FEDERAL RESERVE SYSTEM

[DOCKET No. OP-1164]

Federal Reserve Currency Recirculation Policy

AGENCY: Board of Governors of the Federal Reserve System.

ACTION: Final policy.

SUMMARY: The Board is revising the Federal Reserve's cash services policy to reduce depository institutions' overuse of Federal Reserve Bank currency processing services, which could affect approximately 150 to 225 depository institutions with high-volume currency operations. The Board is adding two elements to the policy: (1) a custodial inventory program that provides an incentive to depository institutions to hold $10 and $20 notes in their vaults to meet customers' demand, and (2) a fee to depository institutions that deposit fit $10 or $20 notes at a Reserve Bank and order the same denomination, above a *de minimis* amount, during the same business week. In general, the Federal Reserve expects depository institutions to recirculate to their customers fit currency deposited with them and to deposit only excess or unfit currency with Reserve Banks. The Reserve Banks will amend section 3.3 of Operating Circular 2 to implement the provisions of the final policy.

DATES: IMPLEMENTATION TIMEFRAME: Reserve Banks expect to begin accepting requests to participate in the custodial inventory program in May 2006, with program operations beginning in July 2006. Reserve Banks expect to begin assessing recirculation fees in July 2007. Reserve Banks' Cash Product Office will provide notice of the specific dates at least sixty days in advance on the Federal Reserve Financial Services web site at www.frbservices.org.

FOR FURTHER INFORMATION CONTACT: Eugenie E. Foster, Manager (202/736-5603) or John D. Sparrow, Jr., Senior Financial Services Analyst (202/452-3597), Cash Section, Division of Reserve Bank Operations and Payment Systems, Board of Governors of the Federal Reserve System; for users of the Telecommunications Device for the Deaf (TDD) only, (202/263-4869).

SUPPLEMENTARY INFORMATION

I. BACKGROUND

The Problem

The Federal Reserve Banks (Reserve Banks) supply genuine (new and fit) currency and coin to depository institutions to meet the public's cash demand.[1] Historically,

[1] Fit notes are of acceptable quality for circulation, whereas unfit notes are unacceptable. For example, unfit notes are often soiled, torn, or defaced. New notes are previously uncirculated notes that Reserve Banks issue.

Reserve Banks also removed unfit notes from circulation and served as intermediaries among depository institutions, accepting deposits from those with a surplus of fit notes and providing currency to those with a shortfall. Depository institutions, in turn, acted as intermediaries among their customers, recirculating currency from merchant customers, for example, to meet the currency demands of households and other customers.

These traditional patterns have been changing as depository institutions have used fewer fit notes deposited by their customers to fill other customers' orders. Today, depository institutions often order currency directly from Reserve Banks to stock automated teller machines (ATMs) and fill customer orders, depositing notes received from their customers directly with Reserve Banks.

Further, actions taken by many depository institutions to reduce their required reserves have allowed them to reduce their holdings of vault cash.[2] Depository institutions with vault cash in excess of that needed to satisfy reserve requirements have an incentive to economize on holdings of currency in their vaults.[3] Efforts to economize on holdings of currency have led some depository institutions to increase the size and frequency of their deposits of currency to and orders of currency from Reserve Banks.

Reserve Banks' order and deposit activity during 2004 shows that deposits of 7.2 billion fit $10 and $20 notes were followed or preceded by orders of the same denomination by the same institution in the same business week in the same geographic area.[4] This pattern suggests that some depository institutions are relying on Reserve Banks to process a substantial amount of currency that the depository institutions should normally have recirculated to their customers. Further, this activity is concentrated primarily in approximately 40 depository institutions with large currency businesses.[5] Underpinning depository institutions' decisions to use—and overuse—Reserve Bank currency processing services is the fact that Reserve Banks offer basic currency processing services without charge. The Board believes that to minimize the societal cost of providing currency to the public, depository institutions should resume their traditional role of supplying fit currency from their customers' deposits to meet other customers' needs before turning to Reserve Banks to obtain currency.

Current Policy

The Federal Reserve's current cross-shipping policy is described in the Reserve Banks' Operating Circular 2, <u>Cash Services</u>, which states:

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[2] Depository institutions can satisfy their reserve requirements with vault cash, or with reserve balances held at a Reserve Bank either directly or through a pass-through correspondent. Since the mid-1990s, however, many depository institutions have sharply reduced their reserve requirements by sweeping balances held by retail customers in deposit accounts that are reservable into accounts that are not reservable. For some institutions, the reduction in required reserves left them with more vault cash than necessary to meet requirements.

[3] Vault cash holdings do not earn interest. If, however, an institution deposits currency with a Reserve Bank, it receives credit to its account at the Federal Reserve. The depository institution can then earn a positive return on those funds by lending them to another institution, such as in the federal funds market.

[4] This amounts to approximately 39 percent of notes deposited in these denominations, or approximately 19 percent of total deposits to Reserve Banks in 2004.

[5] Approximately 40 of the Reserve Banks' more than 8,000 currency customers are responsible for approximately 90 percent of cross-shipping activity.

