# Account Analysis in Correspondent Banking

*By Robert E. Knight*

In recent years the incentive for banks to develop improved measures of customer profitability has mounted. As interest rates have risen and sophisticated cash management techniques have matured, corporate treasurers have trimmed noninterest bearing balances to the minimum believed necessary to compensate banks for services. To a lesser extent the same pattern has occurred in correspondent banking as multibank holding companies have expanded and as banks have sought to maximize earnings by selling large sums in the Federal funds market. In addition, rising levels of loan defaults, questions concerning the adequacy of bank capital and profits, and the likely development of expensive new services, such as electronic fund transfers, have all created a renewed interest by banks in the profitability of individual services and accounts.

The standard approaches for measuring bank customer profitability have also been criticized. Bankers frequently maintain that customers are able to use the same balances to compensate for both loans and activity services. Corporate treasurers, on the other hand, have argued that bank profitability measures are not sufficiently accurate. Traditionally, banks have tended to cost and price only a small group of standard activity services. Others have been offered without charge. By setting prices on the costed services sufficiently high to cover the expenses of all services, banks have been able to obtain a rough indication of the costs of servicing individual customers. This approach, however, results in overstating the costs of customers using few of the noncosted services and underestimating the expenses of those making extensive use of these services. As a result, corporate treasurers have objected. To avoid paying for services not actually utilized they have requested banks to "unbundle" services and to develop separate prices for each.

At most banks the primary measure of individual customer profitability is the account analysis. In performing an analysis a bank determines the revenue represented by an account by multiplying the average collected demand deposit balance, generally adjusted for reserve requirements, by an earnings credit or allowance. The expenses of servicing the account are computed by multiplying the number of times a given service is utilized by the cost (frequently including a margin for profit) of providing the service. The difference between income and expenses represents the estimated profit the bank derives from the customer relationship.[1]

During the fall months in each of the last 5 years, the Federal Reserve Bank of Kansas City has conducted a nationwide survey of major correspondent banks to obtain representative figures on the charges and earnings allowances used in their account analyses. In the most recent survey, data were obtained from 107 banks for the August-September 1975 period. This article reports the results of that survey and discusses some of the difficulties in costing bank services.

## ALTERNATIVE APPROACHES TO COSTING

Although the general methods of performing an account analysis are similar at different banks, the prices of services often vary significantly. In part, these differences reflect alternative ways of calculating the costs of services, variations in the number of services costed, competitive factors, and differences in the methods of treating indirect costs, overhead, and desired profit. The implications of some of these alternatives can perhaps best be explained with an example.

Assume that a bank's officers are considering the price that should be charged a corporation for servicing a direct deposit payroll plan electronically. Under the arrangement, the company's 1,000 employees will no longer be issued checks. Instead, the firm will create a computer tape containing the amounts due all employees, the numbers of their respective banks, and their account numbers at the banks. The tape will then be sent to the company's bank which will sort through it and remove any entries for employees who also have their accounts at the bank. These accounts will then be automatically credited and the remaining entries on the tape forwarded to an automated clearinghouse for processing and distribution to other banks.

The first individual to speak might be the bank's marketing officer: "It's taken me a long time to convince this company that their employees will like this plan and I'm anxious to see it succeed. We should experience substantial cost savings because we will no longer have to process each employee's paycheck as it is cashed or cleared. Our computer has plenty of excess capacity. Since the tape will arrive several days before payday, we can process it during a slack period. In view of our cost savings and the fact that this type of arrangement is likely to be of growing importance in the future, I don't think we should charge the company anything."

The senior vice-president in charge of operations then rises: "I agree that we may experience some cost savings, but these will be small. Displacing 1,000 checks per month will not presently allow us to let any employees go or to retire any equipment. However, there will be direct costs involved with the program which the company should pay. Overtime may be required if our computer operators have to stay late to handle the tape. A charge, therefore, should be made simply for processing the tape. Also our fee should include the computer processing time, the extra bookkeeping that will be necessary, and our transportation costs for delivering the tape to the automated clearinghouse. In my opinion, a flat fee of $8 for each tape received and a charge of 1 cent per entry on the tapes would just about cover these costs."

