Senior Financial Officer Survey
May 1996[1]

During the past two years, so-called retail sweep account arrangements at commercial banks have expanded sharply. Although the details of individual sweep programs vary somewhat, all involve transferring balances from retail transaction accounts (which are subject to reserve requirements) to money market deposit accounts (which are not subject to reserve requirements). As a result, the growth of retail sweep accounts has been accompanied by a sharp decline in required reserve balances—the balances that banks must hold at the Federal Reserve to meet reserve requirements. The magnitude of these aggregate trends is apparent in the data presented in Table 1. The cumulative initial amount of retail checking account deposits swept by all banks (column 10) rose from $10 billion in January 1995 to $98 billion in May 1996.[2] [3] Over the same period, required reserve balances for the System (column 8) fell almost $8 billion. Indeed, early this year, required reserve balances dropped to the lowest level in more than thirty years.

At times, low levels of required reserve balances have been associated with increased volatility in the federal funds rate. Most notably, volatility in the federal funds rate increased sharply for a few months in early 1991 following a cut in reserve requirements in December 1990.[4] This experience has raised concerns that the reserve market might again become more volatile at some point as required reserve balances continue to decline. Where that point is and

---

[1] This document was prepared by the Division of Monetary Affairs (James Clouse and Brian Reid with research assistance by Tilling Lee), Board of Governors of the Federal Reserve System.
[2] For the purpose of this summary, the term "banks" includes commercial banks and all other types of depository institutions.
[3] Figures are the estimated national total of transaction account balances initially swept into money market deposit accounts owing to the introduction of new sweep programs, on the basis of monthly averages of daily data. The Federal Reserve does not receive updates on the amounts being swept after the introduction of a sweep program.
[4] In December 1990, the Board of Governors reduced the required reserve ratio on nonpersonal time deposits and net Eurodollar liabilities from 3 percent to 0 percent. This action reduced the level of required reserve balances by $11-1/2 billion.

how volatile markets might become depends considerably on how banks would manage their accounts at Federal Reserve Banks (Fed accounts) with minimal required reserve balances.

Table 1: Profile of Survey Banks

Survey Respondents

	Required Reserve Balances (RRB) $ Billions (1)	Number of Banks with RRB > 0 (2)	Required Clearing Balances (RCB) $ Billions (3)	Number of Banks with RCB > 0 (4)	Retail Sweeps $ Billions (5)	Number of Banks with Retail Sweeps > 0 (6)
Jan 1995	7.7	49	1.1	17	1.8	2
May 1996	4.8	46	2.2	31	40.2	38

Memo: Federal Reserve System

	RRB $ Billions (8)	RCB $ Billions (9)	Retail Sweeps $ Billion (10)
Jan 1995	24.0	4.2	10
May 1996	16.1	5.8	98

To gain a better understanding of these issues, the Federal Reserve surveyed senior financial officers at fifty large commercial banks, with respondents selected from each Federal Reserve District. The mean asset size of the survey banks was $32 billion, and total assets of the survey banks accounted for more than one-third of all commercial bank assets. Given the nature of the sample, the results of the survey are most indicative of large bank behavior.

Overall reserve trends for the sample banks parallel those for the System as a whole. The total level of required reserve balances at the panel banks fell nearly $3 billion between January 1995 and May 1996 (column 1) or 38 percent—required reserve balances for all banks fell about 33 percent over the same period (column 8). As of May 1996, four of the respondents met their reserve requirements entirely with vault cash and thus did not need to hold any balances in their Fed accounts to meet reserve requirements (column 2). Much of the decline in required reserve balances for the panel banks occurred at those that had implemented retail sweep programs. A total of thirty-eight respondents had established sweep accounts by May 1996, compared with only two in January 1995 (column 6). Over the same period, the cumulative amount of deposits swept by these banks increased from about $2 billion to $40 billion (column 5).

Demand for End-of-Day Balances and Reserve Management

The federal funds rate, which plays a key role in the conduct of monetary policy, is determined primarily by the aggregate demand for end-of-day Fed account balances and the aggregate quantity of balances supplied by the Federal Reserve. In large part, the aggregate demand for Fed account balances derives from banks' needs to maintain balances to meet reserve requirements. Reserve requirements are based on banks' average deposit levels over a two-week computation period that begins on a Tuesday and ends on a Monday fourteen days later.[5] Banks satisfy reserve requirements with vault cash and Fed account balances held on average over a nearly contemporaneous two-week maintenance period that begins on the Thursday following the start of the computation period.[6] Only balances held at the end of the day are used to satisfy reserve requirements. Consequently, it is the end-of-day demand for balances that drives the federal funds rate as banks purchase funds in the market during the day to achieve a desired end-of-day balance.