> If you deposit fit currency with us, you may not order currency of the same denomination within five business days prior to or following the deposit of that denomination. This practice, known as "cross-shipping," is not permitted at the depositing office level. When practicable, cross-shipping should be minimized or eliminated at the depositing institution level.[6]

The current policy has proven ineffective in reducing or preventing cross-shipping. For example, this policy does not provide sufficient guidance to depository institutions or Reserve Banks with respect to the circumstances under which cross-shipping should not occur. More fundamentally, the only tool that Reserve Banks currently have to enforce the policy is to deny currency services to depository institutions that do not comply with the operating circular requirement. Denial of service would be highly disruptive to the businesses of both the depository institutions and their customers. Also, in the past, Reserve Banks did not have systematic tools for monitoring the quality of specific currency deposits, making the process of identifying cross-shipping cumbersome and costly.

2003 Proposed Recirculation Policy

To provide incentives for depository institutions to adopt, from a societal point of view, the least costly means of recirculating currency to their customers, in October 2003 the Board proposed revising the current policy by adding two inter-related components: a custodial inventory program, and a fee that would be assessed on deposits of cross-shipped currency ("2003 proposed policy").[7]

To mitigate the costs associated with holding currency long enough to facilitate its recirculation, the Board proposed allowing depository institutions to transfer to a custodial inventory no more than 25 percent of the value of their total holdings in the $5 through $20 denominations.[8] To be eligible to hold a custodial inventory, the 2003 proposed policy required a depository institution to be capable of recirculating at least 200 bundles of currency in the eligible denominations per week in a Reserve Bank zone or sub-zone, in order to justify the administrative costs and the risks to Reserve Banks of allowing depository institutions to hold Reserve Bank currency in their vaults.[9]

To provide further incentive for depository institutions to recirculate currency, the Board also proposed establishing a recirculation fee. The fee would reflect Reserve Banks' costs that vary with the quantity of currency processed. The 2003 proposal indicated that, based on Reserve Banks' costs at the time, the fee would be $5 to $6 per bundle of cross-shipped currency.

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[6] Federal Reserve Operating Circular 2, January 2, 1998, section 3.3. http://www.frbservices.org/Cash/index.cfm
[7] See 68 FR 59176, Oct. 14, 2003.
[8] A custodial inventory is currency owned by a Reserve Bank but located within a depository institution's secured facility and segregated from the depository institution's currency.
[9] A bundle of currency is a standard package of 1,000 notes. A zone is the area to which a Reserve Bank office provides currency services. Under the 2003 proposed policy, Reserve Banks could establish sub-zones for large metropolitan areas that are located a significant distance from the nearest Reserve Bank office. Deposits and orders by institutions with branches and vaults in a sub-zone would have been assessed cross-shipping fees separately from the institutions' activities in the rest of the zone.

Depository institutions would pay the fee if they cross-ship $5, $10, and $20 notes above a *de minimis* exemption level of 1,000 bundles of currency cross-shipped per quarter.[10]

Summary and Analysis of Public Comments

Twenty-four entities provided comments on the 2003 proposed policy, including twenty financial institutions and organizations representing financial institutions; two armored carriers; a currency processing equipment manufacturer; and a member of Congress. Several broad themes emerged from the comments. The most frequent comment, made in various ways by fourteen commenters, reflected concern that the policy would lead to deterioration in the quality of currency in circulation. Thirteen commenters asserted that the policy favored depository institutions with certain types of operations or currency volumes over others. Twelve commenters expressed concern that the policy would increase their costs; seven commenters expected that depository institutions would pass these costs on to customers. Nine commenters responded negatively to various aspects of including one-dollar notes in the policy. Nine commenters sought more information about the requirements of the custodial inventory program.

Quality

Many commenters expressed concern that the 2003 proposed policy would adversely affect the quality of currency in circulation because the fee would create an incentive to reduce cross-shipping, but would not necessarily cause the depository institutions to sort fit from unfit notes before paying them to customers.[11] Depository institutions, therefore, could choose to recirculate unfit notes to their customers to avoid the risk of incurring fees in the event that they deposit fit notes with Reserve Banks. Reserve Banks, however, believe that many depository institutions have or will invest in automated fitness-sorting equipment, particularly for processing $20 notes, to ensure proper functioning of their ATMs.

Nonetheless, some depository institutions may recirculate unfit notes, leading to a decline in the overall quality of notes in circulation. Consequently, the final policy requires Reserve Banks to adopt and implement a currency quality policy before the recirculation fee takes effect. The quality policy will define the threshold level of quality for each denomination that is “fit for commerce;” identify a framework for monitoring quality; and specify actions Reserve Banks would take to adjust the quality of currency in circulation to avoid significant inconvenience to the public, or increased risk of recirculating counterfeit notes.

The “fit-for-commerce” standard will have two components, which may differ by denomination: 1) a minimum fitness threshold based on consumer acceptance and the technical tolerances of machines that handle currency, and 2) a maximum allowable incidence of below-threshold notes remaining in circulation. The goals of the standard will be the following:

[10] The 2003 proposed policy initially excluded $1 notes while Reserve Banks worked with the banking industry with the goal of achieving net savings comparable to those that Reserve Banks could realize by including $1 notes in the policy. If this collaborative effort failed to yield comparable savings, the 2003 proposal would have then included $1 notes in the policy.