"Gentlemen," interrupts the cost accountant, "you are forgetting about the indirect costs. To handle this operation we will have to develop new computer programs. We should also include allowances for overhead, profit, and the costs associated with rent on the building, insurance, taxes, security guards, and possibly the expenses of marketing the program to the company and its employees. Our cost studies have shown that substantial savings

1/A related method for measuring the adequacy of loan terms and compensating balances is "customer profitability analysis." In essence, profitability analysis involves the preparation of considerably more detailed income and expense statements for major customers. Rather than emphasizing activity charges, however, profitability analysis focuses on lending and is of the greatest use in determining the profitability of net fund users.

The general format for a profitability analysis is often similar among banks. Bank income on a relationship is computed by adding the interest received on loans, the interest earned by the bank on the customer's deposit funds, and various fees paid the bank. Expenses include charges for such items as activity services, interest value of funds loaned, loan handling expenses, and the cost to the bank of fee services. The difference between income and expenses—net profit—is then normally related to some base representing the size of the customer relationship to obtain an index number for comparing relative customer profitability. A complete description of profitability analysis techniques can be found in two articles on customer profitability appearing in the April 1975 and the September-October 1975 issues of the *Monthly Review.*

from direct deposit programs will be significant only if a substantial volume develops, but the number of transactions is now small. To cover the costs this program will entail during the first year we will need to charge the company a fee of about 35 cents per entry on a tape. In the future, if other companies adopt direct deposit plans, we may be able to adjust the price downward."

The marketing officer shook his head sadly. "Most of these indirect expenses will be incurred whether or not we perform this program. In my opinion, if we charge those kinds of prices, no company will ever want to adopt a direct deposit plan."

Which officer is correct? What should the company be charged? Might the situation be approached differently? Allocating the costs in a multiproduct firm such as a bank is always highly arbitrary. The difficulty is further compounded by the fact that banks generally must maintain staff and equipment to handle peak loads, but most of the time do not operate at capacity. The marketing officer who argued that no fee should be charged was trying to apply marginal cost principles. The operations head remembered, however, that to avoid losses average variable costs must always be covered in the short run. In effect, he was stating that only the costs directly attributable to the program should be considered. The general costs of being in business and top management salaries should be absorbed elsewhere in the bank. The cost accountant was looking at the long-run situation in which total revenue must exceed total costs. As may be seen in the hypothetical example, alternative methods of analyzing a situation can give rise to very large differences in estimated costs.

The difficulties in costing bank services are manifold. At any time most bank costs appear to be fixed. Plant and equipment expenses are sunk, most employees are salaried, and overhead normally shows little variance with output. By comparison, the increase in total cost which a bank incurs from providing a standard service to one additional customer is normally small — supplies, postage, computer time, perhaps occasional overtime, etc. In the short run, any revenue gain in excess of these marginal costs adds to total profits. If the bank were to charge these costs, however, the charges would not make any contribution toward meeting the heavy fixed costs and could lock the bank into an unrealistic price structure.

On the other hand, if the bank were to charge average total costs, the situation might be reversed. Most banks maintain substantial excess capacity. If the price were set equal to average total cost, the customer would be asked to pay not only for the cost of providing the service but also for the cost of maintaining the excess capacity and any inefficiencies that may be present. Studies which show the average cost of performing services in an efficient manner — standard cost studies — can be used to eliminate charges for unused capacity and waste, but even so an arbitrary element remains. Alternative methods of allocating the expenses of general bank overhead and support departments (such as the mail room, personnel department, computer service, and employees' cafeteria) can result in widely different cost estimates. For some bank services, these may constitute as much as 40 to 50 per cent of total costs. Varying assumptions about the likely impact of inflation on the cost of performing services can also have a significant impact on prices.

In a complete cost study all bank costs must be allocated. If fewer services are costed, therefore, the estimated average cost of each service is likely to be higher. Although an element of uniformity exists among correspondents in the types of transactions which are commonly included in the account analysis, variants in the specific activities considered may produce differences in estimated costs. Further differences, as the example has illustrated, can arise from the alternative types of costs which may be estimated. Nevertheless, for account analysis purposes the vast majority of banks calculate either the average total standard or historical costs of providing services. In determining the charges which will be made for these services, however, a number of modifications are often made in the cost figures. The average cost figure may be increased to include a profit margin or it may be reduced if competing banks are charging substantially lower amounts. The prices may also be modified to reflect the earnings allowance used in computing the investment value of an account. Banks which use a low earnings credit are likely to have low charges, and vice versa. A few banks, though, have low charges and high earnings allowances to help them build a larger correspondent business.

