The Payment System in a Market Economy

Bruce J. Summers

The papers contained in this book address a broad range of policy issues and issues of practical implementation that arise in the design, management, and supervision of the payment system in a market economy. The payment system, which consists of the set of rules, institutions, and technical mechanisms for the transfer of money, is an integral part of the monetary system in such an economy. As such, the safe and efficient operation of the payment system is of concern to both market participants and public officials, especially central bankers. The perspective on payment systems provided in this book is that of central banking and is given by a group of people whose range of experience spans payment system operations in their own developed market economies as well as the emerging market economies of the states of the former Soviet Union and the Baltics.

In recent years, the issues related to payment system design, management, and supervision considered in this book have been at the forefront of public policy discussions in developed economies in Asia, Europe, and North America. Payment system issues have also received attention in connection with the transformation of former centrally planned, or socialist, economies into market economies, especially the economies of Central and Eastern Europe and the former Soviet Union. Experience in market reform has taught that the existence of a payment system that is responsive to the needs of individuals and businesses for safe and efficient funds transfers is an important part of the infrastructure needed to introduce a market economy successfully. In particular, a well-functioning payment system plays a crucial role in the development of interbank money markets and securities markets.

This introductory chapter describes the nature of transactions in a market economy and the use of money and credit through the payment system to facilitate transactions. It identifies key principles that underlie payment systems in market economies, regardless of their stage of development, and the unresolved issues that arise in connection with the payment system in both modern market economies and former socialist economies. Finally, it reviews the specific case of the former Soviet Union,
showing how these principles and issues manifested themselves during 1992 and 1993 in the transition of a major part of the world economy to the market model.

**Transactions and Payment in a Market Economy**

In a market economy, many transactions take place each day at the initiative of a large number of economic actors. In a market economy with a modern financial system, purchases of goods and services, including financial instruments, are paid for using money, either in the form of currency or deposits held in banks, and may involve the use of credit. Many participants in a market economy, including individuals, businesses in the real sector, and especially those dealing in the financial markets, face uncertainty regarding the timing of their payment receipts and expenditures. These uncertainties are related to a variety of factors, including the promptness with which parties that owe funds initiate payment, the choice of instrument used to make payment and the performance that type of instrument can deliver in terms of timeliness and processing efficiency, and the number of intermediaries involved in the payment stream. Further, the availability and cost of credit used by payors to bridge temporary shortfalls in their money balances can affect the overall efficiency and certainty of the payment system. Finally, well-developed markets tend to be less bound by geographic limitations and may be global in scope. Timeliness and certainty of payment can therefore be influenced by factors such as the different time zone locations of payors and payees and differences in hours of operation of national payment systems.

Participants in a market economy will enter into contracts that require payment for goods and services at specific times. Except where the suppliers of goods and services are willing to extend trade credit, they will require timely payment by a means that gives them immediate use of funds. Because of the uncertainty regarding the timing of receipts and expenditures and because many market transactions depend on payment by cash or the equivalent of cash, all economic actors will hold an inventory of currency or bank deposits to meet their contractual obligations.

It is inefficient, however, for every participant in the economy to hold a large enough inventory of currency or bank deposits to meet its obligations for payments under all possible outcomes entailing the timing of receipts against expenditures. It is probably more efficient for economic actors in the real sector to use payment services provided by credit-granting entities like banks, which are willing to extend credit to cover timing gaps between receipts and expenditures. For their part, banks must be ready at all times to honor payment orders for their customers. Banks themselves may experience gaps in the timing of their receipts and
expenditures, however, and will therefore rely on the interbank markets, and to some extent central banks, to provide short-term funding to meet their interbank settlement obligations.

**Payment System Principles and Issues**

As noted, the authors of the chapters contained in this book have extensive experience in matters relating to their national payment systems. They have also worked as donors of technical assistance, providing the benefit of their expertise to counterparts in former socialist economies making the transition to the market system. Such experience has led to the identification of certain basic principles that govern payment system design and policy in both types of economies. Further, and equally interesting, commercial and central bankers who share responsibility for building the financial systems of the emerging market economies have had to confront and make decisions fairly early in the reform process about a number of design issues that have not yet been finally resolved in many developed financial systems.

