Development of a National Payment System:
Some Lessons Learned

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Organizations and policy-makers interested in the development of domestic and international economic and financial systems have become increasingly aware of the role and importance of the national payment system in this process. A national payment system consists of various institutional and infrastructural arrangements established to transfer money in the form of commercial and central bank deposit claims. While the significance of an effective monetary system for economic development and growth has generally been accepted for some time, many of the real economic benefits that relate to money as a medium of exchange are now believed to arise from a secure, predictable and efficient non-cash payment system. A safe and efficient national payment system supports the use of money in an economy to help create new opportunities for commercial and financial transactions that would not otherwise exist and to lower the real and the financial costs of all transactions.

What constitutes a national payment system?

A national payment system involves a set of elements that interact with each other to allow the system to develop and function efficiently and securely. In addition to a range of payment instruments used to initiate and direct funds transfers for payment in different types of transactions, there is a variety of payment infrastructures required to complete the funds transfers. These include infrastructures for transaction and clearing payment instruments, for processing and communicating payment information, and for transferring funds between the paying and receiving financial institutions of the originating transactors. The infrastructures consist of service providers, network facilities, information and computer technologies, and operating procedures and rules.

There are also several critical institutional arrangements in the system. Chief among these are market arrangements, which involve conventions, regulations and contracts for producing, pricing, delivering and acquiring various payment instruments and services. The legal and regulatory framework that governs the payment transfer process and the conduct of payment service markets is also crucial. The institutional arrangements of the national payment system and the infrastructures link the ultimate users of payment instruments and services with and through the financial institutions that use infrastructure services to provide retail and large-value payment services to consumers and businesses.

Why is payment system development such a challenge?

Developing a national payment system is an on-going process for all countries, which often requires parallel reforms or modifications to a number of different institutional arrangements and infrastructures critical to the system. Moreover, there is no unique path for developing a national payment system nor is there a unique design for a universally best payment system. In each country, the national payment system needs to be developed and designed in a manner that best meets its own particular economic and financial system needs, capabilities and public policy environment. While an individual country can certainly learn from experiences of others in the design and development of a national payment system, it needs to carefully evaluate and adapt the approaches used elsewhere to its own particular circumstances.
How well has the development challenge been met?

Meeting the challenge for effective development of the national payment system has not been equally successful for all countries undertaking similar reforms. In many of these cases, the ‘fundamental challenges’ to system development noted above are aggravated by a narrow vision of the system’s complexity, limited knowledge development and information sharing, and inadequate development planning by key stakeholders in the national payment system. Dealing with these ‘development disablers’ can increase the likelihood that development initiatives are more realistically planned, more efficiently resourced, and better coordinated with the economy’s needs and capabilities.

What can be done to meet the challenge better?

A report published in January 2006 by the Bank for International Settlements (BIS), entitled General Guidance for National Payment System Development draws upon the experiences of a global group of central banks and international organizations, including the Committee on Payment and Settlement Systems (CPSS), the World Bank and the International Monetary Fund to help countries meet the challenges of payment system development. The report benefited from the earlier publication of a consultation report that was discussed in regional sessions with central banks and the financial community around the world. The fourteen guidelines presented in the report address, in a practical way, the main common problems confronting public and private sector stakeholders in the development of their national payment systems. The guidelines, and the suggested approaches for implementing them, focus on specific key issues. These issues, however, generalize to a few important lessons learned from the study and discussions of the development process.

Lesson 1: Invest in knowledge about the complexity of the national payment system and its development process.

Too often the focus of payment system reform is limited to payment instruments, technologies and infrastructures – the supply-side structure of payment transfers - with too little attention paid to the institutional changes necessary to support these reforms and to the conditions influencing the demand for new instruments and services. In many cases, this ‘narrow-vision’ problem exists as a result of inadequate consultation and cooperation between central banks and other key stakeholders in the payment systems, notably bank and non-bank financial institutions and other public sector authorities that influence payment system development. Development of a national payment system is a collaborative process and, while different stakeholders might take the lead for different reform initiatives, typically all key stakeholders need to ‘buy into’ the reform process if it is to proceed as expected.

Investing resources in stock-taking exercises helps identify and update key information on the critical elements of a national payment system – the key instruments and services, the organization and operations of the principal infrastructures, the basic market arrangements for key instruments and services (e.g. structural properties, contract features, participants, inter-market linkages) and the core legal and regulatory framework. The stock-taking is a critical first step in understanding the national payment system and is a useful mechanism for initiating valuable consultation. It also provides a foundation for more fundamental research and analysis into the motivating factors for payment service providers and users that are critical in shaping a sustainable process for payment system development.