## EARNINGS ALLOWANCES AND CHARGES: THE SURVEY RESULTS

In the survey, data were collected on the analysis charges and earnings allowances used in analyzing the accounts of both corporate and respondent bank customers. Although respondent banks receive preferential rates on some services, the average prices of services to both sets of customers were often quite similar. As a result, the figures presented in this article are limited to those applicable to respondent banks.[2]

In performing an account analysis, the initial step for most correspondents is to subtract average uncollected funds or float from the respondent's average ledger balance to obtain an estimate of average collected funds. Uncollected funds represent the dollar amount of cash and noncash items which respondents send to correspondents for collection, but for which the correspondents are unable to obtain immediate credit. Among the banks able to supply figures, float averaged 44.1 per cent of gross ledger balances due to respondents. Large variances existed among correspondents, but on average only about 55.9 per cent of ledger balances were collected. Although this figure is slightly higher than was found 5 years ago, the difference is probably not significant. However, it is rather surprising that correspondent float did not decline during a period in which the Federal Reserve created numerous RCPC's and correspondent banks developed many direct send programs to other correspondents to accelerate check collections. The stability, though, could be coincidental. In recent years the ability of correspondent banks to obtain relatively accurate measures of the float associated with cash letters has improved considerably.

The second step for most correspondents is to calculate the available or investable funds represented by a respondent's balance. This measure is normally obtained by subtracting an allowance for reserve requirements from the collected balance figure.[3] Among the survey banks, all but three indicated that a deduction was made for required reserves. Nearly 43 per cent of the banks stated that the deduction was based on the highest marginal reserve requirement rate for demand deposits to which the bank was subject. The average reserve requirement for demand deposits was used by 35.5 per cent of the banks, while 14.0 per cent reported that the deduction was based on an administrative decision and was not tied in any formal way to actual requirements. Five banks did not indicate how the deduction was obtained. By far the most common deductions for reserve requirements were 13.0 per cent and 16.5 per cent, used by 34.6 per cent and 19.6 per cent of the banks, respectively. The deductions at nearly all of the remaining banks were between these two figures, but the range varied from 10 per cent to 20 per cent.

The earnings or revenue from an account is derived by multiplying the available funds figure by an earnings allowance. Alternatively, if no deduction is made for reserve requirements, the collected balance figure is multiplied by the earnings allowance. Of the banks surveyed, about three-fourths tied their earnings credits to specific money market rates, with 46.7 per cent selecting the 3-month Treasury bill rate. Other money market rates used included the Federal funds rate, short-term CD rates, the discount rate, the commercial paper rate, and an average of several money market rates. A small group of banks tied their earnings allowance to the prime loan rate or to the actual portfolio yield

2/A complete set of tabulations by Federal Reserve district for both portions of the survey is available from the author.

3/Several banks in the survey reduced the earnings allowance rather than the collected balance figure by the required reserve percentage. Since the estimated earnings value of an account is simply the product of these two variables, the effect of the alternative deduction is identical. To improve comparability of the data, all banks making a standard deduction for reserve requirements in the account analysis were assumed to have made the deduction from collected balances.

on loans and investments. Administratively set earnings credits frequently reflect.money market rates, the rate the bank is willing to pay for time deposits in unlimited amounts, or the rate the bank can earn on the funds.

The fact that several banks tied their earnings allowance to a specific money market rate does not necessarily mean that the actual earnings allowance at any time is the same at these banks. Some prefer to use the market rate in the current month or quarter, some lag the rates, and some use moving averages of the rates. Banks lagging the rates frequently want customers to know the earnings value that funds will have in the current period. Moving averages, on the other hand, may be instituted to discourage customers from reducing balances significantly during periods of sharply rising interest rates. At the time of the survey, the earnings allowances used by correspondents ranged from annual rates of 3.5 per cent to 8.32 per cent, with the average and median being 6.09 per cent and 6.1 per cent, respectively. These rates are slightly below the August-September Federal funds rate and the yield on 3-month Treasury bills, but this tendency undoubtedly is attributable to the fact that market rates in those months were rising.

