

The Central Bank and the Payment System

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This chapter describes the central bank's core responsibilities in the payment system. Together with the conduct of monetary policy and oversight of banking and financial markets to ensure their safety and stability, involvement in the payment system is an integral component of the central bank's three-part overall mandate. In meeting this mandate, the central bank helps to maintain public confidence in a country's financial system, even during times of stress. An efficient financial system that engenders public confidence owing to its safety and stability is critical to the performance of the real economy. Without efficiency and public confidence in the payment system, even the simplest and most routine financial transactions may become agonizingly difficult.

The central bank is directly concerned with the smooth functioning of the payment system. Even beyond this direct concern, however, the central bank is interested in the operation of the payment system because it can interact crucially with the central bank's other core responsibilities. More specifically, a safe and efficient payment system is critical to the maintenance of sound banking and financial markets and to the execution of monetary policy.

The chapter discusses the central bank's supervisory responsibilities in the payment system and its responsibilities as a payment system operator, especially regarding large-value transfers. It also discusses the policy role and describes the interrelationships between the central bank's role in the payment system and its other primary functions.

Supervisory Responsibilities

Central banks in developed economies perform a number of different, major functions in their national clearance, settlement, and payment

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arrangements. These functions, which include supervision, oversight, operations, and the provision of credit and liquidity, are not always performed in the same combination.

Because it is a vital component of the financial system, the payment system requires at least a minimum amount of official supervisory attention. Perhaps the central bank's most important role in overseeing the payment system is its active involvement in developing the principles under which private payment arrangements operate.

Especially critical is the central bank's involvement in establishing principles for, and, when necessary, in supervising and regulating private clearing and settlement arrangements that handle large-value transactions. There are numerous financial, structural, and operational features to help ensure that clearing and settlement take place in a safe and sound manner. Most important, however, are the commitments of private participants, in the form of guarantees or other arrangements, to ensure that final and timely settlement is achieved by these systems, especially multi-lateral netting schemes. Guarantees or arrangements to ensure timely settlement should be based on carefully constructed membership criteria. Moreover, members in private clearing and settlement arrangements should have the incentives and capabilities to make their own credit judgments about the parties with whom they choose to do business. In addition, concrete commitments are needed to ensure that the financial resources and liquidity are available to guarantee settlement in the event of default by one or more participants. Such commitments should include loss-sharing arrangements backed by collateral and/or lines of credit.

A good deal of analysis is taking place in the Group of Ten countries, in both central banks and the private sector, to refine the principles that should be used to assess private large-value transfer systems, including delivery-versus-payment systems. Delivery-versus-payment systems provide a mechanism to ensure that the final transfer of one asset (for example, a security) occurs if and only if final payment also occurs.

Finally, as described in Chapter 6, for example, the New York Clearing House Association has adopted settlement guarantees for the Clearing House Interbank Payments System (CHIPS), a private credit transfer mechanism for large-value payments. Also in the United States, the Federal Reserve in recent years has given regulatory approval for the operation of a private clearing arrangement for U.S. Government securities transactions through the Government Securities Clearing Corporation. A private arrangement for settling mortgage-backed securities transactions through the Participants Trust Company has also been approved. An arrangement for clearing and settling dematerialized commercial paper transactions operated by the Depository Trust Company has also been started.

The principles underlying the proper operation of private clearing and settlement arrangements are universal. Indeed, in 1990 the central banks

of the Group of Ten countries adopted minimum standards to guide the design and operation of cross-border and multicurrency interbank netting arrangements.² These standards state that netting arrangements should have, *inter alia*, a well-founded legal basis, clearly-defined procedures for the management of credit and liquidity risks, and the capability to ensure the timely completion of daily settlement, even if the largest participant in the system becomes insolvent.

The central banks of the Group of Ten countries have also recognized the need to oversee the operation of significant interbank netting arrangements and have established principles for cooperation when such arrangements operate across borders.³ A key principle is that every cross-border netting arrangement should be supervised by a central bank that will serve as its "primary regulator." At the same time, the primary regulator of a netting arrangement should consult with other central banks that have an interest in the arrangement's soundness. In addition, if a central bank lacks confidence in a netting arrangement, it should influence institutions under its supervision so that they do not use the arrangement.

