

Research

Global Innovation in Settlement Systems

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1. Changes in the Settlement Environment in Asia

In recent years, the rapid development of IT has brought about changes in finance and the globalization of economic activities has been making further progress. As the purchasing behavior and transaction methods of individuals and companies become more diverse, the environment for settlement - the function of completing transactions - is changing significantly. In Asia, in particular, where settlement systems linking individuals, companies, and financial institutions are still in developmental stages, moves to accelerate innovation in settlement systems and introduce the latest financial technology (FinTech) are evident, but only in what can be described as a leapfrog fashion. The Hitachi Research Institute (HRI) is focusing its efforts on upgrading settlement systems and promoting research that looks to the future.

2. Cross-industry Developments in Retail Settlement

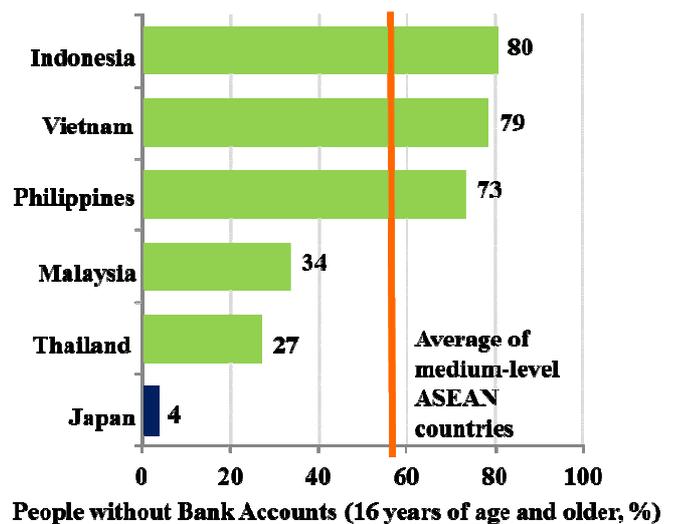
In the wake of advances in IT in recent years, innovative settlement systems have gradually made their way into transactions in people's everyday lives, particularly in the retail industry. Typical of these are remittance services using mobile telephone numbers and SNS, and use of these systems is increasing.

In ASEAN's medium-range countries such as Thailand, Malaysia, and Indonesia, where on average about 60% of the working population is still unable to hold a bank account due to physical or economic factors (Figure 1), non-financial institutions like telecommunication companies are expanding their mobile settlement services to provide a substitute service for the remittance services of banks.

In Asian countries, cash still accounts for a significant proportion of settlement. Many individuals

who do not have bank accounts hold on to their money without entrusting it to a financial institution. There is a possibility that the expansion of these new remittance systems will promote the circulation of these dormant reserves of "idle cash" across these regions.

As a result, in the retail field, activities by companies from different business sectors offering services that originally would have been provided by financial institutions are increasing, and competition in settlement systems across business sectors (cross-industry) is expected to accelerate.



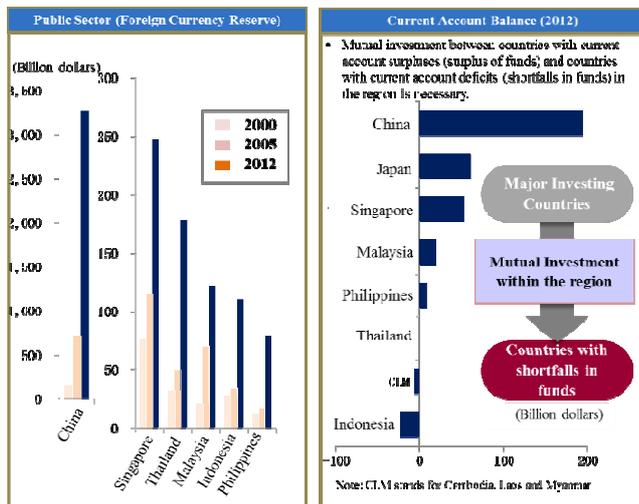
Source: Hitachi Research Institute

Figure 1: Ratio of Non-holders of Bank Accounts in Medium-range ASEAN Countries

3. Cross-border Settlement among Financial Institutions

The growth of economies in Asian countries has been accompanied by an increase in the accumulation of funds centered on the public sector. In particular, in the approximately 10-year period after the Asian currency crisis, foreign currency reserves in Asian countries grew significantly. Nevertheless, while some countries with

ample funds are coming to the fore in the Asian region, there are other countries that face shortfalls in domestic investment funds. Therefore, the creation of a mechanism for utilizing funds accumulated in Asia for investment within the Asian region is vital.