Although most correspondent banks determine the revenue from accounts in a similar fashion; much greater diversity is evident in the methods of calculating the expenses of performing correspondent services. The majority of banks charge for only a small group of basic transactions such as check clearing, wire transfers, and ledger entries; but a handful of banks have identified and charge for as many as 100 separate banking services. Omission of some services from the formal account analysis does not mean that correspondents do not mentally consider these services when evaluating the profitability of an account, but rather that no formal pricing procedures have been developed. Of necessity, the survey results reported in this article are limited to those activities for which charges are commonly assessed.

Comparisons of the basic prices of correspondent services can be misleading. Even though a correspondent may have a higher charge per item, if the correspondent is more generous with its earnings allowance and makes a smaller deduction for reserves, the collected balance required for that service may be smaller than at another bank which has lower charges. Similarly, some banks charge prices which are greater than costs to obtain a profit, while others charge estimated costs but give an earnings allowance less than actual earnings. To correct for these differences, all item charges have been converted to annual balance requirements for each transaction. If accounts are analyzed by correspondents on a monthly basis, the required monthly balances, ignoring complications of compounding, would be 12 times these amounts.[4]

The collected balance requirements for selected correspondent services are shown in Table 1.[5] The only service for which all correspondents calculate charges is check clearings. Among survey banks, approximately one-fifth levy identical fees for amount encoded and nonencoded checks. Cor-

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4/Account maintenance fees are an exception to this generalization. Balance reauirements for maintenance are not affected bv the time period covered'in the analysis. Table 1 shows the annual balance requirements for the maintenance of an account for 1 year. If the account analysis were performed monthly, the same dollar balance would compensate for the maintenance for 1 month.

5/The collected balance requirements in Table I refer to the balances a customer must hold for agiven service, not what remains afier a deduction for reserve requirements has been made. Specifically, if P is the price of a transaction or service, i is the imputed earnings allowance at an annual rate and expressed as a decimal, and r is the fraction of collected balances deducted to meet reserve requirements, the am collected balance (B) required for a given service can be derived from the following l:

$$B = P/[i(1.00-r)].$$

A few comments on the tabulations in the table are in order. Banks not shown as charging in the account analysis may in some instances require customers to pay direct fees for services. Previous surveys, however, have generally suggested that such practices are relatively uncommon for standard activity services involving no out-of-pocket expenses to the bank. If expenses are incurred, these costs are normally passed on directly.

In reducing the account analysis charges to the common denominator of required collected balances, a number of difficulties arose. Most banks. for example, list explicit account maintenance fees in the analysis, but a number have only indirect maintenance fees. Such maintenance fees could arise if a bank has a charge for a monthly statement or has varying charges for the number of items deposited. A bank, for instance, might charge 2.25 cents for the first 1,000 items deposited and 2 cents for all additional items. In effect, customers depositing over 1.000 checks are charged a maintenance fee of $2.50 and a rate per check of 2 cents. In tabulating the results, any charge for a regular monthly statement has automatically been considered to be an account maintenance fee, but a similar adjustment cannot be made for banks which have marginal charges for the number of items deposited. In a few instances, the number of items required to secure the minimum charge is so high th comparatively few customers would be able to qualify. Although it a little difference in the averages whether the minimum or maximum per item charges are respondents which differentiate the two generally charge 1 to 2 cents additional for items received which have not previously been encoded. Consequently, the average and median balance requirements for nonencoded items exceed those for encoded items by about 40 and 50 per cent, respectively. In contrast to differentiating for encoding, three of the survey banks levied different charges for transit items drawn on local or nonlocal banks, while one had prices which varied with the time of day the items were received. Another bank had variable prices depending on whether the items were cleared through-the Federal Reserve or correspondents. In these cases the banks were entered in the tabulations by averaging the possible charges.

Most correspondents also include ledger entries in the account analysis. About 60 per cent differentiate between credits and debits, with the charge for normal credits generally exceeding the charge for normal debits by 1.5 to 4 times. The collected balance requirements in the table refer only to standard transactions. A small group of banks also have special charges for credits associated with cash letters, intrabank transfers, and wire transfers. By contrast, several banks have charges for debits to correspondent accounts but make no charge for credits.