[11] One commenter from the automatic merchandising industry noted that “[i]f the recirculation policy degrades the quality of currency so that a mere ½ of 1% of the industry’s estimated $30 billion of annual sales are lost, the result will be $150 million of lost sales.”

- The public remains confident that currency supplied by depository institutions and merchants is genuine and readily usable in subsequent transactions.
- Currency in circulation is of sufficiently good condition that users can determine it is genuine by using the currency's security features.[12]
- Currency in circulation is usable in automated currency handling equipment.[13]
- There is an appropriate balance between the public's note handling costs and Reserve Banks' costs to maintain the fit-for-commerce standard.

Some commenters mentioned the need for a clear and useable standard for fit notes. To assist depository institutions with the standard, Reserve Banks published guidelines in 2004 for distinguishing between notes that are fit and unfit for further circulation.[14] Over time, the Federal Reserve expects to continue to refine these guidelines to reflect changing industry practices, technology, and the overall quality of currency in circulation.

Equity

Some commenters expressed concern that the 2003 proposed policy would favor depository institutions with certain currency volumes over others. The most frequent comment came from institutions with high-volume currency operations that suggested the *de minimis* exemption would favor institutions with low-volume currency operations because the latter's activity is likely to fall below the exemption threshold. These respondents argued that the *de minimis* exemption would allow institutions with low-volume currency operations to obtain fit and new currency less expensively from Reserve Banks than from correspondent depository institutions, putting the correspondent institutions at a competitive disadvantage. Institutions with medium-volume currency operations argued that they were likely to be most disadvantaged by the policy because 1) their activity exceeds the exemption threshold; 2) they do not have the economies of scale to invest in high-speed processing equipment as depository institutions with large currency volumes do; and 3) they do not have sufficient volume to qualify for the custodial inventory program. Institutions with low-volume currency operations stated that although their activity generally does not exceed the exemption threshold, the policy would nonetheless have a negative effect on them through the increased costs their correspondent banks would pass along to them. Several respondents also commented on the disproportionate effect of the 2003 proposed policy on depository institutions that have a number of relatively small vaults widely dispersed across a Federal Reserve service zone. Transportation costs, they argued, as well as the complexities of managing multiple inventories, would be more burdensome for depository institutions in this position than for those that have fewer, more centralized vaults.

The Board has structured the elements of the final policy, including the custodial inventory program and the recirculation fee, to balance the goal of providing incentives to curtail overuse of Reserve Bank services while minimizing the administrative burden of enforcing the policy on institutions with *de minimis* cross-shipping activity. The custodial inventory proof-of-

[12] The public's ability to recognize the security features of currency can diminish if notes are heavily soiled, torn, worn, or crumpled.

[13] Automated currency handling equipment includes, for example, vending machines, fare card machines, and currency sorting machines.

[14] See http://www.frbservices.org/Cash/pdf/FRB_Fitness_Standards.pdf.

concept program, discussed later in this notice, demonstrated that a depository institution vault with as little as $5 million in daily average vault cash might qualify for the program. Under the final policy, a depository institution can meet the eligibility threshold for the custodial inventory program based on either cross-shipping volume or evidence of internal recirculation, or a combination of the two.[15] Data provided by the depository institutions that participated in the proof-of-concept program suggest that some depository institutions may recirculate significant volumes of currency in normal circumstances. If depository institutions satisfy half of their customer orders with currency from internal sources, such as deposits from other customers, Reserve Banks estimate that, under the final policy, only thirteen depository institutions would incur fees greater than $5,000 per year and the largest fee that any affected depository institution would incur would be less than $15,000 per year. If depository institutions satisfy two-thirds of their customer orders with currency from internal sources, Reserve Banks estimate that all depository institutions either would recirculate enough currency to meet the minimum recirculation requirement for a custodial inventory or would incur no fees because they would not exceed the *de minimis* exemption. Depository institutions with highly dispersed inventories may decide to consolidate some operations or manage their inventories more effectively under the policy, in order to minimize costs.

Increased Costs to Depository Institutions

Many commenters asserted that the 2003 proposed policy would increase their costs, but provided almost no information on specific costs that depository institutions might incur. Some commenters indicated that the proposed policy would affect profit margins for their currency businesses and that it would increase expenses for high-speed sorting equipment, third-party vendor arrangements, new software, and transportation. Reserve Banks projected additional expenses that depository institutions might incur to comply with the policy, including the purchase of new currency processing equipment and the associated labor and maintenance costs, and concluded that the Reserve Bank savings from processing a lower volume of currency will exceed the increased costs to depository institutions.

Commenters also asserted that the 2003 proposed policy did not address the root cause of cross-shipping – the opportunity costs associated with holding additional currency in their vaults long enough to facilitate its recirculation. In response, the Board adjusted the custodial inventory cap in the final policy as described below.

Custodial Inventory Program

A number of commenters sought more information about the requirements of the custodial inventory program. Following the notice of the 2003 proposed policy, but before the implementation of the proof-of-concept program, Reserve Banks published more detailed

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[15] A depository institution can meet the threshold for a custodial inventory site by providing deposit and payment records demonstrating that it currently recirculates at least 200 bundles of currency weekly among its customers. “Internal recirculation” refers to satisfying customer orders with currency from internal sources, such as deposits from other customers, rather than cross-shipping.

information about the custodial inventory program, including an executive summary, a manual of procedures, and a uniform agreement.[16]

Five commenters expressed concern that the inventory cap in the 2003 proposed policy was too restrictive. Most of the custodial inventory proof-of-concept participants agreed, finding that the cap limited their ability to hold enough currency in the custodial inventory to satisfy customer orders. As a result, the participants were able to reduce, but not fully eliminate, cross-shipping. Accordingly, as described below, the Board has adjusted the inventory cap in the final policy.