This structure of reserve requirements allows banks flexibility in the daily pattern of Fed account balances that they can target during the maintenance period. For example, if a bank's Fed account balance dips unexpectedly on a particular day, it can hold higher balances over the remainder of the maintenance period; conversely, a bank can hold lower balances over the remainder of a maintenance period if its Fed account balance on a particular day rises unexpectedly.

The opportunity for banks to substitute balances across days of the maintenance period in meeting reserve requirements helps to stabilize the federal funds rate. For example, if the federal funds rate on a particular day moves well above the level expected to prevail over the remainder of the maintenance period, some banks might sell additional funds in the market by running down their Fed account balances or at least refraining from building up their balances as they might otherwise have done. This, in turn, works to relieve the upward pressure on the federal

---

[5] The two-week average structure for computation and maintenance periods applies to banks with more than $4.3 million in reservable deposits and at least $57 million in total deposits. A separate structure applies to other banks with positive reserve requirements.

[6] Vault cash maintained over the previous maintenance period is eligible to satisfy reserve requirements in the current period.

funds rate. Most of the banks on the survey indicated some willingness to arbitrage across days of the maintenance period. Indeed, one-quarter of the banks reported that their reserve management strategy was primarily driven by variations in the federal funds rate across days in the maintenance period. Most banks that relied on other reserve management strategies noted that they would depart from their typical behavior if the federal funds rate moved significantly above or below the level expected to prevail during the remainder of the maintenance period.

While banks manage their Fed accounts primarily to meet their reserve requirements they do so while also attempting to avoid holding excess reserves or incurring end-of-day overdrafts (overnight overdrafts). Excess reserves are costly to banks because they earn no interest. Banks avoid overnight overdrafts in their Fed accounts because they are charged a penalty for overdrafts.[7] Overdrafts can occur as a result of unexpected debits to banks' Fed accounts; such debits often arise because banks do not have complete information about all transactions that can affect their accounts.

To avoid overdrafts, banks typically attempt to keep their end-of-day Fed account balances above some minimum level. For example, banks on the survey were asked to report the minimum level of Fed account balances they would choose to maintain at the close of Fedwire.[8] The median minimum level was $17.5 million, with one-quarter of the banks reporting minimum levels below $10 million and one-quarter reporting minimum levels above $40 million.

The factor that banks cited as most important in generating a demand for a positive minimum end-of-day Fed account balance was the uncertainty that unexpected off-line transactions posted to Fed accounts after the close of Fedwire might result in an overnight overdraft.[9] About 80 percent of banks also noted that the potential for revisions to earlier postings that might place them in overdraft was a significant concern. Finally, several banks

---

[7] Overnight overdrafts in banks' Fed accounts are charged a penalty rate of 4 percentage points over the effective federal funds rate on the day of the overdraft with a minimum charge of $100. Higher overdraft charges are applied if an institution exceeds three overdrafts in a moving twelve-month period.

[8] The standard closing time for Fedwire is 6:30 p.m. Eastern Time.

[9] Off-line transactions are those for which debits and credits to banks' Fed accounts are not recorded on a real-time basis. Examples include check clearings and cash shipments.

indicated that the potential for daylight overdrafts early on the following day was a concern leading them to hold positive end-of-day Fed account balances.

At times, the demand for end-of-day Fed account balances to avoid overnight overdrafts can limit the degree to which banks can substitute reserve balances across days of the maintenance period. When required reserve balances are quite high, this is unlikely to be a frequent problem because the level of balances that banks maintain in their accounts each day to meet reserve requirements is more than sufficient to guard against overnight overdrafts. However, as the level of required reserve balances falls, the underlying precautionary demand for balances to avoid overdrafts can become important. These precautionary demands are likely to be quite unresponsive to interest rates—many banks are willing to pay very high rates of interest on funds in the market to avoid overdraft penalties. In addition, the level of balances that banks need to protect against overdrafts can change considerably from day to day depending upon variations in transaction volumes and other factors affecting uncertainty about their end-of-day reserve position. Finally, banks cannot apply excess reserves held on other days of the maintenance period to cover an overdraft on a given day and, as a result, the potential for overnight overdrafts tends to limit banks' ability to substitute balances across days in a maintenance period.

