Report to the Federal Reserve Board

by the

Working Group on NewBank Implementation

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1. Background

In January 2004 the Board of Governors of the Federal Reserve System ("Board") established a private-sector Working Group on NewBank Implementation ("Working Group") to develop further the concept of a dormant bank ("NewBank") that would be available for activation to clear and settle U.S. government securities[1] and facilitate tri-party repurchase agreements. NewBank would be activated only if (1) the market lost confidence in one of the existing banks that provide those services (the "clearing" banks), and (2) the exiting bank was not immediately able to sell its clearing business to another well-qualified bank.

The NewBank concept had been developed by an earlier private-sector working group, the Working Group on Government Securities Clearance and Settlement ("WGGSCS"), which the Board had created to recommend steps to mitigate risks to the financial system from the interruption or termination of services of a clearing bank. The sudden loss of such services would disrupt the trading and settlement of U.S. government securities. Federal Reserve open market operations and debt issuance by the United States Department of the Treasury ("U.S. Treasury") for the critical purpose of funding and operating the U.S. Government might also be disrupted. It would also place substantial funding pressures on the exiting bank's dealer clients, which rely heavily on tri-party repos to finance their portfolios of U.S. government and other fixed income securities. The disruption of the tri-party financing mechanism would in turn significantly impair the dealers' ability to provide liquidity to the fixed income markets.

In its December 2003 report to the Board the WGGSCS concluded that the NewBank concept was the most promising approach for meeting the regulators' request that it develop a private-sector contingency plan for the sudden involuntary exit of one of the two clearing banks for non-operational (credit or legal) reasons.[2] Nonetheless, it acknowledged that the NewBank concept needed to be fleshed out and that various challenges to its implementation needed to be addressed. It recommended that additional work be undertaken to flesh out the concept and address the challenges and that, if this work was completed successfully, the concept should be actualized through the chartering of NewBank.

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[1] Throughout most of this report the term "U.S. government securities" is intended to include all securities that are issued, maintained, and transferred through the Federal Reserve's Fedwire Securities Service. These include not only securities issued by the U.S. Treasury Department but also securities issued by U.S. government agencies, government sponsored enterprises and corporations, and certain international organizations

[2] The WGGSCS made other recommendations for mitigating the risks of operational problems at a clearing bank. One key recommendation was that regulators should monitor and test implementation of the clearing banks' plans to satisfy the regulators' sound practices and implementation timelines for core clearing and settlement organizations that were set out in the *Interagency Paper on Sound Practices to Strengthen the Resilience of the Financial System* that was issued on April 8, 2003 by the Board, the Securities and Exchange Commission, and the Office of the Comptroller of the Currency.

The Board formed the Working Group to undertake the work that the WGGSCS had recommended. The same private consultant that chaired the WGGSCS chaired the Working Group. Although there were some changes to the membership, the new group again included representatives of clearing banks, securities dealers, mutual funds, trade associations and other interested parties. Staff from the Federal Reserve, the Securities and Exchange Commission, the U.S. Treasury, the Federal Deposit Insurance Corporation ("FDIC"), and the New York State Banking Department ("NYSBD") have participated as observers and technical advisors. The members of the Working Group are listed in Appendix 1.

2. The NewBank Concept

The WGGSCS had concluded that in planning for the sudden involuntary exit of a clearing bank as a result of financial or legal problems, it is reasonable to assume that the staff, data, and equipment and systems of the exiting bank would still be intact and capable of processing clients' instructions. In this regard, it is important to note that the WGGSCS had not been asked to plan for a scenario in which the clearing bank's problems were so severe as to threaten its continued existence either immediately or within a short period of time. In those serious circumstances it is likely that the FDIC would be required to intervene as a conservator or receiver to resolve the institution through the formation of a bridge bank, a merger or purchase and assumption transaction with another institution, or a liquidation. Because repo investors are highly risk-averse, even less serious problems (for example, the downgrade of a clearing bank's credit rating to below investment grade) might effectively force a clearing bank to exit, and in such circumstances FDIC intervention would not be appropriate or even permissible. What could be needed in such circumstances is a new private legal entity (NewBank) to hold the exiting bank's clients' securities and funds, an entity with sufficient financial resources to maintain the confidence of the clients and to meet their needs for intraday and overnight credit.

As conceived by the WGGSCS, NewBank would have no prior operational capabilities of its own. When activated, it would purchase the existing business functions from the exiting clearing bank, but it would not purchase all of the underlying operational infrastructure. The WGGSCS envisioned that NewBank would obtain its operational capabilities by purchasing some of the associated infrastructure from the exiting clearing bank and for the remainder would enter into a service agreement with the exiting clearing bank to continue providing NewBank and its customers the relevant services. The WGGSCS noted that it would be difficult to work out the terms of the purchase and service agreement in advance of NewBank's activation. It suggested that to ensure that the exiting bank was fairly compensated for its clearing business, the agreement might provide for ex-post third party arbitration of the sales price or the exiting bank might retain the primary equity in NewBank, with capital contributions by market participants essentially serving as an additional layer of credit support during NewBank's existence. The WGGSCS acknowledged that further work on the terms of the purchase and service agreement was needed.

Discussions with staff of the NYSBD indicated that there is no obstacle in principle to its granting NewBank a charter prior to any need to actually utilize it, and that NewBank could remain dormant (and would not need a significant amount of capital) until such time as a separate request was made to the NYSBD to permit its coming into active operation. The WGGSCS also concluded that NewBank should be subject to the supervision of the Federal Reserve as well as the NYSBD, and therefore should apply to become a member bank of the Federal Reserve System. It noted that further work was necessary to clarify the charter and membership requirements and to address other potential regulatory issues.

