

March 14, 2007

Jennifer J. Johnson
Secretary
Board of Governors of the Federal Reserve System
20th Street and Constitution Avenue, N.W.
Washington, DC 20551

Re: Comments on Consultation Paper on Intraday Liquidity Management and Payment Systems Risk Policy [Docket No. OP-1257]

On behalf of Citigroup I am pleased to provide the Board of Governors of the Federal Reserve System ("Federal Reserve") with input on the Consultation Paper on Intraday Liquidity Management and Payment Systems Risk Policy [Docket No. OP-1257] (i.e., "Consultation Paper") issued in June 2006.

We understand the Federal Reserve is currently considering potential changes in market practices, Fedwire operations, and its Payments Systems Risk ("PSR") Policy that could reduce intraday liquidity, credit and operational risks related to Fedwire funds transfers, while maintaining or improving the efficiency of the U.S. payment system. Citigroup appreciates the opportunity to provide information on our experience in managing intraday liquidity associated with our Fedwire funds transfers. We also appreciate the opportunity to share our institution's views on the potential changes in market practices, operations and PSR Policy we favor in order to reduce one or more of these risks, while maintaining or improving the efficiency of the U.S. payment system.

We understand from the Consultation Paper that the Federal Reserve, today, is not overly concerned with the overall rise in daylight overdrafts, as this has occurred in conjunction with the overall growth of commercial bank capital and the continued financial strength of depository institutions. However, we understand that the Federal Reserve may have some longer-term concerns that either the continued growth of uncollateralized daylight overdrafts, or a reduction in the financial strength of depository institution, could increase the direct credit risk to the Federal Reserve Banks from daylight overdrafts. We are also aware of the Federal Reserve's current concern over the increased amount of large-value Fedwire payments made late in the day and how this may present greater risk to the financial markets if significant operational disruptions were to occur late in the day.¹

¹ Citigroup has participated in various recent discussions with Board and Reserve Bank staff about the causes and concerns about the increased concentration late-in-the-day payments and related increased overdrafts.

In providing input on the Consultation Paper, we first highlight our institution's overall views on which potential changes in market practices, operations and PSR Policy we would favor which could likely reduce intraday liquidity, credit and operational risks related to Fedwire funds transfers, while maintaining or improving the efficiency of the U.S. payment system. We then provide responses to the specific questions posed in Section V of the Consultation Paper

Summary Views on Potential Changes in Market Practices, Fed Operations and PSRM Policy

- **Citigroup strongly favors the development of liquidity saving mechanisms for the Fedwire funds transfer system, in particular a centralized queue.** We believe that such a mechanism would be a highly effective way to facilitate a number of large-value Fedwire payments earlier in the day. It would directly address the large number of late-day payments that result from the general liquidity management strategies employed by depository institutions that rely on internal queuing of Fedwire payments to reduce daylight overdrafts and related charges. With a centralized Fedwire queue that offsets payments to greatly reduce or outright eliminates daylight overdrafts, banks would no longer have a cost incentive to hold payments on internal queues wanting for incoming liquidity. In addition, an efficient Fedwire central queuing system (one that offsets payments multilaterally) would likely reduce the overall demand for central bank money and daylight overdrafts. Citigroup believes the "offsetting" effects of a Fedwire central queue for Citigroup could be great, as recent data reflect that approximately 70% of our outgoing late-in-the-day Fedwire payments and approximately 50% of incoming Fedwire payments are concentrated to nine banks. We see a centralized Fedwire queue as an optimal way to reduce intraday liquidity, credit and operational risks associated with Fedwire payments while also improving the efficiency of the U.S. payment system
- **Citigroup would also be in favor of "time-of-day" pricing of daylight overdrafts, where daylight overdraft chares are lower at earlier times of the day.** However it is not clear if daylight overdraft chares would have to be set at zero at earlier times of the day to actually incentive banks to send Fedwire payments earlier that are being held back simply to avoid/minimize the daylight overdraft charges.
- **Citigroup is generally not in favor of "throughput requirements" for the funds transfer systems, as they can be problematic to achieve.** However in conjunction with a Fedwire central queue, Citigroup could see the benefits of having a high-level throughput requirement that ensures banks are sending some minimum percentage of the daily Fedwire payments to a Fedwire central queue to ensure the risk reduction benefits are achieved.
- **To further reduce intraday liquidity, credit and operational risks relating to Fedwire funds transfers, Citigroup believes that there may have to be changes to certain private settlement arrangements, such as to certain private sector systems (e.g. DTC, CHIPS) and to the custodian tri-party repo arrangements.** This is because broker-dealers and their late-in-the day reconciliation of positions, and the late-in-the day settlement by certain private sector systems, are both primary drivers of large, late-day Fedwire payments. There may be risk reduction advantages to moving their settlement periods to earlier in the day or to introduce multiple settlement periods in the day. However

such changes to private settlement arrangements, in particular changes to private securities settlement systems, could result in potentially significant costs to the U.S. financial services industry which would need to be weighed against any potential risk reduction benefits.

