Payment System Policy in a World Economy

remarks of

Wayne D. Angell
Member, Board of Governors of the Federal Reserve System

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Good morning ladies and gentlemen. It is a great pleasure for me to participate in the National Corporate Cash Management Association's 1990 Conference.

Corporate cash managers have expressed great interest in recent years in a number of issues on the Federal Reserve's agenda, particularly with respect to regulation of the payment system. In fact, a May 1989 NCCMA survey showed that 68 percent of your regional officers ranked Federal Reserve regulations as their number one interest, even surpassing interest rate developments.

Your views on Federal Reserve regulatory initiatives have been expressed effectively through your individual contributions to public policy discussions and through the contributions of your local and national cash management associations. We have benefited from the contributions made by cash managers to our understanding of the potential effects of payment system regulations in particular, and we appreciate your service on various advisory groups assisting the Board's staff, your comment letters on proposed regulations, and, most of all, your accessibility and willingness to discuss payment matters on an ongoing basis. Through you, we are able to keep a perspective on how the "real world" works.

With the internationalization of business, a significant number of cash managers have become directly involved in managing their firms' working capital in a number of currencies worldwide. These cash managers have taken on the
additional responsibilities of managing money in international settings characterized by a variety of tax, accounting, and regulatory conventions. The economic and financial integration in the European Community is adding a new element to the job of managing cash in the international environment, namely, coping with the banking and other financial market changes that this integration will bring. Even cash managers whose activities are confined to managing U.S. dollar positions for firms with primarily domestic operations are affected by the globalization of finance. The activities of domestic cash managers are affected by international financial developments if they involve use of investment vehicles such as Eurodollar deposits or payment mechanisms, such as CHIPS, that are used primarily for payments related to foreign transactions.

Cash managers have traditionally had four primary responsibilities. These are the collection, concentration, control, and disbursement of a firm's working capital. To the four traditional cash management responsibilities I would add a fifth, namely, protection of the firm's working capital as it moves through various payment systems. Cash managers protect their firms' working capital by judiciously choosing banking relationships and by carefully specifying the means of payment and settlement for different types of transactions. The job of protecting working capital "on the move" has taken on new importance domestically as a result of the Federal Reserve's reduced appetite for providing free intraday credit by allowing
banks to send Fedwire payments even when funding has not been immediately available. Protecting working capital "on the move" has also taken on increasing importance internationally as corporate cash managers conduct business in different countries and time zones.

Because of their responsibility to protect their firms' working capital, cash managers have a vital interest in the safe and efficient operation of the financial markets and the payment system. Safety and efficiency are keystones of the Federal Reserve's payment system policy and are the foundation of our recent major policy initiatives. These initiatives include our payment system risk reduction policy as it addresses daylight overdrafts and the establishment of principles to govern the operation of private payment and clearing systems. Such private systems include payment systems, such as CHIPS, and systems used to transfer book-entry securities, such as the Participants Trust Company, a depository for mortgage-backed securities, and the expansion of the Depository Trust Company's same-day funds settlement system to include commercial paper.

A number of the Federal Reserve's recent payment system policies have increasing relevance in the global financial order. This is due in part to growth in foreign exchange and Eurocurrency transactions, the expansion of cross-border trading of securities and derivatives, and greater economic integration among countries. Stated conceptually, financial activities, including the activities of cash managers, are no longer
constrained by space and time as economic integration, financial innovation, and technology have combined to break down traditional notions of geographic markets and business days. The payment systems around the world are the key links that bind world financial markets together. It is for this reason that the issues of payment system safety and efficiency, which have risen to prominence in the United States, also warrant our attention internationally.

The theme of my talk today is payment system policy in a world economy. My purpose is to show that our domestic payment system policies must be sensitive to international realities, including around-the-clock financial markets, large cross-border payment flows, and the fact that the safe and efficient delivery-versus-payment systems that exist in the United States for major financial markets are not present in some important international markets, particularly the market for foreign exchange.

I will begin by tracing the modern history of cash management, which has led to increased reliance on daylight credit for making payments. In the process, I will show that laws limiting banking market efficiency in the United States contribute to the large daylight credit requirements of cash managers. Then, I will review the status of the Federal Reserve's payment system risk reduction program and show how pricing of daylight overdrafts could lead to a private market for intraday credit and how it has stimulated private netting
arrangements. I conclude by extending the need for control of payment system risk as it may exist on privately operated netting systems and cross-border payment systems, and describe the Federal Reserve’s efforts to provide operational support for private risk reduction initiatives.

Cash management developments during the last several decades have changed perceptions regarding the time value of money and led to increased reliance on intraday credit and daylight overdrafts. As the cost of providing intraday credit, and its value, are reflected in explicit fees, new techniques for reducing gross payment flows, such as netting, are being used increasingly.