Experience in the technical assistance area has resulted in a large degree of acceptance among both donors and recipients of technical assistance of certain underlying assumptions and principles that can serve as building blocks in the development of modern payment systems. These principles are discussed in the next section. At the same time, a number of the issues that arise during the transition from a socialist to a market economy—especially regarding payment system design—cannot automatically be answered by turning to the developed market model for guidance. These issues are also discussed further below.

**Common Principles**

The first general principle is that a payment system that relies on fiat money as a store value and medium of exchange must enjoy price stability if an effective and efficient payment system based on the national currency is to develop. High rates of inflation render a currency virtually useless as a store of value and medium of exchange. Accordingly, and especially when a developing payment system has not yet achieved the level of technical performance that allows for highly reliable and timely processing of payment instructions, the public will seek ways to avoid using the national currency and payment system, especially deposit money in banks.

If the rate of inflation is high and it takes days or weeks to process payments, a particularly heavy cost is added to conducting transactions in
the economy. Economic actors will quickly turn to alternative means of payment, which might entail falling back on less efficient payment methods, such as currency, barter, or reliance on foreign currencies. Use of currency will guarantee certainty and finality of payment and, although awkward for large-value transactions, might be used to achieve more timely payment than the deposit money system. Barter and the use of foreign currencies provide ways of completely avoiding reliance on the domestic unit of value. Although use of currency, barter, and foreign currency are likely to be a costly means of paying for a broad range of transactions, their use is still relatively attractive if their cost is less than the inflation cost implicit in the use of domestic bank deposits.

A second general principle is that a nation's monetary regime, which defines the terms and conditions under which deposit money held in commercial banks and the central bank can be used, plays a major part in determining the choice of design for the payment system. As discussed in Chapters 2, 3, and 4, the relative attractiveness of clearing through a correspondent banking network versus clearinghouses and of relying on net versus gross payment will be heavily influenced by factors such as the level of reserves that commercial banks have to hold with the central bank, the assets that are eligible to meet reserve requirements, and whether reserve balances earn interest. The choice of payment system design, in turn, will directly affect the risk management procedures that need to be employed in a particular system.

The third general principle is that the technical efficiency of the payment system (that is, the cost effectiveness and physical performance characteristics) influences the efficiency with which the stock of deposit money balances in banks is used and the degree of credit and liquidity risk and fraud risk carried by a particular payment system. Therefore, the technical efficiency of the payment system is closely intertwined with issues of choice of payment system design and management of payment system risk. As discussed in Chapters 4, 9, and 12, timing delays in handling payments resulting from reliance on different types of processing systems lead to different trade-offs regarding costs of operation and risk exposures. Moreover, coordination of the timing of the handling of payment instructions and accounting for these instructions by entering debits and credits into the accounts of the customers of banks, discussed in Chapter 10, can contribute considerably to the overall monetary efficiency of the payment system.

The fourth general principle is that the payment process in a modern economy centers around economic actors' management of their stocks of currency and bank deposits and their access to sources of credit that can be used to obtain money balances. Therefore, as discussed in Chapters 2 and 10, the payment system has developed as an apparatus through which cash balances are transferred and by which credit is extended. This
is true for payment services in virtually all types of markets, including retail markets involving individual consumers, the retail trade, wholesale, and manufacturing sectors, and especially the financial sector. Identifying and managing credit and liquidity risks is therefore an inherent part of the payment process, as discussed in Chapter 7. Grasping the significance of the credit-related aspects of payment system operations is one of the more difficult, but at the same time more important, priorities in developing a payment system.

The fifth general principle concerns the legal framework governing payment transactions. As discussed in Chapter 5 in connection with large-value credit transfer systems, the legal regime can contribute substantially to the certainty of payment and, therefore, to the overall risk inherent in the payment process. The laws and regulations upon which payment relationships are based are as important a building block as are the institutions and operational systems that enter into the development of a modern payment infrastructure.

The sixth general principle is that, like many other financial components of an economic system, the payment system has public good characteristics that require a certain amount of official oversight and supervision. Self-regulation of payment institutions, such as clearing organizations organized and operated by banks, is an important element of the supervisory apparatus. At the same time, however, and as discussed in Chapter 11, an essential and important role exists for official supervision or oversight that in most countries is discharged by the central bank. As with the legal framework governing payment relationships, the supervisory “rules of the game” should be clearly stated and promulgated so they are recognized by all major payment system participants. This will contribute significantly to the regulatory efficiency of the payment process.

