system with ECS, PCS and B/C systems.

LITERATURE REVIEW

This study reviewed the previous studies that have shown and provided evidence for analysis the ICAS system.

David (2002) evaluated the three types of credit card payment system and e-cheque system and digital cash system from the viewpoint of privacy, traceably, transaction costs and the ability to build up the customer purchasing pattern. He found that many consumers are still reluctant to purchase over the internet. They concern about hackers accessing their financial information. The new system is designed to relieve the concern by allowing payment over the telephone network for purchase made over the internet.

Hataiseree (2008) studied the development of e-payment a challenge for the Bank of Thailand in striking the balance between efficiency and safety of the nation payment system. He concluded that the e-payment system development in Thailand has shown a promising development. Experience has shown that pricing strategy alone is not aggressive enough to promote a greater adoption of e-payment products and the BOT has a pivotal role in advancing this type of payment. Their strategies include the reduction of cash and cheque usage, the public's payment habit, the pace of change in the country is legal and regulatory framework related to the payment system and the challenge of creation net benefits for the introduction of prospective e-payment system.

U.S. Government Account Officer (2008) studied the progressing toward full adoption of cheque truncation. They concluded that cheques still represent a significant a volume of payment. They need to be processed, cleared and settled. Moreover, the cheques clearing for the 21st Century Act of 2003 (Check 21) was intended to make cheque collection more efficient and less costly by facilitating wider use of electronic cheque processing. Finally, the cheque image and the use of substitute cheque appear to have a neutral or minimal effect on bank fraud losses.

McCook (2009) studied a future trend in payment system over coming five years. He concluded that the payment landscape has changed considerably over the last ten years. The payment system shifts away from cash and cheque and traditional payment channel to new payment technologies such as mobile banking, credit card and prepaid card. The factors that stimulate the user to use new payment technologies are convenience and low costs. The central bank and regulator play a key role to influence in shaping payment market.

Mukesh M. Goswami (2010) compared the characteristic analysis of efficient e-payment system namely, credit card system, e-coins, e-cheque, and net bill. He concluded that the result can be used as guide-line to develop more efficient e-payment system. It also provides the benefits for the user to appropriately select e-payment methods.

Committee on Payment and Settlement Systems (2010) examined to what extent change in market structure or ownership might affect the expansion of central clearing services. They concluded that the clearing industry's structure has a bearing how far central clearing will be

used in different markets and hence on the resilience of the financial system as a whole. The different kinds of market structure have developed over the last decade.

Ashish Das and Agarwal (2010) studied the transaction payments costs involved in India by holding independent interaction with all payers in the banks, the card companies and the merchants and by comparing the practice in different countries. They concluded that the banks and card companies would continue to gain. Their revenues would increase due to increase usage and user base. The government has benefits which they will be sizable reduction in the growth of currency management costs and generate the volumes of data on spending behavior of individual.

RESEARCH METHODOLOGY

This study is descriptive. The descriptive approach provides background and conceptual information of the payment system in Thailand focusing on the ICAS system. This data is collected from the Bank of Thailand, journals magazines, the Bank for International Settlement and Worldwide web. The limitation of the data based on the data publishes by the Bank of Thailand. This study analyzes the conceptual of the ICAS system as defined by the Bank of Thailand and the Bank for International Settlement. This study also compares the ICAS system with the Electronic Clearing system, the Provincial Cheque Clearing system and Bill for Collection system in order to provide the benefits for the financial instructions and customers.

Background of Payment System in Thailand

The Committee on Payment and Settlement Systems (CPSS) defined the payment system as a reference document for the standard terms used in connection with payment and settlement systems while the BOT referred the payment system as the process of delivery or transferring of means of payment to settle financial obligations resulting from the economic activities. The payment system involves three components such as 1) institutions and individual, 2) legal procedures, rules and regulations, term of agreement and customary and 3) means of payment or payment medial. The institutions and individual refer to payees and payers. The institutions act as payment intermediaries. The legal procedures, rules and regulations, term of agreement and customary practices specify to the roles, responsibilities and relationship between institutions and individuals with the payment mechanisms involved. The means of payment or payment medial refer to cash financial securities, plastic card, account-based funds transfer as well as payment through electronic media.

