THE PAYMENTS RISK COMMITTEE

GLOBAL PAYMENT LIQUIDITY: PRIVATE SECTOR SOLUTIONS

Report by the Global Payment Liquidity Task Force

New York

October 2005

Sponsored by the Federal Reserve Bank of New York, the Payments Risk Committee is a private sector group that includes senior managers from several major banks in the United States. The Committee identifies and analyzes issues of mutual interest related to risk in payment and settlement systems. Where appropriate, the Committee seeks to foster broader industry awareness and discussion and to develop input on public and private sector initiatives. Current members of the Committee are Bank of America N.A., The Bank of New York, Bank of Tokyo-Mitsubishi, Citibank N.A., Deutsche Bank AG, HSBC Bank USA, N.A., JPMorgan Chase, State Street Bank and Trust Company, UBS AG, and Wachovia Corporation.

1. PREFACE

The Federal Reserve Bank of New York established the Payments Risk Committee in 1993 to serve as a channel of communication between commercial bankers and the Federal Reserve System, with the goal of formulating recommendations to improve the quality of risk management in payment and securities settlement systems. Senior executives with broad payments systems experience from banks that were active in the payments business were invited to participate in the Committee. In addition to its primary role of formulating risk reduction recommendations, the Committee's objectives are to promote better understanding of payments risk issues among market participants; to enhance knowledge of the payments systems infrastructure in the United States and abroad; to circulate research on payment systems to participants and the public; to promote better communication between private sector institutions, the Federal Reserve Bank, and, where appropriate, other bank supervisors within the United States and abroad; and to provide a forum for the discussion of technical issues pertaining to payments systems.

The Committee is sponsored by the Federal Reserve Bank of New York and is composed of representatives from Bank of America, N.A.; The Bank of New York; the Bank of Tokyo-Mitsubishi, Ltd.; Citibank, N.A.; Deutsche Bank AG; HSBC Bank USA, N.A.; JPMorgan Chase; State Street Bank and Trust Company; UBS AG; and Wachovia Corporation. In addition, staff from the Board of Governors of the Federal Reserve System participate in the Committee's efforts. The Committee is supported by a Working Group of mid-level executives that conducts research on topics designated by the Committee and drafts reports and studies for Committee approval.

1.1. The Working Group and Global Payment Liquidity Task Force

In 2001, the Committee requested that the Working Group undertake a study of the market need for enhanced cross-border intraday liquidity management services to support global payment activity. In 2003, the Working Group completed its study on the rationale for such services. In the published report, *Managing Payment Liquidity in Global Markets: Risk Issues and Solutions ("Global Payment Liquidity Report"),* various potentially viable public- and private-sector solutions were proposed to promote the continued and efficient availability of global payment liquidity, including in times of market stress.

One of the *Global Payment Liquidity Report*'s main recommendations was that private sector institutions should be encouraged to develop new services that enhance market participants' ability to respond effectively to the accelerating intraday liquidity demands in global markets. A specific recommendation was made that individual banks and industry groups give immediate consideration to the development of one or more of the three private-sector services that were outlined in the report: (a) *cross-currency intraday swaps*, (b) *cross-border intraday collateral swaps*, and (c) *cross-currency intraday repos*. These services were seen as potentially viable solutions that would meet the daily intraday liquidity needs of banks, that is, solutions designed for everyday use.

In January 2005, the Payments Risk Committee assembled a Task Force of representatives from global banks to evaluate the potential market demand and possible viability of the three proposed private-sector service offerings for daily use. The Task Force was charged with the assessment of potential interest in the various private sector proposals at the respective member firms to determine if there might be sufficient collective interest to support a viable business case for any of the services. The guidelines from the Payments Risk Committee were that any new private-sector intraday liquidity services (1) should build upon and be consistent with existing processes, infrastructure, and market practices;[1] and (2) should not re-introduce risks in the global payments and settlement environment. An additional objective was to optimize the banks' use of existing payment liquidity (collateral) by eliminating the obstacles to moving payment liquidity (collateral) across all G-7 markets.