The WGGSCS concluded that NewBank should be owned and capitalized by a broad group of significant market participants, including dealer clients of both clearing banks. Its owners would elect a board of directors, and the board would draw NewBank's senior executives from the ranks of senior management of its owners. All decisions about the amounts and terms of credit extensions to NewBank's clients would be made by its executives, subject to the policies and oversight of its board. Further work clearly would be necessary to reach conclusions about the appropriate size and composition of NewBank's shareholder group and the size and composition of its board of directors.

NewBank's credit extensions would be collateralized and margin policies would be set to ensure that NewBank's capital was adequate to cover potential losses from failure of its largest participant. The WGGSCS's preliminary analysis suggested that initial economic capital in the vicinity of $500 million would permit NewBank to accommodate existing levels of tri-party repo activity at existing margin levels. The WGGSCS believed that raising an amount of capital in this range from 20 or so firms would be feasible in the circumstances in which it would be needed. However, it noted that further detailed work was necessary to analyze the risks that NewBank would face and to refine the estimate of the amount of capital that NewBank would need. The WGGSCS also observed that NewBank would need very substantial amounts of intraday credit and that the Federal Reserve would need to consider how to apply its Payment System Risk Policy ("PSR Policy") to NewBank. Finally, NewBank would need to extend a certain amount of overnight secured credit to its participants and would need to make arrangements to fund such credit extensions.

NewBank will provide a viable contingency plan only if repo investors, which include money market mutual funds and other highly risk-averse investors, are willing to utilize its services. Based on discussions with representatives of several funds, the WGGSCS concluded that further work would be necessary to ensure that they could make prompt decisions to use NewBank should it be activated. Among the steps that needed to be explored were: preparation of an information package that would describe NewBank's charter and business, its pro forma balance sheet, its ownership and capitalization, its management and governance, and its contracts with the exiting bank; development of standard documents for repo investors to assign their tri-party contracts with the exiting bank to NewBank; and obtaining a credit rating for NewBank in advance of its activation.

The WGGSCS saw the activation of NewBank as a last resort. It emphasized that in the event that the market lost confidence in a clearing bank the best possible outcome would be acquisition of the exiting bank's government securities clearance and tri-party repo business by another well-qualified bank. However, the WGGSCS recognized that it is not certain that a well-qualified bank would be interested in purchasing the business or would come forward quickly enough to avoid disruptions to the financial system. Having considered a variety of possibilities, the WGGSCS concluded that the NewBank concept was the most promising approach to meeting regulators' request that a private-sector contingency plan be developed for this very unlikely but potentially very disruptive scenario. Furthermore, it is an approach that could be implemented at relatively low cost.

3. Fleshing Out the Concept and Addressing the Challenges

The discussion of the NewBank concept in the previous section identified several aspects of the concept that needed to be fleshed out and related challenges that would have to be addressed before a decision could be made that the concept should be actualized by obtaining a charter for NewBank. These issues and the related challenges are: (1) determining the specific clearing bank functions that NewBank would need to perform and deciding for each such function whether NewBank should purchase the associated operational infrastructure from the exiting bank or outsource the function to the exiting bank through a service agreement; (2) determining terms for the purchase and service agreement that would be fair to the exiting bank (and, at the same time, fair to NewBank's capital providers); (3) identifying the requirements of the chartering authority and other regulatory requirements and assessing whether it is feasible to meet those requirements; (4) analyzing in detail the risks that NewBank would face and considering how it would manage those risks, including its needs for capital and liquidity and how it would meet those needs; (5) reaching consensus on the appropriate size and composition of NewBank's shareholder group and its board of directors; and (6) identifying steps that would allow repo investors to make prompt decisions to use NewBank's services upon its activation.

The Working Group has focused on these six issues. It met seven times at the Federal Reserve Bank of New York, beginning in February 2004 and extending into September 2005. In addition, it formed four subgroups (Operations, Regulatory Approval, Ownership and Governance, and Credit and Liquidity Needs) that met more frequently to address specific aspects of the six issues. The remainder of this section discusses each of the six issues in turn.

Operations

The Operations Subgroup identified nine critical clearing bank functions that NewBank would need to perform:

1. Core clearing functions (clearing and tri-party)
2. Funds transfer

3. Custody and securities lending
4. Treasury services
5. DDA services
6. General ledger/accounting services
7. Broker loan
8. Network and communication infrastructure and data systems and data centers
9. Staffing issues

For each of these functions the Operations Subgroup evaluated whether the operational infrastructure supporting the function should be separated from the exiting bank and purchased by NewBank (the "lift-out" option) or whether the infrastructure should be maintained by the exiting bank and the function performed for NewBank by the exiting bank under a service agreement (the "service agreement" option).

The Operations Subgroup concluded that it would not be feasible for the exiting clearing bank to transfer any of the operational infrastructure to NewBank. Rather, all of NewBank's operational functions would have to be performed for NewBank by the exiting bank under a service agreement. Many of the functions (for example, funds transfer) could not be lifted out because they would be needed by the exiting bank to continue to support other business lines. A few (notably the core clearing functions) are not critical for other business lines and could be lifted out. However, a lift-out could not be accomplished quickly enough for NewBank to be effective as a contingency plan for a sudden loss of market confidence in either of the clearing banks. In particular, the transfer of staff supporting the core clearing functions would require the renegotiation of employment contracts.

Prior to applying for a charter, representatives of NewBank's shareholders would need to work with the clearing banks to draft the service agreements and work with the clearing banks, the Federal Reserve, and other securities depositories to ensure that all necessary steps had been taken to permit rapid activation of NewBank should that become necessary. Once these steps have been taken, due diligence (including testing) would need to be undertaken to ascertain each clearing bank's ability to segregate NewBank's books and records, to implement NewBank's risk management decisions, and to provide necessary management information to NewBank.