Custodial Inventory Proof-of-Concept Program

Before undertaking a permanent custodial inventory program, the Board authorized Reserve Banks to implement a proof-of-concept program. This program allowed depository institutions to transfer into a custodial inventory no more than 25 percent of average closing balances of currency at the location in the $5 through $20 denominations. The purpose of the proof-of-concept program was to allow Reserve Banks to evaluate how custodial inventories influence depository institutions' patterns of depositing and withdrawing currency, while allowing depository institutions to assess the costs and benefits of participating in the program. Consistent with these objectives, the Board indicated that it would review the following:

- The extent to which participants significantly reduce cross-shipping or recirculate significant amounts of currency
- The extent to which deposits received from participants contain a higher proportion of unfit notes than the average for all deposits in the same zones
- The appropriate inventory cap formula
- The appropriate eligibility threshold for participation in the custodial inventory program.

Six depository institutions participated in the proof-of-concept program. Several institutions participated at more than one location; consequently, the program included eleven custodial inventory sites. The participants found benefit in the program and expressed an interest in continuing their participation. Likewise, Reserve Banks found that the program had a measurable effect on the participants' depositing and ordering patterns with their respective Reserve Bank offices. In total, the eleven participating sites experienced a 34 percent reduction in cross-shipping volume in the first quarter of 2005 as compared with the first quarter of 2004, although results varied from site to site. There was no discernible increase in the proportion of unfit notes deposited because the custodial inventory sites generally chose not to make investments to fitness-sort their currency over the short duration of the program. Many participants indicated to Reserve Banks that if the program were made permanent, they would invest in automated fitness-sorting capability, at least for $20 notes, because they need notes of acceptable quality to ensure that their ATMs do not malfunction.

[16] See http://www.frbservices.org/Cash/CustodialInventoryProgram.html.

The proof-of-concept program also allowed Reserve Banks to evaluate the proposed inventory cap formula. The program demonstrated that the proposed formula does not accommodate intra-week depository institution currency flows and, therefore, does not provide effective relief from increased opportunity costs that depository institutions could incur if they held additional inventory to recirculate to their customers. Program participants found that the inventory cap was inflexible in accommodating incoming deposits that they otherwise could have used to satisfy customer orders. As a result, depository institutions reduced but did not fully eliminate cross-shipping.

II. FINAL RECIRCULATION POLICY

Highlights of Changes from the 2003 Proposed Policy

As a result of the information obtained from public comments and through the proof-of-concept program, the Board determined to revise its cash services policy. The final policy differs from the 2003 proposed policy in the following ways:

- It excludes $1 and $5 notes.
- It requires custodial inventory participants to hold one day of average daily payments on their own books, but allows them to transfer up to the equivalent of four days of average daily payments to the custodial inventory, to be held on the books of Reserve Banks.
- The Reserve Banks will determine the average fitness rate of an institution's deposits on a monthly, rather than quarterly, basis and will apply the rate to the institution's weekly deposits for the month in which the fitness rate was observed, not prospectively.
- It reduces the *de minimis* cross-shipping exemption from 1,000 bundles to 875 bundles of notes per quarter, consistent with the Board's decision to exclude the $5 note from this policy.

The Reserve Banks will amend section 3.3 of Operating Circular 2 to implement the provisions of this final policy.

Elements of the Final Policy

Denominations Subject to the Policy

The final policy applies only to $10 and $20 notes. In its 2003 proposal, the Board initially excluded $1 notes, pending the outcome of a collaborative effort between the Reserve Banks and the banking industry to find a means of achieving net savings comparable with those that Reserve Banks could realize by including $1 notes in the policy. Because of the relatively low incidence of counterfeiting and the low value of $1 notes, depository institutions handle them differently from higher denominations to minimize their costs. Many depository institutions do not piece-count a substantial proportion of the $1 notes they receive today; thus, the additional costs to comply with a recirculation policy for $1 notes would be significantly greater than the costs for higher denomination notes. Reserve Banks worked with depository institutions to consider a variety of options, such as extending the cross-shipping restriction for $1 notes from one to four weeks or providing an exchange program to allow depository institutions to trade fit $1 notes with each other within geographic markets. After thorough analysis, however, the Reserve Banks concluded that none of the options would increase depository institution recirculation of $1 notes without unwarranted societal costs. The Board concluded that including $1 notes in the final policy also would likely lead to a significant decline in the quality of these notes in circulation. The final policy, therefore, excludes $1 notes.

Reserve Banks have also learned that it is unlikely that depository institutions would fitness-sort or authenticate $5 notes before recirculating them because of the relatively low incidence of counterfeiting and the low value of this denomination. Therefore, the quality of $5 notes in circulation would likely decline if these notes were included in the policy. Thus, as with the $1 note, the Board concluded that the options to increase depository institutions' recirculation of $5 notes would result in unwarranted societal costs. The final recirculation policy, therefore, also excludes $5 notes.