Lesson 2: Payment system development requires complementary banking system development.

The core business of banking involves payment transfer services as well as lending and deposit-taking. Developing a national payment system usually involves an increasing range of payment instruments and services, facilitating more transactions with greater efficiency and security, for a wider group of transactors. Development of a national payment system requires that the banking system also develop further its payment accounts, client-access networks, internal accounting and processing systems, cooperative infrastructures and market arrangements.

Broadly defined, the banking system consists of the central bank and financial institutions and their agents that provide the core banking services. The central bank is the key financial institution in the national payment system. It provides settlement services for inter-bank payments and credit arrangements to facilitate timely inter-bank payment settlement. It acts as a catalyst for payment system development and usually takes the lead in reform initiatives of systemic importance, especially early in the development process. It uses payment services in its own commercial and financial transactions, including monetary policy transactions, and oversees the critical operations of the national payment system.
The central bank can contribute to the development of the national payment system through appropriate technology initiatives and policy reforms in each of these roles. However, it can succeed in developing the system only in partnership with others in the banking industry. Bank and non-bank financial institutions are the principal providers of payment instruments and services to consumers and businesses and are the main users of payment infrastructure services provided by the central bank and other organizations. While banking firms compete for client business, they usually form industry associations to cooperate in the development of standards and procedures for payment instruments and infrastructure services that improve the operating efficiency and safety of the national payment system. As the payment system develops, banking firms also begin to initiate and lead valuable payment system reforms, individually or collectively, with the acceptance or support of the central bank.

Lesson 3: Develop the payment infrastructures in accordance with the payment needs of stakeholders system-wide and the capabilities of the economy.

The objective of infrastructure reforms in the national payment system should be the improvement in the safety and overall efficiency in the production and delivery of infrastructure services. The business case – the emerging payment instrument and service needs for businesses and consumers conditioned by the capability of the payment, financial and physical infrastructures to meet these needs economically; the legal and policy framework for influencing and allocating development benefits, costs and risks among the principal service users and providers; and the performance requirements and incentives in service market arrangements – should be the primary driver for infrastructure reform. The main determinant should not simply be the availability of new payment technology, which is only one element of a payment infrastructure and only one means for achieving the goals for reform.

The reform initiatives for payment infrastructures need to be coordinated with broad economic and financial system development programs. Development resources are limited and choices among possible infrastructure reform initiatives need to be grounded in terms of their system-wide relevance. For example, in many developing economies, the choice is between investing first in the development of the country’s retail payment infrastructures or in the development of a large-value payment system. An economy focused on developing key parts of its commercial and industrial sector will generally face an increasing demand from businesses and consumers for greater diversity in retail payment instruments and services and greater access to them. Moreover, where the value and volume of large-value and time critical payments is low and expected to remain so for some time, and systemic risk is not a significant issue, a retail payment infrastructure – especially one for automated credit transfers – could be adapted to clear and settle such payments. However, as securities and financial markets continue to develop through public policy or market initiatives, resulting in more large-value and time critical payments, a large-value payment system for inter-bank transfers would help resolve the greater systemic risks. The basic requirements and various designs of dedicated large-value payment systems are well documented.

The expansion in demand for retail payment services resulting from commercial, industrial and even financial sector development can be satisfied through the expansion of banking services and the development of reliable, secure and efficient retail payment infrastructures. For retail payment infrastructures, the key technology investments typically relate to automation, standardization and interoperability. These often involve improving inter-regional clearing and settlement, possibly through the development of national clearing facilities; integrating or centralizing settlement account management systems for regional central bank branches; developing common standards for specific retail payment instruments and clearing house procedures; and promoting interoperability among point-of-sale transaction systems, such as ATM or card payment networks.

To work effectively, these reforms frequently need to be supported by institutional changes in policies and practices for equitable access for similar institutions to core infrastructure services, transparency in pricing and risk-sharing arrangements in infrastructure service contracts, and strategies for marketing new instruments and services to the most relevant service users. ‘Fair’ access to retail payment infrastructures, where banks and other financial or non-financial institutions may become effective payment service providers to consumers and businesses, is especially important. In this case, similar institutions providing similar services to clients would face the similar access requirements, service fees and risk-sharing in retail payment infrastructures.