Finally, it is universally accepted that final interbank settlement is best accomplished by the transfer of balances held in accounts with the central bank. The central bank is the logical final settlement authority because of its unique status as an institution that does not pose credit or liquidity risks to its account holders. Moreover, because of the role of reserve requirements in the monetary regimes of most countries, it is efficient for commercial banks to rely on accounts and balances held with the central bank to satisfy their interbank payment obligations. Chapters 2 and 3 describe the clearing and settlement system as an inverted pyramid, with the central bank at the apex. A complex set of payment transactions flowing through the economy ultimately achieve final settlement through the transfer of central bank balances between commercial banks. As described in Chapter 6, the real-time gross settlement approach is increasingly viewed as the most effective design for achieving final interbank settlement in central bank money.
Although the above principles are virtually universal for payment systems in countries at different stages of development according to the market model, at least three issues faced by newly developing payment systems have not yet been fully resolved in "mature" systems. The first issue concerns the appropriate division of labor between the central bank and the commercial banking system regarding operation of the payment system. It is clear that commercial banks should be responsible for providing account services to the general public and for the specialized payment services that accompany these account relationships. But it is less clear how active the central bank should be in providing interbank payment services, which may entail handling many individual payment transactions that enter the banking system and must then be cleared and settled on an interbank basis. Similarly, it is not completely clear what the role of the central bank should be regarding operation of the various components of the physical infrastructure of the payment system.

In fact, a variety of different models exist—most of which work quite well within their national contexts—that suggest different approaches to sharing the division of labor in the payment system between the commercial banking system and the central bank. As discussed in Chapter 11, these models range from the case of the United Kingdom, where the central bank currently plays a relatively small operational role, to that of the United States, where the Federal Reserve plays a large role.

The conditions under which the central bank participates in payment system operations may also vary considerably. For example, while the Federal Reserve plays a large operational role in the U.S. payment system as a provider of interbank payment services, these services are priced to recover their full cost of production, including variable, fixed, and imputed costs. In this way, market forces are relied upon to determine the most efficient mix of involvement in the market for payment services by the central bank and commercial banks. In some other countries, however, central bank operational services are subsidized, and the central bank's role in the payment system is treated more like a public good. The growing trend, however, seems to be toward some type of pricing of central bank payment services because of the benefits of relying on market mechanisms to determine efficient amounts and patterns of usage of payment services, a subject that is discussed in Chapter 9. Perhaps the best overall guidance that can be given to those responsible for payment system development in former socialist economies is that each country must carefully weigh its own circumstances in choosing a model that accommodates its needs. The right model will surely be influenced, to a large degree, by each country's own historical circumstances.

A second major issue concerns reliance on real-time gross settlement versus net settlement—particularly for large-value interbank payments. In developed financial and payment systems, a major contemporary question
is the degree of reliance on multilateral netting systems and the appropriate controls that such systems must employ to ensure their integrity. Controls permitting management of the credit and liquidity risks inherent in multilateral netting, described in Chapters 3 and 7, are not without cost, however. There may be differences in view between commercial and central bankers regarding the appropriate level of risk controls needed and, accordingly, the costs that multilateral netting systems should be willing to bear in relation to the risk reduction achieved. As noted earlier, the best that can be said at present is that final settlement for interbank obligations—including those arising in connection with participation in netting systems—should be achieved through the transfer of central bank money, preferably with same-day settlement. As technical systems become more sophisticated and cost efficient, and particularly as financial markets develop, the trade-offs between real-time gross settlement and multilateral net settlement must be carefully considered.

Finally, choices have to be made about the resilience of the operational infrastructures supporting the payment system, as discussed in Chapter 12. Significant dependencies are developed as newer and more sophisticated technologies are introduced into the payment process. Maintaining the levels of operational understanding and backup in automation systems needed to ensure that the payment system can continue to operate even in the face of unanticipated disruptions such as those caused by technical failures in key computer systems, natural disasters, or even civil disorder is expensive. But because the payment system plays such a key role in a modern economy, a fragile operational infrastructure cannot be tolerated. The question of how large an investment should be made in backup systems to ensure the appropriate amount of resilience is still outstanding.