The recent history of cash management must start with the check, which has served as the predominant payment instrument in the United States but which is now being supplemented by electronic methods, such as the ACH for "low value" payments and funds transfers for "large value" payments. Let me begin with 1948, the year cash management historians point to as the time formal lock box systems to concentrate check deposits first came into use. The lock box innovation permitted the speedier collection of checks by cutting down on mail float and reduced the number of days required to collect interterritory checks. The introduction of MICR technology in the early 1960’s provided further technological opportunities for the speedy collection and concentration of checks. And, I might note the introduction of regional check processing centers in 1972 by the Federal Reserve
provided a standard of performance against which different check collection systems could be measured, leading to increased competition among providers of check collection services and resulting in benefits to cash managers. These benefits took the form of even faster availability of funds combined with new banking services, such as zero balance accounts and balance reporting systems, to provide the information needed to manage cash wisely. Finally, the development of the ACH night cycle service in 1979 ushered in the era of electronic concentration of funds overnight.

The ability of cash managers to speed the collection and concentration of funds, combined with improved bank cash management services, quickly gave rise to the demand for new short-term investment vehicles, starting with short-term bank liabilities such as negotiable certificates of deposit. In some cases, these investment alternatives were designed to avoid reserve requirements and deposit insurance assessments. The short-term investment vehicles quickly evolved to overnight investment opportunities such as federal funds, repurchase agreements, and Eurodollar deposits.

The need for these very short-term investment outlets is, of course, directly related to the legal prohibition on the payment of interest on demand balances held with depository institutions by corporations. This prohibition, which the Federal Reserve has been on record as opposing since 1983, is, I believe, an artificial constraint on the effective allocation of
short-term working capital. It has led to the creation of a plethora of alternative investment outlets to and from which demand balances are continually moved, which was encouraged by the high interest rates of the early 1980s. The result is the movement of massive amounts of funds back and forth between demand accounts and interest earning investments within each 24-hour period. In addition, limitations on interstate banking, which are in part responsible for different institutions specializing as collecting and disbursing banks, have further added to the frequent movement of funds between accounts and depository institutions.

The massive daily shifts in funds between demand accounts and interest earning investments are accomplished using funds transfer systems such as Fedwire. When differences in timing occur between the delivery and payment of funds, a need is created for intraday working capital. If funds are not available to bridge these timing gaps, then intraday credit is needed. The Federal Reserve has been the primary source of supply of intraday credit to users of the payment system through the banking industry. Indeed, about $75 billion in daylight overdrafts are incurred by depository institutions on the books of the Federal Reserve Banks that are related to funds transfers.

As you know, Fedwire funds transfers are final and irrevocable when a payment order is delivered to a receiving depository institution. Consequently, in the event that the Federal Reserve honors payment orders when the sending
institution has insufficient funds for the transfer, the Federal Reserve not only provides the intraday working capital through the creation of daylight overdrafts, it also bears the risk that the sending institution ultimately may not be able to fund the transfer. The assumption of credit risk associated with the provision of $75 billion in daylight overdrafts is essentially a subsidy provided by the Federal Reserve to the payment system, which accrues to those who use it, including cash managers.

The Federal Reserve’s payment system risk reduction program has evolved since the mid-1980s and we are now, I believe, on the threshold of entering a very important new stage of the program. I refer, of course, to the pricing of daylight overdrafts. Explicit pricing of daylight overdrafts, as proposed by the Federal Reserve Board in June 1989, would impose a pricing discipline upon the users of daylight credit. Reducing and eventually eliminating the current subsidy would almost certainly result in lower daylight overdrafts. In addition, daylight credit would be allocated more efficiently as users faced explicit costs related to the amount used.

Pricing of daylight credit provided by the Federal Reserve, like caps on daylight overdrafts, would result in behavioral changes affecting not only patterns of use of intraday credit but also the total amount of credit demanded. An important and positive response to the Federal Reserve’s payment system risk reduction program, which would be encouraged by pricing of daylight overdrafts, is payment netting. Netting is
being used more and more to reduce gross payment obligations and, therefore, intraday credit needs.

Netting is constructive if it is based on sound principles of risk control that place the burden of credit and liquidity risk management on the parties to the netting scheme. The Federal Reserve has developed risk-control principles that should be present in private netting systems that seek to settle directly or indirectly over the books of the Federal Reserve Banks. Moreover, we continue to work with the G-10 central banks to determine the applicability of credit and liquidity safeguards to cross-border netting arrangements.

