FEDERAL RESERVE BANK
OF CHICAGO

MICHAEL H. MOSKOW
President and Chief Executive Officer

November 16, 2001

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

E-mail: regs.comments@federalreserve.gov

Re: **Policy Statement on Payments System Risk—Potential Longer-Term Policy Direction; Docket No. R-1111**

Ms. Johnson:

On behalf of the Federal Reserve Bank of Chicago, I am pleased to have this opportunity to respond to the Board's request for comment concerning the longer-term policy direction of the Federal Reserve's policy statement on payments system risk. As is discussed more fully in the attached paper, which was prepared by the Bank's staff, the Chicago Reserve Bank supports:

- Universal Real-Time Monitoring ("URTM") in Reject Mode – The Bank believes that ex ante monitoring against credit limits is a key to attaining a more efficient balance among the costs and risks associated with the provision of Federal Reserve intraday credit. The Bank recognizes, however, that URTM raises certain issues for the processing of automated clearing house ("ACH") credit transfers and other payments. Accordingly, we discuss two possible means of avoiding either rendering URTM ineffective for ACH credit transfers or triggering a costly "unwind" of ACH related payments.

- Recognition of the Explicit Role of Collateral in Mitigating Reserve Bank Risks – In particular, the Bank believes that a multi-tier pricing structure for daylight overdrafts should be adopted as part of a comprehensive revision of the payments system risk policy. Under such a structure, there would be no (or only a nominal) charge for daylight overdrafts to the extent that they are fully collateralized. The Bank believes that such a pricing structure is consistent with the important role Reserve Bank provided credit plays in facilitating payment system liquidity and avoiding gridlock.

- Other Consistent Changes to the PSR Policy – The Bank also supports changes to the net debit cap levels for depository institutions that have access to Reserve Bank provided intraday credit, as well as other consistent policy changes. In particular, the Bank believes that these changes should be adopted concurrently as part of a comprehensive and fundamental reworking of the Federal Reserve's payments system risk policy.

230 SOUTH LASALLE STREET
CHICAGO, ILLINOIS 60604-1413
(312) 322-5001 (312) 322-2141 (Fax)

I hope you will find the Bank's comments useful. The Federal Reserve Bank of Chicago thanks the Board for inviting comments on this policy and welcomes further discussion or clarification of the Bank's commentary. If my staff or I can be of further assistance, please do not hesitate to contact me.

Sincerely,

Michael H. Moskow

Attachment

# Comments Regarding the Longer-Term Direction of the Federal Reserve's Payments System Risk Policy (Docket No. R-1111)

Prepared by the Staff of the Federal Reserve Bank of Chicago[1]
(November 14, 2001)

## Introduction

Funds transfers through Fedwire ® are final, irrevocable and unconditional at the time a Reserve Bank simultaneously debits the account of the sending depository institution and credits the account of the receiving institution.[2] Reserve Banks have the ability to monitor payment instructions ex ante and reject instructions if the sending institution does not have sufficient funds on its account. However, under the Federal Reserve's current Policy Statement on Payments System Risk (the "PSR Policy"), most depository institutions are subject only to ex post monitoring to determine whether, and to what extent, they have relied upon intraday credit to process their payments.

If a depository institution does not have sufficient funds on its account and its payment instruction is not rejected, it incurs a "daylight overdraft" and payment to the receiving institution is made on the basis of credit extended by the Reserve Bank that carries the sending institution's account. The Reserve Bank, however, has no recourse to the receiving institution in the event that the sending institution does not cover its overdraft. Funds transfers through "real-time gross settlement" (or "RTGS") systems such as Fedwire may not lawfully be "unwound." Thus, Reserve Banks bear the credit risk arising from such overdrafts.

Federal Reserve Banks also bear the credit risk of overdrafts arising from other payments that have settlement-day finality, such as payments via the Federal Reserve's Net Settlement Service ("NSS") and Automated Clearinghouse ("ACH") credit transfers. In addition, book-entry securities transfers through Fedwire can result in daylight overdrafts without affirmative action on the part of the depository institution whose Federal Reserve account is debited. Under Fedwire's "delivery versus payment" (or "DVP") arrangements for book-entry securities transfers, the buyer's account is debited at the same time that its account is credited for the securities. This arrangement eliminates the settlement risk that otherwise would arise from separately delivering the securities and transferring the funds to pay for them and constitutes an important element of the risk management regime for such transactions.

---

[1] This commentary was prepared by Eve Boboch, Richard Lamm, Jerry Nick, Ralph Schnackel and Robert Steigerwald.