The payment system can be divided into two systems, namely: (1) the paper-based system and (2) the electronic payment system. The former is a traditional system while the latter is an advanced technology system. The traditional system includes cash and cheque. The advanced technology payment system consists of credit card, debit card automated teller machine (ATM), direct debit/credit, mobile banking and time gross settlement system. Thai payment system can be broadly systemized into two systems according to the types of service provided: 1) system for payment services and 2) system for clearing and settlement of payment among banks. The former is known as a retail bank system while the latter is called an inter-bank system. The retail bank system involves the use and provision of cheque, card services and cash. The inter-bank system is the system for calculating positions and transferring funds among financial institutions in the inter-bank market. This system can be broadly systemized into six systems such as the Bank of Thailand Automated High-Value Transfer Network System (BAHTNET), the System for Managing Automated Retail Funds

Transfer System (SMART), the Electronic Cheque Clearing system (ECS), the Provincial Cheque Clearing System (PCS), the Bill for Collection system and the Imaged Cheque Clearing and Archive System (ICAS). The BAHTNET system concerns large value payment transfers while the SMART system handles small value payment system. The Electronic Cheque Clearing system is the inter-bank cheque payment among the members of the financial institutions. This system clears cheque in the Bangkok and Metropolitan area. Contrastively, the PCS system clears at the provincial and district levels in member banks within one day whereas the B/C system can clear cheque across the province. The ICAS system is new system that the BOT aims to replace the ECS, PCS and B/C Systems.

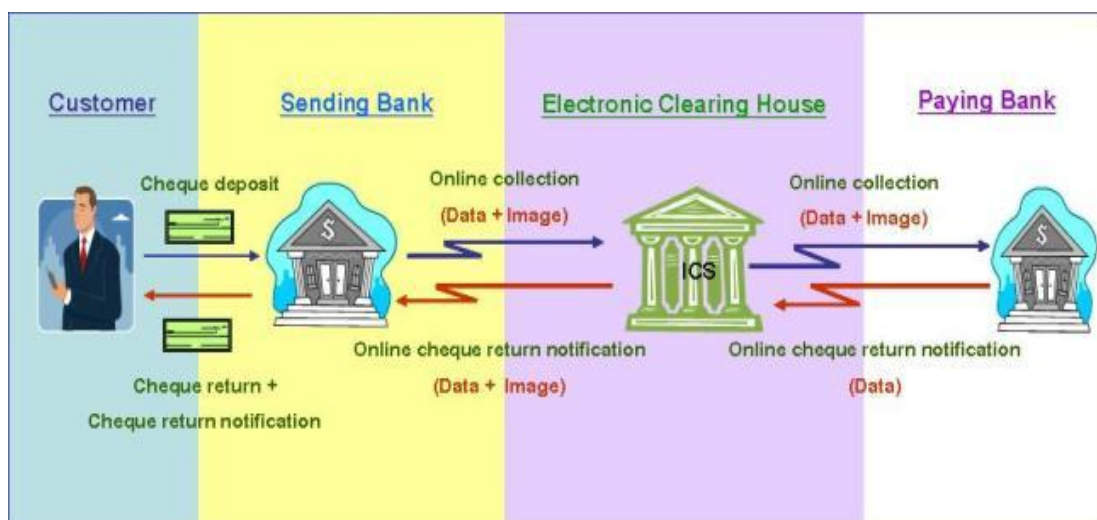
The ECS system is an inter-bank clearing system, in Bangkok and Metropolitan area. This system clears cheques, drafts, bill of changes and promissory notes at the Electronic Clearing House (ECH) among member banks. It can deal both on-line and off-line electronic cheque clearing member banks. In addition, it approximately closes the window of cheque clearing between 1.00 and 2.00 pm. Moreover, this system helps the customer to get funds next working day next to the date of deposit. The member banks would have to send physical cheques to electronic clearing for verifying data. The transaction costs are approximately of 1.20 BAHT per cheque. The BOT implemented this system on July 16, 1996 which is under the Royal Decree Regulating the Affairs of the Bank of Thailand 1942 and the Regulation of the Bank of Thailand and Re: The Inter-Bank Electronic Clearing in Bangkok 1996.

The PCS system is an exchange of physical cheque and inter-bank settlement. This system credits funds to a customer account within the same working day. The customers can withdraw funds on the next working day. This system is support the clearing process for all districts within province and it nearby. In addition, this system is used the computer system to increase its efficiency. The settlement is being done at the BOT's headquarter by ECS instead of BOT's representative at the Treasury Province. Moreover, this system uses off-line system. This system also allows remote branches to use facsimile in place of sending physical cheques. This system helps the banks to close the cheque clearing counter by 1.30 pm. The transaction costs are approximately of 1.20 BATH per cheque. This system began operational on September 15, 1997. This system is stipulated by the Bank of Thailand Regulation on Settlement of Provincial Cheque Clearing system 1996 and as amended in 1997.