To enable each participant firm to fully assess the private-sector proposals, the Task Force established a survey to identify the key business, operational, risk, and cost considerations. Given that the scope of the analysis was to focus on payment liquidity issues and related services, the Working Group assembled a Task Force that was composed mainly of representatives from the participating banks' Treasury functions. However, the Task Force members recognized the need to involve additional staff resources from their institutions' cash management, custody, credit, and operations areas. A full list of the Task Force members is presented below.

1.2. Acknowledgements

Valuable guidance and support were provided by members of the Payments Risk Committee and the Working Group.

The conclusions and recommendations set forth in this Report do not necessarily represent the policies of the institutions represented or the policies or views of the Federal Reserve System.

[1] The Payments Risk Committee did not want to promote the building of an entirely new market infrastructure, which could result in significant costs to the banking industry; rather, it was their view that the Task Force should look for solutions that leverage the services of existing market service providers.

MEMBERS OF THE TASK FORCE

Chairman	Mr. David Mazza, Citigroup
ABN AMRO	Mr. Peter Twilhaar
Bank of Tokyo-Mitsubishi, Ltd.	Mr. Charles Catalano
Barclays PLC	Mr. Richard Pattinson Mr. Andrew Whiteley
Calyon (Crédit Lyonnais)	Mr. Dan Koval
Citigroup, Inc.	Mr. Adrian Gray
Credit Suisse First Boston (CSFB)	Mr. Jon Bowen Mr. Roger Moran Mr. Nick Orchard
Deutsche Bank AG	Mr. Joseph Rice
HSBC Bank USA, N.A.	Mr. Mike Wareham
JPMorgan Chase	Mr. Jeffrey Clennon Mr. Roy DeCicco
State Street Bank & Trust Company	Mr. Kerry Pope
UBS AG	Mr. Steve Hottiger Ms. Anneliese Schwyter
Wachovia Corporation	Mr. Angus McBryde Ms. Yoko Horio Ms. Brenda Bicki

2. EXECUTIVE SUMMARY

- The majority of Task Force banks recognize the potential economic benefits that could be gained by use of the private-sector service offerings from the vantage of being a lender of intraday funds. Many, but not all, Task Force banks see potential liquidity management and cost benefits with the ability to utilize these services as an intraday borrower of funds.

- There is consensus among Task Force members that the transactions require a tripartite service provider because of the operational complexities of the transactions and the need for a third party to serve as an escrow agent to allow for delivery-versus-payment settlement.

- Of the three private sector solutions analyzed, the *cross-currency intraday swap* transaction is viewed as the simplest and least costly to implement, most likely by CLS Bank. However, the incomplete overlap of the G-10 central bank real-time gross settlement (RTGS) systems' operating hours would limit its potential use because banks would not want payment liquidity needs impacting (that is, spilling over into) the overnight funding markets. Further, Task Force members are concerned that this transaction could actually re-introduce liquidity risk because of an incentive for lenders of funds to hold back payments in order to profit from providing intraday liquidity.

- The *cross-border intraday collateral swap* could be a viable service offering. The Task Force sees the International Central Securities Depositories (ICSDs) as the most likely service providers at this time because of their existing tripartite services and because all Task Force banks hold securities in safekeeping with them. However, the ICSDs would be required to facilitate the c*ross-border intraday collateral swap* transaction on a nearly 24-hour basis. The chosen tripartite service provider would also need to be an approved securities depository through which participants would pledge (repo) securities to the central bank in exchange for intraday liquidity.

- The Task Force sees too many barriers to the successful implementation of the *cross-currency intraday repo* facility.

- The Task Force sees a potential market opportunity in the development of a *cross-currency intraday swap* product that is limited to bilateral currency pairs for which there are fully overlapping operating hours. These could include euro/British pound (EUR/GBP) intraday swaps, euro/Swiss franc (EUR/CHF) intraday swaps, or any intraday cross-currency funding transaction incorporating U.S. dollars (USD) as collateral.

- The Task Force recommends that the following actions be taken by the commercial banking industry with the first two actions initially facilitated by the Payments Risk Committee:

    1. The commercial banks should approach CLS Bank to explore the technical feasibility of and the business case for *cross-currency intraday swaps*.
    2. The commercial banks should approach the ICSDs to explore the technical feasibility of and the business case for *cross-border intraday collateral swaps*.
    3. At this time, the *cross-currency intraday repo* should not be actively pursued.