I might note several things about the incentives being provided to the private sector to shoulder the risk burdens inherent in the payment process. First, technical limitations to the development of efficient intraday payment and settlement systems that permit the exchange of payments on precise schedules, such as time-specified delivery-versus-payment systems, make it more difficult to manage use of intraday credit. Second, even with pricing of daylight overdrafts, control over the total amount of Federal Reserve intraday credit used will not be binding until the Reserve Banks begin real-time monitoring of depository institution accounts to ensure that intraday credit does not exceed approved caps. Finally, since there is as yet no intraday credit market in the United States, it is difficult to determine what the appropriate price for daylight credit should be at the outset of pricing. Our proposed 25 basis point annual
rate would be a starting point for daylight overdraft pricing, with the appropriate rate being determined by our increased understanding of market forces over time.

As you well know, the pricing of daylight overdrafts gives critical meaning to the scheme used for measuring the quantity of credit to be priced. Along these lines, daylight credit can arise not only as a result of Fedwire activity but due to timing differences involving non-wire payments, such as checks and ACH, as well. Our decision to record the debits and credits associated with a transaction simultaneously, which eliminates timing differences but intraday float as well, has been one of the more controversial aspects of the Federal Reserve’s proposal for the pricing of daylight overdrafts. Resolution of the issues raised by the public with respect to the measurement of daylight overdrafts, particularly the treatment of non-wire transactions such as check and ACH payments, has taken a good deal of effort and time and has delayed our decision about how the program should be adapted.

It is likely that the Board will consider new staff proposals related to the measurement of daylight overdrafts by the end of the year. These proposals are likely to be responsive to arguments that credits associated with non-wire transactions, such as checks, ACH credit transactions, and ACH debit transactions, be provided earlier than the end of the day.

Inasmuch as the ACH is a voluntary payment mechanism, I believe it is reasonable, given public support, to treat both the
credit and debit sides of ACH credit transactions as opening of business transactions. Check transactions are more difficult to deal with because of the physical nature of the instrument and the legal requirement that the Federal Reserve meet a physical presentment test before it debits paying institutions for checks collected by the Reserve Banks. Our proposals will also likely embody the idea that credits associated with checks cleared through the Federal Reserve Banks be posted on a staggered basis throughout the day, beginning perhaps at mid-day, based on the Federal Reserve’s ability to present the checks to paying institutions. Since ACH debit transactions, especially cash concentration debits, are largely funded by check deposits, it is likely that the timing of posting would be tied to check schedules.

Pricing of daylight overdrafts is designed to bring into play rational economic rules governing the supply, distribution, and use of daylight credit. As a result, daylight credit should be allocated much more efficiently and payment system risk should be reduced as the amount of daylight overdrafts declines. More importantly, pricing of daylight credit will unleash market forces which will reduce total societal risk and not simply shift risk from the public to the private sector.

I see the market forces arising from the elimination of the Federal Reserve subsidy in the form of free intraday credit as creating new business opportunities for cash managers and cash
management banks. Indeed, depending on the market reaction to pricing, it is possible to envision the development of a private intraday credit market, much as already exists in Japan, whereby firms with surplus balances are able to sell intraday funds, perhaps through bank intermediaries, to firms in need of intraday working capital. Further, banks can and would be expected to offer new information services that help corporations monitor and control their intraday funds positions and netting systems to reduce gross payment flows.

The Federal Reserve's interest in encouraging and facilitating prudent risk control by payment system participants extends beyond daylight overdraft policies. In particular, as the operator of the Fedwire funds and securities transfer system, the Federal Reserve is actively pursuing operational responses to help ensure that the mechanisms and services are in place to support the safe and effective exchange of large-value transactions. One such operational response is building absolute reliability into payment mechanisms operated by the Federal Reserve, particularly Fedwire. The continuous availability of the Fedwire system is essential because it is the backbone of this nation's payment system. Fedwire is the vehicle through which final and irrevocable interbank settlement occurs on the books of the central bank. Reliability of Fedwire has improved dramatically in recent years to 99.8 percent year-to-date in 1990. I might add that reliability has improved even as the Federal Reserve Banks have been challenged to deal with a range
of disaster scenarios, including the October 1989, California earthquake and the August 1990, power outage on Wall Street. I believe that 100 percent availability is an appropriate goal for the operation of Fedwire. The Reserve Banks have devoted significant attention and resources to ensure that this goal is achieved and will continue to do so.

In addition to reliability, it is important that the Federal Reserve provide payment services that facilitate a safe and efficient payment process on a consistent basis nationwide. Along these lines, beginning August 1, the Federal Reserve adopted a uniform operating schedule for the Fedwire funds and securities transfer services. In the case of funds transfer, the opening time is 8:30 a.m. Eastern time, with closing at 6:30 p.m. Eastern time; in the case of securities transfer, the opening time is 8:30 a.m. Eastern time and the closing is 2:30 p.m. Eastern time. As you can see, the Fedwire operating times are very closely tied to our domestic business day (this is a big country and I always feel the need to apologize to those on the West Coast who believe that the Fedwire closing time comes too early in their "business day").