One means of ensuring the proper application of sound payment system principles is through the supervision of privately operated clearing organizations. In fulfilling its mandate to ensure the integrity of the financial system, the central bank can influence the structure and operation of a private clearing organization in a variety of ways. The central bank can thereby play an important role in ensuring that new and existing payment systems identify and manage the risks facing them. Specific aspects of supervision might include approving an organization's charter and rules. Further, the central bank can influence a clearing organization by overseeing its individual participants, as discussed below. Overall, central banks have a variety of ways to execute supervision, ranging from dialogue to, in extreme cases, denying settlement services to "unsafe" systems and prohibiting banks from participating in such systems.

An important tool to ensure compliance with sound payment system principles is the regular commercial bank examination process. Central banks and other government authorities with bank supervisory responsibilities conduct safety and soundness inspections of individual banks through this process. A bank's participation in a private clearing arrangement can be scrutinized as part of the examination, and the behavior of the clearing organization can be influenced through the examination of the institutions that use it.

²See Bank for International Settlements, *Report of the Committee on Interbank Netting Schemes of the Central Banks of the Group of Ten Countries*, prepared by the Committee on Interbank Netting Schemes chaired by M.A. Lamfalussy (Basle, November 1990).

³*Ibid.*

The central bank can require commercial banks to identify and control the risks that they face in the payment system. Moreover, by issuing broad guidelines for risk management, bank supervisors can establish a mechanism for compliance with proper risk management by banks. Commercial banks should evaluate and control their credit exposures to other participants, assess and manage their liquidity risks, and establish critical operational support systems for payment activities. Banks should also manage these risks through appropriate credit, liquidity, and contingency plans. For example, banks should have bilateral credit limits for different participants. They should develop reliable means of obtaining liquidity when needed. Also, they should ensure that their operational backup facilities are adequate to support critical payment operations in the event of operational difficulties.

Operational Responsibilities

An operating role in the payment system, including the operation of large-value payment mechanisms, is another key function that central banks may assume in their national clearance, settlement, and payment systems. Although central bank accounts are universally relied upon to settle interbank payments, the extent to which central banks operate the payment mechanism itself varies widely across different countries.

At one end of the spectrum of central bank payment system operations is the example of the United States. The Federal Reserve System, through the 12 Federal Reserve Banks, has operated both large- and small-value, paper and electronic payment mechanisms since the passage of the Federal Reserve Act in 1913. The Federal Reserve handles approximately one-third of all checks cleared in the United States and the majority of automated clearinghouse (ACH) transactions. Moreover, it handles about half of the country's large-value funds transfers over the Fedwire system. In addition, Fedwire is used to effect the book-entry transfer of U.S. Government securities, securities issued by certain federal government agencies and government-sponsored enterprises, and securities issued by certain international organizations, such as the International Bank for Reconstruction and Development, the Asian Development Bank, and the African Development Bank.

Since the passage of the Monetary Control Act of 1980, the Federal Reserve has charged fees for the payment services it provides to banks and other depository institutions. Federal Reserve payment services compete with services offered by private sector providers. The policy of the Federal Reserve is to recover the full costs of providing these services, including the imputed costs of capital, debt, and taxes that a private firm would incur. In this manner, efficiency is promoted by allowing the market to determine the sources of payment services used. Federal Reserve

revenues resulting from the provision of payment services now total about \$800 million annually. Although many other central banks also charge for payment services, not all central banks attempt to recover fully the costs of providing these services.

Although geography and banking structure have heavily influenced the extent of the Federal Reserve's involvement in the payment system of the United States, other considerations may also lead a central bank to play a significant operating role in a country's payment system. For example, in some countries, such as France, the central bank has assumed an active operational role in the payment system on behalf of the banking system. In this model, which has probably been influenced by economies of scale and national preferences regarding the degree of direct government involvement in the management of national "utilities," the central bank is the logical entity to operate the payment infrastructure.

At the other end of the spectrum, a central bank may play a relatively minor role in the operation of its country's payment mechanism. In Canada and the United Kingdom, for example, payment processing is largely carried out by private enterprises and is governed at least in part by a ruling body comprised of representatives of the financial services sector. Although the central banks of these two countries do not provide payment services on a broad scale, they influence the operations of the payment system through participation in the governing bodies. These central banks also influence their nations' payment systems by providing interbank settlement for large-value transfer mechanisms.