3. DESCRIPTION OF PRIVATE SECTOR SERVICES

The Task Force assessed the potential market demand and possible viability of the following private-sector service offerings:

- *cross-currency intraday swaps*
- *cross-border intraday collateral swaps*
- *cross-currency intraday repos*

Each of the above transactions should be structured to enable market participants to utilize assets in one major currency to source central bank intraday liquidity in another major currency. **The currencies that should be covered by the service are Australian dollars, Canadian dollars, euros, Japanese yen, British pounds, Swiss francs and U.S. dollars.**

A *cross-currency intraday swap* is a transaction between two firms in which they "swap" foreign currency balances (for example, dollars for euros) on an intraday basis so that one of the counterparties (that is, the "borrower") can use the incoming funds to meet its RTGS payment liquidity needs.

A *cross-border intraday collateral swap* is a transaction between two firms in which they "swap" securities, issued in two different currencies, on an intraday basis so that one of the counterparties (that is, the "borrower") can immediately pledge or repo the borrowed securities to a G-10 central bank to meet its RTGS payment liquidity needs.

A *cross-currency intraday repo* is a transaction between two firms in which they "swap" cash in one currency for securities in another currency on an intraday basis so that the cash borrower can use the incoming funds to meet its RTGS payment liquidity needs.

4. OPERATIONAL CONSIDERATIONS

4.1. Transaction Structure

The Task Force agreed that:

- A *cross-currency intraday swap* could be legally structured as two equal and opposite foreign exchange transactions agreed upon at the same time as part of a single swap, with the first leg settling immediately and the second settling later the same day.

- A *cross-border intraday collateral swap* could be legally structured as a securities loan transaction, collateralized by securities issued in a different currency, with the loan being reversed on the same business day.

- A *cross-currency intraday repo* could be legally structured as a repurchase agreement, with the repo being reversed on the same business day. Alternatively, it could be structured as a securities loan with the loan being reversed on the same business day.

There was universal agreement within the Task Force that any intraday transaction must not affect the overnight funding needs. Thus, any cash transferred in a *cross-currency intraday swap* or a *cross-currency intraday repo* must be returned to the counterparty during the currency's business day. The Task Force recognized that this directive may limit the business case for these two service offerings, particularly the *cross-currency intraday swap,* where the maximum allowable tenure of a transaction would have to correspond to the overlapping operating hours of the two corresponding central bank RTGS systems. However, the representative Treasurers thought it imperative that market transactions designed to meet intraday payment liquidity must not impact overnight liquidity needs, which are funded separately. Without this requirement, there would be adverse effects on overnight funds markets, banks' funding positions, credit lines, reserve levels, and, possibly, interest rates.

The Task Force thought that existing international legal agreements, such as the International Swaps and Derivatives Association, Inc. (ISDA) agreements, the Tripartite Securities Lending Agreements, and the Tripartite Securities Repo Agreements, could likely be used as a basis to cover the three transaction types under consideration. However, the Task Force recognized that such agreements would likely need to be adjusted (through annexes or otherwise) to suitably distinguish them to cover intraday transactions. The Task Force also accepted that additional legal advice would be required to confirm this possibility.

While swaps are normally based on basis points (bp) (that is, the interest rate differential between two currencies), the Task Force concluded that all three transactions should be subject to a fee on a per-trade basis (that is, a standard flat cost in basis points per million). Because the borrower does not actually possess funds or securities for a full day, a fee-based pricing structure would be the logical choice because this structure would simplify negotiation, improve the speed of trading, and increase overall utility. The individual pricing terms should be negotiated bilaterally by the counterparties at the time of dealing.