- Citigroup recognizes that the collateralization of daylight overdrafts would lower the direct credit risk exposure of the Reserve Banks to depository institutions and perhaps reduce or eliminate any current incentives by depository institutions to hold back Fedwire payments for liquidity saving reasons. **However the collateralization of daylight overdrafts would have an adverse effect on Citigroup unless (a) banks are given the option to collateralize overdrafts, (b) banks are not explicitly charged for any collateralized overdrafts (as is the case in all other G-10 countries), and (c) banks are allowed to use collateral that they have already posted to their discount window account as collateral for supporting incremental intraday overdraft usage. Citigroup is not in favor of full transition of Fedwire to a mandatory, fully collateralized intraday credit RTGS system, as exists in Europe, even if such intraday liquidity is provided free of charge.** Such a change would have an adverse impact to our franchise, as we currently do not maintain the levels of collateral required to support mandatory collateralization of our Fedwire our payment activity.
- **Citigroup believes that an intraday market to exchange liquidity between institutions is not currently viable and would not likely materially reduce intraday liquidity, credit and operational risks relating to Fedwire funds transfers.**
- A nascent market for the early return of federal funds has developed in recent years but it is not clear how large such a market will grow and whether it will materially reduce intraday liquidity, credit and operational risks relating to Fedwire funds transfers.

Responses to Questions in Section V of the Consultation Paper

1. **What intraday liquidity conservation strategies and technologies does your institution use (such as controlling the timing of payments and introducing queuing techniques to conserve on liquidity)? How do these affect your institution's timing for sending payments? What, if any, changes are you planning with regard to intraday liquidity management?**

Citigroup employs both (i) an internal credit queue and (ii) internal liquidity queues, which influence the timing of outgoing Fedwire payments. Pending outgoing Fedwire payments must first clear the internal credit queue which will hold a pending Fedwire payment if there is not sufficient cover or credit capacity for the respective client. Once payments clear the internal credit queue, they are moved to the internal liquidity queues.²

For the internal liquidity queues, Citigroup sets an internal net debit cap, which is lower than the debit cap established for our institution to control the usage of liquidity at our Federal

² Citigroup has separate internal liquidity queues for each Citigroup Fedwire member legal entity.

Reserve account(s). Any breaches to this internal cap are escalated to senior management. This internal debit cap is dynamically established based on the time of the day and payment queues to smoothen the payment flows.

2. How do the concentrated demands for intraday central bank money by private sector systems influence intraday liquidity management by depository institutions throughout the day? Are there significant concentrated sources of demand for intraday central bank money beyond those already mentioned in the text and how does this demand affect intraday liquidity management?

Citigroup agrees that private sector clearing and settlement systems, particularly those related to securities activities (i.e., DTC, NSCC, FICC) have a consequential impact on intraday liquidity. Depository institutions have and/or adopt practices to provide provisional credits and daylight overdraft facilities to their clients in anticipation of net settlements with these private sector securities clearing and settlement institutions. In situations where the depository institution is a "net buyer", there may be downstream implications such as delays in processing of payments, until the institution improves its overall liquidity situation. The fact that these securities settlement systems settle later in the day (i.e. at or near 3pm) contribute somewhat to the late-in-the-day reconciliation of securities markets participants, who are key drivers of late-in-the-day Fedwire payments.

In the case of private-sector payment systems, Citigroup is of the view that it is really only CHIPS that significantly influences intraday liquidity management by Citigroup, and presumably other depository institutions, throughout the day. This is primarily due to mismatches of payments sent over CHIPS and Fedwire whereby some participants are consistently short for the CHIPS settlement (i.e., large net senders at CHIPS), resulting in large sums of liquidity being consistently distributed away from Fedwire throughout the day.

With respect to CLS Bank, CLS funding is made in central bank money early in the morning and hence does not have a large impact on Citigroup's intraday liquidity management throughout the day. However the Federal Reserve should review any impact of CLS on the liquidity position as it is designed to receive and then pay and could lead to short periods of liquidity squeeze. Other private-sector payment systems such as ACH and check clearing do not comprise significant concentrated sources of demand for intraday central bank money, at least for Citigroup.