Upon activation of NewBank, the exiting bank would provide NewBank with a list of its clients (broker-dealers, repo investors, and others that used its services). NewBank would then ask the clients to approve assignment of their clearance and tri-party repo contracts with the exiting bank to NewBank. The Working Group believes that the assignment of these contracts would be the most efficient way to ensure a quick transition to NewBank because it would forestall potentially time-consuming efforts to renegotiate the terms of those contracts. If, after conducting appropriate due diligence,[3] the clients assigned these contracts, the transactions would thereafter be written to the books of NewBank, although the transactions would be processed using the operational

[3] As discussed in the section below on encouraging use of NewBank by repo investors, an information book regarding NewBank would be prepared to support clients' review and approval processes.

infrastructure of the exiting bank pursuant to the service agreement. NewBank would need to establish its own risk management policy function, which would make all decisions regarding the amounts and term of credit extensions to its clients, subject to oversight by its board of directors. NewBank would rely upon the exiting bank's internal controls to ensure that its risks were in fact limited to amounts consistent with NewBank's decisions.

Terms of the Purchase and Service Agreement

This proved to be the most difficult issue for the Working Group to resolve. The WGGSCS had envisioned that the exiting bank would sell the core clearing functions and some of the operational infrastructure to NewBank, while retaining other parts of the operational infrastructure and providing the associated services to NewBank under a service agreement. NewBank would seek to resell the business functions and the infrastructure that it purchased to a well-qualified bank. It was recognized that the exiting bank and NewBank's capital providers would have conflicting incentives with respect to the price at which the business functions were resold. The exiting bank would seek the highest sales price, even if that meant that the resale would not occur promptly. The capital providers would seek to resell as soon as possible in order to minimize the period during which their capital was at risk, even if delaying the sale would allow a higher price to be obtained. The WGGSCS recognized that some arrangement was needed to reconcile these conflicting interests.

As discussed above, the Operations Subgroup concluded that all of NewBank's operational functions should be performed by the exiting bank under a service agreement.[4] Under this approach, the exiting bank would necessarily have a strong role in the sale of its clearing business to another well-qualified bank, even if it sold the business functions to NewBank and NewBank nominally was in control of the sale. Even a well-qualified bank for some time would need to outsource operation of the unique elements of the clearing business to the exiting bank and thus would need to reach an agreement with the exiting bank regarding the terms of a service agreement. For this reason, the Working Group concluded that the exiting bank should not sell the clearing business functions to NewBank. Instead, following activation of NewBank the exiting bank should continue its efforts to sell the business to a well-qualified bank. If it succeeded, it would have the right to terminate its service agreement with NewBank and enter into a similar service agreement with the well-qualified bank. NewBank's clients would then need to assign their clearance and tri-party agreements to the well-qualified bank if they wished to use its services.

Leaving the sale of the clearance business in the hands of the exiting bank clearly would address the clearing banks' concerns about getting a fair price. It would also avoid creating the risk of losses to NewBank's shareholders in the event that they were unable to resell the clearing business at a price equal to or greater than the price at which they purchased it from the exiting bank. But this approach would leave unaddressed the

[4] All (or a substantial portion) of the revenues collected by NewBank from its clients would be passed through to the exiting bank as compensation for the services provided.

capital providers' concerns that they would have no control over the duration of their commitments of capital to NewBank. In order to provide a definite endpoint to their capital commitments, the Working Group concluded that NewBank should have a finite life. If after one year a sale of the exiting bank's clearing business had not been consummated, NewBank would be wound down and its available capital returned to its owners.[5] Market participants would by that time need to have other arrangements in place to address their needs for clearing and funding. Perhaps they would decide to develop an industry utility to provide these services or perhaps they would substitute other forms of funding for tri-party repos.[6] In any event, they would have ample warning and therefore ample time to make alternative arrangements. This approach is consistent with NewBank's character as a contingency arrangement designed primarily to minimize disruptions from a clearing bank's exit. It would address the concerns of both the clearing banks and the capital providers while allowing flexibility in market participants' responses in the event that the sale of the clearing business does not appear imminent. Moreover, this approach would create incentives for all parties to work promptly to achieve a permanent solution to the need for clearance and tri-party repo services.

Regulatory Requirements and Constraints

Charter. The Working Group has had further discussions with NYSBD staff about organizing NewBank as a state-chartered limited purpose trust company ("LPTC") whose charter would limit its activities to the provision of clearance and tri-party repo services. Those discussions have confirmed that there is no obstacle in principle to granting NewBank an LPTC charter that would be warehoused until NewBank's activation is later authorized by the Superintendent of Banks. The Superintendent has the discretion to waive deposit insurance requirements for NewBank and is likely to do so given that NewBank's customers would be limited to institutions (broker-dealers and tri-party repo investors such as mutual funds and pension funds).

Until NewBank is activated, it could maintain its charter with a minimum amount of capital (expected to be about $2.5 million), but a shareholder agreement would need to be in place to ensure that a sufficient amount of additional capital would be contributed prior to activation. The shareholder agreement could be structured so that it does not create a contingent liability that shareholders would be required to report in their financial statements.

Before NewBank can apply for a LPTC charter, NewBank's shareholders would need to designate a group of individuals to act as NewBank's incorporators. The incorporators would need to execute an organization certificate and designate individuals who would serve as NewBank's directors until the charter is obtained. NewBank would also need to seek a variety of exemptions or modifications from various New York

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[5] The owners would fully recoup their investments unless NewBank had suffered losses. Except when needed to provide liquidity to its clients, NewBank's capital would be invested in low-risk instruments.
[6] Indeed, many dealer clients likely would take such steps well before a year had elapsed, and as soon as clients conclude that a sale of the exiting bank's clearing business is unlikely to occur.

banking law requirements and restrictions that arguably are unnecessary during its dormant phase.