The Task Force recognized that there was some merit to allowing fees to be set as a function of the time the borrowing institution has the use of funds or securities—perhaps in half-hour or hourly intervals—and to allowing pricing to reflect the demand for intraday funding through different periods in the day. However, the Task Force decided that pricing as a function of minutes or hours would be difficult to administer and that the amount of system development required could be a constraint to using the product.[2]

The Task Force agreed that transactions should be terminated at the borrower's discretion, but no later than the pre-agreed time prior to the closing of the relevant RTGS system. The Task Force banks thought that second-leg settlement would need to be set at a defined time, typically 15 to 30 minutes prior to the RTGS closing time, to provide time to fund any fails. However, for certain markets, where cutoff times are set for certain types of key payment activity, the transaction would need to be terminated 15 to 30 minutes prior to these agreed cutoffs.[3] All Task Force members thought that compensation (penalty) rules would be required in case of failure by either party. On the contrary, some Task Force members thought that the transactions should provide for an automatic termination (reversal) at a preset time. The issue here is that both parties must have the collateral and liquidity available at the preset reversal time, which cannot be met in all cases. Automatic termination would also require building additional systems

[2] Currently, none of the Task Force banks has systems in place to handle hourly pricing; these banks would likely require manual intervention to apply price to intraday tenure.

[3] One example is Europe, where the cutoff time for third-party payments is 5:00 p.m. and the closing time of the RTGS systems (for interbank payments) is 6:00 p.m. Another example is Switzerland, where there are two main clearing sessions for the RTGS system.

infrastructure. In addition, the Task Force universally agreed that there should be no call option (that is, the lender should not be able to recall the funds earlier than the agreed-upon time).

The Task Force was unanimous in its conclusion that to serve as an effective "global" payment liquidity management tool, the transactions should cover all the G-7 currencies, at a minimum, with possible future extension to other CLS-eligible currencies.

4.2. Service Provider

Because of operational complexities and the need for delivery-versus-payment settlement, there was consensus among Task Force members that the transactions would require a tripartite service provider. The service provider must be able to provide full-service execution and direct account access to the central banks to enable the efficient delivery of the borrowed assets as liquidity (in the case of borrowed cash) or as provisioning for liquidity (in the case of borrowed securities). The tripartite service provider should act purely in an agent capacity.

In the case of the *cross-currency intraday swap* transaction, the service provider must offer participants cash accounts in each G-7 currency and provide for immediate payment-versus-payment settlement of both the first (and return) leg of the transaction on its own books. The service provider must also have direct cash-account relationships with all G-10 central banks to enable real-time transfer of the borrowed funds to the central bank account of the borrowing participant. The service provider would make an RTGS payment to the borrower. Likewise, for the return of the borrowed funds, the borrower would make a RTGS payment to the account of the service provider.

In the case of the *cross-border intraday collateral swap*, the service provider must offer securities deposit (that is, custody) accounts in each G-7 currency and provide for immediate delivery-versus-delivery settlement of both the first (and return) leg of the transaction on its own books. The service provider must also be a "designated" depository for each G-10 central bank so that the borrowed securities can be immediately pledged (repoed) to the central bank for intraday liquidity by the market participant.[4]

In the case of the *cross-currency intraday repo*, the service provider must offer both securities and cash accounts in each G-7 currency and provide for immediate delivery-versus-payment settlement of both the first (and return) leg of the transaction on its own books. If the transaction were structured such that cash is given as collateral for borrowed securities, then the service provider must be a "designated" securities depository for each G-10 central bank for the immediate provisioning of collateral for liquidity. Conversely, if the transaction were structured such that securities are given as collateral for borrowed cash, then the service provider must hold a direct cash account relationships with all G-10 central banks to enable the real-time transfer of borrowed funds to the central bank account of the borrowing participant.

The Task Force was in agreement that the service provider must provide all requisite transaction matching, clearing, and settlement functionality, including checking for currency (securities) position "sufficiency." The service provider should immediately match transaction deals, perform eligibility and sufficiency checks on currencies and collateral, and notify counterparties

[4] Individual central banks designate which depositories can be used by local market participants to pledge (repo) securities to the central bank for immediate intraday credit.

of any discrepancies.[5] There would be no mark-to-market margining because these transactions are intraday transactions. A service provider must provide comprehensive real-time reporting capabilities throughout the tenure of the transaction and flexible communication options, for example, SWIFT. The service provider could, but would not be required to, also monitor intraday credit exposures across participants and make real-time information available via a secure web-based tool.

The Task Force agreed that counterparties must have a mechanism to find each other quickly—calling around the market to find a double-coincidence of wants is not a viable solution. Therefore, an integrated front-end trading platform, which allows market participants to continuously place bids and offers on the screen, should be available. The Task Force recognized that this could be provided either by the service provider or another entity.[6] In addition to enabling "straight-through-processing," a front-end trading system would be critical to ensure the use of the service offering.