[2] Article 4A of the Uniform Commercial Code, as incorporated in Regulation J, establishes the terms under which Fedwire funds transfers are considered final and irrevocable. For purposes of this commentary, the use of the term "depository institution" conforms to the usage in the Federal Reserve's Policy Statement on Payments System Risk.

## The Rationale for Central Bank-Provided Intraday Credit

The rationale for Federal Reserve Banks to permit daylight overdrafts is based, in part, upon the hypothesis that intraday liquidity is a "public good" that is necessary to facilitate the smooth and efficient functioning of the payment system. Recent research by the Chicago Reserve Bank's staff is consistent with that hypothesis. Distinguishing between credit (or debt) that is extended for the purpose of facilitating payment settlement from other forms of credit, a Chicago Reserve Bank economist has concluded that:

> [C]onsumption/investment debt should be appropriately priced to give proper incentives for the efficient allocation of resources, while the cost of settlement debt should be minimized so that it does not distort the underlying goods/assets transaction. The temporary injection of free liquidity by the central bank helps to achieve this goal. The provision of intraday settlement liquidity through a private intraday market in central bank funds may be too costly, in particular when total funds in reserve and clearing accounts are in short supply. Furthermore, even with potential aggregate default risk, the provision of free intraday liquidity by the central bank may be the best way to ensure banks do not bear the brunt of the risk disproportionately."[3]

Whether or not this conclusion is accepted on purely theoretical grounds, the Chicago Reserve Bank notes that the central banks of the Group of 10 countries have put in place liquidity arrangements of one sort or another to facilitate payments in their RTGS systems. Furthermore, the Chicago Reserve Bank notes that private markets to provide liquidity in Federal Funds (or U.S. dollar balances held at the Federal Reserve) currently do not exist.[4]

For these and similar reasons, therefore, the Board of Governors has concluded that ". . . some intraday credit may be necessary to keep the payments mechanism running smoothly and efficiently." (PSR Policy). The Federal Reserve Bank of Chicago takes the continuation of this policy as a given for purposes of this commentary upon the policy options the Board is evaluating as part of a potential longer-term direction for the payments system risk policy.

---

[3] Ruilin Zhou, *Understanding intraday credit in large-value payment systems*, Federal Reserve Bank of Chicago, Economic Perspectives (3rd Quarter 2000).

[4] A recent report by the Payments Risk Committee, entitled *Intraday Liquidity Management in the Evolving Payment System: A Study of the Impact of the Euro, CLS Bank and CHIPS Finality*, concludes that a private market in Federal Funds may not develop soon, notwithstanding the liquidity demands associated with certain payment system initiatives. This is consistent with the hypothesis that it is not cost-effective for private markets to provide liquidity in central bank funds.

**Fundamental Objectives of Credit Risk Management**

The credit risk that Federal Reserve Banks face as a result of daylight overdrafts is, from a risk management perspective, no different from the credit risks that private sector banks face in connection with their lending and financial markets activities. In either case, the lending institution faces credit risk because of ". . . the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms."[5] Of course, Federal Reserve Banks have resources available to them, including regulatory condition monitoring, that give the Reserve Banks information regarding the creditworthiness of its borrowers that are not available to private sector lenders.

Nevertheless, such measures are not failsafe or costless. Therefore, the Chicago Reserve Bank believes that the Federal Reserve should have and use a comprehensive, integrated, means of: (1) identifying the credit and other risks Reserve Banks bear; (2) quantifying the relevant risks; and (3) managing such risks. In particular, it should not be possible for a depository institution to take unilateral actions that create risk exposures for a Reserve Bank that the Reserve Bank has not agreed to undertake (e.g., by exceeding the depository institution's credit limit).

**The Federal Reserve's Policy Statement on Payments System Risk**

The Federal Reserve's PSR Policy addresses each of the fundamental objectives of an effective credit risk management regime. The current policy provides a basis for both identifying and quantifying the credit risks to which Reserve Banks are exposed as a result of daylight overdrafts. Furthermore, the current policy utilizes, to one degree or another, each of the means available for controlling credit risk arising from daylight overdrafts. To date, the PSR Policy has relied principally upon the incentives embedded in the pricing of intraday credit to affect depository institutions' demand for such credit and control the resulting risk to Reserve Banks. Nevertheless, limit structure and levels, monitoring and collateralization – either implicitly or explicitly – also have played important roles in the PSR Policy.