Federal Reserve Membership. As noted above, the WGGSCS concluded that NewBank should be subject to the supervision of the Federal Reserve as well as the NYSBD, and therefore should apply to become a member bank of the Federal Reserve System. To become a member bank, NewBank's board of directors would need to adopt resolutions authorizing NewBank to apply for membership. NewBank would then need to file a membership application with the Federal Reserve Bank of New York ("FRBNY") for approval by the Board. The types of information that NewBank would be required to submit in its membership application are broadly similar to the types of information required by the NYSBD for a charter application. In particular, NewBank would be required to provide detailed information on its service agreements with the clearing banks, changes made to the existing clearing banks' systems designed to ensure that NewBank can take over as a successor clearing bank without significant disruption, and NewBank's internal controls and risk management framework.

The Working Group believes that NewBank should apply for membership when its management and shareholders determine that the appropriate agreements and systems are in place so that NewBank could become operational, if the need arose, soon after it receives all necessary regulatory approvals. While Board staff cannot prejudge the Board's ultimate decision, Board staff have indicated that, in principle, there would be no obstacle to the Board considering whether to grant an approval of NewBank's application for membership at the time NewBank files its charter application. The approval would be conditioned so that NewBank could become operational only if the Board (or the person(s) to whom it has delegated its authority) determines that activation is appropriate and NewBank is prepared to assume its responsibilities as a clearing bank. To enable the Board (or the person(s) to whom it has delegated its authority) to act quickly based on current information, the Board could require NewBank to update the Board regularly regarding any changes to the information relied upon by the Board in granting its approval. Furthermore, upon approval of its membership application, the Federal Reserve Act would require NewBank to subscribe to FRBNY stock equal to six percent of its capital, three percent to be paid in and three percent subject to call by the Board. NewBank would be required to acquire additional FRBNY stock as its capital and surplus increases.

Bank Holding Company Act Issue. Although NewBank would be chartered as an LPTC, it would have the power to take deposits from and make loans to its customers. As such, it would be a "bank" for purposes of the Bank Holding Company Act ("BHCA"). NewBank's investor group, however, is expected to include firms that have a limited ability to own shares or assets of a bank without becoming subject to the BHCA. To avoid unintended consequences for them under the BHCA, it would be desirable for NewBank to have broad ownership, so that no individual firm would own 5 percent or more of NewBank's shares or assets. This suggests that NewBank should have at least 21 shareholders.

Risk Management, Capital, and Liquidity

NewBank would be exposed to counterparty credit risks and to liquidity risks from extensions of intra-day and overnight credit to its dealer clients to facilitate settlement of their trades in government securities and their tri-party repo activity. At a minimum, NewBank would need sufficient capital to cover potential losses from a failure by its largest dealer client. It would need access to funding liquidity on a day-to-day basis that is sufficient to meet its clients' routine demands for intra-day and overnight credit and to finance the portfolio of a failed dealer during its liquidation. Both NewBank's need for capital and its ability to access funding liquidity would depend on the adequacy of the margins that support NewBank's secured lending to its clients to in turn support NewBank's borrowing from the Federal Reserve or other lenders.[7] These margins are determined by repo investors but are monitored by the clearing banks. To protect itself adequately in the uncertain environment in which it would be activated, NewBank would need to be able to impose its own supplemental margins on some or all of its broker-dealer clients.

<u>Counterparty Credit Risks and Capital</u>. Intra-day credit extensions arise primarily because the prior day's tri-party repos between NewBank's dealer clients and tri-party repo investors typically unwind early in the day (at or before 8:30 am). Between that time and the time the current day's tri-party repos are settled (typically between 5:30 and 6:00 pm but sometimes as late as 8:00 pm) dealers' demand deposit accounts with NewBank tend to be overdrawn. In the aggregate, such intraday exposures could equate to approximately half of the aggregate value of tri-party repos, a figure in the vicinity of $800 billion. Additional intraday exposures would arise from the unwinding of "delivery versus payment" repos and dealers' purchases of securities, although the amounts are quite small relative to the exposures created by the unwinding of tri-party repos. (The clearing banks currently extend uncollateralized "day loans" to some dealers, but NewBank would not make such loans.)

These daylight credit exposures usually would be fully collateralized by securities in the dealers' accounts, on which NewBank would have a lien. Indeed, because repo investors impose margin requirements on the dealers, the exposures would tend to be over-collateralized by amounts reflecting the "haircuts" that repo investors apply to the collateral. However, declines in the value of the collateral or deliveries of securities to the dealers' accounts against payments in excess of the securities' current market value could leave the exposures under-collateralized. Either clearing bank would be able to provide NewBank with the capacity to monitor the extent of any such under-collateralization of its exposures to its dealer clients and to make calls to the dealers to reduce their funds overdrafts (by transferring funds to NewBank) or to post additional collateral.

[7] The margin on a security is the difference between the market value of the security and the amount that a lender is willing to lend against the security, expressed as a percentage of the market value. Equivalently, the lender is often said to apply a "haircut" equal to the margin to the security's value when determining the maximum amount that it is willing to lend against that collateral.

Even if NewBank's exposures to its dealer clients are fully collateralized, in the event of a dealer default NewBank could suffer a loss if the value of the collateral declines sufficiently. However, NewBank would be exposed to losses from facilitating a client's tri-party repos only if the client defaults during the day, after the tri-party financing transactions from the previous night have been unwound. Although tri-party transactions typically unwind early in the day (e.g., 8:30 am), NewBank would have the authority to defer or to refuse to unwind the transactions, for example if they have concerns about the financial condition of a dealer. Therefore, NewBank would mainly be exposed to the risk of an unanticipated default during the period between the morning unwind (assuming it has allowed the unwind to take place) and the settlement of that day's tri-party transactions in the early evening. If NewBank permitted a dealer to unwind and the dealer was unable to obtain funding on the day of its default, its daylight overdraft in its funds account at NewBank would become an overnight overdraft, and NewBank would be forced to finance the securities in the dealer's account until the securities could be liquidated and the proceeds used to repay its loan to the dealer. Whether the proceeds were adequate would depend on the size of the haircuts that had been applied to the collateral, the price volatility of the collateral, and the amount of time that was required to liquidate the portfolio.