To pinpoint days on which uncertainty about their end-of-day position may be greater and, as a result, demands for balances to avoid overnight overdrafts might be higher, banks were asked to report the extent to which flows through their Fed accounts were more uncertain for specific dates when transaction volumes are known to be heavy. The respondents indicated that flows were much more uncertain on corporate tax payment dates and at ends of calendar quarters, and about one-third of banks reported that their desired minimum Fed account balance was somewhat to considerably higher on these days. Respondents also indicated that flows were moderately more uncertain on Social Security payment days, individual income tax payment dates, and month-ends but only somewhat more uncertain at the ends of maintenance periods and ·on business days preceding and following holidays. Some banks desired to hold higher minimum balances on these days as well.

Along with the specific days on which account uncertainty is high, banks were asked to report operational factors that complicate Fed account management late in the day. Such factors may contribute to demands for end-of-day balances and at the very least create volatility in the federal funds market late in the day as banks adjust their Fed accounts in response to these factors. Two-thirds of the respondents indicated that difficulty in obtaining complete information on transactions originating from various departments within their banks was an important or very important factor complicating late-day account management; many also cited uncertainty about late-day funds transactions on behalf of their customers. About half of the banks noted that late-day fails on funds transfers and difficulties in obtaining complete information on transactions originating from affiliates were important factors complicating account management. Finally, some banks cited uncertainty about their ability to buy or sell funds in the market late in the day.

Banks, including those that have experienced reductions in required reserve balances, can take steps to reduce the probability of Fed account overdrafts and to restore flexibility in managing their daily reserve position. For example, banks can establish an arrangement known as a clearing balance requirement, in which they agree to hold a predetermined level of balances beyond those held to meet reserve requirements. These balances earn implicit interest in the form of earnings credits that can be used to offset service charges for Federal Reserve priced services. This option has become quite popular in recent years. Indeed, as shown in Table I, required clearing balances for the panel banks increased by $1.1 billion between January 1995 and May 1996 (column 9), with more than 85 percent of the increase occurring at panel banks with sweep programs. Furthermore, the number of banks on the panel that had established a clearing balance requirement increased from seventeen to thirty one over the same period (column 4).

Among banks on the survey, the most important reasons given for maintaining required clearing balances were increased flexibility in managing their Fed accounts and greater protection against overnight overdrafts. A few banks also noted that required clearing balances provided additional protection against penalties for reserve requirement deficiencies. Despite these benefits, not all of the survey banks had established clearing balance requirements. Many of those that had not set up such relationships reported that their required reserve balances provided adequate protection against overnight overdrafts and that alternative assets provided more attractive returns. One-third of the banks reported that an important reason for not setting up a required clearing balance was because their Federal Reserve priced service charges were not large enough to support a clearing balance requirement that would provide much additional flexibility in managing their Fed account.[10]

As required reserve balances continue to decline, the demand for total balances held in banks' Fed accounts will likely continue to contract and could become more difficult for the Federal Reserve to predict. Furthermore, the lower level of required reserve balances implies that banks will be less able to substitute balances across days within the maintenance period, potentially leading to a more volatile federal funds rate. To date, however, there is little evidence of such developments, likely because banks still hold balances that exceed levels needed to avoid overdrafts and that allow them to substitute balances across days of the maintenance period. Indeed, the median spread of required Fed account balances (required reserve balances plus required clearing balances) over the reported target minimum balance at panel banks has declined only moderately since January 1995—from $98 million to $87 million.

With the degree to which banks might be able to address reserve management problems uncertain, some analysts have suggested various measures to foster stability in the reserve market. One proposal is for the Federal Reserve pay interest on required reserve balances, a measure that would require legislation. This step would greatly reduce the burden that banks bear in meeting reserve requirements (and also their incentives to avoid reserve requirements through sweep programs or other innovations) and still allow the Federal Reserve effective control of daily short-term interest rates. Banks on the survey were asked how they might respond if interest were paid on required reserve balances. Three-quarters of respondents indicated that they would economize on vault cash to some extent so as to meet more of their reserve requirement with balances in their Fed account. Banks were also asked whether paying interest on required reserve balances would affect their retail sweep programs. More than two-thirds of the banks indicated that they would discontinue their retail sweep programs either immediately or over time if interest were paid on required reserve balances. These responses suggest that paying interest on required reserve balances would potentially benefit monetary policy implementation

[10] In addition, a few banks reported that regulatory capital requirements and administrative constraints associated with required clearing balances were significant factors discouraging them from establishing a clearing balance requirement.

by increasing required reserve balances and helping to stabilize the demand for end-of-day balances.