Finally, the final policy excludes $50 and $100 notes because of the risk that depository institutions might recirculate high-denomination counterfeit notes. These notes are a relatively minor component of cross-shipped currency.

Custodial Inventory

Inventory Cap

Reserve Banks analyzed three alternative formulas for the final custodial inventory cap: increasing the cap from 25 percent to 70 percent of average closing balances of eligible denominations during the previous week; imposing an end-of-week inventory cap with no cap on intra-week deposits; or requiring a depository institution to hold a minimum amount of currency on its own books before it could deposit notes into a custodial inventory. Each of these cap methodologies would allow depository institutions to reduce significantly (and theoretically eliminate) cross-shipping, while mitigating the opportunity costs they would incur by holding currency long enough to recirculate it. Reserve Banks concluded, however, that the formula requiring a participating depository institution to hold one day of average daily payments on its own books would cause the least disruption to Reserve Banks' internal currency operations. The final policy, therefore, requires each participant to hold on its own books one day of average daily payments in $10 and $20 notes, representing the amount needed by the depository institution to satisfy normal business needs for those denominations.[17] To enhance the incentive to recirculate currency during the week, the final policy allows each participant to hold additional currency for recirculation as follows. After satisfying the one-day requirement, a participant may transfer up to the equivalent of four days of average daily payments in $10 and $20 notes from its own vault to the custodial inventory.

[17] Average daily payments is defined as the total dollar amount of $10 and $20 notes that the depository institution paid to its customers during an appropriate, previous five-business-day period in the zone or sub-zone of a custodial inventory site, divided by five. Reserve Banks will perform this calculation on a weekly basis, based on data from the most recent, appropriate period.

Minimum Recirculation Requirement

The Board determined that depository institutions must demonstrate, initially and periodically thereafter, that each vault in which they seek to operate a custodial inventory can recirculate a minimum of 200 bundles of $10 and $20 notes per week in a Reserve Bank zone or sub-zone to qualify for a custodial inventory.[18] An institution can meet this requirement in the following ways:

1) An institution that cross-ships at least 200 bundles of $10 and $20 notes per week in a zone or sub-zone would meet the recirculation threshold and, therefore, qualify for a custodial inventory, provided that each vault in which the institution seeks to operate a custodial inventory will be able to recirculate at least 200 bundles of $10 and $20 notes per week.
2) An institution can show for the prospective custodial inventory vault that it recirculates among its customers at least 200 bundles of $10 and $20 notes weekly in the zone or sub-zone.
3) An institution can also meet the threshold through a combination of cross-shipping activity and recirculation among its customers, totaling at least 200 bundles of $10 and $20 notes in the zone or sub-zone.

Reserve Banks will review annually the minimum bundles required to support a custodial inventory. Reserve Banks estimate that between 150 and 225 depository institution sites may meet the criteria to participate in the custodial inventory program.

Recirculation Fee

Fee Level

Because the Board expects that custodial inventories alone would not substantially increase recirculation and reduce cross-shipping, it is approving a recirculation fee to provide further incentive for depository institutions to recirculate currency. The fee will be standard nationally and will reflect Reserve Banks' costs that vary with the quantity of currency received, processed, and paid out. Reserve Banks will review the changes to those costs annually and will adjust the fee accordingly. Based on current levels of Reserve Bank costs, the fee would be approximately $5 per bundle of cross-shipped currency. Reserve Banks will assess the fee to depository institutions that deposit fit $10 and $20 notes and order the same denomination within the same business week in a Reserve Bank zone or sub-zone.[19] The fee will not be assessed on deposits of unfit or surplus fit currency.[20] Under certain unusual circumstances, such as the release of a new note design, Reserve Banks may waive the fee.

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[18] Because the expected increase in recirculation from reducing the minimum requirement would be insignificant while the cost to administer the program would increase appreciably, the Board did not adjust the minimum recirculation requirement to reflect the exclusion of the $5 note from the final policy.

[19] Reserve Banks will compare each institution's weekly deposits of fit currency in a zone or sub-zone with their weekly orders to determine the amount of currency the institution cross-shipped. The lesser of fit deposits and orders is the amount cross-shipped. For example, if an institution deposited to a Reserve Bank 1,250 bundles of fit $20 notes in a week and ordered 1,000 bundles of $20 notes the same week, the amount cross-shipped is 1,000 bundles.

[20] Surplus fit currency is defined as fit currency that is not needed by the depository institution within the business week of its deposit.

The recirculation fee is not subject to the pricing requirements of the Monetary Control Act (MCA). The MCA applies to ancillary currency and coin services such as transportation and coin wrapping, but not to services "of a governmental nature, such as the disbursement and receipt of new or fit coin and currency."[21] Only the Reserve Banks can issue and ultimately redeem currency. The Board determined, in the development of its principles for priced services, that "currency and coin processing (paying, receiving, and verifying both coin and currency, and issuing, processing, canceling, and destroying currency) are governmental functions and would not be considered priced services subject to MCA."[22] The recirculation fee is a recovery of costs incurred by the Reserve Banks resulting from overuse of governmental services by certain institutions. The recirculation fee also should lower the overall societal costs of currency processing and distribution.

