Fed Pricing and the Check Collection Business: The Private Sector Response

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In March 1980, Congress passed the Depository Institutions Deregulation and Monetary Control Act (MCA) and dramatically "changed the rules" in the check clearing business. The law directed the Federal Reserve to offer its check collection services to all depository institutions, for instance, not just to its member banks. Furthermore, it required the Fed to price those services to cover costs, rather than providing them free. One important aim of Congress in imposing pricing was to promote competition and efficiency in the market for check collection services by removing the subsidy extended to some banks through free Fed services.

Pricing has changed the structure of economic incentives facing both the suppliers and demanders of check clearing services. How have the major suppliers in this market, namely, the Federal Reserve, correspondent banks, and clearinghouses, been affected? Has the Fed lost business to the private sector, as economic theory would predict? And how has the private sector responded? Have clearinghouses become more important? Is the market more competitive? Are the changes superficial, one-time responses to pricing, or are they more fundamental ones?

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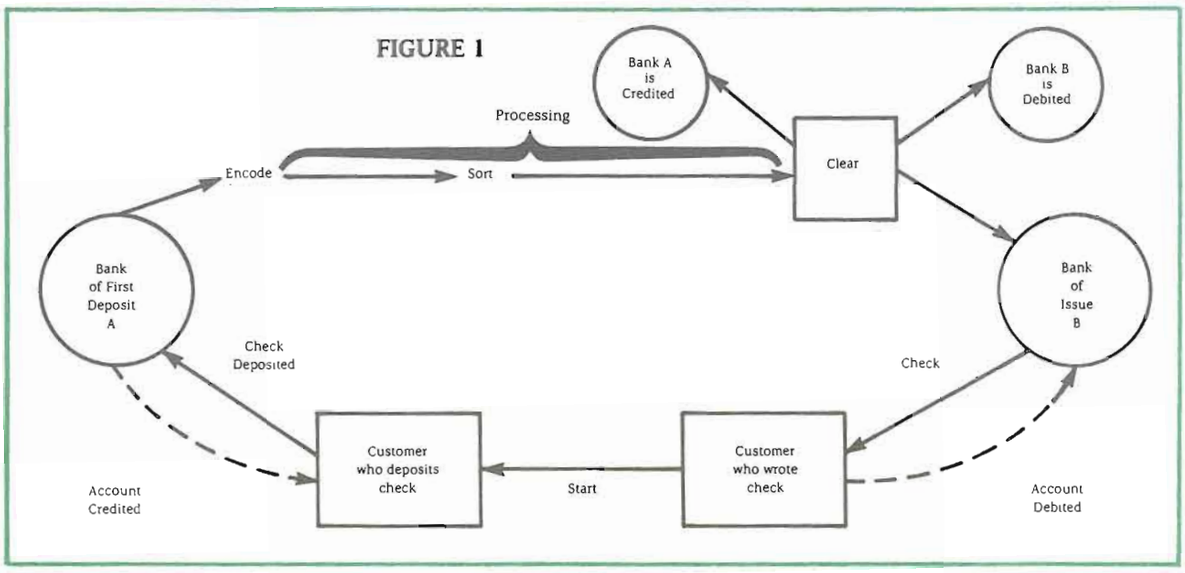
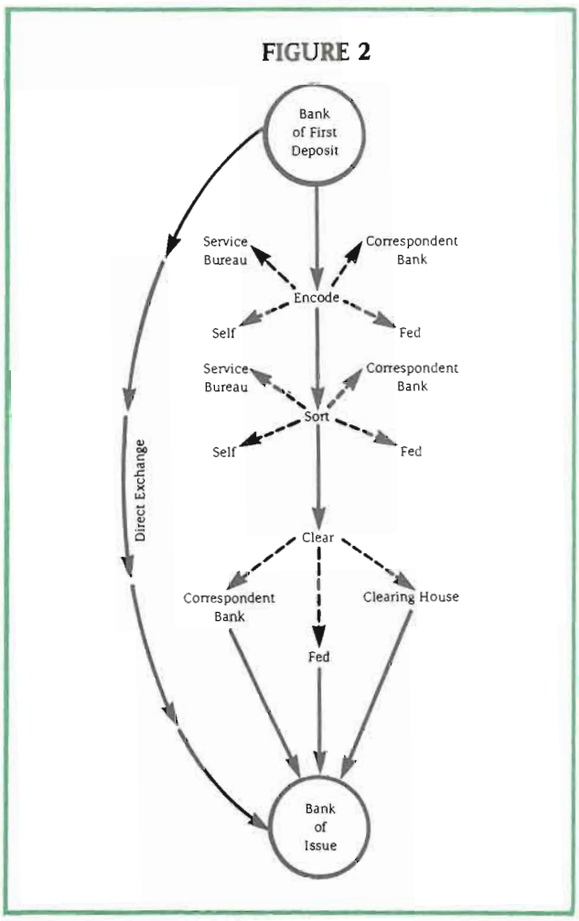
A PRIMER ON CHECK COLLECTION