Daylight Overdrafts

All of the discussion above focused on the demand for end-of-day Fed account balances. Another factor that might influence the federal funds rate at times is banks' desire to maintain positive balances in their Fed account during the day. In recent years, for example, the Federal Reserve has implemented a range of policies designed to encourage depositories to manage their accounts more closely during the day. These policies have been successful in prompting institutions to reduce the extent to which they run daylight overdrafts.[11] Indeed, these policies may have indirectly helped banks reduce uncertainty about their end-of-day account balances by encouraging closer monitoring and control of Fed account transactions.

Survey banks were asked to report the extent to which they had taken certain measures to reduce their level of daylight overdrafts. Many banks indicated that they delay funds transfers as a means of avoiding daylight overdrafts. In addition, some banks purchase funds earlier in the day and a few conduct more transactions over CHIPS to take advantage of deferred net settlement. Other possible actions to reduce daylight overdrafts, such as arranging for more government securities transactions through the Government Securities Clearing Corporation, use of tri-party repurchase agreements, increased clearing through correspondents, and increased use of rollover and continuing contracts for federal funds, were not reported as significant actions taken to reduce daylight overdrafts.

Potential Responses to Interest Rate Volatility

Increased volatility in the federal funds rate associated with low required reserve balances is possible at some point in the future. To help gauge the potential impact of increased interest rate volatility on market practices, survey respondents were asked about their likely actions if the federal funds rate were to become more volatile for a prolonged period. Over half of the banks

---

[11] For a thorough discussion, see the article by Heidi Willmann Richards in the December, 1995, Federal Reserve Bulletin entitled "Daylight Overdraft Fees and the Federal Reserve's Payment System Risk Policy."

indicated that they would increase their funding in other overnight markets and in term markets.[12] In addition, about one-third reported that they would be more willing to engage in arbitrage trades between the federal funds market and other overnight markets and more willing to tum to the discount window. A few banks indicated that increased volatility in the federal funds market would result in a decrease in their willingness to extend overnight credit to brokers, depository institutions, and others.

Discount Window Borrowing

The potential for volatility in the federal funds rate with low required reserve balances could be reduced if banks were more willing to tum to the discount window. When banks are willing to borrow from the Federal Reserve, the discount window can act as a shock absorber in the reserve market. When reserves are in short supply and the federal funds rate moves quite high relative to the discount rate, more banks tend to borrow at the window, thereby adding reserves to the system and muting the upward pressure on the federal funds rate. Through the early 1980s, banks did seem to exhibit this behavior. However, beginning in the mid-1980s, the level of borrowing at the discount window began to fall below levels that would have been anticipated based upon historical patterns. That is, the federal funds rate now needs to move to a higher level relative to the discount rate for banks to obtain a given amount of reserves from the discount window. Many analysts attributed part of this increased reluctance to borrow at the window to the period of distress in the banking industry and market perceptions that discount window borrowing can be a sign of financial weakness. However, despite the marked improvement in the health of the banking industry since the early 1990s, discount window borrowing has remained well below levels predicted by earlier historical relationships.

To identify factors governing current borrowing behavior, banks were asked to report their primary considerations in determining whether to request a discount window loan. About two-fifths of the respondents rated as important or very important whether discount officers at Federal Reserve Banks and senior management within their own bank would view the borrowing

[12] Such responses may have been predicated on an assumption that interest rate volatility in these other markets would not increase.

as appropriate. Some banks reported concerns that bank examiners might view occasional reliance on the discount window as inappropriate. Somewhat fewer banks cited concerns about the market perception of discount window borrowing as important.[13] Very few banks indicated that availability of collateral or the administrative burden of borrowing were significant factors discouraging their use of the discount window.

Banks were also asked to rate the importance of various technological and institutional factors that may have reduced their need to borrow at the discount window in recent years. Many banks reported that improved internal information systems had reduced the incidence of unanticipated, late-day funding needs. Similarly, many banks pointed to the Federal Reserve's Account Balance Monitoring System (ABMS), which provides depository institutions with real-time information on their Fed account balances, as another important factor reducing the potential for unanticipated funding needs. A few banks cited the Federal Reserve's payment system risk policies and programs to alert banks with unusual account overdrafts late in the day as significant factors reducing their need to borrow at the window. Lastly, some analysts have suggested that the availability of short-term advances for commercial banks from the Federal Home Loan Banks might have reduced the level of discount window borrowing in recent years.[14] Of the respondents that were FHLB members, however, few indicated that the availability of FHLB advances was a significant factor reducing their level of discount window borrowing in recent years.