As suggested above, a nation's payment system may exhibit certain natural monopoly characteristics, such as increasing returns to scale in the processing aspects of clearing and settlement. Under natural monopoly conditions, an entity like the central bank should perhaps play a major role in operating the payment system. Nonetheless, competitive market conditions for most payment services, including interbank payment services, offer the most promise for efficient outcomes. (An important caveat to this view discussed below is the operation of a real-time gross settlement system for large-value payments.) Indeed, in virtually every other market for goods and services, the benefits of competition in ensuring a continuous high standard of performance are best attained through a free market approach. Assuming that principles governing the safe operation of the payment process are clearly laid out and that compliance with these principles is adequately supervised by the central bank, other things being equal, the process should generally work best when governed by competitive forces in a market environment.

Large-Value Transfer System

The large-value transfer mechanism, which is the vehicle for making large payments, is critical to the efficient operation of a modern economy,

especially the financial markets. Such a mechanism depends on the transfer of balances held in accounts with the central bank for final (that is, irrevocable and unconditional) settlement. When such a system operates as a gross payment system in real time, special credit risks may be faced by the settlement authority, namely, the central bank. Consequently, it is logical for the central bank to control and operate a nation's large-value transfer mechanism, or at least the mechanism that provides gross settlement in real time.

Because only the central bank can provide finality of settlement in central bank money, backed by unlimited liquidity, private banks cannot provide the same degree of safety and liquidity for the transfer of money balances. Put another way, the final transfer of value on the books of the central bank offers the surest means of providing final and certain settlement. Chapter 6 describes and compares the operation of central bank large-value transfer systems in Japan, Switzerland, and the United States.

Modern financial markets have typically developed in ways that have resulted in large volumes of high-value payments. Experience has shown that the payment system needs to be insulated from shocks that may have systemic risk consequences, such as the inability of one or more participants to meet their high-value payment obligations.⁴ Systemic risk can be reduced by minimizing temporal risk, even within the business day, and by establishing effective settlement guarantees and risk control mechanisms for privately operated payment systems that process high values.

A large-value credit transfer mechanism run by the central bank can be flexible enough to support many types of payments, including net settlement transfers generated by private clearing organizations. For example, in the United States, CHIPS net settlement obligations are met each evening on Fedwire. In Japan, net settlement obligations from the Foreign Exchange Yen Settlement System (FEYSS) are met on BOJ-NET at the end of the day, during the final net settlement period.

A central bank can also operate a delivery-versus-payment system for a subset of financial instruments, such as government securities, in which gross transfers are settled as they occur across the central bank's books. In addition, the central bank can make its gross real-time funds transfer capabilities available to private book-entry depositories that transfer securities to achieve final settlement. In the United States, for example, net payment obligations are settled over Fedwire for a variety of private depositories, including Participants Trust Company for mortgage-backed securities and Depository Trust Company for commercial paper and other instruments.

⁴Consider, for example, the case of the 1974 failure of Bankhaus Herstatt, discussed in more detail later in this chapter, and the more recent failure of Drexel, Burnham, Lambert, Inc.

Large-value transfer mechanisms are important channels through which the operators, including central banks, may provide intraday liquidity to the payment system. For example, in systems in which payments are final as soon as they are processed, such as Fedwire, the central bank may choose to allow banks to effect funds transfers even when the funds in the account of the paying bank are insufficient to cover the payment. The resulting overdraft is a form of intraday liquidity provided by the central bank. But caution must be exercised lest the central bank become the primary source of intraday liquidity in the payment system.

The practice of providing liquidity through the extension of intraday credit as part of the payment process is now recognized as a basic banking activity, just as is more traditional lending. In the United States, the Federal Reserve provides a large amount of intraday credit and liquidity to support the U.S. payment system. There is also a private sector source of intraday credit through CHIPS, where the bilateral credit limits between participants and the system net debit caps define the limits on the intraday credit that can be extended.

The demand for intraday credit is roughly analogous to the demand for short-term working capital by firms whose patterns of receipts may not exactly match their patterns of expenditures. A large, complex, market-oriented economy could not function effectively without a certain amount of intraday liquidity to fund the gaps that result from the difficulty of synchronizing the timing of high volumes of payment transactions. In the United States, the Federal Reserve provides intraday credit to depository institutions through Fedwire and began pricing this intraday credit in April 1994. In Switzerland, in contrast, the central bank does not permit intraday overdrafts, and banks have managed to conduct their business without an intraday market by relying on the queuing feature of SIC. In Japan, the central bank provides no intraday credit, but a private market for daylight (morning and afternoon) credit has emerged.

