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A PROPOSAL TO RELY ON MARKET INTEREST RATES ON INTRADAY FUNDS TO REDUCE PAYMENT SYSTEM RISK

Remarks by

Wayne D. Angell

Member, Board of Governors of the Federal Reserve System

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A Proposal to Rely on Market Interest Rates on Intraday Funds to Reduce Payment System Risk

I appreciate the opportunity to participate in the CATO Institute's conference concerning alternatives for governing the banking industry. The appropriate balance between market based and regulatory solutions is a problem with which the Federal Reserve has struggled during the last decade as the economy and payments system have become more global. Up to this point, it has focused primarily on regulatory solutions. This afternoon, I would like to share the reasons for this struggle and compare a regulatory approach to a market-determined solution. I would also like to spend a little time discussing the use of the U.S. dollar as the key currency in the international payments mechanism and the lack of a meaningful intraday funds market. Before I start, however, I want to describe a trap that we in the public sector frequently fall into, when addressing complex issues.

Society is faced with many complex issues that government agencies, both on the local and national level, must face each day. Typically, the first thing we do is assign the problem to technical experts, who are asked to develop alternative solutions. Using their expertise, the technicians often develop very complex solutions that, by their very nature, have a regulatory bent.

Let's look at the administration of farm subsidies. The administered subsidies frequently encourage farmers to plant crops for which there is no marketplace demand, thereby allocating resources inefficiently.
Oats, for example, have been in high demand in the United States in recent months, because of the increased public awareness of the health benefits of oat bran. Yet, the farm program has had the effect of inducing farmers to grow more corn and wheat and less of oats. As a result, the United States has become a net importer of oats, although it was once a net exporter. I think this illustrates in a concrete way that regulatory solutions often times bring about market inefficiencies.

THE NATURE OF THE PROBLEM

The Federal Reserve has been concerned about the risk associated with large-dollar payment systems, including the Federal Reserve's Fedwire service and the private Clearing House Interbank Payments System (CHIPS). When the Federal Reserve receives instructions from a bank that has an account with it to transfer funds to another bank, the Federal Reserve generally effects the transfer and sends the receiver an advice of the transfer. Because the Federal Reserve treats the payment to the receiving bank as an irrevocable payment, it is exposed to the risk of loss if

the bank sending the payment did not have sufficient funds in its account to cover it. Likewise, when a bank sends a government security to another bank through the Fed, the Federal Reserve gives irrevocable credit to that bank for the purchase price of the security. If the bank receiving the security does not have sufficient funds in its reserve account to pay for the security, a daylight overdraft is created and the Federal Reserve has given away free Reserve Bank credit.

Currently, the Federal Reserve's daily aggregate credit exposure averages $110 billion; $55 billion in intraday Fedwire funds transfer overdrafts and a $60 billion from book-entry securities transfer overdrafts.

In the case of the private CHIPS network, the participants are exposed to two types of risk -- individual credit risk and systemic risk. The transfers exchanged among CHIPS participants are provisional until the net balances of the participants are settled on the books of the Federal Reserve at the close of business. Because these payments are provisional, institutions that permit their customers to use these funds are exposed to the risk that one or more CHIPS participants will not be able to settle their net debit positions at the close of business and that their customers will not be able to cover the payments made on their behalf.

While each participant is exposed to the risk of loss if customers are permitted to use funds received over CHIPS before settlement, each CHIPS participant is also exposed to systemic risk. If one participant cannot settle its net debit position at the close of business, the network, under the CHIPS rules, must unwind all of the day's payment transactions involving those depository institutions that exchanged dollar payments worldwide. Simulations of this process indicate that participants' positions change dramatically. Institutions originally in net credit positions can become net debtors and those in net debit positions originally may experience significant increases in their net debit positions. More importantly, the simulations show that the failure of one medium-sized CHIPS participant to settle could lead to the failure to settle by nearly one-half of the other participants.

CURRENT RISK POLICY

To prevent the Federal Reserve from shielding participants from these credit risks and to reduce the systemic risk of private large-dollar funds transfer networks, the Federal Reserve instituted a Payment System Risk Reduction Program in the late 1970s. Thus far, the program has had a regulatory orientation, establishing credit limits for Fedwire and CHIPS participants. The intraday credit limits, which we call daylight overdraft

caps, are expressed as multiples of depository institutions' capital. Depository institutions who incur daylight overdrafts on Fedwire or who participate on CHIPS must perform a self-evaluation of their creditworthiness and their operational control and credit policies, which is later verified through financial examination. Institutions with high ratings are permitted to select larger caps than those with low ratings. The managements of institutions whose overdrafts exceed their predetermined caps are counselled by the Federal Reserve. The CHIPS network has also instituted bilateral credit limits to constrain the credit exposure each participant can have with each other participant. Through the use of overdraft caps, the Federal Reserve has put boundaries around its aggregate credit exposure, but has not done enough to reduce the systemic risk faced by CHIPS and other private networks.