Practices in Lending Federal Funds to Smaller Institution Outside the Brokered Market

Anecdotal information suggests that small institutions often face various constraints in accessing overnight funds. For this reason, smaller institutions might be more reluctant than large institutions to arbitrage variations in the funds market. In addition, small institutions

[13] The Federal Reserve holds information about borrowing by individual banks in the strictest confidence. However, market participants at times have attempted to infer which bank might have borrowed from their knowledge of banks that were aggressively bidding for funds in the market late in the day and from the publication of aggregate data on borrowing broken down by Federal Reserve district.

[14] Commercial banks became eligible to join the Federal Home Loan Bank (FHLB) system in 1989 with the passage of the Financial Institutions Reform, Regulation, and Enforcement Act. Since then, more than 3,500 commercial banks have become FHLB members.

borrowing from larger banks might cause difficulties for the latter group in managing their own reserve positions. To learn more about the federal funds market for smaller institutions, the survey asked respondents about their lending practices to smaller institutions.

More than 90 percent of the respondents reported providing overnight funds to smaller institutions on a regular basis. Most indicated that they establish maximum credit limits for each counterparty and that the financial condition of the borrower is a prime factor determining the limit. More than half of the banks also indicated that they require collateral for some overnight lending with the condition of the borrower again being an important consideration.

Most survey respondents indicated that they set cutoff times for receiving overnight funding requests; the median cut-off time was 4:00 p.m. (standardized to Eastern Time for all banks). However, about half of the banks reported that they would be moderately to very willing to extend funds past their formal cutoff time. Lastly, three-quarters of the banks indicated that their internal controls limited the number of consecutive days for which they were willing to lend to any individual institution; the median consecutive days limit was about seven days.

Summary

The implementation of retail sweep programs has reduced the demand for balances that banks hold in their Fed accounts. Thus far, banks seem to have been able to operate with the lower balances. Survey results indicate that through expanded clearing balances, improved internal information systems, and access to real-time information on Fed account balances through the Federal Reserve's ABMS system, banks have been able to operate effectively with low required reserve balances. As result, there has been little evidence of increased volatility in the federal funds rate and funding difficulties of the type that marked the period of low required reserve balances in early 1991.

However, the survey results also seem to suggest that banks' underlying demands for end-of-day balances to avoid overnight overdrafts, while perhaps lower than in the past, are variable and could become more apparent if required reserve balances continue to decline. As a result, larger variation in the federal funds rate around intended levels remains a possibility at some point in the future. The survey results concerning banks' attitudes toward the discount window tend to support this general outlook; despite the improved health of the banking system, many banks reported continued concerns about turning to the discount window. Absent fundamental changes in these attitudes toward borrowing from the Federal Reserve, it seems unlikely that discount window borrowing would provide reserves in the quantities necessary to accommodate large daily changes in the demand for end-of-day balances without appreciable variation in the federal funds rate.

The survey evidence concerning the impact of a sustained increase in federal funds rate volatility suggests the potential for a modest spillover in other markets. Most notably, the survey banks reported they might pursue funding more extensively in term markets and might reduce their willingness to extend overnight credit to brokers and dealers, other customers, and smaller banks. Smaller banks might well be the most vulnerable in a period of increased federal funds rate volatility.

The survey banks reported that they already typically apply various administrative criteria in their lending to smaller banks outside the brokered market. To the extent that the willingness of larger banks to extend overnight credit to smaller banks is reduced in a volatile federal funds market, such administrative criteria employed in lending to smaller banks might be expected to become stringent.

Appendix A

Senior Financial Officer Survey May 1996

1A. What is the minimum level of *Fed account* balances that your bank would choose to maintain at the close of the *Fedwire funds transfer system* (Fedwire)?

Millions of dollars

25th Percentile	Median	75th Percentile	Total Banks (count)
10	17.5	40	50

1B. Please indicate which factors are most important in explaining why you would not intentionally hold a lower minimum balance than indicated in 1A.

Number of Banks

	1 (Not Important)	2	3	4	5 (Very Important)	Total
(i) Possibly that some unexpected *off-line transactions* may result in debits to your Fed account after the close of Fedwire that would result in an *overnight overdraft.*	0	2	8	5	35	50
(ii) Possibility that your Fed account balance might later be revised downward reflecting corrections to earlier postings, resulting in an overnight overdraft.	3	7	9	12	19	50
(iii) Possibility that large off-line debits to your Fed account at the opening of Fedwire on the **following** day might result in large daylight overdrafts.	19	14	8	2	7	50

1C. Please indicate how the minimum balance reported in 1A would be affected on the following days.