While the Task Force recognized that certain global commercial banks might have the capability to be a service provider, most Task Force banks preferred a recognized market infrastructure utility (for example, CLS Bank, Euroclear Bank, Clearstream, and so on) that already offers similar tripartite agent services.[7] Many Task Force banks explicitly indicated that they do not consider a commercial bank to be an ideal provider and that they believe a bank should have industry governance rather than a commercial mandate to ensure its transparency.[8] Some Task Force banks indicated that they would only be comfortable with a commercial bank as the service provider if it were rated AA or better.

4.3. Participation Criteria

The Task Force thought that limiting participation to firms that have direct RTGS accounts at each of the G-10 central banks would be too restrictive and unnecessary. Such a requirement would limit participation to just a few global banks. Rather, it was deemed more appropriate to open participation to any banks that had a direct RTGS account with at least one of the G-10 central banks and that can accept foreign cash or securities collateral through a nostro agent or custodian. (The nostro agent or custodian would have to be a participant for the respective currency.) An alternative was to open participation to any bank that self-clears in its own domestic market and perhaps a minimum of one other G-7 market.

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[5] Transactions with discrepancies or that do not meet eligibility checks would be rejected and would have to be resubmitted by the counterparties.

[6] For example, Reuters already has a white-board type solution (called Semaphore) where CLS participants can publish their positions.

[7] The ICSDs have developed collateral swap management services as an extension of their basic collateral management services. These collateral swap services provide market participants with the opportunity to swap securities holdings, on a delivery-versus-delivery basis, on the settlement date. As long as the securities are pre-positioned within an ICSD, the collateral swaps may take place cross-border, that is, a security from one country can be swapped for a security from another country. These services provide for daily marking to market against the swapped assets, with full reporting and automatic margin calls.

[8] Numerous Task Force banks indicated that CLS Bank could be an ideal conduit for a *cross-currency intraday swap* facility based on its role acting as service provider, its direct cash accounts at each of the G-10 central banks, and its experience facilitating inside/outside swaps.

The Task Force did not deem it necessary to require direct participants to meet capital or creditworthiness criteria because borrowers would have to fully collateralize transactions and participants would be able to choose their counterparties. If a service provider thought that there should be minimum capital (creditworthiness) requirements, then the Task Force considered it appropriate. The Task Force also thought that the service provider should set certain minimum operational standards for banks. The Task Force did not see any overall benefit of broker involvement if there were an effective front-end trading platform available.

5. CREDIT ISSUES

Parties to the transactions would be assuming a collateralized intraday credit position against a fully disclosed trading counterparty. The Task Force banks concluded that the associated credit risks can be effectively managed through (1) a payment-versus-payment settlement on both legs of the trade and (2) a margin applied to the collateral to protect against market price volatility in the event of a default.

In these transactions, the party seeking (that is, "bidding for") funds or securities is assuming the financial role of a borrower. This party wants to obtain specific funds (or securities) on loan with the promise that they will be returned. Conversely, the counterparty to the trade is lending the sought after funds (or securities), and, because there is a swap of assets, the loan is effectively collateralized.

As with other similar financing transactions (such as, securities loans, repos) the Task Force thought that the party seeking to borrow funds (or securities) should provide margin in the transaction. Margin could be applied as an increase in the required amount of collateral, relative to the value of funds or securities borrowed, or as a reduction in value (that is, haircut) of the collateral being transferred. The Task Force thought that any margin could be negotiated bilaterally between the counterparties, per deal, to correspond to the one-day market price volatility of the two assets being swapped. Alternatively, to better facilitate trading, standard margins could apply as they do for securities loan transactions, for example, 102 percent, 105 percent, and so on.

The Task Force recognized that it is not common practice to take haircuts on swaps because the negotiated price reflects the interest rate differential between the two currencies. However, for ease of use, the Task Force thought that a haircut structure would be more suitable for a *cross-currency intraday swap* because of its intraday nature. Participating banks would have to monitor the counterparty exposures associated with these intraday transactions.

While participants would not be taking on direct counterparty credit risk vis-à-vis the service provider (it will be an agent to the deals), they would be assuming some level of cash deposit risk (or securities custody risk). Therefore, a prospective service provider must have a sufficiently high credit standing.