This regulatory approach has controlled Federal Reserve risk. The Federal Reserve's aggregate intraday credit exposure has been reduced from more than 10 cents per dollar transferred, when the policy was introduced, to less than 8 cents per dollar now. In addition, the number of institutions incurring daylight overdrafts has declined from 3,600 in 1985 to around 2,200. Despite these achievements, there is no assurance that daylight credit is being allocated efficiently.

During the past year the Federal Reserve has undertaken a zero-based analysis of the dimensions of payments system risk and the adequacy of the current program to control risk. Through the study, we have been able to determine that a long-run strategy to control risk will require the careful balancing of the risk borne by the Federal Reserve against that borne by the private sector.

In crafting a future policy to control risk, the Federal Reserve needs to consider carefully the trade-offs associated with a regulatory solution versus the trade-offs possible with a market-oriented approach. We do not want the risk abatement program to slow payments flows, to unduly increase the cost of transmitting payments, or to drive payments to a non-final clearinghouse arrangement. We must also be sensitive to the possibility of driving payments offshore. At the same time, the program must be sensitive to the competitive impact among providers of payment services. Moreover, we must be aware that our daylight overdraft policy interrelates with the conduct of monetary policy and may impact the market for Treasury securities.

The administered policy options that we have available to us are well known. We can, for example:

- o reduce caps;
- o adopt explicit prices on intraday credit extensions;
- o require collateral to cover daylight overdrafts;
- o impose higher clearing balances; or
- o adopt a combination of these policy steps.

There is considerable sentiment for an administrative solution, such as the Federal Reserve's setting a fee to be applied to intraday overdrafts. Adopting explicit prices for intraday credit provide monetary incentives for depository institutions to avoid overdrafts by adopting more efficient payment practices, such as netting. Unfortunately, there are fundamental problems inherent in such administrative solutions due to the difficulty in determining the appropriate policy structure to "mimic" market efficiency. The likely inflexibility of policy responses to changing market conditions is also a major shortcoming. There is, in addition, the "moral hazard" problem than can arise in an administered environment. To the extent that private markets for intraday credit develop under an administered system, private market rates would not rise above

administered rates. Private institutions could not effectively ration credit at the administered rate when confronted with poor credit risks, as poor risks would presumably turn to the Federal Reserve for credit. When credit risk is not priced, it is not rationed, and societal risk is not minimized. In other words, administered prices -- whether they are price floors or ceiling prices -- cannot be expected to work differently for intraday credit than for oil or housing markets.

A MARKET BASED SOLUTION

I have been developing an alternative approach that avoids the problems associated with an administered solution. The approach I have in mind should enable the market to allocate intraday credit efficiently and to allow intraday interest rates to effect a market equilibrium of prices which would permit interday seasonality .

Essentially, there are four key elements to my proposal. First, intraday overdrafts at the Reserve Banks would be automatically swept into collateralized discount window borrowing. Uncollateralized borrowing or overdraft conditions would be required to be covered within minutes after occurring, rather than to wait for cover until final settlement at the end of the day. Second, although standard collateral would be required for Federal Reserve credit, the

discount window would be open to all qualifying institutions at a 24-hour rate set in the same manner as at present. Since the discount window would be open, depository institutions would not be willing to pay a fed funds rate above the discount rate. Third, an overnight (15-hour) rate normally below the 24-hour market interest rate on funds would be paid on excess reserve holdings of banks. Our present reserve requirement system is in effect on a 15-hour basis. Fourth, the Federal Reserve's Fedwire network would operate on a 24-hour basis.

The advantages of this proposal are that the Federal Reserve would no longer be a direct supplier of intraday credit at zero or other subsidized rates. It would, however, enable the formation of a private market in intraday funds, in which the price of such funds would be determined competitively by the forces of supply and demand. Funds would trade at a market-determined intraday rate of interest that would fully reflect intraday variance in demand and the opportunity costs of the 24-hour alternate rate as well as the marginal cost of increased turnover, and the risk premiums that would vary among market participants. Another advantage is that current administrative restraint on discount window borrowing would be replaced by the disincentive of a variable interest rate penalty.