Number of Banks

	1 (Substantially Decrease)	2	3 (No Change)	4	5 (Substantially Increase)	Total
(i) Settlement of weekly Treasury bill auctions	0	0	50	0	0	50
(ii) Settlement of monthly two- and five-year Treasury note auctions	0	5	45	0	0	50
(iii) Settlement of Treasury midquarter refunding auctions	1	4	44	1	0	50
(iv) Social security payment dates	0	2	36	9	3	50
(v) Corporate income tax payment dates (March, April, June, September, December)	1	5	27	13	4	50
(vi) Individual income tax payment date (January, April, June, September)	0	3	34	11	2	50
(vii) Reserve maintenance period ends	1	1	24	13	9	48
(viii) Business day preceding a holiday	1	3	34	12	0	50
(ix) Business day following a holiday	0	2	38	9	1	50
(x) Month-end	0	3	39	8	0	50
(xi) Quarter-end	3	4	28	13	2	50

2A. Please indicate the reserve management strategy that your bank typically follows (check only one).

	Number of Banks
Targeting a roughly constant end-of-day balance for all remaining days of the maintenance period.	8
Running a modest negative *preliminary gross cumulative reserve position* until late in the maintenance period.	26
Running a modest positive preliminary gross cumulative reserve position until late in the maintenance period.	3
Other	13

2B. Please indicate the extent to which the following developments on a given day might cause your bank to depart from the typical strategy identified above.

Number of Banks

	1 (Not at All)	2	3	4	5 (To a Large Extent)	Total
The level of the federal funds rate moves significantly above/below the level expected to prevail during the remainder of the maintenance period.	3	3	3	18	23	50
Uncertainty about the volume of flows through your bank's Fed account increases significantly.	4	5	18	12	11	50

2C. Over the last few years, how frequently has your bank experienced difficulty in obtaining the desired quantity of overnight funds?

Number of Banks

1 (Very Infrequently)	2	3	4	5 (Very Frequently)	Total Banks
41	7	1	1	0	50

2D. In recent months, how frequently has your bank experience difficulty in obtaining the desired quantity of overnight funds?

Number of Banks

1 (Very Infrequently)	2	3	4	5 (Very Frequently)	Total Banks
40	6	4	0	0	50

3A. Please indicate the extent to which the flows through your bank's Fed account are more uncertain on the following days.

Number of Banks

	1 (Not at All)	2	3	4	5 (To a Large Extent)	Total Banks
(i) Settlement of weekly Treasury bill auctions	27	10	12	1	0	50
(ii) Settlement of monthly two- and five-year Treasury note auctions	24	6	12	7	1	50
(iii) Settlement of Treasury midquarter refunding auctions	23	6	12	5	4	50
(iv) Social security payment dates	8	8	15	16	3	50
(v) Corporate income tax payment dates (March, April, June, September, December)	4	6	13	14	13	50
(vi) Individual income tax payment date (January, April, June, September)	7	9	15	13	6	50
(vii) Reserve maintenance period ends	13	12	12	9	4	50
(viii) Business day preceding a holiday	10	13	13	12	2	50
(ix) Business day following a holiday	9	10	14	12	5	50
(x) Month-end	7	10	14	14	5	50
(xi) Quarter-end	5	5	9	21	10	50
(xii) Expiration dates for exchange-traded options and future contracts	30	10	8	2	0	50

3B. Please rate the importance of the following developments in complicating reserve management late in the day (say, after 4:30 pm Eastern time).

Number of Banks

	1 (Not Important)	2	3	4	5 (Very Important)	Total Banks
(i) Difficulties in obtaining complete information on the transactions originating from various departments within your bank.	3	3	10	13	21	50
(ii) Difficulties in obtaining complete information on transactions originating from affiliates within your holding company.	7	3	19	12	9	50
(iii) Uncertainty about your position after the settlement of the Clearing House Interbank Payments System (CHIPS).	20	10	15	3	0	48
(iv) Uncertainty about your ability to buy or sell funds in the market in desired quantities late in the day.	13	8	15	10	4	50
(v) Uncertainty about late-day *third-party funds transactions* posted to your Fed account.	5	2	12	21	10	50
(vi) The potential for late-day fails on funds transfers that are difficult to cover by the close of the Fedwire.	8	9	9	12	12	50

4A. If your bank has decided to establish a *clearing balance requirement* at the Federal Reserve, please indicate the importance of the following factors in influencing this decision.