Payment System Reform in the Former Soviet Union

Since 1992, major efforts have been made to reform the banking systems of the countries emerging from the former Soviet Union to meet the requirements of a market economy. Reform of the payment system has been a top priority in these countries. Their financial and payment systems, like those of the former socialist economies of countries in Central and Eastern Europe, were organized, until recently, on essentially the same central planning model. In particular, their banking systems were

---

1This discussion is based on a presentation made by the author at the Bank for International Settlements on November 7, 1993.
based on "monobanks," in which the central bank played a dominant role in all aspects of banking, including the operation of the payment system. Money itself played a limited role in the economy. Central planning in conjunction with the monobank model is the starting point of payment system reform in the economies of the former Soviet Union. The sections below review progress in payment system reform in the former Soviet Union through 1993 and highlight opportunities for continuing that reform.

**Recent Progress**

When technical assistance work began in late 1991, the payment apparatus in the former Soviet Union consisted of cash exchange in the retail economy and a deposit money transfer system based on payment orders (credit instruments) and payment demand orders (debit instruments) in the enterprise sector. Individuals could also pay for some services received through the state, such as housing and utilities, using pre-authorized transfers through accounts held at Sherbank, the state savings bank.

The payment systems inherited from the former central planning system and supported by Gosbank—the state bank of the former U.S.S.R.—were unsuited to a market economy. Under the socialist model, economic relationships were determined by central planners. The payment system, and indeed the entire banking system, essentially played an accounting role: maintaining a financial record of centrally planned economic activity. This payment apparatus was not, and did not have to be, particularly reliable or efficient. Timeliness of financial flows was also not essential because the ability to pay in a timely manner was not a factor in establishing economic relationships. Moreover, because payment was guaranteed under the central planning system, counterparties in trade transactions had no need to be concerned about payment system risks. Finally, because the transaction costs associated with the payment process were not shouldered by economic actors as an expense to be managed, there were no direct incentives to motivate efficient payment system operations.

After the introduction of market reforms in the early 1990s, difficulties in making payments had a negative impact on the performance of local markets and the interstate markets linking Russia to the other countries of the former Soviet Union, whose trade patterns were tightly related. The local currency payment systems almost collapsed under the stress of inflation. Dislocations in the transportation sector led to disruptions in the exchange of payment instruments between processing centers operated by the central banks of the former Soviet Union. Faced with this deterio-
rating predicament, many businesses turned to cash, barter, or the use of hard currencies to meet their payment needs.

A large buildup in interenterprise arrears, or trade credits granted between businesses, also occurred. Mechanically, these arrears arose because sellers could order funds transfers from the buyers' banks using an instrument known as a payment demand order, a debit payment instrument. Whereas buyers were at least nominally allowed time to decide whether to honor the "request for payment" represented by such an order, funds transfers were in fact often largely automatic if the buyer's bank agreed to honor that order. Banks refused to honor payment demand orders sent to their illiquid customers by transferring funds on behalf of these customers, and instead large arrears were recorded between enterprises. Thus, it was the illiquidity of buyers—combined with the sellers' willingness to continue delivering goods without receiving timely payment—that led to the arrears. This occurred in an environment of moral hazard, as it was expected that the government would support bankrupt enterprises by guaranteeing their creditworthiness.

In response to the problem with interenterprise arrears, in the summer of 1992 the central banks of the former Soviet Union prohibited the use of payment demand orders for most transactions. Almost all interenterprise payments using deposit money are now made through payment orders, that is, credit transfers that are initiated by the payor of funds. The stock of arrears was reduced through a program of payment netting among enterprises and government loans to allow net payment obligations to be met.

Although the operation of the payment system was not the principal cause of corporate illiquidity and the buildup of interenterprise arrears, inefficiencies in those systems in the countries of the former Soviet Union exacerbated liquidity difficulties throughout the economies of these countries. In particular, inefficient handling of payment orders and inappropriate accounting practices caused large amounts of central bank credit float in these banking systems. As discussed in Chapter 10, credit float is the balance sheet result of debiting (with a credit transaction like a payment order) the bank account of the entity originating the payment before the offsetting credit is made to the account of the entity receiving the payment.

Central bank credit float decreases the balances of the commercial banking system with the central bank, thus lowering commercial bank reserves. This situation is ironic, as the central banks of the countries of the former Soviet Union, on the one hand, have followed accounting practices for payments that result in credit float and at the same time have

---

been concerned about the illiquidity of the financial system. The latter has been addressed by a continuing and liberal policy of providing credit directly to selected commercial banks for specific purposes. Thus, while central bank operational practices have resulted in a generalized removal of liquidity from the economy through the payment system, the central banks have directed liquidity back into the economy on a highly specific basis to selected economic sectors and enterprises. Accordingly, the central banks have become major financial intermediaries.