A brief summary of how the primary tools of risk management have been utilized under the current PSR Policy follows:

- Real-Time Monitoring against Limits – All depository institutions that are entitled to obtain intraday credit from a Reserve Bank are subject to credit limits in the form of a net debit cap. Under the Interim Policy Statement (Docket R-1107) recently adopted by the Board of Governors, institutions with self-assessed net debit caps may enter into arrangements with their Reserve Banks to obtain additional "daylight overdraft

[5] Basel Committee on Banking Supervision, *Principles for the Management of Credit Risk* (Basel September 2000). Similar principles are discussed in the June 1999 report of the Counterparty Risk Management Policy Group, entitled *Improving Counterparty Risk Management Practices.* See also, Committee on Payments and Settlement Systems, *Core Principles for Systemically Important Payment Systems* (Basel, January 2001).

capacity" exceeding their net debit caps to the extent collateral in the amount of such credit capacity has been pledged to the relevant Reserve Banks.[6] The Chicago Reserve Bank supported that change in policy, in part, because it will permit greater flexibility in the setting of limits to accommodate depository institutions' credit needs. However, as noted above, most depository institutions are subject only to ex post monitoring of their payments. Therefore, it is possible – although not acceptable on a routine basis – for such institutions to exceed their net debit caps or, if applicable, their limits on daylight overdraft capacity.

- Collateralization – Until recently, Reserve Banks have not explicitly relied upon collateral to mitigate the credit risk associated with daylight overdrafts. However, the Chicago Reserve Bank believes that the adoption of the Interim Policy Statement represents a shift in policy. The PSR Policy now takes explicit account of the collateral a depository institution has pledged to the Federal Reserve in establishing daylight overdraft capacity limits for institutions with self-assessed net debit caps. The Chicago Reserve Bank supported the adoption of the Interim Policy Statement, in part, because it represents an express recognition of the important, although not sufficient, role that collateral can play in the mitigation of credit risk.

- Price Structure and Other Incentives – As noted above, the PSR Policy has to date relied principally upon the incentives embedded in the pricing of intraday credit to affect depository institutions' demand for such credit and control the resulting risk to Reserve Banks. A single, flat rate charge (subject to adjustments), currently 36 basis points on an annualized basis, is charged for all daylight overdrafts. In effect, this interest charge has been intended to compensate Reserve Banks partially for the risk they undertake in extending intraday credit to depository institutions and to create incentives for such institutions to place less reliance upon central bank-provided credit in managing their accounts.

The Chicago Reserve Bank believes that the adoption of the Interim Policy Statement reflects a fundamental, and beneficial, change in the Federal Reserve's policy concerning the role collateral can and should play in the Reserve Banks' management of the risks to which they are exposed. Undoubtedly, collateral played an important role in protecting Reserve Banks against unexpected credit losses even before the adoption of the Interim Policy Statement. For example, the Board's release seeking public comment on the longer-term policy direction of the PSR Policy points out that:

> . . . the majority of Federal Reserve daylight credit extensions are currently implicitly collateralized because depository institutions that have pledged collateral must sign Operating Circular 10, which provides the Reserve Banks with a secured interest in any collateral recorded on the Reserve Bank's books.

---

[6] For purposes of this comment, the term "daylight overdraft capacity limit" and equivalent terms mean the maximum amount of intraday credit that is available to a depository institution that has pledged collateral to the Federal Reserve to prearrange credit facilities exceeding the amount of the institution's self-assessed net debit limit.

With the adoption of the Interim Policy Statement, the amount of collateral that has been pledged to Reserve Banks becomes an explicit limiting factor in determining the quantum of a depository institution's total daylight overdraft capacity.

As has been noted, the Federal Reserve relies upon regulatory condition monitoring to evaluate the creditworthiness of account holders and subjects problem institutions to special credit controls. While the credit risk posed by a healthy institution may ordinarily be small, it is not zero. It is possible for a healthy institution to suffer an unexpected reversal – resulting either from financial liabilities knowingly undertaken or from fraud, internal sabotage or even external attack – that could jeopardize its ability to cover a large overdraft position on its Federal Reserve account. Regulatory condition monitoring cannot prevent against unexpected changes in financial position or limit the magnitude of the loss that may be incurred by a Reserve Bank in the event of default.

Furthermore, bank supervisors are increasingly moving away from "one size fits all" approaches to regulating depository institutions. Although the current PSR Policy permits an institution that routinely incurs significant daylight overdrafts to conduct a "self-assessment" that takes account of the institution's particular capital position, the resulting net debit caps depend critically upon whether the institution is characterized as eligible for "average," above-average" or "high" cap levels. The net debit caps are then calculated by multiplying an institution's capital by a standardized factor for all institutions in the same category. Credit limits set in this manner do not necessarily bear a close relationship to the intraday credit requirements that particular institutions in each category can reasonably anticipate, based upon the nature of its business and clientele.