Number of Banks

	1 (Not Important)	2	3	4	5 (Very Important)	Total Banks
(i) Lack of adequate protection against overnight overdrafts provided by Fed account balances your bank holds to satisfy reserve requirements.	5	3	5	7	11	31
(ii) Additional flexibility provided by a clearing balance requirement in managing large positive cumulative reserve positions.	3	1	6	8	13	31
(iii) Additional protection against *daylight overdrafts* afforded by the increase in Fed account balances held to meet a clearing balance requirement.	8	6	8	4	5	31
(iv) Additional protection against penalties for reserve requirement deficiencies afforded by the increase in Fed account balances held to meet a clearing balance requirement.	6	6	9	6	4	31
(v) The reduction in your bank's reported non-interest expenses resulting from earnings credits against *Federal Reserve priced services charges* that accrue for Fed account balances held to meet a clearing balance requirement.	6	5	7	8	5	31

4B. How important are the following factors in determining the size of your bank's clearing balance requirement?

Number of Banks

	1 (Not Important)	2	3	4	5 (Very Important)	Total Banks
(i) Maintaining large enough Fed account balances to avoid overnight overdrafts.	5	4	5	6	11	31
(ii) Maintaining large enough Fed account balances to avoid daylight overdrafts	11	6	7	3	4	31
(iii) Maintaining large enough balances so as to generate earnings credits sufficient to cover your bank's Federal Reserve priced service charges.	1	5	7	9	9	31

5. If your bank has not established a clearing balance requirement, please indicate the importance of the following factors in influencing this decision.

Number of Banks

	1 (Not Important)	2	3	4	5 (Very Important)	Total Banks
(i) Your bank's *required reserve balances* provide adequate protection against overnight overdrafts.	0	2	3	5	9	19
(ii) Attractiveness of returns on alternative assets relative to *earnings credits* on Fed account balances held to meet a clearing balance requirement.	2	1	5	4	7	19
(iii) Regulatory capital requirements on Fed account balances held to meet a clearing balance requirement.	4	5	6	1	2	18
(iv) Your bank's *Federal Reserve priced services charges* are minimal and hence would not support a clearing balance requirement large enough to provide much additional flexibility in reserve management.	5	3	5	3	3	19
(v) Administrative constraints associated with a clearing balance requirement, including the need to meet a predetermined 14-day average level and the penalties assessed for not meeting this requirement.	6	2	2	6	3	19

6. For your bank, please characterize the importance of the following factors in influencing the decision whether or not to request a discount window loan in the event of an unexpected funding need that cannot be readily met with funds obtained in the market.

Number of Banks

	1 (Not Important)	2	3	4	5 (Very Important)	Total Banks
(i) Concern that Federal Reserve discount officers might not view the borrowing request as appropriate.	10	6	13	11	10	50
(ii) Concern that market participants might learn that your bank has borrowed from the discount window and conclude that your bank is in weak financial condition.	16	8	8	11	7	50
(iii) Concern that bank examiners might view occasional reliance on the discount window as inappropriate.	14	4	12	9	11	50
(iv) Concern that senior management within your bank might view use of the discount window as inappropriate or unacceptable.	10	7	10	9	14	50
(v) Availability of collateral to secure a discount window loan.	28	3	3	8	8	50
(vi) Concern about the administrative burden entailed in obtaining a discount window loan.	36	2	6	4	2	50

7. Please characterize the degree to which the following factors may have reduced your bank's need to borrow at the discount window in recent years.

Number of Banks

	1 (Not Important)	2	3	4	5 (Very Important)	Total Banks
(i) Improved internal information systems have reduced the incidence of unanticipated, late-day funding needs.	8	2	9	16	14	49
(ii) Improved real-time Fed account information available through the Federal Reserve's *Account Balance Monitoring Systems* (ABMS) has reduced the incidence of unanticipated, late-day funding needs.	4	1	8	16	20	49
(iii) The Federal Reserve's payment system risk policies have led to more active account management by your bank.	12	11	13	7	6	49
(iv) Calls from Reserve Bank staff late in the day to alert banks if their Fed account balances are unusually low.	28	6	10	3	2	49
(v) Availability of short-term advances (distinct from federal funds) from Federal Home Loan Banks for their member depository institutions (if bank is a FHLB member).	7	4	6	2	2	21

8. To what extent has your bank taken any of the following actions to reduce the potential for incurring daylight overdrafts?

Number of Banks

	1 (Not at All)	2	3	4	5 (To a Large Extent)	Total Banks
(i) Delaying funds transfers.	4	7	17	11	11	50
(ii) Purchasing funds earlier in the day.	13	8	16	8	5	50
(iii) Conducting more transactions through CHIPS to take advantage of deferred net settlement.	22	8	11	5	1	47
(iv) Arranging for more government securities transactions to be cleared through the Government Securities Clearing Corporation (GSCC) to take advantage of deferred net settlement.	32	7	10	1	0	50
(v) Increased usage of "*tri-party repurchase agreements*" for U.S. Treasury and Agency security transactions.	34	5	4	4	2	49
(vi) Increased clearing of transactions through correspondents.	34	7	8	1	0	50
(vii) Increased use of *rollover or continuing contracts* for federal funds and repurchase agreements (RPs).	21	13	8	5	3	50

9. If your bank's required reserve balances were to decline permanently to a very low level, to what extent would your bank take the following actions?