A check takes several steps on its journey from the bank where it is first deposited to its bank of issue (see Figure 1). Once someone deposits a check into an account, the transaction information on the check is encoded. Since most checks are printed with codes for the bank of issue, the customer's account number, and routing infor-



mation, it is the dollar amount which is added at this point, in the lower right corner of the check in magnetic ink. Machines which "read" the information do the next step— sorting according to a check's destination (bank of issue). The combination of encoding and sorting checks is known as "processing." Next, a check must be cleared, at which point settlement of accounts of the banks involved takes place. Settlement means the crediting and debiting of funds to and from banks' accounts. After clearing, the check returns to the issuing bank which debits the customer's accounts.

There is no set formula for a check to follow in the collection process. Since several alternatives exist at each step, a check could take a myriad of different routes (see Figure 2). An institution might handle the whole task itself, for instance, by processing the checks in-house and sending them directly to the bank of issue for clearing. These institutions typically are either small banks, which exchange and clear checks directly with another local bank, or institutions which are large enough to process large numbers of checks by machine and use private courier services to send checks directly to banks for collection. By contrast, a bank might use one or several agents: a local service bureau to encode, a correspondent bank to sort, and a Federal Reserve facility to clear the check. Both correspondent banks and the Fed clear checks



and settle banks' accounts. A major reason a bank uses these agents is to clear checks with banks at some distance. For clearing local checks, a bank has a third option—a local clearinghouse, which holds daily exchanges of checks among its members.

Clearinghouses vary in structure and size. A clearinghouse may be an informal organization with as few as three banks, or it may have formal rules and as many as 100 banks. Most clearinghouses settle their members' accounts through a so-called net settlement account at one of 48 Federal Reserve facilities. Each Fed facility participates at local clearinghouses where it receives settlement information, presents checks from non-clearinghouse banks, and picks up checks to be sent elsewhere.

The choices banks make at each stage of the check collection process depend on many factors. Two economic factors loom large—the cost of the service and its quality. Costs include those of encoding, sorting, transporting, and clearing checks. The quality of service depends primarily on availability of funds, that is, how promptly a bank receives credit on checks it presents for collection. Promptness, in turn, depends on deposit, transportation, and availability schedules offered by various agents. The later in the day an agent is willing to wait to accept checks for clearing and the more quickly it credits funds to the banks of first deposit, the more attractive its service. Early availability matters particularly for high dollar value checks. Other factors affect quality also: timely account information, the handling of items returned because of insufficient funds, charges for overdrafts (a debit in a bank's clearing account), and computer downtime. Noneconomic factors might also affect choices. In particular, some institutions may have a strong preference for using private sector services, while others may have a preference for using the Fed.

A 1979 Federal Reserve study provides an idea of the numbers of checks involved in collection and of the relative importance of the various agents in the check collection process.[1] In 1979, the number of commercial bank checks written was about 32 billion. As each check journeyed through the process, an average of 2.4 institutions (banks, Fed, clearinghouses) handled it so that the total number of processed checks was 76.7 billion.