To assess NewBank's potential losses and its need for capital, the Working Group obtained data from the clearing banks on the size and composition of their largest dealers' portfolios as of early 2005. Based on these data the Working Group evaluated NewBank's potential losses from liquidation of a hypothetical $125 billion portfolio. While the largest dealers finance portfolios of this size through tri-party repos, NewBank is unlikely to need to liquidate quite so large a portfolio because the failing dealer likely would be able to roll over some of its overnight repos on the day of its default. Based on the data for the largest dealers, the $125 billion was assumed to be invested across six asset classes: Treasuries (19.4 percent of the total), securities issued by U.S. government agencies and government sponsored enterprises ("Agencies") (14.5 percent), mortgage-backed securities (34.3 percent), corporate bonds (16.6 percent), asset-backed securities (6.7 percent), and equities (8.5 percent).[8]

The Working Group assumed that the haircuts applied to the securities were the current repo market standards --2 percent for Treasuries and Agencies and 5 percent for the other asset classes. This implies an average haircut of 3.98 percent across the hypothetical portfolio. The Working Group assumed that it would take NewBank three business days to liquidate the Treasuries, Agencies, and equities, and seven business days to liquidate the other securities. Because the last marking-to-market of the collateral would have been at the close of business on the day prior to default, NewBank would be exposed to four business days of adverse price movements on the more liquid collateral and eight business days of price movements on the less liquid collateral. To assess

[8] It is worth noting that the composition of the collateral in this hypothetical large dealer portfolio differs significantly in some respects from the composition of the collateral for aggregate tri-party activity. In particular, in aggregate equities account for less than 1-1/2 percent of the collateral pool and Agencies account for around 20 percent.

potential price movements over those horizons, the Working Group examined daily return data for each asset class between February 1994 and June 2004.

Because returns for the various asset classes are not perfectly correlated, the maximum losses over the relevant horizons for the various asset classes do not occur on the same date. Thus, the maximum loss for the portfolio is significantly less than the sum of the maximum losses for the individual asset classes, reflecting the diversification benefits of the diversity of collateral types financed through tri-party repos. The Working Group calculated the maximum loss both including and excluding diversification benefits. Even without taking into account diversification benefits, the maximum loss was about $3.5 billion or 2.79 percent of the aggregate portfolio value. This would have been amply covered by the margins of nearly $5 billion or 3.98 percent. When diversification benefits are taken into account, the maximum loss (which occurred in April 1994 when market participants were caught off guard by a tightening of monetary policy) was only $1.8 billion or 1.3 percent, leaving excess margin of more than $3 billion.

Preliminary analysis by the WGGSCS indicated that NewBank would need economic capital in the range of $500 million to be considered financially sound. Even though tri-party repo programs have since grown significantly, the above analysis indicates that margins alone remain adequate to ensure NewBank's soundness. Indeed, when diversification benefits are taken into account, market conditions would have to produce losses three times as large as the maximum loss over the ten-year period analyzed in order to exhaust the margins required by repo investors. While such conditions cannot be ruled out entirely, it is worth noting that the period analyzed included the stressed market conditions of 1994, 1998, and 2001-02. Nonetheless, the Working Group believes that NewBank should have $500 million of capital to provide confidence to repo investors and other market participants that would maintain accounts at, and possibly hold deposits with, NewBank.

The WGGSCS concluded that raising $500 million of capital for NewBank would be feasible in the circumstances in which NewBank would be activated. As noted above, to avoid constraints that the BHCA would otherwise impose on some potential owners, no single owner should hold 5 percent or more of NewBank's equity. This implies that no single owner would be asked to contribute $25 million or more. The Working Group agrees that raising $500 million of capital from a group of 21 or more owners would be feasible in the circumstances in which NewBank would be activated. Dealers, in particular, would have strong incentives to invest such relatively modest amounts in NewBank to avoid the significant disruptions to their funding that would result if a loss of market confidence in their clearing bank substantially reduced their access to funding through tri-party repos. Of course, if tri-party repo activity continues to grow rapidly, NewBank's need for capital will need to be re-evaluated periodically (perhaps annually) and may well increase.

Liquidity Risk and Funding. On a day-to-day basis NewBank would need to meet demands for intra-day and overnight liquidity, which arise primarily from its provision of tri-party repo services. As explained above, repos would be unwound early in the day. In the case of overnight repos the cash is returned to the repo investor; in the case of term repos the clearing bank provides the repo investor with cash collateral that substitutes for the securities returned to the dealer. Currently repo investors transfer about 10 percent of the cash that is returned to them to other banks. Tri-party repo activity currently totals $800 billion or more at each clearing bank and the preponderance of those repos (perhaps 90 percent) are overnight repos. Thus, NewBank's daylight overdrafts in its funds account at the FRBNY would likely approach $70 billion and could be significantly larger if repo investors significantly increased the percentage of the cash that they transfer to other banks. NewBank's margins and capital should be sufficient to provide repo investors with sufficient confidence to keep the preponderance of their cash at NewBank during the day. In any event, NewBank would likely need substantial amounts of intraday credit, and the Federal Reserve would need to apply its PSR Policy to NewBank in an appropriate manner and in light of the circumstances at the time of NewBank's activation.

The Working Group has discussed the application of PSR Policy to NewBank with Federal Reserve staff. Staff have indicated that the Federal Reserve recognizes that NewBank would be activated only in extraordinary circumstances involving significant and potentially systemic market disturbances and that NewBank may require significant amounts of intraday credit from the FRBNY to function effectively as a contingency plan. Staff have stated that the Board and the FRBNY would take into consideration those market circumstances and NewBank's needs when assessing how much intraday credit should be extended to NewBank.