The B/C system is a clearing system across the province. This system had developed by the BOT in order to reduce the cheque collection period by sending the cheque to clearing in Bangkok or Provincial Clearing House. This system takes 3-5 working days for clearing process. In addition, this system helps the member banks to close the cheque clearing window by 1.00 pm.. The banks who serve as service providers charge 10 BAHT per each 10,000 BATH with the minimum of 10,000 which is calculated on the face amount of the charge. This system is stipulated by the Bank of Thailand Regulation an Inter-Provincial Cheque Clearing Collection 2003 as amended in 2005, 2007. This system started operational on February 4, 2003.

The Bank of Thailand has developed the ICAS System for accommodating the national economic expansion through the more convenient, quick and self. This system allows physical cheques to be replaced by image in exchanges between commercial banks. This system implemented in Bangkok and Metropolitan area on February 3, 2012. It will use throughout the country by 2013. This system facilitates electronic cheque process by allowing banks to use electronic imaging technology by collection and create substitute

cheque from those for delivery to bank that do not accept cheque electronic only. This system uses the new cheque standard. The new cheque standard is a commence watermark which enhance their security. Only black and white image of the cheques will be exchanged between banks. The embossed and colour seal stamped on cheques cannot be validated as they may interfere with or damage other information on the cheques. This system is stipulated by the Civil and Commercial Code Book 3 Specific Contracts, the Offence Arising from the Use of Cheque Act 1991, and Electronic Transactions Act 2001 and Electronic Translations Act (No. 2) 2008. The Civil and Commercial Code Book 3 Specific Contracts specifies the conditions and methods for drawing cheques correctly as well as validity of cheques which is a civil matter, while the Offence Arising from the Use of Cheque Act 1991 is aimed to ensure that cheques are drawn in good faith. Drawing of fraudulent cheques will result in criminal punishments, in which penalties are clearly defined. Electronic transactions Act 2001 and Electronic Translations Act (No. 2) 2008 specify that the electronic data and documents shall be accepted as evidence in legal proceedings. This system, when a customer deposits a cheque at a bank, the sending bank captures both the front and the back of the cheque into cheque images as well as prepares the data related to the cheque in order to send then online to ECH. The ECH will arrange the cheques images and data before sending them to the appropriate paying bank for verification and approval of payment. In-case the paying bank refuses for approval of payment, they must inform the ECH online of the payment status. The ECH will inform the sending bank accordingly. The sending bank will return the physical cheque attached with cheque return advice to the customer. The cheque collection process in the ICAS system can be shown as below:



Source: The Bank of Thailand

Figure 1. Cheque Collection Process in the ICAS System

Comparison of the Current Cheque Clearing System

Here we provide the comparative study of the current cheque clearing system. After study of four cheque clearing systems, we present the comparative study table.

Table 1. Result of the Comparison of the Current Cheque Clearing System

Descriptions	ECS	PCS	B/C	ICAS
Closing Times	13.00-14.00	13.00-13.30	13.00-13.30	14.30-15.30
Fund Availability	13.00-14.00	13.00-14.00	13.00-14.00	12.00
Clearing Hours	1 Day	1 Day	3-5 Days	1 Day
Paper Works	More	More	More	Less
Lose of Cheque	Frequent	Frequent	Frequent	Reduce
Transportation Cost	Cost	Cost	Cost	No Cost
Electronic Clearing House	One	Eighty	More than Eighty	One
Laws and Regulation Support	Yes	Yes	Yes	Yes
Cheque Standard	More	More	More	One

Source: Data Analysis

CONCLUSION

The new modernized technology helps to improve the payment system. The ICAS system makes a cheque clearing process more efficient and less costly by facilitating wider use of one-system, one-day clearing and one clearing house. This system also stimulates the economic growth and reduces the labour costs and papers. This system is suitable for a country with several thousand banks and which a high overall degree of technical sophistication. Moreover, this system should also use in the country that the laws related to electronic documents can be represented as evidence in court. Finally, the banks should request their customer to use cheque not to include their company seal, embossed seal for the purpose of validating cheques.

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