Improvements in the payment systems of these countries since 1992 have led to a reduction in credit float and increased the certainty and timeliness of payments. In the Russian Federation, for example, credit float is estimated to have been reduced by about half during 1993, from 30 percent to 15 percent of base money (that is, the stock of currency in circulation plus balances held by commercial banks with the central bank). Also, the monthly variation in float was reduced considerably in 1993 compared with 1992.

More timely and assured processing of payments and reductions in float were accomplished mainly through relatively inexpensive improvements in the physical apparatus for handling payments, especially the improved transportation of payment instruments. In smaller countries, such as Belarus and the Baltics, with only one, or just a few, central bank processing centers, time delays have been cut significantly, and payment instruments can now be processed relatively quickly. In larger countries, such as the Russian Federation, Kazakhstan, and Ukraine, with their much larger geographic area and many processing centers, interterritorial transactions are now more timely, but can still take days if not weeks to process. Within territories that share the same processing center, paper transactions can be handled very quickly, and even overnight.

But the monetary accounting practices of the central banks of the states of the former Soviet Union have not been changed to incorporate techniques routinely used in developed banking systems to minimize bank float, such as availability schedules. As described in Chapter 10, availability schedules are used to synchronize, on average, the accounting performed on both sides of payment transactions to minimize float.

The operational difficulties described above arose in connection with the national clearing systems managed by the central banks and with accounting practices for payments settled through accounts held with the central banks. These practical problems have led to substantial interest in forming privately operated clearing systems in a number of countries. Where this has occurred, they have relieved operational pressures on the central banks' clearing systems and contributed to more timely and reliable payment. The growing interest in private clearing systems, however, has progressed in fits and starts, partly because of official discouragement by some central banks. Official restrictions on private clearing persist in
some countries, where the central banks require all payments (including interbank payments and even payments between branches of the same bank) to be cleared through the official clearing system.

Private banks in some countries are gravitating toward a banker's bank model of interbank clearing rather than the traditional clearing organization model. Private banks are recognizing that they need to rely on interbank credit specifically to facilitate payments. Short-term funding to help meet interbank payment obligations cannot readily be obtained from the central banks of the countries of the former Soviet Union and, further, interbank money markets have not developed to the point where they can efficiently meet the banking system's liquidity needs. The central banks seem to be approaching the authorization of banker's bank arrangements with caution, partly because these institutions have, at least until recently, completely escaped regulatory oversight. The banker's banks, although essentially deposit-taking and credit-granting institutions like commercial banks—but with a specialized clearing and settlement role—have not been classified as commercial banks. Recent banking regulation in the Russian Federation, however, stipulates that banker's banks must comply with the same financial regulations, promulgated by the central bank, that apply to commercial banks.

A major concern is that private clearing arrangements, whether in the form of banker's banks or traditional clearinghouses, do not generally envision use of central bank accounts and balances for settlement of netted interbank settlement obligations. The private banks view their clearinghouses as an opportunity to disconnect entirely from the central bank, including for interbank settlement—an attitude that is encouraged by the persistent problems with the clearing systems operated by the central banks. In short, the interbank market appears to be willing to trade finality of payment in central bank money for greater speed and certainty in the clearing process.

In the initial phase of payment system modernization, payment systems serving enterprises and the interbank market have been accentuated, with relatively little attention paid to providing individuals and households with payment alternatives to cash, although planning has begun on giro systems in Lithuania and Latvia. A number of the new commercial banks are introducing modern payment services to their retail customers, with credit card services proving particularly popular. Several Russian commercial banks, including the quasi-public Sberbank, are taking the lead in importing technologically sophisticated consumer payment services, including on-line authorization systems for credit cards. To develop the banking system as a primary means of mobilizing savings and investment, better ways must be found to allow people to transfer their deposit and investment balances. Moreover, the development of the retail sector will be limited unless more efficient means of payment are introduced.
Future Opportunities

It is clear that important reforms have begun in the payment systems of the countries of the former Soviet Union. These reforms include operational improvements in the existing clearing systems operated by central banks, resulting in reductions in credit float and the start-up of private clearing organizations. Other important aspects of payment system reform have also been identified, including improvements to the reserve maintenance regime, consolidation of account relationships with the central banks and pricing of payment services they provide, and the establishment of large-value transfer systems.