Nearly all correspondents have established charges for outgoing wire transfers, but only slightly over half have charges for incoming transfers. Most banks charging for both types of transfers have the same price for each, although a fifth have lower charges for funds received. In addition to a flat charge per transfer, occasionally fees also vary with alternative methods of handling the advice of the transfer and the method of performing the transfer. If more than one price was listed, the charge for transfers performed by the Federal Reserve was used in the tabulations. The prices for alternative methods were generally two to five times these amounts.

Correspondents also use a variety of methods to charge for currency and coin transactions. Many banks have separate fees for currency and coin both received and provided. The most common methods of charging for currency are an hourly preparation or verification charge, or a fee proportional to the dollar amount of the currency. The charges for coin furnished are most typically based on a price per roll, while the fees for coin deposited are most commonly related to the dollar amount of coin or the length of time required to verify a shipment. Several additional methods are also listed in the table. Regardless, the indicated charges do not include an allowance for postage or insurance. Some correspondents pass these charges along to respondents directly, while others include the cost as an expense in the account analysis.

As might be expected, a significantly larger fraction of correspondents charge for furnishing currency and coin than charge for receipts. However, a sizable proportion — 30 per cent for currency furnished and 17 per cent for coin furnished—indicated that they did not charge or charged only irregularly for such orders. Many of these correspondents are located in money market cities and have rarely been asked to furnish currency or coin. Respondent banks in these regions frequently obtain currency and coin directly from armored car carriers.

About half of the survey banks also have special charges for bond coupon collections. Most correspondents base the charge on the number of envelopes processed, but several assess fees proportional to the dollar value of envelopes or differentiate between alternative types of securities. If

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used. the average of the two has been used wherever reasonable. In other cases, the charge most likely to dominate has been used.

A more basic shortcoming of several entries in the table is that they do not fully show the diversity that exists in the pricing structure of individual banks. Most banks, for example, have a standard charge for all domestic collection items but some charge a given percentage of the amount of the collection and others differentiate between cash and noncash collections. between documentary and clean collections. between city and country collections, etc. Where alternative types of collections are designated, the prices often vary significantly. Similarly. some banks have charges for items deposited which vary with the location of the drawee bank and with the time of day the deposit is received. At some banks the charge is dependent on the method of clearing the checks. The charge for wire b-ansfers at some banks depends on whether the transfer is processed by the Federal Reserve and the method of handling the advice. In all of these types of cases the number of banks with varying charges is relatively limited, implying that separate tabulations of the figures would not have been particularly meaningful. Unless otherwise noted in the text, such situations have been treated by entering a price based on a simple average of the possible charges. This approach makes the figures roughly comparable to those reported by other banks.