Average Fitness Rate Calculation

The Board has revised the average fitness rate calculation, used in determining the amount of currency cross-shipped, so that Reserve Banks will apply a contemporaneous fitness rate to each institution's deposits.[23] Under the final policy, Reserve Banks will determine the average fitness rate of an institution's deposits on a monthly, rather than quarterly, basis and will apply the rate to the institution's weekly deposits for the month in which the fitness rate was observed, not prospectively. For example, if the notes processed from an institution's deposits in a zone or sub-zone in January include 80 percent fit currency, the Reserve Bank would multiply that institution's weekly deposits during January by 80 percent to determine how much fit currency the institution deposited each week of the month. The Reserve Bank would then compare the institution's weekly deposits of fit currency to their weekly orders in the zone or sub-zone to determine the amount of currency the institution cross-shipped. At the end of each quarter, the Reserve Bank will assess the recirculation fee for each bundle of currency cross-shipped above the *de minimis* exemption.

De minimis Exemption

The final policy exempts *de minimis* levels of cross-shipped currency from the recirculation fee. Consistent with the Board's decision to exclude the $5 note, the final policy reduces the *de minimis* exemption to 875 bundles of notes per quarter from the level of 1,000 bundles per quarter in the 2003 proposed policy. Reserve Banks will review annually the number of bundles for the *de minimis* exemption.

Using the initial *de minimis* amount, depository institutions will not pay a recirculation fee for the first 875 bundles of $10 and $20 notes crossed-shipped in a zone or sub-zone each quarter. The *de minimis* exemption has three purposes. First, the exemption compensates for minor differences between currency fitness determinations made by depository

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[21] 126 Cong. Rec. S3168 (March 27, 1980) (statement of Senator Proxmire)
[22] 45 FR 56893 (Sept. 4, 1980).
[23] Under the 2003 proposed policy, Reserve Banks would have determined the number of fit notes deposited as a percentage of total notes deposited during each quarter and then applied the average quarterly fitness rate by zone or sub-zone to an institution's deposits during the following quarter to determine how much currency it cross-shipped.

institutions and Reserve Banks in processing these notes.[24] Second, the exemption limits the effect of the policy on institutions whose small scale of currency operations may not justify investments in sorting equipment. Third, the exemption allows depository institutions that experience unanticipated swings in customer demand to order or deposit currency without incurring a fee. The exemption will not have a material effect on Reserve Bank processing volumes, but will reduce or eliminate the cost of the policy for a large number of depository institutions.

A Reserve Bank will apply the *de minimis* exemption to currency that a depository institution cross-ships in a zone or sub-zone during each quarter.[25] All or part of an exemption that a depository institution did not use during a quarter will expire at the end of that quarter. Reserve Banks will apply the exemption against depository institutions' total volumes of cross-shipped $10 and $20 notes within a zone or sub-zone, not against each individual denomination. Because of the *de minimis* exemption, Reserve Banks estimate that only between 100 and 150 depository institutions may be subject to the recirculation fee.

Cost-Benefit Analysis of the Final Recirculation Policy

Estimate of Avoided Reserve Bank Costs

During 2004, Reserve Banks processed 36.2 billion notes, with total costs of approximately $344 million. This number includes 17.8 billion $10 and $20 notes, 7.2 billion of which depository institutions cross-shipped. Curtailing current cross-shipping and its expected future growth would reduce Reserve Banks' expenses by enabling them to scale down currency processing operations and delay future capital investments in equipment and facilities. Reserve Banks estimate that by implementing the final recirculation policy, they could avoid currency processing costs of approximately $250 million over the next ten years on a net present value basis.[26]

Estimate of Reserve Banks' and Depository Institutions' Costs

Reserve Banks would incur approximately $1 million per year in operating costs to administer the custodial inventory program, including managing the overall program and auditing the custodial inventories. Reserve Banks estimate that during the first year of the program their costs would total approximately $2.5 million because of expenses for training and site inspections. The net present value of these costs over the next ten years is approximately $10 million.

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[24] Because Reserve Banks will assess the recirculation fee for all fit notes cross-shipped above the *de minimis* exemption, depository institutions will have an incentive to ensure that their fitness determinations are comparable with those of Reserve Banks.

[25] *De minimis* exemptions may not be transferred from one zone or sub-zone to another.

[26] Reserve Banks estimated the net present value based on 2004 expense data, using a discount rate of 3.9 percent, as advised by OMB Circular No. A-94, Appendix C, to approximate the nominal interest rate. The estimate includes costs that vary with the volume of currency processed, including labor, materials, and equipment. The amount by which Reserve Banks are able to reduce costs would depend on the actual decline in volumes because of the recirculation policy. This decline would depend on the extent to which 1) depository institutions elect to pay the fee instead of recirculating; 2) depository institutions take full advantage of the *de minimis* exemption; and 3) depository institutions alter their handling of denominations that are not covered by the policy.

Depository institutions will likely incur some costs to operate custodial inventories. For example, depository institutions may have to modify their facilities to segregate Reserve Bank currency or to enhance their physical security, perhaps by installing surveillance equipment. They may also have to enhance physical- and procedural-access controls and engage in additional sorting and other handling of the notes held in a custodial inventory. While depository institutions provided no specific cost estimates, Reserve Banks project these costs to be minimal.