As a result, some institutions may have net debit caps that far exceed their actual requirements. On the other hand, certain institutions, such as settlement members of the anticipated Continuous Linked Settlement ("CLS") system, may have intraday credit requirements that exceed their self-assessed net debit caps. The Board has addressed this situation most recently through the adoption of the Interim Policy Statement. As a result, Reserve Banks must adopt a methodology for setting appropriate "maximum cap" levels for institutions that wish to have intraday credit capacity exceeding their net debit caps.

**Proposed Longer-Term Direction for the Payment System Risk Policy**

Following a staff review of the PSR Policy, the Board recently stated that the objective of the Federal Reserve's daylight credit policy is to:

> . . . attain an efficient balance among the costs and risks associated with the provision of Federal Reserve daylight credit, including the comprehensive costs and risks to the private sector of managing Federal Reserve account balances, and the benefits of intraday liquidity. (66 Fed. Reg. 30208, 30210).

As part of its effort to direct the PSR Policy toward meeting this objective in the long term, the Board has requested public comment upon the following policy options:

- <u>Net Debit Cap Structure (Limits)</u> – the Board is considering reducing self-assessed single-day net debit caps to levels near those of the current two-week average and eliminating the two-week average caps.

- <u>Two-Tier Pricing</u> – the Board is considering assessing a lower fee on daylight overdrafts that exceed an institution's net debit cap, if the institution has pledged collateral pursuant to the interim policy in Docket R-1107.

- <u>Universal Real-Time Monitoring ("URTM")</u> – the Board is considering monitoring in real-time and "rejecting" any payment with settlement day finality that would cause an overdraft in excess of an institution's net debit cap (or, as appropriate, its daylight overdraft capacity level).

The Chicago Reserve Bank supports: (1) the proposed changes to net debit cap structure; (2) multi-tier pricing, which the Bank believes is consistent with the Board's proposed two-tier pricing proposal; and (3) universal real-time monitoring in reject mode. The Bank believes that these measures, as more fully explained below, will move the longer-term direction of the PSR Policy toward the objective " . . . attain[ing] an efficient balance among the costs and risks associated with the provision of Federal Reserve daylight credit."

The Chicago Reserve Bank also believes that ex ante monitoring of payment instructions in reject mode is a necessary condition to the effective implementation of the other policy options and that the policy options should be adopted as a package because each of the proposals is mutually reinforcing. The Chicago Reserve Bank is aware that ACH credit transfers, which may be submitted for processing in advance of value date, present unique problems in terms of the application of a real-time monitor against limits.[7] In addition, the Chicago Reserve Bank recognizes that daylight overdrafts may be incurred as a result of book-entry securities transfers. As mentioned above, such overdrafts can result because of the DVP arrangements for book-entry securities transfers. Because DVP constitutes an important element of the risk management regime for such transactions, the Bank does not believe that funds transfers associated with the transfer of book-entry securities should not be subject to real-time monitoring in reject mode.

Notwithstanding these qualifications, the Bank believes that it is important for the Federal Reserve to begin to evolve toward a system of real-time controls on intraday credit risk. Because real-time monitoring in reject mode is a necessary element of the risk management scheme favored by the Chicago Reserve Bank, we will discuss that policy option first:

---

[7] These issues are briefly addressed in Appendix A to this commentary.

1. Real-Time Payment Monitoring against Limits

An effective risk management regime should, at a minimum, make it possible for the parties to identify and measure their risk exposures at all times. The current PSR Policy and the systems capabilities of the Federal Reserve Banks meet that fundamental objective by permitting the identification and quantification of the credit risks to which Reserve Banks are exposed as a result of daylight overdrafts.

Furthermore, except in unusual circumstances,[8] it should not be possible for one party to take unilateral actions that create risk exposures for other parties that the others have not previously agreed to undertake. Under the current regime of ex post monitoring of Fedwire payments, however, it is possible for a depository institution to incur overdrafts that exceed its net debit cap or daylight overdraft capacity limit, if applicable. For the reasons discussed above, that should not be possible – no matter how unlikely it may be that a properly-managed, closely-supervised institution would intentionally violate its credit limits.

Therefore, the Chicago Reserve Bank supports subjecting payments that would, if approved, create overdrafts exceeding an institution's limits to special scrutiny and credit decision-making. However, the Bank does not support automatic rejection in a manner that would eliminate or unduly interfere with a Reserve Bank's ability to approve warranted extensions of credit in exceptional circumstances, or that would require additional, burdensome processing by the sending institution to reinitiate a rejected payment. Instead, the PSR Policy should permit qualified, authorized Reserve Bank staff to take appropriate action to facilitate payments under exceptional circumstances. [9]

Thus, the Bank believes that URTM should include a mechanism to provide notice to Reserve Bank staff of payment rejections and tools to facilitate an extension of credit beyond limits when there is a sound business reason for making such an exception. The Bank also believes that it should be incumbent upon depository institutions to expeditiously seek prior approval of temporary cap increases, or other relief, to facilitate exceptional payments.