Delivery-versus-payment settlement on both the front and return leg of the transactions would be a critical requirement for most banks, because a delivery-versus-payment settlement would limit the counterparty credit risk to a market price risk.

6. BUSINESS CASE

6.1. Overview

Ultimately, prospective service providers will have to determine whether a sufficiently strong business case exists to offer these services to the market. The strength of the business case will depend on whether the anticipated revenue allows the service provider to obtain a targeted level of return, given the associated costs (,such as capital investment or operating cost). The Task Force did not attempt to estimate the potential costs of providing these services to the market. Rather, they simply attempted to assess the Task Force banks' interest in these services. This information would provide an indication of market demand, so that prospective service providers could further explore the business case.

6.2. Market Demand for a Daily Facility

Lenders. As lenders of intraday funds, the majority of Task Force banks recognized the inherent potential economic benefits to be gained from utilizing these services. These transactions are considered a way of using excess (unutilized) intraday liquidity (collateral) in one market to earn additional revenue in another.

For lenders of intraday funds, pricing would be a primary determinant in the decision to make regular use of the services. For U.S. dollar intraday loans, a minimum rate of return for most lenders would have to be substantially greater than the Federal Reserve uncollateralized intraday borrowing cost (that is, Fed daylight charges). However, banks that regularly maintain surplus funds in the Fed account on an intraday basis could charge less than the Fed daylight charges. For non-U.S. dollar intraday loans, a minimum rate of return would have to be at least 10 basis points. Some banks indicated that the rate of return would also have to account for any related operational (transaction) costs and agent costs. Other banks indicated that the financial standing of the borrower, expected intraday tenure of the transaction, and the cost of funding if the return leg fails could also be factors in the pricing.

Most Task Force banks indicated that with the requisite pricing (that is, rate of return) they would be interested in being regular lenders in both their home currency and one or more additional currencies in which they have excess capacity. A critical determinant for lenders that wish to make regular use of the services would be the certainty that trades would be reversed (that is, closed out) prior to the close of business in the jurisdiction of the lender, that is, the market where the swapped asset was not used to source RTSG liquidity.

Borrowers. As borrowers of intraday funds, some, but not all, Task Force banks saw potential liquidity management and cost benefits to being able to utilize these services, assuming that the service offering were provided in a safe and efficient manner. Such banks regarded these transactions as a means to utilize excess funds (collateral) in one market to support their payments business in other markets where they self-clear. These banks indicated that, if sufficiently liquid, the intraday markets could enable them to reduce some collateral holding at central banks and to leverage the associated economic benefits. However, the factors that would determine overall usage are cost, available liquidity, and the ability to execute transactions in near-real-time.

The speed of settlement would be a critical factor. Most banks thought that if borrowers could not receive funds within 30 minutes after the trade is executed, the services would be of no value. Some banks preferred that the borrowed intraday funds be received in 15 minutes or less.

Banks would be likely to participate in the market as borrowers on a routine basis only if the costs to borrowers were less than the current average hourly fees charged by Federal Reserve Banks (for U.S. dollar borrowings) or less than the costs (transactional and opportunity) associated with holding excess collateral at central banks (for non-U.S. dollar borrowings). While many banks were unable to determine their institution's degree of interest as a borrower at different cost points, some banks agreed that potential interest in the services as a borrower would be "moderate-to-high" at a borrowing cost of 5 bp to 10 bp, "low" at a borrowing cost of 10 to 15 bp and "non-existent" at a borrowing cost of more than 15 bp. However, many banks indicated that their price requirements would ultimately depend on their frequency of usage. If banks were to use the services more regularly, they would be much more price sensitive.

For borrowers, another key determinant for usage would be market liquidity. As a borrower, firms would rely on the product only if they are confident that they can obtain the funding. There was some consensus among Task Force banks that there would be little or no interest at borrowing levels less than $100 million daily, moderate interest at $100 million to $1 billion, and real potential interest at more than $1 billion a day.