The development of an intraday funds market, and operational responsiveness on the part of the Federal Reserve, have significance beyond the domestic financial system. I believe that an intraday funds market is important to the international competitiveness of cash management services provided by U.S. banks. This is because firms with international
operations and cash balances to manage in a number of countries and currencies are increasingly looking to the banking system for international treasury management products that will help them manage a single worldwide position in each currency across time zones. In particular, firms with dollar balances should be able to put these to work during the U.S. business day in an intraday market.

Further, the development of a private market for daylight credit in the United States is a logical precursor to the kind of market for intraday credit that will help cash managers manage their firms' working capital when they engage in cross-border transactions, which involve additional gaps in the timing of payments. Such cross-border timing delays give rise to settlement risk, or as it has come to be known Herstatt risk, in foreign exchange markets. This risk exists because one currency in a foreign exchange deal must be paid out before the other currency is received. In the terms I used earlier, there is currently no delivery-versus-payment system in the market for foreign exchange to minimize the delay between delivery of the good, in this case, foreign currency, and payment.

An example may be helpful in explaining Herstatt risk and what might be done about it. To use a far eastern example, in a yen/dollar transaction taking place in Tokyo, where a cash manager may sell yen for dollars, the yen leg of the transaction would have been completed by 3:00 p.m. Tokyo time on settlement day -- the time of final settlement for yen payments on the books
of the Bank of Japan. This is 1:00 a.m. New York time. Under current conventions, dollars might well be paid in New York via a CHIPS transfer sometime during the New York banking day. Because CHIPS transfers are not final until the end of the U.S. business day, settlement for the yen/dollar foreign exchange transaction and irrevocable payment of dollars to the cash manager does not occur until roughly 5:30 p.m. New York time, when CHIPS settles over Fedwire. As you can see, there is an approximately sixteen hour delay between the time the cash manager in our example paid out yen and received final and irrevocable dollar value for the transaction. During this 16 hour delay, the cash manager is incurring Herstatt risk, which arises in part because there is no delivery-versus-payment mechanism in place today for foreign exchange.

I am a strong advocate of modifying Federal Reserve payment services to address international risk reduction requirements of a global economy. As a near term matter, this could involve extended Fedwire operations, opening the funds transfer system even earlier in the day at, say, 6:30 a.m. Eastern time. An earlier opening could cut the dollar payment delay in our example down by several hours, especially if the members of CHIPS decided on a beginning of day settlement for the transfers related to foreign exchange deals that have built up overnight. I should add that an earlier Fedwire opening time would also benefit financial markets in the U.S. by permitting more immediate settlement of variation margin calls on the
options and futures exchanges, which currently come due about an hour before Fedwire currently opens. Eventually, I believe it would be possible and desirable to consider virtually around-the-clock Fedwire operations to provide an opportunity for adopting a delivery-versus-payment approach to foreign exchange transactions.

Any discussion of extended Fedwire operating hours into the nighttime cannot ignore the issue of "moonlight" overdrafts. The moonlight overdraft phenomenon is similar to the daylight overdraft phenomenon. Moonlight overdrafts arise when a creditor cannot immediately fund a payment obligation that occurs during our evening hours. If the Federal Reserve extends Fedwire hours into the night, moonlight overdrafts could occur if immediate cover is not available. In this connection, I can assure you that the Federal Reserve will not repeat its past mistake by becoming a large supplier of uncompensated moonlight credit. Rather, I would hope that the principles that are evolving to govern the efficient allocation of daylight credit would be applied to the overnight market. Accordingly, I would envision the development of a nighttime credit market, similar to the intraday "daytime" credit market that may develop with the implementation of pricing for daylight overdrafts.

In conclusion, the U.S. financial markets, and our payment system, have evolved over time to become more efficient and, I hope and trust, safer. The Federal Reserve has proposed additional risk reducing policies, with pricing of daylight
overdrafts as the centerpiece, that would result in a more efficient allocation of intraday working capital and incentives for the private sector to develop netting systems that result in a reduced need for intraday credit. Through the adoption of principles that ensure appropriate control of credit and liquidity risk by the private sector, such netting systems can contribute to a reduction in societal payment system risk. The development of a private market for intraday funds, first during the daytime and perhaps someday during the nighttime, is another important element of controlling and reducing payment system risk. In addition to pursuing policies that promote a safe and efficient payment system, the Federal Reserve will continue to refine its operations and to explore new services, such as an extended Fedwire, to provide the necessary backbone support for a safe and efficient payment system both domestically and internationally.

These opportunities for payment system risk reduction can be aided by the removal of restrictions on the efficient development of U.S. banking markets, including the prohibition of interest on demand deposits and limitations on interstate banking. This is especially important if the U.S. banking system is to be competitive in an increasingly integrated world economy.

Thank you.