The Federal Reserve system processed and cleared directly about one-fifth of this total. While commercial banks individually have smaller correspondent banking networks than the Fed, they processed the remaining four-fifths of the checks. Banks, in turn, relied on several institutions for clearing services. They sent 22 percent of the total they handled to Fed facilities, about 16 percent to correspondent banks, and about 11 percent to local clearinghouses. They cleared the remaining half in their own banks as "on-us" checks.

The relative use of the different clearing agents varied with bank size. The smallest banks relied heavily on larger correspondents and used local clearinghouses, which generally do not process checks, and the Fed to a relatively small degree. The largest banks used local clearinghouses to the greatest degree, reflecting more exchange volume with other clearinghouse member banks. For interdistrict checks (ones which cross Federal Reserve District lines), these banks made relatively small use of the Fed, turning instead to private transportation to exchange directly with banks in other money centers.

FED PRICING AND ITS IMPACT

Pricing of the Federal Reserve's check services went into effect in August 1981 and changed the incentive structure in the check-collection market overnight. Each of the twelve Reserve Banks instituted prices for its district, including its branches and Regional Check Processing Centers (RCPCs).[2] Pricing changed all the relative costs a bank faced at each stage of the check collection process, and, other things equal, would have made all private alternatives relatively less expensive for Fed members than they were before pricing. For pre-

[1] Federal Reserve Bank of Atlanta, *A Quantitative Description of the Check Collection System*, (Copyright by: American Bankers Association and Bank Administration Institute, 1982). The data that follow in the remainder of this section are derived from this publication.

[2] In the early 1970s, the Fed set up 12 RCPCs in areas with relatively large check volumes outside Reserve Bank cities to speed up check collection. The sites of the RCPCs are: Windsor Locks, Conn.; Lewiston, Maine; Jericho, N.Y.; Cranford, N.J.; Utica, N.Y.; Columbus, Ohio; Baltimore, MD.; Columbus, S.C.; Charleston, S.C.; Indianapolis, Ind.; Milwaukee, Wisc.; Des Moines, Iowa.

vious nonmembers, the availability of Fed services opened up by the MCA presented these institutions with a new option rather than with new relative prices.

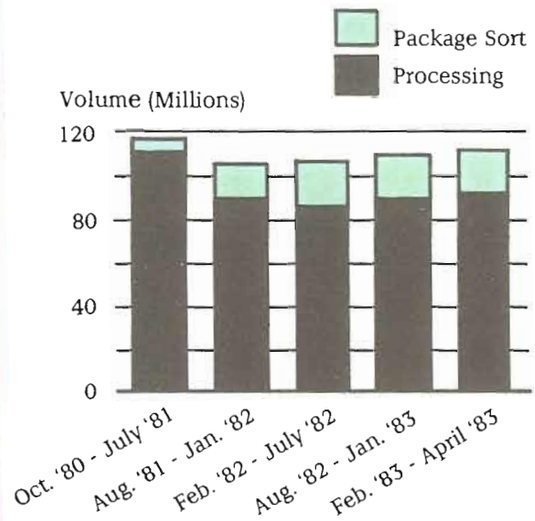
Economic theory suggests that, prior to pricing, free Fed services induced banks to use more Fed and less private sector services. Therefore, where pricing resulted in higher prices for Fed services relative to private services, there should have been some reallocation of resources toward the private sector. Specifically, Fed pricing should have led to decreased use of Fed processing and clearing and to the increased use of private sector alternatives. That is exactly what happened.

In August 1981, pricing brought about an abrupt drop in the use of Fed processing, transportation, and clearing services. The substantial lead time in announcement of Fed changes allowed the banking community ample opportunity to make alternative arrangements, which explains the prompt adaptation to change. In the first month of pricing, the Fed lost 19.7 percent of the volume which it both processed and cleared. The average monthly volume for the period August 1981 to April 1983 was about 22.4 percent lower than that of July 1981.[3]

The Fed lost less total clearing volume than processing volume, however. Most Fed facilities offered a service called "package sort" which banks can use to clear already processed checks. In this program, banks send packages of checks, with clearing information, to a Fed facility (via Fed or private transportation) for clearing and distribution to various end points (banks of issue or their correspondents). Package sort grew after the Fed priced its services because many banks found the per item price—for private processing plus Fed clearing—more economical than either all-Fed or all-private routes.