2. Reducing Net Debit Cap Levels/Elimination of the "Two-Week" Cap

The Chicago Reserve Bank believes that the proposed changes are consistent with the transition to a real-time monitoring and credit risk management regime. A retrospective

---

[8] Such circumstances exist, for example, in the processing of book-entry securities transfers on a DVP basis.

[9] Where such circumstances exist, Reserve Banks have the capability to ensure that critical payments can be completed, notwithstanding real-time monitoring against limits. With the approval of the senior management of the relevant Banks, active monitoring can be bypassed – either for specific institutions or on a system-wide basis. Reserve Bank staff have successfully handled occasional requests for exceptions to active monitoring in the past and should retain the capability to do so under the system-wide real-time monitoring advocated by the Chicago Reserve Bank.

measure of risk, such as the current rolling two-week cap is not effective as a risk limit and is not needed in a URTM environment.

Furthermore, the Chicago Reserve Bank anticipates that eliminating the two-week caps will reduce the burden of administration and compliance for depository institutions. As noted above, the Bank believes that a real-time monitoring and credit risk management regime is a necessary condition to the effective implementation of a reduced net debit cap limit structure. Nevertheless, the Chicago Reserve Bank supports reduced cap levels and the elimination of the two-week cap on the grounds of administrative convenience even if real-time monitoring and credit risk management is not adopted. However, in the latter event, the Bank believes that the Interim Policy Statement should be extended or made permanent to assure that there is sufficient flexibility in the limit structure to facilitate the settlement of payments.

The Chicago Reserve Bank also believes that the Board should consider extending the methodology that is being devised for purposes of setting maximum daylight overdraft capacity limits to the setting of net debit cap levels. This would permit Reserve Banks to tailor net debit caps more closely to the reasonably anticipated credit requirements and creditworthiness of particular institutions. The Chicago Reserve Bank believes that such a step would be consistent with the package of longer-term policy options addressed in this commentary. It also would move the Federal Reserve System away from a process of setting arbitrarily high net debit caps for most institutions (and unnecessarily low caps for institutions with special needs) and away from relying primarily upon price structure as a risk management tool.

3. Two-Tier Price Structure

Under longstanding Federal Reserve policy, intraday credit facilities are considered necessary to support a smooth and efficient payment system. To control the risk to Federal Reserve Banks that arises from permitting daylight overdrafts, the PSR Policy has, until recently, relied principally upon the incentives embedded in the pricing of intraday credit to affect depository institutions' demand for such credit.

With the adoption of the Interim Policy Statement, however, the PSR Policy now explicitly takes account of the risk mitigation benefits of collateralization. Under the Interim Policy Statement, the amount of collateral that has been pledged to the Federal Reserve serves as a limiting factor in deciding the amount by which a depository institution may exceed its net debit cap by agreement in advance with its Reserve Bank.

Collateral that has been pledged to the Federal Reserve is available to offset risk exposure regardless of whether that exposure exceeds an institution's net debit cap or daylight overdraft capacity limit, if applicable. In other words, the benefit of holding pledged collateral accrues with the very first dollar of lending.[10] This is not contrary to

---

[10] The Chicago Reserve Bank recognizes that collateral held in respect of a depository institution's TT&L (Treasury, Tax & Loan) obligations is separately earmarked and accounted for. The discussion of "collateralized credit" in the text does not take account of such collateral.

the Interim Policy Statement, under which the amount of pledged collateral is added to an institution's net debit cap to arrive at its daylight overdraft capacity limit.

Although this may suggest that the benefit of holding collateral accrues with each additional dollar of intraday lending (i.e., the "last dollar" of credit), in fact, the Interim Policy Statement simply uses the amount of pledged collateral as a limiting factor in determining the quantum of a depository institution's total daylight overdraft capacity. In the event a depository institution fails to cover an overdraft, the collateral that institution has pledged to the Federal Reserve is available to offset the total amount of the institution's indebtedness to the Federal Reserve. It is irrelevant, for that purpose, whether the defaulting institution has exceeded either its net debit cap or its total limit on daylight overdraft capacity.

Therefore, the Chicago Reserve Bank believes that a multi-tiered pricing structure for daylight credit should be adopted.[11] Under that arrangement, there would be no (or only a nominal) charge for daylight overdrafts to the extent that they are fully collateralized. The Bank's policy position on pricing is predicated upon the premise, more fully discussed above (see "The Rationale for Central Bank-Provided Intraday Credit") that daylight overdraft facilities serve the public interest. To the extent that daylight overdrafts are fully collateralized, there is little or no justification for the price to include a risk premium.