Consideration of the role of the central bank as the operator of a large-value funds transfer system leads naturally to the question of the "safety net" attributes of this role. Access to the payment system through clearing and settlement services provided by the central bank, including perhaps central bank credit, is one component of the safety net that central banks and governments place under their financial systems.

Like any other part of the safety net, access to the payment system must be judiciously managed to ensure that it is not abused. Used properly, however, and in coordination with the central bank's supervisory and regulatory oversight of the banking system, access to the payment system can be a useful regulatory tool in ensuring that depository institutions do not fail prematurely.

In essence, the central bank gives financial system participants confidence that the payments they may receive from a troubled institution are

good value. With this confidence, counterparties should be willing to continue to deal with the troubled institution, thus giving bank regulatory authorities the time they may need to work out an orderly solution to the problem. Without such confidence, a troubled institution, by being frozen out of the payment system, would be isolated and doomed to immediate failure.

Policy Responsibilities

As has already been suggested, a third key role that the central bank may play in the payment system concerns the development of policies to govern the overall structure and operation of a country's payment system. Of particular importance are policies to ensure the safety and soundness of the payment system.

To contain systemic risk, payment system design must ensure that problems in one financial institution are not readily transmitted to other institutions. For example, a failure by one participant to transfer funds or to deliver securities could lead to similar failures by other participants counting on such payments or deliveries to meet their own obligations. Since problems in the payment system can potentially affect all participants, each participant depends on the smooth functioning of the entire system. Even participants with no dealings with an insolvent institution might still be adversely affected by the insolvency through the payment system.

Payment systems can adopt measures to reduce systemic risk, such as enforcement of caps or limits on the extension of intraday credit between participants and loss-sharing arrangements in multilateral netting systems. These types of measures typically impose costs on the participants, however.

Individual participants in clearing and settlement arrangements, as well as the private sector providers of such arrangements, may be reluctant to bear these costs because of their natural tendency to focus on their own profitability. The central bank brings its concerns about systemic risk to this process and its broad perspective regarding which payment arrangements will most effectively promote the public interest. By assuming a leadership role in formulating policies to govern the overall structure and operation of a country's payment system, the central bank can help ensure that its desires to limit systemic risk and to promote the public interest are adequately taken into account.

Interrelationship Among Central Bank Functions

Until about the 1980s, the payment system was not high on the central banking policy agenda. Instead, the payment system was of interest

primarily to central bank staff with operations and automation responsibilities, reflecting the view that the payment system is essentially mechanical. Increasingly, however, central bankers have recognized both the operational and policy linkages between the payment system and other primary central bank responsibilities. The payment system has now entered the mainstream for central bankers, and experience and analysis combine to underscore its importance across a broad range of policy matters. The linkages between the payment system and other central bank responsibilities are described below.

Conduct of Monetary Policy

One of the central bank's chief roles is that of national monetary authority. A direct link exists between the payment system and the execution of monetary policy because of the influence of payment system operations on the public's use of the money stock. The implications of payment system operations for monetary policy are treated in Chapters 2 and 4. Some concrete illustrations of the linkages are provided here.

Payment for transactions among economic actors in a modern, developed economy is often made using deposit money in banks. The result of the clearing and settlement of payments is that one economic actor obtains a bank deposit, which is one component of "money," from another economic actor. Thus, the payment system links economic activity and money. The efficiency with which deposit money is used is largely determined by the efficiency of the payment system. For example, the length and variability of time lags between the initiation and completion of payment affect the balance sheets of the parties to transactions as well as commercial banks. As discussed in Chapter 10, the balance sheet effects of such time lags are known as payment system float, which is an important variable in the money supply equation.

In addition to the float that normally results from payment processing inefficiencies, malfunctions in clearing and settlement can affect monetary policy. Examples of such malfunctions that have affected the financial markets and monetary policy are easy to find. In August 1990, a power outage on Wall Street led to disruptions in money market operations, including Fedwire.⁵ These operating disruptions resulted in interest rate swings owing to the banks' inability to trade interbank funds efficiently. Similarly, in November 1985, a computer software error at a major New York securities clearing bank led that institution to incur a massive daylight overdraft with the Federal Reserve. This daylight overdraft could

⁵See, for example, "Wall Street Limp Through a Blackout Monday," *Wall Street Journal*, August 14, 1990.