Federal Reserve staff have indicated that any such credit extensions would need to be fully collateralized. However, it would not be practical for NewBank to pledge a stable pool of collateral that can be identified in advance of the FRBNY's credit extensions. Thus, the administration of the collateral that would support its credit extensions to NewBank would be complex and therefore pose risks to the Federal Reserve. The Working Group believes that NewBank could propose a plan for addressing the collateral issue as part of the membership application. Under that plan, NewBank would pledge the collateral owned by its dealer clients in which NewBank would have a security interest. Such collateral would also be available to secure any discount window loan extended by FRBNY. The specific collateral that would support that discount window loan would not be identified until tri-party repos are settled (typically between 5:30 and 6:00 pm but sometimes as late as 8:00 pm).

FRBNY would be reliant upon NewBank's margin and related risk management policies and the exiting bank's collateral management system ("CMS") to identify the securities that are pledged to FRBNY and ensure that sufficient collateral was available to fully secure intraday overdrafts any discount window loans. The Working Group understands that Federal Reserve staff would need to make a rigorous evaluation of the relevant policies and systems prior to acting on NewBank's membership application.

During NewBank's dormant phase Federal Reserve staff would need to monitor NewBank's policies and the clearing banks' systems to ensure that they remained highly robust. Should NewBank need to be activated, FRBNY might need to maintain an on-site presence at NewBank and the exiting bank to monitor NewBank's adherence to its credit risk management policies and the performance of the exiting bank's CMS.

In assessing how much collateral was necessary to fully secure credit extensions to NewBank, the Federal Reserve would apply its own haircuts to the collateral that NewBank pledged to it. The haircuts that the Federal Reserve applies to some forms of collateral are higher than the repo market standards for some types of securities.[9] The Federal Reserve intends to evaluate the extent to which the clearing banks' CMSs, by providing more frequent collateral revaluations than the Federal Reserve's own systems, would permit the Federal Reserve to lower its haircuts somewhat without exposing it to greater credit risk.[10] The Federal Reserve also intends to evaluate whether the clearing banks' CMSs would allow it to establish haircuts for the collateral pledged by NewBank on a portfolio basis, which would take into account the diversification benefits that were mentioned above in the analysis of NewBank's capital. At the same time, repo investors may well increase their required haircuts from current levels in the uncertain financial environment in which NewBank would be activated. Nonetheless, the Federal Reserve's haircuts may well remain somewhat higher than the haircuts imposed by repo investors. Consequently, NewBank may well need to require its dealer clients to provide it with additional cash or other collateral (beyond that required by repo investors) to ensure that NewBank can fully collateralize its daylight overdrafts and any discount window loans.

NewBank would also need to be prepared to meet its dealer clients' needs for overnight financing. As the clearing banks do today, NewBank would provide such credit at a rate of interest sufficiently above the overnight repo rate to create incentives for dealers not to rely significantly on such credit as a source of funds. Still, as also is true today, day in and day out a variety of unanticipated operational problems will leave some dealers with funding shortfalls that become apparent so late in the day that they can be met only by NewBank. Such overnight loans could average \$1 billion to \$3 billion, with the peak amount reaching perhaps \$5 billion. The Working Group understands that NewBank would need to make efforts to fund these overnight loans from private market sources rather than rely primarily on discount window loans to fund them. Funding options would be limited because the demand for funds would not become apparent until just before the Fedwire closes. The Working Group believes that the best approach would be for NewBank to arrange lines of credit with the non-exiting clearing bank and several other very large banks. Such credit extensions would be secured by a portion of

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[9] Indeed, the Federal Reserve currently accepts equities only of government sponsored enterprises at the discount window. However, there is no legal impediment to lending against a broad array of equities and haircuts for equities could readily be established.

[10] Credit risk increases with the interval between the last time the collateral was revalued and the time the collateral is liquidated. More frequent revaluations of the collateral and margin calls would reduce the interval, reduce the credit risk, and reduce the size of the haircuts needed to mitigate the risk.

the collateral that had supported NewBank's intraday credit extensions to its dealer clients.[11]

As discussed above, in the event that one of NewBank's dealer clients defaulted, NewBank would need to liquidate the defaulter's securities portfolio. During the liquidation period NewBank would need to fund that portion of the portfolio that had not yet been sold or that had been sold but for which the sales proceeds had not been received. The Working Group assumed that following the default of a large dealer NewBank would be able to borrow only on a secured basis, either in the repo market or, if that is not possible, from the FRBNY at the discount window. At any point in time NewBank's capacity to borrow would depend on the current market value of the portfolio and the haircuts that lenders require. If lenders require higher haircuts than repo investors required prior to the default or the market value of the portfolio declines during the liquidation period, NewBank would not be able to fully meet its funding requirements through such secured borrowings.[12] The first $500 million of any such funding shortfall could be covered by NewBank's equity. But if lenders' haircuts are substantially higher than those required by repo investors prior to a default or collateral values decline significantly, the shortfall could exceed $500 million. For example, if NewBank could obtain funding only through the discount window at the Federal Reserve's standard haircuts, repo investors do not increase haircuts prior to the default, and prices decline as in the maximum loss (with diversification benefits) scenario considered above, NewBank's funding shortfall could reach $1.7 billion.[13]

To address this risk, NewBank may need to require dealers with a significant probability of default (e.g., those that NewBank assigns an internal credit rating equivalent to below investment grade) to provide it with additional cash or other collateral in an amount sufficient to finance their securities portfolio at discount window haircuts. In addition, as noted above, NewBank may need to require all dealers to provide it with additional cash or other collateral to ensure that it can fully collateralize its daylight overdrafts and any discount window loans from the FRBNY.