The Task Force banks were somewhat mixed in their opinions as to whether these service offerings could also be used by a banking institution to swap liquidity between its own subsidiaries or branches. Some banks indicated that liquidity management benefits could be attained if they could swap liquidity among their own subsidiaries or branches located in different jurisdictions. The majority, however, indicated that these service offerings would have little or no value for use internally because their institutions already have centralized management of overnight funding across all currencies.

Some Task Force banks indicated that they would not rely on these intraday borrowings for core payment system liquidity, no matter what the costs. Even if they assumed that the service offerings were safe, efficient, and highly liquid, a few banks did not regard these products as a way to sufficiently economize on collateral (or liquidity balances) currently maintained at central banks for RTGS purposes. These banks indicated that the excess collateral held at central banks was somewhat limited and that they serve an end-of-day emergency borrowing role that banks need to retain.[9] Rather, they would consider these funding transactions only on rare occasions to meet unexpected peak intraday borrowing needs.

Primary barriers. The Task Force identified two primary barriers to the establishment of a viable business case for the *cross-currency intraday swap.* The first is the incomplete overlap of the G-10 central bank RTGS systems' operating hours. The second is the concern by many of the Task Force banks that this facility would actually re-introduce liquidity risk.

[9] As one bank's Treasurer noted, "by definition, government bonds, the primary securities accepted as collateral by central banks for RTSG liquidity, are considered to be high quality assets. Therefore, the yield is not as good as other classes of asset and banks therefore tend to only hold sufficient amounts at their central bank for their daily payment need needs plus a small margin to cover the unexpected. As a result, this surplus amount that may be offered per institution may be modest at best. I would not offer this buffer stock as I do not know when I may need it to raise additional intraday liquidity for my own use."

The Task Force concluded that for a *cross-currency intraday swap* transaction to be viable from a business standpoint, the tenure of the transaction must be within the overlapping operating hours of the two associated RTGS systems. The banks require that the loaned funds, or the associated cash collateral, be returned prior to the close of the business in their respective markets. If not paid back in time, the intraday loan will roll over into overnight liquidity funding needs. The Task Force banks did not think it suitable to support payment and settlement flows at the risk of increased overnight funding needs. As indicated in Annex A, this would greatly restrict the availability of the *cross-currency intraday swap* as a viable intraday funding source across most G-7 currencies because the availability of intraday funding from these transactions would not be in line on occasions when additional payment capacity is most needed. Exceptions would be for EUR/GBP transactions and any transaction where USD are used as collateral for the intraday funding.

In addition, many Treasurers on the Task Force were concerned that the *cross-currency intraday swap* could actually increase liquidity risks. The issue of concern was that if banks had an economic incentive to lend intraday cash balances for a profit, they would be more likely to hold back on making payments until later in the day. This behavior could increase overall liquidity risk and many Task Force banks thought that this was a sufficiently strong reason to dismiss a *cross-currency intraday swap.*[10] Only one bank indicated that a *cross-currency intraday swap* could adversely affect its nostro account business.

The Task Force thought that a *cross-border intraday collateral swap* facility could suitably address the two main barriers confronting a *cross-currency intraday swap*. Firstly, because only securities would be exchanged with a counterparty, banks would not be concerned if the tenure of the swap transaction were limited to the overlapping operating hours of the two corresponding central bank RTGS systems. There would be no monetary overnight funding impact. Secondly, this transaction would not re-introduce liquidity risk because banks would have no incentive to hold back payments, that is, they would not be lending intraday cash balances.

The Task Force concluded that for the *cross-border intraday collateral swap* to be viable, the service provider must be able to facilitate the securities swap on a nearly 24-hour basis. More critically, participants must be able to use the securities held in custody with the service provider as provisions for intraday liquidity at each of the G-10 central banks. This requirement does not call for central banks to expand the range of collateral they accept for intraday credit (as the banks will be sourcing currently accepted collateral through the *cross-border intraday collateral swap*). However, the chosen tripartite service provider would have to be designated an approved depository, at which participants pledge (repo) securities to the central bank in exchange for intraday liquidity. This condition does not currently exist. A change in policy by some central banks and perhaps incremental costs of establishing and maintaining an account relationship with the service provider would be necessary.