Figure 3 shows processed volume, package sort volume, and total clearing volume. While processing volume has remained more or less stagnant, total clearing volume has recouped some of its initial losses, thanks to gains in package sort clearing. While the net loss in clearing during the first six months of pricing was 10.8 percent (compared to 21.4 percent in processing), it narrowed to 7.6 percent by the February-April 1983 period (compared to 21.1 percent in processing).[4] These later figures reflect not only bankers' immediate adjustments to non-zero Fed prices, but also subsequent reactions to ongoing changes in quality of service, and to further price changes made by the various suppliers of services. The environment did not remain static.

FIGURE 3
AVERAGE
MONTHLY CHECK VOLUME
Federal Reserve System



Although the Fed as a whole lost clearing volume after pricing, not all 48 Fed facilities did so. Because each facility faced different costs and different markets, and because some did not offer package sort, the effect of pricing on clearing volumes varied considerably. For instance, by February-April 1983, one Fed facility suffered a loss of 39 percent in clearing volume while another experienced an increase of 33 percent.[5]

WHO HAS GAINED CLEARING BUSINESS?

The loss of Fed clearing volume is mirrored in the private sector by gains for private clearing

[3]Data based on monthly volumes reported to the Board of Governors.

[4]Ibid.

[5]Ibid.

alternatives—direct exchange, correspondent banks, and clearinghouses. While it is difficult to know how the private sector has carved up its increased market share, it is possible to make qualitative judgments about gainers and losers. The findings reported are based on a survey the author conducted of changes in private sector clearing arrangements in the areas served by each of the 48 Fed facilities.[6]

Direct Exchange Picks Up. After Fed pricing, many banks, which previously had used the Fed to clear checks, resorted to direct exchange with banks of issue. This method of collection does not rely on other agents for clearing. Thus, some of the private sector gain in clearing is happening at banks themselves, not at correspondent banks or clearinghouses.

The simplest direct exchange involves banks walking checks across the street and handing them to each other. In local areas with no clearinghouse, banks customarily have exchanged directly if the volume of checks on each other warranted it. When the Fed instituted RCPCs in the early 1970s, however, the use of direct exchange declined in those 12 zones. Banks using direct exchange were usually competitors and, once RCPCs provided a free convenient alternative, many banks chose not to deal directly and to use the Fed. Fed pricing has altered these relative costs and has led to a resurgence of direct exchange.

Growth is occurring not only in local exchanges but also in the use of direct sends to distant banks. These items previously were sent through the Fed or correspondent banks as clearing agents. Typically, banks use private courier services for direct sends. One of the primary motivating factors for longer distance direct exchange is better availability of funds; that is, banks' accounts (in this case with each other) are credited faster than they would be using an agent. For all Fed zones, the survey yielded new examples not only of direct exchanges within local areas, but also of direct sends between cities, states, and Reserve Districts.

Correspondent Banks Change. Prior to pricing, correspondent banks usually priced their check collection services indirectly. In particular, they required their bank customers to maintain a certain balance with them as compensation for collecting checks. With Fed pricing, correspondent banks faced new costs in providing certain services, such as some interdistrict transfers using the Fed as clearing agent. These new costs served as a catalyst for correspondent banks to reevaluate their costs, their menus of services, and their prices. As a result, many correspondents unbundled their services, revamped them, and priced them explicitly.

It is hard to say whether correspondent banks, as a group, have gained or lost clearing volume. Some correspondents have lost business, in some cases to clearinghouses, and in other cases to the Fed; some have gained business. Many correspondent banks have attracted new business through expanded direct send services which they sell to customer banks. Banks can use a correspondent bank as a transportation agent to direct send checks to the issuing bank rather than contracting courier services themselves. Many correspondent banks have increased significantly the number of end points to which they direct send for customer banks and have lowered the dollar value cut-off, that is, the minimum dollar amount necessary for a direct send program. These changes made their services more competitive with the Fed's transportation system.

