

## Chapter 8.9

# Global Trends of Payment Systems and the Next-Generation RTGS Project in Japan

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### ABSTRACT

*This chapter investigates the evolutionary process of the payment system against the background of structural changes. At the early stage, most payment systems were Designated-Time Net Settlement (DTNS) systems. Then, Real-Time Gross Settlement (RTGS) systems were introduced, which had the merit of reducing settlement risks. This first trend was followed by the deployment of Hybrid systems and Integrated systems. The Bank of Japan (BOJ) is proceeding with the Next-Generation RTGS (RTGS-XG) project. This project is regarded as a typical enhancement of payment systems following the global trend. The features and benefits of the RTGS-XG are closely analyzed.*

### INTRODUCTION

When the author worked for the Bank for International Settlements (BIS) several years ago, he got to know a senior official of a central bank in Europe, who was the head of the payment systems division. One day, he said to him, “Payment systems are not the most fascinating topic in the world.” The author was very surprised to hear that. But the senior official continued, “However, the least fascinating topics are by no means the least important.” The author fully agreed with his opinion then, and still believes his remarks are absolutely true. Payment systems are the indispensable infrastructures for financial markets and business activities.

## BACKGROUND

A payment system is a mechanism that facilitates smooth transfer of funds among financial institutions. Generally, it consists of a set of instruments, procedures, rules, and technical bases like computers and networks. It is sometimes referred to as an interbank funds transfer system.

Payment systems<sup>1</sup> are the important social infrastructures that support the whole national economic activities. Every commercial trade and financial transaction is finalized only when the final settlement is made through payment systems. If malfunctions ever happen in a payment system, which prevent the smooth transfer of funds, the national economy and financial markets would be thrown into extreme confusion and seriously damaged. Therefore, safe and efficient payment systems are critical to the effective functioning of national economies and financial systems.

This chapter is structured as follows. The first section explains the structural changes in the payment system field. The second section describes the global trends of payment systems. The third

section focuses on the Next-Generation RTGS Project in Japan. The fourth section analyzes the features and benefits of the Next-Generation RTGS system.

## STRUCTURAL CHANGES IN PAYMENT SYSTEM FIELDS

In recent years, some significant structural changes have occurred in the payment system fields (Nakajima, Masashi, and Junichi Shukuwa, 2005; Nakajima, Masashi, 2003).

### Rapid Growth of Settlement Values and Accompanying Settlement Risks

First of all, settlement values of payment systems in industrialized countries have increased in a very rapid pace which is faster than that of economic growth. The progress in globalization and liberalization of financial trade had a direct impact on the rapid growth of settlement amount. The settlement values of payment systems in an

*Table 1. Settlement values of payment systems as a percentage of GDP (as of 2004)(in %)*

Country	Payment System	Settlement values relative to Nominal GDP
France	TBF	65.8
	PNS	10.6
Germany	RTGS <sup>plus</sup>	57.0
Japan	BOJ-NET	41.2
	FXYCS	8.7
United Kingdom	CHAPS Euro	19.1
	CHAPS Sterling	44.9
United States	Fedwire	40.0
	CHIPS	29.5

*Source: Statistics on payment and settlement systems in selected countries, Bank for International Settlements, March 2006*

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