3. Is the concentration of payments late in the day a concern for your organization? If so, what is the nature of your concern? Does it include operational risk from late-in-the-day payments, and has operational risk to your organization from such payments been increasing or decreasing? What are the key drivers of late-in-the-day payments? How has your organization responded to the late-in-the-day concentration of payments?

The concentration of payments late in the day is a concern for Citigroup. Missed payments to Citigroup results in credit and settlement risk for Citigroup. Missed outgoing payments to the street results in a franchise and P&L risk (i.e., if fed funds rate drops, the bank will be selling at a loss, lest it creates excess reserves). Operational Risk has been increasing.

It is Citigroup's view that the key drivers of late payments are:

(i) The increasingly late-in-the day reconciliation of positions by securities market participants, particularly activity done via the tri-party repo custodians (e.g. BONY, Program Chase), which results in depository institutions' customers initiating late-in-the-day payments.

(ii) The late-in-the day settlement by certain private sector systems (i.e. DTC, CHIPS) where customers are usually not able to determine and react to their final end of day cash balances until settlement figures are known.

(iii) The use of general liquidity management strategies by depository institutions that rely on internal queuing of Fedwire payments to reduce their daylight overdrafts and related fees.

Citigroup has responded to the late-in-the-day concentration of payments by having customer service (NYSC) monitor the large broker-dealers and other customer accounts especially late in the day, with access to customer cash management desks for resolution if needed. We also rely on late day customer balance monitoring systems to get an early indication of unusual, out of range customer account balances.

4. For the market, operational, and PSR Policy changes discussed in this document and listed as follows, how might the timing of payments and the demand for daylight overdrafts be affected? What advantages or disadvantages do you see for these changes?

- **An intraday market to exchange liquidity between institutions that hold positive balances at the Reserve Banks and those that run negative balances**

In concept there could be advantages to having an intraday market to exchange liquidity. It could lower borrowing costs (if funds could be borrowed at a rate lower than Federal Reserve daylight overdraft charges). It could possibly provide a better distribution of intraday liquidity and it could possibly lower daylight overdrafts at the Federal Reserve.

However the obstacles appear to be many. For one, it is not clear where this supply of intraday U.S. liquidity would come from. It is not clear that there are U.S. depository institutions that have sufficient intraday liquidity to lend. It could not be generated from Federal Reserve daylight overdrafts, as the economics do not support that (i.e. banks would be facing a situation where they would be borrowing at higher rates than they could lend in the market). In addition the infrastructure implications for Citigroup to support an intraday market have been viewed as prohibitive and could result in significant operational risks. It would be difficult to enforce timing (i.e., enforceability of comp claims). It would place credit decisions on the Funding Desks for an unsecured product. It could create pricing abuses. Further it is not clear lower borrowing costs in an intraday would create enough pricing incentive for banks to make large volumes of payments earlier. In fact the opposite effect could occur as it could create the incentive for banks to lend intraday balances as opposed to using those balances to make payments.

Citigroup does not see this as viable near-term solution for reducing intraday liquidity, credit and operational risks related to Fedwire funds transfers

- **A market for the early return of federal funds or other money market investments**

A nascent market for the early return of federal funds is already in place and pricing is becoming more efficient (i.e. pricing narrowing towards regular Fed Funds). The early return market dissipates near the close as need overtakes pricing.

- **Enhancements by private settlement systems that further economize on the use of central bank money, for example multiple settlement periods to release liquidity earlier in the day**

DTC, CHIPS, FICC, NSCC are seen as highly efficient in economizing on liquidity as cash settlements are effected on a multilateral net basis. However the use of earlier or multiple settlement sessions by some or all of these private sector systems would release liquidity earlier in the day which could reduce the concentration of Fedwire payments made late in the day. However there could be significant operational costs to the industry (both direct costs to the clearinghouses and indirect to the participants) to move to earlier or multiple settlement sessions. Such costs should be weighed against any potential risk reduction benefits before being implemented.

- **Liquidity saving mechanisms for the Fedwire funds transfer system**

Citigroup is avid supporter of the Federal Reserve instituting new liquidity savings mechanisms for the Fedwire Funds transfer system, as a way to facilitate Fedwire payments earlier in the day and to reduce intraday liquidity, credit and operational risks.