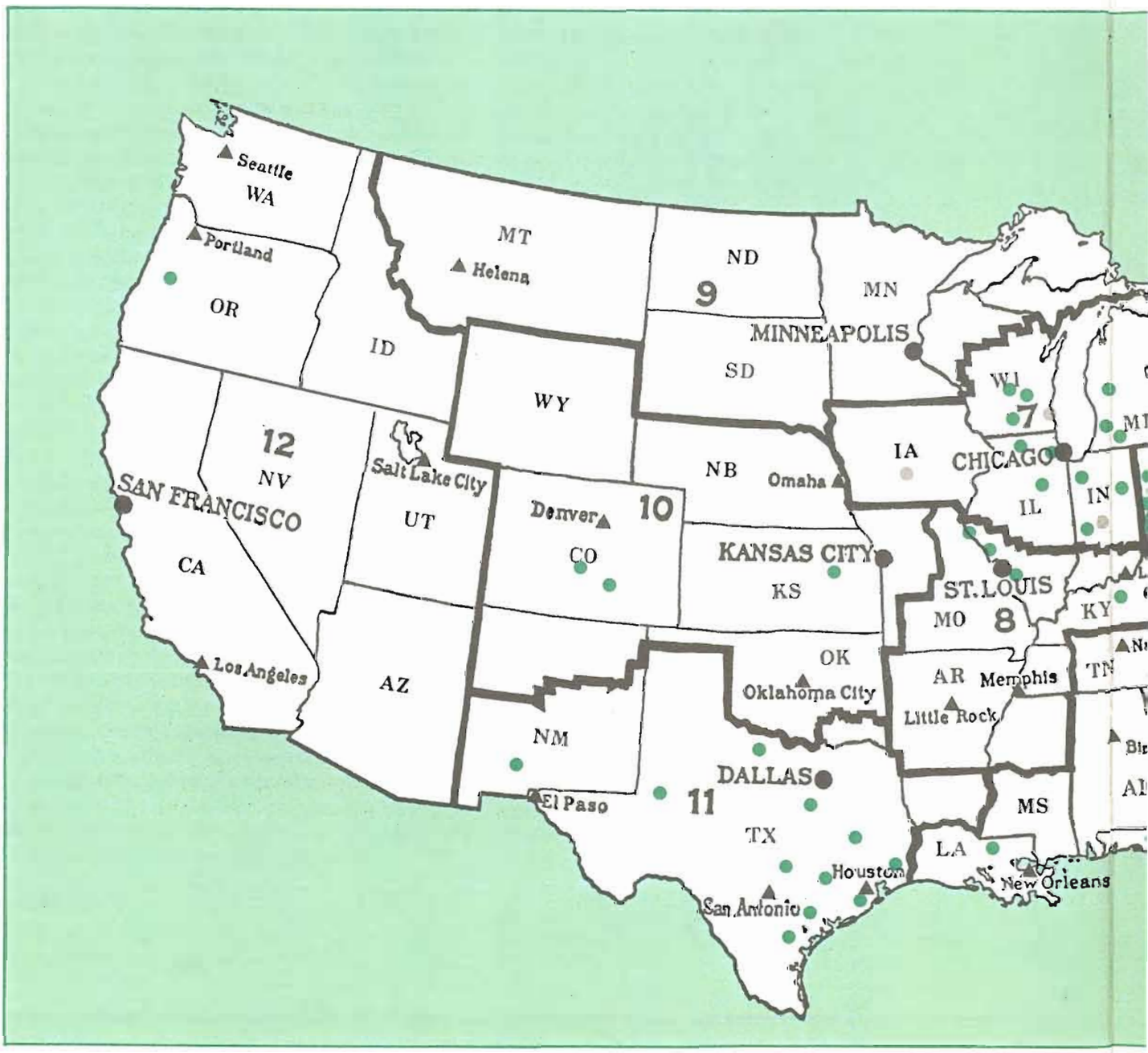
One example points out the importance of relative costs. A major correspondent bank in Indiana started an in-state direct send program after its district Fed raised its package sort price. The program initially included one third of the end points serviced by the Fed, with a view toward expansion. Another example illustrates how banks promote direct send programs by emphasizing availability of funds. First Tennessee Bank in Nashville based a direct send service, First Express, on the airline network of Federal Express whose hub is in Nashville. This correspondent bank's objective was to offer customers better availability, via First Express, than the Fed could offer. The private sector could make considerable additional gains in transportation and clearing if expansions of direct send programs prove to be economical in the longer run.