One of the most important features of this proposal is that banks would have an incentive to expand their holdings of excess reserves, especially in light of the variable penalty associated with overdrawing their accounts. The payment of interest on these excess reserves would partially offset their opportunity cost of retaining idle funds on an overnight basis. However, the banks would still incur some opportunity cost associated with the excess reserves, because the rate paid would be below the market rate on 24-hour funds. This element of the proposal also produces a policy determined floor on the 24-hour funds rate. The proposal would also serve to avoid the moral hazard issue I mentioned earlier. Specifically, any poor credit risks rationed out of the private intraday market would be forced to borrow from the Federal Reserve at a penalty and to provide acceptable collateral for the amounts of their loans.

Under this market price approach, the public sector's role in supplying intraday credit would be minimized. The competitive forces of supply and demand for intraday credit should result in a more efficient allocation of credit without the Federal Reserve playing a major role as the provider of intraday funds. Also, it would reduce total risk by providing a price motivation to improve balance sheets and to avoid clearing arrangement with high systemic risk.

While it is theoretically possible to use caps to achieve the same allocation of daylight credit that would be obtained in a competitive environment, it would be difficult, if not impossible, for the Federal Reserve to determine the appropriate degree of restraint on credit utilization. For example, National Airport has a limited number of slots to be allocated to the airlines. Inefficient allocation of these slots would lead to overcapacity or undercapacity problems at the airport. If less than the optimum number of slots were used, customers would be constrained in the number of available flights. Whereas, if more than the optimum number of slots were used, airlines would be underutilized. The objective is to determine the optimum number of slots based on the demand for those slots and allocate those slots through competitive measures. On the other hand, caps or other administrative use approaches would fail to deal with moral hazard, and fail to provide incentive to accomplish intraday finality. Therefore, if caps are set too low, then banks and their customers would be constrained to a volume of daylight credit that would be too low from the perspective of social welfare. Furthermore, supply and demand conditions change over time, but caps would be set at fixed values during short or intermediate periods. Thus, even if the Federal Reserve were to set appropriate caps at one point in time, variations in the demand for intraday credit would cause the

socially optimal quantity of credit to diverge from the ceiling quantity imposed by the caps, resulting in departures from economic efficiency.

TRANSFER NETWORKS

Now let me turn to the international dimension of large-dollar transfer networks. The dollar is the reserve currency of the world and the currency of choice for many international payments. With the globalization of financial markets, international money movements have become a 24-hour reality. Yet, the U.S. large-dollar payments system operates within the U.S. business day. There is no way to make a dollar payment with the certainty of a Fedwire transfer other than from 9:00 a.m. to 6:30 p.m. Eastern time. Because of this, banks use foreign networks, such as the Tokyo network, to exchange dollar payments. The transfers made over these networks are ultimately settled when CHIPS participants settle with the Federal Reserve at the end of the following business day. This means that a receiver of the transfer may have to wait up to 20 hours to determine whether payments have been finally settled. This settlement delay could be reduced substantially if the Federal Reserve funds transfer network operated 24 hours a day.

Other countries with hard currencies, such as Switzerland, already successfully operate funds transfer systems 24-hours a day. A 24-hour Fedwire operation could be based in one Reserve Bank, and any depository institution having a reserve or clearing account with the Federal Reserve would be an eligible participant, including foreign banks with branches or agencies in the U.S. I would expect that in practice, only U.S. banks with significant operations in foreign markets and the large foreign-based multi-national banks would participate. I would also expect that the international transfers would be conveyed to the 24-hour Reserve Bank via an international private network.

The participating banks would each maintain a special clearing account with the Reserve Bank offering the service. Balances in this special clearing account would not be counted toward the bank's reserve requirement and the account would be restricted to funds transfers. The balances in the special accounts would not receive interest, even if the Federal Reserve decided to pay interest on clearing account balances in the future. The participants would be free to send and receive transfers using this account 24 hours a day, but they would not be able to overdraw the special account at any time. At the opening of business, each bank could transfer funds from its special account to its regular reserve or clearing account.

The primary benefit of the 24-hour service would be to provide banks the opportunity to make final payments 24 hours a day in order to reduce temporal risk. It would also help assure that international financial markets continue to operate smoothly 24 hours a day.

The 24-hour Fedwire operation and a market-determined solution to the issue of payment system risk could work hand-in-hand to reduce payment system risk worldwide. Most importantly, however, I believe this can be achieved within the next few years through the normal interactions of market forces. The Federal Reserve, by allowing the market to operate freely within a limited number of rules, and by providing the operational mechanism to facilitate the international settlement of large-dollar payments, can take a large step toward controlling risk while promoting market efficiency.

In summary, like many of you, I support a market-based approach for addressing the credit risk arising from the operation of large-dollar funds transfer systems that avoids the problems associated with the present and some proposed administered solutions.

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