However, while broad access to such infrastructures might promote competitive efficiency in service markets for clients, some prudential restrictions on access are often required for the safe and reliable operation of infrastructures. In some retail payment infrastructures and network service markets, cooperation critical for effective operations requires that access be limited to institutions with similar prudential regulation.
Consequently, safe and efficient infrastructures and service markets may be supported by different participation restrictions for different types of institutions. For example, it is generally accepted that the closer the infrastructure system to end-user markets and the less counterparty and settlement risk involved – transaction systems, for example – the more open can access be to different types of institutions.

**Lesson 4: Institutional reform is as critical as infrastructure reform for developing a safe and efficient national payment system.**

Developing new payment instruments and services requires the development of new market arrangements and, possibly, new legal and regulatory instruments to support them. Reform initiatives in these core institutional elements, especially those for effective market development, are sometimes overlooked by key stakeholders in the development process. Yet, as suggested in the previous lessons on the relevance of banking system development and payment infrastructure reform, accompanying institutional reform is often required for sustainable development of the national payment system.

Market arrangements – procedures, conventions, regulations and contracts - coordinate and govern the production and pricing of various payment instruments and services and their delivery from payment service providers to users. As the national payment system develops and the range of payment instruments, services, users and providers expands, the system relies increasingly on effective market arrangements to allow it to function safely and efficiently. To be effective, all payment service markets involve some combination of cooperation and competition. As a group, payment service providers cooperate on developing standards for payment instruments and infrastructures but compete individually in providing services to customers. Payment service markets are also highly inter-related through the provision of complementary services or substitute instruments and services. Furthermore, in some markets, particularly infrastructure service markets characterized by network arrangements, the participation benefits, risks and costs are shared among all the users of the network services and the service provider. Retail payment service markets, characterized by bilateral relationships between individual service providers and customers, have fewer multilateral effects among market participants. Knowledge of the key structural features of different payment service markets is critical for market-specific reforms aimed at improving the efficiency of market-pricing and risk-sharing contracts, finding a suitable balance between competition and cooperation, designing appropriate market access conditions, and enhancing public disclosure of the most relevant market information.

The integrity of the market arrangements for payment services depends on the legal soundness of contractual arrangements between service providers and users and on the legal enforceability of banking and payment system regulations. The legal framework for the national payment system – the body of laws that determines the rights and obligations of parties in the system – is encoded in a variety of statutory, contractual and regulatory instruments established to reduce legal uncertainty and risk for participants in various payment service markets. It also involves effective judicial arrangements for interpreting, adjudicating, and enforcing basic laws crucial to the payment system, such as property, contract, incorporation and insolvency laws, as well as laws more specific to particular payment instruments, service relationships and organizations. Reforms to payment infrastructures and service markets often require modifications to this legal framework to support the development of effective service demand and supply. To do so, the legal framework needs to be accessible and transparent to relevant stakeholders and responsive to their legitimate legal concerns.

Also important is the establishment of effective mechanisms for stakeholder consultation and policy coordination among key public sector authorities. Information sharing and consultation among central banks, the banking system, and key business and consumer groups is central to stock-taking exercises and for planning reform initiatives. It is also necessary for the required buy-in and resource commitment. The structure of the consultation mechanism, and the private and public sector stakeholders involved in it, will vary depending on the purpose of the consultation and the nature of the issues. Overall, however, the consultation process needs to be on-going and comprehensive.

**Lesson 5: Effective development planning is not only strategic, but also includes well-defined and organized project implementation programs.**

Even though this last general lesson may seem the most obvious, it is not always well established in payment system development programs. The central bank and other stakeholders participating in a reform program will typically define some forward-looking vision of their planned payment system and will prioritize among competing reform initiatives within the program. However, the vision may not always be as well-informed and comprehensive as it might be and the prioritization of initiatives may not always be based on realistic needs and capabilities of key service users and providers. Frequently, the project planning for implementing these reform initiatives is also inadequately organized and defined. An effective implementation plan, for example, requires
suitable governance arrangements; clearly defined milestones, deliverables and contingency arrangements; realistic resource management, cost-sharing and investment recovery plans; and a comprehensive roll-out strategy acceptable to all participating stakeholders.

2. See, for example, CPSS (2005), New developments in large-value payment systems, May; and CPSS (2001), Core Principles for Systemically Important Payment Systems, January.