Reform of the reserve accounting regime to rationalize use of central bank accounts for clearing and settlement is a high priority. Virtually all of the central banks of the countries of the former Soviet Union require that each private bank maintain two accounts: a reserve account and a correspondent, or clearing account. Balances in the reserve account are frozen, and required reserves are not available to fund payments. Consequently, a large amount of liquidity is withdrawn from the banking system as a result of the design of the reserve accounting system. The correspondent account is used to settle payments and is usually generously funded by banks to take account of the uncertainties regarding the timing of the clearing process and the costs imposed by the central banks on overdrafts. In fact, commercial banks have been holding excess reserves equal to about 60 percent of their deposits.3

One way of addressing this problem is to merge the reserve and correspondent accounts and implement a reserve-averaging procedure. This strategy is common in the monetary regimes of modern financial systems and would allow commercial banks to manage actively all of their liquid balances held with the central bank. Alternatively, the dual account arrangement could continue, and intraday overdrafts, up to a limit, could be permitted in correspondent accounts. The central banks would control their risks by setting the limit that each bank could have—equal to that bank’s balance held in the reserve account. Essentially, overdrafts in correspondent accounts (both intraday and overnight) would be fully collateralized by required reserve balances. These possibilities are discussed in Chapter 4.

A related issue is that reserve and correspondent accounts are held with the central banks of the states of the former Soviet Union on a highly decentralized basis. Every branch of every bank holds separate accounts with the local office of the central bank. In the Russian Federation, cur-

---

rently over one thousand local central bank offices hold accounts for commercial banks. This decentralized account structure fragments the banking system and discourages efficient management by private banks of their liquid balances. Consolidation of the geographically dispersed accounts into one, or at most a few, accounts would also facilitate more efficient clearing. Account consolidation, however, would require significant changes in the way private banks organize their financial management and accounting systems and substantial investments in automation systems, including telecommunications, to permit consolidation.

It is important to define the appropriate division of responsibilities between the central banks on the one hand and the private sector on the other with regard to the operation of the payment system. The central banks need to embrace fully their roles as ultimate settlement authority for interbank transactions and as supervisor of the payment system. The supervisory role needs to be institutionalized so that objective decision making is not influenced by the central bank's proprietary interest in performing payment operations. A closely related point is that central bank payment services that are now free should be priced. So long as these services continue to be free, they will be overused, and competition from private providers of payment services will be stifled.

Implementing large-value transfer systems to support the development of interbank markets is another priority in the countries of the former Soviet Union. These large-value transfer systems do not need to be sophisticated and expensive. They can be based initially on identification of “large-value” transfers early in the payment stream and expedited handling, even for paper-based instruments. This approach is being followed in the Russian Federation. The large-value transfer system will help reduce credit float, thereby increasing the liquidity of the banking system and economy generally. It is a necessary condition to the establishment of an efficient interbank funds market and, as noted below, a market for government securities.

A small number of countries, including the Russian Federation and the Kyrgyz Republic, have implemented book-entry securities clearing systems to handle new issues and secondary market trading of their countries’ government securities. Such systems need to be developed promptly in virtually all countries that are issuing their own currencies. In the Russian Federation, a delivery-versus-payment system for Russian Government securities based on prepayment for securities has been organized outside the central bank by a private clearinghouse with the approval of the central bank. In the Kyrgyz Republic, the system is operated by the National Bank of Kyrgyzstan. Clearly, the basis now exists for implementing such systems widely, and each country should develop a delivery-versus-payment system that supports final payment for purchases of government securities in central bank money.
Conclusions

The payment system in a modern market economy is a specialized apparatus that the banking system is well-suited to provide. Experience has shown that there are common principles underlying the operation of both developed and developing market-based payment systems. They include the importance of low inflation in the domestic currency, the need for clarity in the monetary regime and legal framework, accommodation of the cash and credit management needs of economic actors, a sound technical infrastructure, sound supervision, and reliance on central bank money to achieve final interbank settlement. Outstanding issues remain, including the appropriate division of labor between the central bank and commercial banks in the operation of the interbank payment system, reliance on real-time versus gross settlement for large-value interbank transactions, and the extent of the investment needed to back up critical operational components of the payment system.

The countries of the former Soviet Union are well on their way to reforming their payment systems along the lines of a market model; considerable work remains to be done, however. Key choices focus on some of the issues summarized above. The design decisions that are made and the way these decisions are implemented will play an important part in these countries' transition to market-style economies.