New Clearinghouse Activity. One of the primary findings in the survey was evidence of

[6] Joanna H. Frodin, "Changes in Check Collection After Fed Pricing", Spring 1983, (unpublished).

considerable new clearinghouse activity since Fed pricing. Clearinghouses have expanded both in numbers and in their roles, which suggests that they have gained a significant share of the clearing volume lost by the Fed. Clearinghouses also appear to have attracted business at the expense of correspondent banks. For many banks, using new clearinghouses appears to provide the most economical route for certain types of clearing in the post-pricing environment.

The Number of Clearinghouses Grows. The survey revealed that 95 additional clearinghouses have been established since Fed pricing. Seventy-



eight of these are new while 17 are renewed. Renewed clearinghouses are generally ones which were active prior to the institution of Fed RCPCs in the early 1970s, then disappeared as RCPCs attracted business, and have been reactivated. Figure 4 shows the location of these additional clearinghouses as well as Federal Reserve districts and facilities. The map indicates that additional clearinghouses are not evenly distributed around the country. Rather, there is considerable grouping.

It is difficult to say what accounts for this grouping. It is probable that a state's bank structure is relevant, since it influences the pattern of

FIGURE 4

FEDERAL RESERVE DISTRICTS

New or Renewed Clearinghouses

- New or renewed clearinghouses
- Boundaries of Federal Reserve Districts
- Federal Reserve Bank Cities
- Federal Reserve Branch Cities
- Regional Check Processing Centers

Note: Alaska and Hawaii are in the Twelfth District

Prepared by Joanna H. Frodin with the research assistance of Diane Mayer.

check collection. A state's bank structure is defined in terms of branch banking (statewide or limited) or unit banking. With branch banking, a larger proportion of checks becomes "on-us" and is cleared internally by banks than is the case with unit banking. Therefore, clearinghouses are more likely to form in unit banking states.

California, with extensive branching by a few large banks, seems to be a case where banking structure has affected clearinghouse formation since pricing. There have been no new clearinghouses. By contrast, eleven new clearinghouses appeared in the unit banking state of Texas. While the experience in certain states seems closely related to structure, there does not appear to be a strong correlation between structure and clearinghouse formation nationwide. It is likely that other factors, such as variation in population density, geography, and some noneconomic considerations also influence clearinghouse formation. Further study is needed to attribute the grouping of clearinghouses more specifically.

Clearinghouses Expand Their Activities. Clearinghouses not only have increased in numbers, but also many have expanded in scope—functionally and geographically. Indeed, these changes may indicate important trends in private sector clearing in the future. For instance, many clearinghouses have expanded their activities by exchanging more *types* of checks than before. The common practice in the past was for clearinghouse members to exchange mainly so-called "city" items drawn on each other. Other types of checks (that is, from RCPC areas or Country areas) coming to the clearinghouse would have been sent to the Fed or to a correspondent bank to clear.

Expansion of exchange beyond city items has come from three sources. First, many correspondent banks, which process checks for client banks, now "intercept" these items for "swap," or exchange, at the clearinghouse. This practice avoids the new cost of sending these checks to the Fed to clear. Second, some banks are performing swaps in clearinghouses for affiliates of their parent bank holding company—an expanded, if not an entirely new, activity. Third, one Texas clearinghouse has persuaded banks which are not members of the clearinghouse to send certain non-city items to the clearinghouse rather than to the Fed. These examples of new, or greatly expanded, activities of clearinghouses imply that, in the future, clearinghouses can extend their role by clearing different types of checks and by enlarging the mix of institutions they serve.