The cross-currency intraday repo transaction appears to possess the main barriers seen in the other two transactions. Because cash would be involved in the transaction, the RTGS systems' lack of overlapping operating hours and the reintroduction of liquidity risk attributed to

[10] This is consistent with the view of the Payments Risk Committee that at this stage, proposed private-sector solutions should not be viewed solely as commercial transactions that come at the expense of global payments market stability.

incentives to hold bank payments are both issues. Further, if the transaction were structured as a securities loan, with securities borrowed in exchange for cash collateral, the service provider would have to be a "designated" depository for intraday liquidity provisioning. Alternatively, if the transaction were structured as a repo, with cash being borrowed in exchange for securities collateral, then the service provider must have direct RTGS cash account relationships with all G-10 central banks; today, the ICSDs do not have these relationships.

Only one bank indicated that the proposed services could require a major investment in internal systems, where as a case in point, their systems currently require a different start- and end- date for all swaps and repos.

7. CONCLUSIONS

Of the three private-sector solutions analyzed, the *cross-currency intraday swap* transaction is viewed as the simplest and least costly to implement. It is potentially very well suited to meet the real-time settlement needs of intraday transactions. With its existing cash account relationships with the G-10 central banks, current role as a trusted third-party service provider, and lack of credit exposure, CLS Bank was identified by the Task Force as a very viable prospective service provider. The incomplete overlap of the G-10 central bank RTGS systems' operating hours and the concern that this proposed service could actually re-introduce liquidity risk are the two primary barriers to the establishment of a viable business case for a private-sector provider.

The above conclusion presumes that a *cross-currency intraday swap* facility should be designed to support banks' global payment liquidity needs across <u>all</u> G-7 currencies. In fact, the Task Force thinks that there might be a market opportunity in the development of a *cross-currency intraday swap* product for certain bilateral currency pairs where the operating hours of the RTGS systems are fully concurrent. These transactions could include EUR/GBP intraday swaps, EUR/CHF intraday swaps, or any intraday cross-currency funding transaction in which U.S. dollars serve as collateral. As such, the Task Force would encourage CLS Bank, other potential service providers, and financial institutions to further evaluate this product for all G-7 currencies, or for certain bilateral currency pair transactions.

The *cross-border intraday collateral swap* could be a viable service offering. The Task Force sees the ICSDs as the most plausible service providers at this time because of their existing tripartite services and because all Task Force banks hold securities in custody with them. However, the ICSDs would be required to facilitate the *cross-border intraday collateral swap* transaction on a nearly 24-hour basis. And the chosen tripartite service provider would need to be an approved depository for participants to pledge (repo) securities to the central bank in exchange for intraday liquidity.

The Task Force concluded that too many barriers exist to pursue the successful implementation of the *cross-currency intraday repo* facility.

Recommendations

- The Payments Risk Committee should share this report with the ICSDs so that they can assess whether a *cross-border intraday collateral swap* is a potentially viable product offering.

- Assuming that the ICSDs can facilitate *cross-border intraday collateral swaps* and that there is a business case for doing so, the private sector (that is, commercial banks) should encourage the G-10 central banks to accept collateral from the ICSDs for intraday liquidity.

- The Payments Risk Committee should share this report with CLS Bank to evaluate whether a *cross-currency intraday swap* product that is limited to certain bilateral currency pairs, in which the overlapping hours are fully concurrent, is a potentially viable product.

- Individual banks should continue to develop single currency, collateralized intraday funding products for their bank customers.

ANNEX A

Clearing Cycles of RTGS Systems for CLS Currencies

	(a)		(b)	(c)					(d)	(e)						(f)	(g)				(h)	(i)		
Sydney	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	01:00	02:00	03:00	04:00	05:00
Tokyo	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	01:00	02:00	02:00	04:00
CET	22:00	23:00	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00
Switzerland	22:00	23:00	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00
London	21:00	22:00	23:00	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00
Toronto	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00
New York	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00

There are nineteen countries whose RTGS systems are made up of the CLS currencies: the thirteen countries in Europe who operate in the euro, Australia, Canada, Japan, Switzerland, the United States, and the United Kingdom.

Note: While the SWISS RTGS system operates on a near 24-hour schedule, the close of business for same day value (VD) is at 4:00 p.m. After closing for approximately 15 minutes, the RTGS system opens again at 4:15 p.m. but only for payments effected for next day value (VD+1).