Number of Banks

	1 (Not at All)	2	3	4	5 (To a Large Extent)	Total Banks
(i) Expand or establish a clearing balance requirement with the Federal Reserve.	1	3	8	16	21	49
(ii) Reduce vault cash holdings so as to meet more of your reserve requirement with balances.	6	5	14	9	15	49
(iii) Initiate more payments through CHIPS to take advantage of deferred net settlement.	18	7	14	4	1	44

10A. If interest were paid on required reserve balances (based upon the daily effective federal funds rate), to what extent would your bank substitute reserve balances for vault cash in meeting reserve requirements?

Number of Banks

1 (Not at All)	2	3	4	5 (To a Large Extent)	Total Banks
8	8	13	9	12	50

10B. If your bank has implemented an OCD *sweep program*, would your bank discontinue its program if required reserve balances earned interest (based upon the daily effective federal funds rate)?

	Number of Banks
Yes – Immediately	3
Yes – Over time	24
No	11

11. If the overnight federal funds rate were expected to be very volatile for an extended period, please characterize how your bank might change its…

Number of Banks

	1 (Substantially Decrease)	2	3 (No Change)	4	5 (Substantially Increase)	Total
(i) …willingness to extend overnight credit to broker-dealers or other non-depository institutions.	2	6	41	0	0	49
(ii) …willingness to extend overnight credit in direct transactions to other depository institutions.	0	5	45	0	0	50
(iii) …willingness to extend overnight credit to other depository institutions through the brokered market.	1	3	43	3	0	50
(iv) …willingness to engage in arbitrage trades between the federal funds market and other overnight funding markets.	3	2	27	12	6	50
(v) …funding in other overnight markets. (ie. overnight eurodollar and RP markets).	1	0	20	23	6	50
(vi) …funding in term markets. (ie. term federal funds, eurodollar and RP markets).	0	2	18	19	11	50
(vii) …holdings of *excess reserves.*	1	4	40	4	0	49
(viii) …willingness to borrow at the discount window.	3	1	31	10	5	50

12A. Please report the following information on the average daily volume of sales and purchases of overnight federal funds during the first quarter of 1996.

	Mean Balance ($ Millions)	Total Banks
Gross **overnight** federal funds sold	521	48
Gross **overnight** federal funds purchased	1456	48

12B. Please report the following information on the average daily volume of sales and purchases of term federal funds during the first quarter of 1996.

	Mean Balance ($ Millions)	Total Banks
Gross **term** federal funds sold	84	49
Gross **term** federal funds purchased	275	49

13. Do you regularly provide overnight federal funds directly (outside the brokered market) to small banks?

	Number of Banks
Yes	45
No	5

14A. Are maximum credit limits established?

	Number of Banks
Yes	45
No	0

If YES above, please rate the importance of the following factors in establishing the maximum credit limit.

Number of Banks

	1 (Not Important)	2	3	4	5 (Very Important)	Total Banks
(i) Total assets of borrower.	5	6	12	8	13	44
(ii) Financial condition of borrower.	0	0	0	3	41	44

14B. Is collateral ever required?

	Number of Banks
Yes	27
No	18

If YES above, please rate the importance of the following factors in requiring collateral.

Number of Banks

	1 (Not Important)	2	3	4	5 (Very Important)	Total Banks
(i) Financial condition of borrower.	0	0	2	5	20	27
(ii) Balance outstanding under credit line.	3	1	7	3	12	26

14C. Are cut-off times established for overnight funds requests?

	Number of Banks
Yes	37
No	8

(i) If YES above, please indicate what your usual cutoff time is.

Median Time	4:00 p.m.

(ii) Typically, how willing is your bank to extend credit after the cutoff time?

Number of Banks

1 (Never)	2	3 (Sometimes)	4	5 (Frequently)	Total Banks
0	6	16	8	7	37

14D. Are there limits on the number of consecutive days for which you would typically provide overnight funds to a particular institution?

	Number of Banks
Yes	30
No	15

(i) If yes, please indicate the number of days of consecutive overnight funds to a particular institution that your bank would typically allow.

Median Number of Days	Total Banks
7	28