Reserve Banks believe that many depository institutions have made or plan to make the capital investments necessary to reduce or eliminate cross-shipping. Reserve Banks estimate that the depository institutions' costs to comply with the recirculation policy, including labor costs, would be approximately $10-15 million per year over the next ten years, assuming that depository institutions fitness-sort $10 and $20 notes and make the majority of their remaining compliance expenditures in the first two years of the program. Over a ten-year horizon, the estimated net present value of these depository institution costs is approximately $100 million.

Conclusion

Reserve Banks estimate that the final recirculation policy could result in a net societal benefit of approximately $140 million over the next ten years on a net present value basis. Both Reserve Banks and depository institutions would incur some costs under the policy; however, Reserve Banks estimate that any costs incurred by depository institutions will be significantly less than the costs that Reserve Banks will avoid if the institutions reduce or cease cross-shipping currency.

III. COMPETITIVE IMPACT ANALYSIS

All operational and legal changes considered by the Board that have a substantial effect on payments system participants are subject to the competitive impact analysis described in the Board's policy, "The Federal Reserve in the Payments System."[27] Under this policy, the Board assesses whether the proposed change would have a direct and material adverse effect on the ability of other service providers to compete effectively with the Federal Reserve in providing similar services because of differing legal powers or constraints or because of a dominant market position of the Federal Reserve deriving from such legal differences. If the proposed change has such an effect, the Board must evaluate it further to assess whether its benefits—such as contributions to payments system efficiency, payment system integrity, or other Board objectives—can be retained while reducing hindrances to competition. As noted above, only Reserve Banks can issue and ultimately redeem currency; these are governmental functions that private-sector entities cannot perform. Private-sector entities do, however, provide currency deposit, withdrawal, and related services to depository institutions that might otherwise deal directly with a Reserve Bank. Therefore, the Board has considered the potential competitive effects of the policy on private-sector currency service providers.

[27] Federal Reserve Regulatory Service 9-1558.

Under the recirculation policy, some correspondent banks will incur increased operational costs, or pay recirculation fees. The fees that correspondent banks charge to respondent banks could increase to reflect those costs. While it might be less costly for the respondent banks to obtain currency services directly from Reserve Banks because they would likely benefit from the *de minimis* exemption, the Board understands that respondent banks generally choose a correspondent to provide a package of services, not exclusively for currency services. In that event, depository institutions might retain their correspondent relationships despite an increase in costs caused by this recirculation policy.

Overall, the Board believes that while private-sector currency service providers cannot duplicate the entire range of Reserve Bank cash functions, they can count, sort, and process currency. In addition, private-sector service providers offer an array of value-added cash services that Reserve Banks do not provide. For example, some private-sector service providers maintain automated teller machines for depository institutions and offer specific retail services for the depository institutions' customers. This policy is unlikely to result in any significant shift of business from private-sector providers to Reserve Banks. Indeed, the policy may shift some currency processing business to private-sector providers. In order to minimize the potential effect of recirculation fees, some depository institutions may choose to fitness-sort their customers' deposits themselves or through a service provider rather than continuing to rely on the Reserve Bank to fitness-sort their currency. Armored carriers or local consortia of depository institutions might offer less costly alternatives because the fitness sorting can be performed as an adjunct to deposit processing services they already perform for their customers. The currency recirculation policy, therefore, is not likely to adversely affect the ability of depository institutions or other service providers to compete with Reserve Banks to provide cash services.

IV. FEDERAL RESERVE CURRENCY RECIRCULATION POLICY

The Board has adopted the following policy to promote depository institutions' recirculation of fit $10 and $20 Federal Reserve notes.[28]

Custodial Inventory Program

The custodial inventory program promotes recirculation of fit $10 and $20 notes by reducing depository institutions' opportunity costs for holding currency. Participants in the custodial inventory program may hold, in their vaults, currency on the books of Reserve Banks that they otherwise might have shipped to, and then ordered from, Reserve Banks during the same business week.

Requirements[29]

1) Only depository institutions are eligible to participate in the custodial inventory program. Depository institutions that outsource operation of their currency vault(s) would be eligible if the other requirements are met.

[28] By May 2006, Reserve Banks expect to revise Reserve Bank Operating Circular 2 to provide additional guidance on the recirculation policy. For additional information, see http://www.frbservices.org/Cash/index.html.
[29] Failure to comply with any of these requirements could result in the loss of eligibility to participate in the program.

2) A depository institution must be able to recirculate among its customers a substantial volume of $10 and $20 notes in the zone or sub-zone of a custodial inventory site. At the outset of the program, each vault in which a depository institution seeks to operate a custodial inventory must be able to recirculate 200 bundles of $10 and $20 notes on a regular weekly basis to qualify for the program. Reserve Banks will review annually the minimum bundles required for depository institution participation in the custodial inventory program.

3) A depository institution must hold on its own books no less than one day of average payments, defined as the total dollar amount of $10 and $20 notes that the depository institution paid to its customers during an appropriate, previous five-business-day period in the zone or sub-zone of a custodial inventory site, divided by five.[30]

4) A depository institution may transfer into the custodial inventory no more than four days of average payments, defined as the total dollar amount of $10 and $20 notes that the depository institution paid to its customers during an appropriate, previous five-business-day period in the zone or sub-zone of a custodial inventory site, divided by five and multiplied by four.