Furthermore, the Chicago Reserve Bank supports reducing net debit cap levels and setting such caps on the basis of a more individualized credit evaluation process and enforcing compliance with such limits by using real-time monitoring in reject mode. Thus, the Chicago Reserve Bank believes it is not necessary or desirable to price fully collateralized intraday credit as a means of either affecting depository institutions' demand for such credit or to control the risks to which Reserve Banks are exposed as a result of daylight overdrafts.

Furthermore, to create incentives for institutions to anticipate their intraday credit needs and manage their accounts accordingly, the Chicago Reserve Bank believes that a positive rate of interest should be charged for overdrafts that exceed the amount of collateral that has been pledged to a Reserve Bank. The charge for such credit should be determined by the spread between collateralized and uncollateralized credit in the relevant money markets, which the Board's research indicates is currently approximately 12 to 15 basis points on an annualized basis. The Chicago Reserve Bank also believes that a penalty rate should apply to any overdraft exceeding an institution's total daylight overdraft capacity, regardless of the amount of pledged collateral.[12]

---

[11] The Bank's proposed multi-tiered pricing structure is discussed in Appendix B to this commentary.

[12] The Bank recognizes that the Board has previously considered and rejected this policy option. The Bank believes, however, that the Board should reconsider penalty rates in light of the combined effect of the proposed policy changes discussed in this commentary.

The Board also has requested comment upon a policy option that would call for an additional levy on collateralized daylight credit to protect the general creditors of Federal Reserve account holders, whose interests tend to be diluted when collateral is pledged to the benefit of specific creditors, such as the Federal Reserve Banks. The Chicago Reserve Bank believes that such a charge would be contrary to the objective of both encouraging risk reduction in the payment system and would tend to interfere with the optimal facilitation of critical payments. In addition, the Bank believes that Reserve Banks can limit the dilution of general creditors more effectively by setting appropriate standards for the maximum amount of collateral that will be accepted from account holders.

In any event, the Bank does not expect to see large fluctuations from day to day in the amount of collateral that depository institutions pledge to Federal Reserve Banks. Therefore, the Bank believes it is unlikely that general creditors of Federal Reserve account holders will either be surprised or adversely affected by a policy that allows institutions to incur overdrafts in some relation to the amount of collateral they have pledged to the Federal Reserve.

**Summary of Conclusions**

For the foregoing reasons and subject to the exceptions discussed above, the Federal Reserve Bank of Chicago supports each of the policy options discussed in the Board's release concerning the longer-term direction for the payments system risk policy.

**APPENDIX A**

Universal Real-Time Monitoring of
Automated Clearing House Credit Transfers

The Federal Reserve Bank of Chicago supports a risk management regime for intraday credit provided by Reserve Banks that includes ex ante monitoring in reject mode of all payments that are afforded settlement day finality. The Chicago Reserve Bank recognizes, however, that “universal real-time monitoring” (“URTM”) raises certain issues for the processing of automated clearing house (“ACH”) credit transfers. This appendix is intended to: (1) provide background information concerning those issues; and (2) briefly summarize alternative means of addressing those issues.

## 1. Background Information

Unlike funds transfers processed via Fedwire or the Enhanced Net Settlement System, ACH credit transfers may be submitted for processing in advance of the intended settlement date. As the Board of Governors has recognized, this presents Reserve Banks with a unique risk management challenge:

> [B]ecause the ACH is a value-dated mechanism and transactions could be processed two days before settlement, a simple balance check of an institution’s settlement account at the time that a transaction is processed would be ineffective in managing risk. While an institution’s available account balance may be sufficient to settle for its ACH credit obligations at the time they are processed, those funds may be unavailable at the time of settlement. (64 Fed. Reg. 62,673 at 62,673 (Nov. 17, 1999))(footnote omitted).

In November 1999, the Board of Governors announced its intention to afford settlement day finality to ACH credit transactions, concluding that “ . . . settlement-day finality for ACH credit transactions will reduce risk to receiving depository institutions (RDFIs) and receivers. . . .” (Id.). The Board also reiterated its view that:

> [I]f Reserve Banks were to provide settlement-day finality for ACH credit transactions, they should adopt risk control measures commensurate with those used in connection with other Federal Reserve services with similar finality characteristics, such as the Fedwire funds transfer service and the enhanced net settlement service. (Id.).