Citigroup sees the institution of a centralized queuing system as part of the Fedwire system, as some of the European RTGS systems have, as a potentially highly effective way to reduce the concentration of Fedwire payments late-in-the day. A central queue system would directly address a portion of Fedwire payments which are being made late in the day by depository institutions simply to reduce their daylight overdrafts and related fees. To be effective, a Fedwire central queuing system should settle payments using algorithms that allow the liquidity provided by incoming payments to a depository institution to be used to settle that institution's outgoing payments. In addition to facilitating some payments to be made earlier in the day, a highly efficient Fedwire central queuing system (one that offsets payments multilaterally) could potentially reduce the overall demand for central bank money and daylight overdrafts.

To be of real use to Citigroup, a Fedwire queue should allow for the prioritization and re-ordering of payments and incorporate an optimization routine that would search

for transfers in the queue for which offsetting transfers can be found to make the most efficient use of a bank's intraday liquidity. Another important aspect would be allowing Citigroup to cancel queued transfers and/or re-route them for immediate settlement over Fedwire.

Providing a central Fedwire queue and automated offsetting will address the liquidity "gridlock" that currently occurs as many banks are holding bank some portion of their payments pending receipt of incoming payments from corresponding banks. Citigroup believes the "offsetting" effects of a Fedwire central queue for Citigroup could be great as recent data reflect that approximately 70% of our outgoing late-in-the-day Fedwire payments and approximately 50% of incoming Fedwire payments are concentrated to nine banks.

However, a central Fedwire queue would not address all the large payments made late in the day as many originate from broker/dealers squaring their account with the banks as they are not allowed to carry any bank overdraft. Brokers will automate further real-time position management and thus fund as late as possible.

- **Throughput requirements for the Fedwire funds transfer system**

Citigroup does not believe that throughput requirements for the Fedwire funds transfer system would be an effective way to address the risk concerns of the Federal Reserve. This would be operationally complex to implement and could be problematic to achieve, as payment flows are not predictable. They would not work if the other issues driving the increased late day payments (e.g. expediting tri-partite settlements etc which are causing liquidity shortfall) are not addressed. However in conjunction with a Fedwire central queue, Citigroup could see the benefits of having a high-level throughput requirement that ensures banks are sending some minimum percentage of the daily Fedwire payments to a Fedwire central queue to ensure the risk reduction benefits are achieved.

- **Greater use of voluntary or required collateral to cover partially or fully daylight overdrafts in depository institution accounts at the Reserve Banks**

One way to facilitate payment activity earlier in the day could be for the Federal Reserve to allow banks to use collateral that they have already posted to their discount window account as collateral for supporting incremental free intraday overdraft usage.

However, Citigroup is not in favor of a full transition from a priced, uncollateralized intraday credit system to an unpriced, fully collateralized intraday credit system as exists in Europe. Rather, Citigroup could support a partial collateralization of intraday credit to complement the current priced system, where Banks would be given the option to post eligible discount window collateral for free intraday credit. Banks would still be charged daylight fees for overdrafts that extend beyond any eligible pledged collateral.

However to facilitate greater payment activity earlier in the day, Citigroup believes it critical that the collateral used for daylight credit and discount window borrowings be interchangeable. If banks have to post incremental collateral for daylight credit over what is already allocated for discount window borrowings, the opportunity costs of holding this additional collateral may be a deterrent for this structure to be effective. In addition, the Federal Reserve may also want to consider accepting hypothecated customer collateral to support intraday credit. This is particularly relevant in light of the expected higher daylight usage resulting from the new PSR policy impacting Government Sponsored Enterprises (“GSEs”).

Giving banks the flexibility to use collateral used for daylight credit and discount window borrowings interchangeably would not only facilitate greater payment activity earlier in the day, but also encourage banks to post collateral without having to worry about encumbering liquidity. Citigroup is aware that the opportunity costs (e.g. cost to carry vs. existing daylight charges) of holding additional collateral over what is already posted for discount window borrowings may be a deterrent for this structure.

- **Two-tiered pricing for collateralized daylight overdrafts, with a fee charged for collateralized daylight overdrafts set lower than the rate for uncollateralized overdrafts.**

Citigroup is in favor of two-tiered pricing - no fees charged for collateralized daylight overdrafts and fees charged for uncollateralized daylight overdrafts. Citigroup is aware that Federal Reserve has in the past considered two-tiered pricing for collateralized daylight overdrafts, with a fee charged for collateralized daylight overdrafts set lower than the rate for uncollateralized overdrafts. We urge the Federal Reserve to instead consider that other central banks do not generally charge fees for collateralized daylight overdrafts and that there are implicit costs to collateralized overdrafts. The Federal Reserve may also want to consider any possible long-term adverse “competitiveness” implications for the U.S financial markets if it were the only central bank to charge for collateralized daylight overdrafts.