# Table 1
ACCOUNT ANALYSIS CHARGES FOR SELECTED CORRESPONDENT BANKING SERVICES
**August-September 1975**
**(107 banks)**

| Transaction | Charge Per Transaction (Amounts in Dollars) | | Annual Collected Balance Required Per Transaction in the Account Analysis (Amounts in Dollars) | | | Per Cent of Banks Charging in Account Analysis | Per Cent Nonresponse |
|---|---|---|---|---|---|---|---|
| | Range | Mode | Average | Range | Median | | |
| 1. Annual Account Maintenance | 7.80-720.00 | 36.00 | 1,090.00 | 138.72-21.176.52 | 583.80 | 84.11 | — |
| 2. Ledger Entries | | | | | | | |
| Credits | .03-.868 | .10 | 3.18 | .66-17.04 | 1.94 | 77.57 | 0.93 |
| Debits | .02-.30 | .06 | 1.74 | .36-5.75 | 1.57 | 93.46 | — |
| 3. Items Deposited | | | | | | | |
| Not Encoded | .01-.0658 | .03 | .56 | .18-1.12 | .55 | 97.20 | 2.80 |
| Encoded | .005-.05 | .015 | .40 | .10-.93 | .36 | 98.13 | 1.87 |
| 4. Returned Items | .10-5.00 | .50 | 11.52 | 1.92-93.54 | 8.44 | 76.64 | {0.93} |
| | | (Alternative Methods) | | | | 1.87 | |
| 5. Wire Transfers | | | | | | | |
| Outgoing | .50-5.25 | 2.00 | 44.47 | 9.58-104.50 | 39.15 | 93.46 | {1.87} |
| | | (Alternative Method) | | | | 0.93 | |
| Incoming | .50-3.00 | 2.00 | 38.55 | 9.78-67.88 | 38.38 | 51.40 | 1.87 |
| | | (Alternative Methods) | | | | 2.80 | |
| 6. Securities Drafts | .03-10.25 | 3.00 | 63.04 | .58-191.41 | 57.97 | 39.25 | {2.80} |
| | | (Alternative Methods) | | | | 9.35 | |
| 7. Payable Through Drafts | .03-2.50 | .05 | 3.96 | .56-53.31 | 1.23 | 54.21 | |
| | | (Alternative Methods) | | | | 4.67 | {2.80} |
| 8. Currency Furnished | | | | | | | |
| Per $1,000 | .02-1.00 | .20 | 7.08 | .42-21.80 | 5.04 | 30.84 | |
| Per Package | .03-.40 | .10 | 3.12 | .57-8.16 | 2.39 | 13.08 | |
| Per Hour | 5.00-15.00 | 5.00 | 147.49 | 75.46-278.94 | 140.26 | 8.41 | |
| Per Order | 1.00-10.00 | 1.50 | 69.76 | 19.25-195.05 | 47.90 | 6.54 | {1.87} |
| Per 100 Nates | .008-.20 | .20 | 2.37 | .12-3.85 | 2.44 | 5.61 | |
| | | (Alternative Methods) | | | | 3.74 | |
| 9. Currency Deposited | | | | | | | |
| Per $1,000 | .02-1.50 | .20 & .40 | 9.51 | .42-27.33 | 7.54 | 19.63 | |
| Per Hour | 5.00-16.10 | 5.00 & 10.00 | 154.41 | 75.46-278.94 | 140.26 | 15.89 | |
| Per 100 Notes | 12-.40 | — | 3.93 | 2.20-6.27 | 3.31 | 2.80 | {0.93} |
| Per Strap | .03-.40 | — | 3.12 | .57-7.24 | 1.56 | 2.80 | |
| | | (Alternative Methods) | | | | 3.74 | |
| 10. Rolled Coin Furnished | | | | | | | |
| Per Roll | .01-.181 | .02 | .52 | .18-2.84 | .44 | 66.36 | |
| Per Hour | 5.00-15.00 | 5.00 | 152.51 | 90.57-278.94 | 106.63 | 4.67 | |
| Per $1,000 | .60-2.50 | 2.50 | 37.86 | 10.93-54.57 | 48.09 | 2.80 | {1.87} |
| Per Bag | .50-1.33 | — | 17.30 | 10.65-23.46 | 17.79 | 2.80 | |
| | | (Alternative Methods) | | | | 4.67 | |
| 11. Coin Deposited | | | | | | | |
| Per $1,000 | .10-9.03 | .20 & .40 | 22.66 | 1.93-173.70 | 11.04 | 14.95 | |
| Per Hour | 4.50-16.10 | 10.00 | 169.18 | 80.07-278.94 | 180.34 | 13.08 | |
| Per Roll | .01-.05 | .03 | .48 | .21-.98 | .43 | 7.48 | {1.87} |
| Per Bag | .25-1.25 | .50 | 14.29 | 4.81-29.94 | 9.73 | 5.61 | |
| | | (Alternative Methods) | | | | 2.80 | |
| 12. Domestic Collection Items | | | | | | | |
| Per Item | .08-12.67 | 1.50 | 45.82 | 1.43-228.26 | 37.25 | 62.62 | |
| Dollar Amount | .1%-.05% | .1% | — | — | — | 6.54 | {2.80} |
| | | (Alternative Methods) | | | | 6.54 | |
| 13. Bond Coupon Collections | | | | | | | |
| Per Envelope | .075-5.00 | .50 | 19.20 | 1.46-92.69 | 14.03 | 42.99 | |
| Per $1,000 | .20-1.00 | 1.00 | 13.62 | 3.10-20.70 | 15.70 | 7.48 | |
| | | (Alternative Methods) | | | | 4.67 | {6.54} |
| MEMO | | | | | | | |
| 14. Earnings Allowance | 3.5%-8.32% | 6% | (Average: 6.09%) | | | | |