not be fully extinguished at the end of the business day, resulting in a need for very large amounts of overnight financing that substantially exceeded the capacity of the money markets. As a consequence, the Federal Reserve was obliged to step in and make a \$23 billion discount window loan, the largest on record.⁶

Supervision of Banks and Financial Market Stability

An important two-way interaction exists between the payment process and the stability of the banking and financial systems. Disruptions in the payment system have the potential to weaken confidence in individual financial institutions, particularly in cases where confidence in an institution is already shaken. As a result, an institution's ability to make timely payments or to deliver securities to its creditors and counterparties could be impaired. If an institution's role in the payment system is broad, in terms of either the extent of its dealings with domestic and foreign counterparties or its involvement in high-value transactions, its inability to meet settlement obligations could quickly translate into a systemic problem. Even a technical malfunctioning in the payment system affecting such a participant could cause the markets to question its worthiness as a counterparty, thus transmitting shocks through the banking and financial systems generally. The disruption of a particular institution's payment patterns, therefore, could raise complex concerns for banking supervisors and other central bank policymakers who are not directly involved with payment matters.

Conversely, problems of a bank supervisory nature also have the potential to trigger disruptions in the payment system. If, for example, the counterparties to a bank were fearful that the bank might not be able to meet its payment obligations, they might delay their own transfers of funds or securities to it in an attempt to reduce their exposure to the bank. If the bank were engaged in transactions with a large number of counterparties, financial gridlock could result, with counterparties throughout the payment system refusing to make transfers until they received the corresponding payments or deliveries of securities.

In light of interactions such as those described above, both banking supervisors and central bank officials responsible for the functioning of the payment system must communicate closely with one another—and before serious problems arise. Neither group can be truly informed, or ultimately effective in their own jobs over the longer run, without an awareness of the interdependent nature of their work and responsibilities.

⁶See, for example, Phillip L. Zweig and Allanna Sullivan, "A Computer Snafu Snarls the Handling of Treasury Issues," *Wall Street Journal*, November 25, 1985; and "Fed Is Queried on Failure of Bank Computer System," *Wall Street Journal*, December 13, 1985.

At the heart of the common concerns of bank supervisors and central bank payment officials is the broader interest of the central bank in the stability of the financial system. This stability depends, in part, on the integrity of the payment process, that is, the ability of the payment system to function safely and efficiently even during times of financial stress. Such financial stress may arise in connection with generalized market factors, such as wide swings in asset prices that make it difficult for the "losers" in the markets to meet their obligations. Or financial stress may be caused by the credit problems of a specific large participant in the payment system that make it difficult for that participant to meet its own or its customers' obligations.

Financial stress will manifest itself quite early on in the payment system through the inability of institutions or individuals with payment obligations to meet those obligations. Serious problems involving one or several payment system participants, if contained, should not pose a threat to the safe and efficient functioning of the entire system. Such problems at a commercial bank, adversely affecting its ability to meet payment obligations, would properly be the concern of the central bank in its bank supervisory role. Depending on the nature of the problem, however, financial stress suffered by one or more participants can translate into systemic problems that threaten the overall viability of the payment system.

The well-known case of the failure of Bankhaus Herstatt in 1974, for example, illustrates how just one institution's inability to discharge its payment obligations (in this case payment of dollars against deutsche mark in foreign exchange transactions) can seriously hamper the ability of other entities to meet their payment obligations.⁷ When the financial problems of one or several participants threaten the viability of the entire process, the possibility of systemic risk to the payment system becomes real.

Central banks and other bank supervisory authorities have a number of tools at their disposal to ensure that financial problems at individual financial institutions do not expand into problems of a systemic nature. Bank supervisors, for example, can look for early warning signs of deterioration in the condition of individual banks, particularly worsening asset quality. The earlier such problems are identified, the more promptly bank supervisors can begin to work with a bank's management and board of directors to take steps to strengthen the bank's condition. Such strengthening,

⁷The 1974 Herstatt case has given rise to the term "Herstatt risk," which describes the temporal dimension of the credit risk assumed by a counterparty in a foreign exchange transaction when payment of one currency becomes final some time before the payment of the second currency is completed. Herstatt risk arises in part because the operating schedules of national payment systems are not synchronized. In addition, there is no mechanism in foreign exchange markets today that offers the benefits of concurrency that could be derived from a delivery-versus-payment mechanism.

which might take the form of additions to a bank's capital base and contingency reserves, among other measures, should help to restore market confidence in a troubled institution and hence to contain the problem.