- **Time-of-day pricing of daylight overdrafts.**

Another solution could be reducing or eliminating daylight charges at times early in the day. Citigroup believes the explicit cost for daylight credit is a main factor for banks delaying the sending a portion of their Fedwire payment orders.

One possibility would be for the Federal Reserve to reduce or eliminate daylight charges for a set period of time early in the day, say from 8:00 am to 11:00 a.m. Daylight overdraft chares may have to be set at zero at earlier times of the day to actually incentive banks to send Fedwire payments earlier that are being held back to avoid/minimize the daylight overdraft charges.

Another option would be to institute multiple, very brief “grace periods” when daylight charges would not apply. For instance, the Fed could eliminate daylight charges for one or more 10-minute periods, at say: (1) 8:00 a.m. to 8:10 a.m. and (2) 10:00 a.m. to 10:10 a.m. This could create an incentive for banks to send large number of payments during such early-day “windows” as the potentially significant offsetting of transfers that could occur could economize on a bank’s overall daily use of intraday liquidity.

Citigroup sees this potentially as a way to facilitate some level of payments earlier in the day. It would reduce the incentive to hold some payments if an early morning discount were large big enough. The inherent cost of processing of early morning payments to Asia and CLS and Government Sponsored Entities (“GSEs”) would be cheaper. However a depository institution would not know ahead of time if an early morning “free” or “fee reduced” overdraft (“OD”) would be carried into the later part of the day. This may eliminate any incentive to send Fedwire payments earlier in the day. To avoid this, the Federal Reserve may need to track different balances for calculating overdrafts i.e., early morning OD, late day OD. To make this effective for our entire customer base, Citigroup might also need to track these different ODs for our customers and make changes to the billing process, which would require expenses. Otherwise little incentive may exist to send Fedwire payment instructions earlier.

Citigroup would also highlight that time-of-day pricing of daylight overdrafts may not be very effective if the other issues (e.g. expediting tri-partite settlements etc which are causing liquidity shortfall) are not addressed.

5. What are other possible approaches to consider to reduce delays in payments and to manage efficiently and effectively the Federal Reserve’s exposure to increasing daylight overdrafts as well as depository institutions’ exposure to intraday liquidity and credit risks? Is there other market or operational changes in the private sector that could help reduce intraday liquidity and credit risks?

Citigroup believes that there may be opportunities for individual banks (at least the major banks) to improve the intraday flow of payments simply by informally coordinating receipts and sends between one another.

To that end, Citigroup has initiated discussions with one other large bank to see if it is feasible for the two banks’ respective Operations areas to contact each other on a daily basis to coordinate the receipts and sends of payments. This would entail the banks comparing queued outgoing Fedwire payment orders to one another and agreeing to release all or some portion of them simultaneously. As a practice, other large banks may be able to adopt similar, informal bilateral payment coordination procedures.

While informal arrangements between certain banks may serve to improve the intraday flow of payments somewhat, Citigroup is of the view that the introduction of a central Fedwire queue would be a much more efficient and effective way to improve the intraday flow of payments, reduce the concentration toward the end of the day and control or reduce daylight aggregate daylight overdrafts.

6. **Congress is currently considering legislation that would allow the Federal Reserve to pay interest on reserve balances held by depository institutions at the Reserve Banks. How would the payment of interest on reserves affect depository institutions' intraday liquidity management, including the demand for daylight overdrafts at the Reserve Banks? Could the payment of interest on reserves be utilized to reduce the value or timing of daylight overdrafts?**

Paying interest on reserve balances will probably reduce the need to make some late day settlement payments. However, this is going to create reserve balance volatility for the Fed. It will also probably reduce the demand for daylight overdrafts but this will ultimately depend on how attractive the overnight rate paid on reserve balances is. It is not clear to Citigroup at this time how overnight interest would change the intraday payments behavior

Citigroup recognizes that potential changes in market practices, Fedwire operations and PSR Policy will have to be fully evaluated by the Federal Reserve to ensure the optimal public policy safety and efficiency objectives are achieved. Citigroup appreciates the opportunity to provide input on these issues and would be very interested in contributing toward any future engagements the Federal Reserve has with members of the financial industry. We would also be happy to discuss further our own specific comments directly with Federal Reserve staff if requested.

Regards,

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