banks have not established a special rate for coupons, the fee is normally the same as for a deposited item. Collected balance requirements for securities drafts and domestic collection items are also shown in the table. As mentioned previously, most banks have a flat charge for processing collection items, but some differentiate between clean and documentary collections and for the location of the payee bank. If more than one charge was listed, the minimum charge for nondocumentary collection items was used in the tabulations. However, since some banks may have reported only the charge for documentary collections, the tabulations may be biased. A related problem is that some respondents evidently handle payable through drafts as collection rather than cash items. As a result, a small group of respondents listed very low charges for collection items. In view of these considerations, the representativeness of the collection item averages and range of charges is uncertain.

The major omission in the table is the schedule of fees relating to security safekeeping. About half of the correspondents in the survey include such charges in their account analysis and an additional group made direct charges for these services. However, the wide variety of charges makes it impossible to present meaningful summary figures. Safekeeping fees may be based on the dollar amount held, the number of issues or receipts held, perhaps differentiated by the type of security, the number of coupons clipped, the number of in-out transactions, maintenance fees, transfers, etc. The omission of safekeeping charges should not be interpreted as suggesting that these fees are unimportant. For some respondents they represent a major expense in the account analysis.

As with any set of averages, the figures in the table are subject to a degree of distortion. Differences in the proportion of banks charging for specific services could bias the averages. Some banks, for example, have high account maintenance fees to hold down the charge for normal services. Others do not levy charges for returned items but include the processing cost in the average charge for items deposited. Simple averages of the account maintenance fees or the items deposited charges would make no allowance for the fact that prices at some banks are higher because these banks do not charge or have minimal charges for other services. An upward bias in the average charges for these services might be introduced, but in view of the relatively large number of banks included in the sample this distortion is not likely to be great. Also the highest collected balance requirements often occur at major banks with the most sophisticated and lengthy list of charges for services. A more serious difficulty arises from the fact that the distributions of collected balance requirements tend to be badly skewed in the direction of higher charges. Many banks charge slightly below average fees, but a few banks charge considerably above the average. Consequently, the median balance requirements in almost all cases are below the average. For analysis purposes the medians are undoubtedly a better measure of typical balance requirements.

The group of services in the table are those for which analysis fees have commonly been established. Many correspondents also charge for other miscellaneous transactions, but these vary from bank to bank. Examples of services for which comparatively few banks charge are computer reject items, credit investigations, FDIC insurance, special statements, audit confirmations, automated clearinghouse transactions, customer referrals, negative collected balances, security purchases or sales, etc. In this sense the list of services and charges is incomplete. Services for which fees are normally paid by respondents, on the other hand, have also been omitted. These services include data processing charges, exchange costs for clearing non par items, purchases or safekeeping of securities for bank customers, and portfolio analysis studies.

The net profit or loss on a respondent's account is derived by subtracting the total analysis expenses from the earnings value of an account. The meaning of this figure, however, varies greatly among correspondents. Many correspondents build a profit margin into the account analysis by imputing an earnings allowance below the actual return on demand deposit funds, by adding a profit margin to the estimated costs of performing services, by making a deduction for required reserves which may exceed average requirements, or by being able to collect checks more rapidly than they grant fund availability. Practices differ among banks and are tempered by competition.

Among the survey banks, approximately 50 per cent indicated that they had attempted to make an allowance for profit. The before-tax margin ranged from 15 per cent to 61 per cent, with 25 per cent being the most common amount. Other banks, however, often expressed uncertainty over their actual costs, argued that the original profit objectives had been lost to inflation through rising costs, or felt that the price structures at competing banks had pushed prices to or below the break-even level. Regardless, banks often noted that the continuing U. S. inflation was having a very significant impact on the costs of providing services. As a result, many of these banks expected to recost and reprice services more frequently in the future.