An even broader avenue of expansion—via intra-regional and then inter-regional exchange—seems likely. The survey revealed that many new clearinghouses, as well as expanding old ones, are *intra*-regional in scope, that is, their members come from a larger geographic area than the city-wide area that was typical in the past. For example, a clearinghouse which served one city on Long Island has expanded to become the Long Island Clearing House. Banks in both Southern Michigan and Northern Indiana are now served by the Michiana Clearing House.

Some moves to *inter*-regional exchange are also taking place. One type involves a bank in one region and a clearinghouse in another. Banks in Birmingham, Alabama are presenting checks to members of the clearinghouse in Atlanta, Georgia, through banks which are both their affiliates and also members of the clearinghouse. Another example involves some large correspondent banks in West Texas cities which are presenting checks directly at local clearinghouses in other cities rather than sending them to the Fed.

The survey also uncovered another type of expansion into inter-regional exchange—via inter-clearinghouse exchange. One case involves clearinghouses in Jacksonville, Florida and Atlanta, Georgia. A representative bank in the Jacksonville clearinghouse sends checks drawn on any member of the Atlanta clearinghouse to its representative bank for exchange, and vice versa. Another case of inter-clearinghouse exchange exists between Baton Rouge, Louisiana and Jackson, Mississippi. For these interchanges to occur, there must be sufficiently large dollar values of on-others checks among these two groups of banks to make it worthwhile. The survey revealed that clearinghouses all over the country are talking about such interchanges.

Although the potential for a network of inter-clearinghouse exchanges among business centers is apparent and discussion is ongoing, it is unclear how extensive or how formal such arrangements will become, since interchange is not necessarily mutually advantageous. Also unclear is whether or

not a national clearinghouse system will develop. Although 33 clearinghouses met in 1982 to explore this question, nothing concrete has emerged.

Regardless of whether the ultimate result in this post-Fed pricing environment is a national clearinghouse, there is considerable potential for further development in private clearing through clearinghouses. They may provide a relatively inexpensive clearing alternative for many banks, not only in traditional exchange of city items among members, but for other types of checks issued by a greater variety of institutions from a larger geographical area. The last phase of Fed pricing, the pricing of float,[7] which is currently being instituted, should provide an additional incentive for banks to use clearinghouses. Float pricing will make it more costly to clear through both the Fed and correspondent banks. This development particularly may encourage additional inter-clearinghouse exchange.

CONCLUSION

Federal Reserve pricing of check collection services, as mandated by the MCA, has wrought considerable change in the market for those services. The immediate effects of the August 1981 change in relative prices were more bank direct exchanges, the formation of additional clearinghouses, and restructuring of correspondent banks' prices. Gains in the volume of checks cleared by the private sector came at the expense of Fed volume losses. This finding bore out theory's prediction that, if the Fed were a high cost provider, then full cost pricing would lead to changes in consumption away from the Fed and toward private sector alternatives.

However, subsequent developments indicate that more fundamental changes are occurring in this market. While price is still an important factor in the competition among suppliers, the relative quality of service has increased in importance. One key factor in quality is the availability of funds. Recently, the Fed has improved its services, particularly through reorganizing its transportation services; correspondent banks likewise have improved theirs through better transportation, scheduling, and more attention to customers' needs. Individual banks have cut down clearing times by exchanging directly with distant banks. Local clearinghouses, which first expanded in numbers, have expanded their functional role in many other ways: greater geographical area, exchange of more types of checks, exchange for more institutions than previously, exchange with non-member institutions in other cities or states, and inter-clearinghouse exchange.

In sum, the legislative innovation of the MCA has spawned a great deal of market innovation and increased competition. The check collection market is now characterized by more efficient allocation of resources than existed two years ago. Will the process continue along the same lines in the future? While additional change is likely in the directions found to date, the market for collection of funds will become more complex. New competitors using relatively low-cost, electronic funds transfer and clearing techniques will enter to challenge the more traditional paper-based suppliers.

[7] Federal Reserve float, a net addition of reserves to the banking system, is created when the depositing bank's account at the Fed is credited before the issuing bank's account is debited. Until now, banks have not had to pay interest on what amounts to a loan of reserves.

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