5) Depository institutions may deposit currency into or withdraw currency from custodial inventories at any time during the local Reserve Bank's business day.

6) A depository institution may operate a custodial inventory only under the following conditions:

   a) The depository institution will indemnify the Reserve Bank against theft or loss of Reserve Bank currency.
   b) It will comply with Reserve Bank physical security guidelines for vaults, access control, and camera coverage.
   c) It will operate its facility in accordance with Reserve Bank guidelines for access and control.
   d) It will segregate Reserve Bank currency from other currency.
   e) It will allow full access by Reserve Banks, the Board, the Government Accountability Office, and their agents for unannounced audits of any aspect of the custodial inventory operation.
   f) It is operating in a safe and sound manner, as determined by its Administrative Reserve Bank.

[30] For requirements 3 and 4, the five-business-day period consists of Monday through Friday. Reserve Banks will perform this calculation on a weekly basis, based on data from the most recent, appropriate period. If a Federal holiday falls within the period, the other four business days will constitute the period and the total dollar amount of $10 and $20 notes that a depository institution paid to its customers in a zone or sub-zone of a custodial inventory site during that period will be divided by four.

7) Any depository institution that uses a custodial inventory, in the judgment of Reserve Banks, to circumvent the intent of the recirculation policy will lose its eligibility to participate in the program.

Recirculation Fee

1) Reserve Banks will monitor currency orders and deposits for all endpoints of each depository institution in each Reserve Bank office service area ("zone") for cross-shipping. Reserve Bank zones with large metropolitan areas located at a significant distance from a Reserve Bank office may be divided into smaller service areas ("sub-zones"). The criteria for establishing sub-zones will balance the population of a metropolitan area against its distance from the Reserve Bank office. Reserve Banks will review sub-zone criteria annually. Customers may choose the zone or sub-zone in which to include border endpoints. Reserve Banks will monitor the deposits and orders of endpoints located in and near a sub-zone. Reserve Banks will monitor endpoints in other parts of a zone as a group separate from the endpoints in the sub-zone.[31]

2) Reserve Banks will assess recirculation fees when a depository institution deposits fit $10 or $20 notes and orders the same denomination during the same business week, within a Reserve Bank zone or sub-zone.[32]

3) Reserve Banks will set a standard national recirculation fee based on those Reserve Bank costs that vary with the quantity of currency received, processed, and paid to depository institutions. Reserve Banks will review the changes to those costs annually and will adjust the fee accordingly. Such costs include personnel, materials, and equipment. The fee will not include overhead costs such as facilities, legal, business development, audit, and protection services that Reserve Banks incur to meet their central bank currency services responsibilities.

4) Reserve Banks will allocate recirculation *de minimis* exemptions to depository institutions for each zone or sub-zone where they do business. Reserve Banks will apply the exemptions to depository institutions' total cross-shipped volume.[33] *De minimis* exemptions may not be transferred from one zone or sub-zone to another. Unused *de minimis* exemptions will expire at the end of each quarter. Initially, the *de minimis* exemption will be 875 bundles per quarter. Reserve Banks will review the level of the *de minimis* exemption annually.

[31] Reserve Bank sub-zones will be published on the web at www.frbservices.org.
[32] Reserve Banks will not assess fees for deposits or orders of $1, $2, $5, $50, and $100 notes.
[33] Exemptions will not be denomination-specific.

5) Reserve Banks will monitor depository institutions' order and deposit activity weekly for cross-shipping. For the purposes of monitoring cross-shipping activity, a week includes consecutive days from Monday through Friday. If, in the judgment of Reserve Banks, a depository institution circumvents the recirculation policy by reducing its cross-shipping volume without increasing recirculation, such as would be the case if it alternated the weeks in which it orders and deposits currency, Reserve Banks will apply the recirculation fee to fit notes in such deposits.

6) Reserve Banks will determine the number of fit notes processed from each institution's deposits as a percentage of total notes deposited by that institution during each month. Reserve Banks will then apply this monthly average fitness rate by zone or sub-zone to an institution's weekly deposits during that month to determine how much currency it cross-shipped.[34]

7) Reserve Banks publish currency fitness and equipment guidelines at http://www.frbservices.org/Cash/pdf/FRB_Fitness_Standards.pdf.

Phased Implementation

The Reserve Banks will implement the recirculation policy in two phases. The first phase will expand the custodial inventory program to all eligible participants. One year later, in the second phase, the Reserve Banks will begin assessing the recirculation fee, provided however, that they have implemented a currency quality policy.

By order of the Board of Governors of the Federal Reserve System, March 17, 2006.

Robert deV Frierson

Robert deV. Frierson,

Deputy Secretary of the Board

[34] For example, if the notes processed from an institution's deposits in a zone or sub-zone included 80 percent fit currency in January, the Reserve Bank would multiply that institution's weekly deposits during January by 80 percent to determine how much fit currency the institution deposited each week of the month. The Reserve Bank will then compare that institution's weekly deposits of fit currency with their weekly orders in the zone or sub-zone to determine the amount of currency the institution cross-shipped. At the end of the quarter, the Reserve Bank will assess fees for each bundle of currency cross-shipped above the *de minimis* exemption.