To the extent correspondents have previously made allowance for profits in their analysis computations, the profit or loss figure derived from the analysis statement does not represent profit in the normal sense of the term. Many correspondents feel that this figure considerably overstates profits because many important correspondent services, such as loan participations and Federal funds transactions, are not included in the analysis. In any event, the practices of correspondents tend to be quite uniform in their behavior toward the net profit figure. If a bank's account regularly indicates a profit, the correspondent will generally do nothing. If the account analysis statement consistently shows a loss, the analysis statement may be sent to the respondent and a request made for the respondent to increase compensating balances. If the respondent does not comply, the account may ultimately be service charged the amount of the loss.

## CONCLUDING REMARKS

The most consistent finding of the annual account analysis surveys has been the very wide range of prices that exist among correspondents for even the most basic services. In the past, a portion of this variance could be attributed to the reluctance of some correspondents to modify account analysis charges during a period of price controls and to the subsequent time required to cost services thoroughly. Within the last 2 years, however, nearly all correspondents have modified their analysis prices. On average, the prices of high volume services such as items deposited, ledger entry debits, and payable through drafts rose between 14 and 26 per cent, while the charges for other services such as wire transfers, currency furnished, account maintenance, ledger entry credits, etc., increased between 30 and 40 per cent.

Nevertheless, the 1975 survey again found wide differences among correspondents in the charges for services. For example, among correspondents the maximum collected balance requirement exceeded the minimum by a margin of 9 times for encoded items deposited, 6 times for nonencoded items deposited, 48 times for returned items deposited, and over 150 times for account maintenance. It would be a mistake to anticipate that all banks would ever have identical charges since bank costs and the actual services rendered often differ significantly among banks. Nevertheless, differences of such magnitudes tend to suggest that the methods of establishing charges are often somewhat arbitrary. Moreover, as long as such differences continue to exist, customers are likely to be somewhat skeptical about the figures.

A frequent complaint is that competing banks often do not know their costs and tend to establish unrealistically low charges. To cast some light on the validity of these accusations, the 1975 survey obtained the estimated costs of performing certain services from a small group of correspondents which had recently recosted services. Using a cost-price comparison, the survey found 44 per cent of the banks had losses on ledger entry credits, 36 per cent on debits, 31 per cent on encoded items deposited, 26 per cent on nonencoded items, 57 per cent on wire transfers, etc.

While these percentages must be viewed circumspectly since the sample of banks providing cost figures was small, they do suggest that a significant proportion of correspondents are providing at least some services at prices below estimated costs. Banks experiencing losses on services often had lower prices than those which found the service profitable; but more interestingly, loss banks almost always had higher estimates of costs than other banks. Whether these cost differences are attributable to alternative methods of computing costs, or reflect actual differences in efficiencies or variations in the nature of services performed cannot be readily ascertained. In any event, for a variety of reasons the figures do not necessarily imply that banks appearing to experience losses on some services would necessarily find the provision of those services to be unprofitable. Some may have deliberately established loss leaders. Others could recover potential losses by granting low earnings allowances, establishing deductions for reserves which exceed average requirements, by making funds available for items deposited sometime after they have actually been collected, or by establishing high prices for other services.

Numerous factors are responsible for the wide variations in the prices of correspondent services and the practice of some banks to charge prices below estimated costs. These include varying degrees of bank competition, marketing objectives, alternative approaches to costing services, as well as actual differences in costs. Whether these tendencies will be perpetuated cannot be known, but pressures for greater precision in the measurement of costs are likely to rise. Recent statements by the U.S. Department of Justice have suggested that all depository institutions must be granted nondiscriminatory access to automated clearinghouses operated by the Federal Reserve and that prices covering full operating costs must be established for ACH services. If such policies were implemented, the Federal Reserve in all likelihood would ultimately be forced to adopt a similar approach for all regular operating services. While the potential ramifications of these possibilities are enormous, clearly one effect would be to thrust the Federal Reserve into greater competition with correspondent banks in the provision of services. Competition would still focus on the quality and range of services available, but the prices of services would become much more significant. Perhaps fees would tend to replace balances as the standard means of compensating correspondents for services, a possibility that has been much discussed in the past but which has not occurred. Regardless, only if correspondent banks have an accurate measure of the direct costs of providing standard operating services will they be able to make intelligent decisions regarding the profitability of respondent bank relationships and services.