In certain unusual instances, the central bank may choose to extend temporary credit to a troubled bank in order to provide it with sufficient liquidity to meet its obligations during a crisis. Such emergency liquidity assistance, provided by the central bank in its capacity as lender of last resort, can enable a commercial bank to weather a period of adversity either until it regains sufficient strength (and the confidence of counterparties) to operate independently in the marketplace, or until the financial authorities can arrange a more permanent, orderly solution to the bank's problems. The central bank's lender-of-last-resort capability, in this regard, constitutes another tool for limiting the spread of financial problems from a single troubled institution to the payment and financial systems more generally.

Nevertheless, as suggested previously, a country's financial authorities must seek to manage carefully this and all other components of the safety net underlying the financial system in order to prevent their abuse. The authorities need to be conscious of the moral hazard risk created by the various features of the safety net, and they should seek to minimize that risk. One means of doing so is by ensuring that commercial banks and any other financial institutions that benefit from the safety net take all reasonable steps to assure their own financial soundness, as well as the soundness of clearing and settlement arrangements in which they participate. In sum, a central bank must use its lender-of-last-resort capability judiciously and with an awareness of the higher risk-taking profiles that individual financial institutions might adopt if they believed they could rely on that capability—or other aspects of the safety net—to “bail them out” if they got into trouble.

Conclusions

The payment system is now recognized as an essential component of an efficient financial system in a smoothly operating market economy. The central bank has a proper role in (1) supervising clearing organizations and banks that play key roles in the payment system; (2) providing settlement across its books; (3) operating the large-value transfer system; and (4) establishing appropriate public policy to govern the structure of private clearing and settlement arrangements. Much is to be gained by permitting private entities to compete in the provision of payment services to the public. Because of the critical nature and safety net attributes of large-value payment systems, however, operation of such a mechanism, alone or in conjunction with privately operated clearance and settlement mechanisms, is properly a role of the central bank. Central banks

must take care in controlling the intraday credit and liquidity they provide to the financial system and the payment system risk they absorb.

The central bank's core responsibilities in the payment system interact fundamentally with the other components of the central bank's three-part overall mandate. A direct linkage exists between the payment system and the execution of monetary policy because of the influence of payment system operations on the public's use of the money stock. In this regard, the float that normally results from payment processing inefficiencies can affect monetary policy, just as can malfunctions in the clearing and settlement process. An important two-way interaction also exists between the payment process and the stability of the banking and financial systems. Disruptions in the payment system have the potential to weaken confidence in individual financial institutions, and conversely, problems of a bank supervisory nature have the potential to trigger disruptions in the payment system.

The bank supervisory process provides an important vehicle for ensuring that privately operated clearing organizations are in compliance with sound payment system principles. A bank's participation in a private clearing arrangement can be scrutinized as part of the regular commercial bank examination process, and the behavior of the clearing arrangement can be influenced through the examination of the institutions that use it. Another means of ensuring the proper application of sound payment system principles is through the central bank's direct oversight of the private clearing organizations themselves. Central banks might be involved, for example, in approving a clearing organization's charter, rules, and access to central bank payment services and credit facilities.

At the heart of the common concerns of bank supervisors and central bank payment officials is the broader concern of the central bank with the stability of the financial system. This broader concern leads directly to an interest in the integrity of the payment process, that is, the ability of the payment system to function safely and efficiently even during times of financial stress. Because of the interdependent nature of their work, banking supervisors and central bank officials responsible for the functioning of the payment system need to communicate closely with one another, and before serious problems arise.

A complex, delicate balance characterizes the central bank's multiple responsibilities in the payments area. For example, even as the central bank has an appropriate role to play as the operator of a country's large-value payment system, and in providing other payment services as well, a potential conflict can arise between the central bank's active role in the payment process and the benefits from competitive market conditions for most payment services.

Perhaps an even more delicate balance derives from the safety net aspects of the central bank's involvement in the payment system. Relevant

components of the safety net in this regard can include, for example, the central bank's ability to manage access to the payment system and to provide emergency liquidity assistance to participants. Like any other aspects of the safety net, these components must be judiciously managed to ensure that they are not abused. Used properly, however, and in combination with the central bank's supervisory and regulatory oversight of the banking system, these components of the safety net can provide useful tools for ensuring that depository institutions do not fail prematurely and that the integrity of the financial system is maintained.