Because most depository institutions at that time (like now) were not monitored in real-time against credit limits, the Board apparently concluded that the risk controls for ACH credit transfers were “commensurate” with those for other Federal Reserve payment services for most institutions. For most institutions, it is irrelevant whether a prospective overdraft would be occasioned by the processing of a Fedwire funds transfer or an ACH credit transaction. In either event, the payment would not be rejected under the policy statement on Payments System Risk ("PSR Policy") in effect in 1999 or today.

However, in considering the appropriate risk management regime for ACH credit transfers, the Board also noted that:

> . . . Reserve Banks apply real-time monitoring to institutions in weak financial condition or to institutions with chronic overdrafts in excess of what the Reserve Banks determine is prudent. When a depository institution is monitored in real time, Reserve Banks control their risk exposure by rejecting or delaying certain payment transactions with immediate finality if the institution's account balance would be exceeded. (Id.)(footnotes omitted).

To accommodate the Reserve Bank's need to continue utilizing real-time risk management controls in an environment where problem institutions may submit ACH credit transactions for processing in advance of settlement, the Board imposed a "prefunding" requirement for problem institutions:

> Under prefunding, if an ODFI's [Originating Depository Financial Institution] settlement account is being monitored in real time [sic], the Reserve Banks would process the transactions only after the settlement account has been debited. On the settlement day, the Reserve Banks would credit the RDFI's settlement account with final funds. If the available balance in the ODFI's settlement account were not sufficient to fund the transactions, the transactions would generally not be processed until the settlement account was funded. (Id. At 62,674)(footnote omitted).

Requiring prefunding for institutions that are monitored in real-time, the Board concluded, ". . . .would enable Reserve Banks to manage their settlement risk using risk control measures that are commensurate with those used in services with similar finality characteristics." (Id.).

The Board has indicated that universal real-time monitoring would necessitate prefunding of all ODFI's ACH credit transfers. This might undermine the utility of the value-dating functionality of the ACH system because institutions might find it too costly to prefund ACH credit transfers. The Board has identified this as a matter of concern:

> A policy change that potentially discourages value dating or encourages originating depository institutions to submit files later than they do today could fundamentally change the nature of the ACH service and disrupt established and effective business practices for ACH participants. (66 Fed. Reg. 30,208, 30,213 (June 5, 2001)).

In the following section of this appendix, the Chicago Reserve Bank will briefly summarize alternative means by which URTM could be adapted for ACH credit transfers to avoid impairment of the value dating functionality.

## 2. Possible Means of Adapting URTM to the ACH Service

To implement URTM for ACH credit transfers, it would be necessary as an initial matter to determine when to monitor an ODFI's account balance against daylight credit limits. Reserve Banks could determine whether sufficient funds exist on an ODFI's account: at the time an ACH transfer is submitted for processing; at the time it is posted to the ODFI's account and the payment becomes final and irrevocable; or at some intermediate time. As noted above, if the limit inquiry is conducted at any point other than at the time the ACH transfer is posted to the ODFI's account, the Federal Reserve's payments processing system currently has no means to assure that adequate funds will be available at the time the transfer is posted. However, if the risk monitoring is conducted at or near the time ACH credit transfers are posted and become final, there is a risk that the payment will be rejected, which could necessitate the "unwinding" of many or all of the payments covered by an aggregated ACH file.

The following is an outline of two possible means of avoiding either rendering URTM ineffective for ACH credit transfers or triggering a costly "unwind" of ACH related payments – both of which would undermine the effectiveness of the Federal Reserve's risk management regime for payments processing:

(a) **Prefunding with Cost Mitigation**[13]

Prefunding makes it possible to assure that the funds needed to settle an ACH credit transfer will be available at the time the transfer is posted to the ODFI's account and becomes final. It may be possible to mitigate the costs of prefunding through the use of "as of" adjustments or other forms of explicit compensation. This possible solution would require changes to the Federal Reserve's payment systems software and may involve additional operational steps to assure that adjustments are correctly made in a timely manner. Although this alternative would permit ODFIs to continue to submit ACH files for processing by a Reserve Bank in advance of value date, it would impose additional costs on ODFIs which may only partially be offset by the cost mitigation techniques discussed herein.

[13] To assure conformity with the current PSR Policy, the Chicago Reserve Bank assumes that institutions considered to be in weak financial condition would be distinguished from sound institutions and that the former would not be entitled to cost mitigation for prefunding. However, because there are operational costs associated with making such a distinction and separately accounting for cost mitigation, the Board may wish to reevaluate the current PSR Policy and permit cost mitigation for all ODFIs regardless of their financial condition.