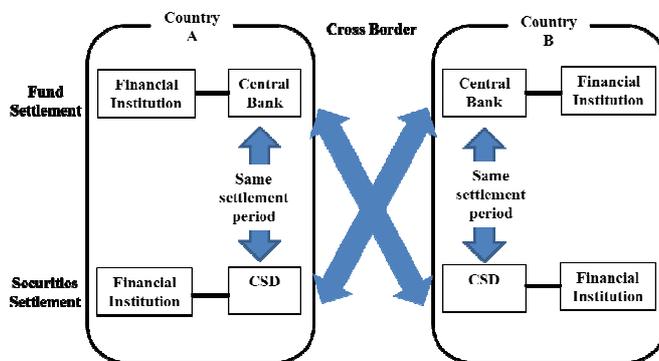
Source: IMF, Central Banks and Bureaus of Statistics of the respective countries

Figure 2: Increasing Expectations for Mutual Investment within the Asian Region

Furthermore, global deployment and the expansion of global supply chains are making cash management involving the control and transfer of corporate funds, efficiency in credit management, and the control of fund risk essential elements in maintaining competitiveness. As the supply chains of Japanese companies expand to emerging countries in Asia, the need to procure funds in a local currency can be expected to increase in the future, as Japanese companies move ahead with their plans for autonomous management by their overseas subsidiaries.

On the other hand, while the economies in emerging countries in Asia are achieving remarkable growth, there are many countries where the establishment of appropriate settlement and legal systems are lagging

behind, and the introduction of modern settlement systems remains an issue. Against this backdrop, the Asian Bond Market Initiative (ABMI) was established in 2003, with the aim of promoting the flow of Asian savings back to Asia, based on lessons learned from the Asian financial crisis. Discussions are currently making headway with regard to the development of an efficient bond market with high fluidity and the establishment of a cross-border settlement system between financial institutions to support this. At the ASEAN + 3 Finance Ministers and the Central Bank Governors' Meeting in May 2013, a decision was made to establish the Cross-Border Settlement Infrastructure Forum, and examination of a settlement infrastructure model (Figure 3) that will mutually link the Central Securities Depositories (CSD) with the funds settlement system of the central banks (Real-time Gross Settlement System: RTGS) of the respective countries has already begun.



Source: Bank of Japan

Figure 3: Cross-border Infrastructure for the Settlement of Securities and Funds

This will enable companies within the Asian region requiring investment funds in a local currency to make direct cross-border links with investors who have ample funds on hand. This in turn will promote inter-bank procurement of local currencies using Japanese government bonds as collateral, and cross-border

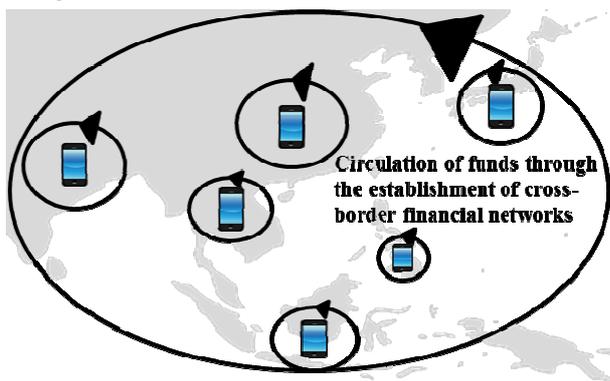
investment in local currency bonds, thereby contributing significantly to the development of the financial markets and economies of Asia.

4. Acceleration of Autonomy in the Flow of Funds in Asia

It is hoped that cross-industry activities in the retail area and cross-border activities in the inter-bank market will promote autonomy in the flow of funds within the Asian region and enhance the attractiveness of the Asian financial market. In this scenario, the increasing popularity and linking of mobile payment services of the segment of the population who do not hold bank accounts will supply “idle funds” to the financial market, and in the near future the widening of cross-border links in the settlement infrastructure centered on financial institutions will have the potential to enable both settlement and the procurement of funds to occur anytime and anywhere within the Asian region.

The Hitachi Research Institute intends to continue to monitor and research these trends.

- (1) Changes in retail: Popularity of mobile banking ⇒ Idle savings of Asian countries enter financial systems ⇒ Accelerate the circulation of local currency in countries in the region**
- (2) Changes in wholesale: Establishment of cross-border settlement systems of Asian countries**



Source: Prepared by Hitachi Research Institute

Figure 4: Autonomous Flow of Funds in Asia