Size and Composition of NewBank's Shareholder Group and Board

As noted above, the WGGSCS had concluded that NewBank should be owned and capitalized by a broad group of significant market participants, including dealer clients of both clearing banks. The Working Group discussed this issue further and concluded that NewBank should have one class of voting securities and 25 or more shareholders, so that the BHCA issues that would affect some shareholders if they owned 5 percent or more of a class of NewBank's voting securities would not arise even if

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[11] It may be advisable for the line-of-credit banks and the FRBNY to enter into an inter-creditor agreement to enable NewBank to appropriately allocate collateral among them.

[12] Repo investors may well increase their required haircuts from current levels in the uncertain financial environment in which NewBank would be activated.

[13] As noted above, the Federal Reserve intends to evaluate whether more frequent revaluations of collateral or taking into account collateral diversification effects would allow it to lower its haircuts somewhat. If so, NewBank's liquidity shortfall would be proportionately smaller. Nonetheless, as indicated above, the Federal Reserve's haircuts may well remain somewhat higher than the haircuts imposed by repo investors.

mergers or other events reduced somewhat the number of shareholders. The Working Group concluded that a diverse group of shareholders, including not only the dealer clients of both clearing banks but other users of NewBank's services, is desirable but not essential. To encourage a broader, more diverse group of shareholders, the Working Group believes that consideration should be given to a two-tiered shareholder structure in which firms that might not be willing or able to make the same capital contribution as the first-tier shareholders would be permitted to make smaller contributions. NewBank would structure any such two-tiered approach so that no shareholder or group of shareholders would need prior approval under the BHCA to acquire NewBank shares.

The shareholders would elect NewBank's board. The board would be responsible for recruiting and providing oversight and direction to NewBank's executives, including its CEO/COO, CFO, and Risk Management Executive. It is anticipated that these senior executives would be drawn from the ranks of the firms that had contributed to NewBank's capital.[14] They would be responsible for developing and implementing NewBank's risk management policies and procedures. To address concerns about their access to the exiting bank's sensitive data, NewBank's directors and senior executives would need to execute a confidentiality agreement with the exiting bank. Furthermore, their access to customer-specific information would be limited to information necessary for risk management purposes. The exiting bank would provide the managers for the functions it would perform for NewBank under the service agreement.

Encouraging Use of NewBank's Services by Repo Investors

The WGGSCS noted that steps would need to be taken to allow repo investors to make prompt decisions to use NewBank's services upon its activation. As noted above, among the steps that were identified were preparation of an information book to support repo investors' review and approval processes, the preparation of documentation for assigning investors' tri-party agreements with the exiting clearing bank to NewBank, and, perhaps most important, obtaining long-term and short-term credit ratings for NewBank (comparable to those of the clearing banks (A and A1/P1)).

The information book would need to support both ongoing reviews and approvals while NewBank is dormant and review and approval of use of NewBank's services if and when it is activated. Among the information that should be covered in the book is a description of NewBank's ownership and governance and identification of its senior management, a description of its business and products, information on its charter and its regulation, and a variety of financial data, including the amount of its equity and the identity of its owners, a pro forma balance sheet, and an identification of its liquidity sources (its bank lines and the fact that it has access to daylight and overnight credit from the Federal Reserve). Because investors ordinarily would need to audit the operations of

[14] The Management Officials Interlocks Act (12 U.S.C. 3201 et seq.) and New York banking law impose certain restrictions on management interlocks between depository institutions operating in the same geographic areas, which might apply to management interlocks between NewBank and some of its shareholders. However, regulatory exemptions or waivers would likely be available for these interlocks.

any provider of tri-party services, the book should contain a written representation that NewBank will employ the same operations, procedures, and controls as the exiting clearing bank, with any exceptions noted.

The information book would need to be reviewed periodically and, if necessary, updated. Working through the Investment Company Institute and possibly other trade associations, NewBank will need to develop an ongoing communications program to keep key repo investors informed about NewBank and prepared to make prompt decisions to use its services if it should be activated.

Prior to obtaining its charter NewBank will need to develop standard documents that would permit repo investors (and broker-dealers and other clearing bank clients) to approve assignment of their clearance and tri-party repo contracts with the exiting bank to NewBank.

The Working Group has discussed prospects for obtaining a credit rating with representatives of Standard & Poor's. In principle, Standard & Poor's believes that NewBank could be given a rating when it is chartered. The rating would need to be validated if and when NewBank is activated. The rating would be based on a review of NewBank's overall financial capacity and willingness to meet its financial obligations when due. The review would focus on NewBank's financial risks and operational risks (the latter only to the extent that they can impact its financial profile). Standard & Poor's is in the process of identifying the specific information that it would need to assign a credit rating.

4. Conclusions and Recommendation

As discussed above, the Working Group has considered the challenges to implementation of the NewBank concept that were identified by the WGGSCS and believes that all of them can be addressed:

• All of the critical clearing bank functions that NewBank would need to perform can and should be performed for NewBank by the exiting bank under a service agreement.

• Efforts to sell the clearing business to a well-qualified bank should be left in the hands of the exiting clearing bank. Concerns of NewBank's capital providers about the duration of their capital commitments can be addressed by agreeing in advance that if a sale is not consummated within one year of NewBank's activation its operations will be wound down.

• Obtaining approvals for an LPTC charter and membership in the Federal Reserve System before there is a need to activate NewBank would provide comfort that the regulatory applications process would not delay NewBank's activation. Discussions with NYSBD staff confirm that there is no obstacle in principle to the NYSBD granting NewBank an LPTC charter that would be warehoused until an event occurs that requires NewBank's activation, at which time its activation could be authorized by the Superintendent of Banks. Similarly, discussions with Federal Reserve Board staff indicate that they believe that, in principle, there would be no obstacle to the Board considering whether to grant an approval of NewBank's application for membership at the time NewBank files its charter application. The approval would be conditioned so that NewBank could become operational only if the Board (or the person(s) to whom it has delegated its authority) determines that activation is appropriate and NewBank is prepared to assume its responsibilities as a clearing bank.