(b) **Collateralization Arrangements**[14]

Alternatively, it would be possible to require originators to have collateral arrangements in place to cover the amount of ACH credit originations outstanding that would permit Reserve Banks to verify accounts at the time ACH credit transfers are posted and become final. Under this approach, which would not require prefunding, settlement on value date is assured because the relevant Reserve Bank would verify, at the time the ACH file is submitted, that the ODFI has sufficient collateral to permit it to fund its obligation on value date. The Federal Reserve's payments system software would have to be modified, and possibly other operational changes made, to insure that collateral can be applied and valued so that the extension of ACH credit at settlement is adequately covered. The Chicago Reserve Bank believes that this approach retains most of the benefits of the value dating functionality without requiring either prefunding or cost mitigation.

---

[14] This alternative could be made available to all ODFIs or only to sound institutions that originate ACH credit transfers.

## APPENDIX B

Proposed Multi-Tiered Pricing Structure

The following examples illustrate the interplay among collateralization, credit limits and real-time monitoring against those limits in the pricing policy favored by the Federal Reserve Bank of Chicago:

Overcollateralization

In the following examples, all overdrafts are Fully Collateralized and there is no basis for charging a risk premium for intraday credit. The Fees applicable to each overdraft under the Chicago Reserve Bank's proposal would be:

- Bank A – Bank A has incurred an overdraft of $90, which is below both the amount of its net debit cap ($100) and the collateral it has pledged to its Reserve Bank ($100). Bank A should be eligible for the most favorable interest rate for its overdraft (i.e., either no or low interest).

- Bank B – Bank B has incurred an overdraft of $110, which exceeds its net debit cap. Assuming that Bank B has made prior arrangements with its Reserve Bank for a total daylight overdraft limit ($150) exceeding its net debit cap, its payment should not be subjected to additional credit administration under real-time monitoring and Bank B should be eligible for the most favorable interest rate for its overdraft (i.e., either no or low interest).

- Bank C – Bank C has incurred an overdraft of $160, which exceeds both its net debit cap and its total daylight overdraft limit. Under these circumstances, notwithstanding that the overdraft is overcollateralized, the Chicago Reserve Bank believes that a penalty rate should be charged for either all or some portion of Bank C's overdraft. For example, if Bank C has made prior arrangements with its Reserve Bank for a total daylight overdraft limit ($150), then the Chicago Reserve Bank believes that, at a minimum, Bank C should be subject to a penalty rate for the amount of the overdraft that exceeds its total limit. If, however, Bank C did not make such prior arrangements, the Chicago Reserve Bank believes that Bank C, at a minimum, should be subject to a penalty rate for the amount of the overdraft that exceeds its net debit cap.

Undercollateralization

In the following examples, the overdrafts are not Fully Collateralized and there is a basis for charging a risk premium or other penalty for intraday credit exceeding the amount of the pledged collateral. The Fees applicable to each overdraft under the Chicago Reserve Bank's proposal would be:

- Bank X – Bank X has incurred an overdraft of $90, which is below both the amount of its net debit cap ($100), but exceeds the collateral it has pledged to its Reserve Bank ($50). Bank X should be eligible for the most favorable interest rate for its overdraft (i.e., either no or low interest) to the extent of $50 and should pay 12 to 15 basis points on an annualized basis for the remaining credit of $40.

- Bank Y – Bank Y has incurred an overdraft of $110, which exceeds its net debit cap ($100) and the collateral it has pledged to its Reserve Bank ($100). Assuming that Bank Y has made prior arrangements with its Reserve Bank for a total daylight overdraft limit ($150) exceeding its net debit cap, its payment should not be subjected to additional credit administration under real-time monitoring and Bank Y should be eligible for the most favorable interest rate for its overdraft (i.e., either no or low interest) to the extent of $100 and should pay 12 to 15 basis points on an annualized basis for the remaining credit of $10.

- Bank Z – Bank Z has incurred an overdraft of $160, which exceeds both its net debit cap and its total daylight overdraft limit, as well as the collateral it has pledged to its Reserve Bank (($150). Under these circumstances, the Chicago Reserve Bank believes that a penalty rate should be charged for either all or some portion of Bank Z's overdraft. For example, if Bank Z has made prior arrangements with its Reserve Bank for a total daylight overdraft limit, then the Chicago Reserve Bank believes that Bank Z, at a minimum, should be subject to a penalty rate for the amount of the overdraft that exceeds its total limit ($10). If, however, Bank Z did not make such prior arrangements, the Chicago Reserve Bank believes that Bank Z, at a minimum, should be subject to a penalty rate for the amount of the overdraft that exceeds its net debit cap.

Although the foregoing discussion illustrates a somewhat complicated pattern of charges, the Chicago Reserve Bank anticipates that it should be manageable for the Federal Reserve Banks to administer a multi-tiered pricing regime, especially since real-time processing for such fees is not necessary.