• At existing levels of tri-party repo activity and repo market margins, $500 million of economic capital should be quite sufficient to provide confidence to repo investors and other market participants. Depending on the behavior of repo investors, NewBank may need substantial amounts of intraday credit from the FRBNY to function effectively as a contingency plan. The Board and the FRBNY would take into consideration market circumstances and NewBank's needs when assessing how much intraday credit should be extended to NewBank. The Working Group understands that any such credit extensions would need to be fully collateralized. The administration of the collateral that would support FRBNY's credit extensions to NewBank would be complex and therefore pose risks to the Federal Reserve. Thus, NewBank's margin and related risk management policies and the exiting bank's collateral management system would be especially important and must ensure that sufficient collateral is available to fully secure intraday credit and any discount window loans that would result if NewBank were unable to cover its daylight overdraft by the close of Fedwire. Furthermore, NewBank is likely to need to require its dealer clients to provide it with additional cash or other collateral to ensure that NewBank meet the Federal Reserve's requirement that it fully collateralize its daylight overdrafts and any discount window loans. To appropriately limit its reliance on discount window loans to finance its overnight credit extensions to dealers, NewBank should arrange lines of credit with the non-exiting clearing bank and several other very large banks.

• Based on its discussions, the Working Group believes that repo investors will use NewBank if adequate preparations are made to support prompt decisions at the time of its activation and if NewBank is given credit ratings comparable to those that the clearing banks have currently.

Consequently, the Working Group believes that the NewBank concept should be actualized by applying for an LPTC charter from NYSBD and applying for membership in the Federal Reserve System.

Before the relevant applications could be submitted, however, additional work would need to be undertaken, including drafting the service agreements with the clearing banks, drafting the shareholder agreement and identifying 25 or more shareholders, proposing directors and senior officers, developing risk management policies, including policies to ensure that NewBank has adequate collateral to meet its needs for intraday and overnight liquidity, making and testing systems changes necessary for rapid activation of NewBank, arranging lines of credit with the clearing banks and other large banks, preparing an information package for repo investors and standard documents for assigning tri-party repo agreements to NewBank, and obtaining credit ratings for NewBank from one or more of the rating agencies.

The Working Group has requested that The Bond Market Association ("TBMA") lead the next phase of detailed work to implement the NewBank concept which will include among other tasks, obtaining a charter for NewBank from the NYSBD and membership approval from the Federal Reserve. The Working Group believes, as with this current phase of work, that it is important for all parties that have a stake in clearing and settlement of government securities, including money market mutual funds and other repo investors, to be involved in actualizing NewBank. The Working Group believes that TBMA has the composition, credibility, and capability to lead this effort and is the organization most able to bring all relevant parties to the table to complete the project.

Governance of the next phase of work under TBMA leadership will need to be organized in a fashion similar to the previous two work groups. The project will need a Chair or Co-Chairs with high integrity, persons that occupy senior positions in their firms, persons considered well-respected by their peers and able to bring parties of diverse views and perspectives to consensus and decision. It is likely that sub-groups of functional and technical experts from firms active in the market, assisted by the TBMA and its staff who will act as project managers, will undertake much of the substantive and analytical work. TBMA senior staff have indicated that TBMA is willing to undertake leadership of this next phase and has obtained all necessary approvals from its board of directors for TBMA's participation in the project.

The Working Group recommends that a core group of its members be constituted a steering committee to advise and assist TBMA as it works to actualize the NewBank concept. Such a steering committee would help ensure continuity of the next and final phase of the work with the work already completed by the Working Group and the WGGSCS. Members of the steering committee would also be expected to be advocates for the completion of the work, especially for the necessary capital commitments, both within their own firms and throughout the financial services industry. The steering committee would be expected to meet infrequently (perhaps twice a year), but individual members would be expected to make themselves available to TBMA on an ongoing basis.

Members of the Working Group

Chairman

Deloitte Consulting	Michael Urkowitz

Members

Bank of New York	Art Certosimo
The Bond Market Association	Eric Foster Robert Toomey
Cantor Fitzgerald Securities	Stephen Merkel
Deutsche Bank Securities, Inc.	Lou Fusco
Federated Investors	Deborah Cunningham
Fidelity Investments	Curt Hollingsworth
Fixed Income Clearing Corporation	Jeffrey Ingber
Goldman, Sachs & Co.	Louis Piliego
Investment Company Institute	Lawrence Maffia
J.P. Morgan Chase	Allen Clark Jane Buyers Russo
Lehman Brothers	Robert Azerad Ian Lowitt
Merrill Lynch	Matthew Flanigan
Morgan Stanley	Thomas Wipf
Salomon Smith Barney (Citigroup)	Patrick Kirby
State Street Bank & Trust Co.	Neil Carfora
UBS Investment Bank	Andrew Watson

Observers and Technical Advisers

Federal Deposit Insurance Corporation	Michael Krimminger
Federal Reserve Bank of New York	Joyce Hansen Christopher McCurdy
Federal Reserve Board of Governors	Patrick Parkinson
New York State Banking Department	Robert Mengani
U.S. Department of the Treasury	Peter Nickoloff
Bureau of the Public Debt U.S. Department of the Treasury	Lori Santamorena
U.S. Securities and Exchange Commission	Robert Colby Jeffrey Mooney Robert Plaze

Secretariat

Federal Reserve Bank of New York	HaeRan Kim

Darryll Hendricks, formerly of the Federal Reserve Bank of New York, also made significant contributions to the preparation of this report.